

The logo for the Shire of Dardanup features a stylized, flowing line in shades of green and blue, resembling a mountain range or a wave.

Shire of Dardanup

APPENDICES

PART 1

ORDINARY MEETING

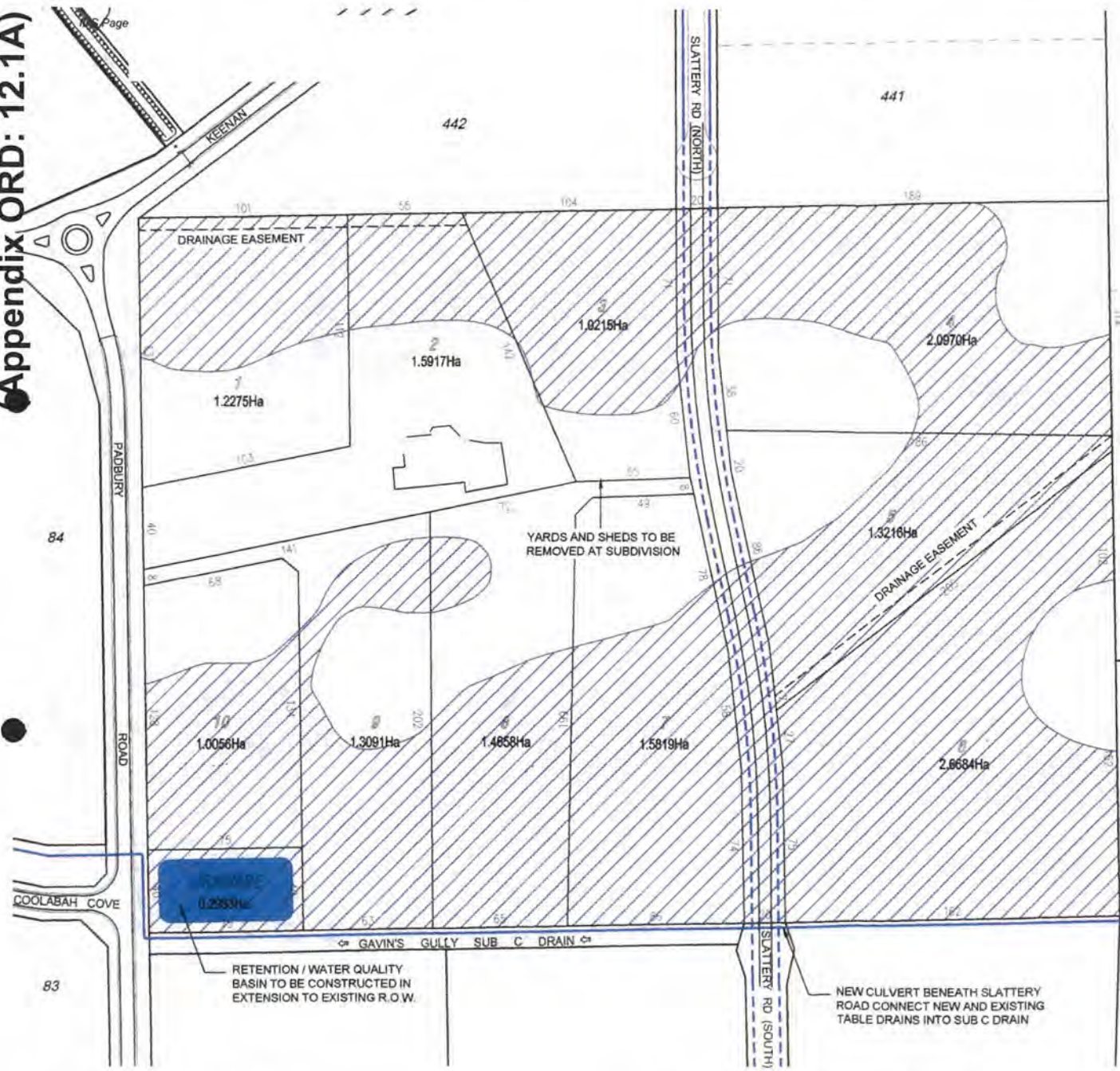
To Be Held

Wednesday, 29 August 2018
Commencing at 5.00pm

At

Shire of Dardanup
ADMINISTRATION CENTRE EATON
1 Council Drive - EATON

This document is available in alternative formats such as:
~ Large Print
~ Electronic Format [disk or emailed]
Upon request.



BUILDING EXCLUSION AREAS
Areas susceptible to seasonal waterlogging and inundation and unsuitable for development

STRUCTURE PLAN MAP
LOT 383 PADBURY ROAD DARDANUP
26 / 03 / 2018

NOTES:

At subdivision stage Local Government shall request the Western Australia Planning Commission impose the following (but not limited to) as conditions of subdivision:

1. Section 70A notification on title advising land owners that:
 - a) All dwellings shall be constructed to have a minimum finished floor level of 500mm above the nearest adjoining road level or 600mm above natural ground level, whichever is the greater, as determined by a licenced surveyor;
 - b) The area is subject to seasonal mosquito infestation;
 - c) The area may be subject to seasonal inundation;
 - d) They may be impacted upon by noise levels above the normal assigned level for nighttime but within the bounds of the noise regulation 17 approved;
 - e) There is to be a minimum vertical separation distance of 500mm from the base of the irrigation area of an Alternate Effluent Treatment System to the highest known water table. Approval shall be sought from the Shire of Dardanup prior to installation of an effluent disposal system;
2. Preparation and implementation of a landscaping plan;
3. Preparation of an Acid Sulfate Soils Self-Assessment. Subject to the results of the self-assessment, an Acid Sulfate Soils Report and Acid Sulfate Soils Management Plan shall be submitted to and approved by the Department of Water and Environmental Regulation before any site works are commenced. Where an Acid Sulfate Soils Management Plan is required to be submitted, site works shall be carried out in accordance with the approved management plan;
4. All buildings, structures and on-site effluent disposal systems on each lot shall conform with the minimum setbacks as follows:
 - 20 metres from any road;
 - 50 metres from the edge of any wetland (sumpland) or natural vegetation line, man-made water bodies or waterway;
 - 10 metres from all side boundaries;
 - Be outside of all "Building Exclusion Areas" as identified on the endorsed Structure Plan Map.
5. A Fire Management Plan is to be prepared and implemented to the satisfaction of the Shire of Dardanup and the Department of Fire and Emergency Services;
6. Stormwater is to be managed in accordance with the approved Stormwater Management Plan;
7. The retention / water quality basin shown on the Structure Plan Map is to be shown on the diagram or plan of survey as a Reserve for Drainage and vested in the Crown under Section 152 of the Planning and Development Act 2005, such land to be provided free of cost and without payment of compensation by the Crown.



INDICATIVE ROAD CROSS SECTION
SUBJECT TO DETAILED DESIGN AND APPROVAL AT SUBDIVISION STAGE



SCALE 1:2,000 ON A3
DIMENSIONS AND AREAS SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO SURVEY

GRAHAM HOUGHTON - TOWN PLANNER
4 Sutton Court Australind WA 6233
0407 252 056
Cadastral and aerial photographs courtesy Landgate
Digital coordinates GDA94 MGA Zone 50





Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

Your Ref:
Our Ref: CMS17282
Enquiries: Billie-J Hughes: 6364 7600
Email: Billie-J.Hughes@dwer.wa.gov.au

Dear Sir/Madam



**DECISION UNDER SECTION 48A(1)(a)
Environmental Protection Act 1986**

SCHEME: Shire of Dardanup - Town Planning Scheme 3 - Amendment 199
LOCATION: Lot 383 Padbury Road, Dardanup West
RESPONSIBLE AUTHORITY: Shire of Dardanup
DECISION: Referral Examined, Preliminary Investigations and Inquiries Conducted. Scheme Amendment Not to be Assessed Under Part IV of EP Act. No Advice Given. (Not Appealable)

Thank you for referring the above scheme to the Environmental Protection Authority (EPA).

After consideration of the information provided by you, the EPA considers that the proposed scheme should not be assessed under Part IV Division 3 of the *Environmental Protection Act 1986* (EP Act) and that it is not necessary to provide any advice or recommendations.

Please note the following:

- For the purposes of Part IV of the EP Act, the scheme is defined as an assessed scheme. In relation to the implementation of the scheme, please note the requirements of Part IV Division 4 of the EP Act.

- There is no appeal right in respect of the EPA's decision to not assess the scheme.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Tom Hatton', written in a cursive style.

Tom Hatton
Delegate of the Minister for Environment
CHAIRMAN

8 January 2018

Development
Services

2511
1000

1000

1000



Your Ref: TPS-R0504924
Our Ref: JT1 2013 08619 V01 - TPS352013
Enquiries: Ross Crockett
Direct Tel: 9420 2013

30th January 2018

Shire of Dardanup
P.O. Box No. 7016
Eaton W.A. 6232



Attention of: **Jake Whistler**

Re: Rezone & Structure Plan - Lot 383 Padbury Rd, West Dardanup

Thank you for your letter dated 23rd January 2018. The Water Corporation offers the following comments in regard to this proposal.

Water and Wastewater

Reticulated water and sewerage services are not currently available to the subject land.

Drainage

The subject area falls within the Gavin's Gully Main Drain catchment in the Collie River Drainage District, a rural drainage system. Developments within this catchment are required to contain the flows from a one in one hundred year storm event on site. Discharge to the Water Corporation drains must be compensated to pre-development levels. The developer of this land should be advised to liaise with the Water Corporation at the preliminary planning stage to determine detailed planning requirements as this area could be prone to future flooding. At the time of development the developer may be required to provide calculations from a consulting engineer to demonstrate, to the satisfaction of the Water Corporation, that the runoff from the development has been restricted to pre development levels. To determine the flood level the developer should contact the Department of Water regarding the Drainage and Water Management Plan which includes the subject area.

General Comments

Please provide the above comments to the land owner, developer and/or their representative.

Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact the Enquiries Officer.

A handwritten signature in blue ink, appearing to read "Ross Crockett".

Ross Crockett
Development Planner
Land Planning
Assets Planning Group



6304227 384241

The Owner, Commissioner, and Clerk of the Board of Health of the City of St. Louis, Missouri, do hereby certify that the above described lot, block, and subdivision are shown on the plat hereto attached and that the same are in compliance with the provisions of the Ordinance of the Board of Health of the City of St. Louis, Missouri, relating to the platting of lots, blocks, and subdivisions of land, and that the same are in compliance with the provisions of the Ordinance of the Board of Health of the City of St. Louis, Missouri, relating to the platting of lots, blocks, and subdivisions of land, and that the same are in compliance with the provisions of the Ordinance of the Board of Health of the City of St. Louis, Missouri, relating to the platting of lots, blocks, and subdivisions of land.

Commissioner of the Board of Health of the City of St. Louis, Missouri, dated this 13th day of August, 1913.

City Clerk of the City of St. Louis, Missouri, dated this 13th day of August, 1913.



Your Ref: TPS-R0504924
Our Ref:
Enquiries: David Brash

Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

Dear Sir/Madam

**PROPOSED SCHEME AMENDMENT 199 - LOT 383 PADBURY ROAD,
DARDANUP WEST**

Thank you for the opportunity to comment on the above mentioned planning proposal.

The WAPC/DoPLH will be required to formally consider this matter following Council's assessment, and in doing so will need to have regard to:

- i) the recommendation of the Council (including the proposal's suitability and any recommended modifications); and
- ii) any issues raised during the advertising period (i.e. from public and government agency submissions).

Given that the above matters are currently unknown, it would be premature for the Department to provide comments at this time, as this could potentially prejudice the WAPC's consideration of the proposal.

Notwithstanding the above, the Department would be happy to discuss any specific issues that Local Government identifies during its assessment and provide advice if required.

Yours sincerely

A handwritten signature in black ink, appearing to read "Kerrine Blenkinsop".

Kerrine Blenkinsop
Secretary
Western Australian Planning Commission

30 January 2018



Department of
Primary Industries and
Regional Development

Your reference: TPS-R0504924
Our reference: LUP 297
Enquiries: Leon van Wyk

Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA, 6232
submissions@dardanup.wa.gov.au

Dear Sir/Madam

**COMMENT: PROPOSED SCHEME AMENDMENT 199 AND STRUCTURE PLAN –
REQUEST FOR COMMENT LOT 383 PADBURY ROAD, DARDANUP WEST**

Thank you for the opportunity to comment on the rezoning of Lot 383 Padbury Road, Dardanup West from 'General Farming' to 'Small Holding'.

The Department of Primary Industries and Regional Development (DPIRD) does not object to the rezoning of the abovementioned lot as this area has been previously identified for this purpose in the WAPC endorsed 'Crooked Brook/West Dardanup Structure Plan'.

I trust these comments inform your decision on this matter. If you have any queries regarding the comments, please contact Leon van Wyk at (08) 9780 6171 or leon.vanwyk@dpiird.wa.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Neil Guise'.

Neil Guise
**Regional Director
Southern Region**

Date: 12 February 2018

Verschuer Place, Bunbury, Western Australia 6230
Postal address: PO Box 1231, Bunbury WA 6230
Telephone: (08) 9780 6100 enquiries@dpiird.wa.gov.au
dpiird.wa.gov.au

ABN 16 951 343 745



Government of Western Australia
Department of Health



Your Ref: TPS-R0504924
Our Ref: F-AA-14495 EHB18/56
Enquiries: Vic Andrich 9388 4999

Mr Mark Chester
Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

Attention: Jake Whistler, Senior Planning Officer

Dear Mr Chester

TOWN PLANNING SCHEME No. 3 AMENDMENT No. 199 AND STRUCTURE PLAN – REZONE FROM ‘GENERAL FARMING’ TO ‘SMALL HOLDINGS’ - LOT 383 PADBURY ROAD, DARDANUP WEST

Thank you for your letter of 23 January 2018 requesting comment from the Department of Health (DOH) on the above proposal. The DOH provides the following comment:

The proposed development is required to be in accordance with the draft *Country Sewerage Policy*.

The amendment should require that all developments are to have access to a sufficient supply of potable water that is of the quality specified under the *Australian Drinking Water Quality Guidelines 2004*.

Approval is required for any on-site waste water treatment process. The necessary requirements may be referenced and downloaded from:

http://ww2.health.wa.gov.au/Articles/U_Z/Water-legislations-and-guidelines

http://ww2.health.wa.gov.au/Articles/S_T/Subdivisions-and-town-planning-approvals

Should you have queries or require further information please contact Vic Andrich on 9388 4999 or ehinfo@health.wa.gov.au

Yours sincerely

Jim Dodds
**EXECUTIVE DIRECTOR
ENVIRONMENTAL HEALTH DIRECTORATE**

12 February 2018

Environmental Health Directorate
All correspondence PO Box 8172 Perth Business Centre Western Australia 6849
Grace Vaughan House 227 Stubbs Terrace Shenton Park WA 6008
Telephone (08) 9388 4999 Fax (08) 9388 4955
www.health.wa.gov.au
28 684 750 332

Alice Baldock

From: Stephen Cook <scook@harveywater.com.au>
Sent: Thursday, 22 February 2018 8:04 AM
To: Submissions Planning
Cc: Jake Whistler
Subject: TPS-R050404924 - Lot 383 Padbury Rd

Good morning,

Harvey Water has no comment on this proposal

Best regards

Stephen Cook
Operations Manager

e scook@harveywater.com.au | ph 08 9729 0104 | fax 08 9729 0111 | mob 0427 988 790




HARVEY WATER

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James Stirling Place, Harvey WA 6220 PO Box 456, Harvey WA 6220 www.harveywater.com.au

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Our Ref: D04720
Your Ref: TPS-R0504924

Jake Whistler
Shire of Dardanup
records@dardanup.wa.gov.au

Dear Mr Whistler,

**RE: SCHEME AMENDMENT NO. 199 AND ASSOCIATED STRUCTURE PLAN - LOT 383
PADBURY ROAD, DARDANUP WEST**

I refer to your letter dated 23 January 2018 regarding the submission of a Bushfire Management Plan (BMP) (Version B), prepared by Lush Fire & Planning dated 16 May 2017, for the above local planning scheme amendment and associated structure plan.

DFES provide the following comments with regard to *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines).

Assessment

Policy measure 6.3 c) Non-compliance with the Bushfire Protection Criteria

Element	Assessment	Action
Siting & design	<p>A2.1 – not demonstrated</p> <p>The structure plan map dated 26 October 2017 included within the scheme amendment report identifies ten proposed lots, and the BMP identifies eleven proposed lots on a "Proposed Subdivision" plan (Figure 5 page 10) - Clarification is required.</p> <p>The structure plan map dated 26 October 2017 identifies significant areas susceptible to seasonal waterlogging and inundation and unsuitable for development. These areas are identified as "building exclusion areas".</p> <p>The BMP does not identify Asset Protection Zones or more broadly, the 'developable areas' within each proposed lot. Developable areas are those areas in which a building can be built and include areas of BAL-29 and below. This should also include other site constraints, such as scheme setbacks and in this instance, areas outside of the "building exclusion areas".</p>	<p>Modification required.</p> <p>Please update all figures in the BMP to reflect the correct structure plan as necessary.</p> <p>Figure 10 of the BMP also needs to reflect the "building exclusion areas", and overlay areas of BAL 29 or below.</p>
Vehicular Access	<p>A3.4 – not demonstrated</p> <p>In bushfire prone areas, lots with battle-axe access legs should be avoided because they often do not provide two-way access and egress for residents and may be easily blocked by falling trees or debris during a</p>	<p>Not demonstrated.</p> <p>Please provide justification for non-compliance or modify the structure plan accordingly.</p>

	bushfire event. DFES recommends the structure plan be modified to ensure through access thereby avoiding the need for battle-axe lots.	
Water	A4.2 – not demonstrated The BMP at 6.2.4 details the requirement for a dedicated 50,000 litre water tank supply. It goes on to detail that <i>"Council have instructed that the water tank is to be provided at the West Dardanup fire brigade station located on Garvey Road"</i> . The BMP also details that this location exceeds the maximum two-kilometre distance as required by the Guidelines.	Not demonstrated Please provide justification from the local government for the location of the water tank or modify the location accordingly.

Recommendation – not supported modifications required

DFES has assessed the BMP for the proposed scheme amendment and associated structure plan, and has identified a number of issues that need to be addressed prior to support of the proposal. It is recommended that the application be deferred pending the required modifications outlined in the table above.

If you require further information, please contact Jackie Holm on telephone number 9482 1785.

Yours sincerely



DOUG VAN BAVEL
LAND USE PLANNING OFFICER

26 February 2018



Department of Biodiversity,
Conservation and Attractions



Your ref: TPS-R0504824
Out ref: PRS 42237 2016/001050
Enquiries: Tracy Teede
Phone: 08 9725 4300
Email: swanduseplanning@dbca.wa.gov.au

Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

ATTENTION: Jake Whistler

**PROPOSED SCHEME AMENDMENT 199 AND STRUCTURE PLAN –
REZONE FROM 'GENERAL FARMING' ZONE TO 'SMALL HOLDING' ZONE –
LOT 383 PADBURY ROAD DARDANUP WEST**

The Department of Biodiversity Conservation and Attractions' Parks and Wildlife Service South West Region has no comments on the above proposal.

It is considered that the proposal and any potential environmental impacts will be appropriately addressed through the existing planning framework.

Thank you for the opportunity to comment on this application. Please contact Tracy Teede at the Parks and Wildlife Service's South West Region office if you have any queries regarding this advice.

A handwritten signature in blue ink, appearing to read 'Tracy Teede'.

For Regional Manager
Parks and Wildlife Service

16 March 2018

South West Region
PO Box 1693, Bunbury, Western Australia 6230
Phone: (08) 9725 4300 Email: bunbury@dbca.wa.gov.au
dbca.wa.gov.au



Department of Planning,
Lands and Heritage

ENQUIRIES : Aidan Ash- Ph 6551 8040
OUR REF : PLH0076/2017
YOUR REF : O179234 LND/48, LND/116

Mr Mark Chester
Chief Executive Officer
Shire of Dardanup
Email: records@dardanup.wa.gov.au

Dear Mr Chester

PROPOSED SCHEME AMENDMENT AND STRUCTURE PLAN - REQUEST FOR COMMENT LOT 383 PADBURY ROAD, DARDANUP WEST

Thank you for your letter dated 23 January 2018 regarding the proposed scheme amendment.

The Aboriginal Heritage Directorate (AHD) of the Department of Planning, Lands and Heritage (DPLH) has reviewed the Register of Sites and Objects and advises there are no reported Aboriginal sites within the area of the Proposal.

The AHD recommends that developers undertaking activities within the proposal area take into consideration the DPLH's Aboriginal Heritage Due Diligence Guidelines when planning specific developments. These guidelines have been developed to assist proponents to identify any risks to Aboriginal heritage and to mitigate risk where heritage sites may be present.

The guidelines are available at: <https://www.daa.wa.gov.au/heritage/land-use/>.

If you have any queries in regards to this please do not hesitate to contact Aidan Ash, Team Leader, on (08) 6551 8040 or via email aidan.ash@dplh.wa.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Aidan Ash'.

Aidan Ash
TEAM LEADER

27 February 2018

Alice Baldock

Subject: FW: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West
Attachments: Attachment 1_Part of larger Daradanup West-Crooked Brook Structure Plan.jpg

From: Daniel Wong [mailto:daniel.wong@dwer.wa.gov.au]
Sent: Wednesday, 7 March 2018 4:17 PM
To: Jake Whistler
Subject: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

7th March 2018

Our Reference: PA 018591, DWERT50~7

Your Reference: TPS-R0504924 JW:gg

To: Shire of Dardanup

From: Department of Water and Environmental Regulation

Attention: Jake Whistler

RE: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

Dear Jake,

Thank you for referring the above proposed Scheme Amendment and Structure Plan to the Department for comment.

Scheme Amendment and Structure Plan summary

This amendment is to rezone Lot 383 Padbury Road, Dardanup West from General Farming zone to Small Holding zone to allow for the subdivision and development of ten rural residential lots.

The purpose of the Structure Plan is to facilitate the subdivision and development of the land for rural residential lots (~1-3 ha).

This proposal is part of the larger Dardanup West/Crooked Brook structure plan area (Attachment 1).

A main feature of this development is the construction of Slattery Way that runs in a North/South direction that separates the development into east and west portions.

Site situation

Much of the subject land is over a 'Multiple Use' Palusplain wetland and subject to localised seasonal flooding, and as confirmed in the referral.

(Appendix ORD: 12.1C)

It is noted from the Stormwater Management Plan in the Structure Plan report that the Gavin's Gully Sub C Drain is owned by the Water Corporation, to which this development is proposed to drain into and eventually flows into the Preston River about 2 km downstream.

Due to the increased runoff from impervious surfaces (with the landuse change) with the slow and limited stormwater flow rate of Gavin's Gully (that was designed to accept flows from agricultural landuse only), the structure plan proposes to construct a detention basin to mitigate against the increased flows and volumes.

The proposal is within the Bunbury Groundwater Area as proclaimed under the *Rights in Water and Irrigation Act 1914*.

The proposal is located within a non-proclaimed area for surface water under the *Rights in Water and Irrigation Act 1914*.

Identified risks

In view of the above situation, the Department identifies the following risks:-

- Risk of contamination of groundwater if there is insufficient vertical separation of onsite sewage disposal systems to groundwater or the soils PRI is insufficiently amended
- Potential for surface water contamination if the on-site sewage disposal system is within an area subject to inundation or is located too close to a drainage system
- The Stormwater Management Plan information (in the Structure Plan report) states that the 1:100 flood level is estimated at 18.6 m AHD (where Sub C Drain enters the main gully), but no details have been provided as to how the estimation was made. It may therefore be possible that the lots finished floor level could be insufficient posing a flooding risk.
- Management of surface water from lots and roadside drainage into the Water Corporation owned Gavin's Gully; noting that Water Corporation may not be willing to accept additional discharge.
- As the agricultural drains are to remain in private ownership (proposed Lots 7-11) and if these are to continue to perform a drainage function, there is a risk that this infrastructure may not be managed appropriately or to a sufficient standard that may cause drainage issues.
- In the absence of 'whole of catchment information', there is a stormwater management risk that the infrastructure (i.e. culvert beneath Slattery Road, drainage easements and detention basin) proposed in the structure plan may not be of sufficient capacity to attenuate increased flows from adjacent development resulting in increased flooding risk.

Risk mitigation

To mitigate against the above risks, the Department provides the following advice:-

- The Shire should satisfy itself that estimated flood levels have been assessed to a sufficiently rigorous level to ensure that building finished floor levels can be adequately set against flooding.

(Appendix ORD: 12.1C)

- The Building Exclusion Area, drainage easements and drains (as identified in the Structure Plan) should also exclude on-site sewage disposal areas, noting that in accordance with section 6.2.2 of the Government Sewerage Policy (Nov 2017), an on-site sewage disposal system is not to be located within 100 metres of a drainage system (that discharges directly into a waterway) and any area subject to inundation and/or flooding in a 10 per cent Annual Exceedance Probability (AEP) rainfall event.
- More details should be provided regarding the sizing and capacity of the detention basin (including drainage easements and culvert); in view of the ensuring sufficient capacity to service the structure plan area, and also future adjacent developments.
- Agreement from the Water Corporation would be required to ensure that the additional flows into Gavin's Gully (from the Structure Plan area and future adjacent developments) would be acceptable, noting the need for management/maintenance.

Recommendations

- That additional detail be provided in the Structure Plan supporting information (i.e. Stormwater Management Plan) to mitigate against the above risks.
- The Shire commissions a drainage and groundwater study over the entire Crooked Brook/Dardanup West Structure Plan to:
 - investigate the need for drainage upgrades as outlined in the Hydrological Review of the Crooked Brook Structure (JDA 2005), and
 - develop a more rigorous understanding the groundwater regime to enable on-site effluent system applications to be appropriately assessed.

Thank you.

Yours faithfully,

Daniel Wong

Environmental Officer
Department of Water and Environmental Regulation
South West Region

Email: daniel.wong@dwer.wa.gov.au
Phone: 08 9726 4113
Fax: 08 9726 4100
Postal: PO Box 261, Bunbury, WA 6231
Location: 35-39 McCombe Road, Bunbury, WA 6230

Water Resource Advice Only

The Department of Water has recently merged with the Department of Environment Regulation and Office of the Environmental Protection Authority to create the new agency Department of Water and Environmental Regulation.

The former agencies are in the process of amalgamating their functions. Until this fully occurs, please note that the advice in this correspondence pertains only to water resource matters previously dealt with by the Department of Water.

From: Krish Seewraj [<mailto:krish.seewraj@dwer.wa.gov.au>]
Sent: Friday, 23 March 2018 11:41 AM
To: Luke Botica; Steve Potter
Cc: Jake Whistler
Subject: FW: HPRM: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

Hi Luke/Steve,

We have just provided advice as per the email below for the next portion of TPS 3 Area no.14 Dardanup West / Crooked Brook Structure Plan – Lot 383 Padbury Road, Dardanup West.

Assessing and providing good advice on these small incremental stages of Area no.14 is problematic. There are constraints predominately related to drainage (seasonal inundation and flood) and high groundwater (affecting on-site domestic waste water systems) but the applications are of a scale that makes it hard to justify application of BUWM, which is a requirement in Appendix VIII of the TPS 3 at sub-division stage.

In most instances the department will recommend a [drainage and groundwater management plan](#) should be developed to support a structure plan in this area and of these scales. However, to avoid cumulative impacts:

- A management plan should be done for the entire remaining undeveloped portion of Area 14, noting that approximately half of the entire area is yet to be developed. A similar message was provided in the attached previous email for Lot 503 Garvey Road, Dardanup West.
- Consideration is needed of the potential cumulative impact of on-site domestic waste water systems, which is raised as a consideration in the *Draft Government Sewerage Policy (WAPC 2016)*. Noting the area lies within the Lower Ferguson and Lower Preston sub-catchments of the *Leschenault Estuary water quality improvement plan (DoW 2013)*, which are both recovery catchments for which there is recommended to be no increase in TN or TP inputs. It is worth noting that previous discussions regarding the issue of on-site domestic waste water systems have occurred with shire EHOs.

Jake I noted also in Dan's response that he omitted to detail that this area is a sewage sensitive area in accordance with the *Draft Government Sewerage Policy (WAPC 2016)* and as such secondary treatment systems are required to be used (e.g. Anaerobic Treatment Units). As a condition of subdivision, a notification, pursuant to Section 70A of the 'Transfer of Land Act 1893' should be placed on the certificate(s) of title of the proposed lot(s). The notification should state:

“A reticulated sewerage service is not available to the lot(s). As such, an on-site secondary treatment and disposal system for sewage, which includes nutrient removal, will be required. Therefore, the developable area of the lot is reduced. There are ongoing landowner obligations to ensure that the treatment and disposal system is regularly

maintained in accordance with relevant health regulations. Contact the local government for further information.”

I'd welcome your thoughts on how this can be best managed into the future.

Regards,

Krish Seewraj

Land Use Planning Program Manager
South West Region

Department of Water and Environmental Regulation

35-39 McCombe Road, BUNBURY, WA 6230

PO Box 261, BUNBURY, WA 6231

T: (08) 9726 4137 | F: (08) 9726 4100 | Ext: 1137

E: krish.seewraj@dwer.wa.gov.au | www.dwer.wa.gov.au

Twitter: [@DWER_WA](https://twitter.com/DWER_WA)

From: Daniel Wong

Sent: Wednesday, 7 March 2018 4:17 PM

To: 'jakew@dardanup.wa.gov.au' <jakew@dardanup.wa.gov.au>

Subject: HPRM: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

7th March 2018

Our Reference: PA 018591, DWERT50~7

Your Reference: TPS-R0504924 JW:gg

To: Shire of Dardanup

From: Department of Water and Environmental Regulation

Attention: Jake Whistler

RE: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

Dear Jake,

Thank you for referring the above proposed Scheme Amendment and Structure Plan to the Department for comment.

Scheme Amendment and Structure Plan summary

This amendment is to rezone Lot 383 Padbury Road, Dardanup West from General Forming zone to Small Holding zone to allow for the subdivision and development of ten rural residential lots.

Alice Baldock

From: Kevin and Sue [REDACTED]
Sent: Friday, 2 March 2018 6:59 PM
To: Submissions Planning
Subject: Response to letter received re: the Proposed Scheme Amendment 199 and Structure Plan - Comment Lot 383 Padbury Road, Dardanup West

Jake Whistler
Senior Planning Officer
Shire of Dardanup

Dear Jake

We Kevin and Sue Burkett totally object to the rezoning and dividing into small holdings and the construction of the Slattery Way through road.

When purchasing this house at 44 Slattery Way in 2014, we investigated and contacted the Shire and asked if the road was to be extended from the end of the cul de sac. We were advised it was never going to happen.

Last year – 2017 we contacted the Shire to ask if there were any plans to allow sub-dividing of properties into smaller holding and we were advised that there were no plans.

Having no house or buildings adjacent to our property and the cul de sac was another reason we purchased our property. If this development proceeds we would have a building zone and houses directly in our view, higher traffic volumes, probable vehicles accessing the area that are already causing road problems, therefore destroying the relaxed walking access currently available. This will be creating a race track road in the area.

The opening of Slattery Way will increase traffic flow down Slattery Way and therefore the quietness and appeal for us which was one of our main reasons for purchasing 44 Slattery Way. This decision takes away our living situation choices and will now reduce the appeal and saleability of our investment if we choose to sell.

If this proceeds you have taken away the main reason for purchasing a home in a quiet area that does not have adjacent properties in our view. This will also de-value our property significantly.

Further questions

Where is the walkway reserve from Slattery Way through to Padbury Road gone? – this does not show on the map.

Why isn't the Shire investing in the already struggling drainage system down Slattery Way, in particular along the front of our property, the cul de sac culvert and drain way, and the drain way and verges down the walkway from Slattery Way through to Padbury Way. Surely upgrading these and other areas infrastructure such as drains, culverts, investing in verge and tree maintenance, road maintenance such as guide posts, signage and pot holes would maintain and improve the existing infrastructure.

If this development is to go ahead

Why can't the entry to the properties be from Padbury Road.

The entry road from Padbury Road would provide a more direct access to the proposed properties and significantly reduce road construction costs?

It would also appear that the road extension would require significant dollars to ensure that drainage would be effective as the area that has been identified on your map for the through road is deemed as a building exclusion due to waterlogging and inundation and unsuitable for development. This is on both sides of the proposed development area. Because of these reasons why would you consider the road construction here?

(Appendix ORD: 12.1C)

Furthermore, the building envelope areas will be raised and therefore create further water run-off towards the already struggling drainage system at the end of the current Slattery Way cul de sac, which is supposed to then fall away into the walkway drain towards Padbury Road - which it doesn't because the drain and reserve have not been fenced. The cattle have therefore had free rein to enter the reserve and drain and have collapsed the walls of the drain, filling the drain with silt and soil and the fall has been partially reversed and the water does not flow away fast enough. It continues to backfill towards the cul de sac and encroaches our property at the cul de sac corner and then fills the drain in front of our property.

This drain caused major flooding issues late 2017 that the Shire did not attend to in a satisfactory way or timeframe. Please advise why?

Please respond to and answer our comment queries, and questions and advise when this proposal is to be presented to Council as we will attend this Council meeting.

Yours sincerely
Kevin and Sue Burkett

44 Slattery Way
Dardanup West 6236
Email: [REDACTED]

Alice Baldock

From: greg smith [REDACTED]
Sent: Tuesday, 6 March 2018 11:28 AM
To: submissions@dardanup.wa.gov.au.
Subject: comment of proposal lot 383 Padbury Rd

To The Executive Officer

I am forwarding this submission on the proposed development of Lot 383 Padbury Rd, Dardanup West, 6236.

I am not against the lot development so much but object to the planning of what will change what is sign posted as Slattery Rd on the north side of the proposed lot development to Slattery Way which is on the South side of the proposed development, in which on the plans will join up and become Slattery Rd.

I reside at 23 Slattery Way with my family and purchased this property January 2009, after looking at several properties of this size at the time choose 23 Slattery Way because of the fact it was a no through road and only had local traffic, after living in the central Bunbury area in a street that had a lot of unruly traffic and did not want to have the worry of raising two very young children in this area.

What concerns me with this road change is that all the residents on the north east side of this development will now short cut through towards Garvey Rd increasing the traffic volume of the Slattery Way.

Also with the property break ins that have happened in the Dardanup Ferguson and surrounding areas over the last 24 months and still happening will make it easier for thieves to plan a better escape route being able to exit the street from either end once this road goes through, and after looking at shire plans of the area notice that there will be access from Harold Douglas Road, in the near future giving more access for these types.

The people of Slattery Way have banded together and take great notice of vehicles that use our street and have noticed our properties being cased out from time to time and place notifications on the Dardanup residents page on facebook which warns others in our area and also warns us with reports from others on the page.

There will also be the inconvenience of mail address changes from Slattery Way to Slattery Road, Slattery Way has been here for about eighteen years from what I have heard from neighbours, why should we have the inconvenience of this having nine properties in our street to change address compared to 3 at the northern side.

Why can't the access for the proposed properties be gained from Padbury Road through the centre of the proposed area ending where Slattery Rd is planned and have a right turn at property 4 and 5 and a cul de sac at property 5 and 6 creating a local traffic only for the 10 properties keeping traffic down creating a safer environment for future families with children like us and I believe creating better property value because of this.

Yours sincerely GP. and VA. Smith

23 Slattery Way, Dardanup, 6236

Alice Baldock

From: Amanda Farr [REDACTED]
Sent: Friday, 9 March 2018 3:28 PM
To: Jake Whistler
Subject: Proposed subdivision in Padbury in Dardanup West

Good afternoon

Just a quick email to state that yes we do indeed oppose this new development of 10 small new blocks.

We bought in this small holdings zoned area for the lifestyle and we aren't really happy that we will suddenly acquire so many new neighbours on top of each other because the building envelopes in the smaller blocks are so small.

Traffic will also increase in our area which is a huge negative and just the overall 'feel' of the rural area will be indeed lost. This will have a big impact on the area so I hope all neighbours voices are heard and recognised.

As a neighbour who is directly impacted, I wanted to voice my thoughts on this matter!!

Thanks

Amanda Farr

Alice Baldock

From: briony thomson [REDACTED]
Sent: Friday, 9 March 2018 4:31 PM
To: Submissions Planning
Subject: Proposed road modification to Slattery way Dardanup West

To whom it may concern,

As a resident of Dardanup west, at 24 Slattery way I, and my neighbours regard both with dismay and dread to learn at the proposal, not only to connect the 2 sections of Slattery way/Slattery road; but to also connect the two sections of Dardanup west via Keenan road to Harold Douglas drive. This connection will allow more traffic to both now isolated communities, thereby largely negating the very reason for which the residence in Slattery Way chose to live, and enjoy our lives here. This was constituted principally by our enjoyment of comparative peace and isolation from the masses and traffic of the city environment. This action will reduce the quality of our lifestyle, as do the placing of street lights which destroy the wonder of the night sky. Please allow the city dwellers to enjoy that part of society and leave us country folk to enjoy the peace and reality of nature.

Kind regards
Residence of 24 Slattery way

Alice Baldock

From: nola8 [REDACTED]
Sent: Monday, 12 February 2018 2:46 PM
To: Submissions Planning
Subject: Proposed scheme amendment 199 and structural plan to Lot 383 Padbury Road

Sent from my [REDACTED]

To Mr Jake Whistler

Thank you for sending us a copy of the proposed new subdivision on Lot 383 Padbury Road, Dardanup West and giving us the opportunity to comment. I trust our comments will be accepted and action taken towards a positive outcome for our area.

1. Objection to the change of Street name.

We object to changing our address by renaming Slattery Way to Slattery Road. We have lived here for almost 12 years and may cause undue stress by us having to change our address. When we purchased the property there was no indication that Slattery Way would change and therefore made the property more attractive for purchase.

2. Objection to making Slattery Way a through road.

We object to making our quiet cal-de sac into a through road for hoons to use. We have a friendly and observant neighborhood who keep watch out for each others property and by making the road a main thoroughfare this would make life much more difficult to assess unwanted vehicles in the area.

Opportunity for improvement.

We suggest that the road for the new subdivision come off Keenen Road to service lots 3, 4, 5 6, 7 & 8. By doing this Slattery Way would not have to be alteted.

We would appreciate feedback prior to the plans being approved.

Your sincerely
Clyde and Nola Shawcross
14 Slattery Way
Dardanup 6236

38 Slattery Way

Dardanup West WA 6236

5th February 2018

Dear Jake Whistler,

Senior Planning Officer,

Shire of Dardanup

RE: Proposed Scheme Amendment 199 and Structure Plan – Request for comment,

Lot 383 Padbury Road, Dardanup West.

We have concerns with the above structure plan set out.

1. We would like to petition against the proposed Slattery Way to Slattery Road North, due to the increase of traffic and noise in the area.
2. In the 3 years we have lived in Slattery way we have taken part in Neighbour hood watch due to the increase of theft on our and many other properties which we fear will increase once again if the proposed thorough fair is to go ahead.
3. All the proposed blocks in the structure plan would be easily accessed by continuation of Slattery Road North a short distance and cost to the council will be minimal compared to the proposed plans.
4. A good percentage of the reason why we purchased this property was due to it being a cul-de-sac or No thru road.

Thank you for taking the time to read our concerns.

Kind Regards

Glen K Thuel

Norm K Thuel

Lorraine M Thuel

Our Ref: TPS-R0504909
JW gg
Enquiries: 9724 0359
jakew@dardanup.wa.gov.au

23 January 2018

GK THUEL
38 SLATTERY WAY
DARDANUP WEST WA 6236

Dear Sir/Madam

**RE: PROPOSED SCHEME AMENDMENT 199 AND STRUCTURE PLAN – REQUEST FOR COMMENT
LOT 383 PADBURY ROAD, DARDANUP WEST**

The Shire of Dardanup is in receipt of a proposed Scheme Amendment to rezone Lot 383 Padbury Road, Dardanup West from 'General Farming' to 'Small Holding'. Additional to the rezoning, a Structure Plan has been prepared over Lot 383 Padbury Road. A summary of the proposed Scheme Amendment and a copy of the proposed Structure Plan have been enclosed for your information.

Copies of the full proposed Scheme Amendment and Structure Plan may be viewed at Council Offices – 3 Little Street, Dardanup and 1 Council Drive, Eaton or on the Shire's website at the following link: <http://www.dardanup.wa.gov.au/council/public-notices-2/>.

As a landowner who may have an interest in the proposed Scheme Amendment, you are invited to make comment. Submissions should be made in writing and addressed to the Chief Executive Officer, **by no later than 4.00pm on Friday, 9 March 2018**. Please note that late submissions will not be accepted.

It is the Shire's preference for submissions to be made by email using the following address: submissions@dardanup.wa.gov.au. If you do not have access to email, written submissions can be made in person at the Shire Offices at Dardanup or Eaton, or alternatively posted to the following address:

Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

Should you have any queries please do not hesitate to contact the undersigned on 9724 0359 or jakew@dardanup.wa.gov.au.

Yours sincerely



MR JAKE WHISTLER
Senior Planning Officer

Enc: Application details (Doc Ref: TPS-R0504917)

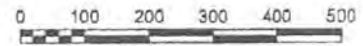
SHIRE OF DARDANUP

TOWN PLANNING SCHEME No. 3

AMENDMENT No. 199



EXISTING ZONING





Scale 1 : 10,000
(@A4)



PROPOSED ZONING

LEGEND

ZONES

-  GENERAL FARMING
-  SMALL HOLDING

JL & LJ Hilder



18 Slattery Way,
Dardanup West,
WA 6236



5/02/2018

Dear Jake Whistler,
Senior Planning Officer,
Shire of Dardanup.

RE: Proposed Scheme Amendment 199 and Structure Plan – Request for comment,
Lot 383 Padbury Road, Dardanup West.

We have some issues with the above structure plan as set out and wish to bring them to your attention.

1. We are against the continuation of Slattery Way through to Slattery Road North as this will cause a thorough fare and increase road traffic and noise in this area.
2. We have spent many years encouraging a Rural Watch with the help of people in this area to ensure safety and welfare of all those in the area.
3. This action would make it increasingly difficult to ensure the rural watch scheme could be effective.
4. All the proposed blocks of land in the structure plan could be accessed easily by continuation of Slattery Road North a short distance with minimal cost as there are already provisions for "Battle axe" blocks in the plan.
5. When we as well as many of our neighbors purchased our land, it was due to Slattery Way being a "Cul de Sac" or "No Thru Road".

Regards,
JL & LJ Hilder



Alice Baldock

From: Jasmine White [REDACTED]
Sent: Friday, 9 March 2018 4:03 PM
To: Submissions Planning
Subject: Fwd: Proposed Scheme Amendment 199 - Lot 383 Padbury Rd DARDANUP

Follow Up Flag: Follow up
Flag Status: Flagged

Sent from my iPad

Begin forwarded message:

From: Jasmine White [REDACTED]
Date: 9 March 2018 at 3:41:46 pm AWST
To: jakew@dardanup.wa.gov.au
Subject: **Proposed Scheme Amendment 199 - Lot 383 Padbury Rd DARDANUP**

Good Morning Jeremy,

We would like to submit our STRONG objection to the proposed amendment 199 at Lot 383 Padbury Road West Dardanup.

We purchased the adjoining land to the south in 1997 as a small holding or "special zoned rural". All blocks in the two Peppermint Ridge stages and the following Innisfail subdivision were minimum 5 acres lots - 2.02 hectares is ours - most were 2.08 to 2.5 or more. We purchased the property for the lifestyle - minimal housing and traffic, peace and quiet, livestock and space between residences.

The property was subject to Dardanup Council provisions including in brief:

- Maintaining the rural character to the area including not removing existing trees;
- Blocks under 2 hectares were limited to ONE residence only;
- Blocks were not subject to any further subdivision - ie minimum 2 hectare lots were maintained;
- Blocks of 2 hectares or more limited to ONE dwelling only;
- Thirty trees to be planted by developer on each property.

A large number of other provisions were included predominantly to maintain a peaceful and rural lifestyle.

The new proposed subdivision directly opposes what we signed up for - they are all bar 2 less than 2 hectare lots. Majority are 1 hectare. Allowing we signed up for a lifestyle in this area that council safe guarded with a stipulation of no more than 1 residence in any TWO hectare lot then this proposal directly contravenes that. There will be at a minimum four 1 hectare lots in a row to our northern boundary with all houses in such close proximity due to the topography that it will be akin to a townsite street.

The water table in Dardanup is notoriously high. Our rainfall here is higher than average. We have strict building restrictions to cater for this including our pool needing to be 600mm above ground height with no option for a concrete pool due to the high water table. We have a drain next to the current bridal path that presently does not in any way cater for the current

(Appendix ORD: 12.1C)

winter rainfall. It consistently floods. The current owners have been unable to run cattle or cut hay in the southern side to their property due to the lake that is created every winter. As neighbours we have saved drowning wildlife caught in the water. The structure plan map clearly shows approximately 80% of the land is unable to be built on due to "seasonal water logging and inundation and unsuitable for development". That in itself shows how completely impractical this subdivision is with only 20% of the land able to be utilized for any form of structure including homes, sheds, chook pens, stables, swimming pools, patios, etc or habitation of livestock.

Dardanup West has a particular interest in homing of horses. The equestrian club exists within 5 km of most properties. Bridal paths were specifically built to cater to homeowners safely riding horses within the area. There is a high percentage of home owners and those looking to buy in this area who are equestrian oriented. The small blocks of land offered in this subdivision are unsuitable for stock due to the flooding of land. The current owners have had the option to only run less than 20 head of cattle at any one time and move them accordingly or sell. That wont be possible with small lots with small building envelopes and no room to relocate animals.

Please consider in relation to above point the property located on the corner of Kentucky Drive and Garvey Road in Dardanup West previously owned by D'agastino's. There was a man made island on the block surrounded by a minimum of 6 months of the year a very large and quite deep lake/moat. Two small house paddocks were utilized for only 2 horses. The rest had to be agisted elsewhere due to loss of usable land. The new owners in an attempt to create flat land for their numerous horses when they purchased the land in summer flattened the island and redistributed the soil including trucking in soil. They also removed many trees by ring barking, felling or pushing over with large machinery. The result was the drains were overflowing on the road, the water pushed across into surrounding properties (particularly Scotts to the east), the whole paddock still flooded and the water backed up for kms in the surrounding drains. Their aim to create usable land for their horses had far reaching negative consequences. Clearly this is a possibility in the proposed sub - division - owners searching for usable land in their rural purchase that is just not feasible due to the size of the blocks and water issues.

We strongly object to the number/size of the blocks proposed. The proposal is impractical and goes against the shires own provisions that all current owners in proximity had to sign. We are happy to meet any council representative including on site to discuss in depth the impact of living, the lay of land and water we have witnessed in 20 years and the consequences of the proposed scheme.

Yours sincerely,

Will and Jasmine White





ADDENDUM TO STRUCTURE PLAN
SHIRE OF DARDANUP
AMENDMENT No. 199
LOT 383 PADBURY ROAD DARDANUP WEST

April 2018

ADDENDUM TO STRUCTURE PLAN

SHIRE OF DARDANUP

AMENDMENT No. 199

LOT 383 PADBURY ROAD DARDANUP WEST

This addendum has been prepared with the agreement of the Shire of Dardanup. It addresses issues raised by:

1. Dept. of Fire & Emergency Services in their letter to the Shire dated the 26th Feb. 2018 attached; and
2. Dept. of Water and Environmental Regulation in their email to the Shire dated the 7th March 2018 attached.

The reason for the addendum rather than a modification of the Structure Plan at this stage is twofold. Firstly, some issues that are addressed have not been finalised by the authorities and it is possible that a third party such as the WA Planning Commission will have to make a final determination. Secondly, to progress the Amendment, an addendum was considered the best instrument to outline how the issues are proposed to be addressed.

Dept. of Fire & Emergency Services

Item One. Siting and Design

The DFES requested changes to the BMP to reflect the building exclusion areas and overlay areas of BAL 29 or below. Also show the building setbacks (20m from road and 10m from the sides). This has been done and is shown on the attached figure.

Because the building area on Lot 5 did not give the lot owner much discretion about where they could site buildings, the area was increased by changing the boundary between Lots 4 and 5.

The attached BAL Contour Plan shows the building exclusion areas and the minimum boundary setbacks provided for in the Planning Scheme ie 20m front boundary; 10m side and rear boundaries. There are minor portions of lots which have a BAL-40 or BAL-FZ rating encroaching past these setbacks. However, any BAL assessment that results in a BAL 40 or FZ rating will then trigger a Development Application pursuant to Clause 78D Part 10A of the Planning and Development (Local Planning Schemes) Regulations 2015. As part of this application local government can require the dwelling to be sited so as to achieve a BAL-29 rating.

Item Two Vehicular Access

DF&ES concerns about the battle axe driveways will be addressed as follows.

- (a) The battle axe legs will be widened to 10m.
- (b) The driveways will be a 6m formed compacted gravel or limestone marl surface with 1m shoulders.
- (c) On either side of the battle axe leg boundaries no trees are to be planted and any shrubs planted are not to exceed 2m in height. All existing vegetation that does not comply with these specifications is to be removed.

The suggestion of the Dept. that a road take the place of the battle axe legs is considered unnecessary. There are more than enough east-west roads in this locality. The Shire do not want a road. The above measures satisfy the concerns of the Dept.

Item Three Water

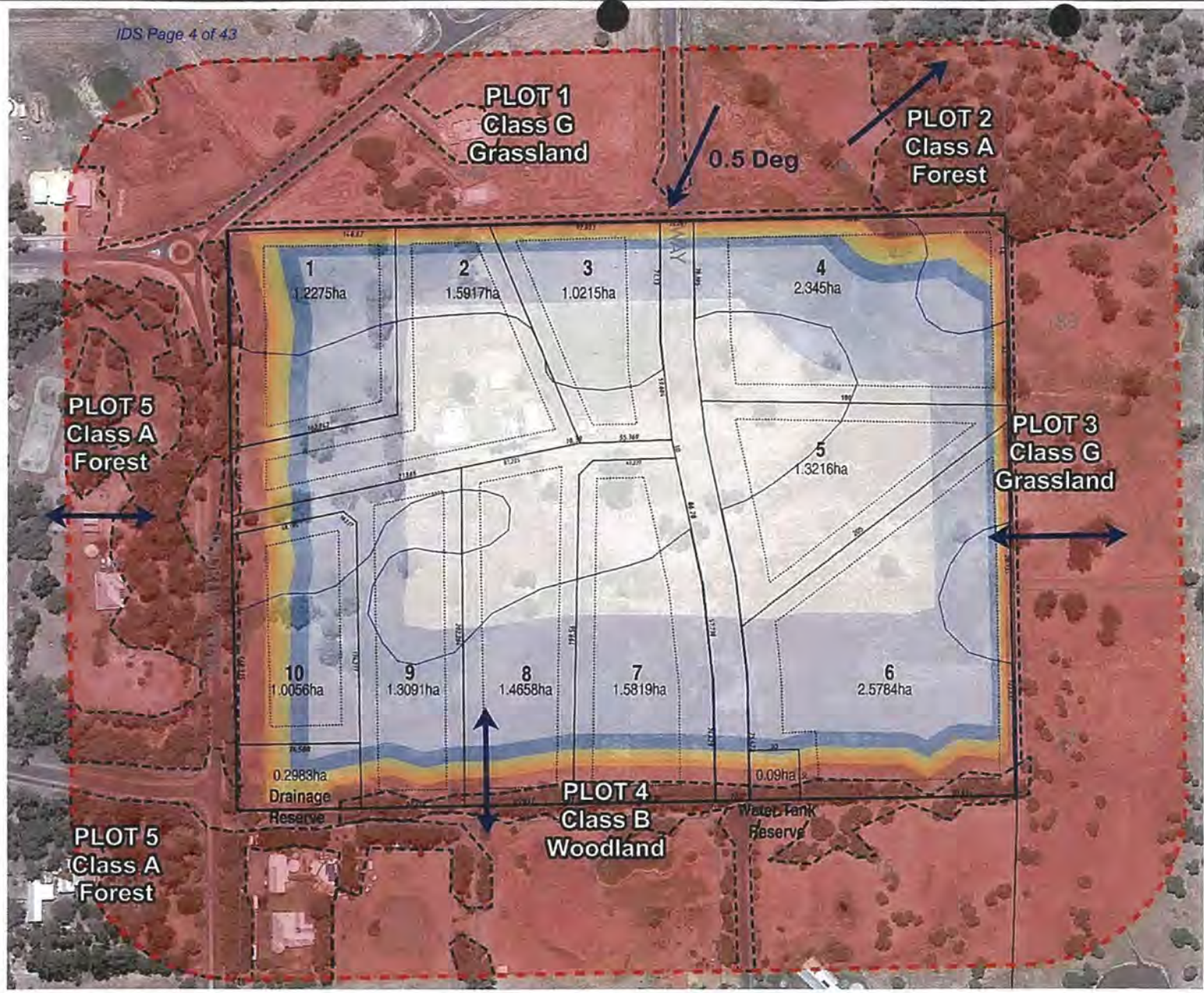
The location of a tank site is a strategic issues between the Shire and DF&ES. If it finally resolved to have a site on Lot 383 then the proponent will designate an agreed site on the Slattery Road extension. The size of the site and the reserve description will need to be determined.

Dept. of Water and Environmental Regulation

The only issue to be addressed in the Structure Plan is dot point two in 'Risk mitigation', the eastern drainage easement. All the other issues are ones that are dealt with in the development stage between the Shire Engineering Dept. and the Consultant Engineer and by the Shire Building Dept.

The drainage easement between lots 4 and 5 has been realigned to a new lot boundary between lots 5 and 6. This alignment will provide a set-back of 50m. Fifty metres is the required setback under the Shire of Dardanup TPS No.3, Appendix VIII Area 14-Dardanup West/Crooked Brook Structure Plan, sec 3. A modified Structure Plan Map and modified Indicative Structure Plan Map are attached that show the boundary change and the realigned drainage easement. It is included for information and changes will be made to both maps at the Modification stage.

Also a changed Stormwater Drainage Plan is attached.



LEGEND

- SUBJECT LAND
- 100m MAPPING BOUNDARY
- UPSLOPE
- FLAT LAND
- VEGETATION PLOTS
- BAL LEVELS
 - BAL - Flame Zone
 - BAL - 40
 - BAL - 29
 - BAL - 19
 - BAL - 12.5
 - BAL - Low
- BUILDING EXCLUSION AREA
- SCHEME SETBACKS
 - 20m FRONT
 - 10m SIDE & REAR

Location Details	Lot 383 Padbury Rd
Assessment Date	05/09/2016
Prepared by:	G Lush
Accreditation Level	Level 2
Accreditation No	BPAD 27682
Expiry Date:	February 2019
Aerial Photo:	Nov 2015

Appendix ORD: 12.1D)

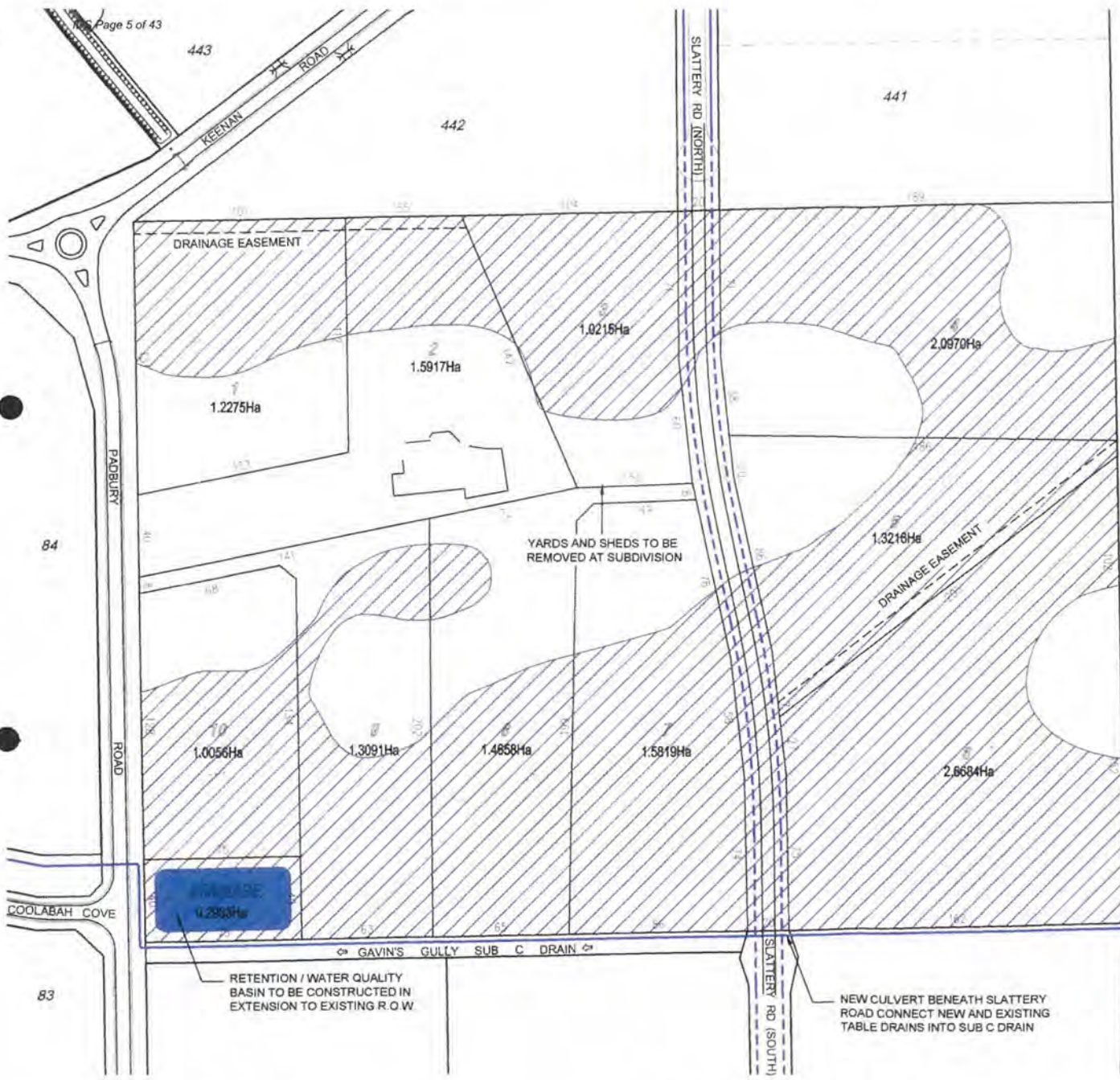
**FIGURE 8
BAL CONTOURS**




Rev	Description	Date
A	Preliminary	03/01/2017
B	Subdivision Plan	12/05/2017
C	Building Exclusion & Setbacks	20/03/2018

LUSHfire
and planning

Ref No 16-056



 BUILDING EXCLUSION AREAS
Areas susceptible to seasonal waterlogging and inundation and unsuitable for development

STRUCTURE PLAN MAP
LOT 383 PADBURY ROAD DARDANUP
26 / 03 / 2018

NOTES:

At subdivision stage Local Government shall request the Western Australia Planning Commission impose the following (but not limited to) as conditions of subdivision:

1. Section 70A notification on title advising land owners that:
 - a) All dwellings shall be constructed to have a minimum finished floor level of 500mm above the nearest adjoining road level or 500mm above natural ground level, whichever is the greater, as determined by a licenced surveyor;
 - b) The area is subject to seasonal mosquito infestation;
 - c) The area may be subject to seasonal inundation;
 - d) They may be impacted upon by noise levels above the normal assigned level for nighttime but within the bounds of the noise regulation 17 approved;
 - e) There is to be a minimum vertical separation distance of 500mm from the base of the irrigation area of an Alternate Effluent Treatment System to the highest known water table. Approval shall be sought from the Shire of Dardanup prior to installation of an effluent disposal system;
2. Preparation and implementation of a landscaping plan;
3. Preparation of an Acid Sulfate Soils Self-Assessment. Subject to the results of the self-assessment, an Acid Sulfate Soils Report and Acid Sulfate Soils Management Plan shall be submitted to and approved by the Department of Water and Environmental Regulation before any site works are commenced. Where an Acid Sulfate Soils Management Plan is required to be submitted, site works shall be carried out in accordance with the approved management plan.
4. All buildings, structures and on-site effluent disposal systems on each lot shall conform with the minimum setbacks as follows:
 - 20 metres from any road;
 - 50 metres from the edge of any wetland (sumpland) or natural vegetation line, man-made water bodies or waterway;
 - 10 metres from all side boundaries;
 - Be outside of all "Building Exclusion Areas" as identified on the endorsed Structure Plan Map.
5. A Fire Management Plan is to be prepared and implemented to the satisfaction of the Shire of Dardanup and the Department of Fire and Emergency Services.
6. Stormwater is to be managed in accordance with the approved Stormwater Management Plan;
7. The retention / water quality basin shown on the Structure Plan Map is to be shown on the diagram or plan of survey as a Reserve for Drainage and vested in the Crown under Section 152 of the Planning and Development Act 2005, such land to be provided free of cost and without payment of compensation by the Crown.



INDICATIVE ROAD CROSS SECTION
SUBJECT TO DETAILED DESIGN AND APPROVAL AT SUBDIVISION STAGE



SCALE 1:2,000 ON A3
DIMENSIONS AND AREAS SHOWN ARE
APPROXIMATE ONLY AND SUBJECT TO SURVEY


GRAHAM HOUGHTON - TOWN PLANNER
4 Sutton Court Australind WA 6233
0407 252 056

Cadastral and aerial photographs courtesy Landgate
Digital coordinates GDA94 MGA Zone 50



(Appendix ORD: 12.1D)



 BUILDING EXCLUSION AREAS
Areas susceptible to seasonal waterlogging and inundation and unsuitable for development

INDICATIVE STRUCTURE PLAN MAP
LOT 383 PADBURY ROAD DARDANUP
26 / 03 / 2018

NOTES:

At subdivision stage Local Government shall request the Western Australia Planning Commission impose the following (but not limited to) as conditions of subdivision:

1. Section 70A notification on title advising land owners that:
 - a) All dwellings shall be constructed to have a minimum finished floor level of 500mm above the nearest adjoining road level or 600mm above natural ground level, which ever is the greater, as determined by a licenced surveyor;
 - b) The area is subject to seasonal mosquito infestation;
 - c) The area may be subject to seasonal inundation;
 - d) They may be impacted upon by noise levels above the normal assigned level for nighttime but within the bounds of the noise regulation 17 approved;
 - e) There is to be a minimum vertical separation distance of 500mm from the base of the irrigation area of an Alternate Effluent Treatment System to the highest known water table. Approval shall be sought from the Shire of Dardanup prior to installation of an effluent disposal system;
2. Preparation and implementation of a landscaping plan;
3. Preparation of an Acid Sulfate Soils Self-Assessment. Subject to the results of the self-assessment, an Acid Sulfate Soils Report and Acid Sulfate Soils Management Plan shall be submitted to and approved by the Department of Water and Environmental Regulation before any site works are commenced. Where an Acid Sulfate Soils Management Plan is required to be submitted, site works shall be carried out in accordance with the approved management plan;
4. All buildings, structures and on-site effluent disposal systems on each lot shall conform with the minimum setbacks as follows:
 - 20 metres from any road;
 - 50 metres from the edge of any wetland (sumpland) or natural vegetation line, man-made water bodies or waterway;
 - 10 metres from all side boundaries;
 - Be outside of all "Building Exclusion Areas" as identified on the endorsed Structure Plan Map.
5. A Fire Management Plan is to be prepared and implemented to the satisfaction of the Shire of Dardanup and the Department of Fire and Emergency Services;
6. Stormwater is to be managed in accordance with the approved Stormwater Management Plan;
7. The retention / water quality basin shown on the Structure Plan Map is to be shown on the diagram or plan of survey as a Reserve for Drainage and vested in the Crown under Section 152 of the Planning and Development Act 2005, such land to be provided free of cost and without payment of compensation by the Crown.



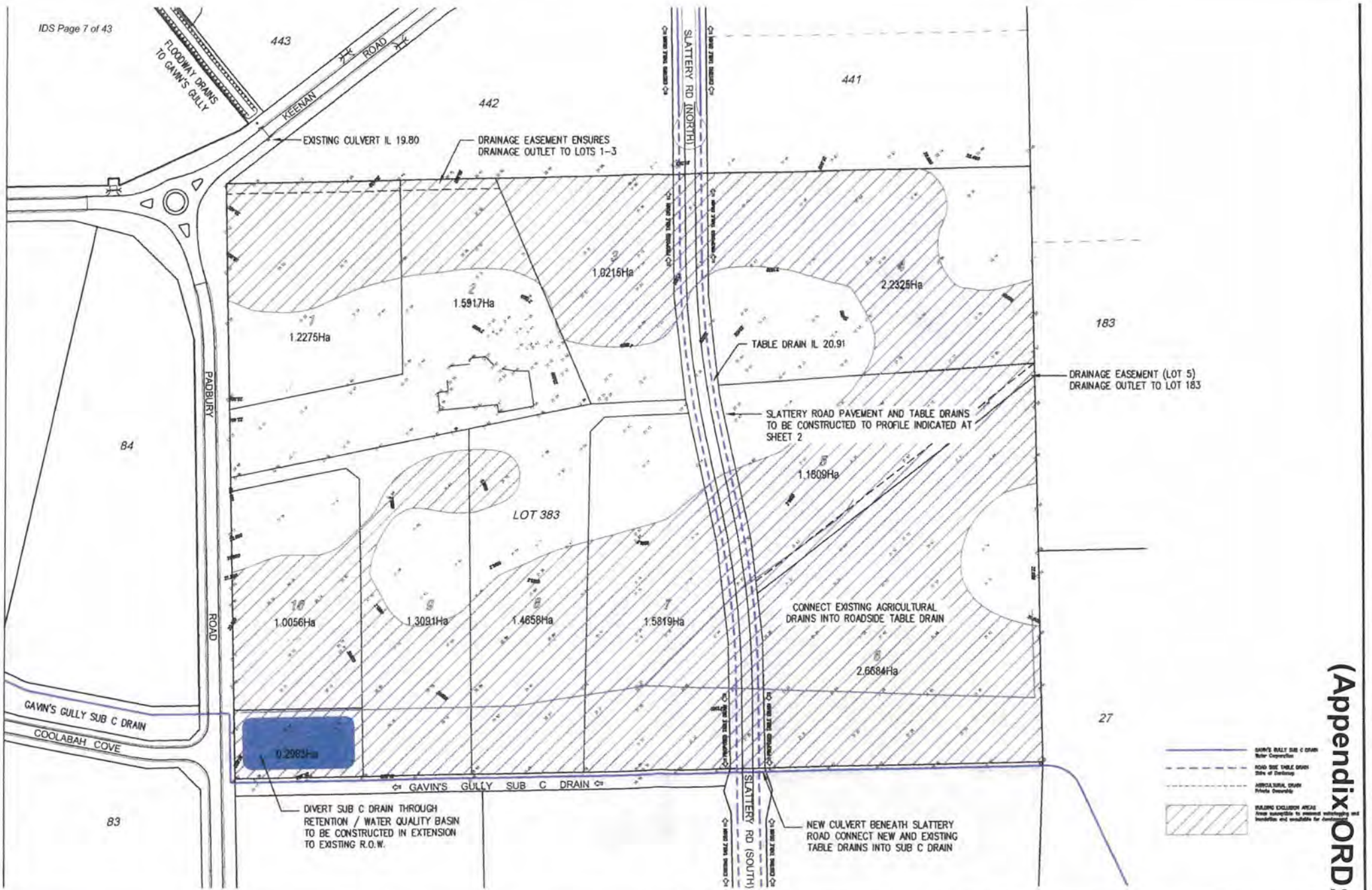
INDICATIVE ROAD CROSS SECTION
SUBJECT TO DETAILED DESIGN AND APPROVAL AT SUBDIVISION STAGE



SCALE 1:2,000 ON A3
DIMENSIONS AND AREAS SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO SURVEY

GRAHAM HOUGHTON - TOWN PLANNER
4 Sutton Court Australind WA 6233
0407 252 056
Cadastral and aerial photographs courtesy Landgate
Digital coordinates GDA94 MGA Zone 50

(Appendix ORD: 12.1D)



183

DRAINAGE EASEMENT (LOT 5)
DRAINAGE OUTLET TO LOT 183

27

- GAVIN'S GULLY SUB C DRAIN
Water Direction
- ROAD SIDE TABLE DRAIN
Side of Drainage
- AGRICULTURAL DRAIN
Private Ownership
- BUILDING EXCLUSION AREA
Areas susceptible to increased subsidence and
instability and available for demolition

(Appendix ORD: 12.1D)



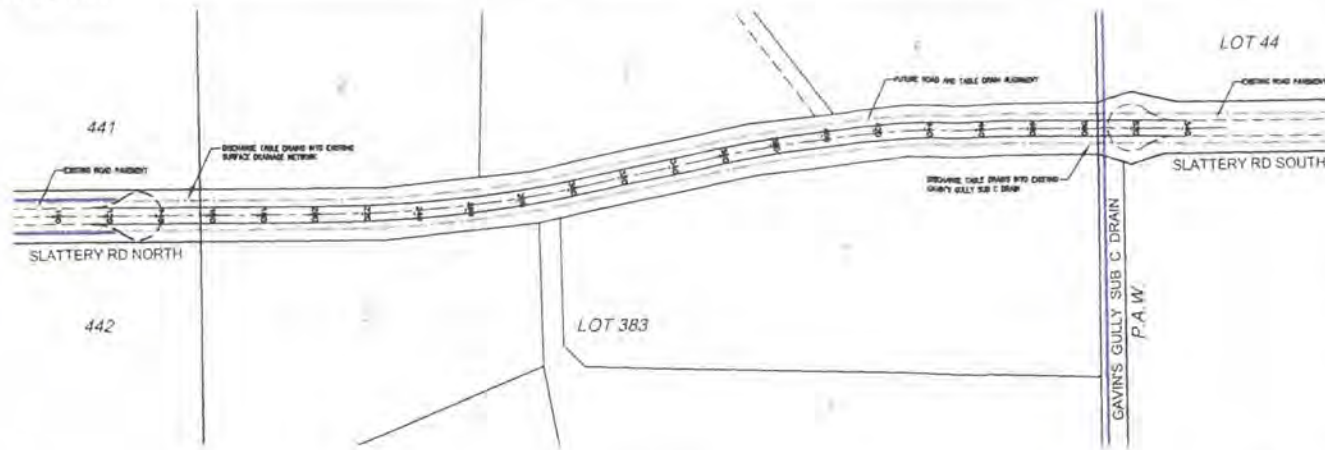
THIS DOCUMENT REMAINS THE PROPERTY OF
 DvN. YOU AGREE
 IT SHALL NOT BE USED OR COPIED WITHOUT PERMISSION
 THE DOCUMENT REMAINS PRELIMINARY UNTIL ADVISED THE CONTRACTOR

PROJECT No: PAN03-A-17
 SHEET: 1 OF 2
 REVISION: 0
 LOCAL AUTHORITY: SHIRE OF DARDANUP
 SCALE: 1 : 1000 (A1)
 DATUM: AND



REVISION DATE	No	REVISION DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED
24 FEBRUARY 2017	0	PRELIMINARY - NOT FOR CONSTRUCTION	DvN	DvN	DvN	
14 MARCH 2018	1	PRELIMINARY - NOT FOR CONSTRUCTION	DvN	DvN	DvN	

PROJECT: LOT 383 PADBURY ROAD DARDANUP
 DRAWING TITLE: STORMWATER MANAGEMENT PLAN



STORMWATER OVERVIEW

EXISTING DRAINAGE ENVIRONMENT

THE SUBJECT LAND IS LOCATED WITHIN THE STORMWATER CATCHMENT OF GAVIN'S GULLY, PREVIOUSLY UNDER THE CONTROL OF THE WATER CORPORATION. GAVIN'S GULLY IS LOCATED APPROXIMATELY 300m TO THE NORTH, ALTHOUGH A SUB DRAIN (GAVIN'S GULLY SUB C) IS LOCATED ON THE SOUTHERN BOUNDARY OF THE PROPERTY. THE LAND IS PREVIOUSLY SERVICED VIA A SERIES OF SHALLOW AGRICULTURAL DRAINS INTENDED TO RELIEVE THE AGRICULTURAL LAND FROM LONG-TERM IMMOBILIZATION. A SMALL FLOOD RUNNING EAST-WEST AND LOCATED CENTRALLY ACROSS THE PROPERTY DIVIDES THE SITE INTO TWO SUB CATCHMENTS. NORTH OF THE RIDGE, STORMWATER MIGRATES THROUGH THE RECENTLY CONSTRUCTED SUBDIVISION DRAINS ALONG HEDDAR ROAD AND SLATTERY DRIVE, BEING RETAINED IN A RECENTLY CONSTRUCTED DETENTION BASIN PRIOR TO ENTRY INTO GAVIN'S GULLY. SOUTH OF THE RIDGE, RUN-OFF ENTERS THE GAVIN'S GULLY SUB C DRAIN, WHICH DISCHARGES DIRECTLY TO GAVIN'S GULLY APPROXIMATELY 1.8km TO THE NORTH WEST.

PROPOSED DEVELOPMENT

THE PROPOSED DEVELOPMENT INCLUDES CONSTRUCTION OF SLATTERY ROAD BETWEEN BE BUILT PORTIONS OF THIS ROAD TO THE NORTH AND SOUTH. CREATION OF THE NEW RESIDENTIAL PROPERTIES AND CHANGES IN THE LAND USE FROM AGRICULTURE TO RESIDENTIAL MAY CREATE ADDITIONAL RESTRICTION TO THE "OVERLAND" FLOW OF STORMWATER WITHIN THE CATCHMENT, PARTICULARLY ACROSS NEW PROPERTY BOUNDARIES. IN ORDER TO ENSURE Ongoing DRAINAGE ROUTES THROUGH THE CATCHMENT IT IS INTENDED THAT EASEMENTS BE CREATED AT STRATEGIC LOCATIONS FOR THE PURPOSE OF PROVIDING A DRAINAGE OUTLET NOT ONLY TO NEIGHBOURING UPSTREAM PROPERTIES, BUT ALSO WITHIN THE PROPOSED SUBDIVISION.

CONSTRUCTION OF NEW ROADSIDE TABLE DRAINS WITHIN THE SUBDIVISION INCREASES THE EFFICIENCY OF THE DRAINAGE NETWORK, RESULTING IN AN INCREASE IN THE SPEED AT WHICH RUN-OFF ENTERS THE DOWNSTREAM WATERCOURSE, NAMELY GAVIN'S GULLY. GAVIN'S GULLY HAVING BEEN CONSTRUCTED TO SERVICE AGRICULTURAL LAND WITH A RELATIVELY SLOW RATE OF STORMWATER ENTRY LACKS THE CAPACITY TO ACCEPT THE HIGHER RATES OF STORMWATER RUN-OFF RESULTING FROM URBAN DEVELOPMENT. CONSEQUENTLY, IT IS NECESSARY TO PROVIDE DETENTION CAPACITY WITHIN THE NETWORK IN ORDER TO CONTROL THE OUTFLOW RATES TO THAT WHICH OCCURRED PRIOR TO DEVELOPMENT. IT IS PROPOSED THAT THIS BE ACHIEVED BY CONSTRUCTION OF A DETENTION BASIN IN THE SOUTH-WESTERN CORNER OF THE PROPERTY WHERE THE FLOW CAN BE CONTROLLED BY OUTLET STRUCTURES.

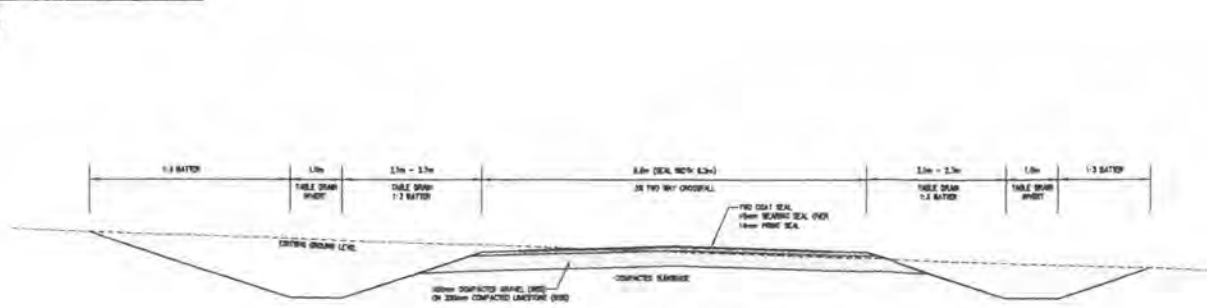
STORMWATER MANAGEMENT

ULTIMATELY, CONTROL OF STORMWATER WITHIN THE CATCHMENT IS DETERMINED BY THE CAPACITY OF GAVIN'S GULLY. THE 1:100 YEAR FLOOD LEVEL AT THE POINT WHERE THE SUB C DRAIN ENTERS THE MAIN GULLY IS ESTIMATED AT 18.6m AHD. GROUND LEVELS AT THE SUBJECT SITE VARY FROM 20.1m TO 22.7. INDICATING THAT ALTHOUGH LOWER AREAS TO THE PERIMETER OF THE SUBDIVISION SITE MAY BECOME IMMERSED DURING A MAJOR STORM EVENT, VERTICAL RELIEF WITHIN THE SITE PROVIDES PROTECTION TO FUTURE RESIDENTIAL DEVELOPMENT FROM POTENTIAL FLOODING.

VERTICAL CURVES	GRADIENT	HORIZONTAL CURVES	DATUM 18.0
CUT (+) / FILL (-)	0.22%	200.00 m	0.00
NATURAL SURFACE		200.00 m	0.00
CENTRELINE LEVELS		200.00 m	0.00
CHAINAGE		200.00 m	0.00

SLATTERY ROAD - LONGITUDINAL SECTION

4.5m TWO COAT BITUMEN SEAL
 SCALES: HORIZONTAL 1:100
 VERTICAL 1:10



TYPICAL ROAD PAVEMENT CROSS SECTION
 TWO COAT BITUMEN SEAL & TABLE DRAIN
 SCALE 1:50



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PROJECT No: FANDS-A-17
 SHEET: 2 OF 2
 LOCAL AUTHORITY: SHIRE OF DARDANUP
 SCALE: 1:1000 (A1)
 DATUM: AHD



REVISION DATE	No	REVISION DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED
24 FEBRUARY 2017	0	PRELIMINARY - NOT FOR CONSTRUCTION	DVN	DVN	DVN	
14 MARCH 2018	1	PRELIMINARY - NOT FOR CONSTRUCTION	DVN	DVN	DVN	
28 MARCH 2018	2	PRELIMINARY - NOT FOR CONSTRUCTION	DVN	DVN	DVN	

PROJECT: LOT 383 PADBURY ROAD DARDANUP
 DRAWING TITLE: STORMWATER MANAGEMENT PLAN

(Appendix ORD-12.1D)

From: Daniel Wong [mailto:daniel.wong@dwer.wa.gov.au]

Sent: Wednesday, 7 March 2018 4:17 PM

To: Jake Whistler

Subject: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

7th March 2018

Our Reference: PA 018591, DWERT50~7

Your Reference: TPS-R0504924 JW:gg

To: Shire of Dardanup

From: Department of Water and Environmental Regulation

8/03/2018

Attention: Jake Whistler

RE: Structure Plan & Town Planning Scheme No. 3, Amendment No. 199 (August 2017) – Lot 383 Padbury Road, Dardanup West

Dear Jake,

Thank you for referring the above proposed Scheme Amendment and Structure Plan to the Department for comment.

Scheme Amendment and Structure Plan summary

This amendment is to rezone Lot 383 Padbury Road, Dardanup West from General Farming zone to Small Holding zone to allow for the subdivision and development of ten rural residential lots.

The purpose of the Structure Plan is to facilitate the subdivision and development of the land for rural residential lots (~1-3 ha).

This proposal is part of the larger Dardanup West/Crooked Brook structure plan area (Attachment 1).

A main feature of this development is the construction of Slattery Way that runs in a North/South direction that separates the development into east and west portions.

Site situation

Much of the subject land is over a 'Multiple Use' Palusplain wetland and subject to localised seasonal flooding, and as confirmed in the referral.

It is noted from the Stormwater Management Plan in the Structure Plan report that the Gavin's Gully Sub C Drain is owned by the Water Corporation, to which this development is proposed to drain into and eventually flows into the Preston River about 2 km downstream.

Due to the increased runoff from impervious surfaces (with the landuse change) with the slow and limited stormwater flow rate of Gavin's Gully (that was designed to accept flows from agricultural landuse only), the structure plan proposes to construct a detention basin to mitigate against the increased flows and volumes.

The proposal is within the Bunbury Groundwater Area as proclaimed under the *Rights in Water and Irrigation Act 1914*.

The proposal is located within a non-proclaimed area for surface water under the *Rights in Water and Irrigation Act 1914*.

Identified risks

In view of the above situation, the Department identifies the following risks:-

- Risk of contamination of groundwater if there is insufficient vertical separation of

onsite sewage disposal systems to groundwater or the soils PRI is insufficiently amended

- Potential for surface water contamination if the on-site sewage disposal system is within an area subject to inundation or is located too close to a drainage system
- The Stormwater Management Plan information (in the Structure Plan report) states that the 1:100 flood level is estimated at 18.6 m AHD (where Sub C Drain enters the main gully), but no details have been provided as to how the estimation was made. It may therefore be possible that the lots finished floor level could be insufficient posing a flooding risk.
- Management of surface water from lots and roadside drainage into the Water Corporation owned Gavin's Gully; noting that Water Corporation may not be willing to accept additional discharge.
- As the agricultural drains are to remain in private ownership (proposed Lots 7-11) and if these are to continue to perform a drainage function, there is a risk that this infrastructure may not be managed appropriately or to a sufficient standard that may cause drainage issues.
- In the absence of 'whole of catchment information', there is a stormwater management risk that the infrastructure (i.e. culvert beneath Slattery Road, drainage easements and detention basin) proposed in the structure plan may not be of sufficient capacity to attenuate increased flows from adjacent development resulting in increased flooding risk.

Risk mitigation

To mitigate against the above risks, the Department provides the following advice:-

- The Shire should satisfy itself that estimated flood levels have been assessed to a sufficiently rigorous level to ensure that building finished floor levels can be adequately set against flooding.
- The Building Exclusion Area, drainage easements and drains (as identified in the Structure Plan) should also exclude on-site sewage disposal areas, noting that in accordance with section 6.2.2 of the Government Sewerage Policy (Nov 2017), an on-site sewage disposal system is not to be located within 100 metres of a drainage system (that discharges directly into a waterway) and any area subject to inundation and/or flooding in a 10 per cent Annual Exceedance Probability (AEP) rainfall event.
- More details should be provided regarding the sizing and capacity of the detention basin (including drainage easements and culvert); in view of the ensuring sufficient capacity to service the structure plan area, and also future adjacent developments.
- Agreement from the Water Corporation would be required to ensure that the additional flows into Gavin's Gully (from the Structure Plan area and future adjacent developments) would be acceptable, noting the need for management/maintenance.

Recommendations

- That additional detail be provided in the Structure Plan supporting information (i.e. Stormwater Management Plan) to mitigate against the above risks.
- The Shire commissions a drainage and groundwater study over the entire Crooked Brook/Dardanup West Structure Plan to:
 - investigate the need for drainage upgrades as outlined in the Hydrological Review of the Crooked Brook Structure (JDA 2005), and
 - develop a more rigorous understanding the groundwater regime to enable on-site effluent system applications to be appropriately assessed.

Thank you.

Yours faithfully,

Daniel Wong

Environmental Officer
Department of Water and Environmental Regulation
South West Region

Email: daniel.wong@dwer.wa.gov.au
Phone: 08 9726 4113
Fax: 08 9726 4100
Postal: PO Box 261, Bunbury, WA 6231
Location: 35-39 McCombe Road, Bunbury, WA 6230

Water Resource Advice Only

The Department of Water has recently merged with the Department of Environment Regulation and Office of the Environmental Protection Authority to create the new agency Department of Water and Environmental Regulation.

The former agencies are in the process of amalgamating their functions. Until this fully occurs, please note that the advice in this correspondence pertains only to water resource matters previously dealt with by the Department of Water.

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Government of Western Australia
Department of Fire & Emergency Services



Our Ref: D04720
Your Ref: TPS-R0504924

Jake Whistler
Shire of Dardanup
records@dardanup.wa.gov.au

Dear Mr Whistler,

**RE: SCHEME AMENDMENT NO. 199 AND ASSOCIATED STRUCTURE PLAN - LOT 383
PADBURY ROAD, DARDANUP WEST**

I refer to your letter dated 23 January 2018 regarding the submission of a Bushfire Management Plan (BMP) (Version B), prepared by Lush Fire & Planning dated 16 May 2017, for the above local planning scheme amendment and associated structure plan.

DFES provide the following comments with regard to *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines).

Assessment

Policy measure 6.3 c) Non-compliance with the Bushfire Protection Criteria

Element	Assessment	Action
Siting & design	<p>A2.1 – not demonstrated</p> <p>The structure plan map dated 26 October 2017 included within the scheme amendment report identifies ten proposed lots, and the BMP identifies eleven proposed lots on a "Proposed Subdivision" plan (Figure 5 page 10) - Clarification is required.</p> <p>The structure plan map dated 26 October 2017 identifies significant areas susceptible to seasonal waterlogging and inundation and unsuitable for development. These areas are identified as "building exclusion areas".</p> <p>The BMP does not identify Asset Protection Zones or more broadly, the 'developable areas' within each proposed lot. Developable areas are those areas in which a building can be built and include areas of BAL-29 and below. This should also include other site constraints, such as scheme setbacks and in this instance, areas outside of the "building exclusion areas".</p>	<p>Modification required.</p> <p>Please update all figures in the BMP to reflect the correct structure plan as necessary.</p> <p>Figure 10 of the BMP also needs to reflect the "building exclusion areas", and overlay areas of BAL 29 or below.</p>
Vehicular Access	<p>A3.4 – not demonstrated</p> <p>In bushfire prone areas, lots with battle-axe access legs should be avoided because they often do not provide two-way access and egress for residents and may be easily blocked by falling trees or debris during a</p>	<p>Not demonstrated.</p> <p>Please provide justification for non-compliance or modify the structure plan accordingly.</p>

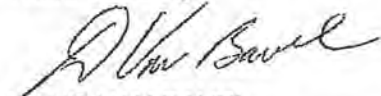
	bushfire event. DFES recommends the structure plan be modified to ensure through access thereby avoiding the need for battle-axe lots.	
Water	A4.2 – not demonstrated The BMP at 6.2.4 details the requirement for a dedicated 50,000 litre water tank supply. It goes on to detail that <i>“Council have instructed that the water tank is to be provided at the West Dardanup fire brigade station located on Garvey Road”</i> . The BMP also details that this location exceeds the maximum two-kilometre distance as required by the Guidelines.	Not demonstrated Please provide justification from the local government for the location of the water tank or modify the location accordingly.

Recommendation – not supported modifications required

DFES has assessed the BMP for the proposed scheme amendment and associated structure plan, and has identified a number of issues that need to be addressed prior to support of the proposal. It is recommended that the application be deferred pending the required modifications outlined in the table above.

If you require further information, please contact Jackie Holm on telephone number 9482 1785.

Yours sincerely



DOUG VAN BAVEL
LAND USE PLANNING OFFICER

26 February 2018



Bushfire Management Plan



**Lot 383 Padbury Road
Dardanup**

LUSH FIRE & PLANNING
PO Box 114
Woodanilling WA 6316
0418 954 873
ABN 74 232 678 543

REF: 16-056
Ver C
April 2018

Lot 383 Padbury Road

Document Reference

Property Details

Street No	Lot No's	Plan	Street Name
175	383	247456	Padbury Road
Locality	Dardanup West	State	WA Postcode 6236
Local Government Area	Dardanup		
Description of the building or works	Rural residential subdivision		

Report Details

Job No	16 - 036	Assessment Date	5 September 2016
Ver	Date	Revision	
A	4 January 2017	Preliminary	
B	16 May 2017	Revised subdivision design and updated policy measures	
C	16 April 2018	Revised subdivision design and DFES comments	

Accreditation Statement

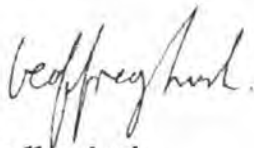
I hereby declare that I am a BPAD accredited bushfire practitioner:

BPAD Level 2 Bushfire Practitioner – Prescriptive

Accreditation No 27682

Disclaimer

The measures contained in this report do not guarantee that a building will not be damaged in a bushfire. The ultimate level of protection will be dependent upon the design and construction of the dwelling and the level of fire preparedness and maintenance under taken by the landowner. The severity of a bushfire will depend upon the vegetation fuel loadings; the prevailing weather conditions and the implementation of appropriate fire management measures.



Geoffrey Lush

16 April 2018
geoffrey@lushfire.com.au

Lot 383 Padbury Road

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Lot 383 Padbury Road

1.0 INTRODUCTION

This bushfire management plan is prepared to support the proposed rezoning and subsequent subdivision of Lot 383 Plan 247456 Padbury Road Dardanup West. The site is located on the corner of Padbury and Keenan Roads.

The subject land is located approximately 2.5 kilometres west of the Dardanup townsite as shown in Figure 1.

This report has been prepared to demonstrate that the design of proposed subdivision has given appropriate regard to:

- State Planning Policy 3.7 Planning in Bushfire Prone Areas; and
- Guidelines for Planning in Bushfire Prone Areas (2015)

The aim of this Report is to reduce the threat to the residents in the proposed subdivision and fire fighters in the event of a bushfire within or adjacent to the development. It defines the responsibilities of relevant stakeholders and the measures required to manage the potential likelihood of fires starting on the proposed lots or the adjoining land. The assets which are highlighted for protection from bush fires are:

- Any future dwelling within the subdivision; and
- The existing development surrounding the properties.

The first priority for fire management is the preservation of life and to reduce the impact of bushfires on property and infrastructure (1).



Figure 1 Location Plan

1 WAPC (2015) SPP3.7 Planning in Bushfire Prone Areas page 1

Lot 383 Padbury Road

2.0 EXISTING CONDITIONS

The subject land has an area of 16.311 hectares with a frontage of 347m to Padbury Road and a depth of 468m. The cadastral information for the site is shown in Figure 2.

There is an existing dwelling, granny flat, outbuildings, and other improvements on the property. The land to the north, south and west of the property has been developed for rural residential purposes with lots generally being 2 hectares in size. The land to the east has larger un-subdivided rural lots.

The existing conditions are shown in Figure 3 and the following photographs.

The site does not contain any remnant vegetation and there is cleared pasture around the dwelling on the balance of the property. There are small areas of remnant vegetation on the adjacent and nearby road verges.

The subject land and surrounding area is flat land which has historically been used for irrigated farming and grazing. The contours for the property are shown in Figure 2 and there is a minor ridge in the middle of the property which is only 1m above the surrounding area. The gradients are minor being between 0.5 and 1.0 degrees.

There is a district drain adjacent the southern boundary. An existing fire service access is located on the southern boundary between Padbury Road and Slattery Way.

Padbury Road is a sealed local road which connects to Moore Road in the north west and to Garvey Road to the south. Keenan Way provides access to the adjoining subdivision (Killarney Glen) to the north. Slattery Way is a cul-de-sac extending to the property boundary from Keenan Way in the north and Padbury Road from the south.

The locality has a Mediterranean climate with cool wet winters and hot dry summers. It has an annual rainfall of 724mm (2). The mean maximum temperature is 30.1 °C with the highest recorded maximum temperature of 40.8 °C in January 1997.

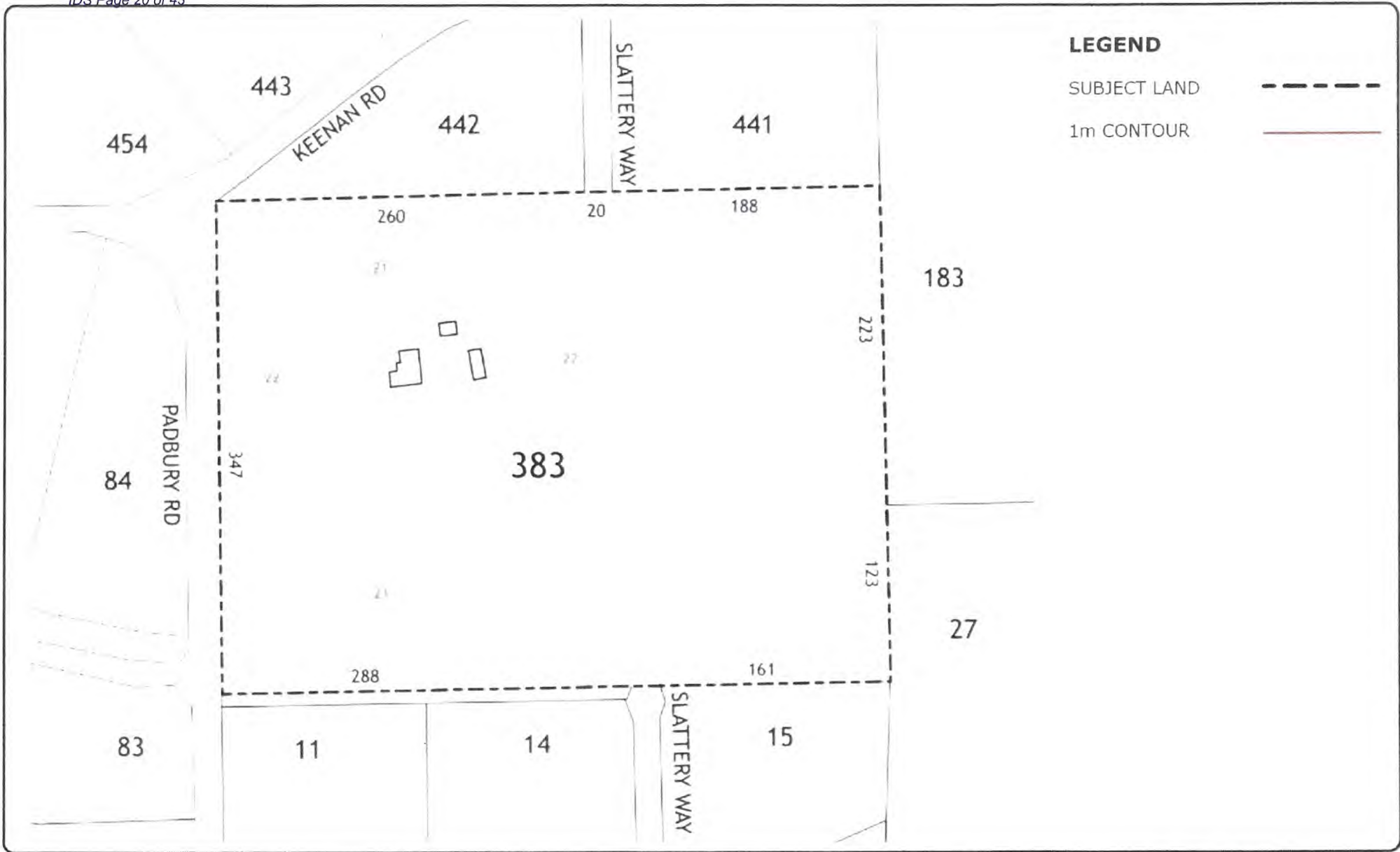
Each year there are on average:

- 52 days with temperatures over 30 °C;
- 11 days with temperatures over 35 °C; and
- 0.1 day with temperatures over 40 °C.

In summer the wind speed and direction at:

- 9:00am is typically from the east and south east between 20 and 40kph; and
- 3:00pm is typically from the west between 20 and 40kph.

2 Bureau of Meteorology – Bunbury Weather Station No 9965.



LEGEND
 SUBJECT LAND
 1m CONTOUR

FIGURE 2
 CADASTRAL PLAN



Rev	Description	Date
A	Preliminary	03/01/2017



Ref No 16-056



FIGURE 3
EXISTING CONDITIONS



Rev	Description	Date
A	Preliminary	03/01/2017



Ref No 16-056

Lot 383 Padbury Road



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6

Lot 383 Padbury Road



Photograph 7



Photograph 8



Photograph 9



Photograph 10

Photograph 11



Lot 383 Padbury Road

3.0 DEVELOPMENT FRAMEWORK

3.1 Bushfire Prone Land

An extract of the State Bushfire Prone Map for the subject land is shown in Figure 4.

The designation of bushfire prone areas triggers:

- The application of Australian Standard AS3959 Construction of Buildings in Bushfire Prone Areas under the Building Code of Australia (from the 8th April 2016);
- The provisions of the Planning and Development (Local Planning Schemes) Amendment Regulations 2015 (from the 8th April 2016); and
- The application of SPP3.7 Planning in Bushfire Prone Areas (from the 7th December 2015).



Figure 4 Bushfire Prone Land

Lot 383 Padbury Road

3.2 SPP 3.7 Planning in Bushfire Prone Areas

State Planning Policy 3.7 Planning in Bushfire Prone Areas was gazetted on the 7th December 2015. The policy provides the foundation for land use planning to address bushfire risk management in Western Australia. It contains objectives and policy measures, as well as reference to the bushfire protection criteria contained in the Guidelines.

The objectives of the policy are to:

1. Avoid any increase in the threat of bushfire to people, property and infrastructure. The preservation of life and the management of bushfire impact are paramount.
2. Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.
3. Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.
4. Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

The Policy requires that planning proposals, subdivision and development applications should have on completion:

- A moderate bushfire hazard level (BHL); and/or
- A Bushfire Attack Level (BAL) rating of between BAL-12.5 to BAL-29 applies.

3.3 Australian Standard AS3959 (2009)

AS3959 Construction of Building in Bush Fire Prone Areas (3) provides measures for improving the ability of buildings to withstand burning debris, radiant heat and flame contact during a bush fire. The lower the separation distance from bushfire prone vegetation, the higher the standard of construction is required for buildings. The construction requirements relate to:-

- Subfloor Supports;
- Floor;
- External Walls;
- External Elements and Doors
- Roofs;
- Verandas, Decks, Steps; and
- Water and gas pipes.

It is emphasised that only applying the Standard's construction measures is not a complete response to bush fire safety. The measures contained in the Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the unpredictable nature and behaviour of fire and extreme weather conditions.

3 Standards Australia (2009) AS 3959 – Construction of Buildings in Bush Fire Prone Areas. Sydney. Standards Australia International Ltd.

Lot 383 Padbury Road

3.4 Planning Bulletin 111 Planning in Bushfire Prone Areas

A revised version of Planning Bulletin 111 was released in October (2016) to provide improved guidance for the administration of SPP3.7.

It states that the overarching policy intentions for Planning in Bushfire Prone Areas are:

- That strategic planning documents or proposals, subdivision and development applications within a bushfire prone area, should demonstrate a Bushfire Attack Level (BAL) of 29 or below; and
- Proposals that on completion, are extreme and/or BAL-40 or BAL-Flame Zone will generally not be supported (subject to exemptions relating to minor or unavoidable development).

3.5 Fire Prevention Order

Within the Small Holdings Zone which includes the subject land, Council's fire prevention order requires:

- Bare earth firebreaks of 2m width and 4m in height must be maintained within and adjacent to the lot boundary.
- Fire hazards on properties must be slashed to a height of no more than 50mm and flammable material must be removed.
- Must have a 20 metre low fuel area around all buildings and haystacks or groups thereof.

Fire prevention measures must be completed by the 30th November each year and maintained until the 26th April.

4.0 PROPOSED DEVELOPMENT

The proposed subdivision is shown in Figure 5. This consists of creating ten (10) lots ranging in size from 1.0ha to 2.6ha. Figure 5 also shows the building exclusion areas and the boundary setbacks contained in the Planning Scheme being:

- 20m from the front boundary; and
- 10m from the side and rear boundaries.

Slattery Way will be extended through the subdivision being a 20m wide road reserve connecting to the existing road on the northern and southern boundaries. There are two battle axe lots with the access leg being 10m wide and 49m and 68m long respectively.

A drainage reserve will be located in the south western corner of the site with an area of 0.2983ha. A water tank reserve will be located on the southern boundary with an area of 0.09ha.



Appendix ORD: 12.1D)

FIGURE 5
PROPOSED SUBDIVISION



Rev	Description	Date
A	Preliminary	03/01/2017
B	Subdivision plan	12/05/2017
C	Subdivision design	11/04/2018



Ref No 16-056

Lot 383 Padbury Road

5.0 THE BUSHFIRE ISSUE

5.1 Bushfire History

The annual fire season extends from approximately mid-October to mid-May. This is the normal period where weather conditions are conducive to the ignition and spread of bushfires. The fire risk increases once vegetation has cured which is generally later in the season.

Bush fires occur annually within the locality with sufficient intensity to cause property damage and potentially to be life threatening.

5.2 Bushfire Hazard

A Bushfire Hazard Level assessment provides a 'broadbrush' means of determining the potential intensity of a bushfire for a particular area.

The bush fire hazard primarily relates to the vegetation on the site, the type and extent (area) of vegetation and its characteristics. The methodology for determining the bushfire hazard level is contained in the Guidelines for Planning in Bushfire Prone Areas (Section 4.1 and Appendix 2). This classifies vegetation based on tree height and the percentage of canopy cover. The classification of the vegetation also takes into account The Visual Guide for Bushfire Risk Assessment in Western Australia (WAPC 2016).

The vegetation classifications are shown in Figure 6.

The Bushfire Hazard Level assessment is shown in Figure 7 and this includes the classification of the hazard vegetation.

The subject generally has a moderate hazard rating which is primarily due to pasture / grassland areas being assigned a moderate hazard level. Land with a moderate bushfire hazard rating can be developed in accordance with the policy measures in SPP3.7 which includes compliance with the Bushfire Protection Criteria.

Land with an extreme bushfire hazard rating should not be developed unless it can be shown that the hazard can be permanently reduced to a moderate level.

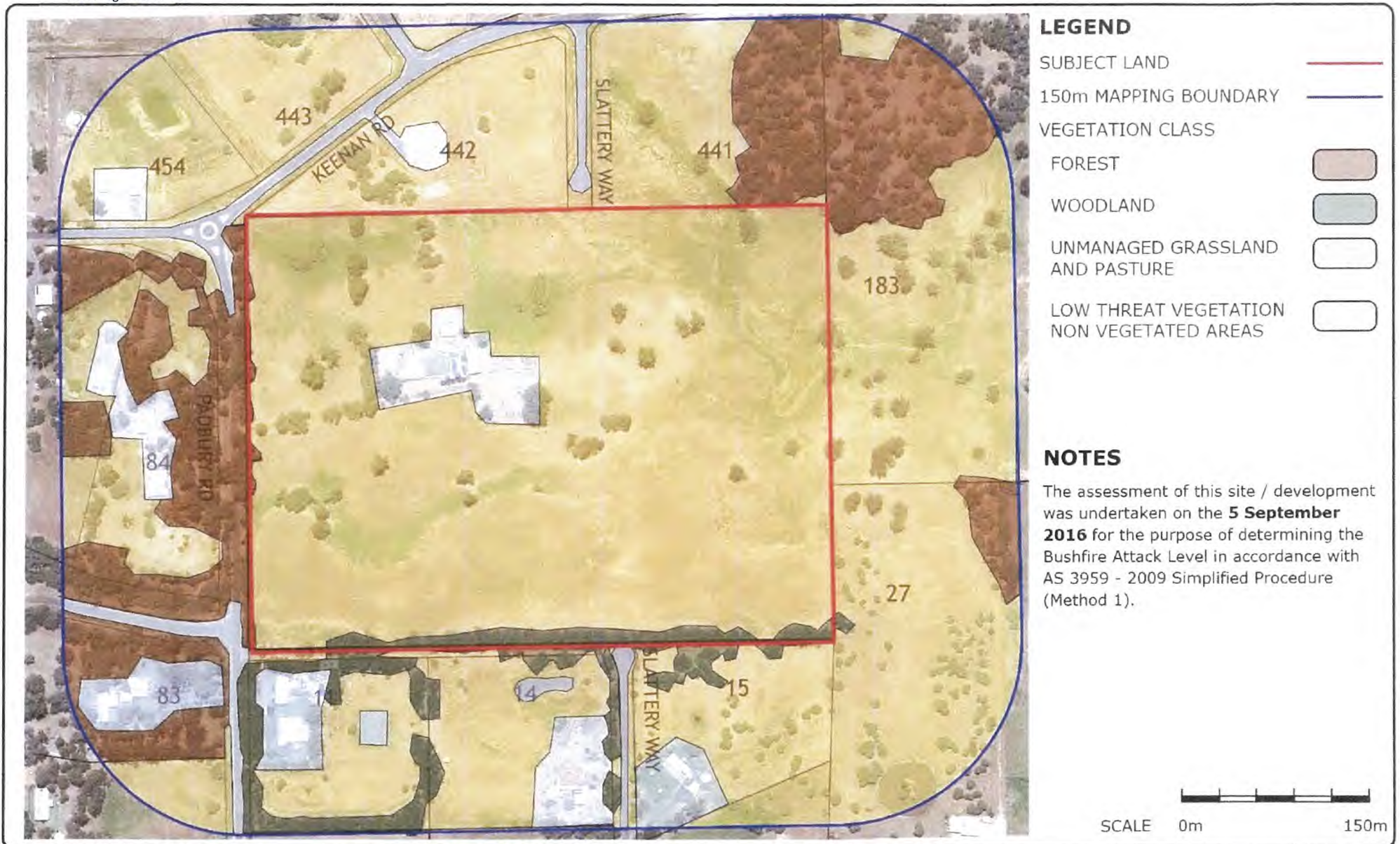


FIGURE 6
VEGETATION CLASSIFICATIONS



Rev	Description	Date
A	Preliminary	12/05/2017



Ref No 16-056

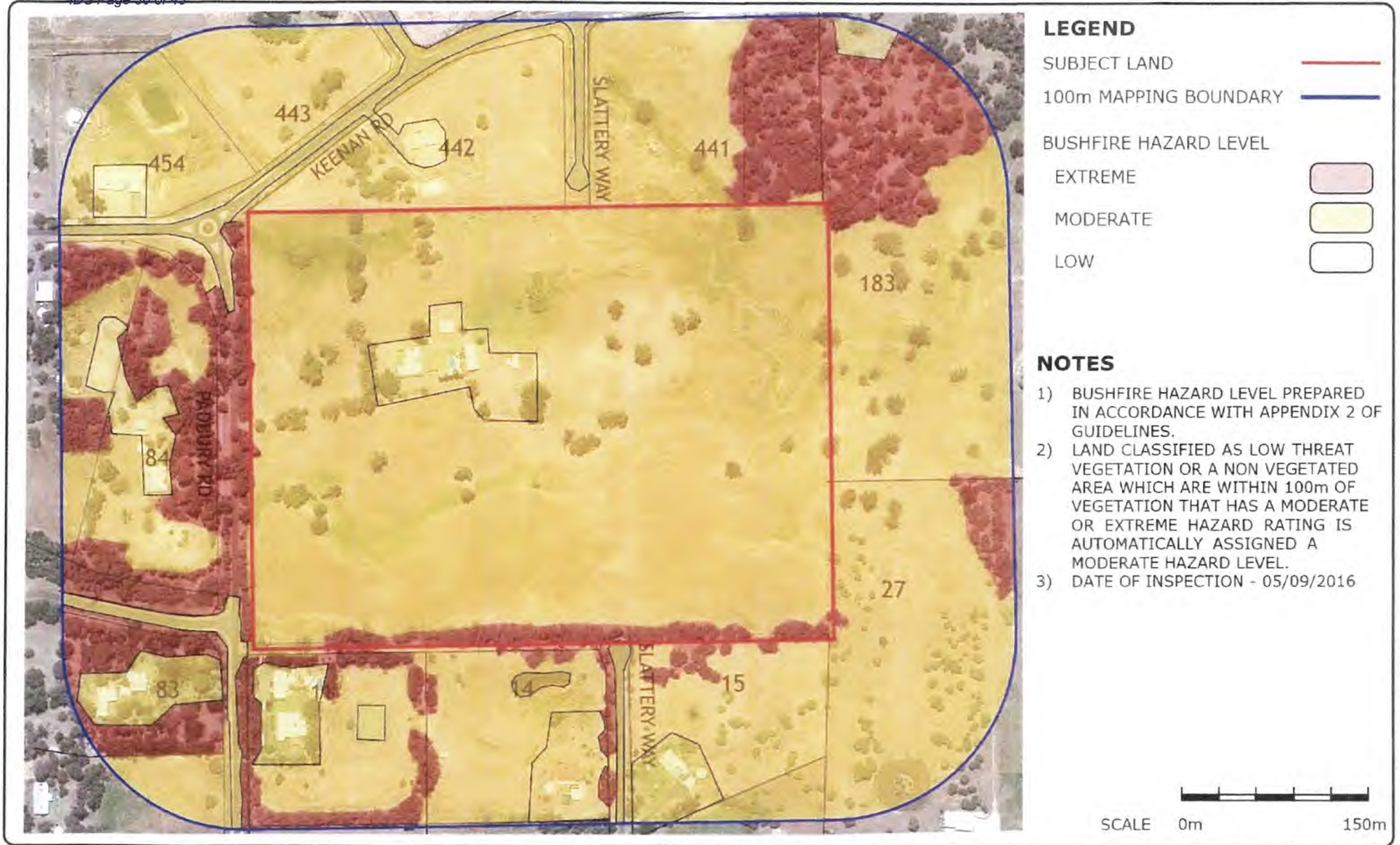


FIGURE 7
BUSHFIRE HAZARD LEVELS



Rev	Description	Date
A	Preliminary	03/01/2017
B	BHL Methodology	12/05/2017



Ref No 16-056

(Appendix ORD: 12.1D)

Lot 383 Padbury Road

5.3 BAL Contour Map

A BAL Contour Map is shown in Figure 8. A BAL Contour Map is a plan of the subject lot/s illustrating the potential radiant heat impacts and associated indicative BAL ratings in reference to any classified vegetation remaining within 100 metres of the assessment area after the development is completed.

The assumptions for the preparation of the BAL Contour Map are:

- That the pasture areas in the adjoining properties has been classified as 'grassland' as the applicant does not have any control over these areas;
- That the paddock areas within each lot will be maintained as Low Threat Vegetation. Where this does not occur then an increased BAL rating may apply when development occurs; and
- That any landscaping or revegetation will be classified as low threat vegetation pursuant to AS3959 Clause 2.2.3.2

Where an adjoining lot has Grassland vegetation then assuming that there is a minimum 10m side boundary setback a BAL-29 rating would apply as shown in Table 1.

Table 1 Grassland BAL Setbacks

Vegetation Classification	Bushfire Attack Levels (BALs)				
	BAL - FZ	BAL - 40	BAL - 29	BAL - 19	BAL - 12.5
	Distance (m) of the site from the predominant vegetation class				
	All upslopes and flat land				
G Grassland	< 6	6 - < 8	8 - < 12	12 - < 17	17 - < 50

5.4 District Context

The relationship of the subject land to the surrounding area is shown in Figure 9.

The subject is located in the centre of the Dardanup Small Holdings area which extends between Moore Road and the Picton - Boyanup Road and this area includes the Copplestone and West Dardanup locations.

The proposed roads are in accordance with the approved Dardanup Small Holdings Structure Plan. The future extension of Keenan Road to the Dardanup townsite will improve the accessibility to the area.

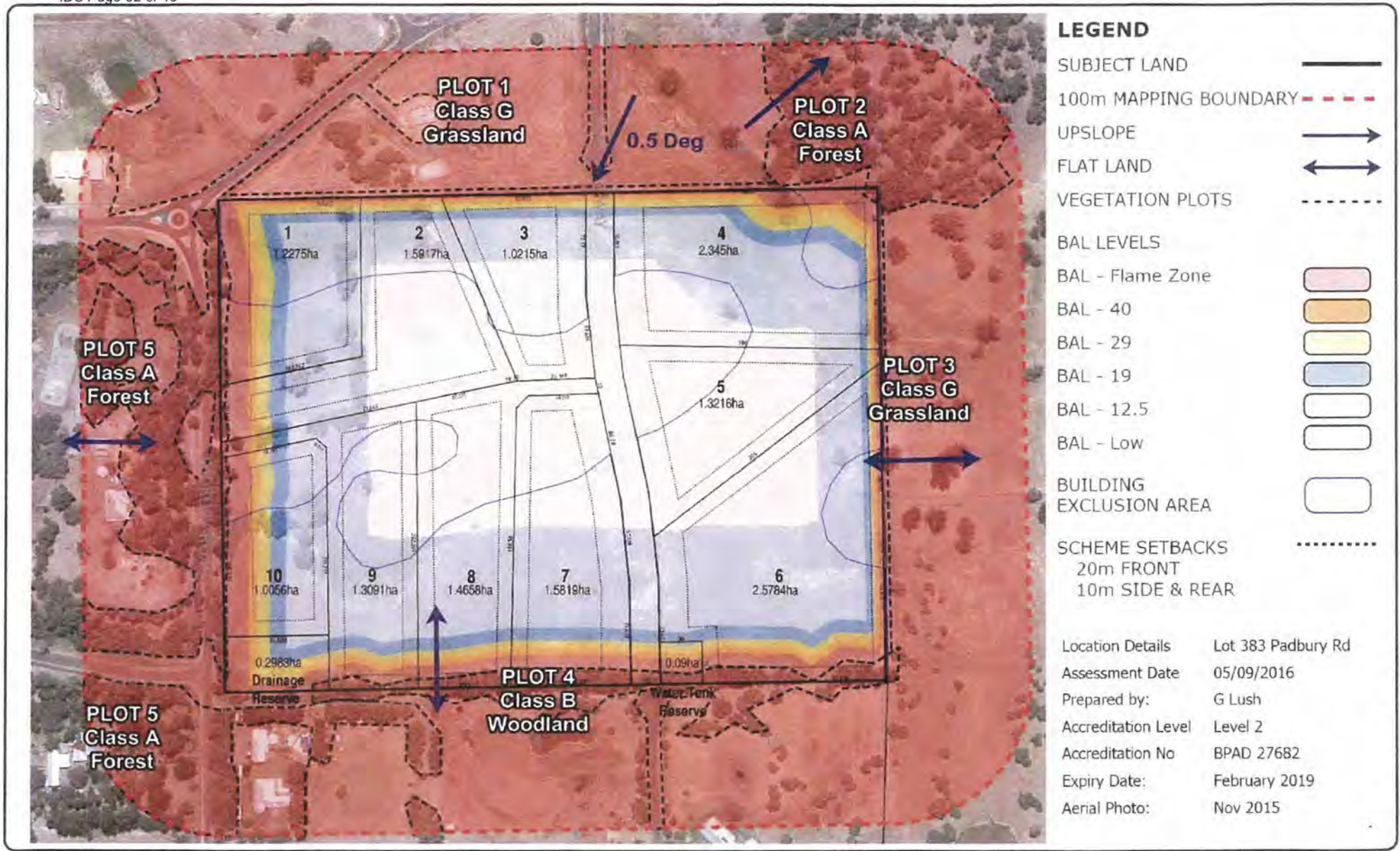


FIGURE 8
BAL CONTOURS

SCALE 0m 100m



Rev	Description	Date
A	Preliminary	03/01/2017
B	Subdivision Plan	12/05/2017
C	Building Exclusion & Setbacks	20/03/2018



Ref No 16-056

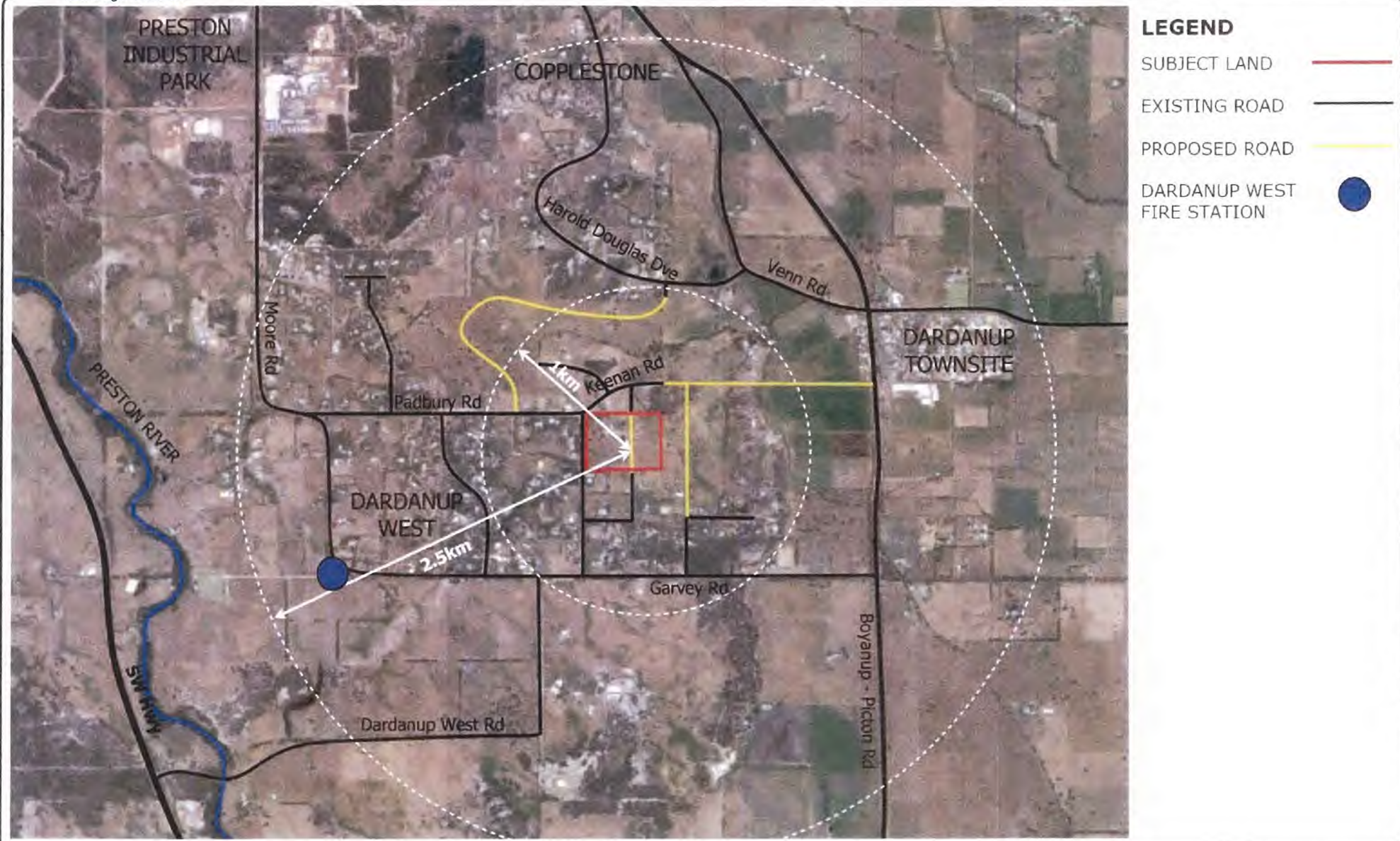


FIGURE 9
DISTRICT CONTEXT



Rev	Description	Date
A	Preliminary	12/05/2017



Ref No 16-056

6.0 FIRE MITIGATION MEASURES

In formulating the proposed mitigation measures regard has been given to the objectives, general principles, guidance statements and performance criteria contained in the Guidelines for Planning in Bushfire Prone Areas and specifically the Bushfire Protection Criteria. The mandatory requirements in the Bushfire Protection Criteria are referred to as "acceptable solutions" and these are designated below in brackets after each heading.

The fire management recommendations for the subject land and are shown on Figure 10 and discussed further in the following sections.

6.1 Bushfire Protection Criteria

The Bushfire Protection Criteria are contained in Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas (2015).

The criteria contain a set of performance criteria and acceptable solutions that new subdivision and developments are required to meet in bush fire prone areas. The main components are:

- Element 1 Location;
- Element 2 Siting and Design of Development;
- Element 3 Vehicular Access; and
- Element 4 Water.

6.1.1 Element 1 Location

A1.1 Development Location

This provision stipulates that the development is to be located so that it has or will have:

- A moderate to low bushfire hazard level; or
- A Bushfire Attack Level rating of BAL-29 or below.

As shown in Figure 7 the subject land has a moderate bushfire hazard rating.

The potential BAL Contours are shown in Figure 8. This illustrates the potential radiant heat impacts and associated indicative BAL ratings in reference to the classified vegetation which is predominantly located on the adjoining properties. It assumes that the paddock areas within each lot will be maintained as Low Threat Vegetation. Where this does not occur then an increased BAL rating may apply when development occurs.

Figure 8 also shows the building exclusion areas and the minimum boundary setbacks provided for in the Planning Scheme ie 20m front boundary; 10m side and rear boundaries. There are minor portions of lots which have a BAL-40 or BAL-FZ rating encroaching past these setbacks. However, any BAL assessment that results in a BAL 40 or FZ rating will then trigger a Development Application pursuant to Clause 78D Part 10A of the Planning and Development (Local Planning Schemes) Regulations 2015. As part of this application local government can require the dwelling to be sited so as to achieve a BAL-29 rating.

It is also noted that a 20m asset protection zone will provide a BAL-12.5 rating from Class G Grasslands either on upslopes or downslopes of less than 5 degrees.



LEGEND

SUBJECT LAND

EXISTING DRIVEWAY

EXISTING FIRE SERVICE ACCESS ROUTE

DEVELOPABLE LAND

This reflects the net area where dwellings can be constructed after excluding:

- Land with a BAL-40 or BAL-FZ rating;
- Land within the minimum boundary setbacks prescribed in the Planning Scheme; and
- Building exclusion areas shown on the local structure plan.

ASSET PROTECTION ZONE

The plan shows an indicative 20m asset protection zone around the Developable Land. In practice this will vary depending upon the BAL-29 setback distance.

3m BOUNDARY FIREBREAK

50,000L STATIC WATER SUPPLY TANK AND RESERVE ●

DRIVEWAYS LONGER THAN 50m

These are to have a 4m wide trafficable surface with 6m horizontal clearance to vegetation. A 17.5m diameter turning circle shall be provided in proximity to the dwelling.

10m BATTLE AXE LEGS

No trees are to be planted along the driveways.

FIGURE 10
BUSHFIRE MITIGATION MEASURES



Rev	Description	Date
A	Preliminary	04/01/2017
B	Update provisions	15/05/2017
C	Revised plan	11/04/2018



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Lot 383 Padbury Road

Recommendations

1. That dwellings be located so as to have a maximum BAL-29 rating.
2. That any application for a building permit for a dwelling is to include an individual BAL assessment to confirm that sufficient land has been cleared to provide for BAL-29 setbacks.

6.1.2 Element 2 Siting and Design of Development

A2.1 Asset Protection Zone (APZ)

An asset protection zone is a "low fuel zone" located around a building. The APZ is by default the distance between the building and the hazard vegetation provided that this is not less than a BAL-29 rating.

The requirements for the asset protection zone are as follows:

- a) Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances.
- b) Location: 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 (see explanatory notes).
- c) Management: the APZ is managed in accordance with the following requirements:
 - 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 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
 - 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.
 - 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 millimetres 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 millimetres or less.

Lot 383 Padbury Road

Recommendations

3. That the vegetation within the BAL setback is to be maintained as an asset protection zone in accordance with the APZ specifications.

6.1.3 Element 3 Vehicular Access

A3.1 Two Access Routes

The subject land has access from two directions (south and west) from Padbury Road and also Slattery Way.

A3.2 Public Roads

The proposed subdivision roads will be designed in accordance with the standards specified in the Local Government Subdivisional Guidelines (4) which meet required specification for bushfire access.

A3.3 Cul – de-sacs

This is not applicable to the subdivision.

A3.4 Battle-Axes

There are two battle axe legs in the proposed subdivision. These are 68 and 50m long with a width of 10m which exceeds the minimum requirement in Table 6 of the Guidelines. The Guidelines indicated that battle axe legs should be avoided in bushfire prone areas as they do not provide two way access and can be potentially blocked by falling trees.

The possible alternative design solutions for Lots 8 and 9 would be to:

1. Reconfigure the design of Lots 7, 8, 9 and 10 re move the battle axe legs; or
2. Construct a public road across the northern boundary of these lots which would also remove the battle axe legs.

Option 1 is not viable due to the extent of the building exclusion, low lying areas on the southern portion of the lots.

Option 2 is not viable because of the proximity to the intersections with:

- Padbury and Keenan Roads on the northern boundary of the subject land; and
- Padbury Road and Coolabah Close opposite the south western corner for the subject land.

Further it is noted that there is an existing fire service access route along the southern boundary which already provides an east west access. Slattery Way extends south from the site connecting into Padbury Road less than 300 south of the site boundary. In summary there is already a highly connective road network and the provision of a further road to access two lots, which only have pasture, is difficult to justify.

A3.5 Private Driveways Longer than 50 metres

The driveways to proposed Lot 9 and 10 will exceed 50m due to the length of the battle axe legs. The driveways for the other lots may exceed 50m in length depending upon

4 Institute of Public Works Engineering Australia WA Division Inc. (2009) Local Government Subdivisional Guidelines Perth

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where the dwelling is located. If it does, then it must comply with the following provisions:

- A minimum trafficable surface of 4m width;
- A horizontal clearance of 6m to vegetation;
- A maximum grade of 1:10;
- Curves with a minimum 8.5m inner radius;
- Passing bays every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house;
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes; and
- An all-weather surface (i.e. compacted gravel, limestone or sealed).

A3.6 Emergency Access Ways (EAW)

This is not applicable to the subdivision.

A3.7 Fire Service Access Routes

This is not applicable to the subdivision.

A3.8 Firebreak Width

As all the proposed lots are greater than 0.5ha in area it is required to have a 3m wide boundary firebreak.

Recommendations

4. Any new driveway shall have a minimum 4m wide trafficable surface and any access gate shall be a minimum width of 3.6m.
5. Where a driveway is more than 50m in length a turnaround area suitable to a fire appliance shall be provided within proximity to the dwelling.
6. That all lots shall provide a minimum 3m wide boundary firebreak.

6.1.4 Element 4 WaterA4.1 Reticulated Areas

This is not applicable to the subdivision.

A4.2 Non-reticulated areas

A water tank with a hydrant or standpipe is required in non-reticulated areas. This is to have a minimum volume of 50,000L per 25 lots.

A proposed reserve for a water tank is shown on the southern boundary of the subject land.

A4.3 Non-reticulated areas - One Additional Lot

This is not applicable to the subdivision.

Recommendations

7. That a 50,000L water tank and fitting be provided as shown in Figure 10.

Lot 383 Padbury Road

8. That any new dwelling shall provide with a static water supply tank having a minimum capacity of 10,000L specifically for firefighting with:
- A 50mm male camlock couplings with full flow valves;
 - The fittings positioned at the base of the tank so that the total tank capacity is available for firefighting purposes at any time;
 - An adequate hard standing access must also be provided adjacent to such connection/s and must be readily identifiable; and
 - A nonelectric firefighting pump (normally 5.5hp) with sufficient hose to protect the dwelling and the surrounding low fuel zone.

6.2 Annual Property Maintenance

Annual property maintenance is an important preparation for the annual fire season. This should focus on the area around the proposed dwelling and the following maintenance works should be considered:

Autumn and Winter (May-August)

- Tree pruning and remove lower branches and check that power lines are clear.
- Clear long grass, leaves, twigs and flammable shrubs.
- Overhaul the emergency water pump, fixtures and hoses.

Spring (September-November)

- Prepare boundary firebreaks.
- Carry out maintenance of strategic firebreak.
- Reduce grass levels within the hazard separation and building protection zones.
- Prune the dead material from the shrubs in the building protection zone.
- Clean out gutters, remove debris from roof.

Early summer (December onwards)

- Re-check personal and home protection gear, screens, water supplies and gutters.
- Keep yards as free as possible from combustible materials, fuels and debris.
- Avoid storing any felled trees and rubbish on your property.
- Remove dead shrubs and avoid long grasses, bracken or neglected masses of tall quick-curing annuals.
- Prepare a bushfire survival plan.

Recommendations

9. That the landowners undertake regular maintenance of their property in preparation for the annual fire season.
10. That all fire mitigation measures shall be completed by the date prescribed in Council's Fire Prevention Order.

6.3 Staging

The proposed subdivision plan does not make any provision for the staging of the development. In the event that the subdivision is staged then it is necessary to ensure that appropriate interim measures are provided.

These may include:

- Interim access or emergency access ways;

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- Creation of additional low fuel zones to ensure that the recommended BAL ratings can be applied; or
- The provision of boundary firebreaks especially on any balance lot.

Recommendations

11. In the event of any staging of the subdivision a plan and statement of the proposed interim fire management measures will be submitted and approved by the Shire as an adjunct to Figure 10.

6.4 Purchaser Advice

All prospective purchasers must be made aware of the fire management issues, measures and responsibilities associated with the subdivision. This can be a notification placed upon the Certificate of Title of all lots pursuant to Section 70A of the Transfer of Land Act advising landowners of this Bushfire Management Plan and BAL requirements.

Recommendations

12. A notification be included on the certificate of titles advising that the land is subject to a Bushfire Management Plan.
13. That prospective residents be provided with a summary of this Bushfire Management Plan.

6.5 Implementation

The management of the risk posed by bushfires is a shared responsibility between landowners, government and industry. While state and local government undertakes bushfire prevention measures (e.g. planned burning), land use planning and emergency response (fire suppression); land owners in bushfire prone areas must take the necessary steps to prepare their property. These responsibilities are summarised in Table 2.

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Table 2 Implementation

REC	RESPONSIBILITIES	WHO	WHEN
1	That dwellings be located so as to have a maximum BAL-29 rating.	Residents Council	Development Application
2	That any application for a building permit for a dwelling is to include an individual BAL assessment to confirm that sufficient land has been cleared to provide for BAL-29 setbacks.	Residents Council	Development Application
3	That the vegetation within the BAL setback is to be maintained as an asset protection zone in accordance with the APZ specifications.	Residents	Annually.
4	That any new dwelling is to provide an asset protection zone of sufficient width to achieve a BAL-29 rating.	Residents	Annually prior to the fire season.
5	Any new driveway shall have a minimum 4m wide trafficable surface and any access gate shall be a minimum width of 3.6m.	Residents	Annually prior to the fire season.
6	Where a driveway is more than 50m in length a turnaround area suitable to a fire appliance shall be provided within proximity to the dwelling.	Residents	Development
7	That all lots shall provide a minimum 3m wide boundary firebreak.	Residents	Annually prior to the fire season.
8	That a 50,000L water tank and fittings shall be provided on the proposed reserve as shown.	Developer	Subdivision
9	That the proposed dwellings provide with a static water supply tank having a minimum capacity of 10,000L specifically for firefighting with the associated fittings.	Residents	Development Application
10	That the landowners undertake regular maintenance of their property in preparation for the annual fire season.	Residents	Annually prior to the fire season
11	That all fire mitigation measures shall be completed by the date prescribed in Council's Fire Prevention Order.	Residents	Annually prior to the fire season
12	In the event of any staging of the subdivision a plan and statement of the proposed interim fire management measures will be submitted and approved by the Shire.	Developer	Subdivision
13	A notification be included on the certificate of titles advising that the land is subject to a Bushfire Management Plan.	Developer	Subdivision
14	That prospective residents be provided with a summary of this Bushfire Management Plan.	Developer	Prior to sale.

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7.0 CONCLUSION

The subject land is located within a bushfire prone area where fires occur on a regular basis. These fires can pose a risk to life and property. The proposed development is introducing substantial values (property and people) which must be protected from the risk posed by the potential bushfire hazard.

The subject land has moderate bushfire hazard level due to the surrounding farming properties and associated cropping and pasture areas. This rating is also influenced by the extent of remnant vegetation scattered along the road reserves. Any proposed dwelling can be sited so as to ensure that there is a moderate hazard level reflected by having a maximum BAL-29 rating and most likely a BAL -12.5 rating.

The purpose of this Bushfire Management Plan is to minimise the impact of a bush fire to people residing on the proposed lots. It demonstrates that the proposed development complies with the criteria within State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas.

The proposed subdivision and development complies with the objectives of State Planning Policy 3.7 as:

1. It avoids any increase in the threat of bushfire to people, property and infrastructure;
2. It reduces vulnerability to bushfire through the identification and consideration of bushfire risks in the design of the development and the decision-making process;
3. The design of the subdivision and the development take into account bushfire protection requirements and include specified bushfire protection measures; and
4. The subdivision achieves an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

The recommendations in this report should not be construed to assure total bush fire protection and do not guarantee that a building will not be damaged in a bush fire. The severity of a bush fire will depend upon the vegetation fuel loadings; the prevailing weather conditions and the implementation of appropriate fire management measures.

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8.0 REFERENCES

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APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

Clause 3.14.

AREA	ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE PROVISIONS OF THE SCHEME TEXT
<p>AREA NO. 14 - DARDANUP WEST/CROOKED BROOK STRUCTURE PLAN</p> <p>Lot 6 corner Garvey Road and Dardanup Road West Lots 501, 502 & 503 Garvey Road and Lot 504 Dardanup West Road Lots 1 and 236 Killarney Road and Lots 2 and 200 Padbury Road, Dardanup West. Lots 3 and 4 Padbury Road Dardanup West. Lot 27 Venn Road. Lot 5 Garvey Road, Dardanup West.</p> <p><i>AMD 149 GG 4/12/09</i> <i>AMD 155 GG 6/11/09</i> <i>AMD 160 GG 14/5/10</i> <i>AMD 161 GG 14/5/10</i> <i>AMD 169 GG 27/7/10</i> <i>AMD 173 GG 15/04/14</i></p>	<p>1. Subdivision and Development Criteria</p> <p>(a) Subdivision shall be generally in accordance with a Subdivision Guide Plan, adopted by the Local Government and the WAPC.</p> <p>(b) The minimum lot size shall be 1 hectare, with an average of 2 hectares unless varied through the adopted Subdivision Guide Plan. Larger lots may be required to preserve or enhance landscape qualities or other site specific issues. <i>AMD 173 GG 15/04/14</i></p>

APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

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(Appendix ORD: 12.1E)

APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

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APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

Clause 3.14.

AREA	ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE PROVISIONS OF THE SCHEME TEXT
<p>AREA NO. 14 - DARDANUP WEST/CROOKED BROOK STRUCTURE PLAN</p> <p>Lot 6 corner Garvey Road and Dardanup Road West Lots 501, 502 & 503 Garvey Road and Lot 504 Dardanup West Road Lots 1 and 236 Killarney Road and Lots 2 and 200 Padbury Road, Dardanup West. Lots 3 and 4 Padbury Road Dardanup West. Lot 27 Venn Road. Lot 5 Garvey Road, Dardanup West.</p> <p><i>AMD 149 GG 4/12/09</i> <i>AMD 155 GG 6/11/09</i> <i>AMD 160 GG 14/5/10</i> <i>AMD 161 GG 14/5/10</i> <i>AMD 169 GG 27/7/10</i> <i>AMD 173 GG 15/04/14</i></p>	<p>Drainage:</p> <p>(d) Prior to subdivision approval, the subdivider is to submit an Urban Water Management Plan (UWMP), to the satisfaction of the Local Government and the Department of Water. The UWMP shall generally be in accordance with the principles and philosophies outlined in the Dardanup West/Crooked Brook Structure Plan which promotes the use of drainage swales. A condition of subdivision will require the Urban Water Management Plan to be implemented to the satisfaction of the Local Government and the Department of Water.</p> <p>Building:</p> <p>(e) No more than one dwelling is permitted on each new lot.</p> <p>(f) All buildings, structures and on-site effluent disposal systems on each lot shall have minimum setback as follows:</p> <ul style="list-style-type: none"> • 20 metres from any road; • 50 metres from the edge of any wetland (sumpland) or natural vegetation line, man-made water bodies or waterways; • 10 metres from all side boundaries; and • be outside of all 'Building Exclusion Areas' as identified on the endorsed Subdivision Guide Plan. <p>Vegetation:</p> <p>(g) No trees or substantial vegetation shall be felled or removed from the site except where:</p> <ul style="list-style-type: none"> (a) required for approved development works; (b) required to fulfil the provisions of an approved Fire Management Plan; (c) required by a Council fire break order; or (d) trees are dead, diseased or dangerous.

Appendix ORD: 12.1E)

APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

Clause 3.14.

AREA	ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE PROVISIONS OF THE SCHEME TEXT
<p>AREA NO. 14 - DARDANUP WEST/CROOKED BROOK STRUCTURE PLAN</p> <p>Lot 6 corner Garvey Road and Dardanup Road West Lots 501, 502 & 503 Garvey Road and Lot 504 Dardanup West Road Lots 1 and 236 Killarney Road and Lots 2 and 200 Padbury Road, Dardanup West. Lots 3 and 4 Padbury Road Dardanup West. Lot 27 Venn Road. Lot 5 Garvey Road, Dardanup West.</p> <p><i>AMD 149 GG 4/12/09</i> <i>AMD 155 GG 6/11/09</i> <i>AMD 160 GG 14/5/10</i> <i>AMD 161 GG 14/5/10</i> <i>AMD 169 GG 27/7/10</i> <i>AMD 173 GG 15/04/14</i></p>	<p>(h) The Local Government will request that the WAPC impose a condition of subdivision requiring the preparation and implementation of a tree planting programme.</p> <p>Foreshore Management:</p> <p>(i) Where applicable and prior to subdivision approval, the subdivider is to submit a Foreshore Management Plan, to the satisfaction of the Department of Water. Wetlands are to be provided with a 50 metre buffer which is to be fenced to restrict access by livestock, and re to be revegetated to the satisfaction of the Department of Environment and Conservation.</p> <p>(j) Where applicable, the Local Government will request that the WAPC impose a condition of subdivision requiring the ceding of land adjacent to the Preston River or specifically identified wetlands, free of cost for foreshore purposes consistent with WAPC Policy.</p> <p>Fire Management:</p> <p>(k) The Local Government will request that the WAPC impose a condition of subdivision requiring the implementation of an approved fire management plan to the satisfaction of the Local Government and the Fire and Emergency Services Authority of Western Australia.</p> <p>Road and Infrastructure requirements:</p> <p>(l) The Local Government may request that the WAPC impose a condition of subdivision requiring the provision and construction of bridle paths.</p> <p>(m) The Local Government will request that the WAPC impose a condition of subdivision requiring a contribution towards road upgrading for locations identified in the Structure Plan area in accordance with Local Government Policy.</p> <p>(n) The Local Government will request that the WAPC impose a condition of subdivision requiring a contribution towards the upgrading and construction of foreshore facilities identified in the Structure Plan area in accordance with the Local Government Policy.</p>

(Appendix ORD: 12.1E)

APPENDIX VIII - ADDITIONAL REQUIREMENTS - SMALL HOLDING ZONES (Cont'd)

Clause 3.14.

AREA	ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE PROVISIONS OF THE SCHEME TEXT
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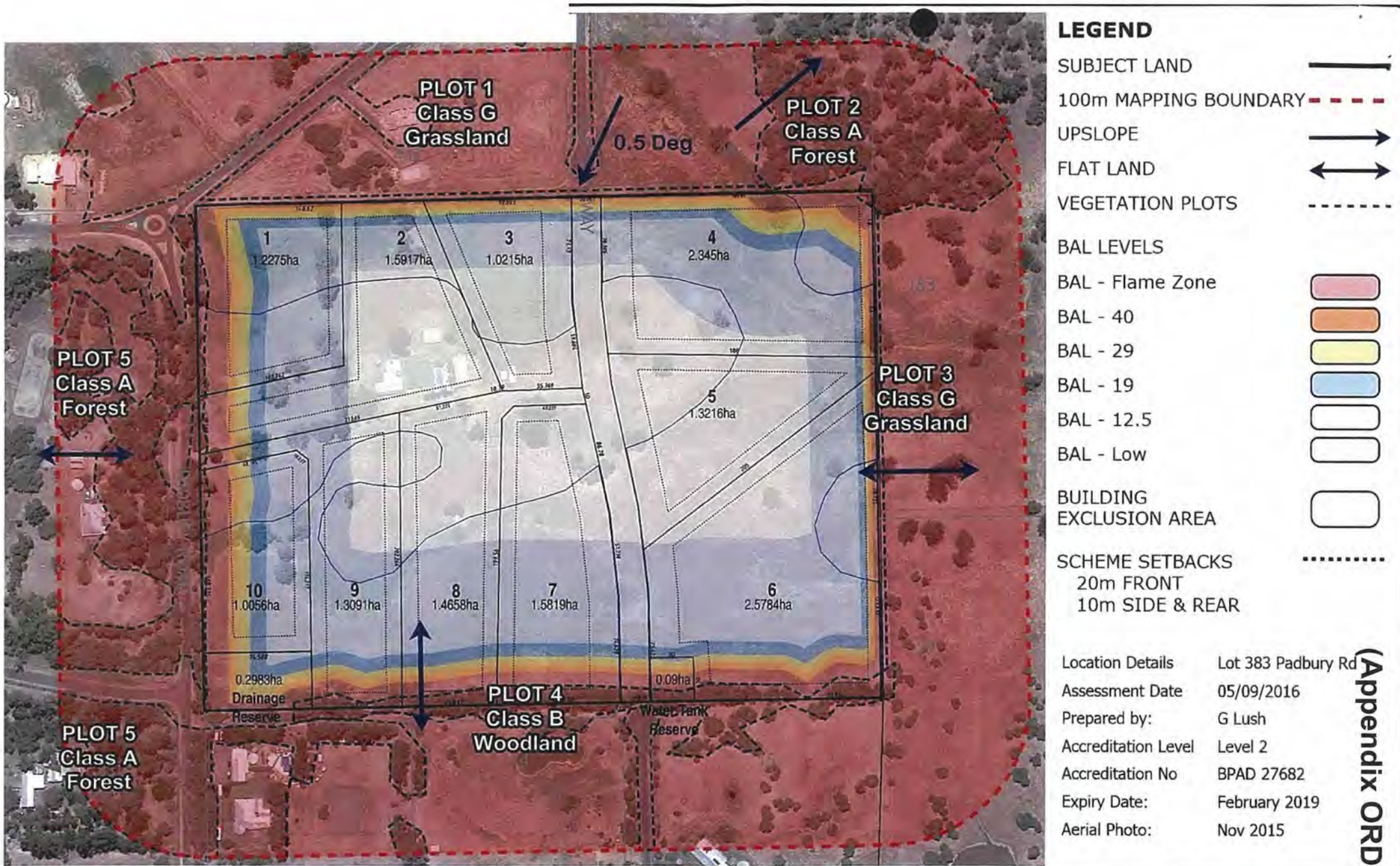


FIGURE 8
BAL CONTOURS

SCALE 0m 100m



Rev	Description	Date
A	Preliminary	03/01/2017
B	Subdivision Plan	12/05/2017
C	Building Exclusion & Setbacks	20/03/2018

- LEGEND**
- EXISTING CADASTRE
 - LOT BOUNDARY
 - STRUCTURE PLAN BOUNDARY
 - PROPOSED CADASTRE
 - STAGE BOUNDARY
 - RESIDENTIAL R25 - R40
 - RESIDENTIAL R60
 - PUBLIC OPEN SPACE 3 192ha
 - REGIONAL OPEN SPACE
 - LOCAL ROADS
 - PATHWAY - SHARED PATHS
 - PROPOSED PLAYING FIELD
 - PROPOSED MANAGED LOW FUEL ZONE
 - VEGETATION TO BE RETAINED

INDICATIVE LOT YIELD

NORTH STAGE	
RESIDENTIAL R25 - R40	296 LOTS
SOUTH STAGE	
RESIDENTIAL R25 - R40	187 LOTS
RESIDENTIAL R60	38 LOTS



calibre
 Calibre Professional Services Pty Ltd
 Unit 5, 53 Victoria Street
 Bunbury WA 6230
 Ph 08 9791 4411
 www.calibregroup.com

STRUCTURE PLAN
 Parkridge, Eaton

Plan No: 17-002497P-SP-01F
 Date: 09.04.2018
 Rev: E
 Scale: A1 @ 1:2500, A3 @ 1:5000
 Co-ords: MGA
 Aerial: Nearmap

Figure 1 - Local Structure Plan

This plan has been prepared for planning purposes. Areas, contours and dimensions shown are subject to survey.



Government of Western Australia
Department of Education

Your ref
Our ref STP-R0531302
Enquiries D18/0254609

Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232



Attention: Cecilia Muller

Proposed Structure Plan – Parkridge Estate – Lot 9001 & 9503 Eaton Drive, Eaton

Thank you for your letter dated 30 May 2018 regarding the Proposed Structure Plan for Parkridge Estate.

The Department has reviewed the document and advises that the proposed 521 residential lots are to be included into the catchment boundary for the proposed Millbridge primary school.

There is no objection to this proposed structure plan.

Yours sincerely

A handwritten signature in cursive script, appearing to read 'Muldoon'.

STEPHEN MULDOON
SENIOR CONSULTANT
ASSET PLANNING and SERVICES

11 June 2018

Alice Baldock

From: Charles Sabato <Charles.Sabato@watercorporation.com.au>
Sent: Friday, 15 June 2018 11:14 AM
To: Submissions Planning
Subject: Proposed Structure Plan - Parkridge Estate (Lot 9004 & 8503 Eaton Dr, Eaton) - STP-R0531302

Follow Up Flag: Follow up
Flag Status: Completed

Attention: Chief Executive Officer
Mrs Cecilia Muller

Thank you for your letter dated May 30, 2018 concerning the proposed structure plan.

The Corporation offers the following comments:

Water & Wastewater Servicing

The Corporation has provided conceptual long term planning for both water and wastewater for the subject site. The Corporation generally acknowledges the Consultants servicing report in appendix 3 of the structure plan with the following proviso's.

Water Supply

The Corporation has yet to prepare a water reticulation plan outlining any potential headworks and reticulation pipe sizings requirements based on more detailed demand scenario's being provided at subdivision stage.

Wastewater

The structure plan site straddles both gravity and vacuum systems. At subdivision stage the Corporation will be able to determine more accurately the preferred servicing strategy.

General Comments

The principle followed by the Water Corporation for the funding of subdivision or development is one of user pays. The developer is expected to provide all water and sewerage reticulation if required. A contribution for Water, Sewerage and Drainage headworks may also be required. In addition the developer may be required to fund new works or the upgrading of existing works and protection of all works. Any temporary works needed are required to be fully funded by the developer. The Water Corporation may also require land being ceded free of cost for works.

The information provided above is subject to review and may change. If the proposal has not proceeded within the next 6 months, the Water Corporation should be contacted to confirm if the information is still valid.

Please provide the above comments to the land owner, developer and/or their representative.

(Appendix ORD: 12.2B)

Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact the Enquiries Officer.

Regards,

Chas Sabato

Snr Planner - Land Planning
Development Services

E: Charles.Sabato@watercorporation.com.au

T: (08) 9420 2105

M: 0439985134



Keep in touch     **W:** watercorporation.com.au

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Department of Planning,
Lands and Heritage

ENQUIRIES : James Dobson- Ph 6551 7928
OUR REF: PLH0016-2018A/01
YOUR REF: STP-R0531302

Chief Executive Officer
Shire of Dardanup

via email: Submissions@dardanup.wa.gov.au

Dear Sir / Madam

PROPOSED STRUCTURE PLAN - PARKRIDGE ESTATE REQUEST FOR COMMENT - LOT 9004 AND LOT 9503 EATON DRIVE, EATON

Thank you for your letter dated 30 May 2018 to the Department of Planning, Lands and Heritage (DPLH) seeking comment on the Proposed Structure Plan for Lot 9004 and Lot 9503 Eaton Drive, Eaton.

A review of the Register of Places and Objects as well as the Aboriginal Heritage Database concludes that Lots 9004 and 9503 Easton Drive, Eaton do not intersect with any known Aboriginal sites or heritage places, therefore no approvals are required under the *Aboriginal Heritage Act 1972*.

DPLH recommends that proponents refer to the State's Aboriginal Heritage Due Diligence Guidelines (Guidelines). The Guidelines can be found on the DPLH website at the following link:

<http://www.daa.wa.gov.au/heritage/land-use/>

The Guidelines allow proponents to undertake their own risk assessment regarding any proposal's potential impact on Aboriginal heritage.

If you have any questions regarding the above, please contact me on 6551 7928 or email james.dobson@dplh.wa.gov.au

Yours sincerely

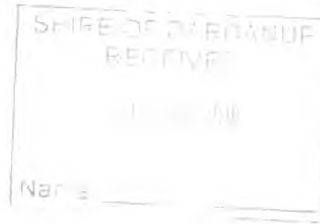
A handwritten signature in black ink, appearing to read 'James Dobson', written over a horizontal line.

James Dobson
TEAM LEADER

20 June 2018



Government of Western Australia
Department of Health



Your Ref: STP-R0531302
Our Ref: F-AA-14495 EHB18/291
Enquiries: Vic Andrich 9388 4999

Mr Mark Chester
Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232

Attention: Jake Whistler, Senior Planning Officer

Dear Mr Chester

**PROPOSED STRUCTURE PLAN – PARKRIDGE ESTATE – LOT 9004 AND 9503
EATON DRIVE, EATON**

Thank you for your letter of 30 May 2018 requesting comments from the Department of Health (DOH) on the above proposal. The DOH provides the following comment:

1. Water Supply and Wastewater Disposal

The structure plan is to require that all future developments be connected to scheme water, reticulated sewerage and be in accordance with the draft *Country Sewerage Policy*.

Approval is required for any on-site waste water recycling process with such proposals being in accordance with DOH publications which may be referenced and downloaded from: http://ww2.health.wa.gov.au/Articles/N_R/Recycled-water

2. Public Health Impacts

DOH has a document on '*Evidence supporting the creation of environments that encourage healthy active living*' which may assist you with planning elements related to this structure plan. A copy is attached or may be downloaded from:

http://www.public.health.wa.gov.au/cproot/6111/2/140924_wahealth_evidence_statement_be_health.pdf

Further design elements that should be considered include:

- A range of quality public open spaces should be provided to contribute towards the recreation, physical activity, health and social needs of the community.
- Parks and open spaces should be located within walking distance of most residents along well-lit connected routes and be co-located with other community facilities to encourage access by walking or cycling.
- The design of parks and open space and the infrastructure provided within them should cater for a variety of users to undertake a mix of activities that increase physical activity and prevent injury.

Environmental Health Directorate | Public and Aboriginal Health Division
All correspondence to: PO Box 8172 Perth Business Centre Western Australia 6849
Grace Vaughan House 227 Stubbs Terrace Shenton Park WA 6008
Telephone (08) 9388 4999 Fax (08) 9388 4955
ABN 28 684 750 332
www.health.wa.gov.au

- 2 -

3. Medical Entomology

The proposal is located in an area that is prone to mosquito prevalence particularly if wetlands are in the vicinity. A mosquito management plan is required and should be implemented prior to the occupation of the development. The structure plan should consider development conditions that minimise the potential for mosquito breeding.

Further details on mosquito management may be downloaded from:

http://ww2.health.wa.gov.au/Articles/J_M/Mosquito-management

Should you have queries or require further information please contact Vic Andrich on 9388 4999 or ehinfo@health.wa.gov.au

Yours sincerely



Jim Dodds
**EXECUTIVE DIRECTOR
ENVIRONMENTAL HEALTH DIRECTORATE**

13 June 2018

Att.

Alice Baldock

From: Cecilia Muller
Sent: Thursday, 21 June 2018 2:39 PM
To: Alice Baldock
Subject: FW: Proposed Structure Plan – Parkridge Estate

From: Brendan Kelly [<mailto:brendan.kelly@dwer.wa.gov.au>]
Sent: Thursday, 21 June 2018 2:11 PM
To: Records
Cc: Cecilia Muller
Subject: Proposed Structure Plan – Parkridge Estate

21st June 2018

Our Reference: PA21078, RF9697~1

Your Reference: STP-R0531302

To: Shire of Dardanup

From: Department of Water and Environmental Regulation

Attention: Cecelia Muller

Re: Proposed Structure Plan – Parkridge Estate, Lot 9004 & 9503 Eaton Drive, Eaton

The Shire of Dardanup (SoD) has forwarded the document '*Structure Plan Parkridge Estate, Calibre Professional Services, April 2018*' (SP) to the Department of Water and Environmental Regulation (DWER) for comment.

It should be noted that the DWER has previously reviewed and provided comments on the associated Local Water Management Strategy (LWMS), which was included in Appendix D of the SP.

It is also noted that Appendix E of the SP '*Engineering Service Report, Calibre Professional Services, March 2018*' (ESP) anticipates that a 'Drainage Management Plan' will be requested for the site, as a planning condition.

Comments on the LWMS were forwarded to the SoD in a spreadsheet on 14th June 2018 and DWER has requested that the SoD return any comments it might have, in order that they may be put into a combined response.

As clearance agency for the LWMS, in accordance with '*Better Urban Water Management (WAPC 2008)*', DWER would prefer to provide the proponent with a single set of comments.

After any amendments have been made and agreement has been achieved on the LWMS, DWER will be in a position to clear the document, which is its key task in assessing the SP.

Essentially DWER's clearance of the LWMS will have given due consideration to the SP.

Please contact this office for inquiries.

Brendan Kelly
Senior Natural Resource Management Officer
Department of Water & Environmental Regulation, South West Region
Telephone: 08 97264194 | Mobile: 0407219515
Email: brendan.kelly@dwer.wa.gov.au

Disclaimer: This e-mail is confidential to the addressee and is the view of the writer, not necessarily that of the Department of Water and Environmental Regulation, which accepts no responsibility for the contents. If you are not the addressee, please notify the Department by return e-mail and delete the message from your system; you must not disclose or use the information contained in this email in any way. No warranty is made that this material is free from computer viruses.



Government of Western Australia
Department of Fire & Emergency Services



Our Ref: D00623
Your Ref:

Cecilia Muller
Shire of Dardanup
Cecilia.muller@dardanup.wa.gov.au

Dear Ms Muller

**RE: LOTS 9004 & 9503 EATON DRIVE, EATON - PROPOSED STRUCTURE PLAN
PARKRIDGE ESTATE**

I refer to your email dated 6 June 2018 regarding the submission of a Bushfire Management Plan (BMP) (revision B), prepared by Lush Fire and dated 14 March 2018, for the above Structure Plan.

The Department of Fire and Emergency Services (DFES) provide the following comments with regard to *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines).

Assessment

1. Policy Measure 6.3 c) Non-compliance with the bushfire protection criteria

Issue	Assessment	Action
Vehicular Access - Emergency Access Ways	<p>A3.1 - Comment</p> <p>Access is required for each stage of development in two different directions to two different destinations. It is acknowledged that public access to the east is not available prior to the future development of the adjoining lot 3001.</p> <p>The proposed EAW services the northern stage, which is likely to be developed last. It may be necessary to provide an EAW as a temporary measure elsewhere to service different stages of the structure plan.</p> <p>In addition, the BMP refers to a landowner agreement for the establishment of the EAW. This should be finalised and included with subsequent subdivision proposals.</p>	Further information /modification required at subsequent planning stages.

Recommendation – supported compliant proposal

DFES advises that the BMP has adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved at subsequent planning stages. DFES re-iterates the importance of ensuring that further consideration is given to the bushfire protection criteria, specifically Element 3: Vehicular Access, at subsequent planning stages to reduce the vulnerability of the development from the impact of a bushfire to ensure continued compliance with SPP 3.7 and the Guidelines.

Should you require further information, please contact me on telephone number 9482 1761.

Yours sincerely



Sandeep Shankar
LAND USE PLANNING OFFICER

2 July 2018

DJS.ds 07-104310-01

21 June 2018

The Chief Executive Officer
Shire of Dardanup
PO Box 7016
EATON WA 6232



Attention: Mr. Mark Chester

Dear Sir

RE: PROPOSED STRUCTURE PLAN – PARKRIDGE ESTATE
COMMENT – LOT 9004 & 9503 EATON DRIVE, EATON

Ardross Estates (S.A.) Pty Limited hereby submits its response to the Shire of Dardanup's invitation to comment on the proposed Structure Plan for Lots 9004 & 9503 Eaton Drive, Eaton.

Proposed Structure Plan reference

page 11 – Section 2.4 Bushfire hazard

"Until the adjoining Lot 3001 to the east is developed, an Emergency Access way will be created through Lot 3001 along the alignment of the proposed subdivision road giving secondary access to Eaton Drive."

page 24 – Appendix B, Bushfire Management Plan, Section 4.1, dot point 7.

"In order to provide two access roads, it will be necessary to have a temporary emergency access way connecting through Lot 3001 to Eaton Drive pending the development of Lot 3001."

Comment

Ardross Estates (S.A.) Pty Limited (Ardross) is the owner of Lot 3001.

In relation to both references above, the proponent has not made contact with Ardross regarding the Emergency Access way through Lot 3001. The proponent will need to make arrangements, to the complete satisfaction of Ardross, for the Emergency Access way to be located on Ardross' land.

Please do not hesitate to contact us should you require any further information.

Yours faithfully

Daniel Skerratt
Development Manager

For: ARDROSS ESTATES (SA) PTY LIMITED ACN 007 674 080



Alice Baldock

From: Suzanne Occhipinti
Sent: Tuesday, 26 June 2018 1:52 PM
To: [REDACTED]
Subject: FW: Proposed Structure Plan for lot 9004 & Lot 9503 Eaton Drive

Dear Pamela,

Thank you for contacting the Shire of Dardanup. Council acknowledges your submission. Your email submission will be considered in the assessment of the proposed Structure Plan.

Please do not hesitate to contact Council's Planning Department on the number below should you have any further queries. Would you please forward any additional submissions or comments by email to: submissions@dardanup.wa.gov.au

Regards

Suzanne Occhipinti

Senior Planning Officer

SHIRE OF DARDANUP | 1 Council Drive | PO Box 7016 | Eaton WA 6292
| Suzanne.occhipinti@dardanup.wa.gov.au



From: Pamela Schultz [REDACTED]
Sent: Monday, 25 June 2018 3:12 PM
To: Records
Subject: Proposed Structure Plan for lot 9004 & Lot 9503 Eaton Drive

To The Executive, Mark Chester

The Shire of Dardanup has a proposed Structure Plan for lot 9004 & Lot 9503 Eaton Drive. The intention is to take the existing land and create 521 lots for housing.

Please accept this email as my objection to the above proposed plan.

This undeveloped land is an asset to the area and becoming increasingly hard to find and enjoy. The area is well used for bike riding, dog walking, fishing, bush walking, bird watching, picnicing etc by many families.

There is some amazing bird life and many kangaroos inhabit the area as well as farmed cows.

(Appendix ORD: 12.2B)

Of course there is also important native vegetation.

What concerns myself and many other residents of Eaton/Millbridge/Parkridge is there does not seem to be a thorough environmental impact statement included in the proposal.

What is going to be the effect on the native fauna, where do they go? What is going to happen to precious native flora?

You only have to drive over the new bridge to Treendale, turn your head to the left and see the countless kangaroos grazing and sleeping in the paddocks.

It wont just be the native animals who lose but also us. Soon it will be impossible to access these amazing sights unless its a dead kangaroo by the road.

If you are a member of the Facebook community pages of surrounding suburbs you will see that not all humans and their domestic pets can live in harmony with wild life, kangaroos are often subjected to cruelty for fun and that concerns myself and family.

Walking trails, bbq areas and playgrounds, whilst greatly appreciated do not help the flora and fauna.

It is also of concern that the magnificent trees will have mostly have to go. Big beautiful trees are also a rarity and they also house many of our wild life.

When I chose to live in Eaton, I particularly picked Glen Huon Primary School for my children as I loved their ethos to to the environment and the wonderful wetlands. Part which has been turned into a road and even more upsetting, it is now being completely eradicated and built on!

On one hand we are banning plastic bags to save the environmental impact and on the other we are destroying beautiful natural land to build even more houses, roads and concrete paths.

We have to preserve some nature for ourselves and future generations.

Thank You for Your Time

Pam Schultz

Alice Baldock

From: Suzanne Occhipinti
Sent: Tuesday, 26 June 2018 1:55 PM
To: [REDACTED]
Subject: FW: Partridge Estate Expansion ATT Mark Chester CEO.

Dear Kelly

Thank you for contacting the Shire of Dardanup. Council acknowledges your submission. Your email submission will be considered in the assessment of the proposed Structure Plan.

Please do not hesitate to contact Council's Planning Department on the number below should you have any further queries. Would you please forward any additional submissions or comments by email to: submissions@dardanup.wa.gov.au

Regards

Suzanne Occhipinti

Senior Planning Officer

SHIRE OF DARDANUP | 1 Council House | PO Box 7016 | Eaton WA 6232

Tel: (08) 9432 1000 | Fax: (08) 9432 1001 | Email: enquiries@dardanup.wa.gov.au



From: Kelly Cusack [REDACTED]
Sent: Monday, 25 June 2018 10:34 AM
To: Records
Subject: Partridge Estate Expansion ATT Mark Chester CEO.

Kelly Cusack,

2 Lipizzaner Turn,

Eaton, W.A. 6232.

Mr Mark L Chester CEO.

Shire of Dardanup,

Dear Mr Chester,

Many members of the Parkridge and Millbridge community are concerned about the ongoing development of the area and other areas of Eaton. As one of your councillors pointed out, most cannot be bothered to put their concerns in writing which is unfortunate for all concerned.

Regarding the Parkridge expansion, yes, it is a lovely plan but, there are many rate-paying members of the community who would like the council to listen to us regarding the few issues we do have.

The traffic congestion. Anyone who lives in Parkridge knows that at peak hour it is horrendous trying to turn right onto Eaton drive. The traffic is bumper to bumper and more than once I have witnessed near misses at the Peninsular Lakes Drive and Glen Huon Blvd intersections along Eaton Drive. When the expansion goes ahead, the traffic will obviously increase again, which in turn will only compound the current issues. We believe intervention for cars turning right from Peninsular Lakes drive intersection is of great importance and we believe this needs to be addressed before 500 plus residences are added into the traffic mix.

The wildlife. There is not a huge number of trees in the area, especially the Parkridge estate side. We have already heard the argument that developers only need to leave 10% of the current vegetation but we request that you, the councillors, reconsider this rule for the Parkridge expansion. If you drive around the area you will see that there are next to no trees or native vegetation except for the wetlands near Cleveland Bay Drive and the large tree on Glen Huon Blvd. The area we would like to see left native is not massive and, in the plans, most is to be taken up with the park which will not provide an income for the Dardanup Shire Council or the developer. We, as residents appreciate seeing native animals and enjoy having birds around our homes. If 90% of the trees and vegetation is removed, then surrounded by houses, the local fauna population will be pushed out and most likely die in the process. We have seen this happen too many times in Australia and animals that people used to see as pests, such as the ring-tailed possum, are now on the critically endangered list because humans continually destroy their habitats. As some residents in Millbridge are finding, as the local habitat is taken over by housing the native animals need to go somewhere so they go into resident's homes and cause all types of issues. The Shire of Dardanup must look towards a sustainable future for both humans and the native flora and fauna and not just at the potential rate monies. Therefore, we request that you insist the developers leave all the current trees in the area and work around them in their planning. And we request that the developers make a considerable contribution to greening up Parkridge with more verge tree planting and attractive, native animal friendly landscaping.

The park. As above, we request that you leave all the current trees and look at a more natural setting for a park. A nature park would be ideal where our children can enjoy true nature instead of plastic and metal. A Nature park would be a big draw card for the area as more and more parents are seeing the benefits of having their children play in natural settings and not man-made playgrounds that do not engage our children in truly stimulating play. The nature park would only need a small section of the current trees and would be a lovely addition to the area, it would save the trees that we want to keep, provide a park and keep the developers happy as they can still develop and sell all the land around it. And, importantly, a Nature park would provide our children with a wholesome area to explore and develop their curiosity and passion for nature and the world they live in.

(Appendix ORD: 12.2B)

As residents, for Parkridge and Millbridge, we request that you listen to our concerns and please give them serious consideration. Most people cannot be bothered putting their concerns into writing so therefore, if you have received only 1 or 2 letters from concerned residents there would be many, many more who are time-starved and have not responded to the plans in writing. We would like to request that prior to the council rubber-stamping this development can you please consider what the current residents would like the development of Parkridge to look like and the the trees on the ridge.

I look forward to your response,

Yours sincerely

Kelly Cusack.

Don's Buildase the Parkridge Estate
Please do not buildase the Parkridge Estate
there are native animals.

- we need trees to live because they provide oxygen.
- it would be nice to have trees near houses than just houses.

as you can see the bushland should be left untouched.

Summer cuscak

7 years old



Your ref: STP-R0531302
Our ref: PRS 42671 2016/003924
Enquiries: Tracy Teede
Phone: 08 9725 4300
Email: swlanduseplanning@dbca.wa.gov.au

Chief Executive Officer
City of Dardanup
PO Box 7016
DARDANUP WA 6232

ATTENTION: Cecilia Muller

PROPOSED STRUCTURE PLAN – PARKDRIDGE ESTATE – LOT 9004 & 9503 EATON DRIVE EATON

I refer to your letter dated 30 May 2018 seeking the Department of Biodiversity, Conservation and Attractions (DBCA) Parks and Wildlife Service comments in relation to the above proposed structure plan.

Parks and Wildlife Service's South West Region has no objection to this application subject to the following advice.

Advice to Shire

The northern portion of Lot 9004 contains native vegetation associated with the adjacent conservation category wetlands (CCW) on the Collie River floodplain.

Shedley et al, 2014 mapped the northern Lot 9004 vegetation as being *High Quality* habitat suitability (Category Class B) for western ringtail possums (WRP) (see attached map). *High Quality* habitat suitability is important in maintaining the integrity of WRP habitat, which is required to increase the reproductive output of the species and to counter declining populations and losses due to habitat loss and predation.

WRP (Schedule 1) are listed as critically endangered species under the Commonwealth of Australia's *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* and Western Australia's *Wildlife Conservation Act 1950*.

It appears that 2 to 3ha of this high quality WRP habitat will be cleared if the current structure plan is implemented. These areas are also very close, if not overlapping, the environmentally sensitive area associated with the CCW.

The central portion of the structure plan shows that about 1ha of mapped medium quality WRP habitat is to be cleared and the rest retained in Public Open Space (POS).

While the application provided some vegetation classification information, it did not include any flora or fauna survey information.

DBCA advises that the proposed clearing should be referred to the Department of Water and Environmental Regulation specifically for consideration under the Environmental Protection Act, Native, Vegetation Clearing regulations.

Parkridge Estate - WRP & GBRS

Legend

Western Ringtail Possum - Habitat Suitability

- High
- Medium
- Very Low

Greater Bunbury Region Scheme

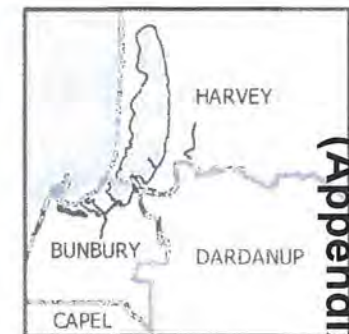
- Regional open space
- Urban
- Waterways
- South West Cadastre (Land Parcels)
- South West Major Hydrography
- South West Minor Hydrography
- South West Drainage Lines

- Canal
- Connector
- Watercourse
- TGDB Roads - All
- Minor road sealed
- Track
- Supplementary road data
- South West Sealed Roads

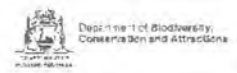
1:5,000 (A4)



Geographic Projection
Datum: GDA94



Produced by TT,
Department of Biodiversity,
Conservation and Attractions



Job Ref: 42671
Produced at 05:23 PM on July 13, 2016

(Appendix ORD: 12.2B)



The Department of Biodiversity, Conservation and Attractions 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. Roads and tracks on land managed by DBCA may contain unmarked hazards and their surface condition is variable. Exercise caution and drive to conditions on all roads.

Don't Bulldoze Parkridge Estate Bushland

Please don't bulldoze Parkridge Estate Bushland

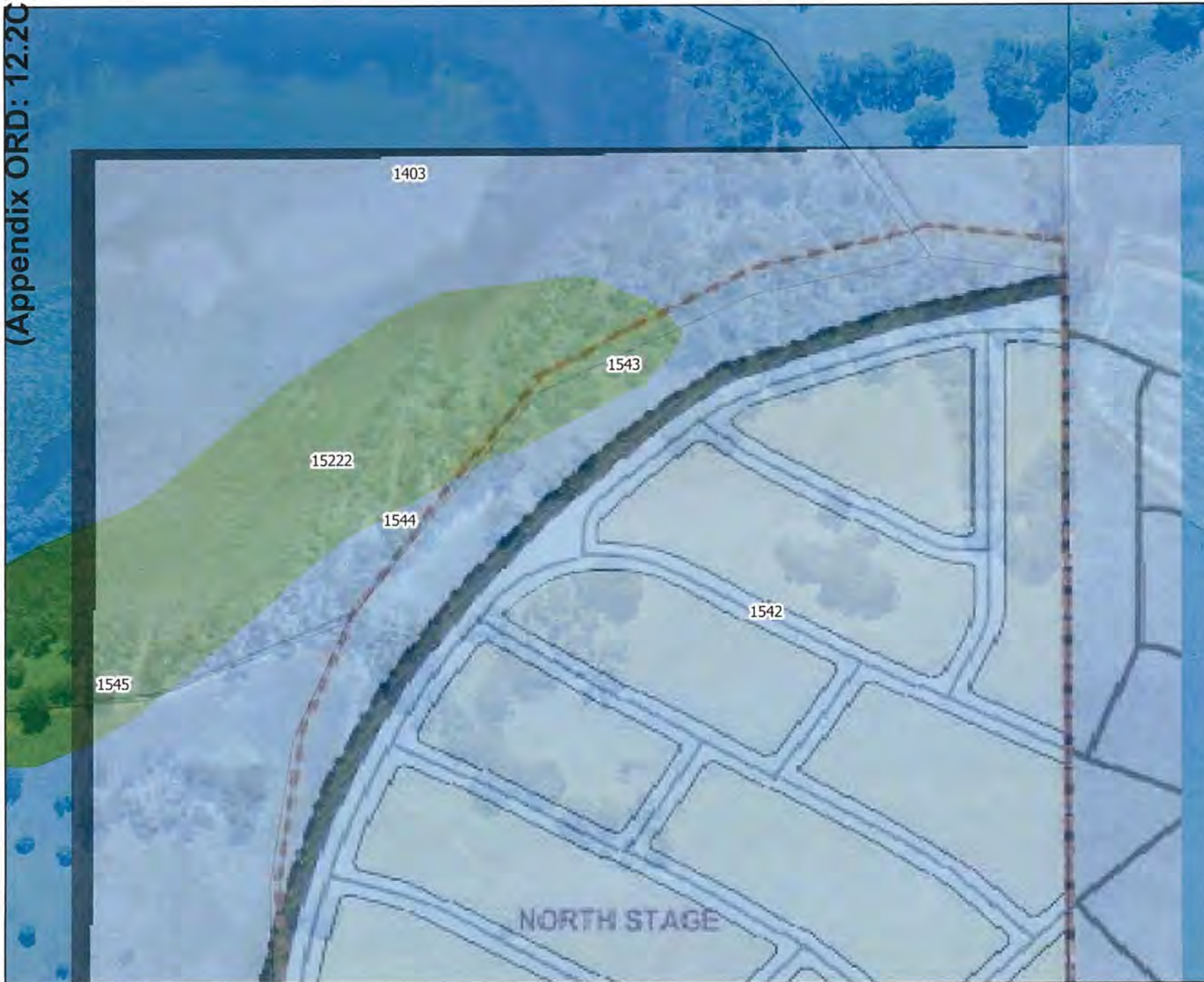
Don't bulldoze Parkridge Estate Bushland because where would the animals live even better if you do bulldoze the land you would be the cause of the deaths of possums, kangaroos and birds. (possibly more)

Seriously it would be better to look at something natural rather than boring old houses, rooms, and roads. Also it'd be better if you left the land alone completely by modern day structures and architecture.

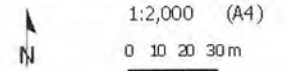
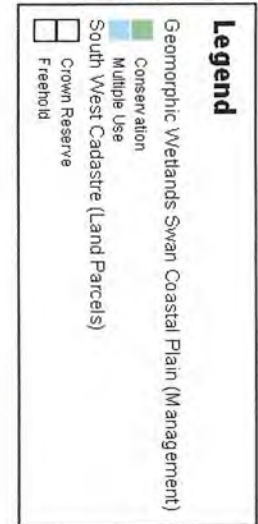
lastly I think it would be better for all of the children to have a nice little bush play area or to go bush walking and to go bird watching.

In conclusion Parkridge Estate Bushland should be left alone for people to know for more than just their home.

Aiden Casarco 9 years old -



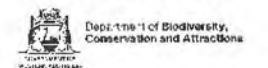
Parkridge Estate & CCW



Geographic Projection
Datum: GDA94



Produced by TT,
Department of Biodiversity,
Conservation and Attractions



Job Ref: 42671
Produced at 12:00 PM on July 12, 2018



LEGEND

- SUBJECT LAND
- PROPOSED VEGETATION CLEARING
- RETAINED VEGETATION
- LOCAL POS SUBJECT TO LANDSCAPE AND MANAGEMENT PLAN

FIGURE 5
VEGETATION MODIFICATION

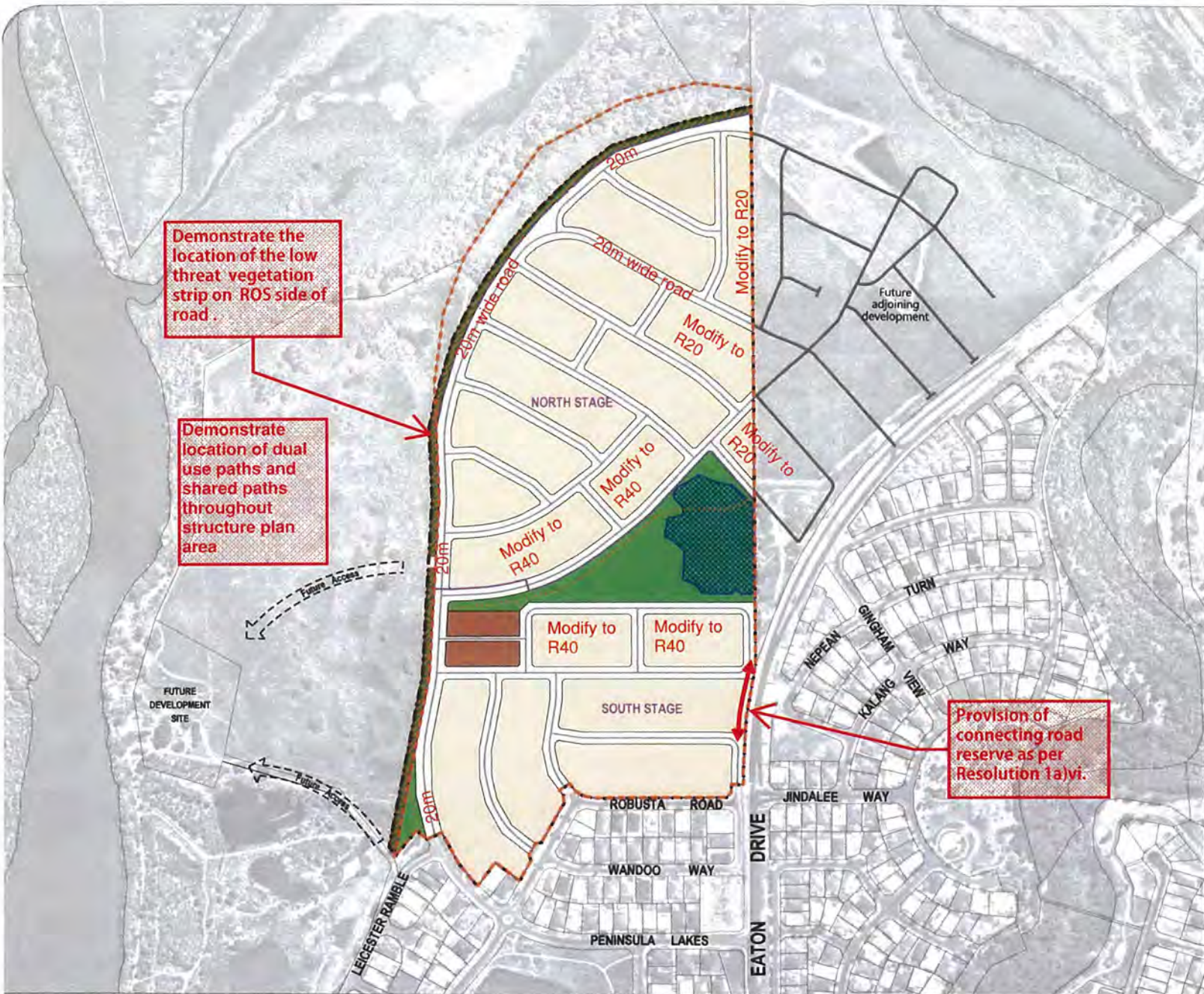


Job No 17-076

Rev	Description	Date
A	Preliminary	01/02/2018
B	Rev Design	14/03/2018

Date
01/02/2018
14/03/2018





LEGEND

- EXISTING CADASTRE
- LOT BOUNDARY
- STRUCTURE PLAN BOUNDARY
- PROPOSED CADASTRE
- STAGE BOUNDARY
- RESIDENTIAL R25 - R40
- RESIDENTIAL R60
- PUBLIC OPEN SPACE 3 192ha
- REGIONAL OPEN SPACE
- LOCAL ROADS
- PATHWAY - SHARED PATHS
- PROPOSED PLAYING FIELD
- PROPOSED MANAGED LOW FUEL ZONE
- VEGETATION TO BE RETAINED

INDICATIVE LOT YIELD

NORTH STAGE	
RESIDENTIAL R25 - R40	296 LOTS
SOUTH STAGE	
RESIDENTIAL R25 - R40	187 LOTS
RESIDENTIAL R60	38 LOTS

Include new heading "At subdivision stage:" with provisions listed as per Council resolution 1.b), (i-xiii)

At subdivision stage:

Provision of connecting road reserve as per Resolution 1a)vi.

Demonstrate the location of the low threat vegetation strip on ROS side of road.

Demonstrate location of dual use paths and shared paths throughout structure plan area.

Figure 1 - Local Structure Plan

This plan has been prepared for planning purposes. Areas, contours and dimensions shown are subject to survey.

Our Ref: 18-000721

13 April 2018

Shire of Dardanup
PO BOX 7016
EATON WA 6232

Attention: Planning Department

Dear Sir/Madam

RE: BETHANIE ESPRIT VILLAGE DEVELOPMENT APPLICATION
LOT 9000 ILLAWARRA DRIVE, EATON

Please find enclosed:

- Completed Application Form and Fee;
- Copy of Certificate of Title (*Attachment 1*);
- 3 x Development Plans (*Attachment 2*); and
- 3 x Stormwater Management Strategy (*Attachment 3*)

The purpose of this Development Application is to enable Bethanie Group Inc. to develop land for Aged or Dependant Person's Dwellings, which will be used for seniors (Aged) accommodation. The portion of Lot 9000 subject to this application is identified on the *Master Site Plan* Included in *Attachment 2*. The site is zoned 'Other Community' under the Shire of Dardanup Town Planning Scheme No.3, and identified as 'Additional Use 18'.

Following is an outline of the proposal and an assessment against the relevant Planning provisions.

Proposal

The proposal is for 34 Aged or Dependant Person's Dwellings. The land the subject of this application is located centrally within Lot 9000 and adjoins the existing Community Centre, Pool and Wood Shop of Bethanie Esprit Village. The land is approximately 1.08ha and is bound by Cumberland Court to the north and east, Endicott Boulevard to the South and the Community Centre and Illawarra Drive to the West.

All dwellings are single storey and are accessed by Cumberland Court or internal rear laneways. The 34 dwellings will comprise; 2 bedrooms, 1 bathroom + powder room and a double car garage. There are 8 design variations, with 4 different front elevations and 2 colour schemes to provide variation in the dwelling designs and add interest at street level. Detailed in the design plans located in *Appendix B*.

Between the existing Community Centre and Wood Shop a landscaped park is also proposed as part of the Development Application.

The Forrest Highway adjoins the southern boundary of Lot 9000, with the balance of the lot surrounded by established residential development. There are other Aged or Dependant Person's Dwellings existing to the west of the area the subject of the development, which make up the existing Bethanie Esprit Village.

It is proposed that the development will be carried out over three stages as indicated in Plan DA.04 of *Attachment 2*.

Local Planning Framework

Greater Bunbury Region Scheme

The subject land is within the Urban Zone of the Greater Bunbury Region Scheme (GBRS). The purpose of the Urban Zone is:

'To provide for residential development and associated local employment, recreation and open space, shopping, schools and other community facilities'

The proposal is consistent with this purpose.

Greater Bunbury Strategy

The Greater Bunbury Strategy (GBS) was released by the Western Australian Planning Commission in December 2013. The document has been prepared by the Department of Planning to guide urban, industrial and regional land use planning and associated infrastructure delivery in the Greater Bunbury sub-region in the short, medium and longer terms.

The GBS advocates a 'compact and connected' growth pattern as the most balanced and responsible way for the Greater Bunbury sub-region to develop. This will support, amongst a range of initiatives, diversity of housing options. Three strategic priorities have been identified to create 'liveable' communities:

- *'Plan for increased housing supply in response to changing population needs;*
- *Promote and increase housing diversity, adaptability, affordability and choice; and*
- *Create attractive, safe, functional, and well-connected neighbourhoods and towns.'*

The proposal is consistent with these strategic priorities and the goals of the GBS.

Shire of Dardanup Local Planning Strategy

The Shire adopted its Local Planning Strategy in March 2014, with the document being finalised in April 2015. The purpose of the Local Planning Strategy is to provide strategic direction to the Shire for the next 15 years and to guide the preparation of the Shire's new Planning Scheme.

The Local Planning Strategy identifies opportunities for increased density in the existing Eaton townsite, as well as expansion opportunities to the east, namely the future Wanju development to cater for anticipated population growth in the coming years.

The Strategy also recognises the changing demographics of the Shire, especially the ageing of the population and changes to household structure, highlighting the need to cater to these changing household and lifestyle needs. Likewise, is the need to enable consolidation of land in order to realise higher residential densities and choice in housing options.

The proposal is consistent with the Shire of Dardanup Local Planning Strategy.

Shire of Dardanup Town Planning Scheme No.3

The subject land is zoned 'Other Community' under the Shire of Dardanup Town Planning Scheme No.3 (TPS 3), and is also included as Additional Use No.18. The objective of this zone is *'to provide for uses that are of a community nature and/or civic purpose that would ordinarily not be suitable in other zones'*.

Aged or Dependant Person's Dwelling is listed as a 'D' use in the Zoning Table of TPS 3, which means the use is not permitted unless the local government has exercised its discretion by granting planning approval.

Additional Use No.18 of TPS 3 permits the use of the subject site for Lifestyle Village, including Aged or dependent persons accommodation and club premises.

The conditions linked to AU 18 are:

- a) The intent of the zoning is to promote the development of a high quality Lifestyle Village which includes residential accommodation, both single and two-storey, and community services, and which integrates with the adjoining residential area.
- b) Development is to be in accordance with a Structure Plan and endorsed by the Western Australian Planning Commission, and shall comply with the following development criteria.
 - i. Development to be generally in accordance with the R40 code
 - ii. No more than 55% of the total site shall be occupied by buildings
 - iii. All areas not used for buildings, parking, access and drying purposes shall be planted, established, mulched and reticulated at the time of occupancy. These areas are to be maintained as landscaped areas to the satisfaction of Council
 - iv. The accessway(s), parking area and turning area(s) shall be constructed, kerbed, formed, graded, drained and finished with a hard standing surface or equivalent by the developer to an approved design and shall be maintained to a standard satisfactory to Council
 - v. Drainage outfall from development to be restricted to pre-development flows

- vi. Landscape buffer treatment works identified as the landscape buffer area on Lot 9000 and the proposed Landscape Buffer reserve to the south of Lot 9000 is to be undertaken by the owner(s) of Lot 9000 at the standard determined by Main Roads WA and the Shire of Dardanup.
- c) The occupancy of the aged person accommodation (independent living units) on the site is restricted to at least one permanent occupant of the dwelling being an aged person (that is a person who is aged 55 years or over) or the surviving spouse of that person.

Local Structure Plan

The Western Australian Planning Commission endorsed a modification to the Structure Plan in September 2017 for Lot 9000. The structure plan identifies the indicative development footprint of Bethanie Esprit Village, road networks and the transition to conventional lots along Illawarra Drive, into the established surrounding residential areas.

Structure Plans are to be given "due regard" when assessing development outcomes. The proposed development does not vary any of the proposed public areas of roads, residential lots or open space. All works for the proposed DA are internal to the Bethanie landholding.

Discussions with officers at the Shire of Dardanup have confirmed that whilst the internal indicative layout of the proposed Bethanie Esprit Village expansion (the subject of this application) footprint is slightly different to that shown on the structure plan, the intent and development outcomes are still the same and therefore consistent with the approved Structure Plan.

Assessment against AU 18

Given the consistency of the development with the approved Structure Plan, the development is required to be assessed against the requirements outlined under Additional Use No.18 of the Scheme.

Bethanie Group is seeking to further develop Bethanie Esprit Village to provide additional housing choices for the area. The cottage lot format allows Bethanie to deliver a quality product at an affordable price point for seniors. A high standard of design is being delivered as can be seen in the established parts of the Bethanie Esprit and the design plans and perspectives included as *Attachment 2*.

The Development is considered consistent with the AU 18 as:

- The detailed design plans included as *Attachment 2* identify the compliance with the Scheme requirements and those set out above.
- The development is generally in accordance with the R40 code, as is further detailed below.
- Calculations considering the overall developed area of Lot 9000 comply with the requirement for buildings to occupy less than 55% of the site as identified on plan DA.05 of *Attachment 2*.
- All landscaping and drainage requirements will be prepared and developed to a standard satisfactory to Council. A comprehensive Stormwater Management Strategy has been prepared considering the existing stormwater infrastructure within the development and its relationship to the surrounding Eaton townsite drainage network. The Stormwater Strategy is included as *Attachment 3*.

The proposal is consistent with the objectives of the Town Planning Scheme and the conditions of the Additional Use No.18 Table.

Residential Design Codes R-40

The proposal generally meets the R-Code R40 provisions as is required by the conditions of Additional Use No.18 of the Scheme. At the same time the proposal has, wherever possible, accommodated the AS4299-1995 Adaptable Housing guidelines and the Liveable Housing Design Guidelines. It can be challenging to meet the sometimes competing requirements of the R-Codes while producing a quality built form outcome suitable for seniors. It is for this reason the original scheme amendment that introduced AU 18 required general adherence to the R-codes rather than rigid compliance.

Clauses 6.1.1 to 6.1.5 stipulate the obligations applicable for grouped or multiple dwellings coded R40 or greater.

The Development is compliant with the provisions of the Residential Density Codes for R40 relevant to:

- Building heights, proportion and form;
- Street surveillance and sightlines, with no issues for garage door dominance due to the use of rear lane access;
- No visual privacy or overlooking concerns; and
- No overshadowing of neighbours properties.

As there are no individual lots for the dwellings, it is difficult to assess side setbacks against the R-Code provisions. Double parapet walls will be used on the 7.5m cottage lots. Whilst this is a variation to the R-Codes, they are considered appropriate for the size of the lots and use within the consistent, built form grouped dwelling development which will be built as one cohesive development. It is our opinion that the side setbacks comply with the general intent of the R-Codes as required by AU18. Front setbacks are consistent with the R-Codes.

Given the 7.5m frontage, it has also proven difficult to achieve the prescribed dimension of 4m square (as per the code deemed to comply provision) which is north facing, given the northern facing element of the proposed design is positioned on the long boundary. The designs have therefore been provided with a useable outdoor living and alfresco area with a northern outlook that are approximately 3.1m wide and 5.5-6m long. We believe that this space meets the design principles of the R-Codes as they are;

- capable of use in conjunction with a habitable room of the dwelling;
- open to winter sun and ventilation, and
- optimise use of the northern aspect of the site.

In addition to this outdoor living space, each unit is provided with a useable porch area at the front door that flows onto generous communal landscaped areas. This encourages interaction between residents to build a sense of community within the village. Retirement villages operate differently to general R40 suburbia where individual privacy has a premium. In a retirement village setting, resident interaction is encouraged and being close to neighbours and friends is beneficial for social and health reasons.

We believe that the slight variations outlined above from the deemed to comply provisions meet the associated design principles and as a result the development plan is considered to generally comply with the R40 design codes as required by AU 18.

The development is consistent with all other requirements of the Residential Design Codes with reference to the R-40 density.

Conclusion

The proposal meets the deemed to comply provisions of the R-Codes for Aged Accommodation, and the conditions of Additional Use No.18 of the Shire of Dardanup TPS No.3. The provision for additional age accommodation is consistent with the Local Planning Strategy and approved Local Structure Plan for Lot 9000.

Should you have any queries or require additional information, please contact the undersigned.

Yours sincerely

Calibre Professional Services Pty Ltd



GARY BARBOUR
Manager - Planning

ATTACHMENTS

1. CT's
2. 3 x Development Plans
3. Stormwater Management Strategy

WESTERN



AUSTRALIA

REGISTER NUMBER	
9000/DP66877	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
3	30/3/2016

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME 2759 FOLIO 798

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



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 9000 ON DEPOSITED PLAN 66877

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

THE BETHANIE GROUP INC OF LEVEL 2/216 STIRLING HIGHWAY, CLAREMONT
(AF L501680) REGISTERED 9/12/2010

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

1. *L060368 MEMORIAL RETIREMENT VILLAGES ACT 1992. AS TO PORTION ONLY. LODGED 1/9/2009.
2. *L501679 NOTIFICATION SECTION 165 PLANNING & DEVELOPMENT ACT 2005 LODGED 9/12/2010.
3. N283649 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA REGISTERED 23/3/2016.
4. *N328285 MEMORIAL HOME BUILDING CONTRACTS ACT 1991 AS TO PORTION ONLY REGISTERED 16/5/2016.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

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

STATEMENTS:

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

SKETCH OF LAND: DP66877
PREVIOUS TITLE: 2077-280
PROPERTY STREET ADDRESS: 97 ILLAWARRA DR, EATON,
LOCAL GOVERNMENT AUTHORITY: SHIRE OF DARDANUP

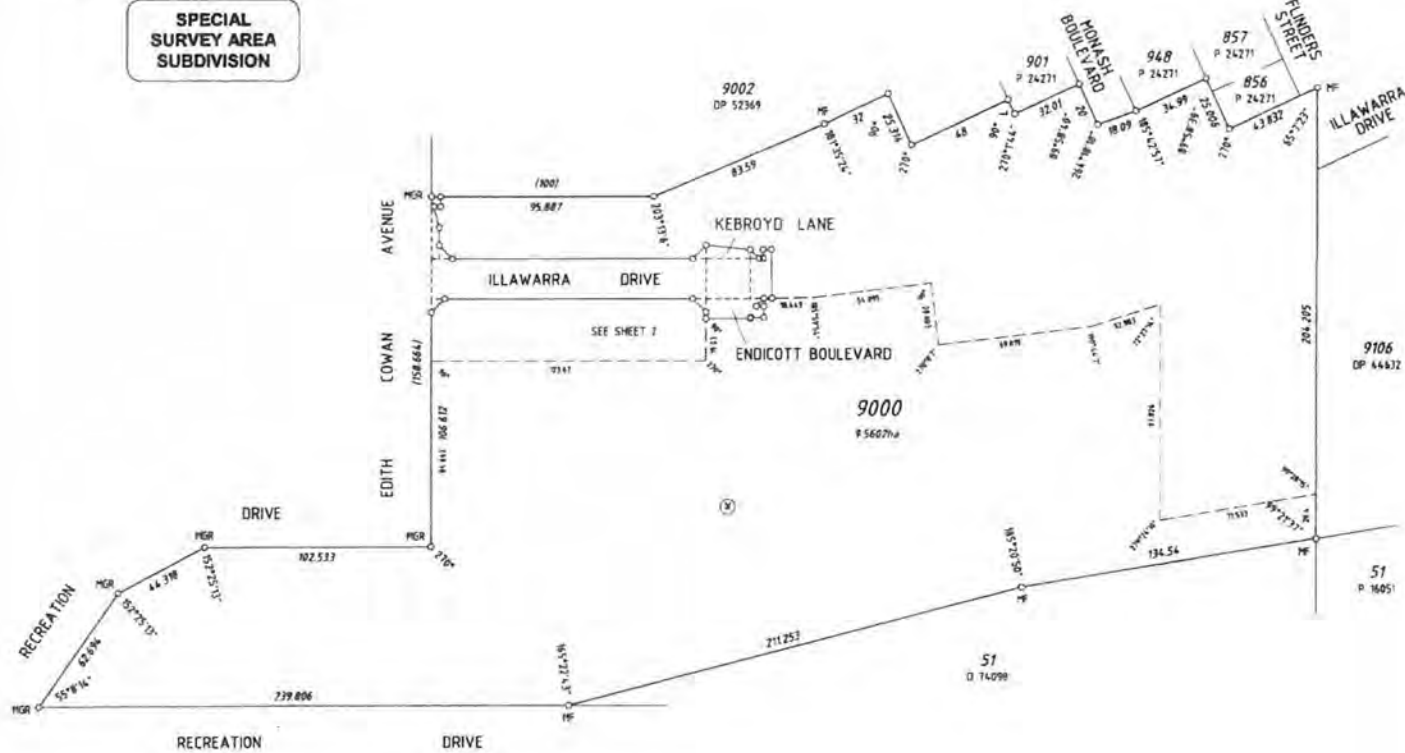
NOTE 1: 1047676 SECTION 138D TLA APPLIES TO CAVEAT H856539
NOTE 2: N756261 DEPOSITED PLAN (INTEREST ONLY) 412922 LODGED

LANDGATE COPY OF ORIGINAL NOT TO SCALE Mon Apr 9 11:11:41 2018 JOB 56413474

VER	AMENDMENT	AUTHORISED BY	DATE
2	AUDIT AMENDMENTS	A.R. ODDY	10/06/10

SURVEY CARRIED OUT UNDER REG 26A(4)
SPECIAL SURVEY AREA GUIDELINES

SPECIAL SURVEY AREA SUBDIVISION



HELD BY LANDGATE
IN DIGITAL FORM ONLY.

HS Ref
13468 L1-08
AMS 27/06/10

INTERESTS AND NOTIFICATIONS

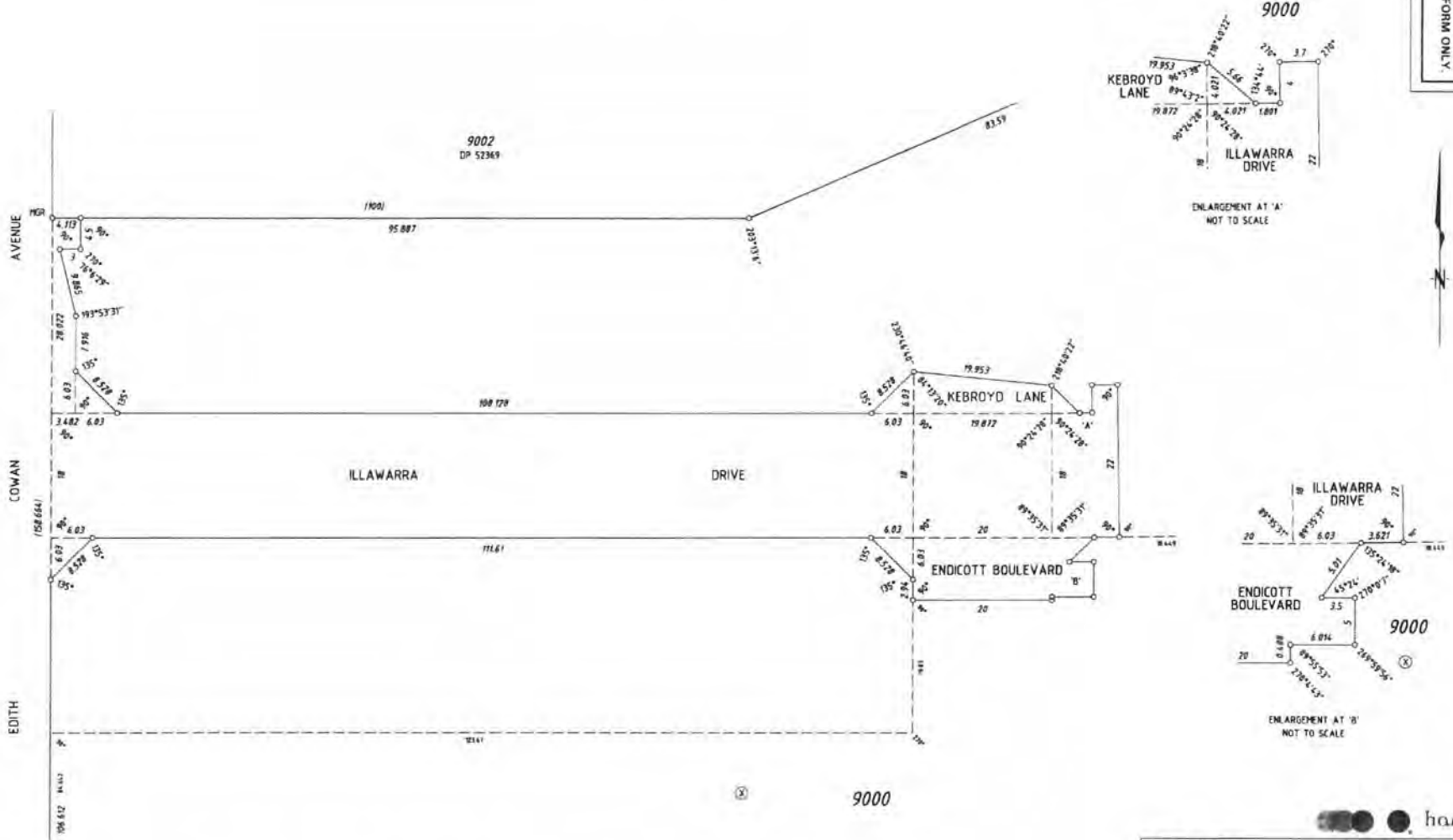
SUBJECT	PURPOSE	STATUTORY REFERENCE	ORIGIN	LAND BURDENED	BENEFIT TO	COMMENTS
(X)	RECREATION	SEC 58 OF THE RETIREMENT VILLAGES ACT 1993	SEC LANDGATE	LOT 9000	SEE DOC	AS TO PORTION ONLY - REFER TO DOC.
	RECREATION	SEE BS OF THE P.A. & A.T.	DOC L501679	LOT 9000		TRAFFIC NOISE

TYPE		FREEHOLD	
PURPOSE		SUBDIVISION	
PLAN OF			
LOT 9000 AND ROADS			
DISTRICT	WELLINGTON	SSA YES/NO	
TOWNSITE	EATON	FORMER TENURE	
FILE		LOT 1004 ON	
LOCAL AUTHORITY	SHIRE OF DARDANUP	P 21399	
LOCALITY	EATON	C/T 2077-280	
INDEX	ON	FIELD BOOK	
	8530 (2) 06-33	119700	
SCALE	1:1500 @ A2		
ALL DISTANCES ARE IN METRES			
SUPERVISOR'S CERTIFICATE - Aug 14			
A.R. ODDY		I hereby certify that this plan is accurate and is a correct representation of the full survey and/or the measurements from measurements, reports of (suggested) measurements for the purposes of this plan and that it complies with the provisions written herein in relation to which it is lodged.	
Lodged Surveyor		Date	
22 Spencer Street BUNBURY WA 6230 PO BOX 779 BUNBURY WA 6230 P. OR 8792 8000 F. OR 9723 0622			
LODGED	DATE	TYPE OF VALIDATION	APPROVED BY
3-May-10	3-May-10	Full Survey / LSA / Form / Message / Component	WESTERN AUSTRALIAN PLANNING COMMISSION
PER FID	\$260.00	BOOKET	FILE
0911706		00407-2010	138327
		CORRECT / CORRECT	
		26-Aug-2010	
		26-Aug-2010	
IN ORDER FOR DEALINGS			
SUBJECT TO			
Secs 105 & 106(1)(2) of the PEO Act			
		27-Aug-2010	
APPROVED REG 26A(4)			
		27-Aug-2010	
Western Australian Land Information Authority			
DEPOSITED PLAN			
66877			
SHEET 1 OF 3			
VERSION 2			

Appendix ORD: 12.3A)

FOR HEADING SEE SHEET 1
FOR INTERESTS & NOTIFICATIONS SEE SHEET 1

HELD BY LANDGATE
IN DIGITAL FORM ONLY



SURVEY CARRIED OUT UNDER REG 26A(4)
SPECIAL SURVEY AREA GUIDELINES

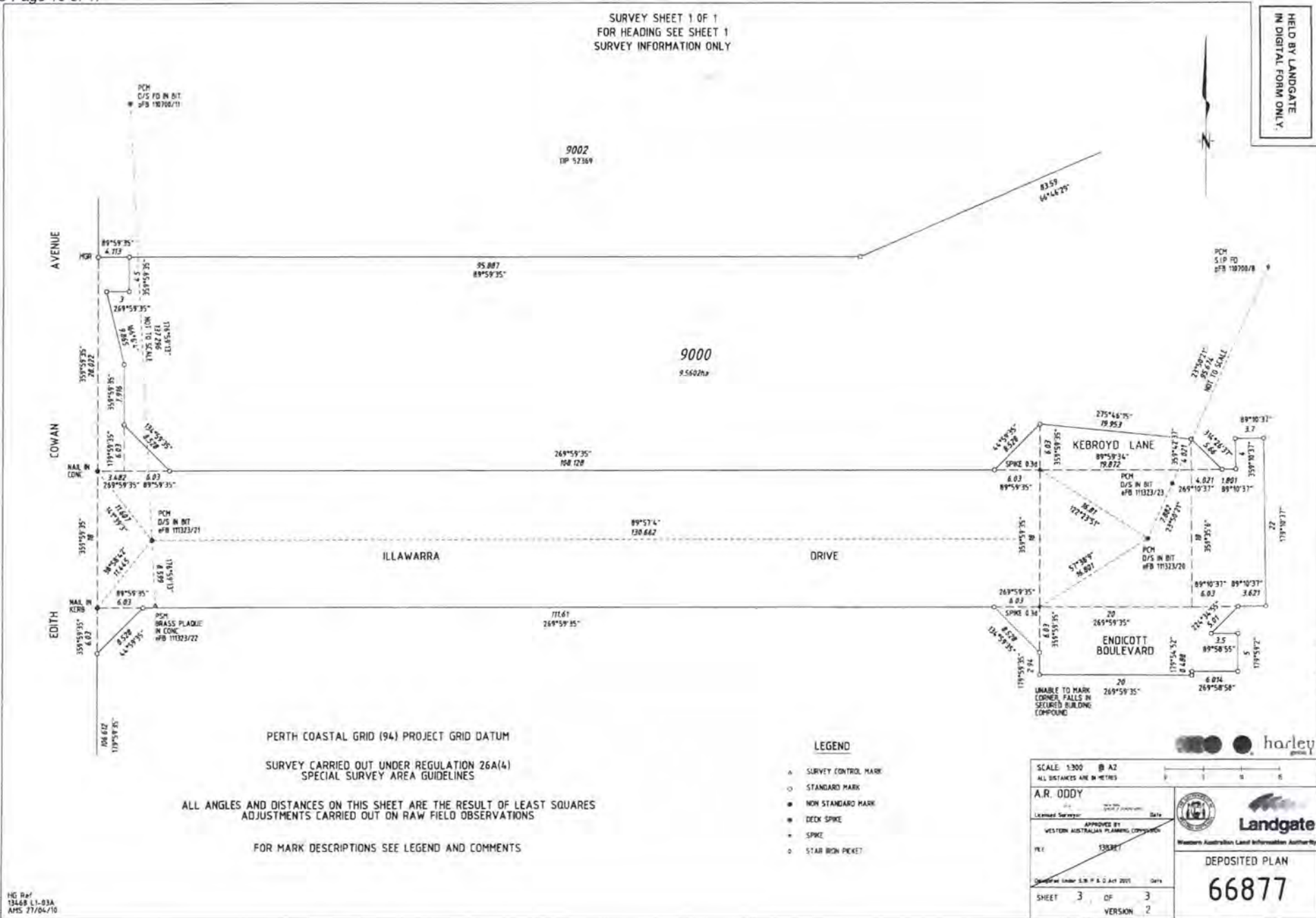
HC Ref
13448 L1-028
AMS 27/04/10

SCALE: 1:1000 @ A2 ALL DISTANCES ARE IN METRES		0 1 2 3 4	
A.R. ODDY Licensed Surveyor		Date	
APPROVED BY WESTERN AUSTRALIAN PLANNING COMMISSION		Date	
FILE 138387		Date	
SHEET 2 OF 3		VERSION 2	
harley		Landgate Western Australian Land Information Authority	
DEPOSITED PLAN		66877	

SURVEY SHEET 1 OF 1
FOR HEADING SEE SHEET 1
SURVEY INFORMATION ONLY

HELD BY LANDGATE
IN DIGITAL FORM ONLY

LANDGATE COPY OF ORIGINAL NOT TO SCALE Mon Apr 9 11:11:41 2018 JOB 56413474



PERTH COASTAL GRID (94) PROJECT GRID DATUM

SURVEY CARRIED OUT UNDER REGULATION 26A(4)
SPECIAL SURVEY AREA GUIDELINES

ALL ANGLES AND DISTANCES ON THIS SHEET ARE THE RESULT OF LEAST SQUARES
ADJUSTMENTS CARRIED OUT ON RAW FIELD OBSERVATIONS

FOR MARK DESCRIPTIONS SEE LEGEND AND COMMENTS

LEGEND

- ▲ SURVEY CONTROL MARK
- STANDARD MARK
- NON STANDARD MARK
- ◆ DECK SPIKE
- ✦ SPIKE
- STAR BORN PICKET

SCALE: 1:300 A2
ALL DISTANCES ARE IN METRES

A.R. ODDY
Licensed Surveyor

APPROVED BY
WESTERN AUSTRALIAN PLANNING COMMISSION

FILE: 130861

Observed Under S.M.P. & G Act 2001 Date:

SHEET 3 OF 3
VERSION 2

harley

Landgate
Western Australian Land Information Authority

DEPOSITED PLAN
66877

(Appendix ORD: 12.3A)

P66877

<u>Lot Number</u>	<u>Part</u>	<u>Register Number</u>	<u>Section</u>
9000		2759/798	

<u>Lot Number</u>	<u>Part</u>	<u>Register Number</u>	<u>Section</u>
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13 April 2018

STORMWATER MANAGEMENT STRATEGY

for

PROPOSED MASTER SITE PLAN BETHANIE ESPRIT COTTAGE LOTS



PREPARED FOR: BETHANIE GROUP



PIPPIN
CIVIL ENGINEERING

13/04/2018
13/04/2018 10:00:00 AM
YWA
www.pippin-engineering.com.au

1.0 INTRODUCTION AND BACKGROUND

Pippin Civil Engineering has been engaged by the Bethanie Group to prepare a Stormwater Management Strategy to accompany the Development Application to the Shire of Dardanup for the proposed Bethanie Esprit cottage lot masterplan. This strategy has been prepared to support the development as proposed by the master site plan and detailed site plans.

The Stormwater Management Strategy provides the approach to stormwater management required to be undertaken by development of this parcel of land considering the existing stormwater infrastructure within the development and its relationship to the surrounding Eaton townsite drainage network.

1.1 LOCATION

The subject site is described as the Bethanie Esprit Village on Lot 9000 Illawarra Drive, Eaton. Lot 9000 is located directly east of the Eaton Shopping Precinct and the Shire of Dardanup offices. The site is bounded by Recreation Drive and Edith Cowan Avenue to the west, Illawarra Drive to the north and the Australind Bypass Road to the south (refer to **Figure 1 – Subject Land**).



Figure 1
Subject Land

Source: MapData 2018 Google

1.2 PROPOSED DEVELOPMENT

This stage of development could be considered as stage 3 of civils and building works within the Bethanie Esprit Village. Stage 1 civil works were undertaken in approximately 2007 with building construction occurring over the last 10 years to 2017. Stage 2 of the development involved the construction of the Village Clubhouse and its associated infrastructure in approximately 2011. Stage 3 will now commence moving the development to the east. Stage 3 involves the creation of 34 cottage lots and associated cottage units. Initially development will involve the civil construction and servicing of the 34-cottage lot which will be built over the following years as demand permits.

The proposed development has been detailed by Darklight design for the Bethanie Group and all reference to the development or site plan, within this strategy, refers to the master site plan as created by Darklight Design as drawing DA.03.

2.0 DESIGN CRITERIA

Objective	Design criteria
Stormwater Management	
Extreme Storm Events	<ul style="list-style-type: none"> • Ensure overland conveyance within the Esprit village to the pre-development outlet locations via the road network and surface water flow paths, outside of the proposed cottage unit sites. • Ensure the top water level overland conveyance mechanisms provide a minimum habitable floor levels 0.3m above the 100-year ARI flood event levels. • Provide additional on-site detention storage, where possible, within non-habitable areas of the development.
Major Storm Events	<ul style="list-style-type: none"> • Provision of a pit and pipe network designed to convey up to the detained 0.1 AEP storm event. • Ensure on-site detention storage areas and volumes capable of limiting the capacity of any stormwater outflow upto the 0.1 AEP storm event. To the predetermined capacity of the existing downstream Shire of Dardanup stormwater pipe network.
Groundwater Management	
Infiltration	<ul style="list-style-type: none"> • Maximise the area of infiltration through the implementation of soakage within the detention infrastructure.
Maintain groundwater surface profile	<ul style="list-style-type: none"> • Implementation of a subsoil pipe network to control any groundwater rise due to development, in accordance with the principles established in previous stages of the Esprit village.

Table 1
Design Criteria

3.0 PREDEVELOPMENT ENVIRONMENT

3.1 EXISTING LAND USE

The existing land use of the property is as retirement village as the Bethanie Esprit Village, however the area proposed for the cottage lot masterplan is presently vacant. The area is generally fenced off from the existing village operations.

The western two-thirds of the masterplan area was previously earth worked to approximately level during the initial Stage 1 earthworks operations in approximately 2006 and has remained vacant ever since. With the exception of the area being utilised as the Builder's laydown yard during the construction of the Clubhouse.

The following aerial photograph (refer to Figure 2) depicts the predominantly cleared nature of the land, with any vegetation being regrowth that has occurred since approximately 2007.



Figure 2
Aerial Photograph of the Site

Source: MapData 2018 Google

3.2 ENVIRONMENTAL AND LANDFORM FEATURES

The land associated with the cottage lot masterplan development is predominantly cleared and devoid of any vegetation, other than a few invasive weeds. Approximately one third, or the eastern portion of the cottage lot masterplan area is covered with paddock type grass that has regrown since the earthworks operations in approximately 2007.

Acid Sulphate Soil mapping (refer Figure 3, extract from Acid Sulphate Soil Risk Map, Swan Coastal Plain – DWER-055) indicates that the site is located within an area with moderate to low risk of actual and potential acid sulphate soils occurring at depths generally greater than 3.0m.

Two thirds of the cottage lot development is located within an area that has already been earth worked to approximate level, with the remaining third to be filled only minimal excavation of the existing surface will be undertaken. The excavation of trenches for the installation of services will require further investigation of ASS should detailed design indicate that trench excavation will be greater than 3.0m below the natural surface. Alternatively, if dewatering is required to be undertaken for the installation of services further ASS testing and investigation will be undertaken. This testing cannot be undertaken until detailed design has been completed.

A geotechnical investigation was undertaken by WML Consultants in November 2006, which also included an assessment on ASS and Potential Acid Sulphate Soils (PASS) within the subsurface soils of the site. The report

made the following recommendation in relation to ASS: "There are no specific recommendations relating to Acid Sulphate Soils and site development, as the investigation indicated little evidence of Actual Acid Sulphate Soil or Potential Acid Sulphate Soil on the site" WML Consultants, Bethanie Fields Stage 2, Geotechnical Report.



Figure 3
Acid Sulphate Soil Mapping

Source: data.wa.gov.au

4.3.2 Soil Types

The geotechnical report, completed by WML Consultants in November 2006 indicated good foundation conditions existed across the site, with the investigation showing that the surface material was fine to medium grained sand, with a varying density. The investigation included the entire original parent parcel of land, Lot 1004, thereby covering the entire proposed Bethanie Esprit village. The investigation advised that an 'A' footing classification could be achieved if 1.2m separation to groundwater could be obtained and the existing surface soils were recompacted, where this was not applicable an 'S' classification would be applicable.

4.3.3 Site Topography

The topography of the cottage lot masterplan site is best described as relatively flat, with surface levels ranging from RL 13.5 metres to RL 12.50 metres, with a general fall to the north. A detailed feature survey of the cottage lot masterplan area has recently been completed and is included as Attachment 1.

3.3 SURFACE WATER HYDROLOGY

3.3.1 Wetlands

The eastern portion of Lot 9000 and specifically the cottage lot masterplan area is classified under the Geomorphic Wetlands of the Swan Coastal Plan (DBCA-019) as multiple use palusplain. This classification does not prevent any form of development, in addition the existing Eaton residential development north and east of Lot 9000 has the same classification. An extended review of the database indicates that the site is within approximately 300m of a conservation category sumpland that is located west north west of the site. This proposal does not affect this conservation category wetland with all stormwater from the development entering the existing Shire drainage network to the in La Trobe Place and heading north to Eaton Drive

3.3.2 Surface Water Bodies

The development site does not contain any surface water storage bodies such as lakes, dams or areas of permanently standing water.

3.3.3 Streams, Creeks and Surface Water Flow Paths

The development site and village does not contain any streams, creeks or surface water flow paths.

However, the village currently and it is proposed that the Cottage lot masterplan development will continue, to discharge into two formed open drainage channels that exist within the Bethanie Groups lot to the north of the Esprit Village and Illawarra Drive.

3.3.4 Existing Stormwater Drainage Network

The existing stormwater management across the village consists of two defined catchments. The first catchment being a catchment exiting the Esprit Village via Endicott Boulevard and the second catchment exiting the Esprit Village via the open swale to the east of the bowling green.

Stormwater design and installation was completed as part of stages 1 and 2, copies of the design plans completed for these stages are included as Attachment 1.

Previous design calculations allocated a maximum outflow rate from the Village of 0.1m³/s across the various land uses within the village.

The design philosophy was that stormwater detention would occur within the pit network of the road. Each land use was directly connected to the drainage pits within the road and additional detention was provided via interconnected soakwells where required. The maximum permissible outflow from each pit was then calculated based upon the impervious surface and land use upstream of that individual pit. The detention volume for each collection pit was then determined based upon this maximum permissible outflow.

Thus, design philosophy only varied where significant detention volume was required associated with the construction of the clubhouse and apartment buildings that were contained within the original site masterplan.

3.4 GROUNDWATER HYDROLOGY

The August 2006 geotechnical investigation by WML also recorded groundwater levels across the site. Groundwater levels varied between 0.4m below the natural surface to depths beyond the extent of the investigation, being greater than 2.0m below natural surface.

It should be noted that the depth to groundwater recordings are below the natural surface at the time in 2006, significant earthworks occurred within the Stage 1 construction project where cut to fill operations ensured that the minimum 1.2m of separation to groundwater level was achieved at all test locations.

4.0 STORMWATER MANAGEMENT STRATEGY

The stormwater management strategy for the development Bethanie Esprit Cottage Lot masterplan is to be undertaken in accordance with the following guidelines that were developed for the Esprit Village during the detailed design and approvals process for Stage 1 of the development in 2006/2007.

The key components of the stormwater management strategy are:

- The residential building development on the cottage lots are to be provided with an individual and suitably sized stormwater connection for the collection of all stormwater runoff from within the building development.
- The road network will be interconnected with a stormwater pit and pipework to collect and convey stormwater from the road, carparks and hardstand areas of the development to detention areas.
- Maximise infiltration of surface water flows within the detention areas through the use soakwells and roadside swale drains, where the existing subsurface material will permit.
- Collection, infiltration and detention of stormwater flows within detention infrastructure located within areas of proposed landscaping and pathways.
- Detention of the 0.1 AEP storm event to the previously agreed capacity of the Shire of Dardanup's downstream stormwater infrastructure.
- Preservation of the predevelopment stormwater flow paths within the open swale to the Shire of Dardanup's existing stormwater pipe network in La Trobe Place.
- Provision of suitable flow paths within the development for the 0.01 AEP storm event to ensure it can escape the development area on its predevelopment flow path.

4.1 MODELLING

The stormwater modelling has been completed utilising the Rational Method, based on the relatively small scale of the development area. The cottage lot masterplan consists of two defined catchments, that both presently exist and are utilised by the existing Esprit Village development. The first catchment being a catchment exiting the Esprit Village via Endicott Boulevard and the second catchment exiting the Esprit Village via the open swale to the east of the bowling green.

Previous drainage design on Stage 1 and Stage 2 of the Esprit village noted that the maximum allowable discharge rate from the village site shall be $0.1\text{m}^3/\text{s}$ for the 1 in 10-year ARI storm event. This maximum allowable flow rate has been adopted for the 0.1 AEP storm vent for the purposes of the development calculations.

Previous design calculations allocated this maximum flow rate across the various land uses within the village, which equated to the Independent Living Units (ILUs) being allocated a maximum flow rate of $0.0824\text{m}^3/\text{s}$ and the clubhouse/apartment land use being allocated the remaining maximum flow rate of $0.0176\text{m}^3/\text{s}$. The road reserve area was included within the impervious area and subjected peak flow generation calculations but was not allocated any of the maximum design outflow. I.e. the detention volume would be greater for a minor catchment that had extensive road contributing because the permissible outflow was not increased based upon road reserve area.

The design philosophy was that the stormwater detention and pipe flow was designed from upstream to downstream, with each stormwater pit being interconnected to its downstream pit via a controlled outlet. This is diagrammatically shown in Figure 4 below. The detention volume for each collection pit was then determined based upon a maximum outflow, that was calculated based upon the number of ILU's that were upstream of the collection pit. This enabled the flow rate within the pipe network to be minimised and the detention storage areas to be spread throughout the development.

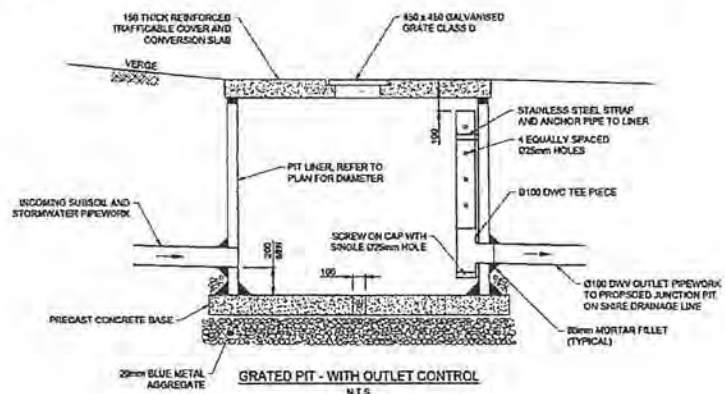


Figure 4
Outlet Controlled Stormwater Grated

It is proposed that this philosophy continue through the cottage lot masterplan development, however it is proposed that the stormwater detention occur within the landscape areas of the masterplan and not within the road pavements. In addition, a comparison of the cottage lot masterplan and the previous plan for apartments and ILU's it indicates that the cottage lot masterplan replaces the apartment development and approximately 6 ILU's. Where the previous maximum flow rate was based upon 103 ILU's and 5187m² of clubhouse/apartment area, the maximum flow rate will not increase but be based upon 1965m² of Clubhouse, 34 cottage lots, 280m² of Men's Shed, the 82 existing ILU's and 15 future ILU's.

The breakdown of maximum permissible flow for each of the design units is broken down as follows:

Original Development

Development Land Use	Permissible Outflow per Unit/m ²	No of Units/m ²	Total Outflow per Land Use
Clubhouse/Apartment	0.0000034 m ³ /s/m ²	5187m ²	0.0176 m ³ /s
ILU's	0.0008 m ³ /s/Unit	103	0.0824 m ³ /s
Road Reserve	0	N/A	0
		Total	0.1 m³/s

Revised Development with Cottage Lot Masterplan

Development Land Use	Permissible Outflow per Unit/m ²	No of Units/m ²	Total Outflow per Land Use
Clubhouse	0.0000034 m ³ /s/m ²	1965 m ²	0.00668 m ³ /s
ILU's	0.0008 m ³ /s/Unit	97	0.0776 m ³ /s
Men's Shed	0.0000034 m ³ /s/m ²	280m ²	0.00095 m ³ /s
Cottage Lot	0.000434 m ³ /s/Unit	34	0.0147 m ³ /s
Road Reserve	0	N/A	0
		Total	0.1 m³/s

Table 2
Maximum Permissible Flow per Land Use

It is noted that the overall Bethanie Esprit masterplan has been extended to the east and greater than 103 ILU's could be developed on the extend site. However, this extension to the east has removed a previously indicated cul de sac. This cul de sac of green title development was allocated additional permissible stormwater outflow above the 0.1m³/s that was allocated to Bethanie Esprit. Therefore, this future eastern development of the village will be able to utilise this permissible outflow for a future drainage outlet through to Illawarra Dve.

Multiple storm events have been modelled utilising the Rational Method as described in Australian Rainfall and Runoff (AR & R).

Rainfall intensities for the various storm events and storm durations are calculated and provided by the Bureau of Meteorology (BoM) computerised design IFD Data System (www.bom.gov.au).

4.2 LOT LEVEL STORMWATER MANAGEMENT

All proposed cottage lots will be directly connected to the stormwater network within the fronting road or landscape area, as presently occurs for other development on The Esprit Village. The cottage lots will not be expected to detain any stormwater within their allocated lot boundary and will generally be provided with a 150mm diameter stormwater connection for the direct connection of gutters and drainage from impervious areas.

4.3 MAJOR STORM EVENT MANAGEMENT (0.1 AEP)

Previous development across the village utilised the methodology of stormwater detention and controlled outflow within the road network. The development proposes a series of roadside swales to collect surface water flows, as they enter the proposed road reserve, with collection pits and pipework to a network of stormwater collection pits and interconnecting pipe system for the collection of stormwater generated by the road network. This proposal will manage storm events up to and including the 1 in 5-year ARI storm for the development area. This is in accordance with discussion with the Shire Officer, Pascal Balley on the 18th October 2016.

The detailed design of the pit, pipe and detention storage network will form part of detailed stormwater design provided at Building stage of development however the conceptual stormwater design, including indicative pit and pipe network, confirmation of detention areas and anticipated flows is shown in Figure 5 below and in more detail within Attachment 2.



Figure 5
Major Storm - 0.1 AEP Stormwater Strategy

Each of the detention areas will include the construction of a controlled outlet, restricting outflow from the detention area to the maximum permissible outflow. Detention volumes and their associated surface areas have then been calculated based upon the relevant maximum permissible outflow at that location, which is dependent on the number/amount of upstream land uses, as described in Table 2 above.

A summary of the maximum permissible flow rates, the detention storage volumes and indicative land area is detailed in table 3, below.

Catchment	EXISTING DETENTION	REQUIRED DETENTION	REQUIRED LAND AREA
Cottage Lots 3 to 10, plus existing upstream	12 Soakwells (1.8 * 1.2)	15 Soakwells (1.8 * 1.2)	N/A, an additional soakwell added to pits 5, 6 & 8
Amendment of Clubhouse plus Cottage Lots 1 & 2.	21m ³ of Atlantis Cells (to be Removed)	26.6 m ³ of Atlantis Cells	30.2 m ²
Detention to Central Landscaped Park	0 m ³	6 Soakwells (1.8 * 1.2) + 31.5 m ³ of Atlantis Cells	35.8 m ²
Detention to Landscaped Belt	0 m ³	6 Soakwells (1.8 * 1.2) + 73.8 m ³ of Atlantis Cells	83.8 m ²

Table 3
Major Storm – 0.1 AEP Stormwater Requirements

The Stormwater Strategy for the 0.1AEP, as shown in Figure 5 indicates the removal of the existing subsurface detention utilising Atlantis Cells, from beneath the existing carpark. The original design purpose of this subsurface storage was for the future apartments and for a portion of the Clubhouse. The Clubhouse currently utilises this stormwater detention during a rain event. Therefore, Figure ?? includes the relocation of the subsurface detention volume for use by the Clubhouse and the portion of those cottage lots that will front Endicott Boulevard.

4.4 EXTREME FLOWS 0.01 AEP STORM EVENT MANAGEMENT

The cottage lot masterplan development includes an interconnecting road network that will grade gently towards the landscaped park and landscaped belt. The road network will convey the 0.01 AEP storm event out of the site the road network parks and existing sealed accesses.

The detailed design of the road pavement grades will occur as part of the detailed stormwater drainage design to be completed at building stage. An indicative and conceptual flood route sketch has been included as Figure 6 below and in more detail within Attachment 3.



Figure 6
Extreme Storm - 0.01 AEP Stormwater Strategy

The landscaped park areas will be depressed below the level of the surrounding road network to undertake some detention of the 0.01 storm, event. The landscape belt between cottage lots 11 to 19 and 20 to 28 will also be marginally depressed to ensure that the proposed path acts as flood route. Eventual discharge from the development will occur into the existing open swale drains to the north of the development to eventually utilise La Trobe Place.

Detailed design at the building stage will resolve with exact dimensions and levels of the landscape areas to ensure that conveyance can occur through the areas shown within Figure 6.

5.0 GROUNDWATER MANAGEMENT STRATEGY

Based upon the advice as included within the 2006 WML Consultants geotechnical investigation, that the site will be an 'A' classification subject to maintaining the groundwater at 1.2m below the finished surface, a network of subsoil drainage pipes will be installed within the cottage lot masterplan development, as currently occurs on the existing village.

The subsoil network will generally be undertaken in accordance with Figure 7 as shown below and in more detail within Attachment 4. It is intended, as per the existing village, that the subsoil pipe network will be independent of the stormwater pipe network, to ensure that the soakage to the natural ground surface is maintained and direct discharge does not occur between the stormwater pits and the subsoil pipework when the pits are required to perform the detention function during a storm event.



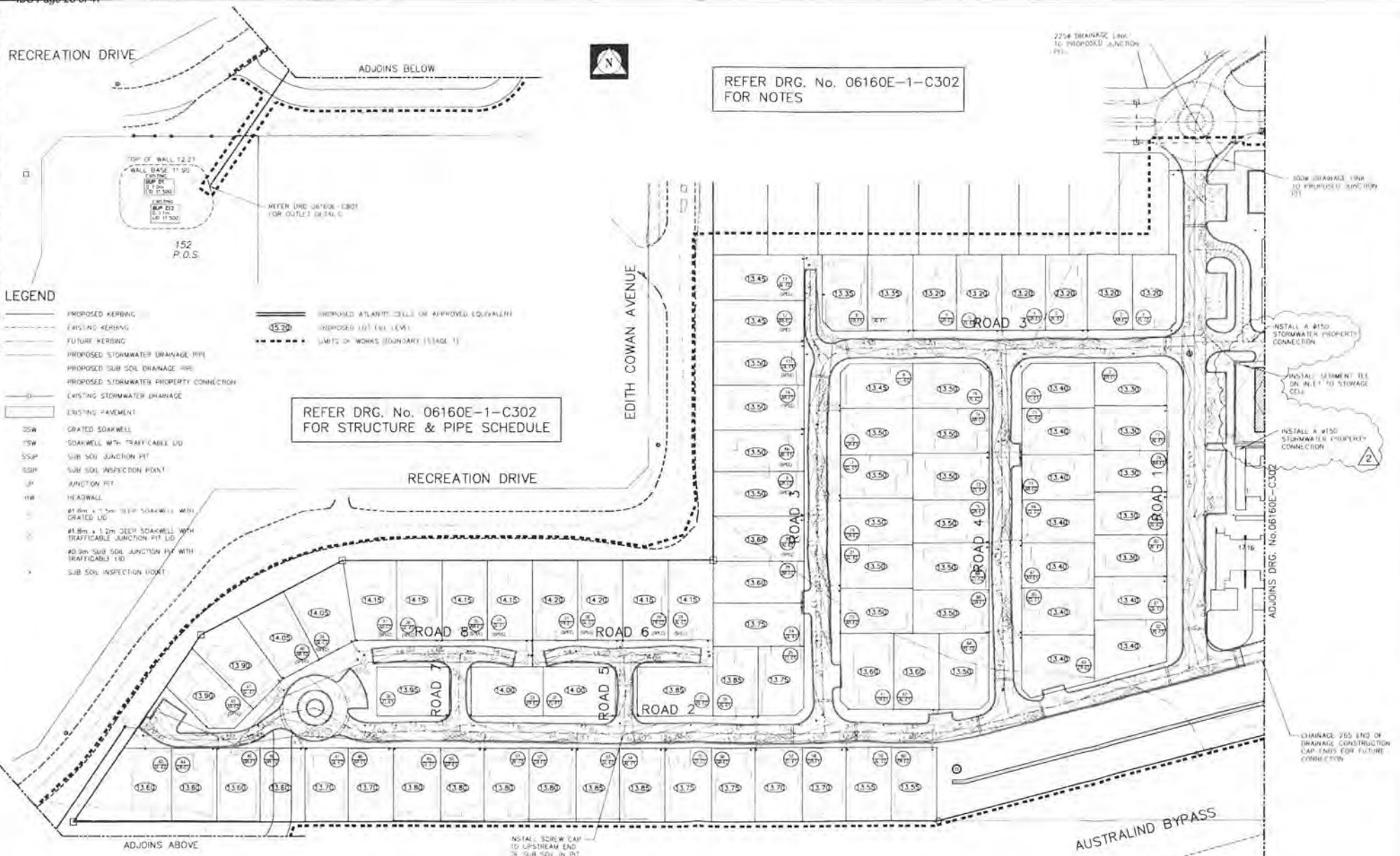
Figure 7
Groundwater Management Strategy

Detailed design at the building stage will resolve with exact locations, grades and inverts of the subsoil network.

ATTACHMENT 1

Existing Development Stormwater Designs

Appendix ORD: 12.3(A)



1:500
 (A1) 0 5m 10 15 20 25 30 35 40 45 50

REV	DATE	DESCRIPTION	ENG	APP
2	19/7/08	CARPARK DRAINAGE DETAILS AMENDED	*CLP	*CLP
1	6/11/08	ROAD CONTOURS AMENDED	*CLP	*CLP
0	29/10/08	ISSUED FOR CONSTRUCTION	*CLP	*CLP
0	8/9/08	NSL REVISED TO HARLEY SURVEY GROUP FEATURE SURVEY	*CLP	*CLP
C	28/8/08	OUTLET DETAIL NOTE ADDED	*CLP	*CLP
B	26/8/08	DRAINAGE OUTLET REVISED	*CLP	*CLP
1	4/2/09	ROAD 7 ALIGNMENT / PIT 49 LID ALIGNMENT AMENDED	*CLP	*CLP



THOMPSON McROBERT EDGELOE
 28 Wiltenswood Street
 Burnbury WA 6230
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 Fax: (08) 9791 4412

DATE: A1

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DESIGNED BY	DATE	CHECKED BY	DATE
*C L PIPPIN	29/10/08	WRS 16/7/08	CLP 16/2/07
*CLP 24/7/08	*CLP 24/7/08		

SCALE: 1:500

DESIGNED BY: BETHANIE GROUP
 BETHANIE ESPRIT - EATON
 DRAINAGE LAYOUT PLAN
 SHEET 1 OF 2
 DRAWING NOT TO BE SCALED
 06160E-1-C301



PIPE SCHEDULE

No.	PIPE LENGTH (m)	STRUCTURE (U/S - D/S)	PIPE DIA/SIZE (mm)	S/S INVERT LEVEL	D/S INVERT LEVEL
P1	13.4	2-Ø112	300	11.86	11.86
P2	20.5	2-Ø112	300	11.24	11.40
P3	25.0	4-Ø	300	11.81	11.14
P4	25.0	5-Ø	300	11.81	11.81
P5	25.0	6-Ø	300	11.86	11.86
P6	25.0	7-Ø	300	12.04	12.04
P7	10.0	8-Ø	300	12.05	12.01
P8	19.9	9-Ø	300	12.11	12.25
P9	25.0	10-Ø	300	12.19	12.19
P10	25.0	11-Ø	300	12.19	12.19
P11	28.4	12-Ø	300	12.42	12.27
P12	21.0	13-Ø	225	12.50	12.40
P13	29.4	14-Ø	300	12.58	12.50
P14	24.9	15-Ø	300	12.66	12.58
P15	10.7	16-Ø	225	12.72	12.86
P16	9.8	17-Ø	150	12.83	12.85
P17	11.8	18-Ø	225	12.95	12.83
P18	20.5	19-Ø	150	13.05	13.25
P19	26.5	20-Ø	150	13.05	12.25
P20	19.4	21-Ø	300	11.86	11.81
P21	11.8	22-Ø	11.86	11.86	11.86
P22	12.1	23-Ø	225	11.96	11.92
P23	11.1	24-Ø	225	12.06	11.86
P24	9.8	25-Ø	225	12.04	12.00
P25	14.0	26-Ø	225	12.06	12.06
P26	14.0	27-Ø	225	12.11	12.07
P27	9.7	28-Ø	225	12.15	12.11
P28	19.8	29-Ø	225	12.21	12.15
P29	24.2	30-Ø	225	12.29	12.21
P30	24.5	31-Ø	150	12.43	12.29
P31	16.1	32-Ø	150	12.53	12.43
P32	11.1	33-Ø	150	12.71	12.55
P33	18.2	34-Ø	150	12.45	12.17
P34	29.7	35-Ø	150	12.21	12.00
P35	25.1	36-Ø	150	12.29	12.21
P36	24.9	37-Ø	150	12.37	12.29
P37	11.4	38-Ø	300	11.86	11.86
P38	21.7	39-Ø	225	11.84	11.85
P39	19.5	40-Ø	225	12.05	11.84
P40	20.0	41-Ø	225	11.84	11.85
P41	15.0	Ø112	300	12.11	12.11
P42	72.9	Ø4-Ø5	300	12.12	11.90
P43	5.5	Ø3-Ø4	150	12.26	12.12
P44	5.1	Ø2-Ø3	150	12.26	12.26
P45	24.2	Ø2-Ø1	150	12.36	12.36
P46	17.7	Ø3-Ø2	150	12.42	12.36
P47	22.8	Ø4-Ø3	150	12.42	12.36
P48	24.9	Ø5-Ø4	150	12.58	12.50
P49	23.0	Ø6-Ø5	150	12.66	12.58
P50	16.7	Ø7-Ø6	150	12.87	12.36
P51	26.3	Ø8-Ø7	150	12.87	12.44
P52	21.9	Ø9-Ø8	150	12.85	12.55
P53	23.5	Ø10-Ø9	150	12.95	12.85

NOTE:
DRAINAGE DISTANCES SHOWN ON PLANS ARE FROM CENTRE TO CENTRE OF DRAINAGE STRUCTURE!

SUBSOIL PIPE SCHEDULE

No.	PIPE LENGTH (m)	STRUCTURE (U/S - D/S)	PIPE DIA/SIZE (mm)	S/S INVERT LEVEL	D/S INVERT LEVEL
P61	53.3	Ø1-Ø0	225	11.55	11.42
P62	28.0	Ø2-Ø1	225	11.64	11.55
P63	61.1	Ø3-Ø2	150	11.84	11.64
P64	61.9	Ø4-Ø3	150	12.45	11.84
P65	91.3	Ø5-Ø4	100	12.58	12.45
P66	21.4	Ø6-Ø5	100	12.62	12.50
P67	24.0	Ø7-Ø6	100	12.70	12.62
P68	23.1	Ø8-Ø7	100	12.70	12.62
P69	53.7	Ø9-Ø8	150	11.83	11.55
P70	40.7	Ø10-Ø9	150	11.83	11.55
P71	56.2	Ø11-Ø10	150	12.25	12.07
P72	44.7	Ø12-Ø11	150	12.43	12.25
P73	24.5	Ø13-Ø12	100	12.15	12.07
P74	94.2	Ø14-Ø13	100	12.15	12.15
P75	4.1	Ø15-Ø14	150	11.15	12.12
P76	39.8	Ø16-Ø15	150	12.22	12.15
P77	51.0	Ø17-Ø16	100	12.25	12.22
P78	21.4	Ø18-Ø17	100	12.42	12.25
P79	20.0	Ø19-Ø18	100	12.70	12.62
P80	25.7	Ø20-Ø19	100	12.70	12.62
P81	46.1	Ø21-Ø20	100	12.50	12.35
P82	46.2	Ø22-Ø21	100	12.60	12.38
P83	43.5	Ø23-Ø22	100	12.00	11.55
P84	34.2	Ø24-Ø23	100	11.74	11.54
P85	28.6	Ø25-Ø24	100	11.91	11.84

NOTE:
UNIT LAYOUT BASED ON DIGITAL DATA RECEIVED FROM CASSELLA & ASSOCIATES ARCHITECTS (ON 01/05/08 REF. No. 5094-001-10M).

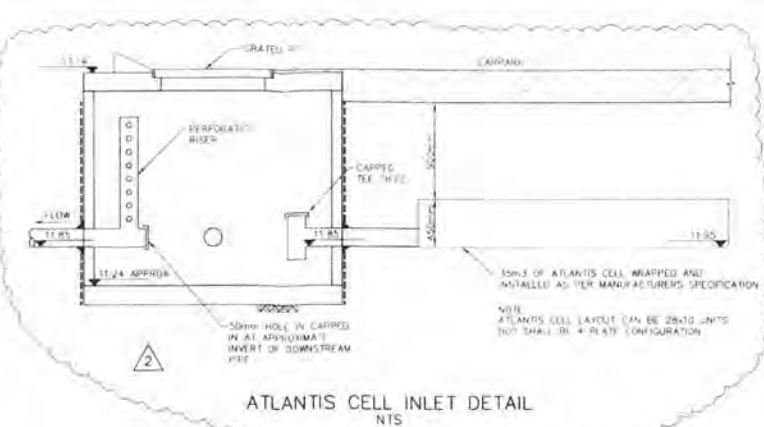
NOTE:
FEATURE SURVEY & HEIGHT DATUM BASED ON HARVEY SURVEY GROUP'S DIGITAL FEATURE SURVEY PLAN DATED 27/6/08 REF. No. 13488-07A.

STRUCTURE SCHEDULE

No.	STRUCTURE TYPE	LINEAR DIA (mm)	EASTING	NORTHING	SO LEVEL
1	Ø112	300	41614.757	111849.194	12.987
2	Ø112	300	41614.990	111921.459	12.992
3	Ø112	300	41614.938	111949.459	12.982
4	Ø112	300	41614.886	111927.459	13.012
5	Ø112	300	41614.564	111896.459	13.014
6	Ø112	300	41614.523	111881.460	13.137
7	Ø112	300	41614.512	111877.460	13.077
8	Ø112	300	41615.816	111852.519	13.114
9	Ø112	300	41615.690	111846.186	13.144
10	Ø112	300	41615.504	111839.862	13.174
11	Ø112	300	41615.398	111834.279	13.343
12	Ø112	300	41615.649	111834.461	13.480
13	Ø112	300	41615.531	111834.461	13.480
14	Ø112	300	41615.531	111834.461	13.555
15	Ø112	300	41615.624	111834.461	13.585
16	Ø112	300	41615.450	111834.291	13.741
17	Ø112	300	41616.054	111844.023	13.952
18	Ø112	300	41616.735	111855.841	13.994
19	Ø112	300	41617.240	111855.793	14.116
20	Ø112	300	41618.237	111856.967	14.240
21	Ø112	300	41619.675	111945.394	13.935
22	Ø112	300	41622.631	111945.120	13.113
23	Ø112	300	41620.706	111945.451	13.065
24	Ø112	300	41625.865	111945.006	13.131
25	Ø112	300	41625.841	111945.332	13.095
26	Ø112	300	41624.703	111945.168	13.161
27	Ø112	300	41620.726	111945.360	13.125
28	Ø112	300	41621.235	111946.051	13.284
29	Ø112	300	41620.537	111926.303	13.155
30	Ø112	300	41620.430	111907.116	13.100
31	Ø112	300	41620.922	111927.050	13.558
32	Ø112	300	41621.331	111881.521	13.414
33	Ø112	300	41620.917	111948.548	13.354
34	Ø112	300	41620.300	111966.419	13.485
35	Ø112	300	41620.871	111915.333	13.275
36	Ø112	300	41620.901	111980.259	13.245
37	Ø112	300	41621.294	111885.366	13.275
38	Ø112	300	41623.204	111926.657	13.152
39	Ø112	300	41623.130	111916.927	13.125
40	Ø112	300	41623.894	111931.298	13.429
41	Ø112	300	41624.921	111842.633	13.529
42	Ø112	300	41627.336	111933.461	13.443
43	Ø112	300	41624.864	111935.831	13.406
44	Ø112	300	41627.865	111834.530	13.537
45	Ø112	300	41621.583	111834.708	13.650
46	Ø112	300	41627.561	111834.247	13.685
47	Ø112	300	41628.594	111845.807	13.742
48	Ø112	300	41628.883	111856.021	14.036
49	Ø112	300	41624.854	111856.181	13.881
50	Ø112	300	41627.237	111855.914	14.150
51	Ø112	300	41627.083	111916.447	14.370
52	Ø112	300	41624.170	111946.048	13.476
53	Ø112	300			
54	Ø112	300			

SUBSOIL STRUCTURE SCHEDULE

No.	STRUCTURE TYPE	LINEAR DIA (mm)	EASTING	NORTHING	SO LEVEL
60	Ø90	900	41612.027	111989.241	12.927
61	Ø90	900	41611.331	111943.123	13.042
62	Ø90	900	41611.813	111916.149	13.110
63	Ø90	900	41611.746	111854.050	13.187
64	Ø90	900	41645.990	111837.387	13.354
65	Ø90	900	41654.616	111836.748	13.814
66	Ø90	900	41654.328	111828.126	14.025
67	Ø90	900	41628.243	111857.749	13.948
68	Ø90	900	41629.242	111827.899	14.185
69	Ø90	900	41628.296	111942.429	13.858
70	Ø90	900	41628.583	111942.249	13.244
71	Ø90	900	41627.625	111886.057	13.337
72	Ø90	900	41629.566	111841.406	13.624
73	Ø90	900	41625.726	111946.023	13.485
74	Ø90	900	41625.236	111846.291	13.544
75	Ø90	900	41615.443	111835.910	13.530
76	Ø90	900	41627.801	111840.812	13.516
77	Ø90	900	41628.013	111837.561	13.313
78	Ø90	900	41628.570	111856.598	13.919
79	Ø90	900	41628.242	111857.932	14.185
80	Ø90	900	41628.868	111858.011	14.035
81	Ø90	900	41628.956	111856.733	14.035



ATLANTIS CELL INLET DETAIL
NTS



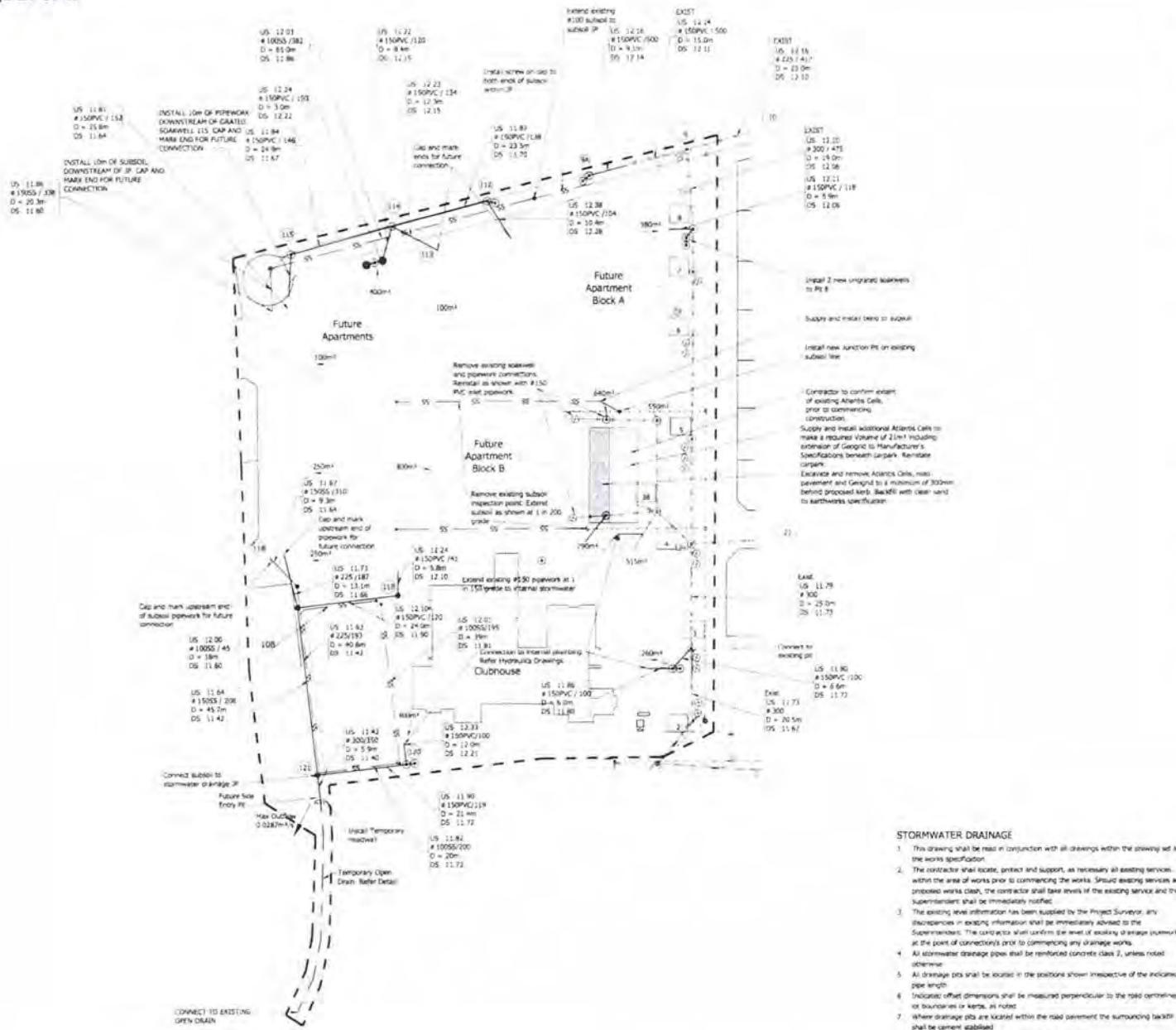
* LENGTHS SIGNATURES ON ORIGINAL OR PREVIOUS SCALE OF DRAWING

- NOTES**
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE SPECIFICATION AND REQUIREMENTS OF THE SHIRE OF GARDNER.
 - THE CONTRACTOR SHALL OBTAIN ALL RELEVANT AUTHORITIES TO LOCATE ALL EXISTING SERVICES WITHIN THE CONTRACT AREA PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL CONTACT THE DIAL BEFORE YOU DIG SERVICE AND SHALL IDENTIFY AND LOCATE ALL SERVICES IN CONJUNCTION WITH THE SERVICE BODIES PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION. WHERE EXISTING AND PROPOSED WORKS INTERSECT, LEVELS ARE TO BE TAKEN AND SUPPLIED TO THE SUPERINTENDENT.
 - THE CONTRACTOR SHALL LOCATE ALL LEVELS FROM ESTABLISHED BENCH MARKS.
 - ALL BENCH MARKS ARE TO BE PROTECTED AND PRESERVED.
 - THE CONTRACTOR SHALL SHARE WITH TELSTRA, ALIATA GAS AND WESTERN POWER TO ALLOW INSTALLATION OF ROAD CROSSINGS PRIOR TO PAVEMENT CONSTRUCTION.
 - ALL CONSTRUCTION SHALL MAKE SMOOTH CONNECTION TO EXISTING WORK.
 - STORMWATER PIPES ARE TO BE REINFORCED CONCRETE (CLASS '2') UNLESS NOTED OTHERWISE.
 - JUNCTION AND ENTRY PITS ARE TO BE LOCATED IN POSITIONS SHOWN, IRRESPECTIVE OF THE INDICATED PIPE LENGTHS.
 - WHERE CONNECTING INTO EXISTING DRAINAGE, THE CONTRACTOR IS TO PICK UP UPSTREAM AND DOWNSTREAM INVERT LEVELS OF EXISTING DRAINAGE LINE IMMEDIATELY DOWNSTREAM OF PROPOSED CONNECTION. THE CONTRACTOR TO SUPPLY THIS SURVEY INFORMATION TO THE SUPERINTENDENT PRIOR TO THE COMMENCEMENT OF ANY DRAINAGE CONSTRUCTION. THE CONTRACTOR TO THEN WAIT NOTIFICATION FROM THE SUPERINTENDENT THAT DRAINAGE CONSTRUCTION MAY COMMENCE.

REFER DRG. No. 06160E-1-C301
FOR LEGEND

1:500
0 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m

3	4/2/09	PIT AND LID ALIGNMENT AMENDED	CLP	CLP
2	19/11/08	DRAINAGE CAPRIAN DETAIL AMENDS	CLP	CLP
1	19/11/08	PIT LID LEVELS AMENDED TO SPLIT ROAD LEVELS	CLP	CLP
0	29/10/08	ISSUED FOR CONSTRUCTION	CLP	CLP
0	8/9/08	NEL. REVISION TO HARVEY SURVEY GROUP FEATURE SURVEY	CLP	CLP
0	8/9/08	PIPE SPECIFICATION SCHEDULE REVISION	CLP	CLP
0	24/7/08	ISSUED FOR APPROVAL/TENDER	CLP	CLP
REV	DATE	DESCRIPTION	ENG	APP



Approved for Construction by:

Signed: *C. Pippin

Date: 26/10/11

This drawing shall not be used for construction unless signed as approved.

CONTRACTOR
This document has been prepared by MPM Development Consultants for use by the Client only, in accordance with the terms of engagement, and only for the purpose for which it was prepared.

Designed: C. Pippin

Drawn: S. Couits

Rev	Description	Drawn	Approved	Date	Checked	Date
A	Issued for Approval	SC	*CP	30/3/11	*CP	30/3/11
B	Issued for Pricing	SC	*CP	8/4/11	*CP	8/4/11
C	Minor Staging Amendments	SC	*CP	28/7/11	*CP	28/7/11
D	Unravel, Hatching Adjusted	SC				
E	Allowing Green Submittal Attendee	SC	*CP	26/10/11	*CP	26/10/11

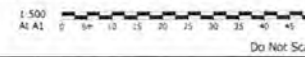
LEGEND

- WORKS BOUNDARY
- EXISTING UNITS
- EXISTING UNGRATED SOAKWELL
- EXISTING GRATED SOAKWELL
- MAXIMUM ALLOWABLE ROOF AREA
- FUTURE PAVEMENT
- FUTURE DRAINAGE INFRASTRUCTURE
- DRAINAGE PIT NUMBER
- EXISTING DRAINAGE PIT NUMBER
- GRATED SOAKWELL
- UNGRATED SOAKWELL (BURIED IN L2)
- UNGRATED SOAKWELL (EXPOSED IF L2)
- EXISTING DRAINAGE PIPESWORK
- SUBSOIL
- SUBSOIL INSPECTION OPENING
- STANDARD JUNCTION PIT
- PROPOSED SUBSOIL JUNCTION PIT

No	Fit Type	Colour	Control	# of manholes	# of manholes	# of manholes	Notes
				Existing	Proposed	Total	
64	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils to Connect To East
64	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils
102	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils
102	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils
103	Ungrated Subsoil	Yes	NA	NA	NA	NA	No Subsoils required on this edge
104	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils
104	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils
105	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
105	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
106	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
106	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
107	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
107	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 1 New Subsoil
108	Ungrated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils and Connect to Existing
108	Grated Subsoil	Yes	NA	NA	NA	NA	Construct 2 New Subsoils and Connect to Existing
38	Adjust Manhole Cell	Yes	NA	NA	NA	NA	Adjust Access Cell Use

STORMWATER DRAINAGE

- This drawing shall be read in conjunction with all drawings within the drawing set and the works specification.
- The contractor shall locate, protect and support, as necessary all existing services within the area of works prior to commencing the works. Ground existing services and proposed works shall be marked with flag levels of the existing services and the Superintendent shall be immediately notified.
- The existing level information has been supplied by the Project Surveyor, any discrepancies in existing information shall be immediately advised to the Superintendent. The contractor shall confirm the level of existing drainage (outlet) at the point of connection prior to commencing any drainage works.
- All stormwater drainage pipes shall be reinforced concrete class 2, unless noted otherwise.
- All drainage pits shall be located in the positions shown irrespective of the indicated pipe length.
- Indicate offset dimensions shall be measured perpendicular to the road centreline, or boundaries or kerbs, as noted.
- Where drainage pits are located within the road pavement the surrounding kerbs shall be cement stabilised.
- Pipe lengths shown are from the centre of drainage pits.
- Subsoil drainage pipework shall be installed in accordance with the levels and details as shown on this plan. Where no levels and details are shown, pipework shall be installed at the minimum depth and alignment as shown on the Details plans.
- The contractor, in conjunction with their Duty and/or Soil and Erosion Management Plans shall undertake a clearing of the stormwater drainage pits and pipework just prior to the practical Commencement and the End of Defects inspections.




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BUNBURY WA 6231
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Facsimile: (08)97 214666
Email: reception@mpmcd.com.au

Client: BETHANIE
Project: BETHANIE ESPRIT STAGE 2
Title: DRAINAGE PLAN
WAPC Number: N/A
Drawing Number: 10-60-300
Original Size: A1

Revision 0



Appendix ORD: 12.3A)

ATTACHMENT 2

0.1 AEP Stormwater Management Strategy

Appendix ORD: 12.3A

0.1 AEP STORMWATER MANAGEMENT STRATEGY

- NEW SCREEN WALLS AND FENCES - REFER TO MATCH EXISTING COMMUNITY CENTER - REFER DETAILED PLANS
- REMOVE EXISTING SCREEN WALLS AND RELANDSCAPE CONNECTION TO EXISTING BOWLS AREA - REFER DETAILED PLANS
- EXISTING STREET FENCING AND LANDSCAPING TO BE RETAINED
- FIGURE VILLA UTILITY AREA DETAILS (DC)

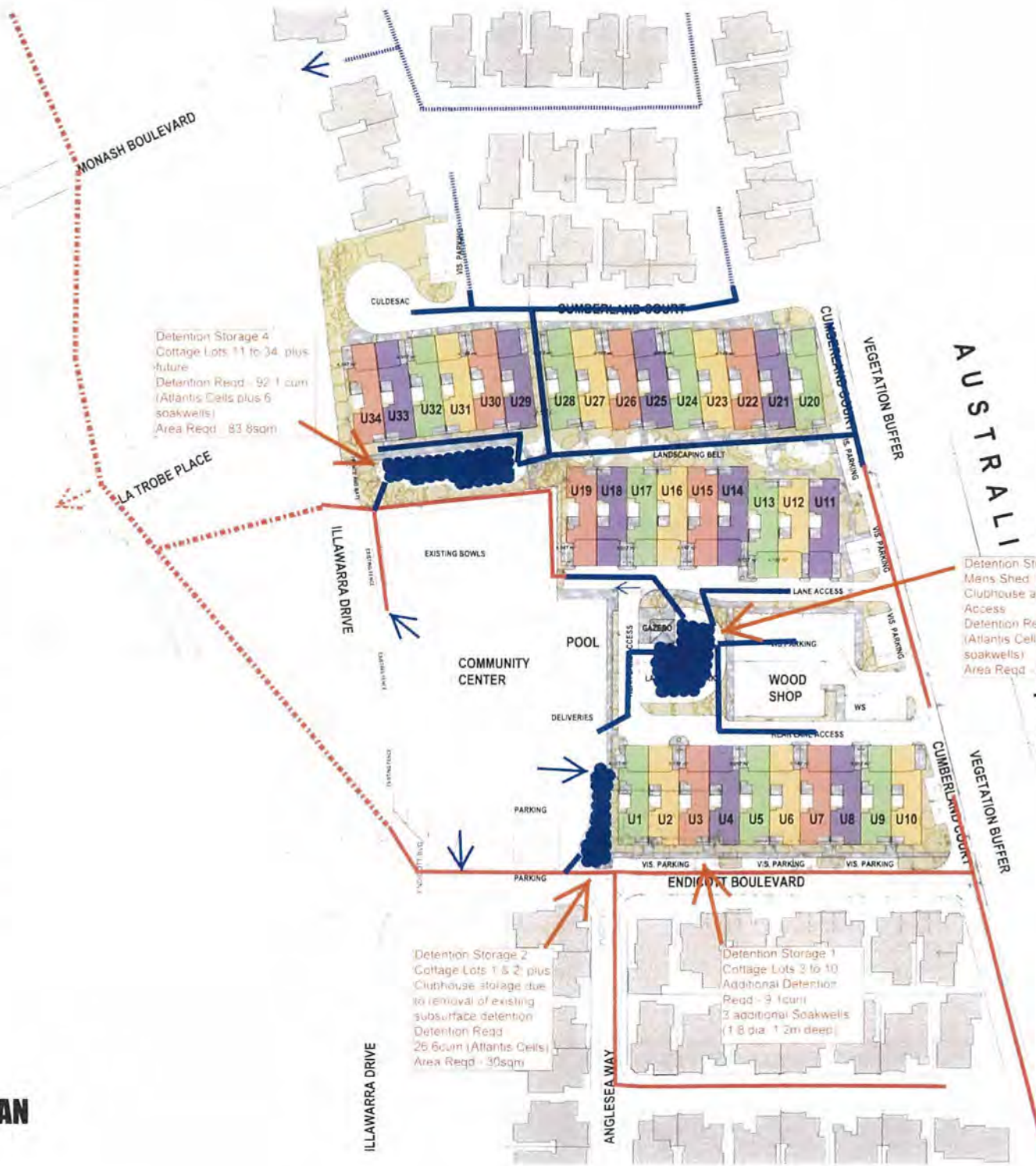
7.5m x 24.6m DESIGN FOOTPRINT
TOTAL YIELD 34 UNITS

UNIT LEGEND

- UNIT TYPE 'A' INTERIOR ELEVATION (REFER TO EXISTING PLANS AND ELEVATIONS SHEET 1A.01)
- UNIT TYPE 'B' INTERIOR ELEVATION (REFER TO EXISTING PLANS AND ELEVATIONS SHEET 1A.01)
- UNIT TYPE 'C' INTERIOR ELEVATION (REFER TO EXISTING PLANS AND ELEVATIONS SHEET 1A.01)
- UNIT TYPE 'D' INTERIOR ELEVATION (REFER TO EXISTING PLANS AND ELEVATIONS SHEET 1A.01)

MASTER SITE PLAN

SCALE @ 1:500 A1 (1:1000 APPROX A2)



LEGEND

- EXISTING VILLA LOTS RETAINED
- REAR GATE AND ACCESS POINT - REFER DETAILED PLANS
- LANDSCAPING GREEN BELT DETAIL IN UNITS WITH CONCRETE DRIVEWAYS AND ACCESS PATHWAYS BETWEEN UNIT FRONT DOORS
- ACCESS ROAD - PAVED AREA TO INDICATE DRIVEWAYS AND PAVED CLEAR ZONES
- CARPORTING AND WOOD SHOP ACCESS AREA NEW ASPHALT PAVING
- NEW ACCESS ROAD - PAVED AREA TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES
ADDITIONAL CHANGES IN BROWN COLOUR TO HIGHLIGHT SAFE PEDESTRIAN AREAS TO REAR LANE WHERE NO PATH
- CARPORTING AREA PAVING REDESIGNED TO SUPPORT ADDITIONAL GREEN CHAIRS - EXISTING LIGHTING RETAINED OR RELOCATED AS PER DETAILED PLANS
- EXISTING VILLAS ALREADY CONSTRUCTED
- EXISTING CURB/SEWER/PIPEWORK
- EXISTING DRIVEWAYS
- EXISTING DRIVEWAY SUB-REVISIONS
- CONCRETE PIPE/ACCESS
- UNDERGROUND DRAINAGE/PIPE
- SUBSURFACE DETENTION
- SOAKWELL NETWORK
- Sub-house Road Connection

Detention Storage 3
Mens Shed Pool Area of Clubhouse and Rear Lane Access
Defention Reqd - 45.2 cum
(Atlantis Cells plus 5 soakwells)
Area Reqd - 35.7 sqm

Detention Storage 2
Cottage Lots 1 & 2 plus Clubhouse storage due to removal of existing subsurface detention
Defention Reqd - 26.6 cum (Atlantis Cells)
Area Reqd - 30sqm

Detention Storage 1
Cottage Lots 3 to 10
Additional Detention Reqd - 9 cum
3 additional Soakwells (1.8 dia 1.2m deep)

NOTE: Refer Notes, Appendix A and Appendix B for further details. All units and fixtures in the plan have been added by Pappas Civil Engineering for the purposes of the Stormwater Management Strategy to accompany the submission of this Masterplan for Development Application. Those notes shall not be construed as being the responsibility of Darklight Design.

ESPRIT COTTAGE LOTS

DARKLIGHT DESIGN
PROPOSED MASTER SITE PLAN

PROJECT	AB	DATE	AB
NO.	AS SHOWN ON DRAWINGS	PROJECT NO.	XB2-17
TITLE	PLANNING APP.	PHASE	AB

DA.03

PLANNING APP. Thursday, 3 April 2025

ATTACHMENT 3

0.01 AEP Stormwater Management Strategy

(Appendix ORD: 12.3A)

**0 01 AEP STORMWATER
MANAGEMENT STRATEGY**

NEW SCREEN WALLS AND FENCE - STYLE TO MATCH EXISTING COMMUNITY CENTER - REFER DETAILED PLANS

REMOVE EXISTING SCREEN WALLS AND LANDSCAPE CONNECTION TO EXISTING BOWLS AREA - REFER DETAILED PLANS

EXISTING STREET FENCINGS AND LANDSCAPING TO BE RETAINED

1/10" ONE VILLA UNIT WORKS - DETAILS 705

7.5m x 24.6m DESIGN FOOTPRINT
TOTAL YIELD 34 UNITS

UNIT LEGEND

- UNIT TYPE 'A'
TRADITIONAL ELEVATION - REFER DETAILED PLANS
- UNIT TYPE 'B'
MODERN ELEVATION - REFER DETAILED PLANS
- UNIT TYPE 'C'
HIGH PERFORMANCE ELEVATION - REFER DETAILED PLANS
- UNIT TYPE 'D'
RURAL ELEVATION - REFER DETAILED PLANS

MASTER SITE PLAN

SCALE @ 1:500 A1 (1:1000 A2/A3)

MONASH BOULEVARD

LA TROBE PLACE

ILLAWARRA DRIVE

ILLAWARRA DRIVE

ANGLESEA WAY

ENDICOTT BOULEVARD

AUSTRALIND BYPASS



LANDSCAPED GREEN BELT BETWEEN UNITS WITH CONVEGATION CORRIDORS AND ACCESS TO TOWERS BETWEEN UNITS FROM FLOORS

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES

CARPARKING AND WOOD SHOP ACCESS AREA IN REAR LANE PARKING

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES
ADDITIONAL CHANGE IN BITUMEN COLOUR TO HIGHLIGHT SAFE PEDESTRIAN AREAS TO REAR LANE WHERE NO PATH

CARPARKING AREA PARKING REDESIGNED TO SUIT ADDITIONAL OVERFLOW BAYS - EXISTING LIGHTING RETAINED OR RELOCATED AS PER DETAILED PLANS

EXISTING VILLAS ALREADY CONSTRUCTED

NOTE: All Road Names, Arrows and Distances noted in red and blue on this plan have been added by Planning Engineering for the purposes of the Stormwater Management Strategy to accompany the submission of this Masterplan for Development Application. These notes shall not be construed as being by or the responsibility of Earthlight Design.

ESPRIT COTTAGE LOTS

0 01 AEP STORMWATER MANAGEMENT STRATEGY

PROPOSED MASTER SITE PLAN

Design	AB	Drawn	AB
Check	AS SHOWN ON DRAWINGS	Project #	X82-17
Issue	PLANNING APP	Project	AB

DA.03

PLAT DATE: Thursday, 1 April 2023

ESPRIT COTTAGE LOTS - THE ESSENTIAL RESIDENTIAL DEVELOPMENT

ATTACHMENT 4

Groundwater Management Strategy

(Appendix ORD: 12.3A)



Groundwater Management Strategy

- Existing Curbs/Gutter Channel
- Existing Sewer Pipe/Storm
- Proposed Sewer & Storm
- Storm Channel
- Existing Stormwater Detention

- LANDSCAPED GREEN BELT BETWEEN UNITS WITH CONCRETE CURBS AND ACCESS PATHWAYS BETWEEN UNIT REAR DOORS
- NEW ACCESS ROAD: PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES
- CARPARKING AND WOOD SHOP ACCESS AREA NEW ASPHALT PARKING
- NEW ACCESS ROAD: PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES
ADDITIONAL CHANGE IN PAVING COLOR TO HIGHLIGHT SAFE PEDESTRIAN AREAS TO REAR LANE WHERE NO PATH
- CARPARKING AREA PARKING REDESIGNED TO ADD ADDITIONAL OVERFLOW BAYS. EXISTING LIGHTING RETAINED OR RELOCATED AS PER DETAILED PLANS
- EXISTING PILLAR ALREADY CONSTRUCTED

NOTE: All Text Notes, Symbols and Drawings on this plan have been designed by Higher Level Engineering for the purposes of the Site Water Management Strategy. To accompany the submission of the Masterplan for Development submission. These notes shall not be construed as liability or the responsibility of Darklight Design.

ESPRIT COTTAGE LOTS

DRY LIGHT DESIGN

PROPOSED MASTER SITE PLAN

DESIGNED BY	AB	DATE	AS
DRAWN BY	AS SHOWN ON DRAWINGS	PROJECT NO.	X82-17
CHECKED BY	PLANNING AND	SCALE	AS

DA.03

PROJECT NO. 17/04/2024

- NEW SCREEN WALLS AND FENCELINES TO MATCH EXISTING FORMWORK CENTER. REFER DETAILED PLANS
- REMOVE EXISTING SCREEN WALLS AND LANDSCAPE CONNECTION TO EXISTING BOWLS AREA. REFER DETAILED PLANS
- EXISTING STREET TENCING AND LANDSCAPING TO BE RETAINED
- FUTURE VILLA UNIT MARKS. SET AS LTR.

7.5m x 24.6m DESIGN FOOTPRINT
TOTAL YIELD 34 UNITS

- UNIT LEGEND**
- UNIT TYPE 'A'
TRADITIONAL ELEVATION. 2000mm CEILING. 2000mm WALLS. 2000mm FLOOR.
 - UNIT TYPE 'B'
URBAN ELEVATION. 2000mm CEILING. 2000mm WALLS. 2000mm FLOOR.
 - UNIT TYPE 'C'
MODERN ELEVATION. 2000mm CEILING. 2000mm WALLS. 2000mm FLOOR.
 - UNIT TYPE 'D'
BEACH ELEVATION. 2000mm CEILING. 2000mm WALLS. 2000mm FLOOR.

MASTER SITE PLAN

SCALE @ 1:500 A1 (1:1000 APPROX A3)



PLANNING APPLICATION 06.04.18

ESPRIT LIFESTYLE VILLAGE COTTAGE LOT REDEVELOPMENT

ENDICOTT BOULEVARD, EATON (LOT 9000)

EATON, BUNBURY WESTERN AUSTRALIA (SHIRE OF DARDANUP)



Bethanie

DARKLIGHTDESIGN

ILLAWARRADRIVE

GEORGETTE ST

SMOOTH BAY

EXISTING CLUB HOUSE

Bawing Breakfast RL 13.22

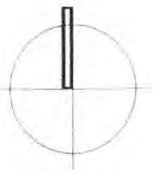
Flow RL 13.45

Flow RL 13.04

EXISTING VILLA UNITS NOT SHOWN FOR CLARITY

LOCALITY PLAN

SCALE 1:500



EXISTING SITE PLAN

SCALE @ 1:500 A1 (1:1000 approx A3)

C	PLANNING APPLICATION	16/04/16
D	PREL. PLANNING REVIEW	18/04/16
A	DETAILED PLANNING REVIEW	23/04/16
APPROVED	PROPOSED DEVELOPMENT	20/04/16

ESPRIT COTTAGE LOTS

D R LIGHT DESIGN

EXISTING SITE PLAN

Design/Drawn	AB	Checked	AB
Scale	AS SHOWN ON DRAWINGS	Project #	KB2-17
Status	PLANNING APP. checked	Checked	AB

DA.02

PLC# 0475 Friday, 6 April 2018



FUTURE VILLA UNIT WORKS - DETAILS ETC

TEMPORARY EMERGENCY ACCESS POINT

NEW PEDESTRIAN ACCESS FOOTPATH

NEW SCOTT WALLS AND FENCE - MATCH TO MATCH EXISTING COMMUNITY CENTER - REFER DETAILED PLANS

REMOVE EXISTING SCOTT WALLS AND RELANDSCAPE CONNECTION TO EXISTING BOWLS AREA - REFER DETAILED PLANS

EXISTING STREET FENCING AND LANDSCAPING TO BE RETAINED

NEW PEDESTRIAN ACCESS FOOTPATH

FUTURE VILLA UNIT WORKS - DETAILS ETC

7.5m x 24.6m DESIGN FOOTPRINT.
TOTAL YIELD 34 UNITS

- UNIT LEGEND**
- UNIT TYPE 'A' - TRADITIONAL ELEVATION - REFER DETAILED PLANS AND ELEVATION SHEET DA.10
 - UNIT TYPE 'B' - URBAN ELEVATION - REFER DETAILED PLANS AND ELEVATION SHEET DA.11
 - UNIT TYPE 'C' - WEATHERBOARD ELEVATION - REFER DETAILED PLANS AND ELEVATION SHEET DA.12
 - UNIT TYPE 'D' - BEACH ELEVATION - REFER DETAILED PLANS AND ELEVATION SHEET DA.13

MASTER SITE PLAN
SCALE @ 1:500 AT (1:1000 APPROX A3)

EXISTING VILLA LOTS RETAINED

REAR GATE AND ACCESS POINT - REFER DETAILED PLANS

LANDSCAPED GREEN BELT BETWEEN UNITS WITH CONVERSATION COURSES AND ACCESS PATHWAYS BETWEEN UNIT FRONT DOORS

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES

CARPARKING AND WOOD SHOP ACCESS AREA NEW ASPHALT PARKING

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES
ADDITIONAL CHANGES IN BULBOUT COLOR TO HIGHLIGHT SAFE PEDESTRIAN AREAS TO REAR LANES WHERE NO PATH

CARPARKING AREA PARKING REDESIGNED TO SUIT ADDITIONAL OVERFLOW BAYS - EXISTING LIGHTING RETAINED OR REALLOCATED AS PER DETAILED PLANS

EXISTING VILLAS ALREADY CONSTRUCTED

OPTIONAL UNFINISHED PLANNING DETAILS

ESPRIT COTTAGE 17

DARKLIGHT DESIGN

PROPOSED MASTER SITE PLAN

Drawn by	AB	Checked by	AB
Scale	AS SHOWN ON DRAWINGS	Project No.	X82-17
Rev. No.	PLANNING APP	Client	AB

DA.03

PILOT DATE: Wednesday, 3 August 2023

(Appendix O)

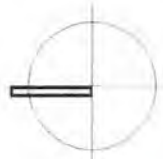
STAGE 3 - FUTURE ILU STAGE

STAGE 2C
UNITS 17 - 19 & 26 - 34

STAGE 2B
UNITS 11 - 16 & 20 - 26

STAGE A
UNITS 1 - 10

EXISTING ILU STAGE COMPLETED



UNIT LEGEND

- UNIT TYPE 'A'**
TRADITIONAL SLAB-ON-GRADE CONCRETE
FLARE AND ELEVATION SHEET DA 11
- UNIT TYPE 'B'**
UNRAISED ELEVATION - CONCRETE SLAB ON GRADE
FLARE AND ELEVATION SHEET DA 11
- UNIT TYPE 'C'**
MULTI-TERRACE SLAB-ON-GRADE CONCRETE
FLARE AND ELEVATION SHEET DA 11
- UNIT TYPE 'D'**
RAISED ELEVATION - CONCRETE SLAB ON GRADE
FLARE AND ELEVATION SHEET DA 11

STAGING PLAN

SCALE @ 1:500 A1 (1:1000 approx A3)



(Appendix O)

ESPRIT COTTAGE LOTS

DORLIGHTDESIGN

STAGING LAYOUT

APPROVED	AB	DATE
DATE	AS SHOWN ON	PROJECT #
DATE	PLANNING APP	PROJECT

DA.04

PLAT 6613



SITE COVER LEGEND

HATCHED AREA INDICATES EXTENT OF NEW DEVELOPMENT AND SITE COVER CALCULATION EXTENT.

10,805.288 m²

TOTAL PROPOSED NEW BUILDING FOOTPRINTS UNITS 1 - 34 (INCLUDES ALFRESCO AND ENTRY PORCH)

5,406 m²

TOTAL SITE COVER

50.031%

SITE COVER DIAGRAM

SCALE @ 1:500 A1 (1:1000 approx A3)

(Appendix C)

PLANNING APPLICATION	Final Planning Review	
DATE	20/08/2024	
ESPRIT COTTAGE LOTS		
DORNLIGHTS PT		
SITE COVER DIAGRAM		
DESIGNED	AB	DRAWN
SCALE	AS SHOWN ON DRAWINGS	PROJECT #
STATUS	PLANNING APP	CHECKED
DA.05		
PLAN DATE		TABLE 4

Appendix ORD: 12.3(A)



- LEGEND**
- NATURAL GRASS / LAWN
NATURAL GRASS OR AS TYPICAL TO
NORTHERN COUNTRY PRAIRIES OR SAVANNAH
 - PAVED HARDSTAND
PAVEMENT FINISHED HARDSHARE
HARDSHARE
 - DRIVEWAY
ALPHAL CURVE DRIVE WITH INTERLAYERED
CONTRASTING COLOUR TO ACCESS
DRIVEWAYS
 - LANDSCAPED GARDEN BED
LANDSCAPED GARDEN BED WITH WATERWISE
PLANTING SCHEME. EXACT DETAILS TO BE BY
LANDSCAPE ARCHITECT AT BL STAGE

- SMALL TREE
- MEDIUM TREE
- LARGE TREE

PROPOSED FFL NOTE: ALL FINISHED LEVELS
OF UNITS ARE INDICATIVE ONLY AND ARE
SUBJECT TO CHANGE DEPENDANT ON
TECHNICAL CONSULTANTS DETAILED DESIGN
DURING BL STAGE OF WORKS

- UNIT LEGEND**
- UNIT TYPE 'A'
TRADITIONAL ELEVATION - REFER DETAILED
PLANS AND ELEVATIONS SHEET DA 12
 - UNIT TYPE 'B'
URBAN ELEVATION - REFER DETAILED PLANS
AND ELEVATIONS SHEET DA 17
 - UNIT TYPE 'C'
HEATHERBUSH ELEVATION - REFER
DETAILED PLANS AND ELEVATIONS SHEET
DA 12
 - UNIT TYPE 'D'
BEACH ELEVATION - REFER DETAILED PLANS
AND ELEVATIONS SHEET DA 13

DETAILED SITE PLAN 'A'

SCALE @ 1:200 A1 (1:400 approx A3)

ESPRIT COTTAGE LOTS
DETAILED SITE PLAN 'A'

D R LIGHT DESIGN
DETAILED SITE PLAN 'A'

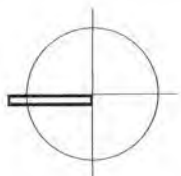
designed	AB	drawn	AB
scale	AS SHOWN ON DRAWINGS	project #	XB2-17
status	PLANNING APP	checked	AB

DA.06

FLOT DATE: Wednesday, 1 August 2018

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FOREST HIGHWAY



LEGEND

- NATURAL GRASS / LAWN**
NATURAL GRASS OR ASTROTILFUM TO NORTHERN COURTYARDS OF UNITS
- PAVED HARDSTAND**
FRONT/REAR PORCHES, DRIVEWAYS, PATHWAYS
- DRIVEWAY**
ASPHALT DRIVEWAYS WITH INTERLOCKED CONCRETE CURBS OR CURB PATHWAYS
- LANDSCAPED GARDEN BED**
LANDSCAPED GARDEN BED WITH WALKWAY, PLANTING SCHEME. EXACT DETAILS TO BE BY LANDSCAPE ARCHITECT AT BL STAGE
- SMALL TREE**
- MEDIUM TREE**
- LARGE TREE**

UNIT LEGEND

- UNIT TYPE 'A'**
TRADITIONAL ELEVATION. REFER DETAILED PLANS AND ELEVATIONS SHEET DA 10
- UNIT TYPE 'B'**
URBAN ELEVATION. REFER UTAR E22 PLANS AND ELEVATIONS SHEET DA 11
- UNIT TYPE 'C'**
WEATHERBOARD ELEVATION. REFER WBL E22 AND E23 PLANS AND ELEVATIONS SHEET DA 12
- UNIT TYPE 'D'**
BEACH ELEVATION. REFER WBL E24 AND E25 PLANS AND ELEVATIONS SHEET DA 13

PROPOSED FFL NOTE: ALL FINISHED LEVELS OF UNITS ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE DEPENDANT ON TECHNICAL CONSULTANTS DETAILED DESIGN DURING BL STAGE OF WORKS



DETAILED SITE PLAN 'B'

SCALE @ 1:200 A1 (1:400 approx A3)

Appendix O

ESPRIT COTTAGE I.C.	DA.07	2.3	ES
DA.07	2.3	ES	
DA.07	2.3	ES	



E1 - ENDICOTT BOULEVARD ELEVATION
SCALE: 1/8"=1'-0"



E2 - REAR LANE WEST ELEVATION
SCALE: 1/8"=1'-0"



E3 - REAR LANE EAST ELEVATION
SCALE: 1/8"=1'-0"



E4 - LANDSCAPED GARDEN BELT ELEVATION
SCALE: 1/8"=1'-0"

UNIT LEGEND

UNIT TYPE 'A'
TRADITIONAL - ELEVATION, REFER DETAILED PLANS AND ELEVATIONS SHEET DA.10

UNIT TYPE 'B'
URBAN ALTERNATION, REFER DETAILED PLANS AND ELEVATIONS SHEET DA.11

UNIT TYPE 'C'
WEATHERBOARD - ELEVATION, REFER DETAILED PLANS AND ELEVATIONS SHEET DA.12

UNIT TYPE 'D'
BEACH - ELEVATION, REFER DETAILED PLANS AND ELEVATIONS SHEET DA.13

TYPICAL STREET ELEVATION
SCALE: 1/8"=1'-0"

PLANNING APPLICATION
 REAL PLANNING REVIEW
 DEVELOPMENT REVIEW
 APPROVED FOR PLAN

ESPRIT COTTAGE LOTS

DOWNLIGHTDESIGN

SITE ELEVATIONS

Prepared: AB Date: 12/27/21

DATE: ALL SHOWN ON DRAWINGS DATE: 12/27/21

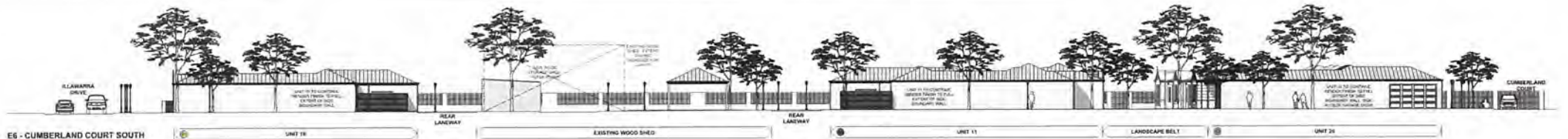
DATE: PLANNING APP. CHECKED: DA.08

PLAT DATE: 12/27/21

Appendix C



E5 - ILLAWARRA DRIVE ELEVATION



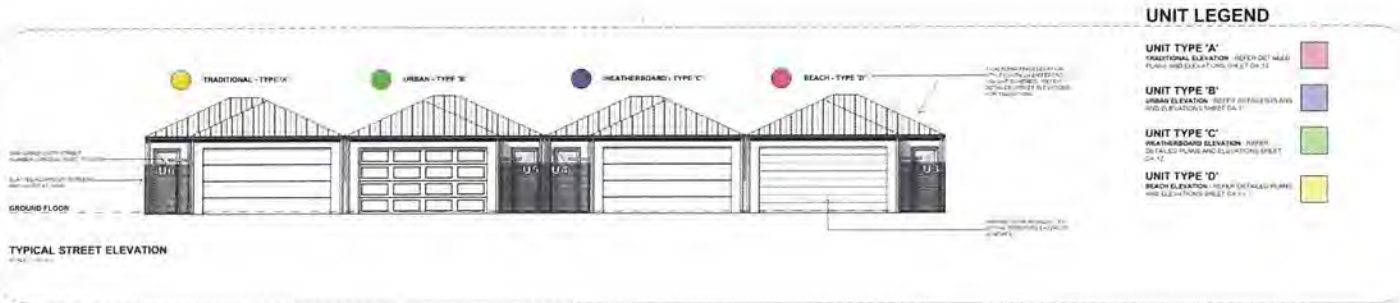
E6 - CUMBERLAND COURT SOUTH



E7 - LANDSCAPED GREEN BELT ELEVATION



E8 - CUMBERLAND COURT EAST ELEVATION

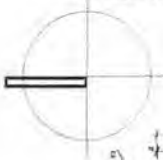


Appendix O

1. ARCHITECTURAL PLANNING
 2. PLANNING APPLICATION
 3. FINAL PLANNING DECISION
 4. DEVELOPMENT CONSENT
 5. COMMENCEMENT OF WORK

ESPRIT COTTAGE LC
 DARK LIGHT DESIGN
 SITE ELEVATIONS

Project	AB	Sheet	AB
Drawn	AS SHOWN ON DRAWING	Project No.	XB2-17
Checked	PLANNING APP	Revision	AB
DA.09			
Plot Date	Wednesday, 1 August 2018		



FLOOR PLAN
SCALE: 1/8" = 1'-0"

AREAS

AREA	168.72 sq ft
FLOOR	432.00 sq ft
POSSIBLE GARAGE	372.00 sq ft
ALFRESCO	8.28 sq ft
TOTAL	106.71 sq ft

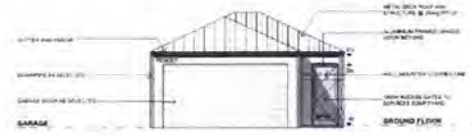
NOTE: BUILDING DIMENSIONS ARE TYPICAL TO SUIT PROPOSED DESIGN FOOTPRINT FOR MASTER PLANNING PURPOSES. ARCHITECTURAL FEATURES TO STREET ELEVATION HAVE MINOR INTRUSIONS TO THE FOOT PRINT WHERE SHOWN



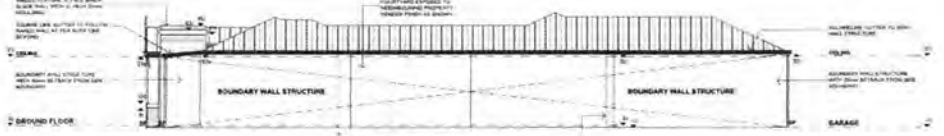
E1 - STREET ELEVATION
SCALE: 1/8" = 1'-0"



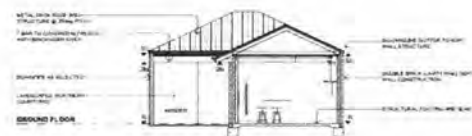
E3 - SIDE BOUNDARY
SCALE: 1/8" = 1'-0"



E5 - REAR STREET ELEVATION
SCALE: 1/8" = 1'-0"



E4 - SIDE BOUNDARY
SCALE: 1/8" = 1'-0"



SECTION XX
SCALE: 1/8" = 1'-0"



SECTION YY
SCALE: 1/8" = 1'-0"

NOTE: EXTERIOR FINISHES ARE PRELIMINARY ONLY AND A GUIDE TO THE OVERALL AESTHETICAL OUTCOME. DETAILS TBC AT BUILDING LICENCE STAGE.



TYPICAL TRADITIONAL ELEVATION - COLOUR SCHEME '1'
SCALE: 1/8" = 1'-0"

A1



TYPICAL TRADITIONAL ELEVATION - COLOUR SCHEME '2'
SCALE: 1/8" = 1'-0"

A2

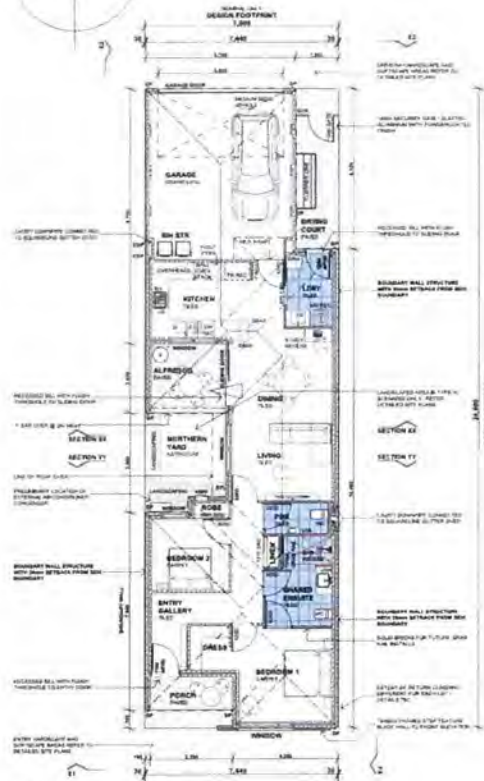
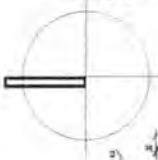
UNIT TYPE 'A' - TRADITIONAL

Appendix C

ESPRIT COTTAGE LOTS

DRAWNIGHTDESIGN
DETAILED UNIT 'A' PLANS & ELEVATIONS

Drawn by	AD	Checked by	
Date	24/06/2024	Project #	12207
File #	PLANNING APP	Project	
DA.10			
Plot Date	Friday, 4 October 2024		



FLOOR PLAN
SCALE: 1/8" = 1'-0"

AREAS

Garage	718.52 sq ft
Porch	4.34 sq ft
Garage	27.88 sq ft
Aluminum	7.75 sq ft
TOTAL	758.49 sq ft

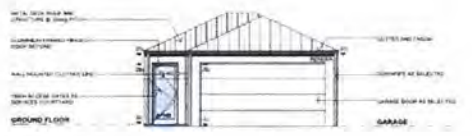
NOTE: BUILDING DIMENSIONS ARE TYPICAL TO SUIT PROPOSED DESIGN FOOTPRINT FOR MASTER PLANNING PURPOSES. ARCHITECTURAL FEATURES TO STREET ELEVATION HAVE MINOR INTRUSIONS TO THE FOOT PRINT WHERE SHOWN.



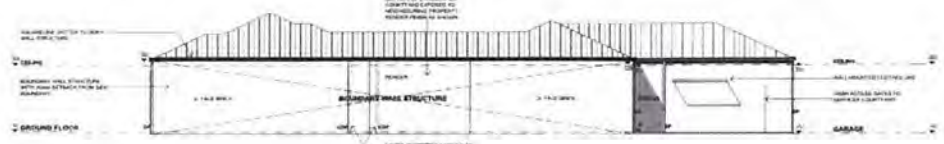
E1 - STREET ELEVATION
SCALE: 1/8" = 1'-0"



E2 - SIDE BOUNDARY
SCALE: 1/8" = 1'-0"



E3 - REAR STREET ELEVATION
SCALE: 1/8" = 1'-0"



E4 - SIDE BOUNDARY
SCALE: 1/8" = 1'-0"



SECTION XX
SCALE: 1/8" = 1'-0"



SECTION YY
SCALE: 1/8" = 1'-0"

NOTE: EXTERIOR FINISHES ARE PRELIMINARY ONLY AND A GUIDE TO THE OVERALL AESTHETICAL OUTCOME. DETAILS TBC AT BUILDING LICENCE STAGE.



TYPICAL URBAN ELEVATION - COLOUR SCHEME '1'
SCALE: 1/8" = 1'-0"



TYPICAL URBAN ELEVATION - COLOUR SCHEME '2'
SCALE: 1/8" = 1'-0"



UNIT TYPE 'B' - URBAN

Appendix C

ESPRIT COTTAGE LOTS

DORNLIGHT DESIGN

DETAILED UNIT B PLANS & ELEV. 11.20

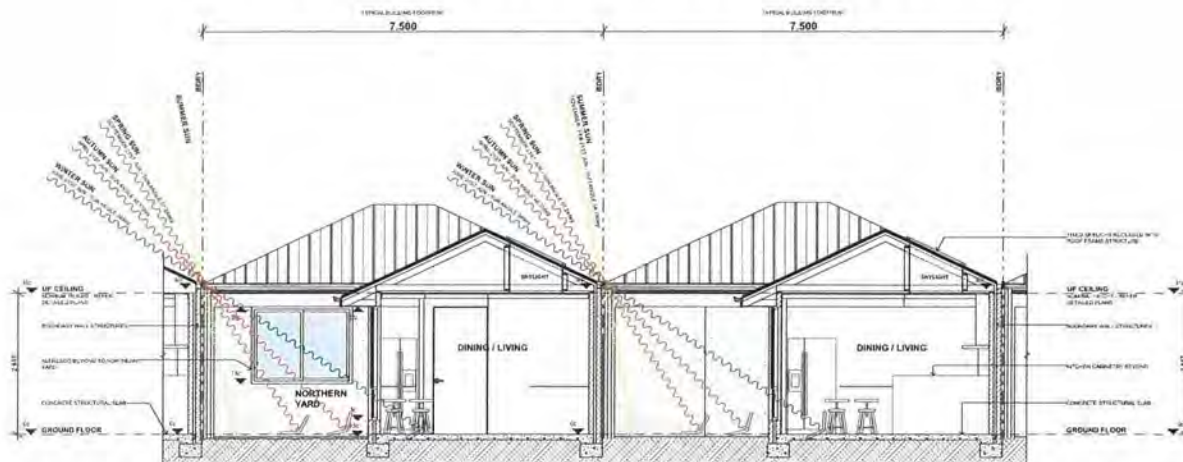
Project	AB	Phase	1
Scale	AS SHOWN ON DRAWINGS	Version	0
Author	PLANNING APP	Discipline	Architect

DA.11

Plot Date: Friday, 11/11/2022

TYPICAL UNIT B&D

TYPICAL UNIT A&C



SUN DIAGRAM SECTION
SCALE AS SHOWN

UNIT LEGEND

- UNIT TYPE 'A'**
TRADITIONAL ELEVATION. REFER DETAILED PLANS AND ELEVATIONS SHEET DA.15
- UNIT TYPE 'B'**
URBAN ELEVATION. REFER DETAILED PLANS AND ELEVATIONS SHEET DA.15
- UNIT TYPE 'C'**
WEATHERBOARD ELEVATION. REFER DETAILED PLANS AND ELEVATIONS SHEET DA.17
- UNIT TYPE 'D'**
BEACH ELEVATION. REFER DETAILED PLANS AND ELEVATIONS SHEET DA.15

TYPICAL SUN DIAGRAM SECTIONAL DETAIL

SCALE AS SHOWN

(Appendix O)

ACCEPTED ARCHITECTURAL PLANS AND ELEVATIONS FOR CONSTRUCTION

ESPRIT COTTAGE L.P.

DANLIGHT DESIGN

SUN DIAGRAM SECTION

Rev. no.	AB	Issued	AB
Scale	AS SHOWN OR DIMENSIONS	Project	X82-17
Client	PLANNING APP	Client	AB
DA.15		23	A

PRINT DATE: Wednesday, 5 August 2015

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STRUCTURE PLAN

Lot 9000 Edith Cowan Avenue

Eaton

This structure plan is prepared under the provisions of the Shire of Dardanup Local Planning Scheme No. 3.

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

21 September 2017

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



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









Witness

21 September 2017

Date

21 September 2027 Date of Expiry

LEGEND

-  SUBJECT LAND
-  EXISTING DUAL USE PATH
-  BETHANE ESPRIT
-  LANDSCAPE BUFFER
-  CONVENTIONAL LOTS
-  PROPOSED DUAL USE PATH

SUBDIVISION AND DEVELOPMENT REQUIREMENTS

1. New pedestrian crossing with Edith Cowan Avenue to be constructed by The Bethane Group, and shall comprise of:
 - Refuge island and road widening;
 - Pedestrian ramps and grab rails; and
 - Lighting review in proximity to the new crossing. Any new lighting required to be to Australian Standards.
2. Land to be filled and retained to the satisfaction of the Shire of Dardrup.
3. Construct dual-use paths as shown on Structure Plan.
4. Contribution to construction of the proposed Coles River bridge and Eaton Drive (District Distributor) and administrative coach, in accordance with the scheme requirements.
5. In relation to Lot 1004 Edith Cowan Avenue, Eaton, Clause 3.15 of Shire of Dardrup Local Planning Scheme No. 3 does not apply. Lot 1004 will be screened against the typical noise effects associated generated from Forrest Highway and views of the future development from Forrest Highway will be screened by a Landscape Buffer area on Lot 1004 and a Landscape Buffer reserve, which is vested under Section 152 of the Planning and Development Act for such purposes to the south of Lot 1004. The landscape buffer treatment is to be undertaken consistent with the recommendations of a Landscape and Noise Management Plan at the subdivision or development stage, whichever is applied first. The intent of the Landscape Buffer is to enhance and protect the landscape values, secure the amenity for the residential use and to provide an aesthetic approach to the City of Bunbury.
 - 5.1 The width, alignment and makeup of the Landscape Buffer reserve is to be consistent with that prescribed in the Landscape and Noise Management Plan. The width of the Landscape Buffer Reserve on the eastern end of Recreation Drive and Lot 52 is to be consistent with the area zoned 'Recreation' on the Scheme Map. Landscaping within the Forrest Highway (excluding portion of Lot 52 prescribed for the Landscape Buffer reserve) will not be considered as part of the Landscape Buffer for the purposes of providing a permanent solution for screening view of the subdivision, subsequent development and the noise bund.
 - 5.2 The Landscape and Noise Management Plan is to prescribe the details for the establishment of a Landscape Buffer by addressing the following:
 - i. Landscaped buffer treatment works are to consist of a continuous earth bund, with a 2 metre wide flat top and, where it is required, terraced sides, but not more than 30 percent sloping sides, to provide the most desirable and sustainable site/cover condition, and the planting of noise vegetation that are prevalent to the locality.
 - ii. Support for three retention units within the prescribed Landscape Buffer area on Lot 1004 or the area zoned 'Recreation' under the local planning scheme, will be subject to a visual impact analysis demonstrating that the noise will not be visible from Forrest Highway as a result of vegetation within the Landscape Buffer area on Lot 1004.
 - iii. No stormwater is to be discharged from the landscaped buffer area towards the Forrest Highway and there may be a need to separate the toe of the noise bund from the Highway reserve for drainage purposes, as required by Main Roads WA.
 - iv. The minimum height of the earth bund is the height required to provide effective noise attenuation as determined by Main Roads WA.
 - v. The height of the vegetation on top of the earth bund is to consist of plants which can grow to a height and provide a canopy density which can screen buildings of 5 metres in height (taken from the finished ground level at the centre of the proposed site or block building sites of the subject land) and the noise barrier which can be viewed from vantage points on the Forrest Highway governed within 1 km away from the edge of the subject land.
 - vi. Landscape and Noise Management Plan for the Landscape Buffer is to have due regard to the recommendations of the Bushfire Management Plan.
 - 5.3 The landscape buffer treatment works will be undertaken by the owner of Lot 1004 as a condition of subdivision or development. The Landscape Buffer Reserve is to be maintained by the owner for at least three years after the landscaped works have been completed and provide for ongoing arrangements with the Shire of Dardrup to pay for the cost of maintenance in perpetuity, as part of a Landscape Maintenance Agreement with the Shire of Dardrup. The Landscape Buffer Reserve is to be managed by the Shire of Dardrup. The Landscape Buffer area on Lot 1004 is to be maintained by the owner of Lot 1004 in perpetuity.
 - 5.4 The Landscape Buffer Reserve is to be vested to the Crown as part of the first Deposited Plan submitted for new UUs. The owner of Lot 1004 is to pay all costs associated with clearing portion of Recreation Drive and portion of the Forrest Highway for road access purposes and requesting the Crown as a single Landscape Buffer Reserve. The Landscape Buffer Reserve is to be vested with the Shire of Dardrup under Section 152 of the Planning and Development Act 2005. The landscaped buffer treatment works are to be completed prior to endorsement of the first Deposited Plan by the Western Australian Planning Commission or an alternative arrangement that is satisfactory to the Western Australian Planning Commission.
 - 5.5 At the subdivision stage, a Section 165 Notification on UUs, pursuant to the Planning and Development Act, is to be proposed as a condition of subdivision advising the following:
 - "Housing higher than a single storey may not be protected against traffic noise from the Forrest Highway. Owners are to engage with the Shire of Dardrup on the 'Quiet House' design criteria at the planning and building licence stage".
6. Access within the Bethane Esprit Village Lot 1004 to accommodate 12.5 m vehicles.
7. Edith Cowan Avenue and Recreation Drive frontage of Lot 1004 to be landscaped and reticulated.
8. Traffic calming measures between two roundabouts subject to detailed design.
9. POS is to be ceded to the Crown as a public recreation reserve and vested in the Shire of Dardrup.
10. POS shall not be used for drainage.
11. Mawarra Drive extension landscaping to be consistent with existing landscape on existing Mawarra Drive.
12. Drainage outfall from development to be restricted to pre-development flows.
13. Mawarra Drive and Edith Cowan intersection to be upgraded to satisfaction of Council.



calibre CONSULTING
 Calibre Consulting (Aust) Pty Ltd
 Unit 5, 53 Victoria Street
 Bunbury WA 6230
 Ph 08 9791 4111
 www.calibreconsulting.com

STRUCTURE PLAN
 Lot 9000 Edith Cowan Avenue, Eaton
 A Bethane Project

Plan No: 15173P-DP-01G
 Date: 20.09.2017
 Rev: G
 Scale: A1 @ 1:2500 A3 @ 1:2500
 Co-ords: MGA
 Area: N/A

This document is prepared for planning purposes. All other content and information shown on this plan is subject to survey.

(Appendix ORD: 12.3B)

From: Kanella Hope <Kanella.Hope@calibregroup.com>
Sent: Wednesday, 1 August 2018 12:06 PM
To: Suzanne Occhipinti
Cc: Cecilia Muller; Blair Hallion
Subject: RE: DA45/18 - Bethanie Esprit - Further information
Attachments: DA.03 PROPOSED MASTER SITE PLAN.pdf; DA.09 SITE ELEVATIONS.pdf;
DA.06 DETAILED SITE PLAN 'A'.pdf; DA.07 DETAILED SITE PLAN 'B'.pdf;
DA.15 SUN DIAGRAM SECTION.pdf

Hi Suzanne,

Further to our email correspondence last week, please find attached additional plans and information in response to the Shire's outstanding queries:

Shadowing impacts

The independent living units proposed are cottage dwellings with connected walls and small private courtyards. This has been a deliberate design response for a range of reasons including efficiency, practicality of these courtyards for the needs of over 55's, plus a desire to emphasize shared open space areas for social interaction and recreation.

The lineal open space areas at the front of the units are a focus and feature of this stage of Bethanie in hand with this cottage style of development.

As discussed when we recently met, this design response has also taken into account the existing independent dwellings at Bethanie. Whilst these have been a success, it has become common for residents to sit at their garages so they have outlook into and interaction with shared thoroughfare areas. Separating the lineal open space away from vehicular access is in response to this. The more traditional private open space areas provided for these existing dwellings have also proven to be underutilized. Feedback from residents has indicated a preference for compact private open space in the one courtyard, a space that is easy to maintain, but with most focus for recreation and socializing on shared open space areas.

More generally, this is a compact and efficient style of development that is now a common lot product in many new housing Estates in WA. It creates greater privacy for residents than traditional style dwellings, is low maintenance and is an economical use of a smaller lot / built form footprint. For this type of lot in a typical residential context, planning approval recognizes that some discount in shadowing is acceptable because it is outweighed by other benefits, that R-Code dispensation is necessary to allow for approval of this housing product.

Attached is a diagram that depicts the shadow impacts throughout the year in a typical cross section. Whilst the shadow impact is greater in winter, the court yards will enjoy adequate solar access throughout the remainder of the year.

It is also noted that Bethanie are going to add in skylights to the dwellings, placed over the living areas, as an added feature.

U34 & Illawarra Drive

Further to our suggested changes for the shared footpath and alignment of Illawarra Drive, we provide a more detailed plan of how this will work.

This shows a fence alongside U34, then separation to the possible future road alignment. This is an indicative 2.7m setback to the road, and 4.2m setback to U34. It also demonstrates how the shared path can work on the northern rather than southern side of Illawarra Drive, plus it depicts how the fence angles back to align with the future stage of Bethanie to the north. Locating this future footpath alongside the open space reserve that will eventuate here is considered more desirable than a path on the opposite side of the road to the reserve.

Emergency access

In relation to emergency access, Bethanie agrees to construct a temporary access track around to the existing Illawarra Drive / Endicott Blvd intersection. This will be a crushed rock track. It will be constructed to a temporary standard as we do not wish to encourage use of this for anything other than emergency access. We accept this as a condition of approval. It can align from the Cumberland Court culdesac or to the north of this and the visitor parking here. A notation has been added to the plans in this regard.

Wood storage shed

As indicated last week, we request detail of the wood storage shed to be a condition of approval. I can advise that this is a light weight low key colourbond shed structure to match the existing woodwork shop for storing wood. It has been added into the elevation plan that is attached.

Other

Aside from these matters, please also find attached a link to artist renders that demonstrate the lineal open space areas and relationship to the dwellings.

This is a drop box link – are you able to access this? <https://www.dropbox.com/sh/bpfd3mmdj620uw4/AAD99CyRaY-WEHqPurM1JdZUa?dl=0>

Thank you Suzanne, we trust this addresses the outstanding concerns and that the matter can now proceed to the August Council meeting with a positive recommendation. If there are any other issues, and given the timing, please call me and we will respond asap.

Kind regards,

Kanella



Kanella Hope
Manager Planning
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E Kanella.Hope@calibregroup.com

1st Floor, Unit 5, 53 Victoria Street, Bunbury, WA 6230

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Please consider the environment before printing this e-mail.

From: Kanella Hope

Sent: Wednesday, July 25, 2018 11:43 AM

To: Suzanne Occhipinti <Suzanne.Occhipinti@dardanup.wa.gov.au>

Cc: Cecilia Muller <Cecilia.Muller@dardanup.wa.gov.au>; Blair Hallion <Blair.Hallion@bethanie.com.au>

Subject: RE: DA45/18 - Bethanie Esprit - Extension of time request

Hi Suzanne,

Thanks for getting back to us concerning the Bethanie DA. We agree for the matter to be determined at the 29 August 2018 Council meeting and continue to be available to work with the Shire to resolve the final concerns.

In this regard, we note the matters that the Shire agrees to propose as Conditions of Approval. We also advise the following:

- We will provide further justification with regards to potential shadowing impacts on dwelling private open space;
- We will provide a concept diagram of our suggestions for U34 and its relationship with the future Illawarra Drive. We hope this concept will assure both you as well as the Shire Engineers about this. We note that the alignment of Illawarra Drive remains indicative and that there is discretion under the Structure Plan to adjust this. It is cost prohibitive to construct Illawarra Drive in this stage, however it will be completed in future stages;
- Bethanie is considering how they might provide a secondary, temporary emergency access to this stage;
- We seek to have the wood shed included as part of this application. This will be a relatively discrete storage shed constructed to match the existing Wood Shop. Can the detail of this please be addressed via a Condition of Approval?

We are cognizant of your timeframes and will endeavor to have this information back to you as soon as possible, but by mid next week at the latest. If you have any more queries, please give me a call.

Thanks again,

Kanella



Kanella Hope
Manager Planning
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M +61 401 046 852
E Kanella.Hope@calibregroup.com

calibregroup.com 1st Floor, Unit 5, 53 Victoria Street, Bunbury, WA 6230

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 Please consider the environment before printing this e-mail.

From: Suzanne Occhipinti <Suzanne.Occhipinti@dardanup.wa.gov.au>
Sent: Tuesday, July 24, 2018 10:51 AM
To: Kanella Hope <Kanella.Hope@calibregroup.com>
Cc: Cecilia Muller <Cecilia.Muller@dardanup.wa.gov.au>
Subject: RE: DA45/18 - Bethanie Esprit - Extension of time request

Dear Kanella,

RE: PROPOSED UNITS (BETHANIE ESPRIT)

With reference to the above, whilst I appreciate that your client is keen to extend development on the site, Council needs to be satisfied that the current (proposed) stage of development will provide a safe

(Appendix ORD: 12.3C)

and liveable environment for its residents and not restrict the future and overall development of the site.

Officers have assessed the proposal as representing a departure from the approved Structure Plan and have therefore determined the DA will need to be determined by Council, rather than by officers under delegation. Whilst the previous approval granted in 2014 for this part of the site was granted under delegation, the proposal at that time was 100% consistent with the layout of development shown on the Structure Plan. In assessing the current proposal, Council is being requested to exercise discretion in 'generally' applying the R40 provisions and approve development that is at variation to the approved Structure Plan, and therefore officers consider that Council should be given the opportunity to review the extent of that discretion. The Council meeting of the 29 August 2018 is the first available Council meeting date that would allow sufficient time to review the further information you submitted.

I have reviewed the additional information you provided and advise that, whilst I note the responses provided, Planning staff consider that some of the issues identified in our assessment, for which further information was requested, have not been resolved. The report to Council is therefore likely to address the following points:

1. The layout and orientation of units appears to result in the units having very limited northern solar access, particularly in winter, both to the dwellings themselves and to outdoor living areas. No shadow diagrams or other details have been submitted, as requested by Planning staff, to demonstrate the extent of shadowing from the units, or to demonstrate compliance with the Design Principles in Part 5.3.1 and Part 5.4.2 of the R-Codes. Whilst you have stated that the development "is generally in accordance with the R-Codes", deviations from the requirements for solar access are not insignificant and this has not been adequately addressed in the information provided thus far.
2. Presently, the proposed layout shows only one point of egress in only one direction, being to the west (Endicott Blvd) and for that reason you have been requested to provide for a temporary Emergency Access Way. Given the substantial increase in occupancy, it may not be appropriate to permit Endicott Blvd to be the sole egress route in the case of a bushfire. This is particularly so, given that if a fire is located to the west or south of the proposed development site, there is no exit route away from the fire hazard for residents in the proposed dwellings. I will be discussing this issue, and the broader issue of the extension to Illawarra Rd (including the footpath), with the Director of Development Services (Luke Botica) later this week prior to preparing the report to Council.
3. In your recent correspondence (5 July 2018) you stated that the boundary setback for Unit 34 matches with the boundary for future dwellings/lots within Bethanie land to the east. However, that is not the case as demonstrated by the diagram below. The red line indicates an extension of the existing fence to the future lots to the east. It can be clearly seen that Unit 34 is not consistent with that alignment, and will prevent a uniform streetscape being established along Illawarra Boulevard.



Your suggestions regarding angling the fence from the bowling green across the end of the landscape belt, and that the fence abutting Unit 34 could be in line with the parapet wall and treated for visual interest with the verge landscaped, are noted. However, these would need to be demonstrated on plans in order to be assessed. Even so, as discussed above, this would not result in Unit 34 having a fence alignment consistent with the rest of Illawarra Drive (existing and future development).

4. Dual use paths: Your request to install dual use paths to the north of the Illawarra Rd extension, rather than to the south, will also be discussed with the Director of Development Services to determine whether this likely to be supported.

With regard to other information you have previously provided to address officer concerns, officers make the following comments. The item numbers refer to Council's correspondence dated 29 May 2018:

- 3.d.: Officers are supportive of your suggestion to install mirrors at the street corners to improve sightlines, in lieu of relocating the driveways to Units 10 and 20 which can be recommended as a condition of approval, if granted.
- 3.g.iii.: The information provided doesn't show how cl.3.3.2 of AS4299 – accessible path of travel – is achieved, however, if necessary, officers are satisfied this can be addressed through an 'Advice Note' on an approval, if granted.
- 3.g.v.: Your suggestion to include the requirement for one visitor bay to comply with AS4299 can be recommended as a condition of approval, if granted.
- 5.f.: Your suggestion to require the blank, south-facing walls of Units 10, 11 and 20 be treated to add visual interest, can be recommended as a condition of approval, if granted.

Wood Storage: I note that the site plans you have submitted show a wood storage structure to the south of the existing wood shop, however this is not shown on the elevations or on any other plans, and is not mentioned in the proposal. Would you please confirm if the wood storage structure is intended to be assessed as part of this application and if so, provide amended site plans, elevations and a full set of shed/structure plans. If not, would you please either amend the plans to remove it, or advise in writing that you consent to Council including a notation on the plans to state that it is not part of this application.

Please note that the Council report will be finalised over the coming weeks and therefore if you wish to provide any further information to address officer concerns as outlined above, it will need to be submitted no later than 3 August 2018. In the event of no further information being forthcoming, officers will proceed with the information submitted thus far. I will also provide you with a further update, once Planning staff have met with the Director Engineering and Development Services to discuss the relevant Engineering matters as outlined above.

Regards

Suzanne Occhipinti

Senior Planning Officer

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From: Kanella Hope [<mailto:Kanella.Hope@calibregroup.com>]
Sent: Friday, 13 July 2018 3:48 PM
To: Suzanne Occhipinti
Cc: Blair Hallion
Subject: RE: DA45/18 - Bethanie Esprit - Extension of time request

Hi Suzanne,

Thanks for the update.

I appreciate you are under pressure, however I had hoped to have a quick chat with you as well at some stage. I saw you at the Evan Jones briefing about Planning Reform on Wednesday but didn't get to say hello – what did you think of this? I understand that you are also from Victoria? I moved here 8 years ago so we could probably share experiences of being thrown in at the deep end transitioning from one planning system to another!

In terms of your request to delay the decision for Bethanie, my client is keen to get building as soon as possible. Can I ask that you please reconsider this matter going to Council in August?

This is a DA, not a request to amend a Structure Plan.

The P&D Act Deemed Provisions create discretion around Structure Plans – requiring due regard to a Structure Plan. Like the R-Code generally in accordance with, this DA has had due regard and conforms with the intent of AU18 and the approved Structure Plan - developing this land as a Lifestyle Village for a range of accommodation types.

If there are now no more outstanding concerns, can it please be determined under Delegation?

Thank Suzanne, I hope to catch up soon.

Kanella



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Please consider the environment before printing this e-mail.

From: Suzanne Occhipinti <Suzanne.Occhipinti@dardanup.wa.gov.au>
Sent: Friday, July 13, 2018 9:57 AM
To: Kanella Hope <Kanella.Hope@calibregroup.com>
Subject: DA45/18 - Bethanie Esprit - Extension of time request

Hello Kanella,

I know that you have been chasing a date for the determination of the above application. As we discussed at our meeting on 20 June at the Council offices, the above application will need to be determined at Council rather than under delegation, as it proposes a change to the Local Structure

Plan. Because of the lead in time to get an item on the Council meeting agenda, the matter is not likely to be heard until 29 August at the earliest. I am currently assessing the information you have provided, and will provide a response to you next week. Both the Manager of Development Services (Steve Potter) and the Principal Planning Officer (Cecilia Muller) are away at present so I have quite a number of items that I am dealing with, however I have booked a meeting with Steve for next week to go through the information you have submitted.

Council requests your agreement to an extension of time to determine this application. Would you please advise by return email if you agree to an extension to 29 August 2018 (or a later date).

Please feel free to contact me should you require additional information.

Regards,

Suzanne Occhipinti

Senior Planning Officer

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p: 08 9724 0359 | e: Suzanne.occhipinti@dardanup.wa.gov.au



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FUTURE VILLA UNIT WORKS - DETAILS TBC

TEMPORARY EMERGENCY ACCESS POINT

NEW PEDESTRIAN ACCESS FOOTPATH

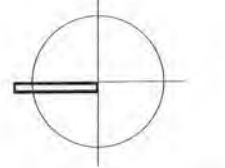
NEW SCREEN WALLS AND FENCE - SIMPLE TO MATCH EXISTING COMMUNITY CENTER - REFER DETAILED PLANS

REMOVE EXISTING SCREEN WALLS AND RE-LANDSCAPE CONNECTION TO EXISTING BOWLS AREA - REFER DETAILED PLANS

EXISTING STREET FENCING AND LANDSCAPING TO BE RETAINED

NEW PEDESTRIAN ACCESS FOOTPATH

FUTURE VILLA UNIT WORKS - DETAILS TBC



7.5m x 24.6m DESIGN FOOTPRINT.
TOTAL YIELD 34 UNITS

- UNIT LEGEND**
- UNIT TYPE 'A' - Traditional Elevation - REFER DETAILED PLANS SHEET DA.01 (DA.12)
 - UNIT TYPE 'B' - Urban Elevation - REFER DETAILED PLANS AND ELEVATION SHEET DA.11
 - UNIT TYPE 'C' - Weatherboard Elevation - REFER DETAILED PLANS AND ELEVATION SHEET DA.13
 - UNIT TYPE 'D' - Beach Elevation - REFER DETAILED PLANS AND ELEVATION SHEET DA.15

MASTER SITE PLAN
SCALE @ 1:500 A1 (1:1000 approx A3)

EXISTING VILLA LOTS RETAINED

REAR GATE AND ACCESS POINT - REFER DETAILED PLANS

LANDSCAPED GREEN BELT BETWEEN UNITS WITH CONVERSATION CORNERS AND ACCESS PATHWAYS BETWEEN UNIT FRONT DOORS

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES

CARPARKING AND WOOD SHOP ACCESS AREA NEW ASPHALT FINISHING

NEW ACCESS ROAD - PAVED AREAS TO INDICATE DRIVEWAYS AND SERVICES CLEAR ZONES. ADDITIONAL CHANGES IN RETURN COLOUR TO HIGHLIGHT SAFE PEDESTRIAN AREAS TO REAR LANES WHERE NO PATH

CARPARKING AREA PARKING REDESIGNED TO SUIT ADDITIONAL OVERFLOW BAYS. EXISTING LIGHTING RETAINED OR RELOCATED AS PER DETAILED PLANS

EXISTING VILLAS ALREADY CONSTRUCTED

(Appendix O)

ESPRIT COTTAGE

DARKLIGHT DESIGN

PROPOSED MASTER SITE PLAN

APPROVED	AB	23	AB
ISSUED	AS SHOWN ON DRAWINGS	23	AB
STATUS	PLANNING APP.	23	AB

DA.03

PLAT DATE: Wednesday, 1 August 2018

THE INFORMATION ON THIS PLAN IS FOR INFORMATION ONLY AND SHOULD NOT BE RELIED UPON FOR ANY PURPOSES WITHOUT THE EXPRESS WRITTEN PERMISSION OF DARKLIGHT DESIGN.

PROPOSED NEW FENCE AND GATE
EXTENSION TO EXISTING COMMUNITY
CLUBHOUSE EXTERNAL PERIMETER
FENCES. STYLE AND SIZE TO MATCH
EXISTING PROFILE - EXAMPLE IMAGE



E5 - ILLAWARRA DRIVE ELEVATION



E6 - CUMBERLAND COURT SOUTH



E7 - LANDSCAPED GREEN BELT ELEVATION



E8 - CUMBERLAND COURT EAST ELEVATION

TYPICAL STREET ELEVATION

UNIT LEGEND

- UNIT TYPE 'A'**
TRADITIONAL ELEVATION - REFER TO DETAILED PLANS AND ELEVATIONS SHEET DA.10
- UNIT TYPE 'B'**
URBAN ELEVATION - REFER TO DETAILED PLANS AND ELEVATIONS SHEET DA.11
- UNIT TYPE 'C'**
WEATHERBOARD ELEVATION - REFER TO DETAILED PLANS AND ELEVATIONS SHEET DA.12
- UNIT TYPE 'D'**
BEACH ELEVATION - REFER TO DETAILED PLANS AND ELEVATIONS SHEET DA.13

Appendix O

ESPRIT COTTAGE 1.0

D L I G H T D E S I G N

SITE ELEVATIONS

Rev	AB	Issue	AB
NO	AS SHOWN ON DRAWINGS	DATE	XB2-17
STATUS	PLANNING APP.	UNIT	AB

DA.09

23

PL02 04/23

Wednesday, 1 August 2018



- LEGEND**
- NATURAL GRASS / LAWN
 - PAVED HARDSTAND
 - DRIVEWAY
 - LANDSCAPED GARDEN BED
 - SMALL TREE
 - MEDIUM TREE
 - LARGE TREE

PROPOSED FFL NOTE: ALL FINISHED LEVELS OF UNITS ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE DEPENDANT ON TECHNICAL CONSULTANTS DETAILED DESIGN DURING BL STAGE OF WORKS

- UNIT LEGEND**
- UNIT TYPE 'A'
 - UNIT TYPE 'B'
 - UNIT TYPE 'C'
 - UNIT TYPE 'D'

DETAILED SITE PLAN 'A'

SCALE @ 1:200 A1 (1:400 approx A3)

Appendix O

ESPRIT COTTAGE

DARKLIGHT DESIGN

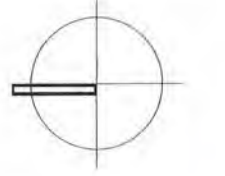
DETAILED SITE PLAN 'A'

Revised	AB	Drawn	AB
Scale	AS SHOWN ON DRAWINGS	Approved	X82-17
Status	PLANNING APP	Checked	AB

DA.06

PILOT DATE: Wednesday, 1 August 2018

FOREST HIGHWAY



LEGEND

- NATURAL GRASS / LAWN
NATURAL GRASS OR ASTROTILFY TO
SOUTHERN COURTYARDS OF WHITE
- PAVED HARDSTAND
PAVED OR EXPANDED APPROPRIATE
HARDSTAND
- DRIVEWAY
SIGNAL DRIVEWAYS WITH REGULATED
CONTRASTING COLOUR TO ADJACENT
PAVEDWAYS
- LANDSCAPED GARDEN BED
LANDSCAPED GARDEN BEDS WITH VARIOUS
PLANTING SCHEME. EXACT DETAILS TBC BY
LANDSCAPE ARCHITECT AT BL STAGE
- SMALL TREE
- MEDIUM TREE
- LARGE TREE

UNIT LEGEND

- UNIT TYPE 'A'
TRADITIONAL ELEVATION - REFER DETAILED
PLANS AND ELEVATIONS SHEET DA 10
- UNIT TYPE 'B'
UPPER ELEVATION - REFER TO USE EXPLANS
AND ELEVATIONS SHEET DA 11
- UNIT TYPE 'C'
MEDITERRANEAN ELEVATION - REFER
TO DETAILED PLANS AND ELEVATIONS SHEET
DA 12
- UNIT TYPE 'D'
BEACH ELEVATION - REFER TO USE EXPLANS
AND ELEVATIONS SHEET DA 13

PROPOSED FFL NOTE: ALL FINISHED LEVELS
OF UNITS ARE INDICATIVE ONLY AND ARE
SUBJECT TO CHANGE DEPENDANT ON
TECHNICAL CONSULTANTS DETAILED DESIGN
DURING BL STAGE OF WORKS



DETAILED SITE PLAN 'B'

SCALE @ 1:200 A1 (1:400 approx A3)

Appendix O

ESPRIT COTTAGE

D R N I G H T D E S I G N

DETAILED SITE PLAN 'B'

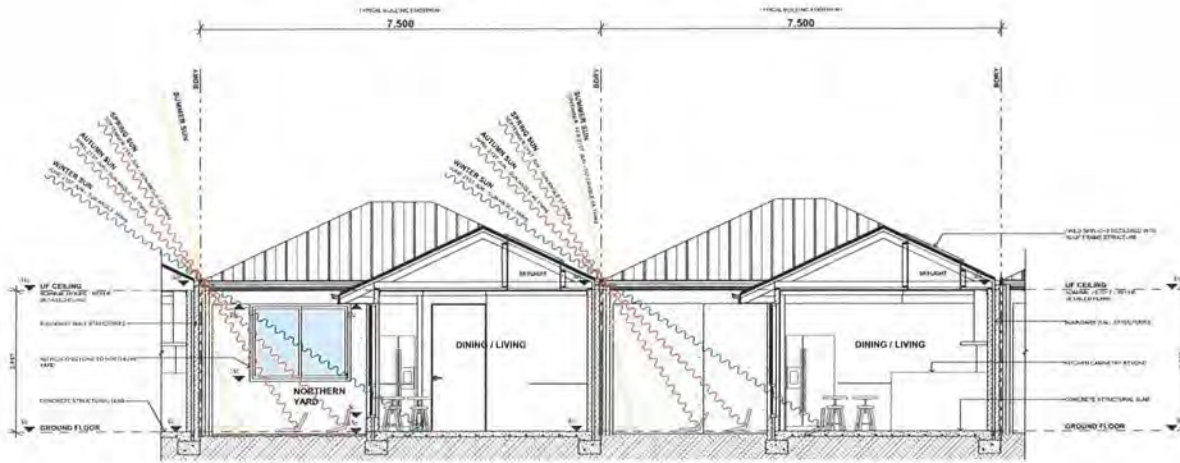
Approved	AB	Drawn	AB
Scale	AS SHOWN ON DRAWINGS	Project	XB2-17
Plans	PLANNING APP	Sheet	AB

DA.07

DATE: Wednesday, 1 August 2018

TYPICAL UNIT B&D

TYPICAL UNIT A&C



SUN DIAGRAM SECTION
SCALE: 1/8"=1'-0"

UNIT LEGEND

- UNIT TYPE 'A'
TRADITIONAL ELEVATION - REFER DETAILED PLANS AND ELEVATIONS SHEET DA.10
- UNIT TYPE 'B'
URBAN ELEVATION - REFER DETAILED PLANS AND ELEVATIONS SHEET DA.11
- UNIT TYPE 'C'
WEATHERBOARD ELEVATION - REFER DETAILED PLANS AND ELEVATIONS SHEET DA.12
- UNIT TYPE 'D'
BEACH ELEVATION - REFER DETAILED PLANS AND ELEVATIONS SHEET DA.13

TYPICAL SUN DIAGRAM SECTIONAL DETAIL

SCALE AS SHOWN

(Appendix O)

ESPRIT COTTAGE 15.1C
DARKLIGHT DESIGN
SUN DIAGRAM SECTION

DESIGNED BY	AB	PROJECT	AB
SCALE	AS SHOWN ON DRAWING	PROJECT NO.	XB2-17
DATE	PLANNING APP.	DATE	AB

DA.15

DATE: Wednesday, 1 August 2018