

# T.N. WOOLFORD & ASSOCIATES

LAND & ENGINEERING SURVEYORS



72 Grahams Road  
Mount Rumney  
Tasmania 7170  
Phone: (03) 6248 5224  
Mobile: 0418 248 569

Email: [TNWoolford@tassie.net.au](mailto:TNWoolford@tassie.net.au)

5<sup>th</sup> October 2016

Southern Midlands Council,  
P.O. Box 21,  
Oatlands. 7120

Dear Sir,

**Proposed Boundary Alteration, Church Road, Broadmarsh.**  
**Brendon Campbell Owner**

Please find enclosed three copies of a plan showing the proposed boundary alteration between four titles owned by Brendon Campbell at Church Road, Broadmarsh, submitted to Council for approval.

The owner has applied to Crown Lands to purchase the reserved roads, other than Church Road, that are shown on the titles.

All lots have good access to Church Road and are covered in bush with some cleared areas.

Also enclosed are copies of the four titles, a completed Application for Planning Permit form and \$685.00 to cover your approval and advertising fees.

Yours faithfully

A handwritten signature in black ink, appearing to read "Tony Woolford".

**Tony Woolford**  
Authorised Surveyor

Encl.  
c.c. Brendon Campbell

Phone: (03) 6259 3011  
mail@southernmidlands.tas.gov.au

Southern Midlands Council  
PO Box 21  
Oatlands TAS 7120



Office Use Only  
Date received: \_\_\_\_\_  
Date Fees received: \_\_\_\_\_  
SA NO: \_\_\_\_\_

**APPLICATION FOR PLANNING PERMIT FOR SUBDIVISION**

**Land Use Planning and Approvals Act 1993**

**Applicant Details:**

Note: Only an owner or agent of the owner may make an application

Applicant(s): T.N. Woolford & Associates

Postal Address: 72 Grahams Road  
Mt. Rumney 7170

Phone No: 62485224  
Fax No: 62485202

Email address: tnwoolford@tassie.net.au

**Land Owner Details and Address of Proposal:**

Land Owners Name: Brendon Campbell

Property Address (Address of Development): Church Road, Broadmarsh

Certificate of title number: 232965-1, 111196-1, 223388-1, 208363-1

**Written Description of the Proposal:**

Boundary Alteration between four titles.

Or attach written description separately

**Heritage Tasmania:**  
If the Property is listed on the Tasmanian Heritage Register then the Application will be referred to Heritage Tasmania unless an Exemption Certificate has been provided with this Application. Phone 1300 850 332 (local call cost) or email [enquires@heritage.tas.gov.au](mailto:enquires@heritage.tas.gov.au)

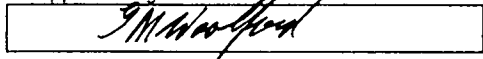
**TasWater:**  
Depending on the works proposed Council may be required to refer the Application to TasWater for assessment (Phone 136 992)

**State Roads (Department of State Growth) (The "Road Authority" for State Owned Roads):**  
An Application for the Subdivision of land with access to or adjoining a State Owned Road will be referred to the Department of State Growth by Council for comment. You may contact the Department to discuss matters (such as access requirements) on 6166 3369.

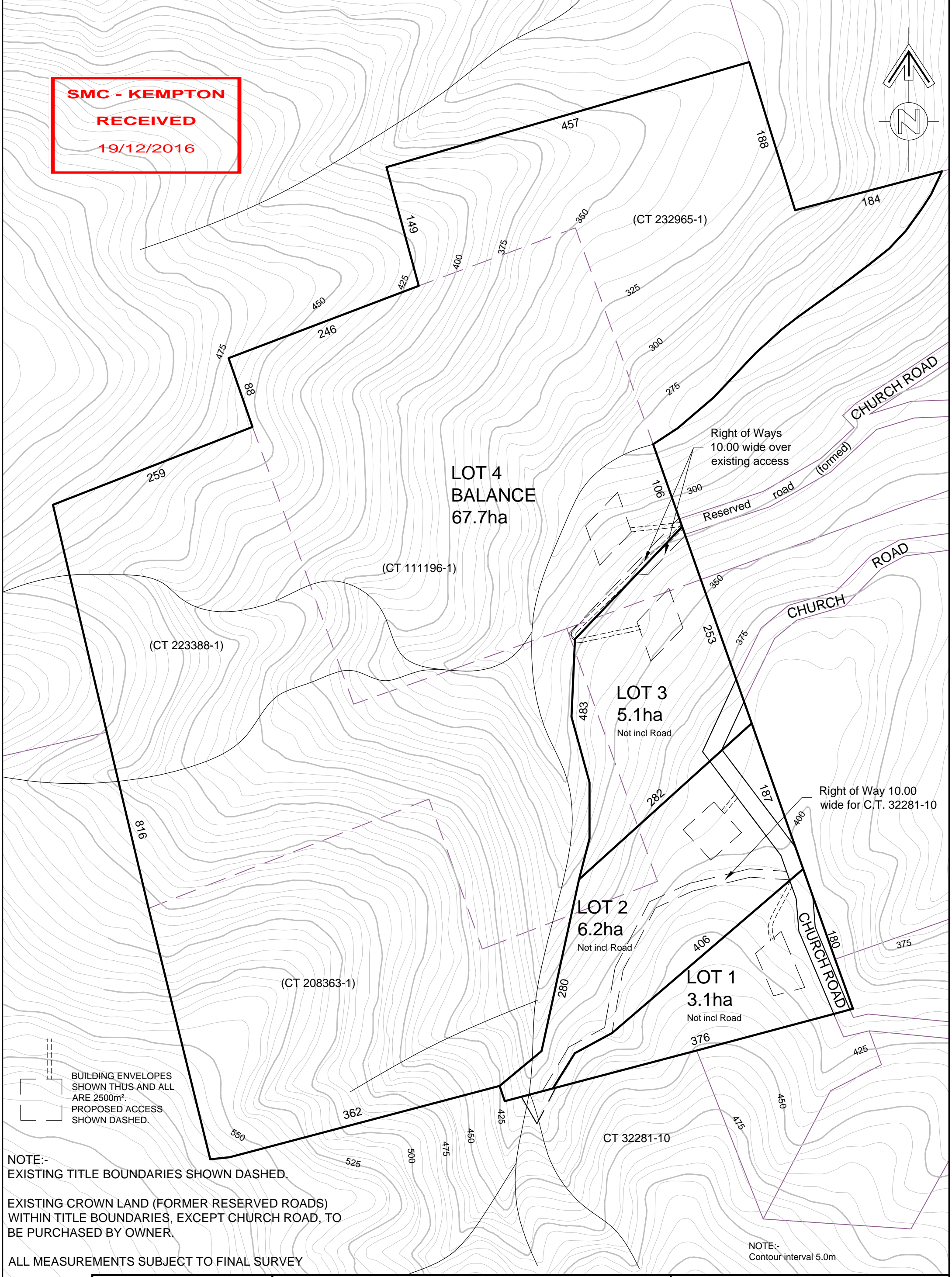
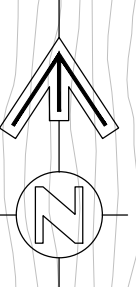
## Signed Declaration

I/we hereby apply for a planning approval to carry out the use or development described in this application and in the accompanying plans and documents, accordingly I declare that.

- The information given is a true and accurate representation of the proposed development. I understand that the information and materials provided with this development application may be made available to the public. I understand that the Council may make such copies of the information and materials as, in its opinion, are necessary to facilitate a thorough consideration of the Development Application. I have obtained the relevant permission of the copyright owner for the communication and reproduction of the plans accompanying the development application, for the purposes of assessment of that application. I indemnify the Southern Midlands Council for any claim or action taken against it in respect of breach of copyright in respect of any of the information or material provided.
- I am the applicant for the planning permit and I have notified the owner/s of the land in writing of the intention to make this application in accordance with Section 52(1) of the *Land Use Planning Approvals Act 1993* (or the land owner has signed this form in the box below in "Land Owner(s) signature):

Applicant Signature 	Applicant Name (print) Tony Woolford	Date 5-10-16
Land Owner(s) Signature  	Land Owners Name (please print)  	Date  
Land Owner(s) Signature  	Land Owners Name (please print)  	Date  

**SMC - KEMPTON**  
**RECEIVED**  
 19/12/2016



Right of Ways  
 10.00 wide over  
 existing access

Right of Way 10.00  
 wide for C.T. 32281-10

---  
 BUILDING ENVELOPES  
 SHOWN THUS AND ALL  
 ARE 2500m<sup>2</sup>.  
 ---  
 PROPOSED ACCESS  
 SHOWN DASHED.

NOTE:-  
 EXISTING TITLE BOUNDARIES SHOWN DASHED.

EXISTING CROWN LAND (FORMER RESERVED ROADS)  
 WITHIN TITLE BOUNDARIES, EXCEPT CHURCH ROAD, TO  
 BE PURCHASED BY OWNER.

ALL MEASUREMENTS SUBJECT TO FINAL SURVEY

NOTE:-  
 Contour interval 5.0m

THIS DRAWING IS STRICTLY COPYRIGHT  
 AND SHALL NOT BE COPIED, LENT OR  
 USED FOR ANY PURPOSE WITHOUT THE  
 WRITTEN PERMISSION OF  
 TONY WOOLFORD

**PROPOSED BOUNDARY ALTERATION**  
**BRENDON CAMPBELL OWNER**  
**CHURCH RD BROADMARSH TAS 7030**

SCALE 1: 4000 (A3) | DATE: OCTOBER 2016 | DRAWN: IDS/TNW | DWG NO. C6093-1

**T. N. WOOLFORD & ASSOC.**  
**72 GRAHAMS RD, MT. RUMNEY**  
 PHONE (03) 6248 5224 e: tnwoolford@tassie.net.au  
 FAX (03) 6248 5202

SEARCH OF TORRENS TITLE

VOLUME 208363	FOLIO 1
EDITION 4	DATE OF ISSUE 13-May-2016

SEARCH DATE : 05-Oct-2016

SEARCH TIME : 10.58 PM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Plan 208363  
 Derivation : Lot 21546 Gtd to A E Fitzgerald  
 Prior CT 2396/61

SCHEDULE 1

M570646 TRANSFER to BRENDON JOHN CAMPBELL Registered  
 13-May-2016 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

ORIGINAL - NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1449  
TASMANIA  
REAL PROPERTY ACT, 1862, as amended

CERTIFICATE OF TITLE

Register Book  
Vol. Fol.  
2396 61

NOTE—REGISTERED FOR OFFICE  
CONVENIENCE TO REPLACE



Purchase Grant Vol. 139 Fol. 113

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple in the land within described together with such interests and subject to such encumbrances and interests as are shown in the Second Schedule. In witness whereof I have hereunto signed my name and affixed my seal.

*T. E. Hutchinson*  
Recorder of Titles.



DESCRIPTION OF LAND

PARISH OF MELVILLE LAND DISTRICT OF MONMOUTH  
SIXTY TWO ACRES THREE ROODS EIGHTEEN PERCHES on the Plan hereon.

FIRST SCHEDULE (continued overleaf)

CECIL FREDERICK WEST of Granton, Cartage Contractor.

SECOND SCHEDULE (continued overleaf)

NO. A261507 MORTGAGE to Eric Rutherford Henry and Albert Gray Benjamin. Registered 22nd March 1967 at Noon.  
(Sgd.) T. E. HUTCHINSON  
Recorder of Titles.

DISCHARGED  
A534359  
14.9.1976

*T. E. Hutchinson*  
Recorder of Titles

NOTE.—ENTRIES CANCELLED UNDER SIGNATURE OF THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.

REGISTERED NUMBER

208363

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Registrar.



Lot 21546  
G<sup>d</sup> to A E Fitzgerald  
Meas in Links

First Edition, Registered 26 SEP 1968  
Derived from P.G. Vol. 139 Fol. 113 - Transfer 132377 E.J. Fitzgerald/

SEARCH OF TORRENS TITLE

VOLUME 111196	FOLIO 1
EDITION 4	DATE OF ISSUE 13-May-2016

SEARCH DATE : 23-Mar-2017

SEARCH TIME : 11.21 AM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Plan 111196  
 Derivation : Whole of Lot 4686, 50 Acres Gtd. to Edmund Hely  
 Derived from A13330

SCHEDULE 1

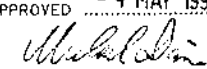
M570646 TRANSFER to BRENDON JOHN CAMPBELL Registered  
 13-May-2016 at noon

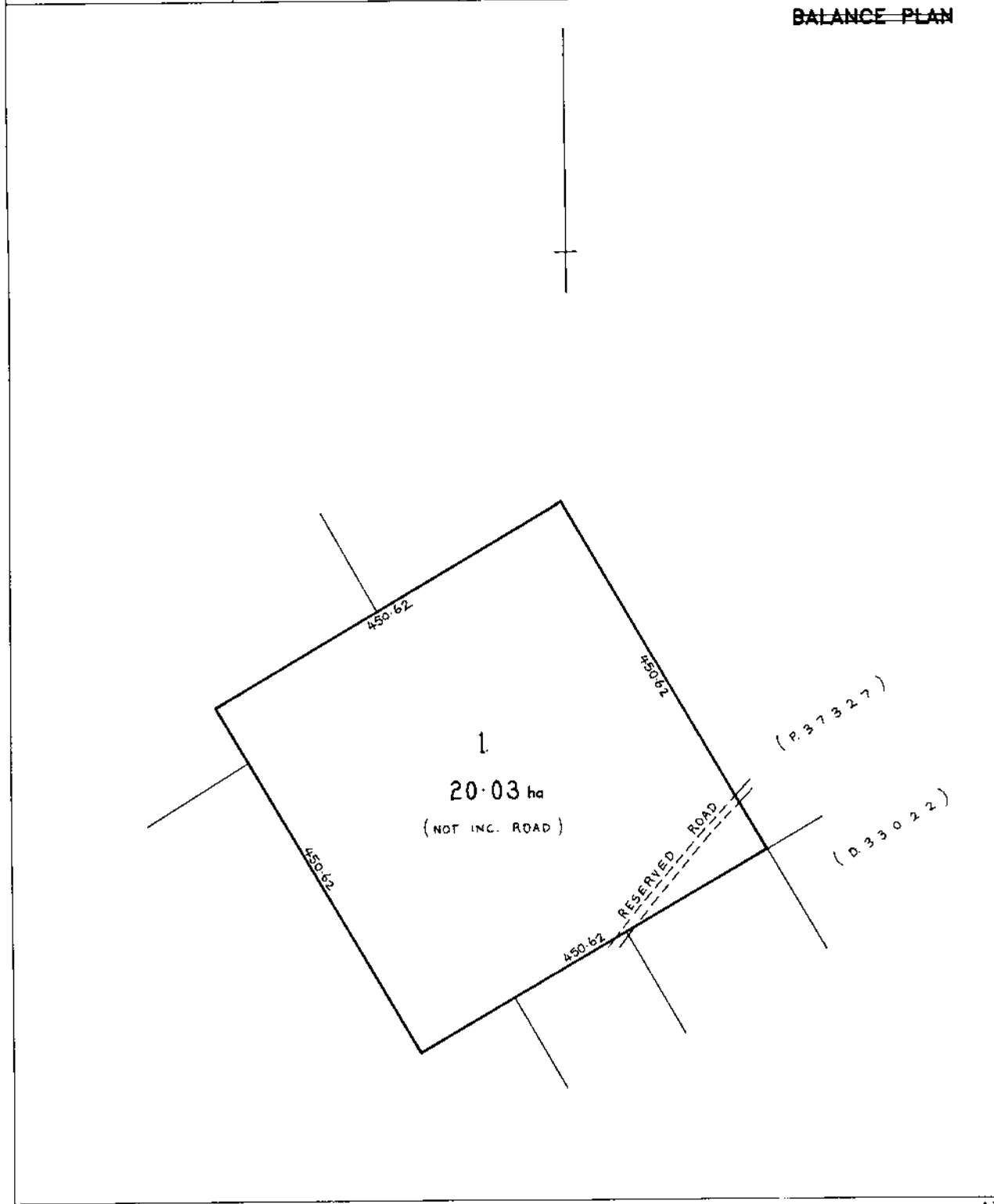
SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER LT. ACT 1980		<b>PLAN OF TITLE</b>		REGISTERED NUMBER	
FOLIO REFERENCE A.13330				<b>P111196</b>	
GRANTEE WHOLE OF LOT 4686, 50A-OR-OP. 6TD. TO EDMUND HELY		LOCATION MONMOUTH - MELVILLE	APPROVED - 4 MAY 1994		
		FIRST SURVEY PLAN No. 7/84 L.O.	 Recorder of Titles		
		COMPILED BY			
		SCALE 1: 4000	LENGTHS IN METRES		
MAPSHEET MUNICIPAL CODE No. 12	LAST UPI No 856	LAST PLAN No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN		



A 143  
M.C.



SEARCH OF TORRENS TITLE

VOLUME 232965	FOLIO 1
EDITION 9	DATE OF ISSUE 13-May-2016

SEARCH DATE : 23-Mar-2017

SEARCH TIME : 11.20 AM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Plan 232965  
 Derivation : Lot 6257 Gtd.to R. Temple  
 Prior CT 3218/90

SCHEDULE 1

M570646 TRANSFER to BRENDON JOHN CAMPBELL Registered  
 13-May-2016 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

ORIGINAL - NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1469  
TASMANIA  
REAL PROPERTY ACT, 1862, as amended  
NOTE - REGISTERED FOR OFFICE  
CONVENIENCE TO REPLACE



CERTIFICATE OF TITLE

Register Book  
Vol. Fol.  
337 90

Cert. of Title Vol. 95. Fol. 78.

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple in the land within described together with such interests and subject to such encumbrances and interests as are shown in the Second Schedule. In witness whereof I have hereunto signed my name and affixed my seal.

*(Signature)*



Recorder of Titles.

DESCRIPTION OF LAND

PARISH OF MELVILLE LAND DISTRICT OF MONMOUTH  
THIRTY FIVE ACRES TWO ROODS on the Plan hereon

FIRST SCHEDULE (Continued overleaf)

FREDERICK WILLIAMS of Black Brush, Farmer

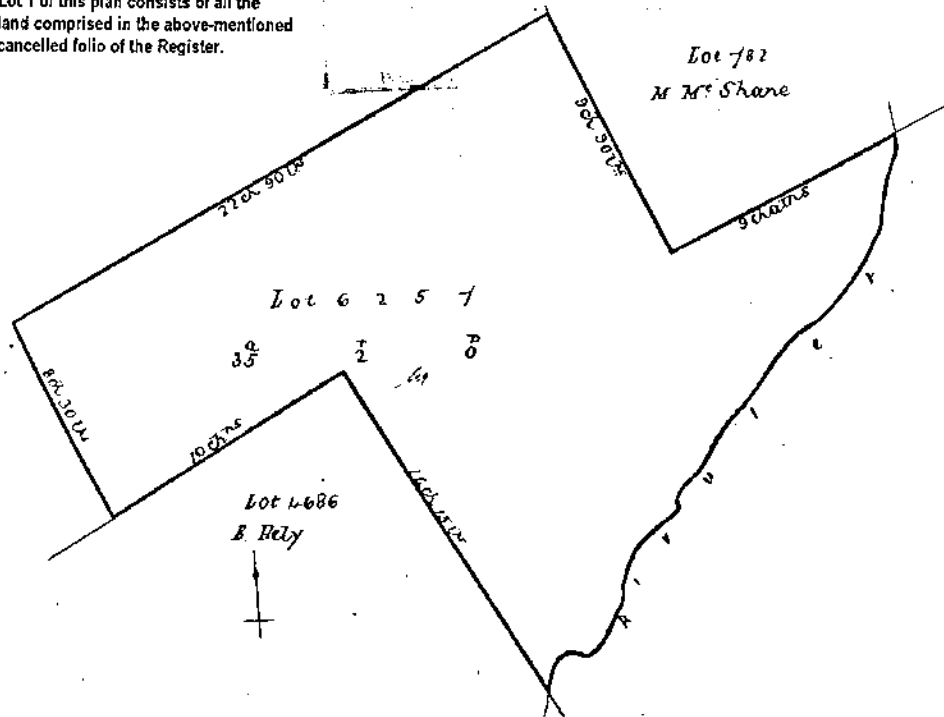
SECOND SCHEDULE (Continued overleaf)  
NIL.

REGISTERED NUMBER

**232965**

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.

NOTE.—ENTRIES CANCELLED UNDER SIGNATURE OF THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.



Lot 6257 Gtd. to R. Temple Meas. in Links  
FIRST Edition. Registered  
Derived from C.T. Vol. 95. Fo. 78. Transfer 14576 The Curator of Intestate Estates

SEARCH OF TORRENS TITLE

VOLUME 223388	FOLIO 1
EDITION 4	DATE OF ISSUE 13-May-2016

SEARCH DATE : 23-Mar-2017

SEARCH TIME : 11.22 AM

DESCRIPTION OF LAND

Parish of MELVILLE, Land District of MONMOUTH  
 Lot 1 on Plan 223388  
 Derivation : Lots 2719 & 6715 Gtd. to J. Tonks & E. Hely  
 respectively.  
 Prior CT 2801/67

SCHEDULE 1

M570646 TRANSFER to BRENDON JOHN CAMPBELL Registered  
 13-May-2016 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

2801 67

ANNEXURE TO CERTIFICATE OF TITLE VOL. FOL.

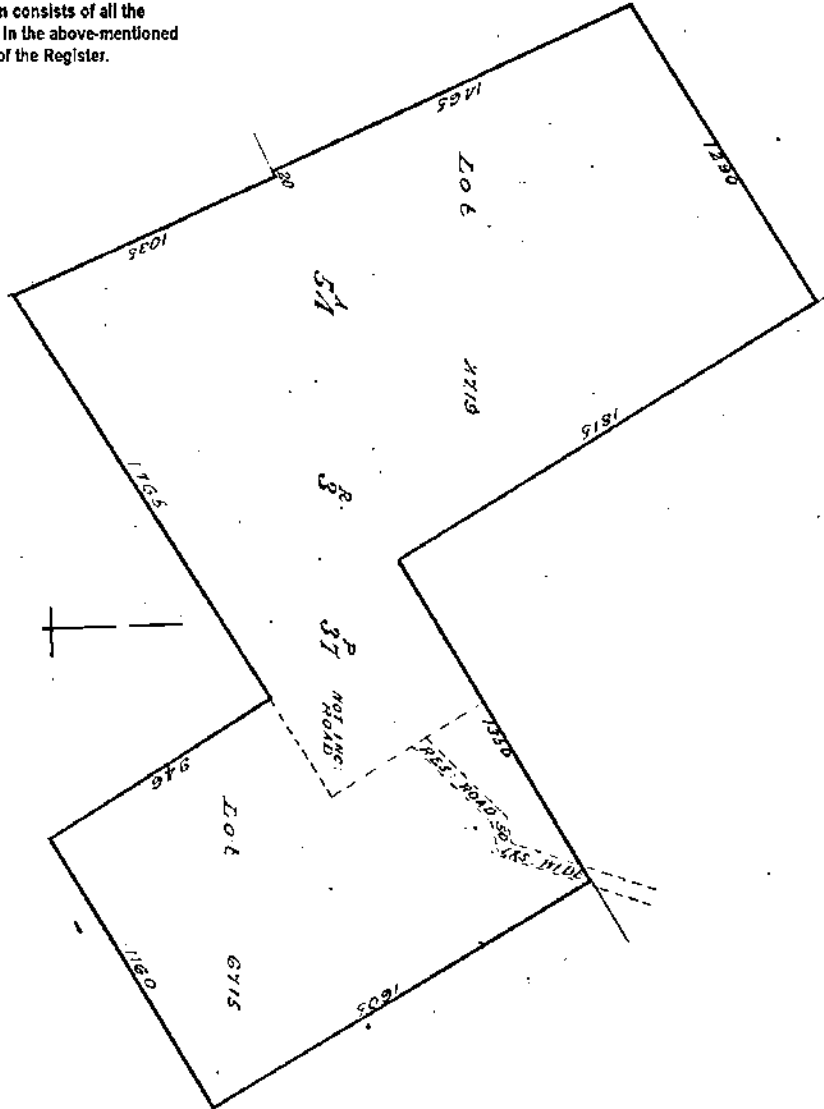


REGISTERED NUMBER

223388

*M. J. ...*  
Recorder of Titles

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.





28 Suncrest Avenue  
Lenah Valley, TAS 7008  
mark@ecotas.com.au  
www.ecotas.com.au  
(03) 62 283 220  
0407 008 685  
ABN 83 464 107 291

Tony Woolford  
T.N. Woolford & Assoc.  
72 Grahams Road  
Mount Rumney TAS 7170

6 December 2016

Dear Tony

RE: Request for Additional Information  
Development Application – DA SA 2016/12  
Subdivision (Boundary Adjustment)  
Church Road, Broadmarsh (Brendon Campbell)

I refer to correspondence from South Midlands Council dated 13 October 2016 in relation to Development Application DA SA 2016/12, which requests the following information:

Biodiversity Code

**3. Provide information to demonstrate compliance with the "Party E10.8.1 Subdivision Standards".**

The following statement addresses the provisions of the Biodiversity Code under the *Southern Midlands Interim Planning Scheme 2015*.

Please do not hesitate to contact me further if additional information is required.

Kind regards

Mark Wapstra  
Senior Scientist/Manager



COMPLIANCE STATEMENT FOR SUBDIVISION (BOUNDARY ADJUSTMENT) AT CHURCH ROAD, BROADMARSH, TASMANIA:  
BIODIVERSITY CODE UNDER SOUTHERN MIDLANDS INTERIM PLANNING SCHEME 2015

SUPPORT DOCUMENTATION FOR DEVELOPMENT APPLICATION DA SA 2016/12

Prepared by Mark Wapstra for Tony Woolford (T.N. Woolford & Assoc.) on behalf of Brendon Campbell (owner), 6 December 2016

Preamble

Under the *Southern Midlands Interim Planning Scheme 2015*, the titles subject to DA SA 2016/12 are zoned as Rural Resource and partly subject to the Biodiversity Protection Area (BPA) overlay (Figure 1).

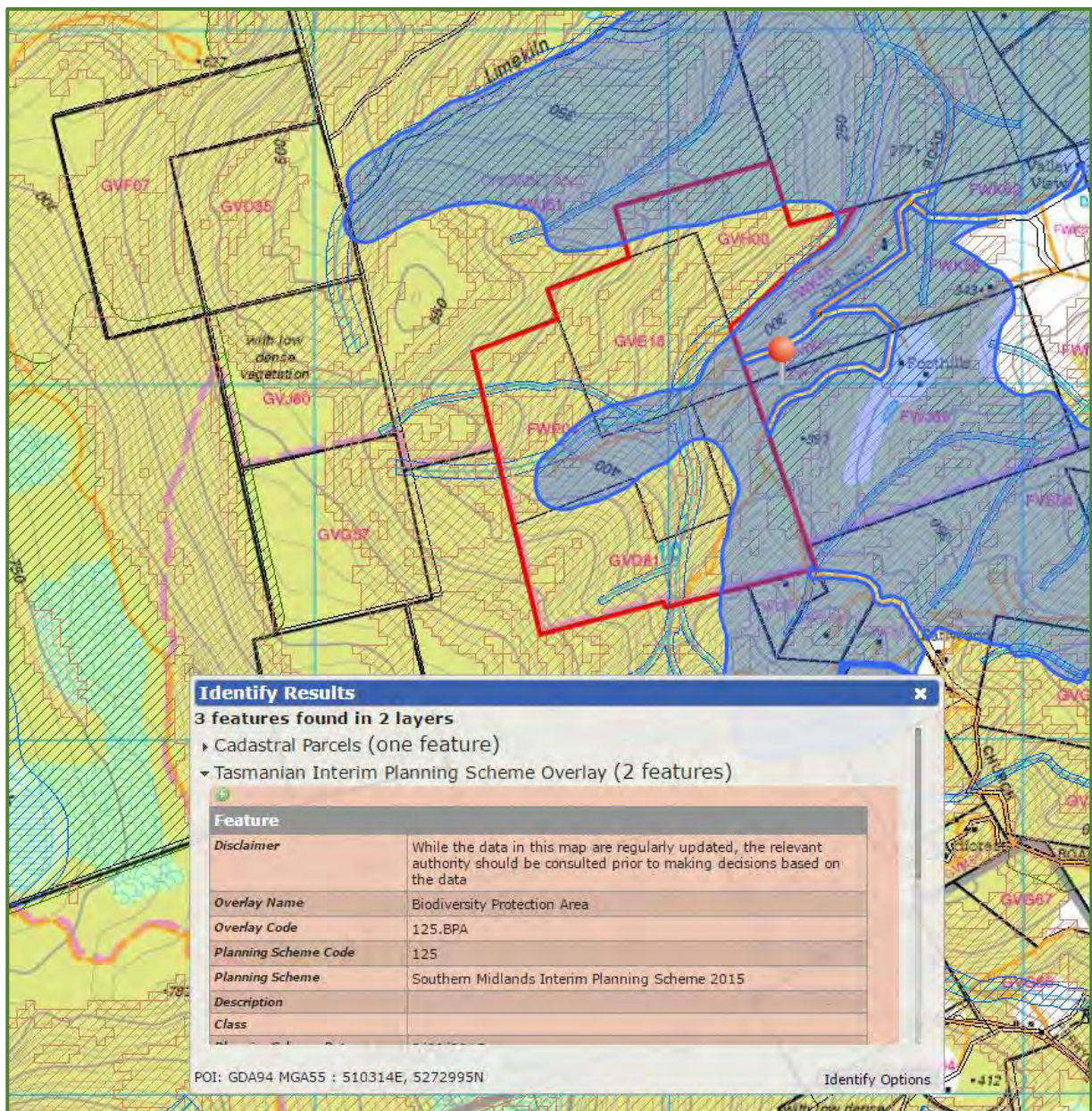


Figure 1. Subject titles (red) showing extent of Biodiversity Protection Overlay [source: TheList]



Assessment

The parts of the titles proposed as building envelopes, and the proposed access to these envelopes, as shown in Figure 2, were assessed by Mark Wapstra on 6 December 2016.

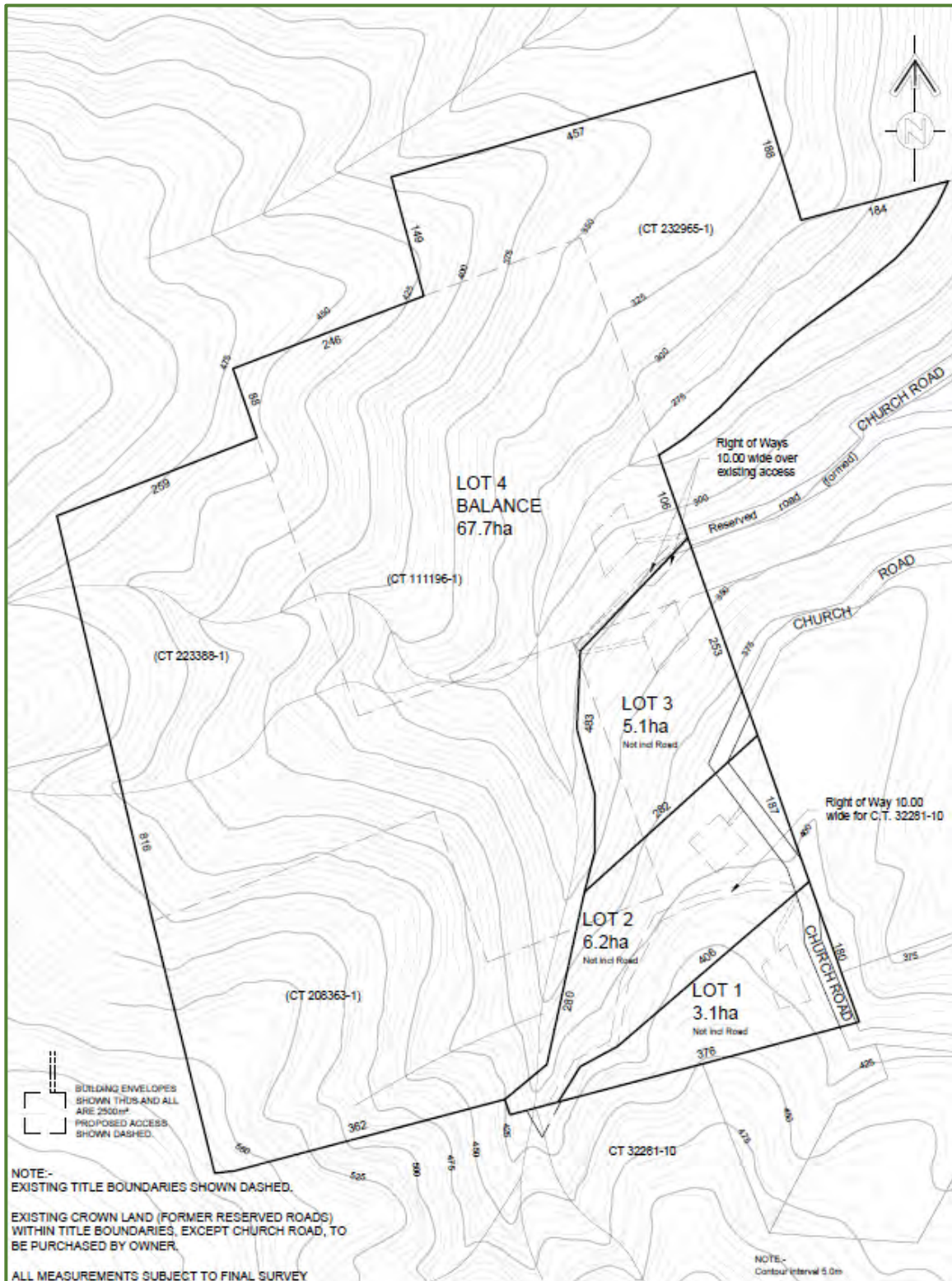


Figure 2. Subject titles showing proposed lot configurations and location of building envelopes and associated access [source: T.N. Woolford & Assoc.]



*Biodiversity Code*

The PURPOSE of the Biodiversity Code is stated below:

E10.1 Purpose

E10.1.1

The purpose of this provision is to:

- (a) minimise loss of identified threatened native vegetation communities and threatened flora species;
- (b) conserve identified threatened fauna species by minimising clearance of important habitat and managing environmental impact; and
- (c) minimise loss of other biodiversity values that are recognised as locally significant by the Planning Authority;

where not otherwise regulated by the State or Commonwealth.

Threatened vegetation: clause E10.1.1(a)

Available TASVEG 3.0 vegetation mapping indicates that the subject titles support the following vegetation mapping units:

- *Eucalyptus obliqua* wet forest (undifferentiated) (TASVEG code: WOU): mapped extensively across most of titles;
- *Eucalyptus tenuiramis* forest and woodland on sediments (TASVEG code: DTO): mapped along some ridgelines within titles; and
- *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL): mapped in south-eastern corner of titles.

TASVEG mapping is indicative only. Ground-truthing is required to confirm (and usually re-classify and map) the actual vegetation types present.

Site assessment indicated that the following vegetation types are present within the proposed building envelopes (refer to Plates 1-12 for annotated images of the vegetation):

Lot 1: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – entire lot and surrounds;

Lot 2: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – entire lot and surrounds, although a somewhat complicated mix of canopy species on margins of building envelope (still most appropriately classified as DOB);

Lot 3: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – building envelope entirely within DOB but eastern, southern and northern fringes in a broad transition to *Eucalyptus tenuiramis* forest and woodland on sediments (TASVEG code: DTO), but no DTO within any part of building envelope likely to be disturbed; and

Lot 4: *Eucalyptus obliqua* forest with broad-leaf shrubs (TASVEG code: WOB) – transitioning into *Eucalyptus obliqua* dry forest (TASVEG code: DOB) on southern margins of building envelope.

Apart from the building envelope for Lot 1, the general area of each proposed building envelope is already partly cleared, such that classification as a forest mapping unit is somewhat inappropriate – perhaps at least part of each building envelope for Lots 2-3 could be classified as extra-urban miscellaneous (TASVEG code: FUM).

Access to the building envelopes is through the following vegetation types:

Lot 1: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – most of access appears to follow an existing cleared forest track;





Lot 2: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – access from Church Road already formed;

Lot 3: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) – access is an already well-formed forest track that may require minimal additional clearing, with existing track essentially following the transitional boundary between DOB and DTO; and

Lot 4: *Eucalyptus obliqua* dry forest (TASVEG code: DOB) and *Eucalyptus tenuiramis* forest and woodland on sediments (TASVEG code: DTO) – proposed access follows right-of-way that is already well-formed.

On this basis, clause E10.1.1(a) does not have application because none of the vegetation types that occur within the building envelopes are classified as threatened under Schedule 3A of the Tasmanian *Nature Conservation Act 2002* or equate to a threatened ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Threatened flora: clause E10.1.1(a)

Database information (DPIPWE's *Natural Values Atlas* as available through TheList) does not indicate the presence of threatened flora within the subject titles. Field assessment did not detect any flora species classified as threatened under the Tasmanian *Threatened Species Protection Act 1995* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, such that clause E10.1.1(a) does not have application.

Threatened fauna: clause E10.1.1(b)

Database information (DPIPWE's *Natural Values Atlas* as available through TheList) does not indicate the presence of threatened fauna within the subject titles. Field assessment did not detect any fauna species classified as threatened under the Tasmanian *Threatened Species Protection Act 1995* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. While there is potential habitat for various species listed under these Acts, it is noted that the Biodiversity Code does not include definitions of **the terms "important habitat"**. **It is my opinion that the limited extent of the four building envelopes relative to the remainder of the titles, which all support extensive areas of such habitat, is such that "important habitat" is not present, such that** clause E10.1.1(b) does not have application.

Other biodiversity values that are recognised as locally significant by the Planning Authority: clause E10.1.1(c)

I am not aware of any other biodiversity values identified by the Southern Midlands Council within the subject titles that meet the intent of this statement, such that clause E10.1.1(c) does not have application.

**On the basis of the above analysis of the "Purpose" of the Biodiversity Code, the proposed subdivision will meet the intent and specifics of the Code's Purpose.**

The APPLICATION of the Biodiversity Code is stated below:

#### E10.2 Application

E10.2.1 This code applies to development involving the clearance and conversion or disturbance of native vegetation within a Biodiversity Protection Area.

"Clearance and conversion" is defined under the Code as:

"the process of removing native vegetation from an area of land and: (a) leaving the area of land, on a permanent or extended basis, in a state predominantly unvegetated with native vegetation; or (b) replacing the native vegetation so removed, on a permanent or extended



basis, with residential, commercial, mining, agriculture or other non-agricultural development”.

It is reasonable to consider the clearing of a house site and associated infrastructure elements such as access driveways and water tanks, sheds and the like as “clearance and conversion”.

“Disturbance” is defined under the Code as:

“the alteration of the structure and species composition of a native vegetation community through actions including cutting down, felling, thinning, logging, removing or destroying of a native vegetation community”.

In my opinion, partial structural modification (e.g. some canopy removal, slashing of understorey) for the purposes of maintaining a low-risk fire management zone should not be considered to comprise “clearance and conversion” but does fall within the intent of the definition of “disturbance”. It is noted, however, that the vegetation types to be modified are likely to respond positively to this type of disturbance and the current levels of floristic diversity will be maintained.

Section E10.5 indicates the APPLICATION REQUIREMENTS for developments with the Biodiversity Protection Area, as follows:

#### E10.5 Application Requirements

E10.5.1 In addition to any other application requirements, the planning authority may require the applicant to provide a natural values determination if considered necessary to determine compliance with acceptable solutions.

E10.5.2 In addition to any other application requirements, the planning authority may require the applicant to provide any of the following information, if considered necessary to determine compliance with performance criteria:

- (a) a natural values determination;
- (b) a natural values assessment;
- (c) a report detailing how impacts on priority biodiversity values will be avoided, minimised, and/or mitigated;
- (d) a special circumstances justification report;

A “natural values determination” is defined as:

“an ecological assessment, generally consistent with the *Guidelines for Natural Values Assessment* (DPIPWE July 2009), by a suitably qualified person (biodiversity) to identify and convey:

- (a) the location of priority biodiversity values affecting the site;
- (b) the significance of priority biodiversity values, with particular reference to Table E10.1”.

In the case of the present proposal, in my opinion a natural values determination is considered most appropriate for the circumstances and values identified. The present statement presents the key information on natural values usually considered under the *Guidelines for Natural Values Assessments – Terrestrial Development Proposals* (DPIPWE 2015), and satisfies clause E10.5.1.

Section E10.8 presents the SUBDIVISION STANDARDS, as follows:

#### 10.8 Subdivision Standards

##### 10.8.1 Subdivision

Objective: To ensure that:



- (a) works associated with subdivision resulting in clearance and conversion or disturbance will not have an unnecessary or unacceptable impact on priority biodiversity values;
- (b) future development likely to be facilitated by subdivision is unlikely to lead to an unnecessary or unacceptable impact on priority biodiversity values.

To assess whether the proposal meets the intent of the Objectives of the Subdivision Standards it is necessary to examine if "priority biodiversity values" are present and if they will be impacted.

Table E10.1 lists PRIORITY BIODIVERSITY VALUES in the categories of "high", "moderate" and "low". "High priority biodiversity values" include only a list of various TASVEG mapping units (codes DAS, DAZ, DGL, DOV, DTO, SRI, AWU, AHL, ASF, AHS, AHF, GPL, GTL, DRO, DPO), only some of which are classified as threatened under Schedule 3A of the Tasmanian *Nature Conservation Act 2002* or equate to a threatened ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. The "moderate priority biodiversity values" category is vacant. "Low priority biodiversity values" are described as "other native vegetation communities".

On the basis that the proposed building envelopes only support non-threatened vegetation types (and none listed in the category of "high priority biodiversity values"), the sites can only be considered to support "low priority biodiversity values".

The ACCEPTABLE SOLUTION (A1) is as follows (relevant clause only):

A1

Subdivision of a lot, all or part of which is within a Biodiversity Protection Area, must comply with one or more of the following:

- (a) be for the purposes of separating existing dwellings;
- (b) be for the creation of a lot for public open space, public reserve or utility;
- (c) no works, other than boundary fencing works, are within the Biodiversity Protection Area;
- (d) the building area, bushfire hazard management area, services and vehicular access driveway are outside the Biodiversity Protection Area.

The Acceptable Solution A1 is not met, meaning the PERFORMANCE CRITERIA (P1) need to be considered, which are stated as follows (for "low priority biodiversity values" only):

P1

Clearance and conversion or disturbance must satisfy the following:

- (a) if low priority biodiversity values:
  - (i) subdivision works are designed and located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the subdivision;
  - (ii) impacts resulting from future bushfire hazard management measures are minimised as far as reasonably practicable through appropriate siting of any building area.

In my opinion, it is clear that the subdivision (placement of lots and access to lots) has been designed to meet P1(a)(i) in that a minimal part of each lot (and a tiny proportion of the combined area of the lots) will be impacted, and the building envelopes have been positioned to avoid high priority biodiversity values and are mainly within pre-disturbed vegetation and accessed by existing tracks. While I cannot comment in detail on the bushfire hazard management requirements for the proposed building envelopes (as I am not an accredited person), my experience in this field leads me to conclude that P1(a)(ii) is also met because any bushfire hazard management that may be required can be contained within the defined building envelopes (i.e. remain restricted to vegetation defined as having "low priority biodiversity value") and that the access to the lots will require minimal clearing of native vegetation.





Plate 1. (LHS) Approximate building envelope in Lot 1, comprising even-aged relatively young regrowth-form *Eucalyptus obliqua* dry forest (DOB) with a distinctive dense shrubby understorey

Plate 2. (RHS) Approximate access to building envelope in Lot 1, which is through the same vegetation type as is present in the building envelope and will partially follow an existing track



Plate 3. (LHS) Approximate building envelope in Lot 2, comprising mainly previously cleared land surrounded by a mixed stand of dry to slightly wet sclerophyll forest dominated by *Eucalyptus obliqua* (DOB)

Plate 4. (RHS) Approximate access to building envelope in Lot 2, which is already effectively formed



Plate 5. (LHS) View east from existing access track to partly cleared building envelope in Lot 3, dominated by *Eucalyptus obliqua* dry forest (DOB), with a more open understorey than in Lot 1

Plate 6. (RHS) View west from eastern edge of partly cleared building envelope in Lot 3, dominated by *Eucalyptus obliqua* dry forest (DOB), fringed by *Eucalyptus tenuiramis* forest and woodland on sediments (DTO), but with a broad transition zone still locally dominated by more mature *E. obliqua*





Plate 7. (LHS) Existing access to building envelope in Lot 3 (lower section), showing route through DOB, fringed (somewhat only) by DTO

Plate 8. (RHS) As above, but further upslope past the bend, with the dominance of DOB much clearer



Plate 9. (LHS) Existing clearing that is part of building envelop in Lot 4, which is within (and still surrounded by) *Eucalyptus obliqua* forest with broad-leaf shrubs (WOB)

Plate 10. (RHS) As above but looking from clearing to further upslope where WOB transitions into DOB



Plate 11. (LHS) Existing access on right-of-way near Church Road, this section through *Eucalyptus tenuiramis* forest and woodland on sediments (DTO) but no material clearing being required (access to Lots 3 & 4)

Plate 12. (RHS) As above, but further west along access on right-of-way near subject title boundary, this section through *Eucalyptus obliqua* dry forest (DOB), transitioning into WOB near the title boundary (access to Lots 3 & 4)



SMC - KEMPTON  
RECEIVED  
12/12/2016

BUSHFIRE RISK ASSESSMENT  
4 LOT SUBDIVISION  
CHURCH ROAD, BROADMARSH  
FOR  
B CAMPBELL



PREPARED BY

N M CREESE

Accredited Bushfire Practitioner BFP-118

17th November 2016

1

LARK & CREESE

**CONTENTS**

1. **SUMMARY:**..... 3

2. **LOCATION:** ..... 4

3. **SITE CHARACTERISTICS:** ..... 5

4. **PROPOSED DEVELOPMENT:** ..... 9

5. **BUSHFIRE RISK ASSESSMENT:**..... 10

6. **COMPLIANCE:** ..... 22

7. **CONCLUSIONS & RECOMMENDATIONS:** ..... 25

8. **REFERENCES:**..... 29

**ATTACHMENT 1 - BUSHFIRE HAZARD MANAGEMENT PLAN**

Disclaimer:

AS 3959-2009 cannot guarantee that a dwelling will survive a bushfire attack, however the implementation of the measures contained within AS 3959-2009, this report and accompanying plan will improve the likelihood of survival of the structure. This report and accompanying plan are based on the conditions prevailing at the time of assessment. No responsibility can be accepted to actions by the land owner, governmental or other agencies or other persons that compromise the effectiveness of this plan. The contents of this plan are based on the requirements of the legislation prevailing at the time of report.

## 1. SUMMARY:

This Bushfire Risk Assessment has been prepared to support the development of a new 4 lot subdivision at Church Road, Broadmarsh. The site has been deemed to be bushfire prone due to its proximity to the areas of bushfire prone vegetation surrounding the site.

This report identifies the protective features and controls that must be incorporated into the design and construction works to ensure compliance with the standards. Fire management solutions are as defined in *AS 3959-2009 Construction of Buildings in Bushfire-Prone Areas, Interim Planning Directive 1 Bushfire Prone Areas Code (IPD1)*, and the Tasmania Fire Service publication *Guidelines for Development in Bushfire Prone Areas 2005*.

All lots have been designed to achieve a bushfire attack level of **BAL-19** (or lower) of AS 3959-2009 in accordance with E1.6.1, *Southern Midlands Interim Planning Scheme 2015*. New dwellings on these lots are to be constructed to this level, or greater, with the establishment and maintenance of the specified Hazard Management Areas to ensure ongoing protection from the risk from bushfire attack.

Private access is to be constructed in accordance with E1.6.1.2, Table E4, *Bushfire Prone Areas Code*.

Where staging of the development occurs, it is the responsibility of the developer to maintain the balance area in a reduced fuel condition until such time as the development extends to its outer boundary.

The effectiveness of the measures and recommendations detailed in this report and *AS 3959-2009* are dependent on their implementation and maintenance for the life of the development or until the site characteristics that this assessment has been measured from alter from those identified. No liability can be accepted for actions by lot owners, Council or governmental agencies which compromise the effectiveness of this report.

This report has been prepared by Nick Creese, principal of Lark & Creese surveyors. Nick is a registered surveyor in Tasmania and is accredited by the Tasmania Fire Service to prepare bushfire hazard management plans.

Site survey was carried out on 15th November 2016.



**2. LOCATION:**

Property address: Church Road, Broadmarsh

Title owner: B J Campbell

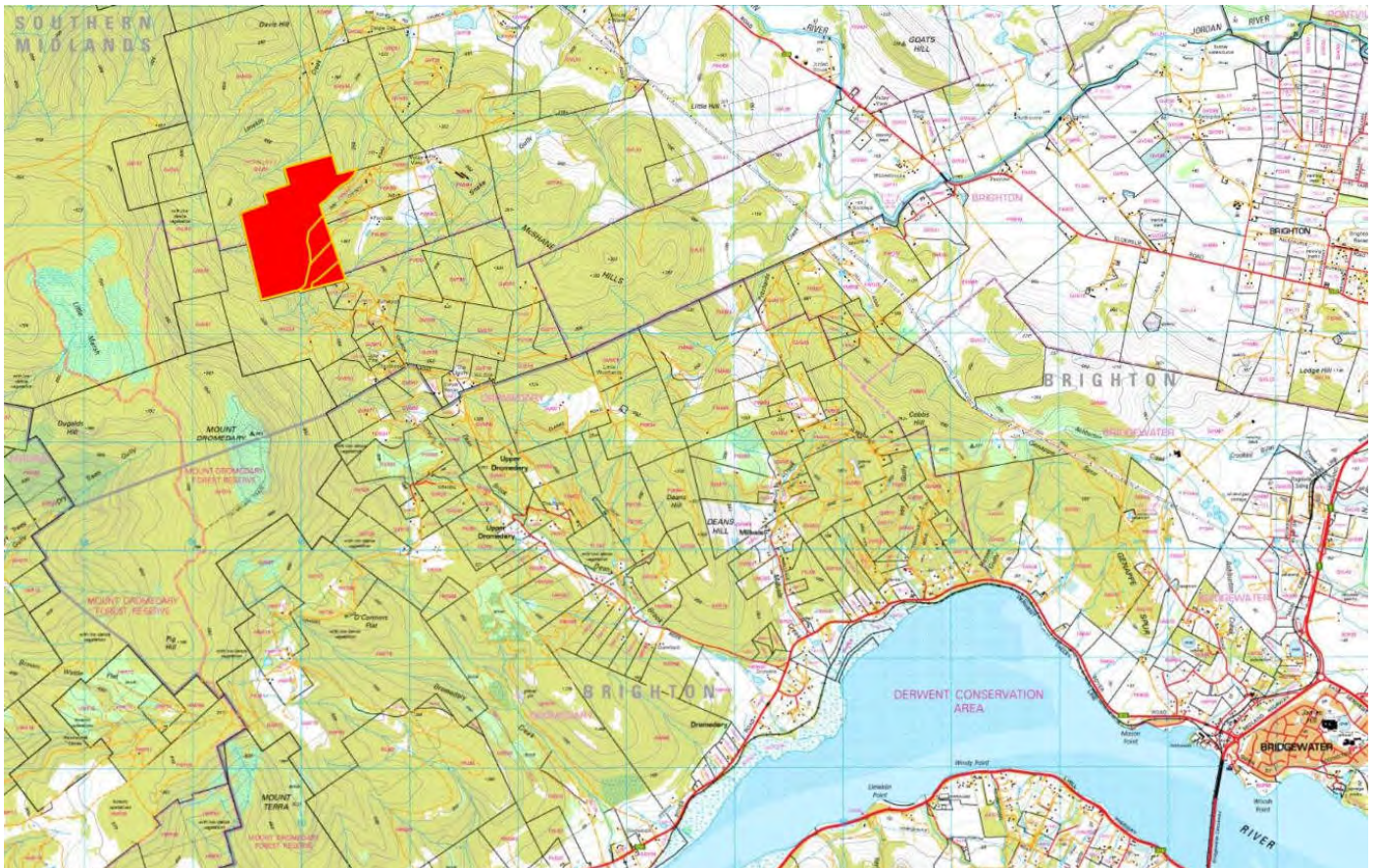
Title reference: C.T.232965-1, C.T.111196-1, C.T.223388-1, C.T.208363-1

PID N°: 3369487

Title area: 82 ha approx.

Municipal area: Southern Midlands

Zone: Rural Resource (Southern Midlands Interim Planning Scheme 2015)



**Image 1: Site Location (Source: The LIST)**

### 3. SITE CHARACTERISTICS:

The site is located off Church Road, approximately 8 km north of the intersection of Church Road and Boyer Road, Dromedary. The site is situated at an elevation of between 300 and 450m AHD, with grades typically falling at 10-15° to the north west within the vicinity of the building areas. A number of rough access tracks exists across the site.

Vegetation across the site has been identified as dry Eucalypt Forest with several creeks passing through the property. In the general vicinity of the building areas, understory vegetation appears more sparse than the western portion of the property, partly due to the aspect of this part of the site, and the apparent burning of the vegetation due to bushfire or hazard reduction burn.

Rural properties border the site on all sides, with some cleared pasture areas to the east, and bushland areas to the north, east, south and west. Several houses and associated infrastructure are located east and south.

Reticulated water supply is unavailable to the site with domestic water supply requirements reliant on on-site storage.



**Image 2: Aerial Image of site and surrounds (Source: TheLIST)**



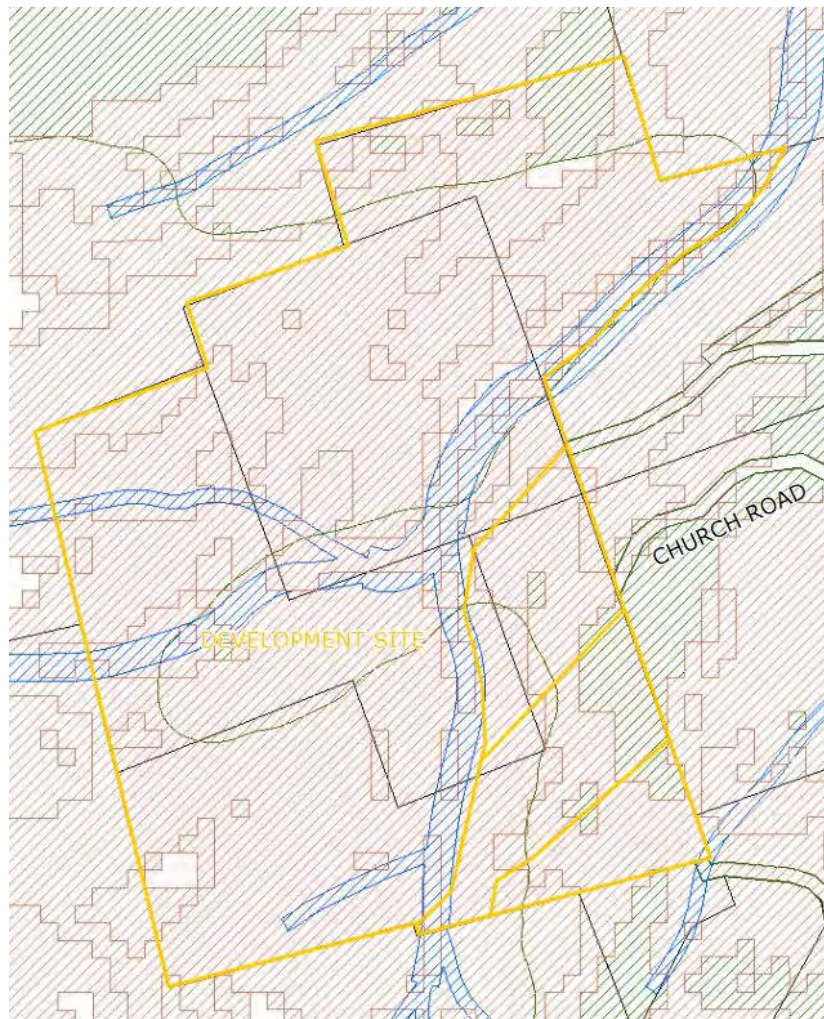
**Image 3: Typical site photo. (Looking north from southern boundary)**



**Image 4: Typical site photo. (Looking north on Church Road - site to left)**

**Planning Controls:**

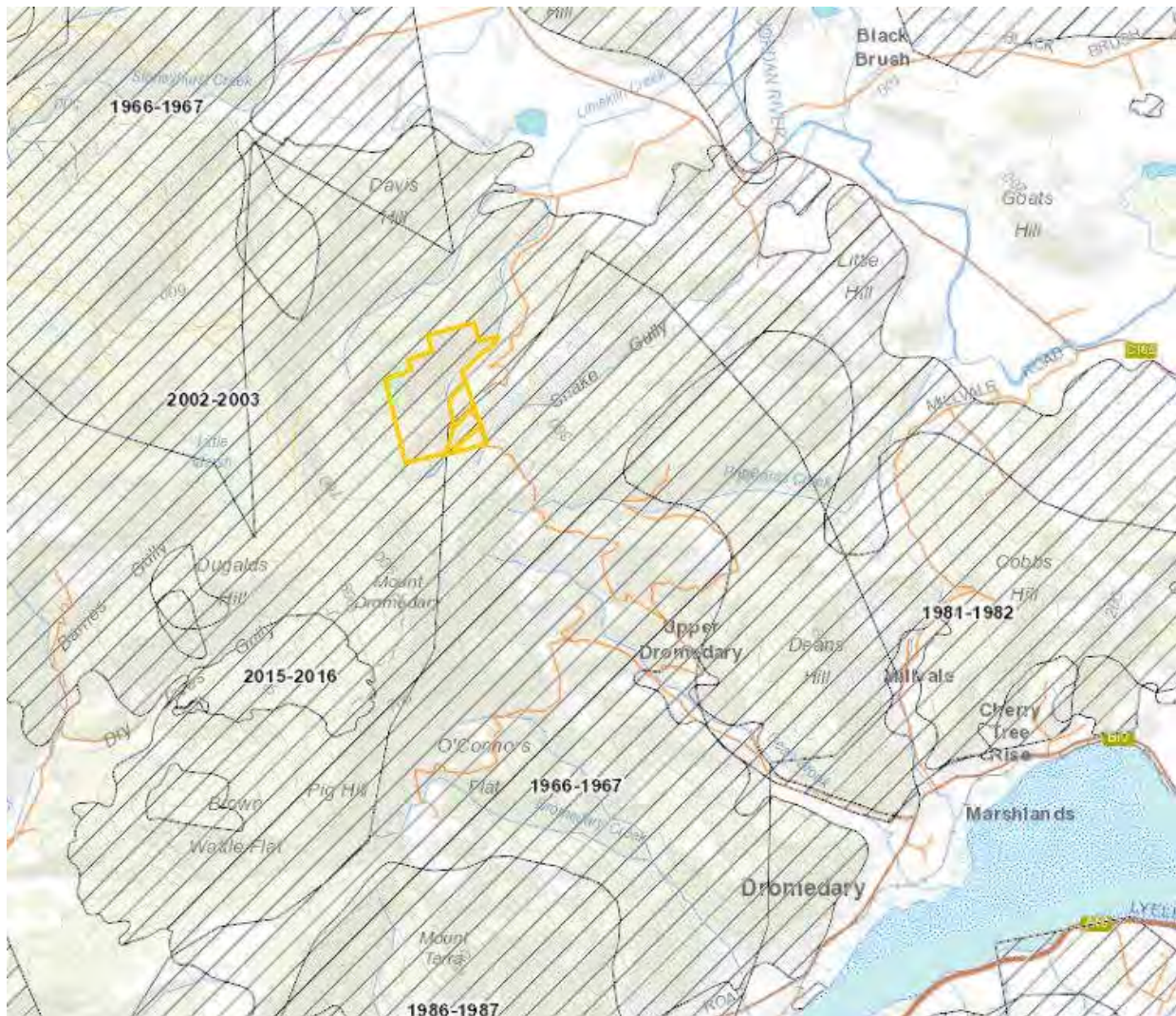
Planning controls are administered by the Southern Midlands Council under the *Southern Midlands Interim Planning Scheme 2015*. The site is subject to Biodiversity and Landslide overlays, and is zoned Rural Resource. Bushfire prone areas overlay's are yet to be developed for this area and the application of E1.0, Bushfire Prone Areas Code is based on the presence of in excess 1 hectare of bushfire prone vegetation within 100 metres of the site in accordance with the definition contained within the scheme.



**Image 5: Council zoning & overlays**  
**(Whole site zoned Rural Resource and subject to Biodiversity overlay. Blue indicates Waterways protection overlay, brown indicates Landslide overlay)**

**Fire History:**

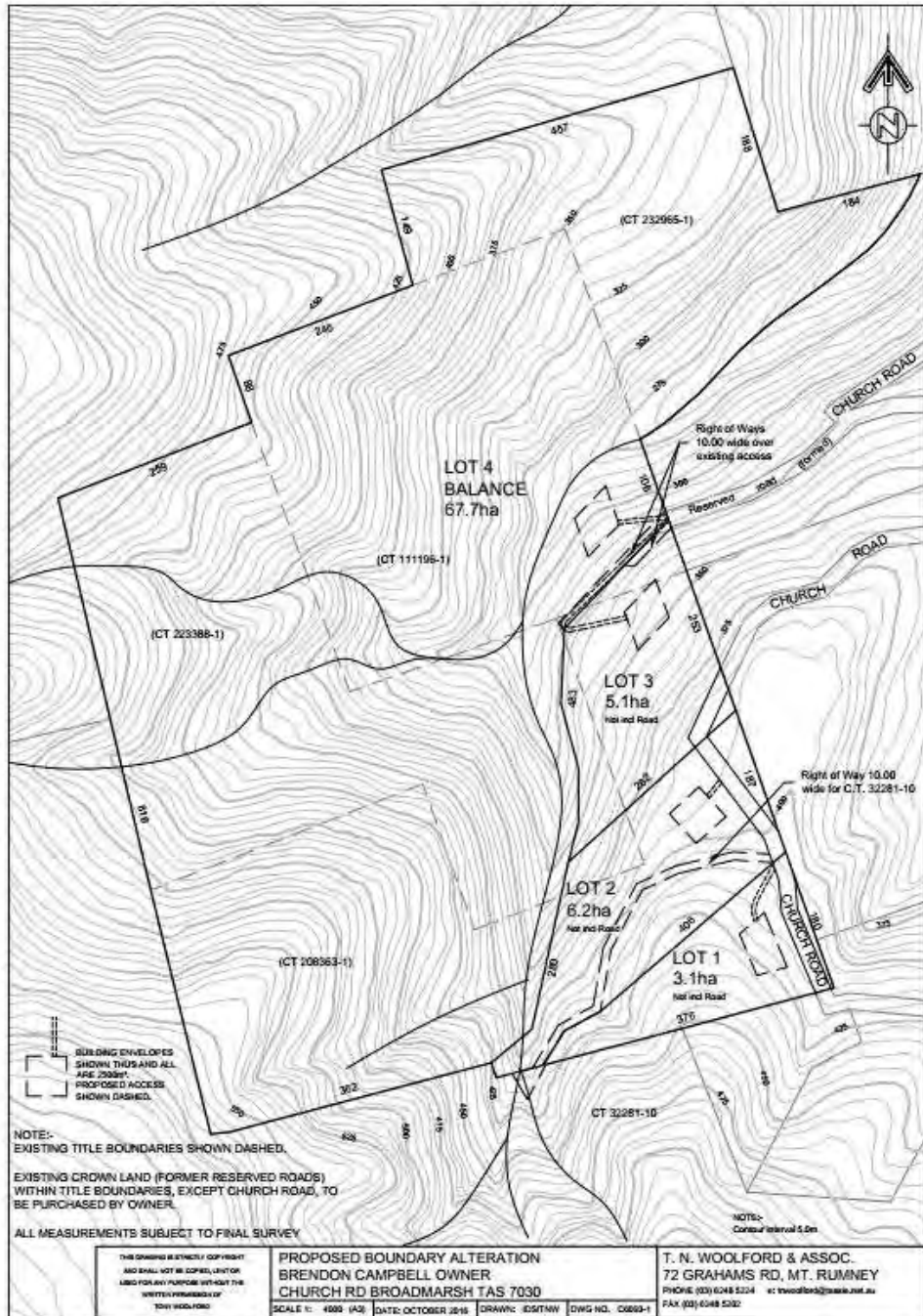
From the Fire History overlay detailed within TheLIST map imagery, a significant vegetation fire occurred in this region in January 2003, with 14,000 hectares of vegetation burnt across an area extending from the Derwent River in the south, Elderslie in the north and Broadmarsh to the east. The 1967 bushfires extended from the south to the southern portion of the site (within proposed Lots 1 & 2). A number of other bushfires are notes as occurring within 5km of the site over the last 40 years.



**Image 6: Bushfire History (Source: TheLIST)**

**4. PROPOSED DEVELOPMENT:**

A re-organisation of 4 existing titles is proposed, creating three new allotments of 3.1 ha (Lot 1), 6.2 ha (Lot 2) and 5.1 ha (Lot 3) in the south eastern portion of the site, with the remaining areas to be amalgamated into a single allotment of 67.7 ha (Lot 4). Each site is to be provided with a building area and constructed access from Church Road. Lots 3 & 4 are to share a single access from Church Road via a reciprocal Right of Way arrangement registered on title.



**Image 7: Subdivision layout.**

**5. BUSHFIRE RISK ASSESSMENT:**

Fire Danger Index (FDI): The Fire Index Rating for Tasmania is adopted as 50.

Vegetation Classification:

From inspection of the site and consideration of the vegetation type, the current risk associated with, and future impacts of this vegetation, the predominant vegetation has been determined as follows:

<b>North of development site:</b>	<b>Classification A:Forest</b>
<b>East of development site:</b>	<b>Classification A:Forest</b>
<b>South of development site:</b>	<b>Classification A:Forest</b>
<b>West of development site:</b>	<b>Classification A:Forest</b>

Gradient under predominant vegetation:

Gradients under the predominant vegetation have been assessed from site inspection and analysis of existing topographical mapping. Gradients are averaged over 100 metres and does not necessarily represent the steepest gradient across the assessment area.

**LOT 1:**

<b>NE:</b>	<b>12° down slope</b>
<b>SE:</b>	<b>Level</b>
<b>SW:</b>	<b>14° upslope</b>
<b>NW:</b>	<b>6° down slope</b>

**LOT 2:**

<b>NE:</b>	<b>Level</b>
<b>SE:</b>	<b>10° upslope</b>
<b>SW:</b>	<b>Level</b>
<b>NW:</b>	<b>18° down slope</b>

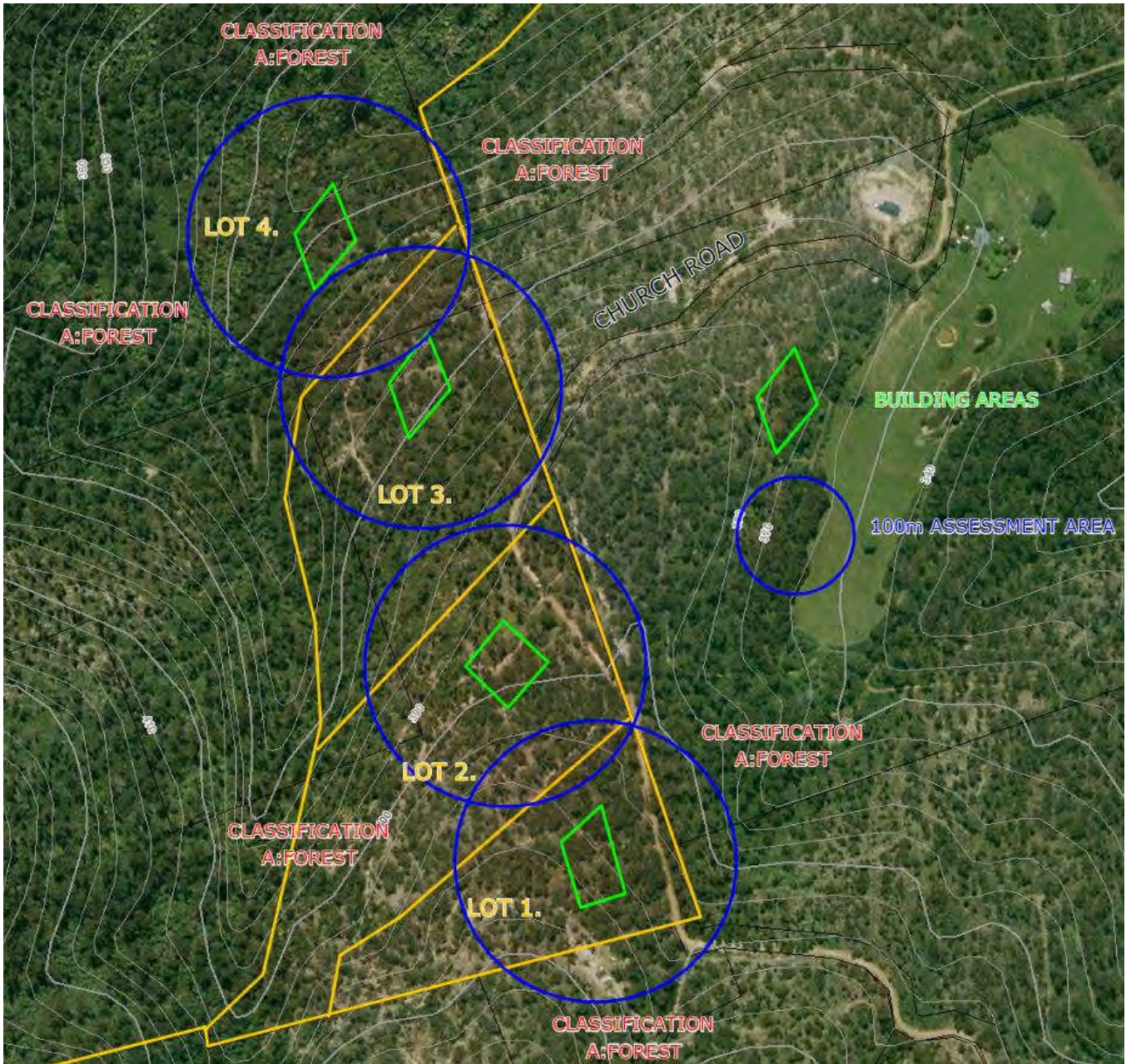
**LOT 3:**

<b>NE:</b>	<b>Level</b>
<b>SE:</b>	<b>18° upslope</b>
<b>SW:</b>	<b>Level</b>
<b>NW:</b>	<b>18° down slope</b>

**LOT 4:**

<b>NE:</b>	<b>12° down slope</b>
<b>SE:</b>	<b>15° upslope</b>
<b>SW:</b>	<b>Level</b>
<b>NW:</b>	<b>18° down slope</b>

NOTE: The vegetation surrounding the site is typically mature eucalypts 10-15 metres high with an understory of bracken fern, grasses and native trees and shrubs. The vegetation in the vicinity of the building sites on Lots 1, 2 and 3 is more sparse due to a vegetation fire or hazard reduction burn, however is regenerating and represents a significant risk to the sites. The predominant vegetation for all sites has been assessed as **Classification A:Forest**.



**Image 8: Predominant vegetation surrounding the site**





**Image 9: Predominant vegetation to north of Lot 1 - Classification A:Forest**



**Image 10: Predominant vegetation to east of Lot 1 - Classification A:Forest**



**Image 11: Predominant vegetation to south of Lot 1: Classification A:Forest**



**Image 12: Predominant vegetation to west of Lot 1: Classification A:Forest**



**Image 13: Predominant vegetation to north of Lot 2 - Classification A:Forest**



**Image 14: Predominant vegetation to east of Lot 2 - Classification A:Forest**



**Image 15: Predominant vegetation to south of Lot 2: Classification A:Forest**



**Image 16: Predominant vegetation to west of Lot 2: Classification A:Forest**



**Image 17: Predominant vegetation to north of Lot 3 - Classification A:Forest**



**Image 18: Predominant vegetation to east of Lot 3 - Classification A:Forest**



**Image 19: Predominant vegetation to south of Lot 3: Classification A:Forest**



**Image 20: Predominant vegetation to west of Lot 3: Classification A:Forest**



**Image 21: Predominant vegetation to north of Lot 4 - Classification A:Forest**



**Image 22: Predominant vegetation to east of Lot 4 - Classification A:Forest**



**Image 23: Predominant vegetation to south of Lot 4: Classification A:Forest**



**Image 24: Predominant vegetation to west of Lot 4: Classification A:Forest**



**Bushfire Attack Level (BAL):**

Based on the predominant vegetation detailed above, and the distances available for the creation of hazard management areas between the predominant vegetation and the building areas, the BAL applicable for a compliant building area within each lot has been determined from Table 2.4.4, AS 3959-2009 as follows:

LOT No.	BAL	Dist. to vegetation	Veg Type
LOT 1	BAL-19	NE: 41m SE: 23m SW: 23m NW: 34m	Classification A:Forest
LOT 2	BAL-19	NE: 23m SE: 23m SW: 23m NW: 51m	Classification A:Forest
LOT 3	BAL-19	NE: 23m SE: 23m SW: 23m NW: 51m	Classification A:Forest
LOT 4	BAL-19	NE: 41m SE: 23m SW: 23m NW: 51m	Classification A:Forest

**Table 1: Assessed Bushfire Attack Level for each lot**

See attached Bushfire Hazard Management Plan (Annexure 1) for extent of hazard management areas.

**Qualification on assessed bushfire attack level:**

This property contained significant areas of native vegetation which in part appear to have been burnt, either through hazard reduction or bushfire removing a portion of the understory vegetation and ground fuels. Considering the surrounding vegetation and the apparent regeneration of the vegetation, it has been deemed appropriate to identify the bushfire risk at the highest level, assessing all vegetation as Classification A:Forest.

Assuming the building sites on each lot will be developed at differing times, it is possible that the creation of a hazard management area for one lot may be relied upon by another, subsequently developed neighbouring lot, permitting a lower BAL as a result. Should this occur, a new assessment would be required to measure, and quantify the extent of management and its impact on the building.

## 6. COMPLIANCE:

The site has been assessed as being within 100 metres of bushfire prone vegetation and compliance is assessed against the provisions of E1.6.1, Bushfire Prone Areas Code, *Southern Midlands Interim Planning Scheme 2015* in the following manner:

### E1.6.1.1 Provision of Hazard Management Areas:

This provision seeks to:

- *facilitate an integrated approach between subdivision and subsequent building on a lot;*
- *provide for sufficient separation of building areas from bushfire-prone vegetation to reduce the radiant heat levels, direct flame attack and ember attack at the building area; and*
- *provide protection for lots at any stage of a staged subdivision.*

In accordance with Acceptable Solution A1(b), all lots are assessed as being within a bushfire prone area and must comply with the provisions of this part as follows:

- A1(b) i) The attached Bushfire Hazard Management Plan details all lots which are in, or partly within a bushfire-prone area.
- A1(b) ii) Each lot contains a building area compliant with this part.
- A1(b) iii) Each lot assessed as being subject the bushfire risk is provided with a hazard management area with a dimension equal to, or greater than that for BAL-19.
- A1(b) iv) The attached Bushfire Hazard Management Plan details the location and extent of the Hazard Management Areas with a dimension equal to, or greater than that for BAL-19.

All lots are assessed as BAL-19, and must be constructed to this standard unless the extent of the bushfire risk to these lots varies, or the separation distances provided from the classified vegetation exceeds that required for BAL-19 (see table 1 and Bushfire Hazard Management Plan). It is conceivable that several lots may be assessed as BAL-12.5 subsequent to development of neighbouring sites, however would require reassessment at the time of application.

Lots assessed as **BAL-19** are:

**LOTS: 1, 2, 3 & 4**

### **Individual Lot Management:**

Each lot subject to this assessment, and considered to be exposed to a risk of attack from bushfire is to be maintained in a manner to ensure the risk to any building on the lot, or to adjoining lots is minimised. This may be achieved, but is not necessarily limited to the following:

- Establishing non-flammable areas around the dwelling such as paths, patios, driveways, lawns etc.
- Locating dams, orchards, vegetable gardens, effluent disposal areas etc on the bushfire prone side of the building.
- Providing heat shields and ember traps on the bushfire prone side of the dwelling such as non-flammable fencing, hedges, separated garden shrubs and small trees. Avoid the use of highly flammable plants.
- Ensure flammable materials such as wood piles, fuels and rubbish heaps are stored away from the dwelling.
- Replace highly flammable plants with low flammability species.
- Provide horizontal separation between tree crowns and vertical separation between ground fuels and overhead branches.
- Regular slashing or mowing of grass to a height of less than 100mm.
- Removal of ground fuels such as leaves, bark, fallen branches etc on a regular basis.
- Ensuring no trees overhang the dwelling so that vegetation falls onto the roof.

#### **1.6.1.2 Public and fire fighting access:**

This provision seeks to:

- *allow safe access and egress for residents, firefighters and emergency service personnel;*
- *provide access to the bushfire-prone vegetation that enables both property to be defended when under bushfire attack and for hazard management works to be undertaken; -*
- *are designed and constructed to allow for fire appliances to be maneuvered;*
- *provide access to water supplies for fire appliances; and*
- *are designed to allow connectivity, and where needed, offering multiple evacuation points.*

The development requires the construction of new private access to the sites to provide safe access and egress for residents, fire fighters and emergency service personnel. In accordance with Acceptable Solution A1(b) these private access' are to comply with the requirements of Table E4.

**Table E4: Standards for Property Access**

Column 1		Column 2
Element		Requirement
<b>A.</b>	Property access length is less than 30 metres; or access is not required for a fire appliance to access a water connection point.	There are no specified design and construction requirements.
<b>B.</b>	Property access length is 30 metres or greater; or access for a fire appliance to a water connection point.	The following design and construction requirements apply to property access: (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3 degrees (1:20 or 5%); (7) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and (10) Terminate with a turning area for fire appliances provided by one of the following: (a) A turning circle with a minimum inner radius of 10 metres; or (b) A property access encircling the building; or (c) A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.
<b>C.</b>	Property access length is 200 metres or greater.	The following design and construction requirements apply to property access: (1) The Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length provided every 200 metres.
<b>D.</b>	Property access length is greater than 30 metres, and access is provided to 3 or more properties.	The following design and construction requirements apply to property access: (1) Complies with Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 100 metres.

Access to Lots 1 & 2 have been identified as being less than 200 metres in length, and are required to comply with Part B, Table E4 above including 4 metre wide pavement, maximum gradient of 10 degrees and the provision of a turning area at the building site.

As the precise building area may not be known until such time as the design and application for a new house occurs, the turning area may be omitted from the construction works for the subdivision and developed at the time of construction of a new house on the lots.

Access to Lots 3 & 4 is to be via a shared access in excess of 200 metres from Church Road via a Crown Road Reserve for approximately 250 metres, then via a reciprocal Right of Way to the building sites. This access is to comply with Part B and Part C, Table E4 including 4 metre wide pavement, maximum gradient of 10 degrees passing bays every 200 metres of an additional 2 metre pavement width (total 6 metres) and 20 metres length, and the provision of a turning area at the building site.

As the precise building areas may not be known until such time as the design and application for a new house occurs, the turning area may be omitted from the construction works for the subdivision and developed at the time of construction of a new house on the lots.

**1.6.1.3 Provision of Water Supply for Firefighting purposes:**

This provision seeks to provide:

*Adequate, accessible and reliable water supply for the purposes of fire fighting can be demonstrated at the subdivision stage and allow for the protection of life and property associated with the subsequent use and development of bushfire-prone areas.*

No reticulated water supply is available to the site, and as such, at the time of development of the lots for residential purposes a minimum supply of water is to be installed in accordance with the requirements of Table E7 below. The location of this water supply and hardstand access is to be determined at the time of design and approval of the new buildings proposed for the lots.

**Table E7 Static Water Supply for Fire fighting**

Column 1 Element		Column 2 Requirement
<b>A.</b>	Distance between building area to be protected and water supply.	The following requirements apply: (1) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and (2) The distance must be measured as a hose lay, between the water connection point and the furthest part of the building area.
<b>B.</b>	Static Water Supplies	A static water supply: (1) May have a remotely located offtake connected to the static water supply; (2) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; (3) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; (4) Must be metal, concrete or lagged by non-combustible materials if above ground; and (5) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by: (a) Metal; (b) Non-combustible material; or (c) Fibre-cement a minimum of 6mm thickness.
<b>C.</b>	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a water connection point for a static water supply must: (1) Have a minimum nominal internal diameter of 50mm; (2) Be fitted with a valve with a minimum nominal internal diameter of 50mm; (3) Be metal or lagged by non-combustible materials if above ground; (4) Where buried, have a minimum depth of 300mm (compliant with AS/NZS 3500.1-2003 Clause 5.23); (5) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment; (6) Ensure the coupling is accessible and available for connection at all times; (7) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (8) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (9) Where a remote offtake is installed, ensure the offtake is in a position that is: (a) Visible; (b) Accessible to allow connection by fire fighting equipment; (c) At a working height of 450 – 600mm above ground level; and (d) Protected from possible damage, including damage by vehicles.
<b>D.</b>	Signage for static water connections.	The water connection point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must comply with: (1) Water tank signage requirements within AS 2304-2011 <i>Water storage tanks for fire protection systems</i> ; or (2) The following requirements: (a) Be marked with the letter “W” contained within a circle with the letter in upper case of not less than 100 mm in height; (b) Be in fade-resistant material with white reflective lettering and circle on a red background; (c) Be located within one metre of the water connection point in a situation which will not impede access or operation; and (d) Be no less than 400 mm above the ground.
<b>E.</b>	Hardstand	A hardstand area for fire appliances must be provided: (1) No more than three metres from the water connection point, measured as a hoselay (including the minimum water level in dams, swimming pools and the like); (2) No closer than six metres from the building area to be protected; (3) With a minimum width of three metres constructed to the same standard as the carriageway; and (4) Connected to the property access by a carriageway equivalent to the standard of the property access.

**7. CONCLUSIONS & RECOMMENDATIONS:**

This Bushfire Risk Assessment and Bushfire Hazard Management Plan have been prepared to support design and construction of a new 4 lot subdivision at Chuch Road, Broadmarsh. The report has reviewed the bushfire risks associated with the site, and determined the fire management strategies that must be carried out to ensure the development on the site is at reduced risk from bushfire attack.

Provided the elements detailed in this report are implemented, the development on the site is capable of compliance with AS 3959-2009 and E1.6.1 *Bushfire Prone Areas Code* and any potential bushfire risk to the site is reduced.

The proposed lots have been assessed as compliant with bushfire attack levels (BAL) detailed in Table 3. The Council approval issued for the development should contain conditions requiring that the protective elements defined in this report and E1.6.1, *Bushfire Prone Areas Code* be implemented during the construction phase. Any new building required to comply with this assessment must be constructed to the bushfire attack level described in Table 3, within the prescribed building areas noted on the Bushfire Hazard Management Plan. Should the extent or classification of the bushfire prone vegetation surrounding the site alter from that assessed by this report, building on the lots affected by this variation may be constructed to a lower level subject to the preparation of a revised assessment.

Lot No.	Compliant BAL
1, 2, 3 & 4	BAL-19

**Table 3: Compliant BAL for each lot**

New private access, where necessary are to be constructed in accordance with Table E4, E1.6.1.2, *Bushfire Prone Areas Code*. At the time of development of each lot for residential purposes, a minimum 10,000 litre supply of water is to be installed for dedicated fire fighting purposes in compliance with Table E7, E1.6.1.3, *Bushfire Prone Areas Code*.

Although not mandatory, any increase in the construction standards above the assessed Bushfire Attack Level will afford improved protection from bushfire and this should be considered by the owner, designer and/or builder prior to construction commencing. Hazard Management Areas must be established and maintained in a minimal fuel condition in accordance with this plan and the TFS guidelines. It is the owner's responsibility to ensure the long term maintenance of the hazard management areas in accordance with the requirements of this report.



This report does not recommend or endorse the removal of any vegetation within, or adjoining the site for the purpose of bushfire protection without the explicit approval of the local authority.

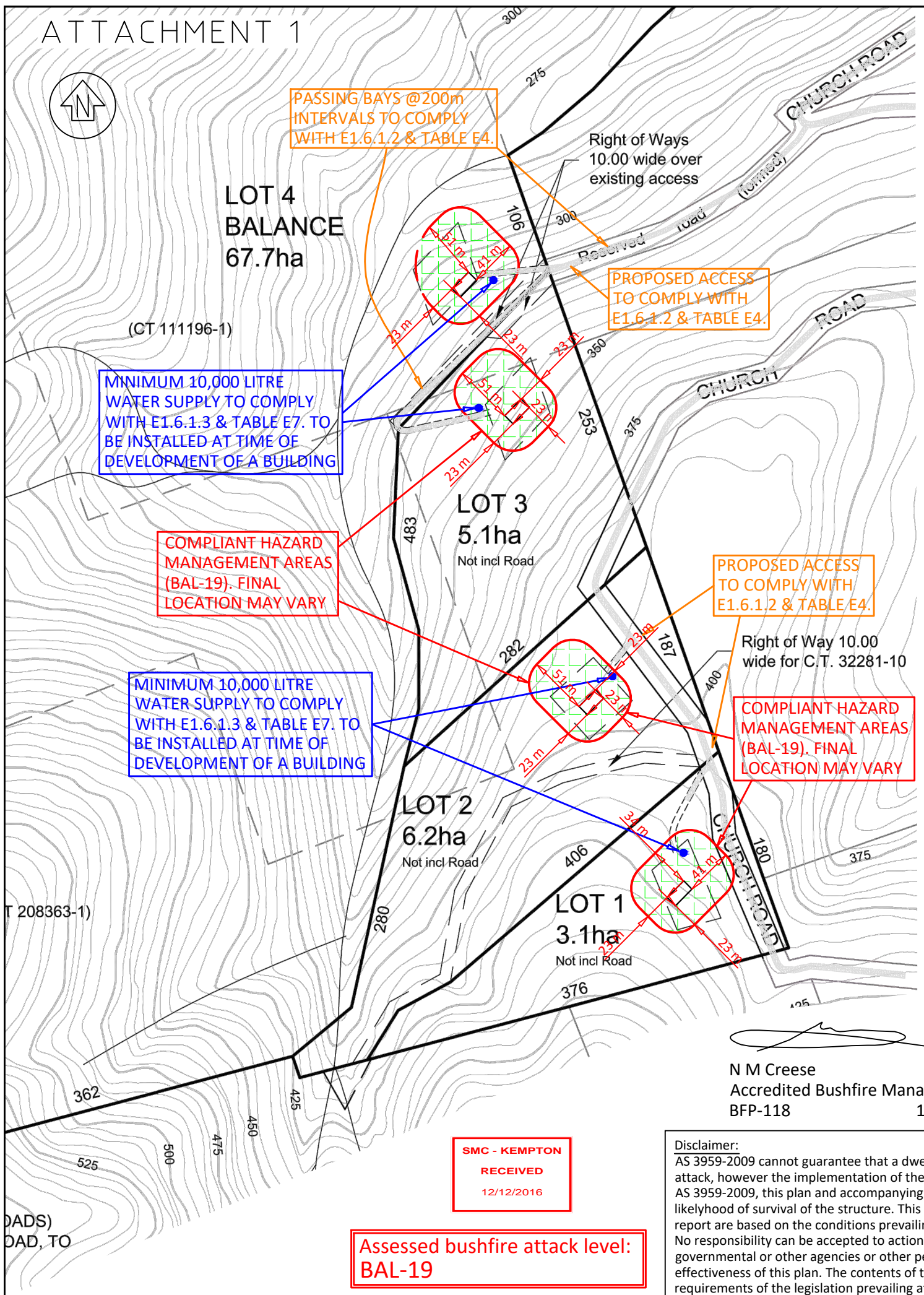


N M Creese  
*Bushfire Management Practitioner BFP-118*

**8. REFERENCES:**

- *AS 3959-2009 - Construction of Buildings in Bushfire Prone Areas.*
- *Southern Midlands Interim Planning Scheme 2015.*
- *Interim Planning Directive 1, Bushfire Prone Areas Code.*
- *Guidelines for Development in Bushfire Prone Areas - Tasmania Fire Service.*
- *The LIST - Department of Primary Industry Parks Water & Environment.*

ATTACHMENT 1



NOTES:

1) Building areas on the lots contain sufficient hazard management areas capable of compliance with BAL-19 of AS 3959-2009. Specific location and dimension of proposed buildings and hazard management areas may vary subject to specific design and positioning on the lots at the time of application for building approval.

2) At the time of development of buildings on the lots required to comply with the standards, Hazard Management Areas are to be established and maintained in a reduced fuel condition for the life of the structure. It is the responsibility of the land owner to ensure continued maintenance of these Hazard Management Areas to the distances quoted in the report.

3) Access to be constructed to the lots in accordance with E1.6.1.2 and Table E4, Interim Planning Directive 1 prior to issue of titles to the following standards:

- All-weather construction
- Load capacity of at least 20 tonnes, including for bridges and culverts
- Minimum carriageway width of 4 metres
- Minimum vertical clearance of 4 metres
- Minimum horizontal clearance of 0.5 metres from the edge of the carriageway
- Cross fall of less than 3° (1:20 or 5%)
- Dips less than 7° (1:8 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads
- Curves with a minimum inner radius of 10 metres;
- Passing bays of 2 metres additional carriageway width and 20 metres length every 200 metres.

At the time of development of a building on the lots required to comply with the standards, a turning facility is to be provided at the building site to the following standards:

- A turning circle with a minimum inner radius of 10 metres or, a property access encircling the building, or a hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.

4) At the time of development of a building on the lots required to comply with the standards, a supply of water for fire fighting purposes must be installed in accordance with E1.6.1.3 and Table E7, Interim Planning Directive 1 to the following standards:

- Must have a minimum static water supply of 10,000 litres;
- The connection point must be within a 90 metre hose lay of the building area to be protected measured as a hose lay;
- May be a supply for combined use provided that the minimum of 10,000 litres is reserved for firefighting purposes;
- Must be a non-combustable material such as metal or concrete if above ground, or may be shielded from the bushfire risk provided that the lowest 400 mm of the tank is protected by a non-combustable material;
- Pipework and valves must have a minimum nominal diameter of 50 mm;
- Above ground pipework and fittings are to be metal or lagged by non-combustable material. If buried a minimum of 300 mm cover is required;
- Water connection point is to be fitted with a 65 mm Storz coupling fitted with a suction washer, blank cap and securing chain. This coupling is to be accessible at all times. Remote offtake must at a working height of 450-600 mm above ground level and protected from possible damage;
- Under ground tanks may have an opening of no less than 250 mm diameter in lieu of the coupling;
- The water connection point must be identified by a sign permanently affixed to the assembly;
- A hardstand area must be provided within 3 metres of the connection point, no closer than 6 metre from the building to be protected and be of minimum width of 3 metres constructed to the same standard as the carriageway.

N M Creese  
Accredited Bushfire Management Practitioner  
BFP-118  
17th November 2016

SMC - KEMPTON  
RECEIVED  
12/12/2016

Assessed bushfire attack level:  
BAL-19

Disclaimer:  
AS 3959-2009 cannot guarantee that a dwelling will survive a bushfire attack, however the implementation of the measures contained within AS 3959-2009, this plan and accompanying report will improve the likelihood of survival of the structure. This plan and accompanying report are based on the conditions prevailing at the time of assessment. No responsibility can be accepted to actions by the land owner, governmental or other agencies or other persons that compromise the effectiveness of this plan. The contents of this plan are based on the requirements of the legislation prevailing at the time of report.

**LARK & CREESE** Pty Ltd  
Land & Engineering Surveyors

62 Channel Highway, Kingston 7050  
Ph. 62296563 Mobile: 0427 879 023  
Email: info@larkandcreese.com.au  
Web: www.larkandcreese.com.au

**BUSHFIRE HAZARD MANAGEMENT PLAN**

Owner: B Campbell		Note: This plan has been prepared for the purpose of compliance with AS3959-2009 and Tasmania Fire Service Guidelines. This plan is not to be used for any other purpose without the express permission of Lark & Creese Pty Ltd. The details depicted on this plan have been obtained from a combination of field survey, aerial photography and mapping and as such may not represent the precise nature of the site.
Location: Church Road, Broadmarsh		
Title Reference: C.T.232965-1, C.T.111196-1, C.T.223388-1, C.T.208363-1	PID: 3369487	
Scale: 1:4000	Date: 17/11/16	



Tasmania Fire Service

# Bushfire Hazard Advisory Note

## No 04 – 2016

<b>Advisory Note 04</b>	Chief Officer's Approved Form for a Bushfire Hazard Management Plan
<b>Purpose</b>	To provide the required content for Bushfire Reports, Bushfire Hazard Management Plans and Bushfire Planning Certificates to be used by Bushfire Hazard Practitioners accredited under Part 4A of the <i>Fire Service Act 1979</i> .
<b>Version</b>	1
<b>Previous Advisory Notes</b>	Nil. This Note replaces the document "Approved Form for a Bushfire Hazard Management Plan" version 1, issued on 7 February 2014.
<b>Background</b>	<p><b>Legislation</b></p> <p>Section 60A <i>Fire Service Act 1979</i> –  <i>bushfire hazard management plan</i> means a plan showing means of protection from bushfires in a form approved in writing by the Chief Officer.</p> <p>Section 3 <i>Land Use Planning and Approvals Act 1993</i> –  <i>bushfire hazard management plan</i> means a plan showing means of protection from bushfires in a form approved in writing by the Chief Officer;</p> <p><i>Chief Officer</i> means the person appointed as Chief Officer under section 10 of the <i>Fire Service Act 1979</i>;</p> <p><b>Required Content for a Bushfire Report</b></p> <p>A Bushfire Report is an investigation and assessment of bushfire risk to establish the level of bushfire threat, vulnerability, options for mitigation measures, and the residual risk if such measures are applied on the land for the purpose or activity described in the assessment.</p> <p>A Bushfire Report must include:</p> <ol style="list-style-type: none"> <li>a) A description of the characteristics of the land and of adjacent land;</li> <li>b) A description of the use or development that may be threatened by a bushfire on the site or on adjacent land;</li> <li>c) Whether the use or development on the site is likely to cause or contribute to the occurrence or intensification of bushfire on the site or on adjacent land; and</li> <li>d) Whether the use or development on the site, and any associated use or development, can achieve and maintain a tolerable level of residual risk for the occupants and assets on the site and on adjacent land having regard to – <ol style="list-style-type: none"> <li>i. The nature, intensity and duration of the use;</li> <li>ii. The type, form and duration of any development;</li> </ol> </li> </ol>

- iii. A Bushfire Attack Level assessment to define the exposure to a use or development; and
- iv. The nature of any bushfire hazard mitigation measures required on the site and/or on adjacent land.

**Specified Content of a Bushfire Hazard Management Plan**

A Bushfire Hazard Management Plan (BHMP) is a plan which shows the bushfire mitigation measures which are to be used to provide the appropriate level of bushfire protection for the proposed use, development or building.

A BHMP must:-

- a) Identify the site to which the BHMP applies by address, Property Identifier (PID), and reference to a Certificate of Title under the *Land Titles Act 1980*;
- b) Identify the certifying Bushfire Hazard Practitioner, Accreditation Number, and Scope of Accreditation.
- c) Identify the proposed activity to which the BHMP applies by reference to any plans, specifications or other documents that are applicable for the purpose of describing the proposed use or development;
- d) Indicate the bushfire hazard management and protection measures required to be implemented by the Bushfire Report;
- e) If intended to be applied for the purpose of satisfying a regulatory requirement, identify the regulation by its statutory citation and indicate the applicable provisions for which the BHMP applies; and
- f) Have, as a schedule, the Bushfire Report that details specific bushfire hazard management and mitigation measures required to achieve a tolerable level of residual risk for the proposed activity and any building or development on the site, including specific measures to achieve compliance with any mandatory controls under both land use planning and building regulations.

**Bushfire Planning Certificate**

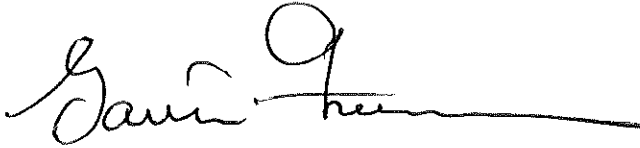
A Bushfire Planning Certificate is to be used by an accredited Bushfire Hazard Practitioner to certify that a BHMP meets the specified requirements of a Bushfire-prone Area Planning Code contained in a planning scheme or interim planning scheme.

A Bushfire Planning Certificate is also to be used to certify any exemption to a Bushfire-prone Area Planning Code.

The form of the Bushfire Planning Certificate is provided as a schedule to this Note.

**Documents to be Provided to the Chief Officer**

It is a condition of continuing accreditation that a Bushfire Hazard Practitioner provides a copy of all Bushfire Reports, Bushfire Hazard Management Plans and Bushfire Planning Certificates to the Chief Officer.

<p><b>Instruction</b></p>	<p>A Bushfire Hazard Management Plan (BHMP) is in a form approved by the Chief Officer for the purposes of Section 60A of the <i>Fire Service Act 1979</i> if:</p> <ol style="list-style-type: none"> <li>1. The BHMP is consistent with a Bushfire Report that has been prepared taking into consideration such of the matters above as are applicable to the purpose of the BHMP;</li> <li>2. The BHMP contains a plan identifying the specific measures required to provide a tolerable level of risk from bushfire for the purpose or activity described in the BHMP having regard to the considerations listed above; and</li> <li>3. The BHMP is consistent with all applicable Bushfire-prone Areas Advisory Notes issued by the Chief Officer.</li> </ol>
<p><b>Chief Officer's Signature</b></p> <p><b>Date</b></p>	 <p><b>Gavin Freeman AFSM</b>  Chief Officer  Tasmania Fire Service</p>

## Schedule 1 Bushfire Planning Certificate

### CODE E1 – BUSHFIRE-PRONE AREAS CODE

### CERTIFICATE<sup>1</sup> UNDER S51(2)(d) *LAND USE PLANNING AND APPROVALS ACT 1993*

#### 1. Land to which certificate applies<sup>2</sup>

*Land that is the Use or Development Site that is relied upon for bushfire hazard management or protection.*

Name of planning scheme or instrument:

Southern Midlands Interim Planning Scheme 2015

Street address:

Church Road, Broadmarsh

Certificate of Title / PID:

C.T.232965-1, C.T.111196-1, C.T.223388-1,  
C.T.208363-1 PID 3369487

*Land that is not the Use or Development Site that is relied upon for bushfire hazard management or protection.*

Street address:

Certificate of Title / PID:

#### 2. Proposed Use or Development

Description of Use or Development:

{Provide a brief description of the proposed use or development; including details of scale, siting and context.}

Subdivision (boundary re-organisation of 4 titles)

Code Clauses<sup>3</sup>:

E1.4 Exempt Development

E1.5.1 Vulnerable Use

E1.5.2 Hazardous Use

E1.6.1 Subdivision

<sup>1</sup> This document is the approved form of certification for this purpose, and must not be altered from its original form.

<sup>2</sup> If the certificate relates to bushfire management or protection measures that rely on land that is not in the same lot as the site for the use or development described, the details of all of the applicable land must be provided.

<sup>3</sup> Indicate by placing X in the corresponding  for the relevant clauses of E1.0 Bushfire-prone Areas Code.

### 3. Documents relied upon<sup>4</sup>

#### Documents, Plans and/or Specifications

Title:

Author:

Date:

Version:

#### Bushfire Report

Title:

Bushfire Risk Assessment 16400-01

Author:

N M Creese

Date:

17/11/16

Version:

01

#### Bushfire Hazard Management Plan

Title:

Bushfire Hazard Management Plan 16400-01

Author:

N M Creese

Date:

17/11/16

Version:

01

#### Other Documents

Title:

Author:

Date:

Version:

<sup>4</sup> List each document that is provided or relied upon to describe the use or development, or to assess and manage risk from bushfire. Each document must be identified by reference to title, author, date and version.



#### 4. Nature of Certificate<sup>5</sup>

<input type="checkbox"/>	<b>E1.4 – Use or development exempt from this code</b>		
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.4 (a)	Insufficient increase in risk	

<input type="checkbox"/>	<b>E1.5.1 – Vulnerable Uses</b>		
	<b>E1.5.1.1 Standards for vulnerable use</b>		
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.5.1.1 P1.	Risk is mitigated	
<input type="checkbox"/>	E1.5.1.1 A2.1	BHMP	
<input type="checkbox"/>	E1.5.1.1 A2.2	Emergency Plan	

<input type="checkbox"/>	<b>E1.5.2 – Hazardous Uses</b>		
	<b>E1.5.2.1 Standards for hazardous use</b>		
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.5.2.1 P1.	Risk is mitigated	
<input type="checkbox"/>	E1.5.2.1 A2.1	BHMP	
<input type="checkbox"/>	E1.5.2.1 A2.2	Emergency Plan	

<input checked="" type="checkbox"/>	<b>E1.6.1 – Development standards for subdivision</b>		
	<b>E1.6.1.1 Subdivision: Provision of hazard management areas</b>		
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.6.1.1 P1.	Hazard Management Areas are sufficient to mitigate risk	

<sup>5</sup> The certificate must indicate by placing X in the corresponding  for each applicable standard and the corresponding compliance test within each standard that is relied upon to demonstrate compliance to Code E1

<input type="checkbox"/>	E1.6.1.1 A1. (a)	Insufficient increase in risk	
<input checked="" type="checkbox"/>	E1.6.1.1 A1. (b)	Provides BAL 19 for all lots	

<b>E1.6.1.2 Subdivision: Public and fire fighting access</b>			
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.6.1.2 P1.	Access is sufficient to mitigate risk	
<input type="checkbox"/>	E1.6.1.2 A1. (a)	Insufficient increase in risk	
<input checked="" type="checkbox"/>	E1.6.1.2 A1. (b)	Access complies with Tables E3, E4 & E5	

<b>E1.6.1.3 Subdivision: Provision of water supply for fire fighting purposes</b>			
	<b>Assessment Criteria</b>	<b>Compliance Requirement</b>	<b>Reference to Applicable Document(s)</b>
<input type="checkbox"/>	E1.6.1.3 A1. (a)	Insufficient increase in risk	
<input type="checkbox"/>	E1.6.1.3 A1. (b)	Reticulated water supply is consistent with the objective	
<input type="checkbox"/>	E1.6.1.3 A1. (c)	Reticulated water supply complies with Table E6.	
<input type="checkbox"/>	E1.6.1.3 A2. (a)	Insufficient increase in risk	
<input type="checkbox"/>	E1.6.1.3 A2. (b)	Static water supply is consistent with the objective	
<input checked="" type="checkbox"/>	E1.6.1.3 A2. (c)	Static water supply complies with Table E7.	

### 5. Bushfire Hazard Practitioner<sup>6</sup>

Name:	N M Creese	Phone No:	6229 6563
Address:	62 Channel Highway	Fax No:	
	Kingston	Email Address:	nick@larkandcreese.com.au
	TAS		7050
Accreditation No:	BFP - 118	Scope:	1, 2, 3A, 3B

### 6. Certification<sup>7</sup>

I, certify that in accordance with the authority given under Part 4A of the Fire Service Act 1979 –

The use or development described in this certificate is exempt from application of Code E1 – Bushfire-Prone Areas in accordance with Clause E1.4 (a) because there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measure in order to be consistent with the objectives for all the applicable standards identified in Section 4 of this Certificate.



or

There is an insufficient increase in risk from bushfire to warrant the provision of specific measures for bushfire hazard management and/or bushfire protection in order for the use or development described to be consistent with the objective for each of the applicable standards identified in Section 4 of this Certificate.




and/or

The Bushfire Hazard Management Plan/s identified in Section 4 of this certificate is/are in accordance with the Chief Officer's requirements and can deliver an outcome for the use or development described that is consistent with the objective and the relevant compliance test for each of the applicable standards identified in Section 4 of this Certificate.



Signed:  
certifier



Date:

17/11/16

Certificate No:

16400-01

<sup>6</sup> A Bushfire Hazard Practitioner is a person accredited by the Chief Officer of the Tasmania Fire Service under Part IVA of *Fire Service Act 1979*. The list of practitioners and scope of work is found at [www.fire.tas.gov.au](http://www.fire.tas.gov.au).

<sup>7</sup> The relevant certification must be indicated by placing X in the corresponding .

## ROCK SOLID GEOTECHNICS PTY LTD

23 January, 2017

CLIENT: BRENDON CAMPBELL

Peter Hofto  
171 Lewisham Scenic Drive  
LEWISHAM  
TAS 7173

PH 0417 960 769  
peter@rocksolidgeotechnics.com.au

cc. T.N. Woolford & Assoc Surveyors  
tnwoolford@tassie.net.au

### Geotechnical Assessment

Re: 4 Lot Subdivision - Church Road, Broadmarsh  
DA SA 2016/12

#### SUMMARY:

This report assesses a specific request from the Southern Midlands Council for additional information regarding a proposed 4 Lot subdivision at Church Road, Broadmarsh.

The area designated for the subdivision is underlain by Permian sediments, with areas of deeper talus deposits on the steeper slopes.

The building envelopes on, and access to, Lots 1 and 2 are in areas of Very Low Risk.

The building envelope on, and access to Lot 3 is in an area of Low to Moderate Risk.

The building envelope on, and access to Lot 4 is in an area of Moderate to High Risk.

Specific consideration of the attached Australian Geomechanics "Practical Note Guidelines for Landslide Risk Management 2007" is recommended for Lots 3 and 4.

Site specific geotechnical Foundation Classifications (AS2870) will be required during development on each of the individual Lots.

All of the proposed lots are suitable for residential development.

There is no geotechnical reason why subdivision of the land at Church Road, Broadmarsh should not proceed.

## INTRODUCTION:

T.N. Woolford & Assoc Surveyors, on behalf of property owner Mr Brendon Campbell, has proposed a four lot residential subdivision of land at Church Road, Broadmarsh (Figure 1) - DA SA 2016/12.

Council have requested additional information regarding compliance with the Landslide Code as specified in the *Southern Midlands Interim Planning Scheme 2015*, specifically:

- Landslide Code
  - 2. Provide a landslide risk management report prepared in accordance with "Part E3.5.1" or other documentation to demonstrate compliance with "Part E3.8.1 Development Standards for Subdivision".
- E3.5.1 Application Requirements states "In addition to any other application requirements, the planning authority may require the applicant to provide any of the following information if considered necessary to determine compliance with performance criteria:
  - (b) A landslide risk management report.
- E3.8.1 Subdivision has the objective "To ensure that the landslide risk associated with subdivision in Landslide Hazard Areas, is:
  - (a) acceptable risk; or
  - (b) tolerable risk, having regard to the feasibility and effectiveness of any measures required to manage the landslide hazard.
- E3.8.1 P1 (Performance Criteria) states that "Subdivision of a lot, all or part of which is within a Landslide Hazard Area must be for the purpose of one of the following:
  - (c) creation of a lot in which the building area, access and services are outside the High Landslide Hazard Area and the landslide risk associated with the subdivision is either:
    - (i) acceptable risk, or
    - (ii) capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.

Lots 1 and 2 lie in a defined Low Landslide Hazard Area, and Lots 3 and 4 lie in a defined Medium Landslide Hazard Area.

There are no defined High Landslide Hazard Areas in the *Southern Midlands Interim Planning Scheme 2015*, so this report assesses each of the proposed building envelopes for:

- (i) acceptable risk, or
- (ii) capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.

The risk of landslide of the Building envelopes and access driveways has been assessed in accordance with the Australian Geomechanics Society (2000) *Landslide risk management concepts and guidelines* (LRMCG 2000), Australian Geomechanics, Vol 35, pp 49-92.

A field survey was completed on Tuesday 17 January, 2017, encompassing field mapping of geological and geomorphological features and hazards, and the drilling of test auger holes to determine subsurface conditions (4WD mounted SAMPLA25 Auger Drill with 100mm solid flight augers).



A landslide is conceivable but only under exceptional circumstances.

- Level of Risk to Property VL: Very Low  
Acceptable

#### LOT 3:

The land defined in Lot 3's Building Envelope is northwest-facing, with a natural slope of 8-10 degrees. The land immediately upslope from the building envelope increases in angle to 15-18 degrees. The land has been partially cleared and is surrounded by ferns and light scrub beneath mature trees to 18+m high.

Two test holes were completed in the building envelope, and indicate that the site is underlain by deep, unconsolidated, subsoils over probable siltstone bedrock. Typical of the profile encountered was:

0.00 - 0.20m	silty SAND: fine grained, grey, 20% silt, trace roots and rootlets - TOPSOIL
0.20 - 0.70m	sandy CLAY: medium plasticity, light brown, to 40% fine to medium grained sand, trace fine angular siltstone gravel, trace silt
0.70 - 1.50m	gravelly SAND: fine to medium grained, light brown, to 20% fine angular siltstone gravel, trace clay, trace silt
1.50m+	Mechanical auger refusal on probable siltstone bedrock

There is no evidence of present or past instability in the building envelope or on the surrounding land.

The Risk of Landslide is assessed as:

- Likelihood D: UNLIKELY - Indicative annual probability =  $10^{-4}$   
A landslide is might occur under very adverse circumstances.
- Consequences to Property 3: MEDIUM  
A landslide is conceivable but only under exceptional circumstances.
- Level of Risk to Property L-M: Low to Moderate  
Tolerable provided treatment plan is implemented to maintain or reduce risks. May require investigation and planning of treatment options.

Driveway access is partially common with Lot 4 along a Reserved Road. The Reserved Road has been present for many years and appears stable, with shallow siltstone bedrock observed in the trackside cuttings. The balance of the driveway has been lightly grades and has low slope angles, and is considered stable.

#### LOT 4:

The land defined in Lot 4's Building Envelope is northwest-facing, with a very steep natural slope of 23-25 degrees. The surrounding land is surrounded by ferns and light scrub beneath mature trees to 25+m high.

The site has recently been cleared and modified, with an excavated cutting (40m+ long and to 8m wide) and associated fill pad constructed immediately upslope from the track defined as the assess driveway. Further fill is present downslope from the driveway. The 2-3m deep excavated cutting has a 35 degree batter angle, and exposes semi-consolidated sandy clay sediments containing some siltstone gravels. The surface of the battered excavation is subject to surface erosion, with fragments from the cutting falling into a small, rough cut drain at the base of the cut.

Two test holes were completed in the building envelope at the base of the 3m high cutting, and indicate that the site is underlain by deep, unconsolidated, subsoils over probable siltstone bedrock. Typical of the profile encountered was:

0.20 - 0.80m	sandy CLAY: medium plasticity, light brown, to 40% fine to medium grained sand, trace fine angular siltstone gravel, trace silt
0.80 - 2.30m	gravelly SAND: fine to medium grained, light brown, to 20% fine angular siltstone gravel, trace clay, trace silt
2.30m+	Mechanical auger refusal on probable siltstone bedrock

The test holes indicate that the depth to bedrock is over 4m from the natural ground surface.

There is no evidence of present or past instability in the building envelope or on the surrounding land.

The Risk of Landslide is assessed as:

- Likelihood D: UNLIKELY - Indicative annual probability  $\approx 10^{-4}$   
A landslide is might occur under very adverse circumstances.
- Consequences to Property 1: CATASTROPHIC  
Structure completely destroyed or large scale damage requiring major engineering works for stabilisation.
- Level of Risk to Property M-H: Moderate to High  
Detailed investigation, planning and implementation of treatment options required to reduce risks to acceptable levels. With effective treatment through hazard management measures the risk can be tolerable.

Driveway access for Lot 4 is along a Reserved Road. The Reserved Road has been present for many years and appears stable.



## CONCLUSIONS:

The land designated for the proposed subdivision at Church Road, Broadmarsh (DA SA 2016/12) has been investigated and the Landslide Risk Assessment completed.

The land lies in an area that does not have a history of instability, and is currently stable.

The building envelopes on all blocks are either acceptable risk, or capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.

There is no geotechnical reason why the subdivision at Church Road, Broadmarsh (DA SA 2016/12) should not proceed.

## *ROCK SOLID GEOTECHNICS PTY LTD CONDITIONS OF INVESTIGATION:*

This report remains the property of Rock Solid Geotechnics Pty. Ltd. (RSG). It must not be reproduced in part or full, or used for any other purpose without written permission of this company. The investigations have been conducted, & the report prepared, for the sole use of the client or agent mentioned on the cover page. Where the report is to be used for any other purpose RSG accepts no responsibility for such other use. The information in this report is current and suitable for use for a period of three years from the date of production of the report, after which time it should not be used for Building or Development Application.

This report should not be used for submission for Building or Development Application until RSG has been paid in full for its production. RSG accepts no liability for the contents of this report until full payment has been received.

The results & interpretation of conditions presented in this report are current at the time of the investigation only. The investigation has been conducted in accordance with the specific client's requirements &/or with their servants or agents instructions.

This report contains observations & interpretations based often on limited subsurface evaluation. Where interpretative information or evaluation has been reported, this information has been identified accordingly & is presented based on professional judgement. RSG does not accept responsibility for variations between interpreted conditions & those that may be subsequently revealed by whatever means.

Due to the possibility of variation in subsurface conditions & materials, the characteristics of materials can vary between sample & observation sites. RSG takes no responsibility for changed or unexpected variations in ground conditions that may affect any aspect of the project. The classifications in this report are based on samples taken from specific sites. The information is not transferable to different sites, no matter how close (ie if the development site is moved from the original assessment site an additional assessment will be required).

It is recommended to notify the author should it be revealed that the sub-surface conditions differ from those presented in this report, so additional assessment & advice may be provided.

Investigations are conducted to standards outlined in Australian Standards:

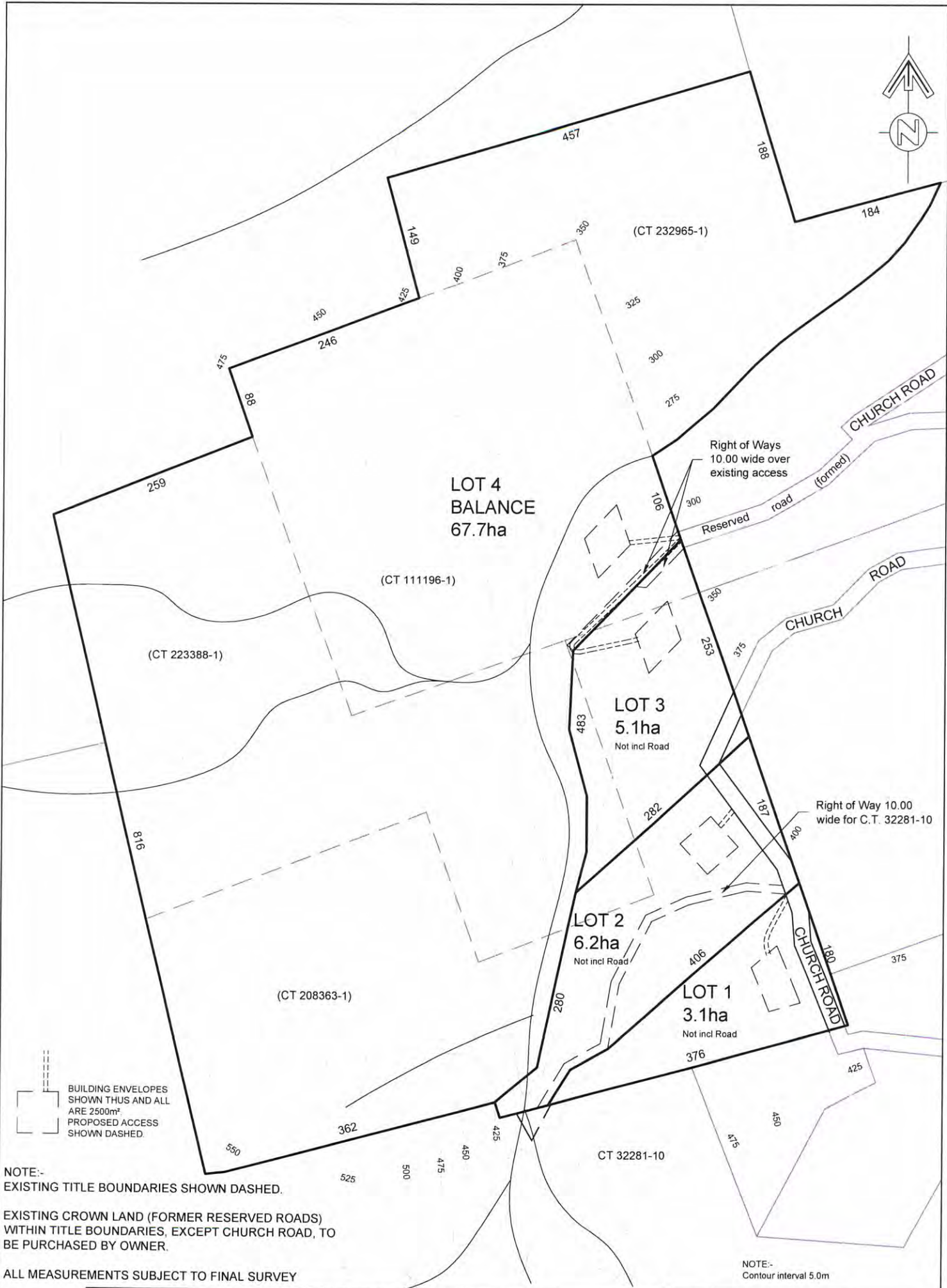
- AS1726-1993: Geotechnical Site Investigations



& as specified in 'Guidelines for Geotechnical Assessment of Subdivisions and Recommended Code of Practise for Site Classification to AS2870 in Tasmania' - Institute of Engineers, Tasmanian Division.

Copyright: The concepts & information contained in this report are the Copyright of Rock Solid Geotechnics Pty. Ltd.



PETER J HOFTO BSc (Hons)  
Engineering Geologist



 BUILDING ENVELOPES SHOWN THUS AND ALL ARE 2500m<sup>2</sup>  
 PROPOSED ACCESS SHOWN DASHED.

NOTE:- EXISTING TITLE BOUNDARIES SHOWN DASHED.

EXISTING CROWN LAND (FORMER RESERVED ROADS) WITHIN TITLE BOUNDARIES, EXCEPT CHURCH ROAD, TO BE PURCHASED BY OWNER.

ALL MEASUREMENTS SUBJECT TO FINAL SURVEY

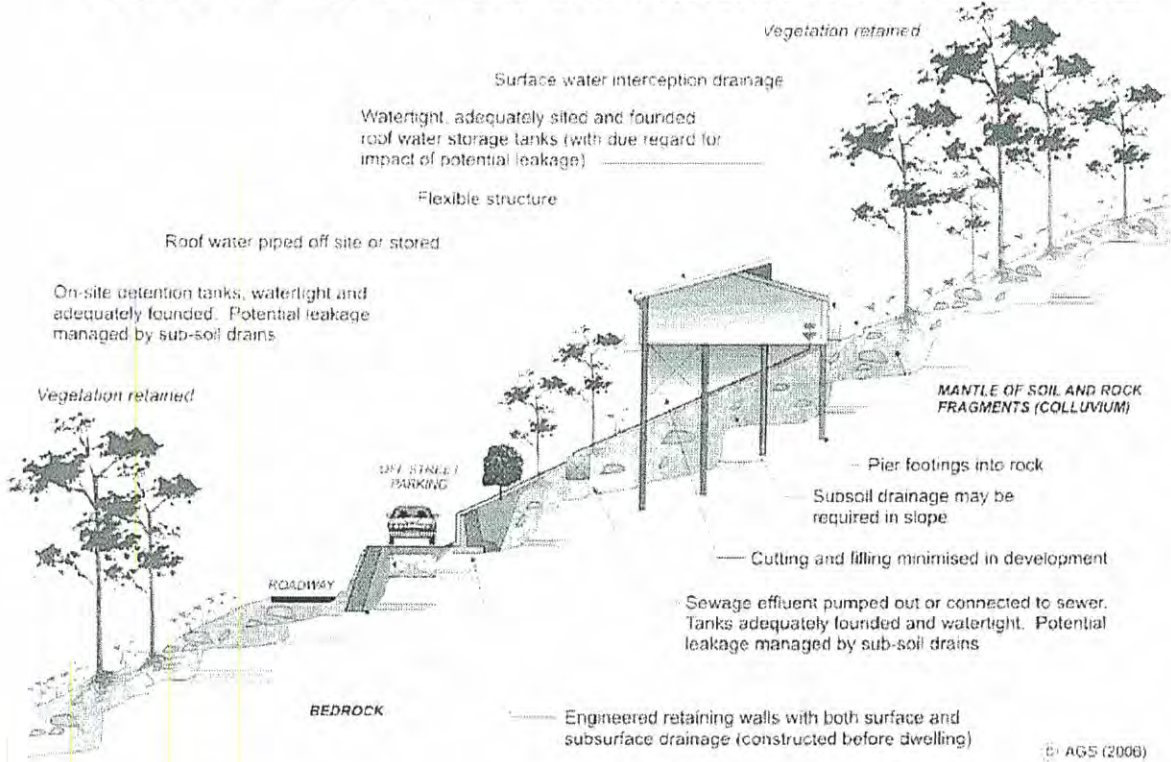
NOTE:- Contour interval 5.0m

THIS DRAWING IS STRICTLY COPYRIGHT AND SHALL NOT BE COPIED, LENT OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF TONY WOOLFORD

**PROPOSED BOUNDARY ALTERATION**  
**BRENDON CAMPBELL OWNER**  
**CHURCH RD BROADMARSH TAS 7030**  
 SCALE 1: 4000 (A3) | DATE: OCTOBER 2016 | DRAWN: IDS/TNW | DWG NO. C6093-1

**T. N. WOOLFORD & ASSOC.**  
**72 GRAHAMS RD, MT. RUMNEY**  
 PHONE (03) 6248 5224 e: tnwoolford@tassie.net.au  
 FAX (03) 6248 5202

## EXAMPLES OF GOOD HILLSIDE PRACTICE



## EXAMPLES OF POOR HILLSIDE PRACTICE

