



THE CONSULTANCY BUREAU

BUSHFIRE MANAGEMENT PLAN

FOR THE DEVELOPMENT OF TEMPORARY CAMPING GROUND AND CABINS AT FLINDERS

FOR PACIFIC INTERNATIONAL DEVELOPMENT CORPORATION PTY LTD

by

L.S. Hawkes, B.Sc.(For), MIFA, MRFAQ
The Consultancy Bureau Pty Ltd
March 2019

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MANAGEMENT CONSULTANCY SERVICES

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV2018/970

Date: 14 March 2019



1. Introduction

A large property west of Jimboomba has been cattle grazing lands for decades. Recently the area has been investigated and approved for future residential development on appropriate sections.

The options for short term use have included camping and cabin facilities. (see Aerial Proposal Plan)

Parts of the property are heavily forested and rate as Bushfire Hazardous.

This hazardous vegetation has triggered an assessment by Economic Development Queensland E.D.Q. at a pre application meeting. (see Appendix 1)

2. Description of the Site

The lower lands of the property have been cleared to pasture and adjacent ridgelines have been selectively cleared or retained as native forest.

The area has been logged for logs suitable for milling and there is an extensive network of road tracks and dams.

Hazard reduction burning has been practised in past over selected areas on the property. Grazing has maintained the overall pasture in a manicured condition.

The proposed development is in two separate locations:-

2.1 Cabins

It is proposed for six cabins to be built in cleared areas with vegetation adjacent.

An existing track network will be used for access with some concrete crossing across the minor gullies. There are two dams in the immediate precinct of the cabins.



2.2 Camping Area

Further to the west and overlooking Undullah Creek it is proposed to develop a 15 site camping area.

This site is currently cleared pasture with retained vegetation adjoining. (see Aerial Proposal Plan)

This site will be accessed off Undullah Road utilising existing tracks for the majority of the access. A newly constructed access track will be required from the ridge down to the camp sites.

3. Assessment of Potential Bushfire Hazard for the Site

State Planning Policy Bushfire Hazard Mapping when overlaid on the site Aerial Photograph confirms the proposed camping development is in a Low Hazard area. (see SPP Overlay)

The cabins are located in a mixture of Low and Medium Hazard areas. These medium hazard areas are generally small ridgelines with low fuel loads.

All of the proposed development is within a Hazardous Buffer Zone and as such while the bushfire risk is low, a set of mitigating actions is appropriate.

4. Proposed Mitigating Actions

4.1 Access

Both areas will have short and easy access out to either Wyatt or Undullah Roads.

As the uses are short term stays with no permanent residents there would be a “no use” restriction in times of extreme fire danger i.e. the need for evacuation would be eliminated by the sites not being used in extreme fire weather.



4.2 Fire Breaks and Fire Lines

There would be a minimum of 10 metres of managed/manicured grass around each cabin and the camping area.

The camping area also has a perimeter access track to provide separation from the adjoining vegetation. (see Aerial Proposal Plan)

4.3 Water

There are two dams readily accessible to the cabins for firefighting water if required.

The camping area has access to considerable water supply at the property headquarters nearby.

4.4 Vegetation Management

Outside the development precinct is managed as a cattle grazing property and this would continue. Any vegetation within 20 metres of cabins or the camping area would have the following management:-

- All dead and dangerous trees would be removed.
- All ground fuels other than grass would be removed.
- Low branches to three metres would be pruned to remove any vertical fuel connection.

5. Compliance with Logan Planning Scheme 2015 Version 2.1

The Logan Planning Scheme (2015) provides a Part 8 regarding the Bushfire Code. (see Appendix 2)

This details actions necessary to protect people and premises from bushfire attack.

The proposed mitigating actions in Section 4 of this Plan confirm that the proposal will comply with the Code. (see Acceptable solutions in Appendix 2)



6. Conclusion

There is considerable areas of hazardous vegetation to the north and west of these proposal, they are either distant and upslope or with significant separation from any serious hazard.

This proposal is not limited by bushfire provided all the mitigating actions in Section 4 are implemented and maintained.

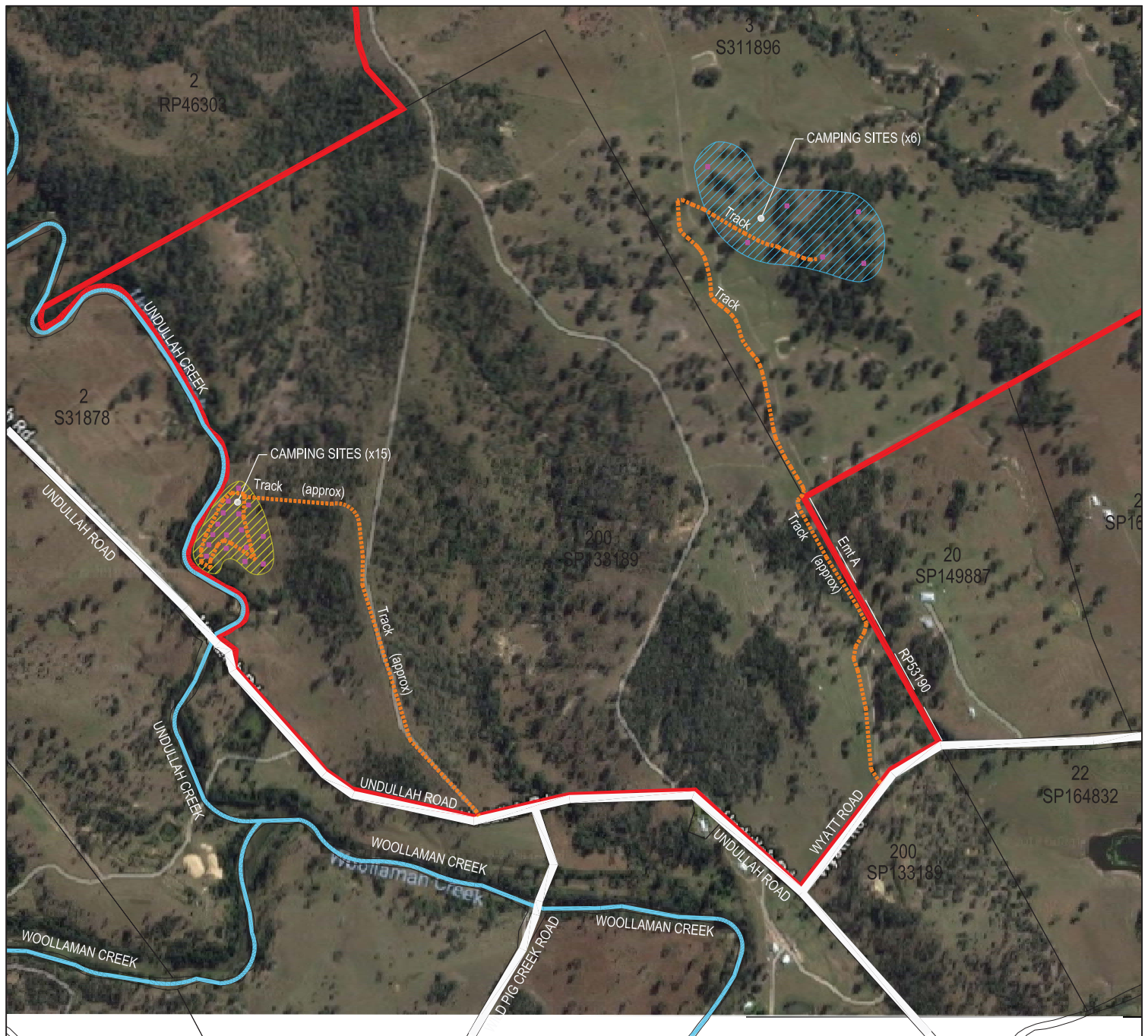


L.S. Hawkes, B.Sc.(For), MIFA, MRFAQ

Senior Associate

(CV attached)





LEGEND:

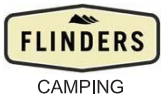
-  SITE BOUNDARY
-  EXISTING CREEKS
-  EXISTING ROADS
-  ACCESS TRACKS
-  INDICATIVE CAMP AREA (6 SITES MAX)
-  INDICATIVE CAMP AREA (15 SITES MAX)



0 50 100 150 200 250m
Scale 1:5000 - A1 (1:10000 - A3)

NOTE:
THIS PLAN WAS PREPARED FOR PLANNING PURPOSES ONLY. AS SUCH ALL PARTICULARS, INCLUDING LOT DESIGN AND DENSITIES, ARE SUBJECT TO DETAILED SURVEY, SITE INVESTIGATIONS AND TO THE REQUIREMENTS OF COUNCIL (SUCH AS, CONFORMITY WITH THE STRATEGIC PLAN, PLANNING SCHEME AND BYLAWS), AND ANY OTHER AUTHORITY WHICH MAY HAVE REQUIREMENTS UNDER ANY RELEVANT LEGISLATION. IN PARTICULAR, NO RELIANCE SHOULD BE PLACED ON THE INFORMATION ON THIS PLAN FOR ANY FINANCIAL DEALINGS INVOLVING THE LAND. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

PROJECT NAME



RP DESCRIPTION
Lot 200 on SP 133189,
Lot 3 on SP 311896,
PARISH OF UNDULLAH,
COUNTY OF STANLEY

CLIENT

PACIFIQ

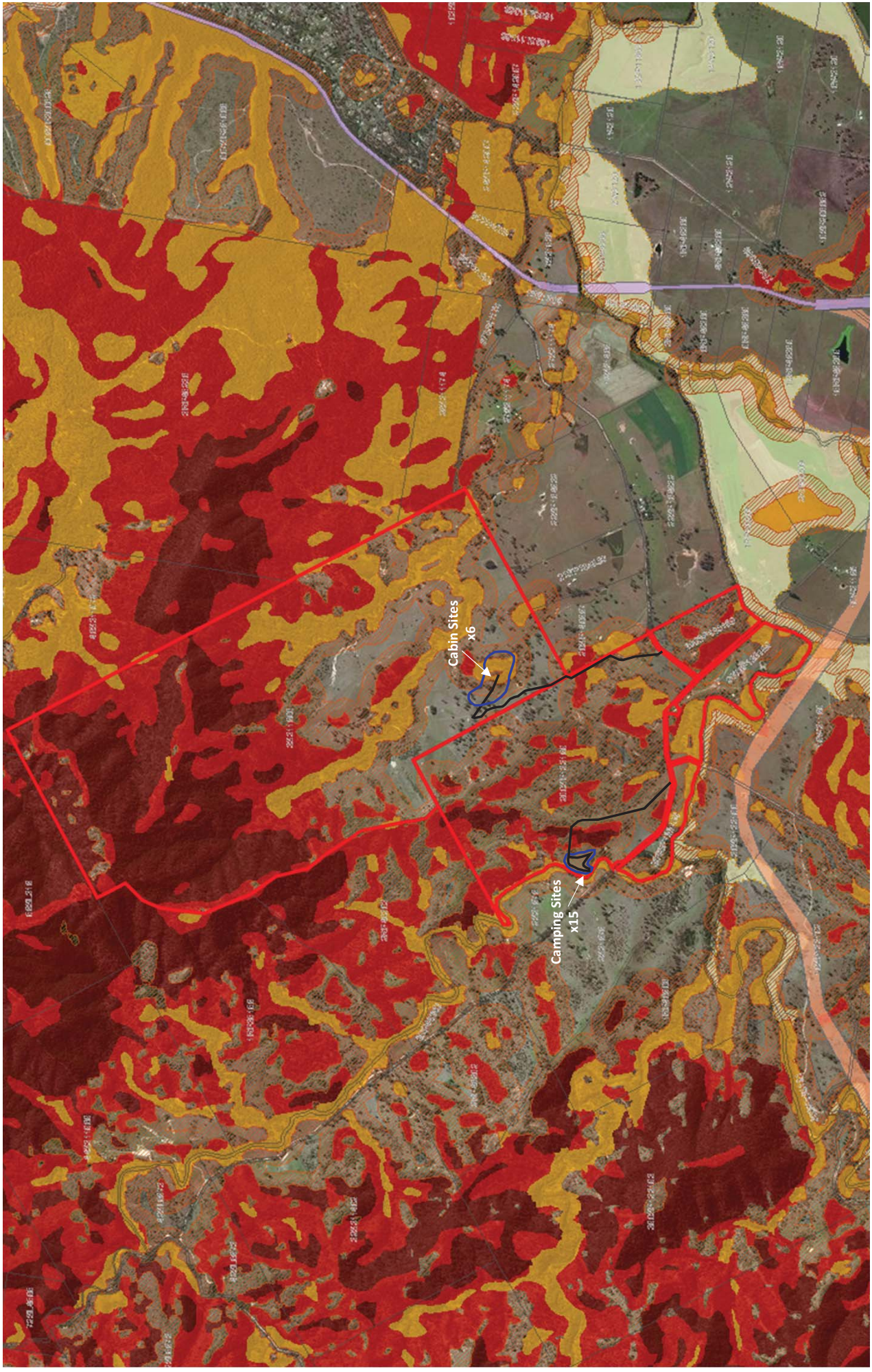
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DRAWING TITLE

FLINDERS CAMP GROUND
PROPOSAL PLAN

DESIGNED RCB	APPROVED	BPB
DRAWN RV DATE 25-08-18	AMEND DATE	DATE
DRAWING NUMBER		AMEND.
23302-CMP-SK001		A





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Marco Bonotto – EDQ
 Gavin Johnson – Mortons Urban Solutions
 John Harrison – Mortons Urban Solutions
 Matt McLaren – Mortons Urban Solutions
 Stephen Harrison – Harrison Development Group

1. **The proposed development is a suitable interim use, which has a scale and intensity that will not compromise the intent and future development on the subject site.**

EDQ supports the proposal as an interim use. The proposal is of a nature and scale that will not prejudice the future development of the land as anticipated by the development scheme. If approved, conditions will be imposed to limit the duration of the use.

2. **Application requirements including supporting reports considering the client's intent to commence development at the earliest opportunity.**

While the proposal is for an interim use, it is noted that the location is in the very high to high bushfire risk. A bushfire report will need to be submitted identifying mitigation actions. These actions do not necessarily have to involve extensive clearing, but could look at other outcomes such as availability of water on site, general maintenance of the grounds, site based emergency plans, fire equipment access, minimum distance between campsite and vegetation etc.

While the above are potential outcomes, your bushfire expert will be in the best position to provide advice on any appropriate mitigation measures that should be in place.

Other reports to be submitted include:

Site / location plan/ drawings etc

Planning report

Ecological - if vegetation is proposed to be removed (it is noted that the report indicates that there isn't an vegetation proposed to be removed).

Traffic report – showing access arrangements into the site that there is a suitable access to support the proposed use

3. **Confirmation that EDQ will not require the provision of amenity facilities for the camping reserve.**

A sewerage disposal system (compost toilet or similar) will need to be provided. EDQ has reviewed Council requirements for a similar outcome and the applicant would need to comply with Part 1 of the Queensland Plumbing and Wastewater Code - specifically protecting the environment by ensuring surface and ground water are not polluted. This is particularly important as the Undullah Creek flows into the Logan River upstream of the Cedar Grove Weir.

4. **Confirmation that the scale of the activity does not generate the need for any local road upgrades.**

EDQ is satisfied this activity will not generate the need to upgrade local roads.

5. **General**

EDQ noted that there appear to be pipe crossings over the waterways. This may require approval from SARA.

Part 8 Overlays

8.2 Overlay codes

8.2.3 Bushfire hazard overlay code

8.2.3.1 Application

- (1) This code applies to self-assessable and assessable development for which the Bushfire hazard overlay code is identified in the assessment criteria column in Table 5.10.3.1–Bushfire hazard overlay map OM–03.00 in Part 5–Tables of assessment.
- (2) When using this code, reference should be made to section 5.3.2–Determining the level of assessment and, where applicable, section 5.3.3–Determining the assessment criteria located in Part 5–Tables of assessment.

Note— Pursuant to section 32(a) of the *Building Act 1975* and section 12 of the *Building Regulation 2006*, land identified as a Bushfire hazard area on Bushfire hazard overlay map–OM–03.00 is a 'designated bushfire prone area' for the Building Code of Australia and the Queensland Development Code.

8.2.3.2 Purpose

- (1) The purpose of the code is to protect people and premises in a Bushfire hazard area.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Development protects people and premises from bushfire risk:
 - (i) through allotment design and siting of development envelope areas and asset protection zones;
 - (ii) by providing vehicular access, fire maintenance trails and evacuation routes that are safe and facilitate easy way finding;
 - (iii) by providing an accessible water supply for firefighting purposes;
 - (iv) by ensuring the function of community infrastructure is not adversely impacted by bushfire;
 - (v) by protecting personal health and safety and the environment from hazardous materials.

8.2.3.3 Criteria for assessment

Part A–Criteria for self-assessable and assessable development

Table 8.2.3.3.1–Bushfire hazard overlay code: self-assessable and assessable development

Performance outcomes	Acceptable outcomes	Comments
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Appendix 2

Performance outcomes	Acceptable outcomes	Comments
For self-assessable and assessable development		
Location, design and siting of development		
PO1 Development is designed to: (a) minimise risk of bushfire hazard; (b) provide safe premises; (c) create efficient emergency access for fire-fighting and other emergency vehicles. Note—Planning scheme policy 6—Management of bushfire hazard provides guidelines on how to achieve this outcome.	AO1 Development: (a) does not increase the number of persons living in, or lots in, the Bushfire hazard area identified on Bushfire hazard overlay map—OM—03.00; or (b) is on a site that a bushfire hazard assessment prepared in accordance with the methodology in planning scheme policy 6—Management of bushfire hazard determines is of low bushfire hazard.	COMPLIES

Appendix 2

Performance outcomes	Acceptable outcomes	Comments
PO2 Development is sited and constructed to minimise the bushfire hazard and maximise the protection of life and property from bushfire.	AO2 Development is located and constructed: (a) where there is no bushfire management plan approved by an existing development approval: (i) such that the bushfire attack level is less than or equal to BAL-29; (ii) away from the most likely direction of a fire front; (iii) so that elements of the development least susceptible to fire are sited closest to the bushfire hazard; (iv) such that asset protection zones are sited on land with a slope less than 18 degrees; (v) such that asset protection zones are entirely within the boundaries of the private property of the development site; or (b) where an approved bushfire management plan directs development to be located. Note—BAL = Bushfire attack level is the radiant heat flux a building will experience during a bushfire and is a measure of heat energy impacting on a surface expressed as kW/m². BAL is calculated from the following factors: vegetation type, fuel loads, distance to vegetation, Forest Fire danger Index (FFDI), flame length, fire behaviour/intensity and slope. BAL is used to determine the required construction level of a building and the size of asset protection zones (inner and outer radiation zones). Further information on calculating the BAL can be obtained from AS3959-2009. Editor's note—Asset protection zones are not located on slopes greater than 18 degrees to ensure maintenance is practical, soil stability is not compromised and the potential for crown/canopy fires is reduced. Editor's note—Planning scheme policy 6—Management of bushfire hazard contains guidance on the preparation of bushfire management plans.	COMPLIES

Appendix 2

Performance outcomes	Acceptable outcomes	Comments
PO3 Reconfiguring a lot ensures that lots are designed to minimise bushfire hazard and provide safe sites for people, property and buildings.	AO3 Lots: (a) are suitable for people, property and buildings by: (i) having a bushfire attack level less than or equal to BAL-29; or (ii) containing a development envelope area that has a bushfire attack level less than or equal to BAL-29; (b) provide asset protection zones that: (i) are located on land with a slope less than 18 degrees; (ii) are located on the same lot.	N/A
Vehicular access and fire maintenance trails		
PO4 Access for fire management and evacuation is provided by access that: (a) separates premises from adjoining vegetation; (b) is safely accessible by fire fighting vehicles; (c) has regular vehicular access points for bushfire management, response and evacuation; (d) has regular vehicle passing and turning areas for bushfire management, response and evacuation; (e) allows access at all times for fire fighting vehicles; (f) allows for maintenance, burning off and bushfire response; (g) has vehicular links to an alternative through road; (h) is readily maintained. Editor's note—Planning scheme policy 6— Management of	AO4 Access for fire management and evacuation is provided by vehicular access in the form of a perimeter road: (a) with a minimum reserve width of 20 metres; (b) located between the premises and adjoining vegetation; (c) with a maximum gradient of 12.5 percent; (d) constructed to otherwise comply with section 3.4—Movement infrastructure standards of planning scheme policy 5—Infrastructure; (e) that has a layout that does not include a cul-de-sac.	COMPLIES

Appendix 2

Performance outcomes	Acceptable outcomes	Comments
bushfire hazard provides details on alternative solutions for providing fire management access and evacuation		
Water supply		
PO5 Development has access to adequate water supply for fire fighting purposes.	AO5 Development: (a) is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or (b) has an on-site water storage in accordance with Table 8.2.3.3.2—Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is: (i) a separate tank; or (ii) a reserve section in the bottom part of the main water supply tank. Editor's note—The requirement in AO5 is: – in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.2—Infrastructure code: self-assessable and assessable development;; – reflected in AO5 in Table 9.4.3.3.2—Infrastructure code: self-assessable and assessable development.	COMPLIES

Appendix 2

Performance outcomes	Acceptable outcomes	Comments
For assessable development		
Community infrastructure		
PO6 Community infrastructure is not located in a bushfire hazard area or is able to function effectively during and immediately after a bushfire event.	AO6 Community infrastructure is: (a) not located in a Bushfire hazard area identified on Bushfire hazard overlay map—OM—03.00; or (b) located to ensure that: (i) the core services provided by the community infrastructure is able to function effectively during bushfire events; (ii) access to the community infrastructure is not compromised by bushfire events; (iii) the safe storage of valuable records, public records and items of cultural or historic significance is able to be maintained during a bushfire event.	N/A
Hazardous materials		
PO7 Public safety and the environment are not adversely affected by the adverse impacts of bushfire on hazardous materials including fuels, explosives and flammable chemicals manufactured or stored in bulk on premises.	AO7 Hazardous materials: (a) storage is in compliance with AS1940—The storage and handling of flammable and combustible liquids; (b) manufacturing does not occur in a Bushfire hazard area on Bushfire hazard overlay map—OM—03.00.	N/A

Table 8.2.3.3.2–Water storage for fire fighting

Column 1 Lot size / use type	Column 2 Water requirement
For each residential lot:	
(a) less than 1000m ²	5000 litres
(b) between 1000m ² and less than 1 hectare	10,000 litres
(c) greater than 1 hectare	20,000 litres
Multiple dwelling	5000 litres per dwelling up to a maximum of 20,000 litres
A use other than Multiple dwelling	5000 litres or the prevailing rural fire brigade standard



THE CONSULTANCY BUREAU

CURRICULUM VITAE

LESLIE HAWKES, SENIOR ASSOCIATE

Qualifications

- ◆ BSc For ANU 1969

Professional Affiliations

- ◆ Member of the Institute of Foresters of Australia
- ◆ Justice of the Peace (Qualified)

Areas of Expertise

- ◆ Land use planning, including the resolution of land use conflicts
- ◆ Development of community-based management strategies for natural resources, including forests, bushfire and wildlife
- ◆ Development of environmental guidelines
- ◆ Development and implementation of fire management plans and strategies
- ◆ Resource assessments for native and plantation timber
- ◆ Farm, social and community forestry (including the development of resource materials)
- ◆ Silviculture and management of native rainforest, eucalypt and plantation forests
- ◆ Forest recreational planning and management of State Forests and National Parks

Relevant Experience

- ◆ Extensive experience as a Natural Resource Consultant, preparing Reports on Environmental Performance, Court Appearances as an expert witness, performing forest, environmental, habitat assessments and Bushfire Plans.
- ◆ Extensive experience in Queensland, participating in forums and negotiations relating to land use conflicts, including conflicts between forestry and sugar growing industries.
- ◆ Sound understanding of the operations of the sugar growing industry and of the agricultural and grazing sectors, from continuing contact with participants in the industry and from direct experience as a primary producer.
- ◆ Appreciation of the constraints and challenges facing the farming sector and individual farmers from ongoing contacts with the primary production sector, from direct farming experience, and as a small business proprietor.

Work Experience

1992 – present Natural Resource Consultant - The Consultancy Bureau Pty Ltd

Achievements

- ◆ Provide consultancy services to public and private sector within Queensland on wide range of ecological assignments including
 - Prepare Bushfire Management Plans throughout Queensland and present expert evidence in the courts for Local Authorities and Developers.
 - Environmental Impact Assessments on large sub division proposals, roads, quarries and underground cable projects.
 - Prepare legal reports on environmental performance for Local Authorities and private developers (court appearance as expert witness).
 - Review, develop community based management strategies for rural Queensland areas, e.g. (Western Cypress areas around Roma).
 - Assist in the review of Environmental Labelling for Forest products in Australia.
 - Assist in financial auditing for Queensland Government Department.
 - Major review of habitat of the Mahogany Glider in the Herbert Valley.

1992 - 2007 Small business owner/operator

1992-1995: Party Hire Owner/Operator

1996-2007: Ladder Manufacture and Distribution, Qld and NSW

1998-2007: Wholesale Leather Distribution Company.

1990 - 1992 Manager, Forest Advisory Branch, Queensland Forest Service.

Achievements

- ◆ Management, development and delivery of information services to keep the public informed of the intent and the detail of all programs and services of the Queensland Forest Service.
- ◆ Co-ordinate and enhance the quality of the rural and urban environment by encouraging and facilitating the planting, care and retention of trees along with the rehabilitation of degraded land by promoting the role of trees and forests in sustainable land management including assessment of private commercial forest proposals.
- ◆ Developing and producing appropriate awareness campaign along with literature to ensure the wider community is fully informed on suitable practices on the land.



1985 - 1990 District Forester at Ingham District - Queensland Forest Service

Achievements

- ◆ High level negotiations and demonstration of the Department's management of the rainforests in North Queensland.
- ◆ High level of both technical and managerial skills in a senior field position.
- ◆ High degree of expertise in managing the development of tropical forests.
- ◆ Major resource assessments of all lowland native forest in Ingham region for land use classification.
- ◆ Management of a large budget, including financial monitoring and auditing.
- ◆ Workforce management and control, including responsibility for planning the downsizing of the workforce following the cessation of rainforest harvesting.
- ◆ Establish and manage 10000 ha of exotic pine plantation.

1980-1985 Officer In Charge of the Imbil District - Queensland Forest Service

Achievements

- ◆ Management of a 14,000 ha plantation of Hoop Pine which involved:-
 - raising 500,000 nursery stock annually.
 - Establishment of approximately 250ha of new plantation, annually, silvicultural maintenance including weeding, pruning and thinning, commercial harvesting of 40,000 cubic metres of thinning and preparation for the imminent harvesting of much larger volumes of timber of the final crop.
- ◆ Management of highly productive native hardwood forests for both timber and high use recreational pursuits including all the Connondale Range area.
- ◆ Management and workforce control of 120+ staff

1978 - 1980 Marketing Development Officer - Marketing Division - Queensland Forest Service, Head Office

Achievements

- ◆ Review of pricing systems for the Services forest products.
- ◆ Investigation and development of operational and environmental guidelines for forestry activities
- ◆ Review environmental logging guidelines in native forests.



1977-1978 Fire Protection Officer for Queensland

Achievements

- ◆ Responsible for management to ensure the effective protection of all state forests from fire.
- ◆ Extensive work in pioneering helicopter hazard reduction burning of both native forests and exotic plantations.
- ◆ Developing and running Fire Schools for all Field Officers in Queensland.

1970 - 1977 Various management positions in the Queensland Forest Service

- ◆ Forester in Charge of Native Forest Management Esk Gatton Crows Nest.
- ◆ Forester in Charge of Jimna SF. including Native Forest Management of Conondale Range.

Consultancy Experience

Human Resource Management

- ◆ Up-sizing and down-sizing of workforces, for example:-
 - Increases in plantation establishment, staff from 50 to 120.
 - Shut down of Rainforest logging and complete review of all positions in North Queensland and report on down-sizing.
 - Implementation of performance management systems from 1982 - 1992.
 - Development of the Queensland wide forestry extension program including budgets, staff position descriptions, recruitment and placement.

Human Resource Development

- ◆ Developing training course and providing Fire Training Schools for Queensland wide Fire Prevention staff.
- ◆ Produced training videos for Farm Forestry, manuals for Farm Forestry, quarterly corporate publication and computer based Tree Selection System with accompanying book version for Farm Forestry activities.

Organisational Structures and Functions

- ◆ 1976 Department of Forestry Restructure
- ◆ 1982 Review of roles / responsibilities and reporting systems for Queensland Wide Sub-Districts.



- ◆ 1989 Review of North Queensland - Forestry Structure, Personnel and redundancy needs following the closure of Rainforest Management.
- ◆ 1990 Develop a state-wide structure for Forest extension including interaction with Land Care, Integrated Catchment Management and Extension Research.
- ◆ 1993 Business planning and development of a Hire Equipment business.
- ◆ 1996 Purchase of a Ladder Manufacturing business and implementation of a new factory system and a changed marketing strategy.
- ◆ 1998 Purchased leather distribution company and implemented change to post a 400% increase in turnover in 30 months.

Additional Skills

- ◆ Considerable involvement with Aboriginal Communities over a 25 year period including - assistance in developing skills (sawmilling, fire protection, and special native treecrops).
- ◆ Assistance with employment training schemes especially using unskilled labour.
- ◆ Developing and assisting with problems employing people of diverse cultural backgrounds.
- ◆ Major team building has included:-
 - Forest Extension Programme
 - Up-sizing for new Plantation Programme
 - Staff morale reviews during and after the Rainforest Logging Debate

Scope of Consultancy Services

- ◆ Les Hawkes has a strong operational background with excellent interpersonal skills at the work place. He has extensive experience in feasibility studies and design of projects and programmes. Les possesses extensive experience in project implementation / with large workforces and budgets, and develops sound operational plans showing achievement milestones and required reporting arrangements.
- ◆ Considerable experience in land use evaluation reporting and conflict resolution.

