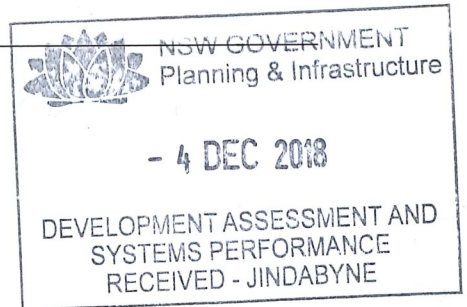




OLDINA SKI CLUB CO-OPERATIVE LIMITED

BUSHFIRE ASSESSMENT REPORT & BAL STATEMENT

OLDINA SKI CLUB
5 BILLY BUTTON PLACE
SOUTH PERISHER KOSCIUSZKO NATIONAL PARK



**Planning &
Environment**

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No. DA 9791

13 AUG 2020

granted on the

Signed MB

Sheet No. 2 of 8

THIS REPORT HAS BEEN PREPARED BY:
NEIL WALTON
OLDINA SKI CLUB DIRECTOR
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REVISION:
DA~Rev.3
30th October 2018

Contents

1	DISCLAIMER	3
2	INTRODUCTION	4
3	LEGISLATION	4
4	LOCALITY WITHIN THE PERISHER RANGE	5
5	SIGNIFICANT ENVIRONMENTAL FEATURES	5
6	LOCATION OF SITE	6
7	SITE ACCESS	6
8	EXISTING SITE SERVICES	7
8.1	Water supply	7
8.2	Electricity supply	7
8.3	Gas Supply	7
8.4	Hose reel services	7
8.5	Portable firefighting equipment	7
9	EMERGENCY MANAGEMENT	7
10	SPECIFIC OBJECTIVES FOR SPECIAL FIRE PROTECTION PURPOSE DEVELOPMENTS	8
10.1	Development assessment	8
	• Siting and design;	8
	• Capacity of public roads;	8
	• Capacity public roads link to fire trails and have two - way access;	8
	• Adequacy of access and egress;	8
	• Adequacy of evacuation and maintenance plans; (To be made conditional with approval).....	8
	• Construction standards to be used (BAL 40)	8
11	DEVELOPMENT PROPOSAL	9
11.1	Vegetation types	10
13	BUILDING ASPECT & VEGETATION PHOTOS	10
14	NORTH DOWNSLOPE CALCULATION	12
14.1	Hazard distance	13
14.2	Effective slope that will influence bushfire behavior in each direction.	13
	Figures in red represent actual site conditions.	13
14.3	Fire Danger Index	13
14.4	Bush Fire Attack Level	13
14.5	Assessment outcome	14
15	PROPOSED ALTERNATE SOLUTION	14
15.1	Proposed detail	14
16	CONCLUSION	16
17	ADDITIONAL INFORMATION	17

1 DISCLAIMER

Oldina Ski Club Co-operative Ltd disclaims any liability (including but not limited to liability by reason of negligence) to the users of this material for any loss, damage, cost or expense whether direct, indirect, consequential or special, incurred by, or arising by reason of, any person using or relying on the material and whether caused by reason of, any error, omission or misrepresentation in the material or otherwise. Users of the document will be responsible for making their own assessment of the material and should verify all relevant representations, statements and information with their own professional advisers.

2 INTRODUCTION

This Bush Fire Assessment Report has been prepared for Oldina Ski Club to accompany their development Application (DA) to the NSW Planning Department of Planning & Environment for alterations and additions and general progressive fire up grades to the external cladding and installation of double glassed windows.

The application is in reference to the Ski Club situated at Lot 60 DP756697 known as number 3 Billy Button Place South Perisher NSW within the Kosciuszko National Park NSW.

The report has been generally prepared in accordance with Section 914 of the Environmental Planning and Assessment Act, 1979 [EP&A Act, 1979], and Section 100B of the NSW Rural Fires Act, 1997 [RF Act, 1997] and based on the published Planning for Bushfire Protection 2006 Guidelines [PBP].

3 LEGISLATION

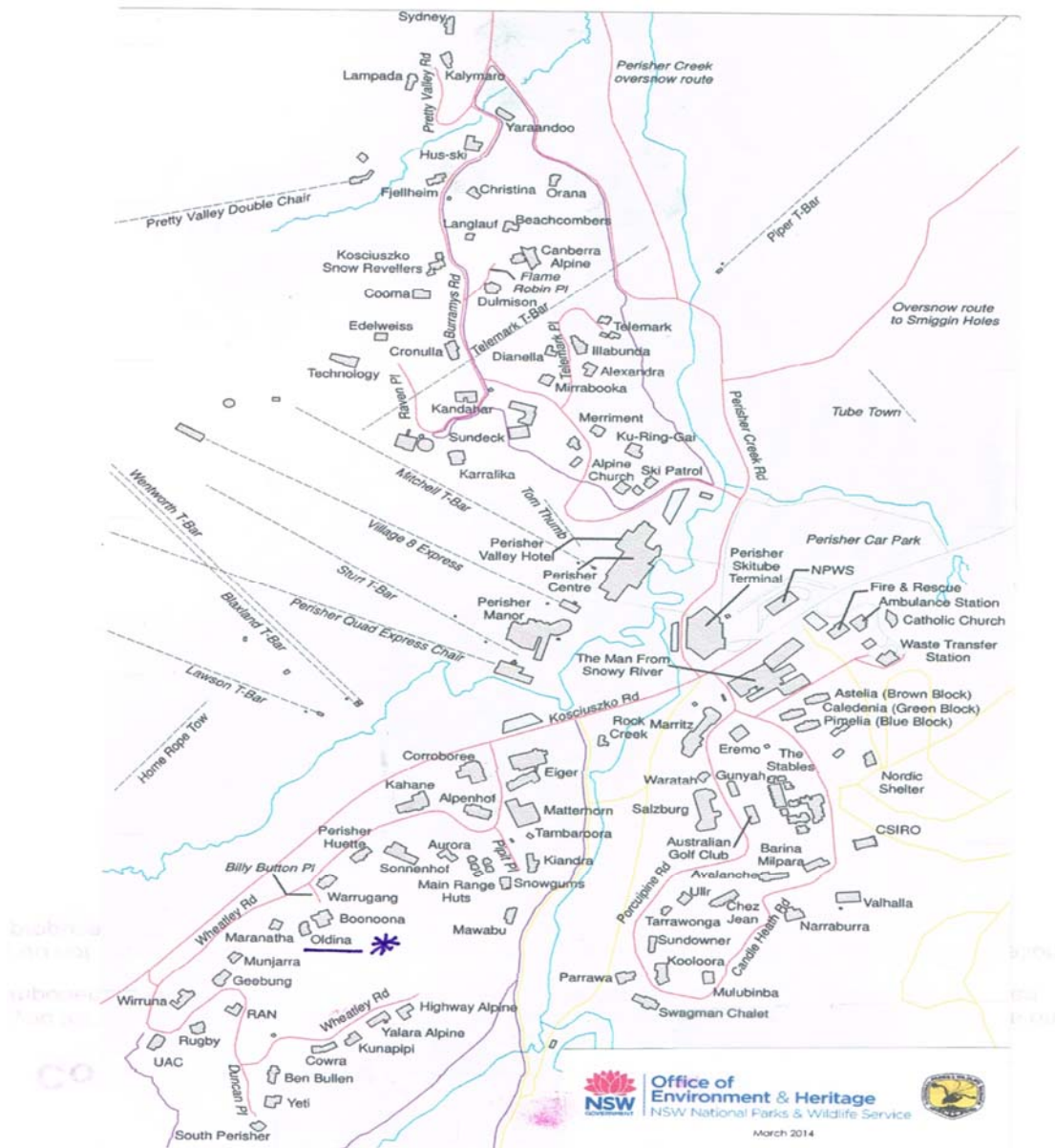
This Bush Fire Assessment Report has been compiled for submission to the Department of Planning for the purpose of assessment under Section 100B of the RF Act and is also considered "integrated development" under Section 91 of Environmental Planning and Assessment Act 1979 (EP&A Act). A bush fire safety authority must be obtained before developing on bush fire prone land for a special fire protection purpose such as the proposed alteration and additions to the existing ski club. A bush fire safety authority authorises development for a purpose referred to in subsection (1) of 100B to the extent that it complies with standards regarding setbacks, provision of water supply and other matters considered by the Commissioner to be necessary to protect persons, property or the environment from danger that may arise from a bush fire.

The detailed information to be contained within a bushfire assessment report submitted to the RFS under clause 46 of the RF Regulations is:

- Description of property;
- Classification of vegetation out to 140 m from the development;
- An assessment of the effective slope to a distance of 50 -100M.
- identification of any significant environmental features;
- Details of threatened species, populations, endangered communities and critical habitat known to the applicant.
- Details of Aboriginal heritage known to the applicant; and - A bushfire assessment that complies with the relevant requirements of the PBP (2006) and AS 3959 2009;
- A determination of the property bushfire attack level (BAL)
- Where applicable an alternative solution may be submitted to insure fire safety compliance can be met.

4 LOCALITY WITHIN THE PERISHER RANGE

The site is located in South Perisher Valley located on the fringe of Perisher Valley all of which forms part of the Perisher Range Resorts Group. The site is accessed from Kosciuszko Road followed by Wheatley then into Billy Button Place



Oldina Ski Club is identified with an asterix.

5 SIGNIFICANT ENVIRONMENTAL FEATURES

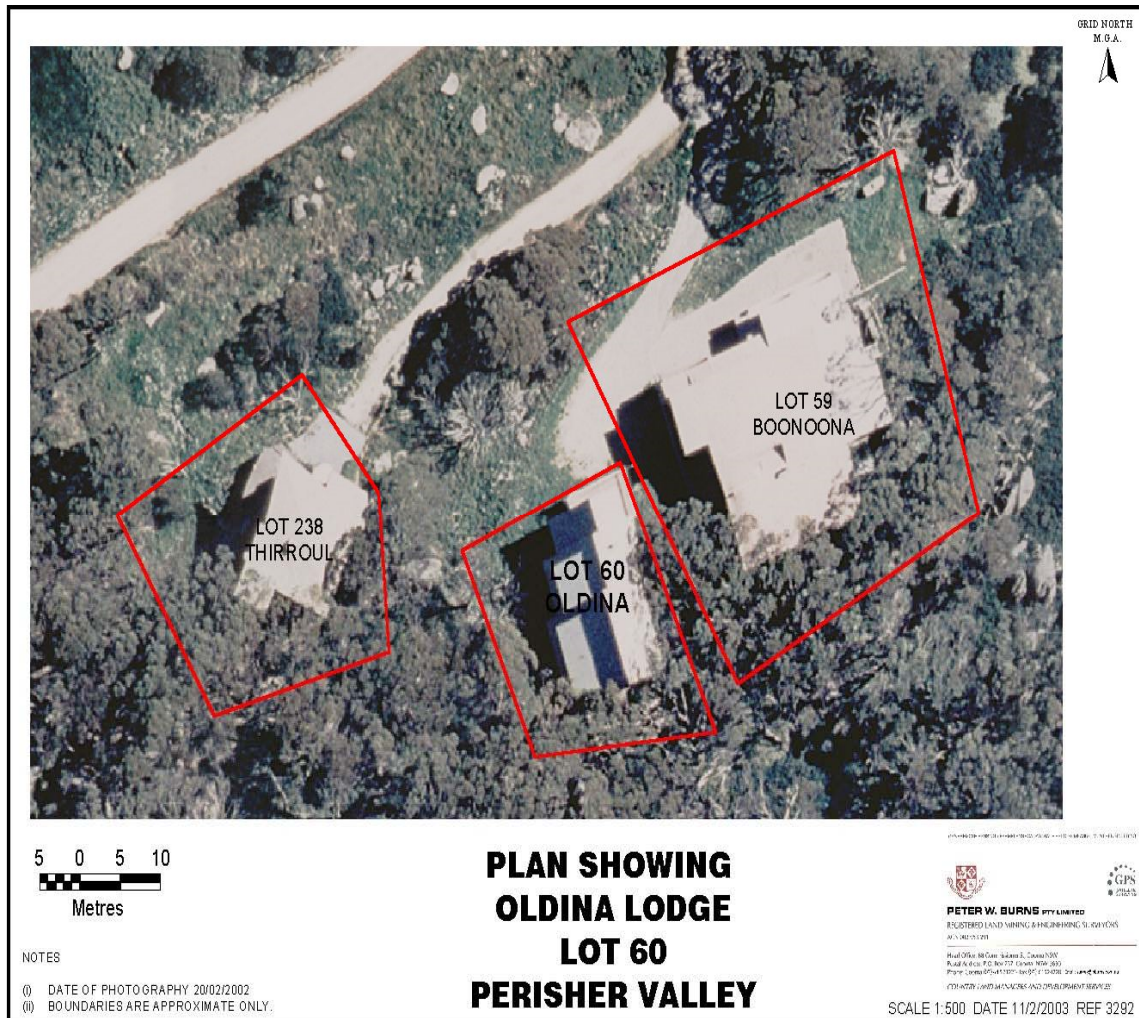
The proposed internal/external alterations and additions and replacement of existing windows are generally located within the existing building footprint with no impact on native vegetation and therefore an assessment in respect to threatened species, populations, endangered ecological communities or critical habitat is not required to be undertaken. Furthermore an assessment of Aboriginal heritage is also not warranted.

6 LOCATION OF SITE

This photo was taken in February 2003 and it should be noted that the tree canopy has thinned since the photo date.

The image indicates the relative location of adjacent lease holders and the adjacent woodland, cleared and grassed areas the latter being referred to as managed land in this report.

The predominant vegetation adjoining the existing building on all sides is Subalpine Woodland (Keith 2004). As such, the vegetation classification for the report shall be considered as woodland.



7 SITE ACCESS

Site access is by a loop road being Kosciuszko and Wheatley roads both of which are dual carriage and suitable for fire vehicles. Any ongoing tree canopy maintenance is the responsibility of the NPWS. Oldina is located at 3 Billy Button Place a short branch of Wheatley South Perisher. A strategic fire hydrant has been placed to service the adjacent buildings within the area.

This is considered compliant for special fire protection purposes developments.

8 EXISTING SITE SERVICES

8.1 Water supply

Adequate Water Services. Perisher Resort is serviced by reticulated water. A hydrant system is located in Billy Button Place adjacent to the road and is extended above the predicted snow level and terminated with 65mm hydrant valve and storz coupling. This provision is located approximately 40m from the proposed development and is assessable to fire appliances. The location and distance to the hydrants will be consistent with the requirements of the PBP 2006. 6.

Property Access Roads and Public Road System Capacity. The PBP (2006) requires the provision of safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area. Billy Button Place is a compacted gravel road and should be suitable for a small loaded firefighting appliance.

8.2 Electricity supply

The proposed development and adjacent buildings are supplied with underground power supplies.

8.3 Gas Supply

Gas supply to the proposed building is provided by liquefied petroleum gas (LPG) tanks located as shown on the proposed development. Installation will be to AS. 2601 compliance.

8.4 Hose reel services

A compliant fire hose reel service is installed on levels two and three of the development to insure the safety of occupants and building.

8.5 Portable firefighting equipment

Nine portable firefighting extinguishers are provided within the building to insure the safety of occupants within. These fire extinguishers have been installed additional to the requirements of the general provisions of Table E1.6 of the BCA

9 EMERGENCY MANAGEMENT

This aims at a set of measures to provide suitable emergency and evacuation arrangements for occupants of special fire protection purpose developments. The existing building contains fire and evacuation orders as required by code. These identify all fire exit paths and regrouping location instructions. Additional visual instructions will be required to cover further evacuation and management in the case of bush fires.

These instructions and site plan are required to be coordinated with the requirements of the local NSW Rural Bush Fire Service and the Guidelines for the Preparation of Emergency/Evacuation Plan and in accordance with AS 3745 2010 Planning for Emergencies in Facilities. These conditions would be conditional with a building approval.

10 SPECIFIC OBJECTIVES FOR SPECIAL FIRE PROTECTION PURPOSE DEVELOPMENTS

10.1 Development assessment.

The following demonstrates how the proposed development is required to comply with the relevant aims and specific objectives of PBP (2006) for a bushfire assessment.

An assessment of the development requirements in accordance with, the performance criteria and acceptable solutions contained within section 4.3.5 of PBP are provided in the following.

The proposal is for an existing SFPP Development approved prior to the 1st August 2002. For this reason, the proposal is considered an 'infill development' in accordance with 4.2.5 of PBP.

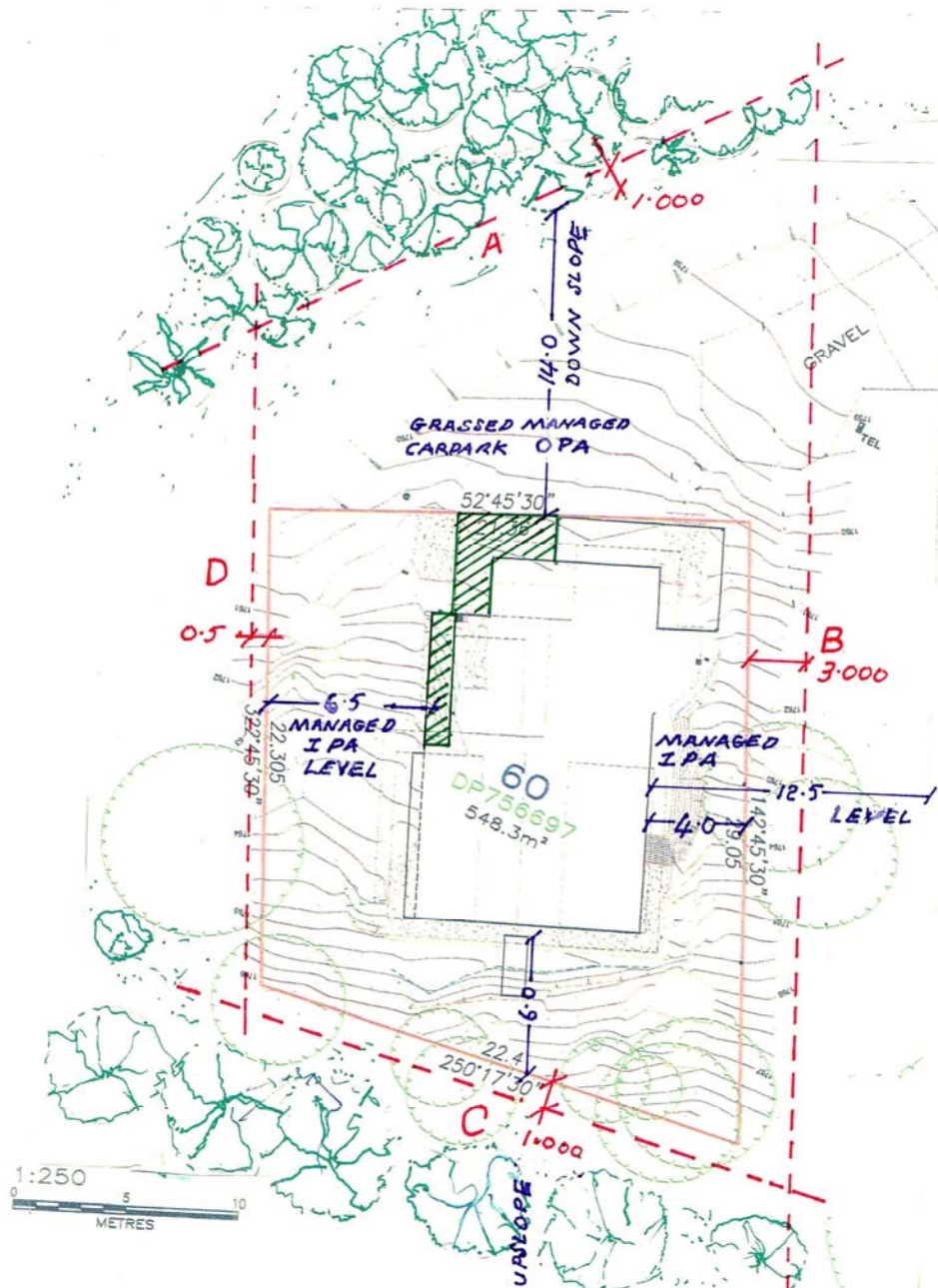
An appropriate combination of bushfire protection measures and compliance with the intent and performance criteria of each measure within section 4.3.5 of PBP is required as indicated by the following:

- Siting and design;
- Capacity of public roads;
- Capacity public roads link to fire trails and have two - way access;
- Adequacy of access and egress;
- Adequacy of evacuation and maintenance plans; (To be made conditional with approval)
- Construction standards to be used (BAL 40)

Subject to agreement on the APZ Alternative Solution requirements then the above matters are considered would comply in this application.

11 DEVELOPMENT PROPOSAL

The proposal is for additions and alterations to the existing building, as is indicated by the green hatched area on the diagram below. It is to be a staged development with an extension to the lounge, kitchen and level one change rooms. Replacement of cladding and existing windows with double glazing installed all being in compliance with bush fire attack level (BAL 40) standards.



ASSET PROTECTION ZONE (APZ) DIAGRAM

This APZ diagram is used in the determination of the following assessment report.

NOTE: The red dashed lines represent the limits of proposed asset management, consisting both of inner and outer protection areas.

12 BUSHFIRE ATTACK AND LEVEL OF CONSTRUCTION

The following information is required by the Rural Fire Service and building authorities when submitting a building application in a known fire zone.

11.1 Vegetation types

The vegetation around the development has been assessed in accordance using AUSLIG 1990 and is noted in the following table.

NORTH	EAST	SOUTH	WEST
Managed land & Woodland	Managed Land	Managed land & Woodland	Managed land & Woodland

13 BUILDING ASPECT & VEGETATION PHOTOS

The following photos are indicative of the vegetation surrounding the building from each aspect.



FIGURE 1. NORTH ELEVATION



FIGURE 2. SOUTH ELEVATION

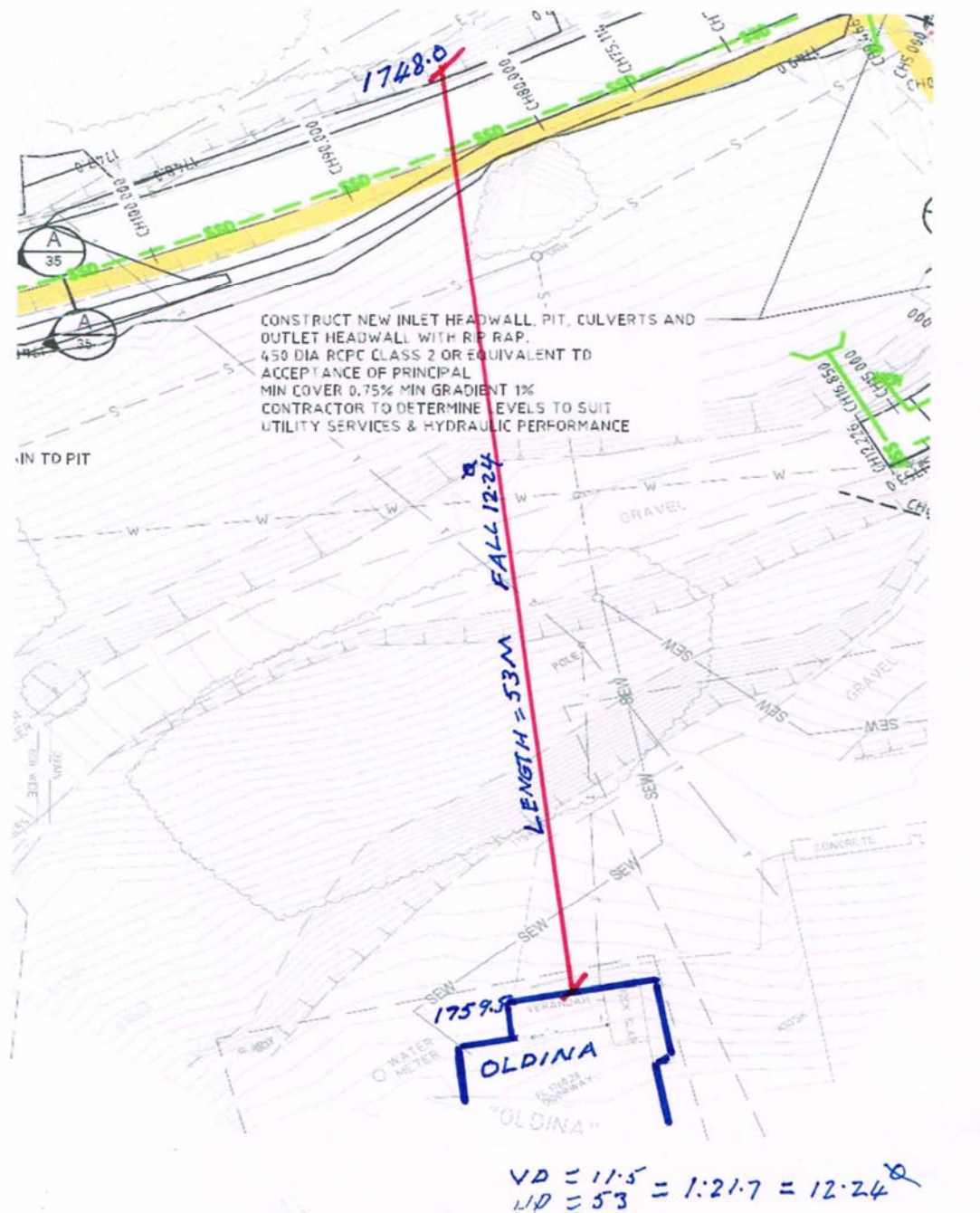


FIGURE 3. EAST ELEVATION



FIGURE 4. WEST ELEVATION

14 NORTH DOWNSLOPE CALCULATION



Data for bush fire attack level (BAL) downslope grade calculation.

14.1 Hazard distance

The following table sets out the distance from the building to the prominent vegetation in each direction.

NORTH	EAST	SOUTH	WEST
14 meters	4 meters	6 meters	6.5 meters

14.2 Effective slope that will influence bushfire behavior in each direction.

Figures in red represent actual site conditions.

NORTH	EAST	SOUTH	WEST
Upslope / Flat	Upslope / Flat	Upslope / Flat	Upslope / Flat
>0 to 5	>0 to 5	>0 to 5	>0 to 5
>5 to 10	>5 to 10	>5 to 10	>5 to 10
>10 to 15	>10 to 15	>10 to 15	>10 to 15
>15	>15	>15	>15
Managed land	Managed land	Managed land	Managed land

14.3 Fire Danger Index

A fire danger index (FDI) is determined for each local government area and is as indicated below.

LOCAL GOVERNMENT AREA	FIRE DANGER INDEX
Perisher Range	50 FID

14.4 Bush Fire Attack Level

Table 6. - FDI 50

CATEGORIES OF BUSHFIRE ATTACK (AS 3959-2009)					
Vegetation Formation	BAL- FZ	BAL- 40	BAL- 29	BAL- 19	BAL- 12.5
(class) AUSLIG 1990	Distance (m) of the site from the predominant vegetation class				
All up slopes and flat land (0 degrees)					
Forests	<12	12-<16	16-<23	23-<32	32-<100
Woodlands	<7	7-<10	10-<15	15-<22	22-<100
Scrubland	<7	7-<9	12-<19	19-<27	27-<100
Scrub	<10	10-<13	13-<19	19-<27	27-<100
Mallee/Mulga	<6	6-<8	8-<12	12-<17	17-<100
Rainforest	<5	5-<6	6-<9	9-<14	14-<100
Tussock Moorland	<7	7-<9	9-<14	14-<29	20-<100

14.5 Assessment outcome

Based on the Asset Protection Diagram page 10 which indicates the Oldina lease boundaries and relative distance to the building and with reference to the above bush fire attack table (Table 6). **This assessment finds that a bush fire attack level (BAL) FZ is required for construction due to existing site vegetation and the building location.**

The required level of construction of Fire Zone BAL (FZ) for the existing building would require the installation of fire shutters on all windows. This installation along with other requirements are not desirable, aesthetically pleasing or financially affordable to the club. Therefore as provided under the code we submit the following alternative solution for consideration and approval by the authorities.

Due to the above negative outcomes an alternate solution reducing the required bush fire attack level (BAL) FZ to (BAL) 40 is included as follows.

15 PROPOSED ALTERNATE SOLUTION

It is proposed that if the internal protection area to each aspect was to be augmented to include a small area of adjacent parkland, and that this area be reclassified and managed by Oldina as an outer protection area then the requirements for a (BAL) 40 classification could be achieved.

15.1 Proposed detail

With reference to the APZ diagram on page ten of this report, we note the following with respect to each aspect.

- **NORTH:** This aspect is all outside the limits of Oldina Lot as the existing building was been constructed on the boundary in 1981. The remaining land is National Park land of which some fourteen meters has been managed as grass land by Oldina for used as a parking and turning area for both Oldina and Boononna ski clubs for the past thirty six years.

It is proposed that if a further meter of parkland was managed as an outer protection area by Oldina then it would comply with the requirement and achieve (BAL) 40 classification. This would be achieved mainly by cutting back some dead trees within the zone that have been effected by dieback.

- **EAST:** This aspect has a four meter wide strip of managed grassed internal protection area, however in the past Oldina has managed an additional three meter wide strip of National Park land which links to managed land forming portion of a fire escape from the adjoining Boononna lodge.

It is proposed that Oldina would continue to manage this three metes area as an outer protection zone as noted on the (APZ) diagram then it would comply with the requirement and achieve (BAL) 40 classification as noted in the following table.

- **SOUTH:** This aspect has a distance of six meters to the boundary and would require a one meter strip of National Park land to maintain a compliance with (BAL) 40 requirements.

It is proposed that Oldina would maintain the required seven meter hazard protection area along with advice from the NP&WS. Refer to previous correspondence appended to this report from the NP&WS authorizing partial maintenance of this land.

- EAST: This aspect has a distance of six point five meters to the boundary and would require a one meter strip of National Park land to maintain a compliance with (BAL) 40 requirements.

It is proposed that Oldina would manage the additional meter area as an outer protection zone as noted on the (APZ) diagram this would then comply with the requirement and achieve (BAL) 40 classification as noted in the following table.

The following table indicates the distance from the building to the prominent vegetation in each direction if the above points were to be implemented.

NORTH	EAST	SOUTH	WEST
15 meters	7 meters	7 meters	7 meters

Based on the proposed revision to the asset protection zones as noted above we consider the category of bushfire attack would be reduced to (BAL) 40 as indicated in the following table.

Table 6. - FDI 50

CATEGORIES OF BUSHFIRE ATTACK (AS 3959-2009)					
Vegetation Formation	BAL- FZ	BAL- 40	BAL- 29	BAL- 19	BAL- 12.5
(class) AUSLIG 1990	Distance (m) of the site from the predominant vegetation class				
All up slopes and flat land (0 degrees)					
Forests	<12	12-<16	16-<23	23-<32	32-<100
Woodlands	<7	7-<10	10-<15	15-<22	22-<100
Scrubland	<7	7-<9	12-<19	19-<27	27-<100

This alternate solution would require approval of the NSW Rural Fire Service and an enduring agreement between the National Parks & Wildlife Services and Oldina Ski Club Cooperative Limited. Such an agreement would provide for a managed asset protection area (APZ) to be increased beyond the Oldina lease to include a small area of National Parks lands that would in the future be managed as an outer (APZ) by Oldina Ski Club.

16 CONCLUSION.

It should be noted that existing building being class 3 is positioned on the lot and constructed 1981 with a masonry basement and steel and timber frame with cladding for the upper two floors and to date is unchanged. This building as it stands today with the current code applying has a Bush Fire Attack Level of Fire Zone (BAL-FZ)

The club needs to replace the wooden single glassed windows with new aluminium double glassed units. And additionally carry out small extensions to the north and west elevations as stated in the statement of Environmental Effects and indicated on the drawings.

The proposed replacements and or additions would require the building works to comply with the appropriate current bush fire attack levels of construction.

It proposed that the existing windows be progressively replaced with double glassed aluminium windows manufactured and installed to BAL 40 standards. Additionally the existing Cedar building cladding would be resurfaced with ColorBond metal sheeting of select colour and profile to be further agreed with authorities. This work would include for all trims, capping's and joining moulds to ensure BAL 40 compliance to all gap sealing.

It has been shown that the building works could meet the BAL 40 requirements as noted in the various sections of this report and addition can generally meet the Specific Objectives for Special Fire Protection Purpose Developments.

Currently the asset protection zones (APZ) are insufficient to certify that the construction levels could be reduced from BAL. FZ to BAL 40. This subject matter has been dealt with in the alternate solution section 15 of this report and merits full consideration in order that a BAL 40 certification may be attained.

We would therefore request that the authorities give consideration to the proposed alternative solution and provide a considered and workable outcome that would be acceptable for all parties.

Yours faithfully,
Neil Walton
Director for Oldina Ski Club Co Operative Ltd

17 ADDITIONAL INFORMATION

- Selection of six photos through proposed APZ areas for general information.
- Approval for limited tree trimming. (Email and three photos from Keith McFadden of NPWS)



View looking north across dead trees and others suffering from dieback



View looking east/west across rear of club.



Ground shrubs at the north end of club fire path.



Northern elevation during the buildings occupied season



Photo identifies the extent of dieback and fire risk at northern elevation during occupied season.



View identifies the extent of fire access to Oldina adjoining clubs during peak occupation.

Neil Walton

From: Keith McFadden <Keith.McFadden@environment.nsw.gov.au>
Sent: Thursday, 6 July 2017 4:30 PM
To: Neil Walton
Cc: Dave Woods; Rebecca Owen
Subject: Approval to trim trees at Oldina Ski Lodge.
Attachments: Vegetation Management at Oldina Lodge.docx

Neil, Please accept this approval for the removal of the trees growing adjacent to Oldina Ski Club. The trees shown in the photographs on the attached document are permitted to be removed. I inspected the trees on Thursday 6th July 2017 and I agree that the trees removal now will prevent potential damage to the building. The heath vegetation around the building was not inspected due to the recent snow fall. Any heath trimming will need to be assessed as a part of the Development Application process to provide for an Asset Protection Zone. Please contact Dave Woods, if you require further assistance with this matter.

Kind regards



Keith McFadden
Part Time Environmental Liaison Officer (Thursday
and Friday)
Resorts Environmental Services Team
Southern Ranges Branch
NSW National Parks and Wildlife Service

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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL



Branches on the tree that lean towards the Eastern side of the Lodge are permitted to be trimmed.



Dead stags on the South East Corner of Oldina Lodge are permitted to be removed.



The small clump of dead stags on the North-West Corner of the Lodge are permitted to be removed.



Imagery ©2017 CNES / Airbus, Map data ©20