

27 October 2017

Our Ref: DIC15/71, DIC17/01

Mr Alan Bawden  
Rural Fire Service  
79 Marcia Street  
Coffs Harbour NSW 2450

Dear Alan

**Proposed 88 Lot Subdivision of Lot 1 DP 134787, Lot DP 167380, Lot 2 DP 961928 & Lot 5 DP 1117326,  
Walmsleys Road & Stott Street, Bilambil Heights – MP05 0198**

We attach a copy of MP05\_0198 issued on 2 August 2012 and Mod 1 (including stamped plans) issued on 5 June 2017.

Condition B24 is in the following terms:

- "1. Asset Protection Zones (APZ's) in each stage are to be provided in accordance with the Ecological Bushfire Planning Assessment in the Biolink Ecological Consultants report dated June 2011, as contained within the Environmental Management Area, illustrated on the proposed subdivision plans in condition A3. Details of the APZ's are to be provided, accompanied by RFS endorsement, to the satisfaction of the Certifying Authority prior to the release of the Construction Certificate for each stage.
2. Asset Protection Zones in each stage are to be provided on private land, in accordance with Planning for Bushfire Protection (2006). Details and a plan showing the APZ's, accompanied by RFS endorsement, are to be provided to the satisfaction of the Certifying Authority prior to the release of the Construction Certificate for each Stage.
3. Thinning of Camphor Laurel trees within the APZ for Lots 38, 39, 40, 55, 57, 59, 60 and 61 is required in order to comply with Planning for Bushfire Protection (2006) as part of the on-going maintenance of adequate bushfire protection."

In accordance with the requirements of Condition B24(1) and (2), Biolink Pty Ltd has prepared the attached Asset Protection Zone Management Plan dated, October 2017.

The Rural Fire Services endorsement of the Asset Protection Zone Management Plan as required by Condition 24 (1) and (2) is requested to enable a Construction Certificate to be issued by Tweed Shire Council.

Please contact Darryl Anderson should you require further information in relation to this matter.

Yours faithfully  
DAC Planning Pty Ltd



Darryl Anderson  
Director

cc. DoPE

# Project Approval

## Section 75J of the *Environmental Planning & Assessment Act 1979*

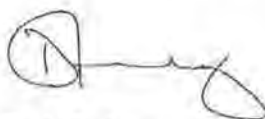
Under delegation of the Minister for Planning and Infrastructure executed on 14 September 2011, the Planning Assessment Commission of New South Wales (the Commission) approves the project application referred to in Schedule 1, subject to the conditions referred to in Schedule 2 and the proponent's Statement of Commitments in Schedule 3.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance; and
- provide for the ongoing environmental management of the project.



**Paul Forward**  
Member of the Commission



**David Furlong**  
Member of the Commission

Sydney

2 August 2012

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### SCHEDULE 1

**Application No.:**

05\_0198

**Proponent:**

WDLG Pty Ltd, ATF Dickinson Superannuation Fund, M Walmsley, R Walmsley, H Mabbutt and D Miller

**Approval Authority:**

Minister for Planning and Infrastructure

**Land:**

Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 DP 1117326 at Walmsleys Road and Stott Street, Bilambil Heights.

**Project:**

85 lot subdivision comprising:

- 77 Torrens title residential lots,
  - a 6 lot Community Title scheme (5 residential and 1 neighbourhood property),
  - a public reserve lot,
  - sewage pumping station lot, and
  - associated roads, stormwater and utility infrastructure
-

## SCHEDULE 2

### RECOMMENDED CONDITIONS OF APPROVAL

#### MAJOR PROJECT NO. 05\_0198

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## DEFINITIONS

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory Notes                                         | Advisory information relating to the approval but do not form a part of this approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Proponent                                              | WDLC Pty Ltd, ATF Dickinson Superannuation Fund, M Walmsley, P Walmsley, H Mabbutt and D Miller, or anyone else entitled to act on this approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Application                                            | The project application and the accompanying drawings plans and documentation described in Conditions A3 and A4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| BCA                                                    | Building Code of Australia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Construction                                           | Any works, including earth and building works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Council                                                | Tweed Shire Council                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Certifying Authority                                   | Means a person who is authorised by or under section 109D of the Act to issue a construction certificate under Part 4A of the Act; or in the case of Crown development, a person qualified to conduct a Certification of Crown Building works                                                                                                                                                                                                                                                                                                                                                                 |
| Day                                                    | The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Department                                             | Department of Planning and Infrastructure or its successors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Director-General                                       | Director-General of the Department of Planning and Infrastructure, or nominee/delegate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Director General's approval, agreement or satisfaction | A written approval from the Director- General (or nominee/delegate)<br><br>Where the Director-General's approval, agreement or satisfaction is required under a condition of this approval, the Director-General will endeavour to provide a response within one month of receiving an approval, agreement or satisfaction request. The Director-General may ask for additional information if the approval, agreement or satisfaction request is considered incomplete. When further information is requested, the time taken for the Applicant to respond in writing will be added to the one month period. |
| EEC                                                    | Endangered ecological community                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Evening                                                | The period from 6pm to 10pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| EPA                                                    | Environment Protection Authority, or its successor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EP&A Act                                               | <i>Environmental Planning and Assessment Act 1979</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EP&A Regulation                                        | or <i>Environmental Planning and Assessment Regulation 2000</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Incident                                               | A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Minister                                               | Minister for Planning and Infrastructure, or nominee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Night                                                  | The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NOW                                                    | NSW Office of Water, or its successor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                         |                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OEH                     | Office of the Environment and Heritage, or its successor                                                                                                                                                                                                                                                                |
| PCA                     | Principal Certifying Authority, or in the case of Crown development, a person qualified to conduct a Certification of Crown Building works                                                                                                                                                                              |
| PPR                     | Preferred Project Report                                                                                                                                                                                                                                                                                                |
| Reasonable and Feasible | Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements. Feasible relates to engineering considerations and what is practical to build |
| RMS                     | Roads and Maritime Services Division, Department of Transport or its successor                                                                                                                                                                                                                                          |
| Subject Site            | Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 DP 1117326.                                                                                                                                                                                                                                                 |

## **PART A—ADMINISTRATIVE CONDITIONS**

### **A1 Project Description**

Project approval is granted only to carrying out the project described in detail below:

- 1) Subdivision of Lot 1 DP134787, Lot1 DP167380, Lot 2 DP961928, and Lot 5 DP1117326.
- 2) Creation of 77 residential housing lots.
- 3) Creation of a 6 lot Community Title scheme (5 residential, 1 neighbourhood property).
- 4) Creation of an open space lot for public recreation reserve.
- 5) Dedication of land for roads, public parks and public infrastructure.
- 6) Site rehabilitation works to stabilise current land slip hazards.
- 7) Construction of roads, footpaths, access driveways, revetment structures, earthworks and drainage infrastructure.

### **A2 Staging**

The project is to be constructed in six (6) stages, generally in accordance with Revision F of Plan 35054 dated 04.05.11 prepared by Landsurv Pty Ltd, incorporating the lots as follows:

- (1) Stage 1 comprises lots 1-13 inclusive, incorporating roads and public reserve (see note (a) below).
- (2) Stage 2 comprises lots 14-31 inclusive incorporating roads.
- (3) Stage 3 comprises Community Title subdivision containing six lots.
- (4) Stage 4 comprises lots 32-40 inclusive incorporating roads.
- (5) Stage 5 comprises lots 41-61 inclusive incorporating roads and sewer pumping station.
- (6) Stage 6 comprises lots 63-79 inclusive incorporating roads.

Note (a). The public reserve, shown as part of Stage 1, together with a road access shall be constructed prior to the issuing of a subdivision certificate for more than 25% of the approved allotments and associated roads and services.

Subject to any conditions of approval, staging of allotment and/or road construction may vary in sequence and timing. Essential infrastructure associated with and including, but not limited to, roads, roundabouts, bus routes, footpaths, parks, services, landscaping and environmental management, shall be constructed as specified in the staging listed above or as otherwise provided in these conditions and the proponent's Statement of Commitments. Any revised staging plan that varies the stage boundaries or components listed in (1) – (6) inclusive, and subject to note (a) of this condition, shall be submitted for the approval of the Director General, prior to the issuing of a Construction Certificate for subdivision works.

### **A3 Project in Accordance with Plans**

The project will be undertaken in accordance with the Environmental Assessment, the Preferred Project Report and the following drawings:

| <b>Subdivision Design Drawings prepared by Landsurv Pty Ltd</b> |                 |                              |             |
|-----------------------------------------------------------------|-----------------|------------------------------|-------------|
| <b>Drawing No.</b>                                              | <b>Revision</b> | <b>Name of Plan</b>          | <b>Date</b> |
| 35054 (Sheets 1, 2, 3 in 3 sheets))                             | F               | Plan of Proposed Subdivision | 04.05.11    |

| <b>Engineering Drawings prepared by Opus Quantec McWilliam</b>  |                 |                                                                           |              |
|-----------------------------------------------------------------|-----------------|---------------------------------------------------------------------------|--------------|
| <b>Drawing No.</b>                                              | <b>Revision</b> | <b>Name of Plan</b>                                                       | <b>Date</b>  |
| 203057 Fig.4.0                                                  |                 | Proposed Cut and Fill Contours                                            | October,2011 |
| 203057 Fig 6.0                                                  |                 | Erosion and Sediment Control Plan                                         | October 2011 |
| 203057 Fig 7.0                                                  |                 | Road Layout Plan                                                          | October 2011 |
| 203057 Fig 7.1                                                  |                 | Site Cross Sections                                                       | October 2011 |
| 203057 Fig 7.2                                                  |                 | Site Cross Sections                                                       | October 2011 |
| 203057 Fig 8.0                                                  |                 | Walmsleys Road Longitudinal Section and Typical Cross Section             | October 2011 |
| 203057 Fig 9.0                                                  |                 | Road 1 Longitudinal Section and Typical Cross Section                     | October 2011 |
| 203057 Fig 10.0                                                 |                 | Road 2 Longitudinal Section and Typical Cross Section                     | April 2009   |
| 203057 Fig 11.0                                                 |                 | Road 3 Longitudinal Section and Typical Cross Section                     | October 2011 |
| 203057 Fig 12.0                                                 |                 | Road 5 Longitudinal Section and Typical Cross Section                     | October 2011 |
| 203057 Fig 12.1                                                 |                 | Right of Carriageway No.1 Longitudinal Section and Typical Cross Sections | April 2010   |
| 203057 Fig 12.2                                                 |                 | Right of Carriageway No.2 Longitudinal Section and Typical Cross Sections | April 2010   |
| 203057 Fig 12.3                                                 |                 | Right of Carriageway No.3 Longitudinal Section and Typical Cross Section  | April 2010   |
| 203057 Fig 12.4                                                 |                 | Right of Carriageway No.4 Longitudinal Section and Typical Cross Section  | April 2010   |
| 203057 Fig 13.0                                                 |                 | Water Cycle Management Plan Pre-Development                               | October 2011 |
| 203057 Fig 14.0                                                 |                 | Water Cycle Management Plan Post-Development                              | October 2011 |
| 203057 Fig 15.0                                                 |                 | Services Plan                                                             | October 2011 |
| 203057 Fig 16.0                                                 |                 | Proposed Grades Analysis                                                  | August 2010  |
| 203057 SK20100303                                               |                 | Indicative Restriction of Use Layout Plan                                 | June 2011    |
| 203057 SK20100713                                               |                 | Walmsley Road Extension Proposed 1 in 4 Batter                            | July, 2010   |
| 203057 SK20100809-01                                            | Rev A           | Proposed Local Park Grade Compliance Schematic                            | August 2010  |
| 203057 SK20100809-02                                            | Rev A           | Proposed Local Park Grade Compliance Schematic                            | August 2010  |
| 203057 SK20100921                                               |                 | Proposed Energy Dissipater & Level Spreaders                              |              |
| <b>Landscape Drawings prepared by Form Landscape Architects</b> |                 |                                                                           |              |
| <b>Drawing No.</b>                                              | <b>Revision</b> | <b>Name of Plan</b>                                                       | <b>Date</b>  |
| 91105 DA03 P2                                                   |                 | Landscape Masterplan                                                      | 08 Dec 10    |
| 91105 DA03 P3                                                   |                 | Landscape Masterplan                                                      | 08 Dec 10    |
| 91105 DA03 P4                                                   |                 | Landscape Masterplan - Pedestrian                                         | 08 Dec 10    |

|               |  |                                               |           |
|---------------|--|-----------------------------------------------|-----------|
|               |  | Pathways                                      |           |
| 91105 DA03 P5 |  | Landscape Masterplan - Trees In Public Places | 08 Dec 10 |
| 91105 DA03 P6 |  | Landscape Masterplan - Public Park Concept    | 08 Dec 10 |
| 91105 DA03 P7 |  | Tree Suitability List                         | 08 Dec 10 |

#### **A4 Project in Accordance with Documents**

The project will be undertaken in accordance with the following documents:

- (1) *Environmental Assessment Report* dated November, 2006, as revised June 2009 prepared by Darryl Anderson Consulting Pty Ltd; and,
- (2) *Preferred Project Report/Response to Submissions* prepared by Darryl Anderson Consulting Pty Ltd dated October 2011;

#### **A5 Inconsistency between documents**

In the event of any inconsistency between conditions of this approval, the proponent's Statement of Commitments and the drawings/documents referred to in Conditions A3 and A4, the conditions of this approval shall prevail to the extent of the inconsistency.

#### **A6 Lapsing of Approval**

This approval shall lapse 5 years after the date on which it is granted, unless the works subject to this approval have been commenced before that time.

#### **Monetary Contributions**

##### **A7 Section 94 Monetary Contributions**

- 1) Prior to the endorsement of a Subdivision Certificate for each stage of the subdivision, the Proponent must pay, in proportion to the additional lots created by that stage, the following contributions to Council pursuant to Section 94 of the *Environmental Planning and Assessment Act (1979)*:

| Section 94 Plan No 5 – Local Open Space (2009) - Structured                                                             |              |                           |               |
|-------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------|---------------|
|                                                                                                                         | No. of ET    | \$ per ET                 | Sub-Total     |
| Stage 1                                                                                                                 | 8            | \$602 (base rate \$575)   | \$3,371.20*   |
| Stage 2                                                                                                                 | 18           | \$602 (base rate \$575)   | \$7,585.20*   |
| Stage 3                                                                                                                 | 5            | \$602 (base rate \$575)   | \$2,107.00*   |
| Stage 4                                                                                                                 | 9            | \$602 (base rate \$575)   | \$3,792.60*   |
| Stage 5                                                                                                                 | 21           | \$602 (base rate \$575)   | \$8,849.40*   |
| Stage 6                                                                                                                 | 17           | \$602 (base rate \$575)   | \$7,163.80*   |
| Section 94 Plan No 4 - Tweed Road Contribution Plan (2012) (*refer to 2 below for heavy haulage contribution, included) |              |                           |               |
|                                                                                                                         | No. of Trips | \$ per trip               | Sub-Total     |
| Stage 1                                                                                                                 | 52           | \$2860 (base rate \$2836) | \$103,890.13* |
| Stage 2                                                                                                                 | 117          | \$2860 (base rate \$2836) | \$233,752.79* |
| Stage 3                                                                                                                 | 32.5         | \$2860 (base rate \$2836) | \$64,931.33*  |
| Stage 4                                                                                                                 | 58.5         | \$2860 (base rate \$2836) | \$116,876.39* |
| Stage 5                                                                                                                 | 136.5        | \$2860 (base rate \$2836) | \$272,711.59* |
| Stage 6                                                                                                                 | 110.5        | \$2860 (base rate \$2836) | \$220,766.52* |

| <b>Section 94 Plan No 11 - Tweed Shire Library Facilities (2009)</b>                                  |                  |                                |                  |
|-------------------------------------------------------------------------------------------------------|------------------|--------------------------------|------------------|
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$816 (base rate \$792)        | \$4,569.60*      |
| Stage 2                                                                                               | 18               | \$816 (base rate \$792)        | \$10,281.60*     |
| Stage 3                                                                                               | 5                | \$816 (base rate \$792)        | \$2,856.00*      |
| Stage 4                                                                                               | 9                | \$816 (base rate \$792)        | \$5,140.80*      |
| Stage 5                                                                                               | 21               | \$816 (base rate \$792)        | \$11,995.20*     |
| Stage 6                                                                                               | 17               | \$816 (base rate \$792)        | \$9,710.40*      |
| <b>Section 94 Plan No 12 - Bus Shelters (2009)</b>                                                    |                  |                                |                  |
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$62 (base rate \$60)          | \$347.20*        |
| Stage 2                                                                                               | 18               | \$62 (base rate \$60)          | \$781.20*        |
| Stage 3                                                                                               | 5                | \$62 (base rate \$60)          | \$217.00*        |
| Stage 4                                                                                               | 9                | \$62 (base rate \$60)          | \$390.60*        |
| Stage 5                                                                                               | 21               | \$62 (base rate \$60)          | \$911.40*        |
| Stage 6                                                                                               | 17               | \$62 (base rate \$60)          | \$737.80*        |
| <b>Section 94 Plan No 13 - Environ Cemetery (2009)</b>                                                |                  |                                |                  |
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$121 (base rate \$101)        | \$677.60*        |
| Stage 2                                                                                               | 18               | \$121 (base rate \$101)        | \$1,524.60*      |
| Stage 3                                                                                               | 5                | \$121 (base rate \$101)        | \$423.50*        |
| Stage 4                                                                                               | 9                | \$121 (base rate \$101)        | \$762.30*        |
| Stage 5                                                                                               | 21               | \$121 (base rate \$101)        | \$1,778.70*      |
| Stage 6                                                                                               | 17               | \$121 (base rate \$101)        | \$1,439.90*      |
| <b>Section 94 Plan No 15 - Community Facilities (2010)</b>                                            |                  |                                |                  |
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$1352 (base rate \$1305.6)    | \$7,571.20*      |
| Stage 2                                                                                               | 18               | \$1352 (base rate \$1305.6)    | \$17,035.20*     |
| Stage 3                                                                                               | 5                | \$1352 (base rate \$1305.6)    | \$4,732.00*      |
| Stage 4                                                                                               | 9                | \$1352 (base rate \$1305.6)    | \$8,517.60*      |
| Stage 5                                                                                               | 21               | \$1352 (base rate \$1305.6)    | \$19,874.40*     |
| Stage 6                                                                                               | 17               | \$1352 (base rate \$1305.6)    | \$16,088.80*     |
| <b>Section 94 Plan No 18 - Council Administration Offices and Technical Support Facilities (2009)</b> |                  |                                |                  |
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$1812.62 (base rate \$1759.9) | \$10,150.67*     |
| Stage 2                                                                                               | 18               | \$1812.62 (base rate \$1759.9) | \$22,839.01*     |
| Stage 3                                                                                               | 5                | \$1812.62 (base rate \$1759.9) | \$6,344.17*      |
| Stage 4                                                                                               | 9                | \$1812.62 (base rate \$1759.9) | \$11,419.51*     |
| Stage 5                                                                                               | 21               | \$1812.62 (base rate \$1759.9) | \$26,645.51*     |
| Stage 6                                                                                               | 17               | \$1812.62 (base rate \$1759.9) | \$21,570.18*     |
| <b>Section 94 Plan No 22 - Cycleways (2009)</b>                                                       |                  |                                |                  |
|                                                                                                       | <b>No. of ET</b> | <b>\$ per ET</b>               | <b>Sub-Total</b> |
| Stage 1                                                                                               | 8                | \$460 (base rate \$447)        | \$2,576.00*      |
| Stage 2                                                                                               | 18               | \$460 (base rate \$447)        | \$5,796.00*      |
| Stage 3                                                                                               | 5                | \$460 (base rate \$447)        | \$1,610.00*      |
| Stage 4                                                                                               | 9                | \$460 (base rate \$447)        | \$2,898.00*      |
| Stage 5                                                                                               | 21               | \$460 (base rate \$447)        | \$6,762.00*      |
| Stage 6                                                                                               | 17               | \$460 (base rate \$447)        | \$5,474.00*      |

| <b>Section 94 Plan No 26 - Shirewide Regional Open Space (2009) – Casual</b>     |                  |                           |                  |
|----------------------------------------------------------------------------------|------------------|---------------------------|------------------|
|                                                                                  | <b>No. of ET</b> | <b>\$ per ET</b>          | <b>Sub-Total</b> |
| Stage 1                                                                          | 8                | \$1064 (base rate \$1031) | \$5,958.40*      |
| Stage 2                                                                          | 18               | \$1064 (base rate \$1031) | \$13,406.40*     |
| Stage 3                                                                          | 5                | \$1064 (base rate \$1031) | \$3,724.00*      |
| Stage 4                                                                          | 9                | \$1064 (base rate \$1031) | \$6,703.20*      |
| Stage 5                                                                          | 21               | \$1064 (base rate \$1031) | \$15,640.80*     |
| Stage 6                                                                          | 17               | \$1064 (base rate \$1031) | \$12,661.60*     |
| <b>Section 94 Plan No 26 - Shirewide Regional Open Space (2009) – Structured</b> |                  |                           |                  |
|                                                                                  | <b>No. of ET</b> | <b>\$ per ET</b>          | <b>Sub-Total</b> |
| Stage 1                                                                          | 8                | \$3730 (base rate \$3619) | \$20,888.00*     |
| Stage 2                                                                          | 18               | \$3730 (base rate \$3619) | \$46,998.00*     |
| Stage 3                                                                          | 5                | \$3730 (base rate \$3619) | \$13,055.00*     |
| Stage 4                                                                          | 9                | \$3730 (base rate \$3619) | \$23,499.00*     |
| Stage 5                                                                          | 21               | \$3730 (base rate \$3619) | \$54,831.00*     |
| Stage 6                                                                          | 17               | \$3730 (base rate \$3619) | \$44,387.00*     |
| <b>TOTAL CONTRIBUTIONS PAYABLE</b>                                               |                  |                           |                  |
| <b>Stage 1</b>                                                                   |                  | <b>\$160,000</b>          |                  |
| <b>Stage 2</b>                                                                   |                  | <b>\$360,000</b>          |                  |
| <b>Stage 3</b>                                                                   |                  | <b>\$100,000</b>          |                  |
| <b>Stage 4</b>                                                                   |                  | <b>\$180,000</b>          |                  |
| <b>Stage 5</b>                                                                   |                  | <b>\$420,000</b>          |                  |
| <b>Stage 6</b>                                                                   |                  | <b>\$340,000</b>          |                  |
| <b>TOTAL</b>                                                                     |                  | <b>\$1,560,000</b>        |                  |

\*includes adjustments to ensure compliance with the Minister's direction relating to the maximum contribution payable per lot

## 2) Roads: Heavy Haulage Component

The Tweed Road Contribution S94 Plan No. 4, Sector 4\_4

Payment of a contribution pursuant to Section 94 of the Act and the Heavy Haulage (Extractive materials) provisions of Tweed Road Contribution Plan No. 4 - Version 5.1.1 prior to the issue of a construction certificate or subdivision certificate for any stage, whichever occurs first. The contribution shall be based on the following formula:-

$\$Con_{TRCP - Heavy} = Prod. \times Dist \times \$Unit \times (1 + Admin.)$ , where:

$\$Con_{TRCP - Heavy}$  heavy haulage contribution, and:

Prod. projected demand for extractive material to be hauled to the site over life of project in tonnes

Dist. average haulage distance of product on Shire roads (trip one way)

\$Unit the unit cost attributed to maintaining a road as set out in Section 6.4 (currently 2.5c per tonne per kilometre)

Admin. Administration component - 5% - see Section 6.5

(This contribution applies to each stage of development but is not repeated for each stage in this document for legibility purposes)

## 3) Timing and Method of Payment

The contribution shall be paid in the form of cash or bank cheque, made out to Tweed Shire Council. For accounting purposes, the contribution may require separate payment for each of the categories above and you are advised to check with Council.

Evidence of the payment to Council, shall be submitted to the Certifying Authority prior to the issue of the Subdivision Certificate for each stage of the project.

#### 4) Section 94 Plans

A copy of the Section 94 contribution plans may be inspected at the Civic and Cultural Centres, Tumbulgum Road, Murwillumbah and Brett Street, Tweed Heads.

### **A8 Section 64 Monetary Contributions**

- 1) Contributions plans relevant to the subdivision include:
  - a) Water Development Services Plan No.3
  - b) Sewer Contributions - Banora Point
- 2) Prior to the endorsement of a Subdivision Certificate for each stage of the subdivision, the Proponent must pay, in proportion to the additional lots created by that stage, the following contributions to Council pursuant to Section 64 of the *Local Government Act 1993*.

| STAGES  | Water Development Servicing Plan No.3 |          | Sewer Banora   |          |
|---------|---------------------------------------|----------|----------------|----------|
|         | Calculation/ET                        | Total    | Calculation/ET | Total    |
| Stage 1 | 10.8 ET @ \$11571                     | \$131220 | 12 ET @ \$5560 | \$70056  |
| Stage 2 | 18 ET @ \$11571                       | \$218700 | 18 ET @ \$5560 | \$105084 |
| Stage 3 | 5.2 ET @ \$11571                      | \$63180  | 5 ET @ \$5560  | \$29190  |
| Stage 4 | 9.2 ET @ \$11571                      | \$111780 | 9 ET @ \$5560  | \$52542  |
| Stage 5 | 21.6 ET @ \$11571                     | \$262440 | 21 ET @ \$5560 | \$122598 |
| Stage 6 | 17.4 ET @ \$11571                     | \$211410 | 17 ET @ \$5560 | \$99246  |

- 3) These charges to remain fixed for a period of twelve (12) months from the date of this approval and thereafter in accordance with the rates applicable in Council's adopted Fees and Charges current at the time of payment.
- 4) A copy of the Section 64 contribution plans may be inspected at the Civic and Cultural Centres, Tumbulgum Road, Murwillumbah and Brett Street, Tweed Heads.

## **PART B—PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE FOR SUBDIVISION WORKS**

### **Subdivision Design Modifications**

#### **B1 Through site access for pedestrians and bicycles only**

The proposed Road No 1 shall be terminated in a new cul-de-sac head, between lots 21 and 68, to ensure there is no vehicular access through to the existing Stott Street. The formerly proposed road reserve between lots 21 and 68 must be landscaped and dedicated to Council, to ensure its future availability, if required.

The proponent shall prepare an amended road design to comply with this condition to the satisfaction of Council and the required works must be completed prior to the issue of a Subdivision Certificate for more than 50% of the approved allotments and associated roads and services.

#### **B2 Intersection of Walmsley Road and Stott Street**

The proponent shall design and construct a suitable traffic management facility at the intersection of Walmsley Road and Stott Street, to the satisfaction of Council. Construction

shall be completed prior to the issue of a Subdivision Certificate for more than 50% of the approved allotments and associated roads and services.

Note: As Road No 1 (see condition B1 above) is no longer a through road, it is unlikely that this intersection would require a bus accessible roundabout.

### **B3      *Lot Layout and Access to Sewage Pumping Station***

The layout of proposed Lots 55, 56, 57 and 62 and access to the sewage pumping station in Stage 5 shall be revised as follows:

- a) The access handle proposed for lot 55 shall be included into lot 62 and be used to provide exclusive access to the proposed Pumping Station;
- b) The width of proposed lot 56 shall be reduced by 1 metre along its southern boundary;
- c) The space created in point b) above shall be incorporated into proposed lot 55 and together with the access handle to proposed lot 57, be used to accommodate a common right of access to both of those lots with a minimum width of 5 metres.

### **B4      *Community Title Road***

- a) No physical road formation or associated works is to occupy the Environmental Management Area (EMA), other than within an approved Asset Protection Zone, within Lot C1 of the Community Title subdivision.
- b) A plan showing the physical road works located outside of the defined and approved EMA, subject to item (a) above, shall be provided for approval of the Certifying Authority prior to the release of the Construction Certificate for Stage 3.
- c) The Community Title Management Statement is to be amended to specify that no road or associated works shall be constructed within the EMA, subject to item (a) above.

For the purposes of this condition the EMA shall be the 15 metres width, closest to the adjacent sensitive vegetation.

### **B5      *Noise Attenuation***

The subdivision proposal shall be implemented in accordance with the recommendations as contained in the submitted Noise Impact Report dated 30 October 2007, by CRG Traffic and Acoustics Pty Ltd.

### **B6      *Subdivision***

- 1) Notwithstanding any other condition of this approval but subject to condition AN12, separate Construction Certificates may be issued for bulk earthworks and for civil works. The carrying out of bulk earthworks may be commenced prior to the issue of a Construction Certificate for civil works where it can be demonstrated all works are compatible with the civil works subject to compliance with the following conditions: A3, B1, B2, B3(a), B6, B7, B8, B9, B11, B12, B16, and conditions in Part C and Part D of this approval.
- 2) Prior to the issue of a Construction Certificate the following detail in accordance with Councils adopted Development Design and Construction Specifications shall be submitted to the satisfaction of the Certifying Authority.
  - a. copies of compliance certificates relied upon
  - b. four (4) copies of detailed engineering plans and specifications. The detailed plans shall include but are not limited to the following:
    - i. earthworks

- ii. roadworks/furnishings
- iii. stormwater drainage
- iv. water supply works
- v. sewerage works
- vi. landscaping works
- vii. sedimentation and erosion management plans
- viii. location of all service conduits (water, sewer, Country Energy and Telstra)

Note: The *Environmental Planning and Assessment Act 1979* makes no provision for works under the *Water Management Act 2000* and Section 138 of the *Roads Act 1993* to be certified by an Accredited Certifier.

#### **B7 Construction Compliance Bond and Long Service Levy**

- 1) Prior to the issue of a Construction Certificate for each stage of the subdivision, a cash bond or bank guarantee (unlimited in time) shall be lodged with Council for an amount based on 1% of the value of the works (minimum \$1,000). The bond may be called up at any time and the funds used to rectify any non-compliance with the conditions of this consent which are not being addressed to the satisfaction of the General Manager or his delegate. The bond will be refunded, if not expended, when the final Subdivision/Occupation Certificate is issued.
- 2) In accordance with Section 109F(i) of the *Environmental Planning and Assessment Act 1979* (as amended), a construction certificate for subdivision works or building works shall not be issued until any long service levy payable under Section 34 of the *Building and Construction Industry Long Service Payments Act, 1986* (or where such levy is payable by instalments, the first instalment of the levy) has been paid. Council is authorised to accept payment. Where payment has been made elsewhere, proof of payment is to be provided.

#### **Remediation / Earthworks**

##### **B8 Geotechnical Compliance**

Each stage shall be preceded by an endorsement of detailed earthworks design plans by a practicing geotechnical engineer to certify compliance of the plans and implementation strategy with the conclusions and recommendations of the geotechnical reports, submitted with the EA, numbered JU/04/810 (dated June/July 2004 and May 2009) and NO/03/699 (dated December 2003/January 2004) prepared by Maiden Geotechnics.

##### **B9 Cut and Fill levels**

- 1) Cut and fill levels for each stage within the project are to be generally in accordance with Opus Quantec McWilliam Drawing 203057 Fig 4.0 dated October, 2011, *Proposed Cut and Fill Contours*. Design plans are to be approved by Council prior to issue of the Construction Certificate for each stage of the project.
- 2) The source of any fill material is to be identified and reported by a practicing geotechnical engineer certifying that the material is suitable for the intended purpose prior to the issue of the Construction Certificate for each stage of the subdivision. The report is to include any conditions on the use of the material and a report from a registered NATA laboratory on the soil properties of the fill material.

##### **B10 Site Regrading**

- 1) Site regrading undertaken for all stages of the project must be undertaken in accordance with *Tweed Shire Council's Development Design Specification D6 – Site Regrading*. Evidence of compliance with this specification must be provided to Council for approval prior to issue of the Construction Certificate for each stage of the project.

- 2) At the interface between the areas subject to vegetation management and earthworks proposals, and to ensure vegetation management objectives are achieved, earthworks are not permitted closer than 5 metres to vegetation management works at the eastern and western boundaries of the site.

### **B11 Retaining Walls**

- 1) All retaining structures and batters shall be designed in accordance with Tweed Shire Council's Development Design Specification D6 - Site Regrading. Permissible retaining wall and batter heights are specified in Table D6.1, except that side and rear boundary structures in residential subdivisions are subject to Note 1 of D6.05.4(1), rather than D6.04.4(1).
- 2) All retaining structures and batters must comply with Development Design Specification D6 - Site Regrading. Where variations to this specification are proposed, they must be accompanied by a design report that demonstrates that the proposed varied design achieves a positive engineering, urban design or environmental outcome, which is superior to a compliant design.
- 3) Design detail including surcharge loads for any retaining walls to be erected on the site must be submitted to the Certifying Authority for approval prior to issue of a Construction Certificate for each stage of the project, in accordance with AS 4678, *Tweed Shire Council Development Control Plan Part A14 - Cut and Fill on Residential Land* and Councils Development Design and Construction Specifications. Design detail is to be supported by certification of adequacy of design from a suitably qualified structural engineer.
- 4) Details from a Structural Engineer are to be submitted to the Certifying Authority for approval prior to the issue of a Construction Certificate for each stage of the subdivision for all retaining walls, footings, structures or the like. The design should take into consideration the zone of influence on the sewer main or other underground infrastructure and include a certificate of sufficiency of design.

Note: Ground anchors (to retain excavated material) within Council or private property are not permitted without prior consent from the property owner being obtained. If the land owner is Council, approval is required from the General Manager or his delegate, and the anchors are required to be removed upon completion of the works, unless a compensation amount is negotiated with Council.

### **B12 Pre-Construction Dilapidation Reports**

The Proponent is to engage a qualified structural engineer to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate for each stage. A copy of the report is to be forwarded to Council.

### **Construction Management**

#### **B13 Construction Management Plan**

- 1) Prior to the issue of a Construction Certificate for each stage of the project, a Construction Management Plan shall be submitted to and approved by the Certifying Authority. A copy of the approved plan shall be submitted to Council. The Plan shall address, but not be limited to, the following matters where relevant:
  - a) hours of work;
  - b) contact details of site manager;
  - c) traffic and pedestrian management;

- d) noise and vibration management;
  - e) construction waste management;
  - f) erosion and sediment control; and,
  - g) flora and fauna management, including tree protection works.
- 2) The site earthworks are to be staged and limited to the proposed staged areas 1 to 6 inclusive or a 5ha maximum total area at any time to reduce exposed areas. Works are to be topsoiled and seeded immediately after completion to protect the exposed areas from water and wind erosion. The earthwork staging details are to be shown on the Construction Certificate.

#### ***B14 Traffic & Pedestrian Management Plan***

Prior to the issue of a Construction Certificate for each stage of the project, a Traffic and Pedestrian Management Plan in accordance with AS1742 and RTA publication 'Traffic Control at Works Sites' Version 2 shall be prepared by an RTA accredited person, and shall be submitted to and approved by the Certifying Authority. Safe public access shall be provided at all times. The Plan shall address, but not be limited to, the following matters:

- (1) ingress and egress of vehicles to the site,
- (2) loading and unloading, including construction zones,
- (3) predicted traffic volumes, types and routes, and
- (4) pedestrian and traffic management methods.

The Proponent shall submit a copy of the approved plan to Council.

#### ***Traffic & Parking***

#### ***B15 Road Junction***

In order to ensure that vehicles exit/enter the site or road network in a safe manner, the following works must be installed:

Walmsleys Road / Nabilla Street Intersection as per drawing 203057 SK20100913-5 - to be modified so that no obstruction occurs to vehicles exiting from existing residential driveways.

Details of the type, location and operation of the device are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate for Stage 1 or 6.

#### ***Subdivision Works***

#### ***B16 Stormwater (prior to Issue of Construction Certificate)***

- 1) All stormwater drainage outlets shall be designed to discharge to a lawful point of discharge, being a Council drainage system, existing watercourse or easement, and shall discharge via stormwater quality control devices, energy dissipation devices and level spreaders as required by Council specifications D5 and D7 to minimise adverse impacts of the development on downstream property. All stormwater discharge onto Lot 6 DP1117326 must satisfy the existing "restriction on the use of land" burdening that land such that it "reflects the existing natural drainage pattern of the catchment". The design and location of all stormwater outlets and related treatment and mitigation structures must consider and make provision for future access for maintenance to the satisfaction of Council.
- 2) All interallotment drainage systems shall be designed in accordance with Development Design Specification D5 – Stormwater Drainage Design, catering for minor and major storm events, with appropriate consideration for blockages, bends,

freeboard to adjoining residential development, and adjacent earth retaining structures. Where practical, interallotment drainage systems shall discharge to the public stormwater drainage system rather than discharge separately, to minimise the number of outlets.

- 3) Staging plans for the subdivision must provide the necessary stormwater infrastructure to fully service each stage of the development, to the satisfaction of Council.
- 4) Engineering calculations and/or modelling of peak stormwater discharges for a range of storm intensities and durations shall be provided with the Construction Certificate application to demonstrate any on site detention / retention requirements for individual allotments in order to mitigate adverse downstream impacts. Any measures identified for individual allotments (e.g. rainwater tank sizing, available storage volumes) shall be registered on each land title at subdivision certificate stage.
- 5) Permanent stormwater quality treatment shall be provided in accordance with the following:
  - a) The Construction Certificate Application shall detail stormwater management for the occupational or use stage of the development in accordance with Section D7.07 of Council's *Development Design Specification D7 - Stormwater Quality*. Permanent stormwater quality treatment shall comply with section 5.5.3 of the *Tweed Urban Stormwater Quality Management Plan* and Council's *Development Design Specification D7 - Stormwater Quality*.
  - b) The stormwater and site works shall incorporate water sensitive design principles and where practical, integrated water cycle management.
  - c) Specific Requirements to be detailed within the Construction Certificate application include shake down area along the haul route immediately before the intersection with the road reserve.
  - d) A Construction Certificate Application for works that involve any of the following:
    - connection of a private stormwater drain to a public stormwater drain
    - installation of stormwater quality control devices
    - erosion and sediment control works will not be approved until prior separate approval to do so has been granted by Council under s.68 of the *Local Government Act, 1993*.

Applications for these works must be submitted on Council's standard s.68 stormwater drainage application form accompanied by the required attachments and the prescribed fee.

- e) Erosion and Sediment Control shall be provided in accordance with the following:
  - The Construction Certificate Application must include a detailed erosion and sediment control plan prepared in accordance with Section D7.07 of *Development Design Specification D7 - Stormwater Quality*.
  - Construction phase erosion and sediment control shall be designed, constructed and operated in accordance with *Tweed Shire Council Development Design Specification D7 - Stormwater Quality* and its Annexure A – "Code of Practice for Soil and Water Management on Construction Works".

## ***Road Design***

### ***B17 Roads***

- 1) Kerb and gutter, stormwater drainage, full road width pavement including traffic facilities (roundabouts, median islands etc.) and paved footpaths shall be constructed along the full length of the new roads.
- 2) All roads shall be designed in accordance with the relevant requirements of Council. Final road design plans shall be prepared by a qualified practising Civil Engineer and submitted to the Certifying Authority prior to the issue of a Construction Certificate for below ground works for each stage of the project.
- 3) Rumble Bar Delineators including line marking are to be provided on Walmsleys Road crest at the start of Walmsleys Road extension in front of the existing driveways. Line marking and Rumble Bar Delineators are to physically reduce the running lanes to 3.0m. Appropriate "Crest Signs" and "No Parking" signs are to be provided.

### ***B18 Regulatory Signage***

All traffic regulatory signage and line marking is to be shown on the Construction Certificate application for each stage of the subdivision.

### ***B19 Driveways***

The Construction Certificate application for each stage of the subdivision is to demonstrate that all lots in the steeper sections of the subdivision can be serviced by a driveway in accordance with Council's design and construction specifications.

### ***B20 Footpaths***

A concrete footpath 1.2 metres wide is to be constructed on a compacted base along the entire frontage of the site in accordance with the councils Development Design and Construction Specifications and Standard Drawing SD013.

Twenty four (24) hours notice is to be given to the councils Engineering & Operations Division before placement of concrete to enable formwork and sub grade to be inspected.

### ***B21 Section 138 Application***

Application shall be made to Council under Section 138 of the *Roads Act 1993* for works pursuant to this approval located within the road reserve for each stage of the project. The engineering plan submission must include copies of compliance certificates relied upon and details relevant to but not limited to the following: -

- 1) Road works/furnishings;
- 2) Stormwater drainage;
- 3) Water and sewerage works;
- 4) Sediment and erosion control plans;
- 5) Location of all services/conduits; and,
- 6) Traffic control plan.

## ***Landscaping***

### ***B22 Parks***

- 1) Prior to the release of a Construction Certificate for each stage of the development a detailed landscape plan prepared by a qualified landscape architect must be submitted for all areas of casual open space, structured open space and streetscapes

to be dedicated to Council. Such plan(s) must be approved by the Manager, Recreation Services, Tweed Shire Council and include embellishments such as listed in Councils Subdivision Manual (Section A5 of the Tweed Development Control Plan) and Development Design Specification (D14) and related Standard Drawings and include grassing, landscaping, seating, playground equipment and shade cover. The plans must provide slope information and indicate all underground services. Where play equipment is installed a minimum area of 10m around the equipment is to be turfed and the remaining area seeded.

- 2) This detailed plan may include variations to the Landscape Masterplan if sought by Council. This could include allowing for future access to the area described as the 'Eastern Conservation Zone' should it become public land.
- 3) The developer is to liaise with Council's Recreation Services Unit regarding the final design and embellishment of this park.
- 4) Any playgrounds included in landscape plans must comply with the guidelines established in the 'Playground Audit for Tweed Shire Council' (July 2009). Appendix 3 of this establishes a procedure for assessing nearby hazards and mitigation measures. New subdivisions designed after development of these guidelines must ensure no playground facility has a Facility Risk Rating exceeding 13 as defined in Table 3A7 of that document.

## ***Vegetation Management***

### ***B23     Vegetation Management Plan***

A Vegetation Management Plan (VMP) shall be prepared for the site in accordance with the recommendations contained in report prepared by Biolink Ecological Consultants, dated June 2011, Appendix III, that proposes Objectives and Guiding Principles. The report is to be submitted (and a copy forwarded to the department) for the approval of Tweed Shire Council prior to the issue of a Construction Certificate for subdivision works.

## ***Bushfire Management***

### ***B24     Asset Protection Zones***

- 1) Asset Protection Zones (APZs) in each stage are to be provided in accordance with the Ecological Bushfire Planning Assessment in the Biolink Ecological Consultants report dated June 2011, as contained within the Environmental Management Area, illustrated on the proposed subdivision plans in condition A3 . Details of the APZs are to be provided, accompanied by RFS endorsement, to the satisfaction of the Certifying Authority prior to the release of the Construction Certificate for each stage.
- 2) Asset Protection Zones in each Stage are to be provided on private land, in accordance with *Planning for Bushfire Protection* (2006). Details and a plan showing the APZs, accompanied by RFS endorsement, are to be provided to the satisfaction of the Certifying Authority prior to the release of the Construction Certificate for each Stage.
- 3) Thinning of Camphor Laurel trees within the APZ for Lots 38, 39, 40, 55, 57, 59, 60 and 61 is required in order to comply with *Planning for Bushfire Protection 2006* as part of the on going maintenance of adequate bushfire protection.

## ***Monitoring***

### ***B25     Stormwater Monitoring Plan***

In order to demonstrate that the stormwater management system satisfactorily complies with the intended design and the *Tweed Shire Council Development Control Plan Stormwater Design Specification*, a Stormwater Monitoring Plan shall be submitted with the s68 Stormwater Application to Council for approval prior to issue of the Construction Certificate for the first stage of the project. Due to the proximity of the SEPP 14 wetlands, the plan shall consider the appropriate water quality objectives of the *Tweed Urban Stormwater Quality Management Plan, 2012*, for drainage of stages 4, 5 and 6 for approval of the council.

## **PART C—PRIOR TO COMMENCEMENT OF WORKS**

### ***Notification Requirements***

#### **C1 Notice to be Given Prior to Commencement / Excavation**

- 1) The Principal Certifying Authority and Council shall be given written notice, at least 48 hours prior to the commencement of excavation, shoring or underpinning works on the site for each stage of the project.
- 2) The Principal Certifying Authority is to be given a minimum of 48 hours notice prior to any critical stage inspection or any other inspection nominated by the Principal Certifying Authority via the notice under Section 81A of the *Environmental Planning and Assessment Act 1979*.

#### **C2 Notifying Adjoining Neighbours**

- 1) Where any pumps used for dewatering operations are proposed to be operated on a 24-hour basis, the owners of adjoining premises shall be notified accordingly prior to commencement of such operations for any stage of the project.
- 2) All pumps used for onsite dewatering operations are to be installed on the site in a location that will minimise any noise disturbance to neighbouring or adjacent premises and be acoustically shielded to the satisfaction of Council so as to prevent the emission of offensive noise as a result of their operation.

### ***Public Risk***

#### **C3 Public Risk Liability**

- 1) The proponent shall provide to the PCA copies of Public Risk Liability Insurance to a minimum value of \$10 Million for the period of commencement of works until the completion of the defects liability period.
- 2) Where the construction work is on or adjacent to public roads, parks or drainage reserves the development shall provide and maintain all warning signs, lights, barriers and fences in accordance with AS 1742 (Manual of Uniform Traffic Control Devices). The contractor or property owner shall be adequately insured against Public Risk Liability and shall be responsible for any claims arising from these works.

#### **C4 Site Safety**

Prior to the commencement of works for each stage of the subdivision, the applicant shall ensure that a Site-Specific Safety Management Plan and Safe Work Methods for the subject site have been prepared and put in place in accordance with either:-

- a) Occupation Health and Safety and Rehabilitation Management Systems Guidelines, 3<sup>rd</sup> Edition, NSW Government, or
- b) AS4804 Occupation Health and Safety Management Systems - General Guidelines on Principles Systems and Supporting Techniques.
- c) WorkCover Regulations 2000

## **Structural Works**

### **C5     *Structural Details***

Prior to the commencement of construction at each stage of the project, the Proponent shall submit to the satisfaction of the Principal Certifying Authority structural drawings prepared and signed by a suitably qualified practising Structural Engineer that comply with:

- (1) the relevant clauses of the BCA,
- (2) the relevant project approval,
- (3) drawings and specifications comprising the Construction Certificate, and
- (4) the relevant Australian Standards listed in the BCA (Specification A1.3).

### **C6     *Filling of the Site***

Once the Construction Certificate has been issued for each stage of the subdivision, any change in the source of fill must be notified to the Certifying Authority and approval obtained to the new source prior to the import of any of the material. A report from a practicing geotechnical engineer certifying that the new source material is suitable for the intended purpose must be provided. The report must include any conditions on the use of the material and a report from a registered NATA laboratory on the soil properties of the fill material including contamination.

### **C7     *Retaining Walls***

Prior to commencement of works for any stage of the project a certificate of adequacy of design, signed by a practising Structural Engineer on all proposed retaining walls in excess of 1.2m in height, must be provided to the Principal Certifying Authority. The certificate must also address any loads or possible loads on the wall from structures adjacent to the wall and must be supported by a geotechnical assessment of the founding material.

## **Pollution Control**

### **C8     *Erosion and Sediment Control***

Prior to commencement of work on the site for each stage of the project, all erosion and sedimentation control measures are to be installed and operational including the provision of a "shake down" area where required to the satisfaction of the Principal Certifying Authority.

## **Road Construction**

### **C9     *Pavement Design***

- 1) Before the commencement of the relevant stages of road construction for each stage of the project, pavement design detail including reports from a Registered NATA Consultant shall be submitted to Council for approval and demonstrating.
  - a. That the pavement has been designed in accordance with *Tweed Shire Council's Development Design Specification, D2*.
  - b. That the pavement materials to be used comply with the specifications tabled in Council's Construction Specifications, C242-C245, C247, C248 and C255.
  - c. That site fill areas have been compacted to the specified standard.

- d. That supervision of Bulk Earthworks has been to Level 1 and frequency of field density testing has been completed in accordance with Table 8.1 of AS 3798-1996.
- 2) During the relevant stages of road construction, reports shall be submitted to the Principal Certifying Authority by a Registered NATA Geotechnical firm demonstrating.
  - a. That the pavement layers have been compacted in accordance with Council's adopted Design and Construction Specifications.
  - b. That pavement testing has been completed in accordance with Table 8.1 of AS 3798 including the provision of a core profile for the full depth of the pavement.
- 3) Temporary turning areas and associated signage must be provided for refuse vehicles at the end of roads which will be extended in subsequent stages. The temporary turning areas shall be constructed with a minimum 150mm pavement (CBR 45) and shall have a right of carriageway registered over the turning area until such time as the road is extended.

## **Services**

### ***C10 Existing Services***

The proponent shall accurately locate and identify any existing sewer main, stormwater line or other underground infrastructure within or adjacent to the site and the Principal Certifying Authority advised of its location and depth prior to commencing works for each stage of the subdivision and ensure there shall be no conflict between the proposed development and existing infrastructure prior to start of any works.

### ***C11 Drawing Reticulated Water***

Where water is to be drawn from Councils reticulated system, the proponent shall: -

- 1) Make application for the hire of a Tweed Shire Council metered standpipe including Councils nomination of point of extraction.
- 2) Apply for Councils nomination of a point of extraction specific to the development where a current standpipe approval has been issued
- 3) Pay relevant fees in accordance with Councils adopted fees and charges.

### ***C12 Contact Telephone Number***

Prior to the commencement of the works for each stage of the project, the Proponent shall forward to the Department and Council a 24 hour telephone number to be operated for the duration of the construction works.

### ***C13 Movement of Trucks Transporting Waste Material***

The proponent shall notify the Roads and Traffic Authority's Traffic Management Centre (TMC) of the truck route(s) to be followed by trucks transporting waste material from the site, prior to the commencement of the removal of any waste material from the site for each stage of the project.

### ***C14 Stormwater – (prior to Commencement of Works)***

Prior to commencement of work on the site all erosion and sedimentation control measures are to be installed and operational including the provision of a "shake down" area where required to the satisfaction of the Principal Certifying Authority.

In addition to these measures the core flute sign provided with the stormwater approval under Section 68 of the *Local Government Act, 1993*, is to be clearly displayed on the most prominent position of the sediment fence or erosion control device which promotes awareness of the importance of the erosion and sediment controls provided.

This sign is to remain in position for the duration of the project.

## **PART D—DURING CONSTRUCTION**

### ***Construction Management***

#### ***D1 Approved Plans to be On-site***

A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification shall be kept on the site at all times and shall be readily available for perusal by any officer of the Department, Council or the PCA.

#### ***D2 Site Notice***

A site notice(s) shall be prominently displayed at the boundaries of the site for the purposes of informing the public of project details including, but not limited to:

- 1) Details of the Builder, Principal Certifying Authority and Structural Engineer for all stages of the project;
- 2) The approved hours of work;
- 3) the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice; and
- 4) To state that unauthorised entry to the site is not permitted.

#### ***D3 Site security***

It is the responsibility of the applicant to restrict public access to the construction works site, construction works or materials or equipment on the site when construction work is not in progress or the site is otherwise unoccupied in accordance with WorkCover NSW requirements and Occupational Health and Safety Regulation 2001.

#### ***D4 Protection of Trees – Street Trees***

All street trees planted as part of the project shall be protected at all times during construction. Any tree on the footpath, which is damaged or removed during construction of any stage of the project, shall be replaced, to the satisfaction of Council.

#### ***D5 Protection of Trees – On-site Trees***

All trees on the site that are not approved for removal are to be suitably protected by way of tree guards, barriers or other measures as necessary are to be provided to protect root system, trunk and branches, during construction of any stage of the project.

Thinning of Camphor Laurel trees within the APZ for Lots 38, 39, 40, 55, 57, 59, 60 and 61 is required in order to comply with *Planning for Bushfire Protection 2006* as part of the on going maintenance of adequate bushfire protection.

#### ***D6 Dust Control Measures***

Adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood during construction for each stage of the project. In particular, the following measures must be adopted:

- (1) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions,

- (2) Earthworks and scheduling activities shall be managed to coincide with the next stage of project to minimise the amount of time the site is left cut or exposed,
- (3) All materials shall be stored or stockpiled at the best locations,
- (4) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs,
- (5) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material,
- (6) All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays,
- (7) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and
- (8) Cleaning of footpaths and roadways shall be carried out regularly.
- (9) All topsoil stockpiles are to be sprayed with dust suppression material such as "hydromulch", "dustex" or equivalent. All haul roads shall be regularly watered or treated with dust suppression material or as directed on site.

#### ***D7 Environmental Health***

All work associated with this approval is to be carried out so as not to impact on the neighbourhood, adjacent premises or the environment. All necessary precautions, covering and protection shall be taken to minimise impact from:

- noise, water or air pollution,
- dust during filling operations and also from construction vehicles, and
- material removed from the site by wind.

#### ***D8 Removal of Material***

No soil, sand, gravel, clay or other material shall be disposed of off the site without the prior written approval of Council.

#### ***D9 Surrounding Road Carriageways***

The surrounding road carriageways are to be kept clean of any material carried onto the roadway by construction vehicles. Any work carried out by Council to remove material from the roadway will be at the proponent's expense and any such costs are payable prior to the issue of a Subdivision Certificate/Occupation Certificate.

#### ***D10 Burning of Vegetation***

The burning off of trees and associated vegetation felled by clearing operations or builders waste is prohibited. All such materials shall either be recycled or disposed of in a manner acceptable to the Council's General Manager or his delegate. .

#### ***Site Maintenance***

#### ***D11 Erosion and Sediment Control***

All erosion and sediment control measures, as designed in accordance with the approved plans are to be effectively implemented and maintained at or above design capacity for the duration of the construction works for each stage of the project to the satisfaction of the council, and until all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.

#### **D12    *Disposal of Seepage and Stormwater***

Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless separate prior approval is given in writing by Council.

#### ***Geotechnical***

#### **D13    *Geotechnical Engineer***

A suitably qualified Geotechnical Engineer is required onsite during remediation of the identified landslips of the site to:

- i.) Confirm the competency of the base;
- ii.) Identify the points of seepage entry; and,
- iii.) Provide instructions on the construction of the seepage control.

#### **D14    *Filling source.***

All imported fill material shall be from an approved source. Prior to the commencement of filling operations details of the source of fill, description of material and documentary evidence that the fill material is free of any contaminants, and details of the proposed haulage route shall be submitted to Tweed Shire Council for the approval of the General Manager or delegate.

#### **D15    *Filling of the Site***

- 1) Proposed earthworks shall be carried out in accordance with AS 3798, "Guidelines on Earthworks for Commercial and Residential Developments". The earthworks shall be monitored by a Registered Geotechnical Testing Consultant to a level 1 standard in accordance with AS 3798. A certificate from a registered Geotechnical Engineer certifying that the filling operations comply with AS3798 shall be submitted to the Principal Certifying Authority upon completion.
- 2) During filling operations,
  - a) No filling is to be placed hydraulically within twenty metres (20m) of any boundary that adjoins private land that is separately owned.
  - b) Fill adjacent to these boundaries is to be placed mechanically.
  - c) All fill and cut batters shall be contained wholly within the subject land.
  - d) All topsoil to be re-spread and the site to be grassed and landscaped including battered areas.

#### ***Monitoring***

#### **D16    *Monitoring of Stormwater Management System***

- 1) The stormwater drainage system shall be monitored throughout construction of each stage of the project to demonstrate that it satisfactorily complies with the intended design and the *Tweed Shire Council's Development Control Plan Stormwater Design Specification*. Amendments to the system may be required to ensure compliance.
- 2) Monitoring shall continue post-construction in accordance with water quality guidelines in the Stormwater Monitoring Plan, required by Condition B25 for Stages 4, 5 and 6 for up to 5 years following the completion of the last of these stages, until the

council is satisfied with the performance of the stormwater management system, whichever is soonest.

## **Noise and Vibration**

### **D17 Hours of Work**

The hours of construction for all stages of the project, including the delivery of materials to and from the site, shall be restricted as follows:

- (1) between 7:00 am and 6:00 pm, Mondays to Fridays inclusive;
- (2) between 8:00 am and 1:00 pm, Saturdays;
- (3) no work on Sundays and public holidays.

Works may be undertaken outside these hours where:

- (4) the delivery of materials is required outside these hours by the Police or other authorities;
- (5) it is required in an emergency to avoid the loss of life, damage to property and/or to prevent environmental harm;
- (6) the work is approved through the Construction Noise and Vibration Management Plan; and
- (7) residents likely to be affected by the works are notified of the timing and duration of these works at least 48 hours prior to the commencement of the works.

### **D18 Construction Noise Objective**

- 1) The construction noise objective for all stages of the project is to manage noise from construction activities (as measured by a  $L_{A10}$  (15minute) descriptor) so it does not exceed the background  $L_{A90}$  noise level by more than 5dB(A).
- 2) Background noise levels are those identified in the Environmental Assessment or otherwise identified in the approved Construction Management Plan. The Proponent shall implement all feasible noise mitigation and management measures with the aim of achieving the construction noise objective.
- 3) Any activities that have the potential for noise emissions that exceed the objective must be identified and managed in accordance with the approved Construction Management Plan.
- 4) If the noise from a construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the NSW Industrial Noise Policy), 5dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise objective.

### **D19 Construction Noise Management**

For all stages of the project, the Proponent shall:

- (1) schedule rock breaking, rock hammering, sheet piling, pile driving and any similar activity only between the following hours unless otherwise approved in the Construction Management Plan:
  - (a) 9.00 am to 12.00 pm, Monday to Friday;
  - (b) 2.00 pm to 5.00 pm Monday to Friday; and
  - (c) 9.00 am to 12.00 pm, Saturday

- (2) ensure that wherever practical and where sensitive receivers may be affected,, piling activities are completed using bored piles. If driven piles are required they must only be installed where approved in the Construction Management Plan.

#### **D20     *Vibration Criteria***

For all stages of the project, vibration resulting from construction of all stages of the project must not exceed the evaluation criteria presented in the *Environmental Noise Management – Assessing Vibration: A Technical Guide* (DEC, 2006).

#### **D21     *Use of Crushing Plant Machinery***

The use of crushing plant machinery, mechanical screening or mechanical blending of materials must be subject to a separate development application with Council.

### ***Stormwater and Drainage***

#### **D22     *Stormwater***

- 1) Inter allotment drainage shall be provided to all lots where roof water for dwellings cannot be conveyed to the street gutter by gravitational means.
- 2) All stormwater gully lintels shall have the following notice cast into the top of the lintel: 'DUMP NO RUBBISH, FLOWS INTO CREEK' or similar wording in accordance with Council's adopted Design and Construction Specification.
- 3) Regular inspections shall be carried out by the Supervising Engineer on site to ensure that adequate erosion control measures are in place and in good condition both during and after construction.
- 4) Additional inspections are also required by the Supervising Engineer after each storm event to assess the adequacy of the erosion control measures, make good any erosion control devices and clean up any sediment that has left the site or is deposited on public land or in waterways.
- 5) This inspection program is to be maintained until the maintenance bond is released or until Council is satisfied that the site is fully rehabilitated.

### ***Heritage***

#### **D23     *Impact of Below Ground (Sub-surface) Works – Non-Aboriginal Objects***

If any archaeological relics are uncovered during the course of the work in any stage of the project, then all works shall cease immediately in that area and the NSW Heritage Office contacted. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the NSW *Heritage Act 1977* may be required before further works can continue in that area.

#### **D24     *Impact of Below Ground (Sub-surface) Works – Aboriginal Objects***

In the event that future works during any stage of the project disturb Aboriginal cultural materials, works at or adjacent to the material must stop immediately. Temporary fencing must be erected around the site and the material must be identified by an independent and appropriately qualified archaeological consultant. The Regional Archaeologist of the Cultural Heritage Unit of the Department of Environment and Climate Change, Coffs Harbour, the Tweed Byron Local Aboriginal Land Council (TBLALC) and the Ngunduwal/Minjungbal descendents must be informed. These groups will advise on the most appropriate course of action to follow. Works must not resume at the location without the prior written consent of

the Department of Environment and Climate Change, the Tweed Byron LALC and the Ngunduwal/Minjungbal descendants.

### ***D25 Compulsory Inspections***

Tweed Shire Council shall be given a minimum 24 hours notice to carry out the following compulsory inspections in accordance with Tweed Shire Council Development Control Plan, Part A5 - Subdivision Manual, Appendix D. Inspection fees are based on the rates contained in Council's current Fees and Charges:-

#### **Roadworks**

Pre-construction commencement erosion and sedimentation control measures

Completion of earthworks

Excavation of sub grade

Pavement - sub-base

Pavement - pre kerb

Pavement - pre seal

Pathways, footways, cycleways - formwork/reinforcement

Final inspections - on maintenance

Off Maintenance inspection

#### **Water Reticulation, Sewer Reticulation, Drainage**

Excavation

Bedding

Laying/jointing

Manholes/pits

Backfilling

Permanent erosion and sedimentation control measures

Drainage channels

Final inspection - on maintenance

Off maintenance

#### **Sewer Pump Station and Lift Stations**

Excavation

Formwork/reinforcement

Hydraulics

Mechanical/electrical

Commissioning - on maintenance

Off maintenance

#### **Stormwater Quality Control Devices (other than proprietary devices)**

For detail refer to Water By Design - Technical Guidelines

Earthworks and filter media

Structural components

Operational establishment

Commissioning - on maintenance

Off maintenance

Council's role is limited to the above mandatory inspections and does not include supervision of the works, which is the responsibility of the Developers Supervising Consulting Engineer.

The EP&A Act, 1979 (as amended) makes no provision for works under the Water Management Act 2000 to be certified by an "accredited certifier".

The fee for the above-mentioned inspections shall be invoiced upon completion of all civil works, and subject to the submission of an application for a 'Subdivision Works Compliance Certificate'.

## **PART E—PRIOR TO ISSUE OF SUBDIVISION CERTIFICATE**

### **E1 Part 4A Certificate**

Prior to the registration of final subdivision plan in the Office of the Registrar-General, a Part 4A certificate shall be obtained under section 109D(1)(d) of the *Environmental Planning and Assessment Act 1979* for each stage of the subdivision.

### **E2 Compliance Certificate**

Prior to the application for a Subdivision Certificate for each stage of the subdivision a Compliance Certificate or Certificates shall be obtained from Council or an accredited certifier for the following:-

- a) Compliance Certificate - Roads
- b) Compliance Certificate - Water Reticulation
- c) Compliance Certificate - Sewerage Reticulation
- d) Compliance Certificate – Drainage
- e) Compliance Certificate – Sewerage Pump Station

Note:

1. All compliance certificate applications must be accompanied by documentary evidence from the developers Subdivision Works Accredited Certifier (SWAC) certifying that the specific work for which a certificate is sought has been completed in accordance with the terms of the development consent, the construction certificate, Tweed Shire Council's Development Control Plan Part A5 - Subdivisions Manual and Councils Development Design and Construction Specifications.
2. The EP&A Act, 1979 (as amended) makes no provision for works under the *Water Management Act 2000* to be certified by an "accredited certifier".

## **Remediation / Earthworks**

### **E3 Retaining Walls**

All retaining walls are to be certified by a suitably qualified geotechnical/structural engineer. The certification is to be submitted with the Subdivision Certificate application for each affected staged of the subdivision and shall state that the retaining walls have been designed and constructed in accordance with AS4678-2002 Earth Retaining Structures and are structurally sound.

## **Geotechnical**

### **E4 Geotechnical Certification**

Prior to issue of a Subdivision Certificate for any stage of the project, the consultant geotechnical engineer is to certify the following on site:

- The remediation of all nominated slips on the site; and,
- All lots in the subdivision are to be certified as being sound for building construction purposes, classifying the soil type, and addressing the adequate bearing capacities of the soils in accordance with AS 2870, Residential Slabs and Footings Construction and the submission of soil compaction and bearing capacity test results for the filled areas.

This certification shall be provided to Council prior to the release of the Subdivision Certificate for the first stage of the project.

#### **E5 Dilapidation Report**

A second dilapidation report is to be prepared by a suitably qualified engineer at the completion of the works for each stage of the project to ascertain if any structural damage has occurred to the adjoining and adjacent buildings, infrastructure and roads. The report is to be compared with the first dilapidation report and recommend a course of action to carry out repairs if required. The report is to be submitted to the Principle Certifying Authority, prior to issue of the Subdivision Certificate for each stage of the project.

#### **Traffic and Access**

#### **E6 Civil works**

- 1) All civil works approved with the Construction Certificate are to be completed to the satisfaction of Council prior to issue of a Subdivision Certificate for each stage of the project. All works are to be completed in accordance with Council's *Subdivision Code* (as current at the time of commencement).
- 2) Any damage caused to public infrastructure (roads, footpaths, water and sewer mains, power and telephone services etc) during construction of the development shall be repaired in accordance with Council's adopted Design and Construction Specifications prior to the issue of a Subdivision Certificate for each stage of the project.

#### **Bushfire Management**

#### **E7 Asset Protection Zones (APZ)**

- 1) Prior to the issue of the Subdivision Certificate for the relevant Stage, certification from a Fire Protection Association Australia (FPA Australia) accredited Bushfire Planning And Design (BPAD) certified practitioner, must be submitted to the PCA, confirming that the subject development complies with the Rural Fire Service's General Terms of Approval imposed under Section 100B of the Rural Fires Act 1997 on the consent.
- 2) No dwellings shall be constructed within the APZ. Private open space, communal open space, roads, backyards and pools are permissible in the APZ.
- 3) Thinning of Camphor Laurel trees within the APZ for Lots 38, 39, 40, 55, 57, 59, 60 and 61 is required in order to comply with *Planning for Bushfire Protection 2006* as part of the on going maintenance of adequate bushfire protection.

#### **E8 Registration of Easements / Restrictions to use / Right of carriageways**

- 1) The creation of easements for services, rights of carriageways and restrictions as to user are applicable under Section 88B of the *Conveyancing Act 1919*, including (but not limited to) the following:
  - a. Easements for sewer, water supply and drainage over all public services/infrastructure on private property.
  - b. Right of carriageway over the approved driveway access, subject to the outcomes required in condition B2, is to benefit Council and provide access in perpetuity to the sewer pump station.

- c. Drainage Easements are to be placed over all subsurface drains and interallotment drainage, benefiting and burdening the property owners. Maintenance of the subsurface drains is to be included in the 88B instrument.
  - d. Right of carriageways are to benefit and burden the property owners. Maintenance of the right of carriageways is to be shared between the property owners. Provision is also to be included in the 88B to provide public access to the proposed parks, nominating Council as the benefiting authority.
  - e. Use of site regrading on sloping residential subdivision sites to manufacture flat earth platforms is not permitted. Future dwellings on these sites are to use building techniques suitable to sloping sites.
- 2) Pursuant to Section 88BA of the Conveyancing Act (as amended) the Instrument creating the right of carriageway/easement to drain water shall make provision for maintenance of the right of carriageway/easement by the owners from time to time of the land benefited and burdened and are to share costs equally or proportionally on an equitable basis.
  - 3) Any Section 88B Instrument creating restrictions as to user, rights of carriageway or easements which benefit Council shall contain a provision enabling such restrictions, easements or rights of way to be revoked, varied or modified only with the consent of Council.
  - 4) Privately owned infrastructure on community land may be subject to the creation of statutory restrictions, easements etc in accordance with the *Community Land Development Act 1989*, *Strata Schemes Management Act 1996*, *Conveyancing Act 1919*, or other applicable legislation.
  - 5) In addition to the above certification, the following is to be included in the Section 88B Instrument to accompany the final plan of subdivision.
    - a. A restriction to user for each lot that has the benefit of a retaining wall that prevents any cut or fill greater than 0.3m in vertical height within a zone adjacent to the wall that is equal to the height of the wall.
    - b. Each lot burdened and or benefited by a Type 1 wall as defined in AS4678-2002 Earth Retaining Structures, shall contain a restriction as to user advising the landowner of the need to maintain the wall in accordance with that standard.
    - c. A restriction as to user burdening all lots that prevents use of site regrading on sloping (natural slope >10%) residential subdivision sites to manufacture flat earth platforms suitable for construction of concrete slab-on-ground dwellings. Dwellings on these sites are to use building techniques suitable to sloping sites such as piled or piered foundations.
    - d. A Restriction as to User for any indicated Asset Protection Zone. No dwellings are to be constructed in this area. The Restriction as to User shall advise the landowner of the need to maintain this area as an Asset Protection Zone.

The restriction is to be clearly marked on the plan of subdivision and Council is to be nominated as the sole party to vary, modify and/or extinguish the restriction.

- 6) A public positive covenant is to be created under Section 88E of the *Conveyancing Act 1919*, to require that the land the subject to the VMP is to be maintained in accordance with the requirements of the VMP.

## **E9 Defects Liability Bond**

- 1) Prior to the issue of a Subdivision Certificate for each stage of the project a defect liability bond (in cash or unlimited time Bank Guarantee) shall be lodged with Council.

- 2) The bond shall be based on 5% of the value of the works (minimum \$1,500) which will be held by Council for a period of 12 months from the date on which the Subdivision Certificate is issued. It is the responsibility of the proponent to apply for refund following the remedying of any defects arising within the 6 month period.
- 3) Prior to the issue of a Subdivision Certificate for each stage of the project, a maintenance bond equal to 25% of the contract value of the footpath construction works shall be lodged for a period of 3 years or until 80% of the lots fronting paved footpaths are built on.
- 4) Alternatively, the developer may elect to pay a cash contribution to the value of the footpath construction works plus 25% in lieu of construction and Council will construct the footpath when the subdivision is substantially built out. The cost of these works shall be validated by a schedule of rates.
- 5) A bond shall be lodged prior to the issue of the Subdivision Certificate to ensure that the landscaping is maintained by the developer for a period of 6 months from the date of issue of a Subdivision Certificate. The amount of the bond shall be 20% of the estimated cost of the landscaping or \$3000 whichever is the greater.
- 6) The six (6) months Defects Liability Period commences upon the registration of the Plan of Subdivision for each stage of the project.
- 7) Any damage to property (including pavement damage) is to be rectified to the satisfaction of the General Manager or his delegate prior to the issue of a Subdivision Certificate for each stage of the project. Any work carried out by Council to remove material from the roadway will be at the Developers expense and any such costs are payable prior to the issue of a Subdivision Certificate.

### ***E10 Embellishment of Open Space***

Prior to the release of a Subdivision Certificate for each stage of the project, casual open space is to be embellished consistent with the approved detailed landscape plans. The exception to this is playground equipment and softfall. The developer must provide the appropriate level area for the play equipment with a minimum fall of 1:100. Installation of the play equipment and softfall however is not to occur until 20% of the relevant stage's allotments are occupied. The developer must provide a bank guarantee or cash contribution equivalent to the cost of purchase and installation of such items prior to release of the Subdivision Certificate for each stage. Council will undertake the installation at the appropriate time.

### ***E11 Works as Executed Plans (Open Space)***

Prior to issue of a Subdivision Certificate, Work as Executed Plans (WAX) must be submitted for all landscaped casual and active open space. These must show all underground services, irrigation systems and the location of concrete paths, structures, other park infrastructure and garden bed outlines.

The plans are to be certified by a registered surveyor or consulting engineer.

Two categories of WAX plans are to be provided:

- a) the original approved plan with any variation to this indicated, and
- b) plan showing only the actual as constructed information.

The plans are to be submitted in the following formats:

- 2 paper copies of the same scale and format as the approved landscape plan.
- A PDF version on CD or an approved medium.
- Electronic copy in DWG or DXF format on CD or an approved medium.

## **Services**

### **E12 Utilities –Telephone and Electricity Services and Federal Government's National Broadband Network (NBN)**

- 1) The project is to be connected to all available services (water, electricity and telephone) prior to issue of the Subdivision Certificate for each stage of the project. Such connections, and any extension of services required to the development, are to be carried out at full cost to the Proponent.
- 2) In accordance with the Federal Government's National Broadband Network (NBN) initiatives, the subdivision is required to provide a pit and conduit network to allow for the installation of fibre to the home (FTTH) broadband services.
- 3) The production of written evidence from the local telecommunications supply authority certifying that satisfactory arrangements have been made for the provision of underground telephone supply must be submitted prior to issue of a Subdivision Certificate for each stage of the project.
- 4) The production of written evidence from the local electricity supply authority certifying that reticulation of underground electricity has been completed prior to issue of a Subdivision Certificate for each stage of the project.
- 5) The reticulation to include the provision of fully installed electric street lights to the relevant Australian standard. Such lights to be capable of being energised following a formal request by Council.
- 6) The submission to the Certifying Authority and subsequent registration of the required right of carriageway/easement for services/restrictions-as-to-users is required.

### **E13 Water Supply and Sewer**

- 1) Prior to issuing a Subdivision Certificate for each stage of the project, reticulated water supply and outfall sewerage reticulation shall be provided to all lots within the subdivision in accordance with Tweed Shire Council's Development Control Plan Part A5 - Subdivisions Manual, Councils Development Design and Construction Specifications and the Construction Certificate approval.
- 2) The site of the sewage pumping station shall be transferred to Council in fee simple, at no cost to Council within 28 days of the date of registration of the plan of subdivision.
- 3) Note: The *Environmental Planning and Assessment Act 1979* makes no provision for works under the Water Management Act, 2000 to be certified by an Accredited Certifier.
- 4) Water meters are to be located outside of the vehicle paths within the rights of carriageway of battleaxe lots.

### **E14 Infrastructure / Work As Executed Plans**

- 1) The Proponent is to construct, at own cost, all civil and service infrastructure works to service each stage of the subdivision, in accordance with the Construction Certificate under the supervision of an engineer or surveyor approved by the Council.
- 2) Prior to the issue of a Subdivision Certificate for each stage of the subdivision, Works as Executed Plans shall be submitted in accordance with the provisions of Council's Development Control Plan A5 - Subdivisions Manual and Council's Development Design and Construction Specification, D13 - Engineering Plans.
- 3) The plans are to be endorsed by a Registered Surveyor or a Consulting Engineer Certifying that:

- a. all drainage lines, sewer lines, services and structures are wholly contained within the relevant easement created by the subdivision;
- b. the plans accurately reflect the Work as Executed.

Note: Where works are carried out by Council on behalf of the proponent it is the responsibility of the proponent to prepare and submit works-as-executed plans.

### ***E15 Drainage***

- 1) Prior to the issue of a Subdivision Certificate for each stage of the project, and also prior to the end of defects liability period, a CCTV inspection of the stormwater pipes and sewerage system including joints and junctions will be required to demonstrate that the standard of the stormwater system is acceptable to Council.
- 2) Any defects identified by the inspection are to be repaired in accordance with Council's adopted Development Design and Construction Specification.
- 3) All costs associated with the CCTV inspection and repairs shall be borne by the proponent.

### ***E16 Assets Created***

Council's standard "Asset Creation Form" shall be completed (including all quantities and unit rates) and submitted to Council with the application for Subdivision Certificate.

### ***E17 Survey Marks***

Where new state survey marks and/or permanent marks are placed a copy of the locality sketch relating to the marks shall be submitted to Council within three months of registration of the Subdivision Certificate for each stage of the subdivision in accordance with the Survey Practices Regulation.

### ***E18 Street Names***

- 1) The proponent shall obtain the written approval of Council to the proposed road/street names and be shown on the Plan of Subdivision accompanying the application for a Subdivision Certificate for the first stage of the subdivision.
- 2) Application for road naming shall be made on Council's Property Service Form and be accompanied by the prescribed fees as tabled in Council's current Revenue Policy - "Fees and Charges". The application shall also be supported by sufficient detail to demonstrate compliance with Council's Road Naming Policy.

### ***Open Space / Landscaping***

#### ***E19 Landscape Entry Statement Areas***

No structures or entry statement signs are to be located on public land or road reserves at the entry statement areas of the development.

#### ***E20 Landscaping and Open Space maintenance***

The developer is to undertake maintenance operations on all streetscapes, casual open space and structured open space for a minimum of 12 months after the Subdivision is registered with the Land Titles Office. This is the establishment period for new plantings. Such maintenance will include all soft landscaping, particularly mowing and weed control. Any power and water consumption costs during this period must also be met by the developer.

### ***E21 Vegetation Management Maintenance***

All works associated with the Vegetation Management Plan (excluding ongoing maintenance) are to be completed to the satisfaction of Council prior to the release of the Subdivision Certificate for Stage 4, 5 or 6 (whichever comes first).

The land subject to the VMP is to be maintained in perpetuity in accordance with the with the VMP recommendations.

### ***Dedication of Land***

#### ***E22 Dedication of Open Space***

The Proponent must make necessary arrangements for the dedication of the open space areas to Council within the subdivision prior to release of the Subdivision Certificate for each stage of the project.

#### ***E23 Dedication of Internal Roads***

All internal roads shall be constructed by the proponent and (excluding constructed roads within the Community Title Scheme) are to be dedicated to Council as public roads prior to issue of a Subdivision Certificate for each stage of the project. Upon dedication and at the end of the maintenance period Council will be responsible for the on-going maintenance of the roads.

## **ADVISORY NOTES**

### ***AN1 Compliance Certificate, Water Supply Authority Act, 2000***

Prior to issuing a Subdivision Certificate, a Compliance Certificate shall be provided to the approval authority showing that the project has met with the detailed requirements of the relevant water supply authority for the region that the subject site is located within.

The developer shall obtain the Compliance Certificate from the relevant local water supply authority and produce this to the satisfaction of:

- (1) the certifying authority before release of the Construction Certificate,
- (2) the approval authority before the release of the Subdivision Certificate, and
- (3) the principal certifying authority prior to occupation.

### ***AN2 Requirements of Public Authorities for Connection to Services***

The Proponent shall comply with the requirements of any public authorities (e.g. Energy Australia, Telstra Australia, AGL, etc) in regard to the connection to, relocation and/or adjustment of the services affected by the construction of the proposed structure. Any costs in the relocation, adjustment or support of services shall be the responsibility of the Proponent. Details of compliance with the requirements of any relevant public authorities are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate.

### ***AN3 Compliance with Building Code of Australia***

The Proponent is advised to consult with the Certifying Authority about any modifications needed to comply with the BCA prior to submitting the application for a Construction Certificate.

### ***AN4 Structural Capability for Existing Structures***

The structural capabilities of any existing structure will need to meet the requirements of the BCA and may require engaging a structural engineer.

### ***AN5 Use of Mobile Cranes***

The Proponent shall obtain all necessary permits required for the use of mobile cranes on or surrounding the site, prior to the commencement of works. In particular, the following matters shall be complied with to the satisfaction of the PCA:

- (1) For special operations including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on site tower cranes which warrant the on street use of mobile cranes, permits must be obtained from Council:
  - (a) at least 48 hours prior to the works for partial road closures which, in the opinion of Council will create minimal traffic disruptions, and
  - (b) at least 4 weeks prior to the works for full road closures and partial road closures which, in the opinion of Council, will create significant traffic disruptions.
- (2) The use of mobile cranes must comply with the approved hours of construction and shall not be delivered to the site prior to 7.30am without the prior approval of Council.

#### **AN6 Stormwater drainage works or effluent systems**

A Construction Certificate for works that involve any of the following:

- (1) water supply, sewerage and stormwater drainage work (including connection of a private stormwater drain to a public stormwater drain, installation of stormwater quality control devices or erosion and sediment control works); and
- (2) management of waste.

as defined by Section 68 of the Local Government Act, 1993 will not be issued until prior separate approval to do so has been granted by Council under Section 68 of that Act. Applications for these works must be submitted on Council's standard Section 68 application form accompanied by the required attachments and the prescribed fees.

#### **AN7 Temporary Structures**

An approval under Section 68 of the *Local Government Act 1993* must be obtained from the Council for the erection of the temporary structures. The application must be supported by a report detailing compliance with the provisions of the Building Code of Australia.

Structural certification from an appropriately qualified practicing structural engineer must be submitted to the Council with the application under Section 68 of the *Local Government Act 1993* to certify the structural adequacy of the design of the temporary structures.

#### **AN8 Disability Discrimination Act**

This application has been assessed in accordance with the *Environmental Planning and Assessment Act 1979*. No guarantee is given that the proposal complies with the *Disability Discrimination Act 1992*. The Proponent/owner is responsible to ensure compliance with this and other anti-discrimination legislation. The *Disability Discrimination Act 1992* covers disabilities not catered for in the minimum standards called up in the Building Code of Australia which references AS 1428.1 - Design for Access and Mobility. AS1428 Parts 2, 3 & 4 provides the most comprehensive technical guidance under the *Disability Discrimination Act 1992* currently available in Australia.

#### **AN9 Commonwealth Environment Protection and Biodiversity Conservation Act 1999**

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 provides that a person must not take an action which has, will have, or is likely to have a significant impact on a matter of national environmental significance (NES) matter; or Commonwealth land, without an approval from the Commonwealth Environment Minister.

This application has been assessed in accordance with the New South Wales Environmental Planning & Assessment Act, 1979. The determination of this assessment has not involved any assessment of the application of the Commonwealth legislation. It is the proponent's responsibility to consult Environment Australia to determine the need or otherwise for Commonwealth approval and you should not construe this grant of approval as notification to you that the Commonwealth Act does not have application. The Commonwealth Act may have application and you should obtain advice about this matter. There are severe penalties for non-compliance with the Commonwealth legislation.

#### **AN10 Airspace Controls**

- (1) The Commonwealth airspace approvals should be obtained prior to construction for any building or structure which would constitute a "controlled activity" under the Commonwealth Airports Act, by virtue of penetration of the OLS and/or PANS-OPS surfaces of Gold Coast Airport.

- (2) Commonwealth airspace approvals are also to be obtained for any temporary penetration of the airspace for erection of construction cranes prior to construction.
- (3) With regard to the approvals for any building or structure under the BCA, consultation is to be undertaken with the Gold Coast Airport during the preparation of the applications to ascertain criteria for height limit determination.

#### **AN11 Roof area for water tanks**

A minimum roof area of 160m<sup>2</sup> is required for any housing development that is to be connected to an on site water tank.

#### **AN12 Certification**

##### Construction Certificate

Prior to the commencement of subdivision works, the proponent must obtain a Construction Certificate from either the Council or an accredited certifier for each stage of the subdivision before any subdivision work can commence for the relevant stage.

Civil work in accordance with an approval or development consent for any stage must not be commenced until a Construction Certificate for the civil work has been issued in accordance with Councils Development Construction Specification C101 by the consent authority, or an accredited certifier, and the person having the benefit of the approval or development consent has appointed;

- a principal certifying authority,
- a Subdivision Works Accredited Certifier (SWAC) to certify the compliance of the completed works. The SWAC must be accredited in accordance with Tweed Shire Council DCP Part A5 – Subdivision Manual, Appendix C with accreditation in accordance with the Building Professionals Board Accreditation Scheme. As a minimum the SWAC shall possess accreditation in the following categories:

C4: Accredited Certifier – Stormwater management facilities construction compliance

C6: Accredited Certifier – Subdivision road and drainage construction compliance

The SWAC shall provide documentary evidence to Council demonstrating current accreditation with the Building Professionals Board prior to commencement of works.

Note: For subdivisions creating 5 new allotments or less, OR the value of new public infrastructure is less than \$30,000, then the SWAC may be substituted for an Institute of Engineers Australia Chartered Professional Engineer (Civil College) with NPER registration.

##### Subdivision Certificate

Prior to registration of a plan of subdivision under Division 3 of Part 23 of the *Conveyancing Act 1919* for any allotments in any stage within the subdivision a Subdivision Certificate pursuant to Section 109C(1)(d) of the EP&A Act must be obtained from the Council or an accredited certifier for each stage of the subdivision.

-O-

**SCHEDULE 3**  
**STATEMENT OF COMMITMENTS**  
**(OCTOBER 2001)**

**MAJOR PROJECT NO. 05\_0198**

## REVISED STATEMENT OF COMMITMENTS

| DRAFT COMMITMENTS                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| DEVELOPMENT IN ACCORDANCE WITH PLANS                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OBJECTIVE                                                                                                  | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| To ensure that the development is carried out in general accordance with the approval.                     | <ul style="list-style-type: none"> <li>The development shall be carried out in general accordance with the approved plans.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TRAFFIC                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OBJECTIVE                                                                                                  | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| To ensure that safe and efficient vehicular and pedestrian access is provided to the site.                 | <ul style="list-style-type: none"> <li>Connect Stott Street and Walmsleys Road as part of Stage 1.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| FLORA AND FAUNA                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OBJECTIVE                                                                                                  | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Protect existing threatened species of flora and biodiversity.</p> <p>Rehabilitate 7(d) zoned land.</p> | <ul style="list-style-type: none"> <li>Final subdivision design shall demonstrate that the rare and/or threatened flora species (<i>A. whitei</i>, <i>E. globosa</i>, <i>L. pulchella</i> and <i>M. tetraphylla</i>) that occur in close proximity to the 2(c)/7(d) boundary are located and appropriately identified and/or signposted such that they remain unaffected by any activities (including provision of any asset protection zones for bushfire management purposes) associated with development of the site.</li> <li>A Vegetation Management Plan (VMP) (based on the "Proposed Vegetation Management Plan, Objectives and Guiding Principles, of Appendix III of the revised Ecological and Bushfire Planning Assessment, Final Report, June 2011 (at Annexure M) will be prepared for 7(d) zones within the study area and submitted to the Consent Authority for endorsement. The VMP will be developed in consultation with the NSW Office of Environment and Heritage and will be completed prior to the issue of a Subdivision Certificate. The VMP will detail not only measures that diminish the threat of invasive species, facilitate the removal of Camphor Laurel and other weed species, support restoration of the rainforest communities and protect threatened flora species and remnant vegetation on the site, but also the means by which this will be achieved.</li> <li>A Section 88B Restriction shall be created on Lots 38 to 40 and 54 to 61 requiring cats to be kept indoors at all times.</li> <li>The VMP shall incorporate scoped and appropriate performance requirements for the restoration of the notophyll rainforest across the 7(d)-zone (for example, in relation to the diversity and density of plantings, seedling survival and growth rates, cumulative crown coverages, and the abundance and diversity of weed species) referenced to appropriate benchmarks (such as comparable, undisturbed vegetation communities).</li> <li>Prior to the commencement of development works, all rare and/or threatened flora species that occur within 25m either side of the 2(c)D(d) zoning interface will be located and appropriately identified and/or signposted such that they remain unaffected by any activities (including provision of Asset Protection Zones (APZs) for bushfire purposes).</li> <li>Street landscaping of the proposed development precinct will make extensive use of suitable species of endemic rainforest vegetation, including the use of native groundcover/shrub layer.</li> </ul> |

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| DRAFT COMMITMENTS                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|                                                                   | <ul style="list-style-type: none"> <li>Vegetation modification for the purposes of establishing APZs will be restricted to the removal of Camphor Laurel trees only.</li> <li>All land zoned 7(d) will exclude any disturbance or landform changes.</li> <li>The edge of the buffer zone to the EEC shall be identified by bollards or the like to reduce edge effects.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Rehabilitate that part of Lot 61 zoned 7(d).                      | That part of proposed Lot 61 zoned 7(d) Environmental Protection (Scenic Escarpment) will be rehabilitated in accordance with a Vegetation Management Plan and a Title Restriction will be registered on the lot requiring the Vegetation Management Plan to be implemented.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CONSTRUCTION IMPACTS                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| OBJECTIVE                                                         | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Protect existing utilities in and adjacent to the site.           | <ul style="list-style-type: none"> <li>Clearly mark the location of underground utilities with permanent markers.</li> <li>Notify relevant utility authorities if any damage occurs.</li> <li>Ensure that power, telephone, water and sewer reticulation is provided to each allotment in accordance with Tweed Shire Council's normal policies.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Minimise nuisance to adjacent residents and adjoining properties. | <ul style="list-style-type: none"> <li>Prepare a Construction Management Plan for approval by the Department of Planning prior to the issue of a construction certificate.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Construction traffic and parking (employees)                      | <ul style="list-style-type: none"> <li>Designate a suitable area for a construction compound (including worker's amenities and employee parking), on the construction certificate drawings.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Working Hours                                                     | <ul style="list-style-type: none"> <li>Construction site work including the entering and leaving of vehicles is limited to the following hours, unless otherwise permitted by Council: - Monday to Saturday from 7.00am to 6.00pm. No work to be carried out on Sundays or Public Holidays. The proponent is responsible to instruct and control subcontractors regarding hours of work.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Noise Mitigation                                                  | <ul style="list-style-type: none"> <li>All reasonable steps shall be taken to muffle and acoustically baffle all plant and equipment. In the event of complaints from the neighbours, which Council deem to be reasonable, the noise from the construction site is not to exceed the following: <ul style="list-style-type: none"> <li>A. Short Term Period - 4 weeks.<br/>LAeq noise level measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 20dB(A) at the boundary of the nearest likely affected residence.</li> <li>B. Long term period -the duration.<br/>LAeq noise level measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 15dB(A) at the boundary of the nearest affected residence.</li> </ul> </li> </ul> |
| Access Control                                                    | <ul style="list-style-type: none"> <li>It is the responsibility of the applicant to restrict public access to the construction works site, construction works or materials or equipment on the site when construction work is not in progress or the site is otherwise unoccupied in accordance with Workcover NSW requirements and Occupational Health and Safety Regulation 2001.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>DRAFT COMMITMENTS</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| Amenity Generally                                | <ul style="list-style-type: none"> <li>All work associated with this approval is to be carried out so as not to impact on the neighbourhood, adjacent premises or the environment. All necessary precautions, covering and protection shall be taken to minimise impact from: -               <ul style="list-style-type: none"> <li>Noise, water or air pollution</li> <li>dust during filling operations and also from construction vehicles</li> <li>material removed from the site by wind.</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| Vegetation Burning                               | <ul style="list-style-type: none"> <li>The burning off of trees and associated vegetation felled by clearing operations or builders waste is prohibited. Such materials shall either be recycled or disposed of in a manner acceptable to Councils General Manager or his delegate.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Dust                                             | <ul style="list-style-type: none"> <li>Ensure that small areas only are disturbed at any one time and are promptly revegetated following completion of earthworks.</li> <li>Ensure that appropriate dust abatement measures are implemented during the construction phase including appropriate use of water carts.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Vibration                                        | <ul style="list-style-type: none"> <li>Ensure that vibratory compaction equipment is not used within 100m of existing dwelling houses.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Water Quality Management                         | <ul style="list-style-type: none"> <li>Prepare a Water Quality Management Plan prior to commencing work in accordance with Tweed Shire Council's Urban Stormwater Management Plan.</li> <li>Ensure that the Water Quality Management Plan is complied with.</li> <li>Stormwater management implementation with respect to staging of the subdivision, including verification of the site requirements for onsite detention/retention, shall be addressed in detail in the Construction Certificate Application.</li> <li>Install appropriate erosion and sedimentation control devices (filter fences, hay bales, catch drains, etc.) prior to commencing construction and any other site works.</li> <li>Discharged hardstand areas to lawns and gardens.</li> <li>Runoff from road pavements will be collected and treated by proprietary gross pollutant traps such as Humeceptor.</li> </ul> |
| Damage to Existing Buildings During Construction | <ul style="list-style-type: none"> <li>Prior to construction commencing ensure that an inspection of existing buildings adjacent to the construction site is completed and any existing faults are documented.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Waste Materials                                  | <ul style="list-style-type: none"> <li>Ensure that waste materials suitable for recycling are stockpiled and suitably disposed of.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Public Safety                                    | <ul style="list-style-type: none"> <li>Ensure that appropriate signage is installed at the entry points to the site.</li> <li>Ensure that all employees are suitably inducted on OH &amp; S responsibilities.</li> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>GENERAL</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| OBJECTIVE                                        | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Occupational Health and Safety                   | <ul style="list-style-type: none"> <li>Ensure that all obligations under the Occupational Health and Safety Act are complied with.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| Design Guidelines                                 | <ul style="list-style-type: none"> <li>The proponents will develop design guidelines in consultation with Tweed Shire Council and in accordance with the Future Residential Character and Built Form Report (BDA Architecture, 18/10/07).</li> <li>Built form cladding shall be lightweight and earthy tones and building designs shall be slope sensitive.</li> </ul>                                                                                                                                                                                                                                                                                       |
| Walmsleys Road                                    | <ul style="list-style-type: none"> <li>The proponents will upgrade Walmsleys Road from the end of the existing bitumen to proposed Road No. 1 (Walmsleys Road/Stott Street connection) in accordance with Tweed Shire Council standards with an 11m pavement width.</li> <li>Details of the vertical alignment design shall accompany the Construction Certificate Application to ensure a smooth, safe transition and appropriate sight distance.</li> </ul>                                                                                                                                                                                                |
| Interallotment Drainage                           | <ul style="list-style-type: none"> <li>Interallotment drainage will be provided including easements in accordance with the requirements of Tweed Shire Council's Development Design Specification 5.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Drainage through Lot 13 (proposed public reserve) | <ul style="list-style-type: none"> <li>A drainage reserve shall be created through Lot 13 to accommodate overland stormwater flows with details to accompany the Construction Certificate Application.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Interallotment Batters                            | <ul style="list-style-type: none"> <li>Interallotment batters shall comply with Clause D6.06A(2) of the Development Design Specification D6 – Site Regrading.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Batters for Battleaxe Lot Accesses                | <ul style="list-style-type: none"> <li>Details of batters proposed for battleaxe lot accesses demonstrating that compliant driveways and adequate building envelopes are achievable shall accompany the Construction Certificate Application.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                     |
| Right of Carriageway – Off Street Parking         | <ul style="list-style-type: none"> <li>For battleaxe lots a Section 88B Instrument shall create a restriction on use requiring at least 1 visitor car parking space to be provided on each lot.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Road Gradients                                    | <ul style="list-style-type: none"> <li>Road gradients are not to exceed 12% with details to be included in the Construction Certificate Application.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Footpath Widths – Roads 2, 3 and 4                | <ul style="list-style-type: none"> <li>Minimum footpath width of 4.25m is required with details to accompany the Construction Certificate Application.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Pavement Widths – Road 5                          | <ul style="list-style-type: none"> <li>The pavement width is to be 5.5m or 6m with details to accompany the Construction Certificate Application.</li> <li>An adequate footpath width is required with details to accompany the Construction Certificate Application.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                             |
| Parks                                             | <ul style="list-style-type: none"> <li>Proposed Lot 13 (park) will be embellished in accordance with Tweed Development Control Plan 2008, Section A5 – Subdivision Manual.</li> <li>Drainage and maintenance issues on the eastern boundary of the proposed park are to be addressed in the detailed design to accompany the Construction Certificate Application.</li> <li>Dam fill and earthworks stabilising requirements will be addressed in the detailed design to accompany the Construction Certificate Application.</li> <li>A Detailed Landscaping Plan for the proposed park shall accompany the Construction Certificate Application.</li> </ul> |
| Planting Details                                  | <ul style="list-style-type: none"> <li>Planting details shall comply with Council's standard drawings, particularly SD701, Tree and Shrub Planting Detail.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| DRAFT COMMITMENTS                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CULTURAL HERITAGE                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OBJECTIVE                                                             | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ensure That Cultural Heritage Material Is Appropriately Managed       | <ul style="list-style-type: none"> <li>• If any cultural heritage material is discovered during construction the Office of Environment and Heritage must be notified and appropriate approvals/studies must be undertaken.</li> <li>• In the event that Aboriginal objects or cultural matters of significance are identified the proponent is to develop appropriate mitigation measures with the local Aboriginal community and the subdivision layout amended if necessary with the approval of the Department of Planning.</li> <li>• In the event that human remains are located during the project, a protocol to halt all works in the immediate area should be followed to prevent any further impacts to the find or finds. The local police and Office of Environment and Heritage are to be notified. If the remains are found to be of Aboriginal origin and the police consider the site is not an investigation site for criminal activities, Office of Environment and Heritage is to be contacted and notified of the situation. Works are not to resume in the designated area until approval in writing from the Police and Office of Environment and Heritage.</li> <li>• If Aboriginal cultural objects are uncovered due to the development activities, all works must halt in the immediate area to prevent any further impacts to the find or finds. A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the find(s). The site is to be registered in Office of Environment and Heritage's Aboriginal Heritage Information Management System (AHIMS) and the management outcome for the site included in the information provided to the AHIMS. AHIMS contact details: Phone: (02) 9585 6470, address: Level 6, 43 Bridge Street, Hurstville, NSW, 2220, email: ahims@environment.nsw.gov.au.</li> </ul> |
| GEOTECHNICAL STABILITY                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OBJECTIVE                                                             | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ensure That Each Lot Is Suitable for the Erection of a Dwelling House | <p>To address geotechnical and earthworks issues, the following actions are proposed:</p> <ul style="list-style-type: none"> <li>• <u>Ground Improvement Techniques – eastern depressions</u><br/>The existing ground conditions at this area can be rectified as follows: <ul style="list-style-type: none"> <li>- Excavate the colluvium and stockpile the material.</li> <li>- Remove cobbles, boulders and oversize rocks from the stockpile.</li> <li>- Backfill with sorted material (less the oversize rocks, cobbles and boulders).</li> </ul> </li> </ul> <p>The backfill shall be placed in layers not exceeding 0.5m (uncompacted) and compacted to at least 100% standard dry density ratio.</p> <p>Each layer should be tested. Full-time supervision of the earthworks operation is strongly recommended. Along the top of the slope, the construction of the proposed road should involve removal of the colluvium. The new pavement should be established over the bedrock.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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## DRAFT COMMITMENTS

- **The Southern Slopes**

Buildings should be limited to lightweight pole homes. Foundations should be either steel posts or reinforced concrete piers. They should extend at least 1.0 metre past the toe of the slope, or be socketed into bedrock. The rock socket length shall not be less than 50% of the total post or pier length.

- **The Deep Gully Area**

The existing colluvium at the deep gully should be removed. The area may be backfilled with suitable material to the design formation level. The fill shall be placed at slopes of not steeper than 1 in 2.5, and compacted to standard dry ratio of at least 100%.

- **Other Areas**

The ridge crest and adjacent slopes are adequately stable for normal residential development. Independent soils tests and site classifications are recommended for the individual allotments.

- **General**

The factors of safety against failure of the existing slopes are generally in excess of 2.0 and hence, adequate for the proposed development to proceed. The following specific issues, however, need to be addressed to ensure adequate stability of the entire site.

- **Organic fill – Site A**

The organic fill identified at the areas of test pits 6; 6A & 7 should be removed and replaced with compacted clay fill. The imported fill shall be of low to medium plasticity clays/gravelly clays/sandy clay, and should be compacted to dry density ratio of not less than 100% (standard).

- **Stockpile – Site B**

The existing stockpile between the subject site and the aged care facility is not likely to be stable in the long-term. It is, however, understood that the entire stockpile shall be removed upon completion of the age care facilities. It is recommended that this office be contacted for the inspection of the excavation works to ensure that adequate stable batter slopes are maintained.

- **Ground Improvement Techniques: Eastern Depressions**

It is recommended that existing colluvium over the area identified as the "eastern depression" should be removed. The material may be excavated and discarded or stockpiled for re-use, following removal of the boulders, cobbles, and oversize materials. The backfill shall be placed in layers not exceeding 0.5m (uncompacted), and compacted to at least 100% standard dry density ratio. Bulk earthworks, including road works, are to be conducted under engineering supervision by this office.

Preparation of the proposed access road subgrade should include an excavation of, at least, 1.0m of the existing formation. The subgrade replacement shall comply with Tweed Shire Council specification. The material shall be placed and compacted to, at least, 100% standard dry density ratio.

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A.C.N. 093 157 165

Town Planning & Development Consultants

**DRAFT COMMITMENTS**

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• <b>Ground Improvement Techniques: The Southern Slopes</b><br/>Buildings over the designated Southern Slopes should be limited to lightweight pole homes. Foundations should be either steel posts or reinforced concrete piers. They should extend at least 1.0 metre past the toe of the slope and be socketed into bedrock. The rock socket length shall not be less than 1.0m.</li><li>• <b>Ground Improvement Techniques: The Filled Gully</b><br/>The existing sections of the site situated within the gully are considered unsuitable for residential building construction due to presence of fill. The proposed subdivision allotments 68 to 73 are mostly affected. The area can, however, be engineered to improve on the stability and, consequently, its suitability for residential development. As part of the re-engineering exercise, existing fill should be removed, and the area presented for re-assessment. It is unlikely that existing fill shall be suitably for re-use as structural fill. The excavated material may, however, be stockpiled for further assessment. Certification of the suitability of the re-engineered site for residential development by an experienced geotechnical engineer should be required, prior to the issue of a subdivision certificate.</li><li>• <b>Ground Improvement Techniques: Ridge-tops &amp; Adjacent Slopes</b><br/>The ridges and adjacent slopes are adequately stable for normal residential development. Footings for these buildings should be adequately socketed into bedrock. Each subdivision allotment should be independently engineered for the intended structure. Full geotechnical investigation should be insisted. Routine "soil test" for the classification of the site, as defined in AS2870-1996, may be inadequate.</li><li>• An update of the Geotechnical report (or an alternative approach prior to Stage 3 subdivision certificate application) listed under Annex 12 of the Environmental Assessment, Part 1 is required as some of the recommendations in that report are obsolete. This is particularly important for progressing Stage 3 of the development (the community title area/proposed Lot 80) eg. Section 6.3 of that report requires further inspection of the site in this area upon completion of the aged-care facility.</li></ul> |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**BUSHFIRE**

| OBJECTIVE                                              | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To comply with Planning for Bushfire Protection, 2006. | <ul style="list-style-type: none"><li>• A minimum 25m combined asset protection zone and Ecological Management Area must be located wholly within the boundaries of the lots within the 2(c) zoned area.</li><li>• A Section 88B Covenant shall be created requiring the asset protection zone area to be maintained as a mowed lawn with any plantings restricted to endemic lowland rainforest species such that no more than 20% of the asset protection zone area is covered by tree canopy or tree crowns to be separated by a minimum distance of 2m to 5m.</li><li>• Where canopy thinning is required, tree removal is restricted to camphor laurels only.</li><li>• Rear fencing of residential allotments abutting the 7(d) zoned areas must include a gate to facilitate access for fire fighting purposes.</li></ul> |

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| DRAFT COMMITMENTS                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                          | <ul style="list-style-type: none"> <li>At the commencement of subdivision works and in perpetuity the entire site shall be managed as an APZ as outlined within Appendices 2 &amp; 5 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.</li> <li>The proposed 25 metre APZ and Ecological Management Area to the west of proposed Lot 54 <u>lie outside the boundary of the property</u> and is required to be protected and maintained in perpetuity. The APZ shall be managed as outlined within Appendices 2 &amp; 5 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.</li> <li>An easement shall be created over the APZ west of Lot 54.</li> <li>The proposed reticulated water supply shall comply with the requirements for services as outlined within section 4.1.3 of Planning for <i>Bush Fire 2006</i>.</li> <li>The proposed public and private roads shall comply with the requirements of section 4.1.3 (1) of Planning for <i>Bush Fire Protection 2006</i>. A perimeter road <u>is not required</u> in this instance.</li> <li>Landscaping, restoration and regeneration works within the site is to comply with the principles of Appendix 5 of Planning for <i>Bush Fire Protection 2006</i>.</li> </ul> |
| TELECOMMUNICATIONS                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OBJECTIVE                                                                | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Provide appropriate telecommunications services.                         | <ul style="list-style-type: none"> <li>The applicant shall provide "fibre to the home" (FTTH) telecommunications infrastructure throughout the subdivision, in accordance with the requirements of Council and the relevant service providers."</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SERVICES                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OBJECTIVE                                                                | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| To provide services in accordance with Tweed Shire Council requirements. | <ul style="list-style-type: none"> <li>Council requires that the PRV be located in Walmsleys Road near the boundary of Lot 1 DP167380 and Lot 1 DP1034976.</li> <li>Rainwater tanks will be provided for all future dwelling houses on each lot.</li> <li>The proponents shall provide a water supply system capable of serving all lots in the development by connection to the Tweed Shire Water Supply System including all works necessary in accordance with the provisions of Tweed Shire Council Development Design Specification D11.</li> <li>The subdivision will provide that the following minimum Sewer and Water requirements are mandatory for development on each lot created:<br/>Single Dwellings:<br/>Minimum 5000L rainwater tank roof area connected to it.<br/>Multi Dwellings &amp; other buildings:<br/>Rainwater tanks to be provided on a similar basis connecting 80% - 90% of the roof area</li> <li>These tanks shall be plumbed to provide water for external uses, toilet flushing and laundry cold water for washing machines.</li> </ul>                                                                                                                                                                                                                                                                                                  |

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**DRAFT COMMITMENTS**

- The subdivision shall be seweraged by conventional gravity sewerage including the construction of a sewerage pump station to service the lots west of Stott Street. The gravity sewer shall provide a connection point for further development to the south. A review of the risk of overflow at SPS2050 Bolwarra PI shall be carried out and any works required to ensure a low risk will be provided.
- Sewerage shall be designed in accordance with the provisions of Tweed Shire Council Development Design Specification D12.
- Development contributions under S64 of the Local Government Act shall be made in accordance with Council requirements and at the prevailing rates.
- No physical works occur in any current or future (Draft as advertised) Environmental Protection zones. This includes clearing, roads, fences, provision of services, erosion and sediment control devices and access.
- The high voltage power lines shall be diverted underground as identified in the bushfire assessment prepared by Biolink.

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# Modification of Project Approval

## Section 75W of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning, I modify the Project Approval referred to in Schedule 1, subject to the conditions in Schedule 2.



Anthony Witherdin  
**Director**  
**Modification Assessments**

Sydney 5 JUNE 2017

### SCHEDULE 1

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Approval:</b>   | <b>MP 05_0198</b> granted by the Planning Assessment Commission of New South Wales on 2 August 2012.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>For the following:</b>  | 88 lot subdivision comprising: <ul style="list-style-type: none"><li>• 77 Torrens title residential lots;</li><li>• a six lot Community Title scheme (five residential and one neighbourhood property);</li><li>• one public reserve lot;</li><li>• one sewerage pumping station lot; and</li><li>• associated road, stormwater and utility infrastructure.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Applicant:</b>          | WDLC Pty Ltd, ATF Dickinson Superannuation Fund, M Wamsley, R Wamsley, H Mabbutt and D Miller                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Approval Authority:</b> | Minister for Planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>The Land:</b>           | Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 DP 1117326 Wamsleys Road and Stott Street, Bilambil Heights.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Modification:</b>       | <b>MP 05_0198 MOD 1:</b> the modification includes: <ul style="list-style-type: none"><li>• changes to the approved sewerage servicing infrastructure, including the deletion of the sewerage pumping station on approved Lot 63;</li><li>• deletion of Condition B3 and re-wording of conditions A3, A4, B6, D25, E2, E8 and E13 to reflect the removal of the sewerage pumping station on approved Lot 63 and the approved engineering drawings;</li><li>• re-wording of Condition A2 to create a new development stage (Stage 1A) to enable tree removal and site survey works;</li><li>• administrative changes to the description of the approved development in Schedule 1, the Definitions table in Schedule 2 and conditions B7 and B8, C5 to C7 and E9 to reflect the revised staging arrangements; and</li><li>• re-wording advice note AN1 to correct a typographical error and advice note AN12 to reflect changes to Council's subdivision certification process.</li></ul> |

## SCHEDULE 2

The above approval is modified as follows:

- (a) Schedule 1 is amended by the insertion of the **bold and underlined** words/numbers and deletion of the ~~struckout~~ words/numbers as follows:

### Schedule 1

|                            |                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application No.:</b>    | MP 05_0198                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Proponent:</b>          | WDLC Pty Ltd, ATF Dickinson Superannuation Fund, M Wamsley, R Wamsley, H Mabbutt and D Miller                                                                                                                                                                                                                                                                                           |
| <b>Approval Authority:</b> | Minister for Planning and Infrastructure                                                                                                                                                                                                                                                                                                                                                |
| <b>Land:</b>               | Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 in DP 1117326 at Wamsleys Road and Stott Street, Bilambil Heights                                                                                                                                                                                                                                                           |
| <b>Project:</b>            | <p>85 <b><u>84</u></b> Lot subdivision comprising:</p> <ul style="list-style-type: none"><li>• 77 Torrens title residential lots,</li><li>• A 6 lot Community Title Scheme (5 residential and 1 neighbourhood property)</li><li>• a public reserve lot,</li><li>• <del>sewerage pumping station lot,</del></li><li>• associated roads, stormwater and utility infrastructure.</li></ul> |

- (b) The Definitions Table in Schedule 2 is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

### DEFINITIONS

|                                  |                                                                                                                                                                                                                                                                         |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advisory Notes                   | Advisory information relating to the approval but do not form a part of this approval.                                                                                                                                                                                  |
| <b><u>Approval Authority</u></b> | <b><u>The Minister for Planning, or delegate</u></b>                                                                                                                                                                                                                    |
| Proponent                        | WDLC Pty Ltd, ATF Dickinson Superannuation Fund, M Walmsley, P Walmsley, H Mabbutt and D Miller, or anyone else entitled to act on this approval.                                                                                                                       |
| Application                      | The project application and the accompanying drawings plans and documentation described in Conditions A3 and A4.                                                                                                                                                        |
| BCA                              | Building Code of Australia                                                                                                                                                                                                                                              |
| Construction                     | Any works, including earth and building works                                                                                                                                                                                                                           |
| Council                          | Tweed Shire Council                                                                                                                                                                                                                                                     |
| Certifying Authority             | Means a person who is authorised by or under section 109D of the Act to issue a <del>e</del> Construction <del>e</del> Certificate under Part 4A of the Act; or in the case of Crown development, a person qualified to conduct a Certification of Crown Building works |
| Day                              | The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays                                                                                                                                                                         |
| Department                       | Department of Planning and <del>Infrastructure</del> <b><u>Environment</u></b> or its successors                                                                                                                                                                        |
| <del>Director-General</del>      | <del>Director-General of the Department of Planning and Infrastructure, or nominee/delegate</del>                                                                                                                                                                       |

Director General's approval,  
agreement or satisfaction

A written approval from the Director General (or nominee/delegate)

~~Where the Director General's approval, agreement or satisfaction is required under a condition of this approval, the Director General will endeavour to provide a response within one month of receiving an approval, agreement or satisfaction request. The Director General may ask for additional information if the approval, agreement or satisfaction request is considered incomplete. When further information is requested, the time taken for the Applicant to respond in writing will be added to the one month period.~~

EEC

Endangered ecological community

Evening

The period from 6pm to 10pm

EPA

Environment Protection Authority, or its successor

EP&A Act

*Environmental Planning and Assessment Act 1979*

EP&A Regulation or  
Regulation

*Environmental Planning and Assessment Regulation 2000*

Incident

A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval

Minister

Minister for Planning and Infrastructure **Environment**, or nominee **delegate**

Night

The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays

NOW

NSW Office of Water, or its successor

OEH

Office of the Environment and Heritage, or its successor

PCA

Principal Certifying Authority, or in the case of Crown development, a person qualified to conduct a Certification of Crown Building works

PPR

Preferred Project Report

Reasonable and Feasible

Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements. Feasible relates to engineering considerations and what is practical to build

RMS

Roads and Maritime Services Division, Department of Transport or its successor

**Secretary**

**Secretary of the Department of Planning and Environment, or nominee/delegate**

**Secretary's approval,  
agreement or satisfaction**

**A written approval from the Secretary (or nominee/delegate)**

**Where the Secretary's approval, agreement or satisfaction is required under a condition of this approval, the Secretary will endeavour to provide a response within one month of receiving an approval, agreement or satisfaction request. The Secretary may ask for additional information if the approval, agreement or satisfaction request is considered incomplete. When further information is requested, the time taken for the Applicant to respond in writing will be added to the one month period**

Subject Site

Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 DP 1117326.

- (c) Schedule 2, Part A, Condition A2 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**A2 Staging**

The project is to be constructed in ~~six (6)~~ **seven (7)** stages, generally in accordance with Revision F L of Plan 35054 dated 04.05.11 **24.03.16** prepared by Landsurv Pty Ltd, incorporating the lots as follows:

**(1A) Stage 1A Preliminary Works Stage comprising:**

- **Removal of the existing trees within and adjacent to the alignment of approved Roads 3 and 5. Prior to removing any trees within or adjacent**

to approved Roads 3 and 5 the Proponent shall:

- submit a Tree Removal Plan for the approval of the Secretary identifying all trees proposed to be removed within Stage 1A; and
  - provide a copy of the approved Tree Removal Plan to the PCA prior to the issue of a Construction Certificate authorising any tree removal works
  - Surveying of all proposed road alignments including placing pegs, observing levels and preparing spatial data.
  - The following conditions of approval shall be complied with prior to commencing the preliminary works stage: conditions C1 to C4, Condition C10, and conditions C12 to C14.
- (1) Stage 1 comprises lots 1-13 inclusive, incorporating roads and public reserve (see note (a) below).
- (2) Stage 2 comprises lots 14-31 inclusive incorporating roads.
- (3) Stage 3 comprises Community Title subdivision containing six lots.
- (4) Stage 4 comprises lots 32-40 inclusive incorporating roads.
- (5) Stage 5 comprises lots 41-61 inclusive incorporating roads and sewer pumping station. Prior to removing any trees associated with the construction of the sewer line at the rear of approved lots 55, 57, 59 and 60 the Proponent shall:
- submit a Tree Removal Plan for the approval of the Secretary identifying all trees proposed for removal and demonstrating the design and construction techniques proposed to minimise tree removal within the Environmental Management Area; and
  - provide a copy of the approved Tree Removal Plan to the PCA prior to the issue of a Construction Certificate authorising any tree removal works.
- (6) Stage 6 comprises lots 63-79 **62 -78** inclusive incorporating roads. Prior to removing any trees associated with the construction of the sewer line at the rear of approved lots 69, 70 and 77 the Proponent shall:
- submit a Tree Removal Plan for the approval of the Secretary identifying all trees proposed for removal and demonstrating the design and construction techniques proposed to minimise tree removal within the Environmental Management Area; and
  - provide a copy of the approved Tree Removal Plan to the PCA prior to the issue of a Construction Certificate authorising any tree removal works.

Note (a). The public reserve, shown as part of Stage 1, together with a road access shall be constructed prior to the issuing of a subdivision certificate for more than 25% of the approved allotments and associated roads and services.

Subject to any conditions of approval, staging of allotment and/or road construction may vary in sequence and timing. Essential infrastructure associated with and including, but not limited to, roads, roundabouts, bus routes, footpaths, parks, services, landscaping and environmental management, shall be constructed as specified in the staging listed above or as otherwise provided in these conditions and the proponent's Statement of Commitments. Any revised staging plan that varies the stage boundaries or components listed in (1) - (6) inclusive, and subject to note (a) of this condition, shall be submitted for the approval of the **Secretary** ~~Director-General~~, prior to the issuing of a Construction Certificate for subdivision works.

- (d) Schedule 2, Part A, Condition A3 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~-words as follows:

**A3 Project in Accordance with Plans**

The project will be undertaken in accordance with the Environmental Assessment, the Preferred Project Report and the following drawings:

| <b>Subdivision Design Drawings prepared by Landsurv Pty Ltd</b> |                 |                                                                                                                                                                                                                       |                                 |
|-----------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <b>Drawing No.</b>                                              | <b>Revision</b> | <b>Name of Plan</b>                                                                                                                                                                                                   | <b>Date</b>                     |
| 35054<br>(Sheets 1, 2, 3<br>in 3 sheets))                       | F<br><br>L      | Plan of Proposed Subdivision                                                                                                                                                                                          | 04.05.11<br><br><b>24.03.16</b> |
| <b>Engineering Drawings prepared by Opus Quantec McWilliam</b>  |                 |                                                                                                                                                                                                                       |                                 |
| <b>Drawing No.</b>                                              | <b>Revision</b> | <b>Name of Plan</b>                                                                                                                                                                                                   | <b>Date</b>                     |
| 203057<br>Fig.4.0                                               |                 | Proposed Cut and Fill Contours                                                                                                                                                                                        | October,2011                    |
| 203057 Fig<br>6.0                                               |                 | Erosion and Sediment Control Plan                                                                                                                                                                                     | October 2011                    |
| 203057 Fig<br>7.0                                               |                 | Road Layout Plan                                                                                                                                                                                                      | October 2011                    |
| 203057 Fig<br>7.1                                               |                 | Site Cross Sections                                                                                                                                                                                                   | October 2011                    |
| 203057 Fig<br>7.2                                               |                 | Site Cross Sections                                                                                                                                                                                                   | October 2011                    |
| 203057 Fig<br>8.0                                               |                 | Walmsleys Road Longitudinal<br>Section and Typical Cross Section                                                                                                                                                      | September<br>2010               |
| 203057 Fig<br>9.0                                               |                 | Road 1 Longitudinal Section and<br>Typical Cross Section                                                                                                                                                              | October 2011                    |
| 203057 Fig<br>10.0                                              |                 | Road 2 Longitudinal Section and<br>Typical Cross Section                                                                                                                                                              | April 2009                      |
| 203057 Fig<br>11.0                                              |                 | Road 3 Longitudinal Section and<br>Typical Cross Section                                                                                                                                                              | October 2011                    |
| 203057 Fig<br>12.0                                              |                 | Road 5 Longitudinal Section and<br>Typical Cross Section                                                                                                                                                              | October 2011                    |
| 203057 Fig<br>12.1                                              |                 | Right of Carriageway No.1<br>Longitudinal Section and Typical<br>Cross Sections                                                                                                                                       | April 2010                      |
| 203057 Fig<br>12.2                                              |                 | Right of Carriageway No.2<br>Longitudinal Section and Typical<br>Cross Sections                                                                                                                                       | April 2010                      |
| 203057 Fig<br>12.3                                              |                 | Right of Carriageway No.3<br>Longitudinal Section and Typical<br>Cross Section                                                                                                                                        | April 2010                      |
| 203057 Fig<br>12.4                                              |                 | Right of Carriageway No.4<br>Longitudinal Section and Typical<br>Cross Section                                                                                                                                        | April 2010                      |
| 203057 Fig<br>13.0                                              |                 | Water Cycle Management Plan Pre-<br>Development                                                                                                                                                                       | October 2011                    |
| 203057 Fig<br>14.0                                              |                 | Water Cycle Management Plan Post-<br>Development                                                                                                                                                                      | October 2011                    |
| 203057 Fig<br>15.0                                              |                 | Services Plan <b><u>as amended by<br/>Cozens Regan Williams Prove<br/>Sewer Reticulation Plans, SK15<br/>and SK16, Rev D, June 2016 and<br/>the relevant conditions of consent<br/>included within DA 15/0042</u></b> | October 2011                    |

|                                                                     |                 |                                                                                                     |                  |
|---------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------|------------------|
| 203057 Fig 16.0                                                     |                 | Proposed Grades Analysis                                                                            | August 2010      |
| 203057 SK20100303                                                   |                 | Indicative Restriction of Use Layout Plan                                                           | June 2011        |
| 203057 SK20100713                                                   |                 | Walmsley Road Extension Proposed 1 in 4 Batter                                                      | July, 2010       |
| 203057 SK20100809-01                                                | Rev A           | Proposed Local Park Grade Compliance Schematic                                                      | August 2010      |
| 203057 SK20100809-02                                                | Rev A           | Proposed Local Park Grade Compliance Schematic                                                      | August 2010      |
| 203057 SK20100921                                                   |                 | Proposed Energy Dissipater & Level Spreaders                                                        |                  |
| <b>Engineering Drawings prepared by Cozens Regan Williams Prove</b> |                 |                                                                                                     |                  |
| <b>SK15</b>                                                         | <b>D</b>        | <b>Sewer Reticulation Plan Sheet 1 and relevant conditions of consent included within DA15/0042</b> | <b>June 2016</b> |
| <b>SK16</b>                                                         | <b>D</b>        | <b>Sewer Reticulation Plan Sheet 2 and relevant conditions of consent included within DA15/0042</b> | <b>June 2016</b> |
| <b>Landscape Drawings prepared by Form Landscape Architects</b>     |                 |                                                                                                     |                  |
| <b>Drawing No.</b>                                                  | <b>Revision</b> | <b>Name of Plan</b>                                                                                 | <b>Date</b>      |
| 91105 DA03 P2                                                       |                 | Landscape Masterplan                                                                                | 08 Dec 10        |
| 91105 DA03 P3                                                       |                 | Landscape Masterplan                                                                                | 08 Dec 10        |
| 91105 DA03 P4                                                       |                 | Landscape Masterplan - Pedestrian Pathways                                                          | 08 Dec 10        |
| 91105 DA03 P5                                                       |                 | Landscape Masterplan - Trees In Public Places                                                       | 08 Dec 10        |
| 91105 DA03 P6                                                       |                 | Landscape Masterplan - Public Park Concept                                                          | 08 Dec 10        |
| 91105 DA03 P7                                                       |                 | Tree Suitability List                                                                               | 08 Dec 10        |

- (e) Schedule 2, Part A, Condition A4 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**A4 Project in Accordance with Documents**

The project will be undertaken in accordance with the following documents:

- (1) *Environmental Assessment Report* dated November, 2006, as revised June 2009 prepared by Darryl Anderson Consulting Pty Ltd; and,
- (2) *Preferred Project Report/Response to Submissions* prepared by Darryl Anderson Consulting Pty Ltd dated October 2011; **and**
- (3) **+ Modification Report – Major Project Approval No. 05 0198 (MOD 1) Proposed Residential Subdivision Wamsleys Road & Stott Street, Bilambil Heights, prepared by DAC Planning PTY LTD, dated February 2017.**

- (f) Schedule 2, Part A, insert new Condition A9 after Condition A8 as follows:

**A9 SEWERAGE PUMPING STATION REQUIREMENTS**

No Subdivision Certificate(s) for lots within stages 4 to 6 (approved lots 41 to 78) shall be released until the Proponent has provided written evidence to the satisfaction of the PCA

confirming the sewerage pumping station on Lot 12, as approved under DA 15/0042, is operational.

- (g) Schedule 2, Part A, insert new Condition A10 after Condition A9 as follows:

**A10 WORKS WITHIN PROJECT AREA**

This Project Approval does not authorise any works outside the project approval boundary, which includes Lot 1 in DP 134787, Lot 1 in DP 167380, Lot 2 in DP 961928 and Lot 5 in DP 117326.

- (h) Schedule 2, Part B, Condition B3 – is amended by the deletion of the ~~struckout~~ words as follows:

**~~B3 Lot Layout and Access to Sewerage Pumping Station~~**

~~The layout of proposed Lots 55, 56, 57 and 62 and access to the sewerage pumping station in Stage 5 shall be revised as follows:~~

- ~~a) The access handle proposed for lot 55 shall be included into lot 62 and be used to provide exclusive access to the proposed Pumping Station;~~
- ~~b) The width of proposed lot 56 shall be reduced by 1 metre along its southern boundary;~~
- ~~c) The space created in point b) above shall be incorporated into proposed lot 55 and together with the access handle to proposed lot 57, be used to accommodate a common right of access to both of these lots with a minimum width of 5 metres.~~

- (i) Schedule 2, Part B, Condition B6 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**B6 Subdivision**

- 1) Notwithstanding any other condition of this approval but subject to ~~condition~~ **advice note** AN12, separate Construction Certificates may be issued for bulk earthworks and for civil works. The carrying out of the bulk earthworks may be commenced prior to the issue of a Construction Certificate for civil works where it can be demonstrated all works are compatible with the civil works subject to compliance with the following conditions: A2, B1, B2, ~~B3(a)~~, B7, B8, B9, B11, B12, B6, and conditions in Part C and Part D of this approval.
- 2) Prior to the issue of a Construction Certificate the following detail in accordance with Council's adopted Development Design and Construction Specifications shall be submitted to the satisfaction of the Certifying Authority.
  - a. copies of compliance certificates relied upon
  - b. four (4) copies of detailed engineering plans and specifications. The detailed plans shall include but are not limited to the following:
    - i. earthworks
    - ii. roadworks/furnishings
    - iii. water supply works
    - iv. sewerage works
    - v. landscaping works
    - vi. sedimentation and erosion management plans
    - vii. location of all service conduits (water, sewer, Country Energy and Telstra)

Note: The ~~Environmental Planning and Assessment Act 1979~~ EP&A Act makes no provision for works under the ~~Water Management Act 2000~~ and Section 138 of the ~~Roads Act 1993~~ to be certified by an Accredited Certifier.

- (j) Schedule 2, Part B, Condition B7 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**B7 Construction Compliance Bond and Long Service Levy**

Prior to the issue of a Construction Certificate for ~~each stage~~ **stages 1 to 6** of the subdivision, a cash bond or bank guarantee (unlimited in time) shall be lodged with Council for an amount based on 1% of the value of the works (minimum \$1,000). The bond may be called up at any time and the funds used to rectify any non-compliance with the conditions of this ~~consent~~ **approval** which are not being addressed to the satisfaction of the General Manager or his/**her** delegate. The bond will be refunded, if not expended, when the final Subdivision/Occupation Certificate is issued.

In accordance with Section 109F(i) of the ~~Environmental Planning and Assessment Act 1979~~ **EP&A Act** (as amended), a ~~e~~Construction ~~e~~Certificate for subdivision works or building works shall not be issued until any long service levy payable under Section 34 of the **Building and Construction Industry Long Service Payments Act, 1986** (or where such levy is payable by instalments, the first instalment of the levy) has been paid. Council is authorised to accept payment. Where payment has been made elsewhere, proof of payment is to be provided.

- (k) Schedule 2, Part B, Condition B8 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**B8 Geotechnical Compliance**

**Stages 1 to 6** ~~Each stage~~ shall be preceded by an endorsement of detailed earthworks design plans by a practicing geotechnical engineer to certify compliance of the plans and implementation strategy with the conclusions and recommendations of the geotechnical reports, submitted with the EA, numbered JU/04/810 (dated June/July 2004 and May 2009) and NO/03/699 (dated December 2003/January 2004) prepared by Maiden Geotechnics. **A copy of the geotechnical engineer's endorsement shall be forwarded to the PCA prior to the commencement of construction works within these stages.**

- (l) Schedule 2, Part C, Condition C5 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**C5 Structural Details**

Prior to the commencement of construction ~~at each~~ **works for stages 1 to 6** of the project, the Proponent shall submit to the satisfaction of the ~~Principal Certifying Authority~~ **PCA** structural drawings prepared and signed by a suitably qualified practising Structural Engineer that comply with:

- (1) the relevant clauses of the BCA,
- (2) the relevant project approval,
- (3) drawings and specifications comprising the Construction Certificate, and
- (4) the relevant Australian Standards listed in the BCA (Specification A1.3).

- (m) Schedule 2, Part C, Condition C6 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**C6 Filling of the Site**

Once the ~~a~~ Construction Certificate has been issued for ~~each stage~~ **stages 1 to 6** of the subdivision, any change in the source of fill must be notified to the Certifying Authority and approval obtained to the new source prior to the import of any of the material. A report from a practicing geotechnical engineer certifying that the new source material is suitable

for the intended purpose must be provided to the PCA. The report must include any conditions on the use of the material and a report from a registered NATA laboratory on the soil properties of the fill material including contamination.

- (n) Schedule 2, Part C, Condition C7 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

### **C7 Retaining Walls**

Prior to ~~the~~ commencement of works for any ~~stage~~ **stages 1 to 6** of the project a certificate of adequacy of design, signed by a practising Structural Engineer on all proposed retaining walls in excess of 1.2m in height, must be provided to the ~~Principal Certifying Authority~~ **PCA**. The certificate must also address any loads or possible loads on the wall from structures adjacent to the wall and must be supported by a geotechnical assessment of the founding material.

- (o) Schedule 2, Part D, Condition D25 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

### **D25 Compulsory Inspections**

Tweed Shire Council shall be given a minimum of 24 hours notice to carry out the following compulsory inspections in accordance with Tweed Shire Development Control Plan, Part A5- Subdivision Manual, Appendix D. Inspection fees are based on the rates contained in Council's current Fees and Charges:-

#### **Roadworks**

Pre-construction commencement erosion and sedimentation control measures

Completion of earthworks

Excavation of sub grade

Pavement – sub base

Pavement – pre kerb

Pavement – pre seal

Pathways, footways, cycleways – formwork/reinforcement

Final inspections – on maintenance

Off maintenance inspection

#### **Water Reticulation, Sewer Reticulation, Drainage**

Excavation

Bedding

Laying/jointing

Manholes/pits

Backfilling

Permanent erosion and sedimentation control measures

Drainage channels

Final inspection – on maintenance

Off maintenance

#### **Sewer Pump Station and Lift Stations**

Excavation

Formwork/reinforcement

Hydraulics

Mechanical/electrical

Commissioning – on maintenance

Off maintenance

#### **Stormwater Quality Control Devices (other than proprietary devices)**

For detail refer to Water by Design – Technical Guidelines

Earthworks and filter media

Structural Components

Operational Establishment

Commissioning – on maintenance

## Off maintenance

Council's role is limited to the above mandatory inspections and does not include supervision of the works, which is the responsibility of the Developer's Supervising Consulting Engineer.

The EP&A Act, 1979 (as amended) makes no provision for works under the **Water Management Act 2000** to be certified by an "aAccredited eCertifier".

The fee for the above-mentioned inspections shall be invoiced upon completion of all civil works, and subject to the submission of an application for a 'Subdivision Works Compliance Certificate'.

- (p) Schedule 2, Part E, Condition E2 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

### **E2 Compliance Certificate**

Prior to the application for a Subdivision Certificate for each stage of the subdivision a Compliance Certificate or Certificates shall be obtained from Council or an aAccredited eCertifier for the following:-

- a) Compliance Certificate - Roads
- b) Compliance Certificate - Water Reticulation
- c) Compliance Certificate - Sewerage Reticulation
- d) Compliance Certificate – Drainage
- e) ~~Compliance Certificate – Sewerage Pump Station~~

Note:

1. All eCompliance eCertificate applications must be accompanied by documentary evidence from the developer's ~~Subdivision Works Accredited Certifier (SWAC)~~ **Certifying Engineer** certifying that the specific work for which a certificate is sought has been completed in accordance with the terms of the ~~development consent~~ **Project Approval**, the ~~C~~onstruction **C**ertificate, Tweed Shire Council's Development Control Plan Part A5 - Subdivisions Manual and Council's Development Design and Construction Specifications. **The Certifying Engineer shall be a Professional Engineer (Civil) with a National Engineering Register (NER) or a Registered Surveyor. Documentary evidence shall be provided to Council demonstrating the currency of the above accreditation.**
  2. The EP&A Act, 1979 (as amended) makes no provision for works under the *Water Management Act 2000* to be certified by an "aAccredited eCertifier".
- (q) Schedule 2, Part E, Condition E8 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

### **E8 Registration of Easements / Restrictions to use / Right of carriageways**

- 1) The creation of easements for services, rights of carriageways and restrictions as to user are applicable under Section 88B of the *Conveyancing Act 1919*, including (but not limited to) the following:
  - a. Easements for sewer, water supply and drainage over all public services/infrastructure on private property.
  - b. Right of carriageway over the approved driveway access, subject to the outcomes required in condition B2, is to benefit Council ~~and provide access in perpetuity to the sewer pump station.~~
  - c. Drainage Easements are to be placed over all subsurface drains and interallotment drainage, benefiting and burdening the property owners. Maintenance of the subsurface drains is to be included in the 88B instrument.

- d. Right of carriageways are to benefit and burden the property owners. Maintenance of the right of carriageways is to be shared between the property owners. Provision is also to be included in the 88B to provide public access to the proposed parks, nominating Council as the benefiting authority.
  - e. Use of site regrading on sloping residential subdivision sites to manufacture flat earth platforms is not permitted. Future dwellings on these sites are to use building techniques suitable to sloping sites.
- 2) Pursuant to Section 88BA of the Conveyancing Act (as amended) the Instrument creating the right of carriageway/easement to drain water shall make provision for maintenance of the right of carriageway/easement by the owners from time to time of the land benefited and burdened and are to share costs equally or proportionally on an equitable basis.
  - 3) Any Section 88B Instrument creating restrictions as to user, rights of carriageway or easements which benefit Council shall contain a provision enabling such restrictions, easements or rights of way to be revoked, varied or modified only with the consent of Council.
  - 4) Privately owned infrastructure on community land may be subject to the creation of statutory restrictions, easements etc in accordance with the *Community Land Development Act 1989*, *Strata Schemes Management Act 1996*, *Conveyancing Act 1919*, or other applicable legislation.
  - 5) In addition to the above certification, the following is to be included in the Section 88B Instrument to accompany the final plan of subdivision.
    - a. A restriction to user for each lot that has the benefit of a retaining wall that prevents any cut or fill greater than 0.3m in vertical height within a zone adjacent to the wall that is equal to the height of the wall.
    - b. Each lot burdened and or benefited by a Type 1 wall as defined in AS4678-2002 Earth Retaining Structures, shall contain a restriction as to user advising the landowner of the need to maintain the wall in accordance with that standard.
    - c. A restriction as to user burdening all lots that prevents use of site regrading on sloping (natural slope >10%) residential subdivision sites to manufacture flat earth platforms suitable for construction of concrete slab-on-ground dwellings. Dwellings on these sites are to use building techniques suitable to sloping sites such as piled or piered foundations.
    - d. A Restriction as to User for any indicated Asset Protection Zone. No dwellings are to be constructed in this area. The Restriction as to User shall advise the landowner of the need to maintain this area as an Asset Protection Zone.

The restriction is to be clearly marked on the plan of subdivision and Council is to be nominated as the sole party to vary, modify and/or extinguish the restriction.

A public positive covenant is to be created under Section 88E of the *Conveyancing Act 1919*, to require that the land the subject to the VMP is to be maintained in accordance with the requirements of the VMP.

- (r) Schedule 2, Part E, Condition E9 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**E9 Defects Liability Bond**

- 1) Prior to the issue of a Subdivision Certificate for ~~each stage~~ **stages 1 to 6** of the project a defect liability bond (in cash or unlimited time Bank Guarantee) shall be lodged with Council.

- 2) The bond shall be based on 5% of the value of the works (minimum \$1,500) which will be held by Council for a period of 12 months from the date on which the Subdivision Certificate is issued. It is the responsibility of the proponent to apply for refund following the remedying of any defects arising within the 6 month period.
  - 3) Prior to the issue of a Subdivision Certificate for each ~~stage~~ **stages 1 to 6** of the project, a maintenance bond equal to 25% of the contract value of the footpath construction works shall be lodged for a period of 3 years or until 80% of the lots fronting paved footpaths are built on.
  - 4) Alternatively, the developer may elect to pay a cash contribution to the value of the footpath construction works plus 25% in lieu of construction and Council will construct the footpath when the subdivision is substantially built out. The cost of these works shall be validated by a schedule of rates.
  - 5) A bond shall be lodged prior to the issue of the Subdivision Certificate to ensure that the landscaping is maintained by the developer for a period of 6 months from the date of issue of a Subdivision Certificate. The amount of the bond shall be 20% of the estimated cost of the landscaping or \$3000 whichever is the greater.
  - 6) The six (6) months Defects Liability Period commences upon the registration of the Plan of Subdivision for each stage of the project.
  - 7) Any damage to property (including pavement damage) is to be rectified to the satisfaction of the General Manager or his delegate prior to the issue of a Subdivision Certificate for each stage of the project. Any work carried out by Council to remove material from the roadway will be at the Developer's expense and any such costs are payable prior to the issue of a Subdivision Certificate.
- (s) Schedule 2, Part E, Condition E13 – is amended by insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**E13 Water Supply and Sewer**

- 1) Prior to issuing a Subdivision Certificate for each stage of the project, reticulated water supply and outfall sewerage reticulation shall be provided to all lots within the subdivision in accordance with Tweed Shire Council's Development Control Plan Part A5 - Subdivisions Manual, Councils Development Design and Construction Specifications and the Construction Certificate approval.
- 2) ~~The site of the sewage pumping station shall be transferred to Council in fee simple, at no cost to Council within 28 days of the date of registration of the plan of subdivision.~~
- 3) Note: ~~The Environmental Planning and Assessment Act 1979~~ **EP&A Act** makes no provision for works under the **Water Management Act, 2000** to be certified by an Accredited Certifier.
- 4) Water meters are to be located outside of the vehicle paths within the rights of carriageway of battleaxe lots.

- (t) In the Advisory Notes, AN1 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**AN1 Compliance Certificate, Water Management Supply Authority Act, 2000**

Prior to issuing a Subdivision Certificate, a Compliance Certificate shall be provided to the ~~a~~**A**pproval ~~a~~**A**uthority showing that the project has met with the detailed requirements of the relevant water supply authority for the region that the subject site is located within.

The developer shall obtain the Compliance Certificate from the relevant local water supply authority and produce this to the satisfaction of:

- (1) the ~~e~~**C**ertifying ~~a~~**A**uthority before the release of the Construction Certificate,
- (2) the ~~a~~**A**pproval ~~a~~**A**uthority before the release of the Subdivision Certificate, and
- (3) the ~~principal certifying authority~~ **PCA** prior to occupation.

- (u) In the Advisory Notes, AN12 – is amended by the insertion of the **bold and underlined** words and deletion of the ~~struckout~~ words as follows:

**AN12 Certification**

**Construction Certificate**

Prior to the commencement of subdivision works, the ~~p~~**P**roponent must obtain a Construction Certificate from either the Council or an ~~a~~**A**ccredited ~~e~~**C**ertifier for each stage of the subdivision before any subdivision work can commence for the relevant stage.

Civil work in accordance with ~~an the~~ **Project a**pproval ~~or development consent~~ for any stage must not be commenced until a Construction Certificate for the civil work has been issued in accordance with Council's Development Construction Specification C101 by ~~the consent authority, or an a~~**A**ccredited ~~e~~**C**ertifier, **or Tweed Shire Council** and the person having the benefit of the approval ~~or development consent~~ has appointed:

- a ~~principal certifying authority~~ **PCA**,
- **a Certifying Engineer to certify the compliance of the completed works. The Certifying Engineer shall be a Professional Engineer (Civil) with a National Engineering Register (NER) or a Registered Surveyor. Documentary evidence is to be provided to Council demonstrating the currency of the above accreditation, and**
- **has notified the Approval Authority and the Council of the appointment.**
- ~~a Subdivision Works Accredited Certifier (SWAC) to certify the compliance of the completed works. The SWAC must be accredited in accordance with Tweed Shire Council DCP Part A5 – Subdivision Manual, Appendix C with accreditation in accordance with the Building Professionals Board Accreditation Scheme. As a minimum the SWAC shall possess accreditation in the following categories:~~
  - ~~G4: Accredited Certifier – Stormwater management facilities construction compliance~~
  - ~~G6: Accredited Certifier – Subdivision road and drainage construction compliance~~

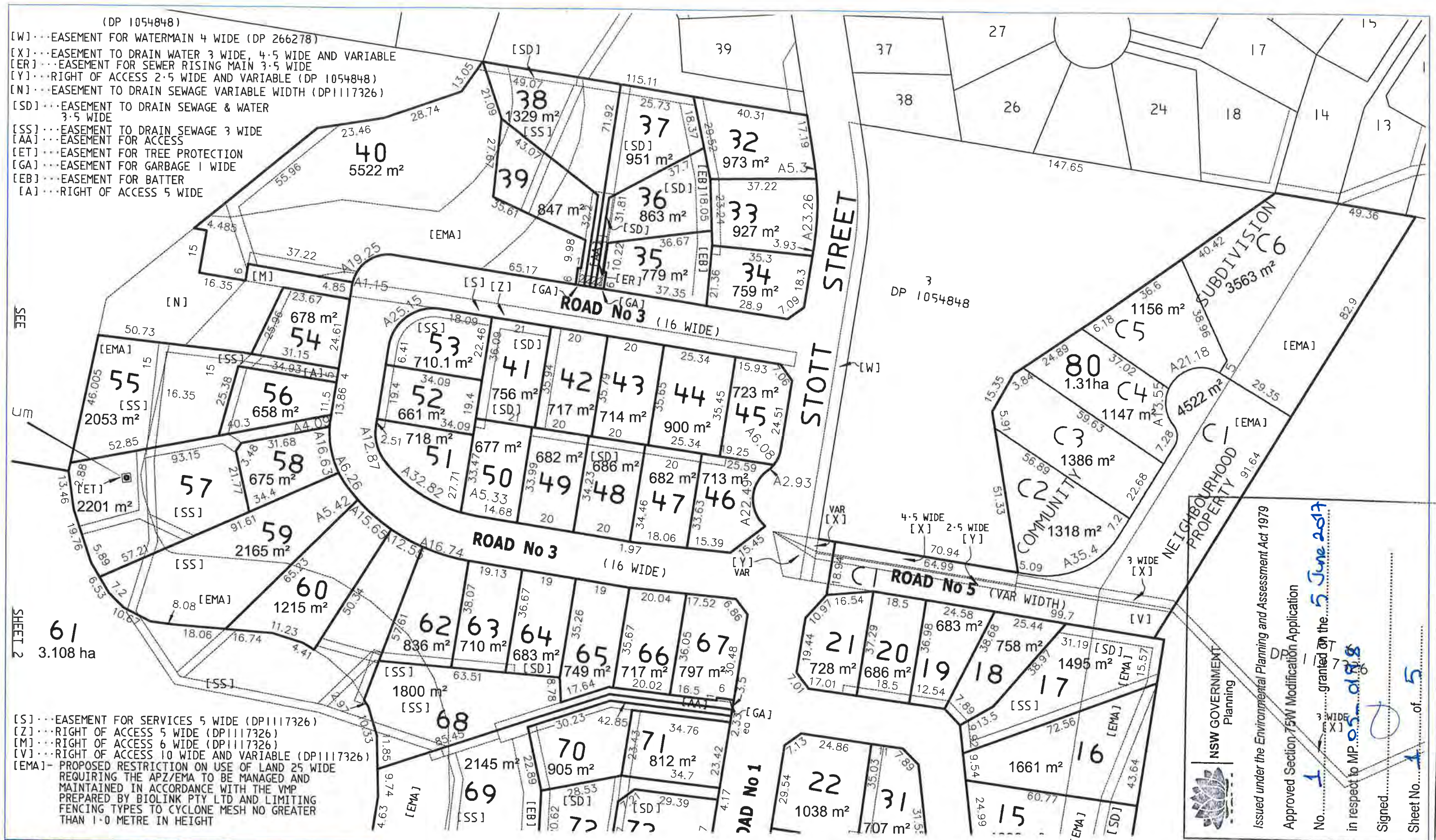
~~The SWAC shall provide documentary evidence to Council demonstrating current accreditation with the Building Professionals Board prior to commencement of works.~~

**Note:** ~~For subdivisions creating 5 new allotments or less, OR the value of new public infrastructure is less than \$30,000, then the SWAC may be substituted for an Institute of Engineers Australia Chartered Professional Engineer (Civil College) with NPER registration.~~

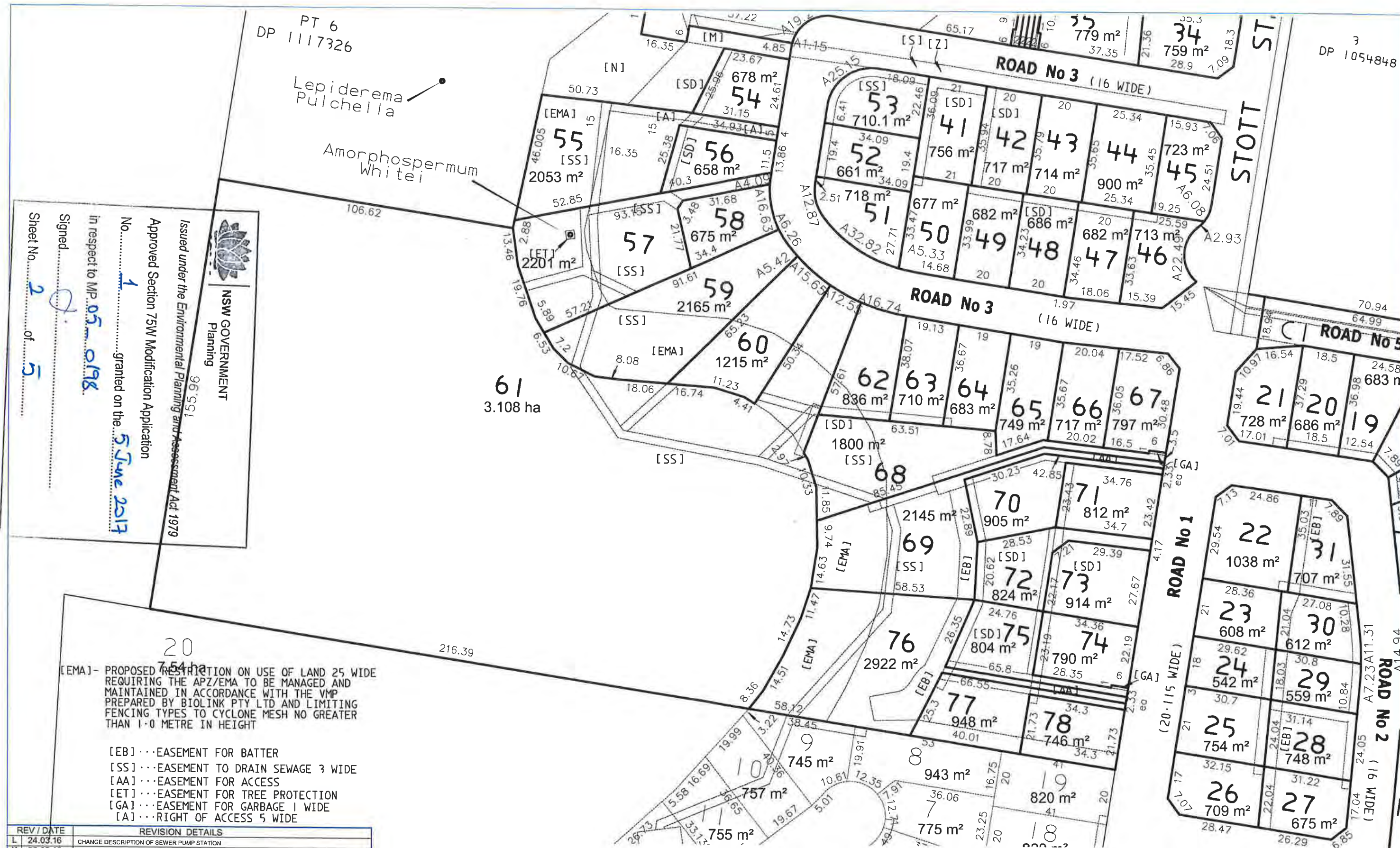
#### Subdivision Certificate

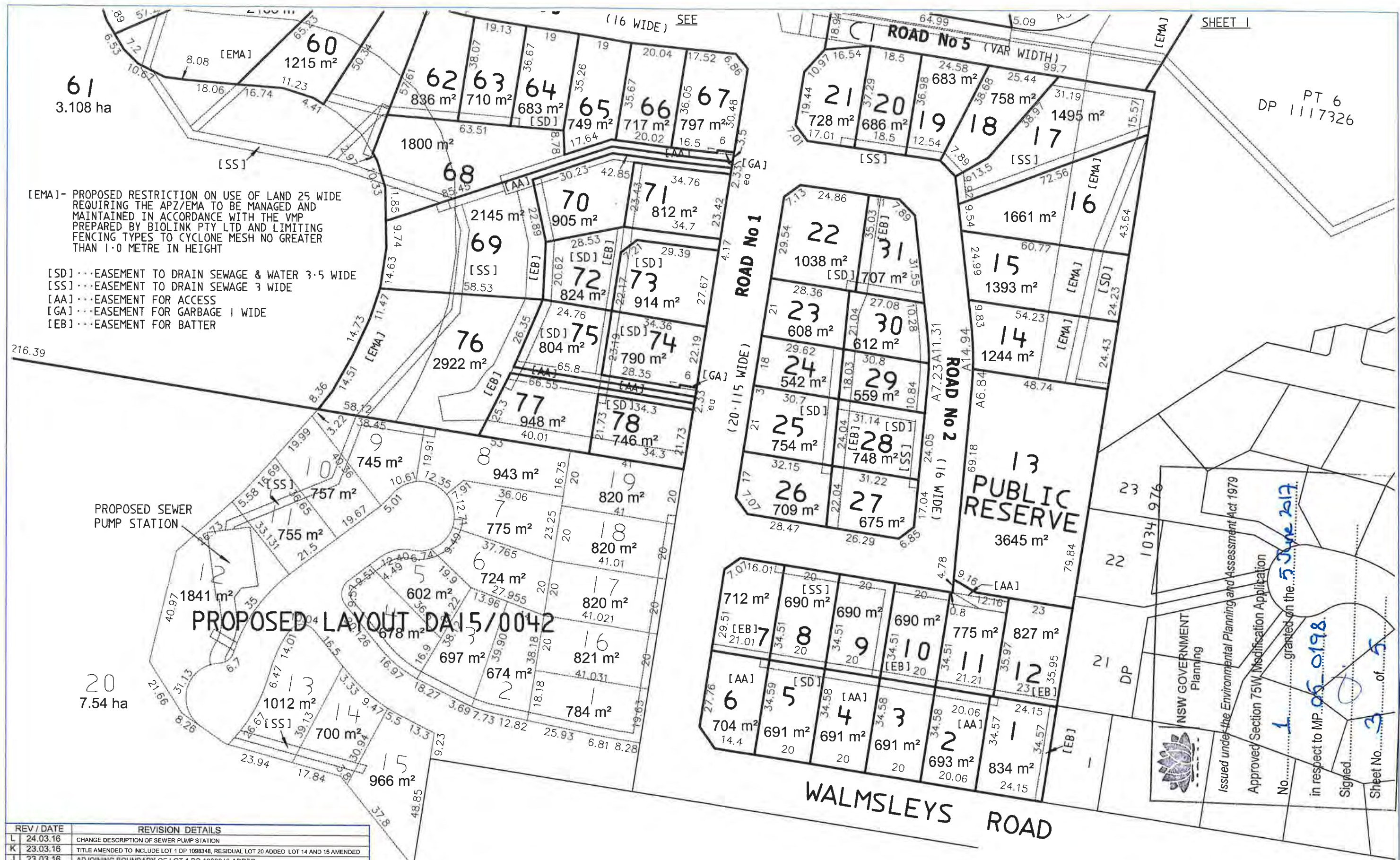
Prior to registration of a plan of subdivision under Division 3 of Part 23 of the *Conveyancing Act 1919* for any allotments in any stage within the subdivision a Subdivision Certificate pursuant to Section 109C(1)(d) of the EP&A Act must be obtained from the Council or an accredited certifier for each stage of the subdivision.

**End of Modification**



|                         |               |
|-------------------------|---------------|
| LEVEL DATUM             | SCALE 1: 1250 |
| DATE OF SURVEY          | REVISION L    |
| DATE 18.03.16           | SHEET 2 OF 3  |
| DRAWN CBS               | JOB No        |
| CHECKED BG              | 35054         |
| CAD FILE No. 35054-PROP |               |





| REV / DATE | REVISION DETAILS                                                                       |
|------------|----------------------------------------------------------------------------------------|
| L 24.03.16 | CHANGE DESCRIPTION OF SEWER PUMP STATION                                               |
| K 23.03.16 | TITLE AMENDED TO INCLUDE LOT 1 DP 1098348, RESIDUAL LOT 20 ADDED LOT 14 AND 15 AMENDED |
| J 23.03.16 | ADJOINING BOUNDARY OF LOT 1 DP 1098348 ADDED                                           |
| H 22.03.16 | LOT 55 AREA AMENDED, SUBDIVISION OF LOT 2 DP 1098348 LOT NUMBERS ADDED                 |
| G 18.03.16 | EASEMENTS AMENDED, PROPOSED SUBDIVISION OF LOT 2 DP 1098348 ADDED                      |
| F 04.05.11 | LOT NUMBERS AMENDED                                                                    |
|            | LOT REDESIGN LOTS 35-40, ROAD 4 REMOVED                                                |
|            | REVISED APZ-EMA AREA LOTS 38-40                                                        |
|            | GARBAGE AREAS ADDED TO TOP OF RIGHT OF CARRIAGEWAYS                                    |
|            | NEIGHBOURHOOD PROPERTY INCREASED IN SIZE                                               |
|            | BATTER EASEMENTS ADDED                                                                 |
|            | SEWER CONNECTION AND EASEMENT ADDED TO LOT 2 DP 1098348                                |
|            | SEWER PUMP STATION SITE MOVED                                                          |

**LANDSURV PTY LTD**  
REGISTERED SURVEYORS & DEVELOPMENT CONSULTANTS  
14 ENID STREET TWEED HEADS NSW 2485  
Ph. (07) 55366467 Fax (07)55367489 email: macsurv@landsurv.com.au

PLAN OF PROPOSED SUBDIVISION OF  
LOT 1 DP 167380, LOT 1 DP 134787, LOT 2 DP 96192,  
LOT 5 DP 1117326 AND LOTS 1 AND 2 ON DP 1098348  
WALMSLEYS ROAD AND  
STOTT STREET, BILAMBIL HEIGHTS  
CLIENT: WALMSLEY AND DICKINSON

|                         |               |
|-------------------------|---------------|
| LEVEL DATUM             | SCALE 1: 1250 |
| DATE OF SURVEY          | REVISION L    |
| DATE 18.03.16           | SHEET 3 OF 3  |
| DRAWN CBS               | JOB No        |
| CHECKED BG              | 35054         |
| CAD FILE No. 35054-PROP |               |

# LEGEND

- EXISTING CONTOUR
- EXISTING SURFACE LEVEL
- EXISTING WATER
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING O/H ELECTRICAL
- EXISTING TELECOM
- PROPOSED WATER RETICULATION
- PROPOSED STORMWATER RETICULATION
- PROPOSED SEWERAGE RETICULATION
- PROPOSED SEWER RISING MAIN
- FUTURE SEWERAGE RETICULATION NOT PART OF THIS CONSENT SCHEMATIC ONLY
- BOULDER RETAINING WALL
- CONCRETE 'CRIB' RETAINING WALL
- BLOCKWORK RETAINING WALL
- PROPOSED ELECTRICAL SUPPLY TO PUMP STATION

US IL 53 54  
OS IL 50 52

US IL 55 57  
OS IL 53 66

THIS IS THE PLAN REFERRED TO IN DEVELOPMENT CONSENT NO. DA150042

TWEED SHIRE COUNCIL

IF RISING MAIN IS CONSTRUCTED PRIOR TO MAJOR PROJECT DEVELOPMENT A 3m EASEMENT IN FAVOUR OF COUNCIL IS TO BE PROVIDED OVER RISING MAIN TO ENSURE ACCESS IS MAINTAINED UNTIL SUCH TIME AS MAJOR PROJECT DEVELOPMENT IS CONSTRUCTED WHEREBY EASEMENT IS TO BE EXTINGUISHED

NSW GOVERNMENT  
Planning

Approved Section 75W Modification Application

granted on the 5 June 2017

Sheet No. 4 of 5

REFER TO SEWER CATCHMENT PLAN ON DRG. No. Sk.24 FOR MORE INFORMATION.

PROPOSED SEWER PUMP STATION TO TSC STDS. REFER TO DRG. No. Sk.17 FOR DETAILS.

WALMSLEYS ROAD

| DATE  | DESCRIPTION                     | BY     | CHECKED |
|-------|---------------------------------|--------|---------|
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |
| 04/18 | AMENDED TO COUNCIL REQUIREMENTS | D.P.G. | J.A.W.  |

PRELIMINARY  
NOT FOR CONSTRUCTION

SCALE A  
SCALE B



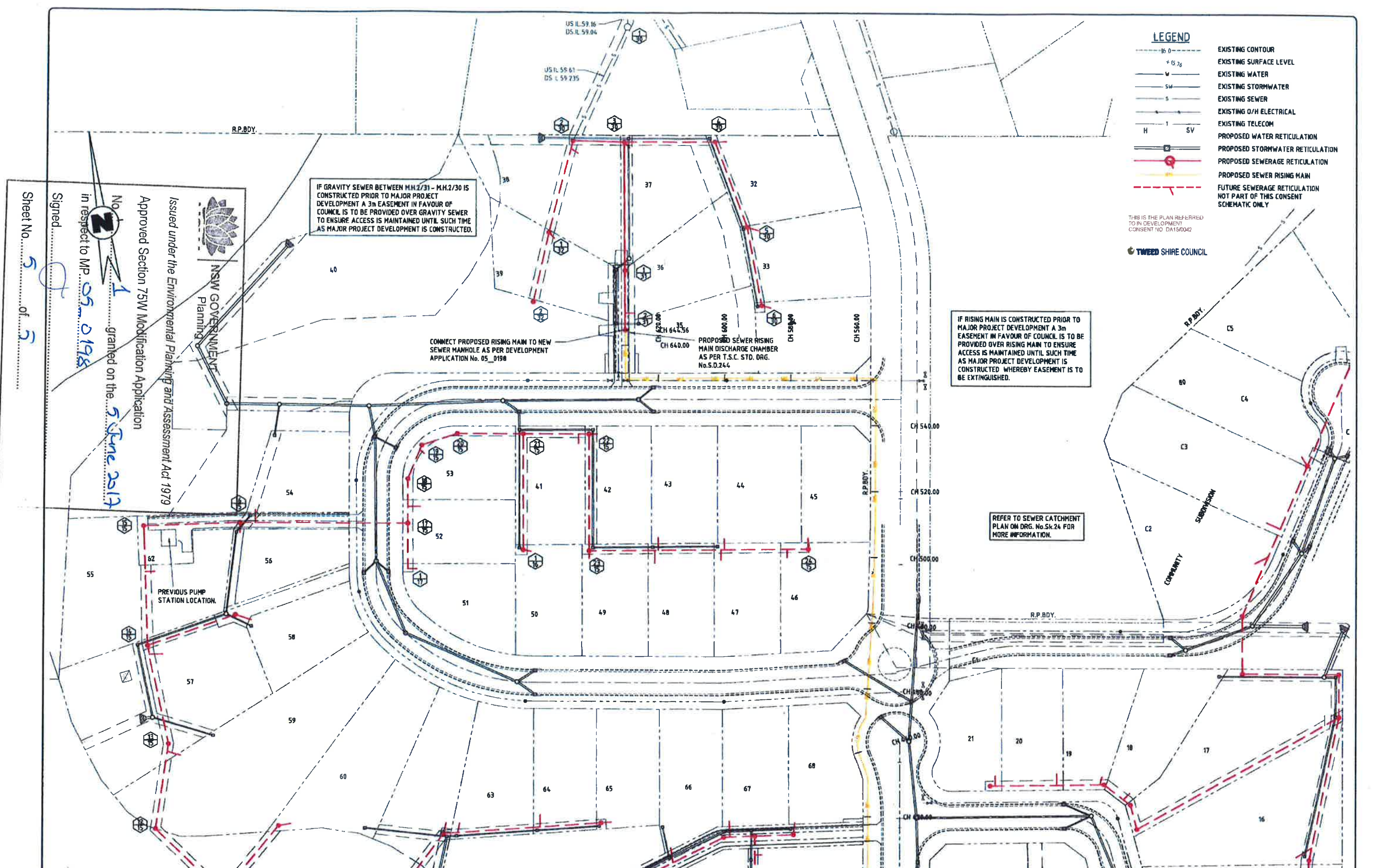
COZENS-REGAN  
WILLIAMS-PROVE  
CONSULTING ENGINEERS  
CIVIL - STRUCTURAL - LAND MANAGEMENT

SUITE 1 ADVANCE BUSINESS CENTRE  
39 LAWRENCE DRIVE MERANG  
PO BOX 2711 MERANG QLD 4211  
Telephone: (07) 5578 4100  
Facsimile: (07) 5578 4092  
Email: info@crmp.com.au

DESIGNED T.M.H.  
DRAWN D.P.G.  
CHECKED J.A.W.  
APPROVED FOR AND ON BEHALF OF  
COZENS-REGAN WILLIAMS-PROVE PTY LTD  
SHEET No. 41

CLIENT  
BORDER HOLDINGS PTY. LTD.  
PROJECT  
PROPOSED 22 LOT SUBDIVISION  
AT 55 - 57 WALMSLEYS ROAD, BILAMBIL HEIGHTS  
SEWERAGE RETICULATION PLAN - SHEET 1 OF 2

JOB NO.  
14446  
DRAWING NO.  
Sk.15  
DATE  
11/11/17



- LEGEND**
- 16.0
  - +15.76
  - SW
  - S
  - H
  - SV
  - PROPOSED WATER RETICULATION
  - PROPOSED STORMWATER RETICULATION
  - PROPOSED SEWERAGE RETICULATION
  - PROPOSED SEWER RISING MAIN
  - FUTURE SEWERAGE RETICULATION NOT PART OF THIS CONSENT SCHEMATIC ONLY

THIS IS THE PLAN REFERRED TO IN DEVELOPMENT CONSENT NO. DA150042

**TWEED SHIRE COUNCIL**

IF GRAVITY SEWER BETWEEN MH.2/31 - MH.2/30 IS CONSTRUCTED PRIOR TO MAJOR PROJECT DEVELOPMENT A 3m EASEMENT IN FAVOUR OF COUNCIL IS TO BE PROVIDED OVER GRAVITY SEWER TO ENSURE ACCESS IS MAINTAINED UNTIL SUCH TIME AS MAJOR PROJECT DEVELOPMENT IS CONSTRUCTED.

CONNECT PROPOSED RISING MAIN TO NEW SEWER MANHOLE AS PER DEVELOPMENT APPLICATION No. 05\_0198

PROPOSED SEWER RISING MAIN DISCHARGE CHAMBER AS PER T.S.C. STD. DRG. No.S.D.244

IF RISING MAIN IS CONSTRUCTED PRIOR TO MAJOR PROJECT DEVELOPMENT A 3m EASEMENT IN FAVOUR OF COUNCIL IS TO BE PROVIDED OVER RISING MAIN TO ENSURE ACCESS IS MAINTAINED UNTIL SUCH TIME AS MAJOR PROJECT DEVELOPMENT IS CONSTRUCTED WHEREBY EASEMENT IS TO BE EXTINGUISHED.

REFER TO SEWER CATCHMENT PLAN ON DRG. No.Sk.24 FOR MORE INFORMATION.

NSW GOVERNMENT Planning

Issued under the Environmental Planning and Assessment Act 1979

Approved Section 75W Modification Application

No. 2 granted on the 5 June 2017 in respect to MP 05\_0198

Signed: [Signature]

Sheet No. 5 of 5

|                                            |  |                                  |                                                                                                    |                                                                                                                                                                                                                     |              |                                                                                                                                                      |                                   |                   |
|--------------------------------------------|--|----------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------|
| <b>PRELIMINARY</b><br>NOT FOR CONSTRUCTION |  | SCALE A<br>0 5 10 15 20<br>1:500 | <b>COZENS-REGAN WILLIAMS-PROVE</b><br>CONSULTING ENGINEERS<br>CIVIL • STRUCTURAL • LAND MANAGEMENT | SUITE 7 ADVANCE BUSINESS CENTRE<br>39 LAWRENCE DRIVE MERANG<br>PO BOX 2711 MERANG QLD 4211<br>Telephone: (07) 5578 4100<br>Facsimile: (07) 5578 4092<br>Email: <a href="mailto:enr@crwp.com.au">enr@crwp.com.au</a> |              | DESIGNED: T.W.N.<br>DRAWN: D.P.G.<br>CHECKED: J.A.W.<br>APPROVED FOR AND ON BEHALF OF<br>COTYNS REGAN WILLIAMS PROVE PTY LTD<br>DRAFTER: [Signature] | CLIENT: BORDER HOLDINGS PTY. LTD. | DRAWING NO: 14446 |
| DATE: [ ]/ [ ]/ [ ]                        |  | SCALE B                          |                                                                                                    | PROJECT: PROPOSED 22 LOT SUBDIVISION<br>AT 55 - 57 WALMSLEYS ROAD, BILAMBIL HEIGHTS<br>SEWERAGE RETICULATION PLAN - SHEET 2 OF 2                                                                                    | SCALE: Sk.16 |                                                                                                                                                      |                                   |                   |

## **Asset Protection Zone Management Plan**

Lot 1 DP 134787, Lot 1 DP 167380, & Lot 2 DP 961928

Walmsley's Road and Stott Street, Bilambil Heights

Major Project No. 05-0198

&

Lot 1 DP 1098348, Lot 2 DP 1098348, Lot 1 DP 134787

55 and 57 Walmsley's Road Bilambil Heights

Tweed Shire Council DA 15/0042



### **Final Report – October 2017**

Prepared by  
Maria Matthes

Reviewed by  
John Callaghan



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## **1. Introduction**

This Asset Protection Zone Management Plan (APZMP) has been prepared for the landowners for the purposes of complying with the NSW Government approval of Major Project No. 05\_0198 (dated 2<sup>nd</sup> August 2012) and Tweed Shire Council's approval for DA15/0042 (dated 6<sup>th</sup> December 2016) for the proposed subdivision at Lot 1 DP 167380, Lot 2 DP 961928, & Lot 4 DP 1054848, Walmsley's Road and Stott Street, and Lot 1 DP 1098348, Lot 2 DP 1098348, Lot 1 DP 134787, 55 and 57 Walmsley's Road Bilambil Heights.

This APZMP has been prepared with consideration to the Biolink (2011) Vegetation Management Guiding Principles that form part of the approval for the Major Project. It addressed the bushfire risk and associated management for the two adjoining developments referred to above. The APZMP therefore includes provision for three asset protection zones (western boundary, eastern boundary and the 20-Lot subdivision), as addressed in Section 5, to provide protection to the approved developments from bushfire risk.

The area affected by the APZ is predominantly cleared but will involve the removal of approximately 0.27 ha of a non-endemic Turpentine open forest windbreak, with regenerating Lowland Rainforest components, and removal of up to 0.4 ha of Camphor Laurel for the purposes of creating Asset Protection Zones (APZs) on the Major Project site, plus a further estimated 0.5 ha of Camphor Laurel with regenerating rainforest understorey in the 20-lot subdivision. The latter being compensated for through the Habitat Restoration Plan for the site (Biolink 2017a).

### **1.1. Conditions of Approval and Consent**

The APZMP has been developed in accordance with the Conditions of Approval from the NSW Planning Assessment Commission for the Major Project, and the Conditions of Consent from Tweed Shire Council for the adjoining development, with consideration to the General Terms of Approval from the Rural Fire Service (RFS) (Appendix 1).

***Relevant NSW Planning Assessment Commission Conditions of Approval******B4 Community Title Road***

- a) No physical road formation or associated works is to occupy the Environmental Management Area (EMA), other than within an approved Asset Protection Zone, within Lot C 1 of the Community Title subdivision.*
- c) The Community Title Management Statement is to be amended to specify that no road or associated works shall be constructed within the EMA, subject to item (a) above.*

**Response:** The project manager/landowner will ensure that all relevant plans and documents reflect the requirements of Condition B4 Community Title Rd.

***B24 Asset Protection Zones***

- 1) Asset Protection Zones (APZs) in each stage are to be provided in accordance with the Bushfire Planning Assessment in the Biolink Ecological Consultants, dated June 2011, as contained within the Environmental Management Area, illustrated on the proposed subdivision plans in Condition A3. Details and a plan showing the APZs accompanied by RFS endorsement are to be provided.*

**Response:** This APZMP is generally in accordance with the Bushfire Planning Assessment in Biolink (2011). Where the APZMP has deviated from or modified the recommendations in Biolink (2011) this is explained in the relevant sections. Any deviation and modification has served to improve both the outcomes for managing bushfire risk and for the environment. The RFS has advised that their General Terms of Approval were provided to both the PAC and Tweed Shire Council. Any further consideration by RFS will occur at the time of assessing proposed development of each individual Lot.

- 2) Asset Protection Zones in each Stage are to be provided on private land, in accordance with Planning for Bushfire Protection (2006). Details and a plan showing the APZs accompanied by RFS endorsement are to be provided.*

Response: The APZ Inner Protection Area and APZ-EMA Outer Protection Area are wholly located within the rear of development allotments. The inclusion of adjoining private lands as part of the asset protection management is designed to provide additional protection from bushfire events at the interface with the development. An additional 20 m EMA for fire management has been included above the 20 m rehabilitation buffer (Biolink 2011). This will also address issues raised by the Office of Environment and Heritage (Appendix 2) largely in relation to the conflict between being able to achieve the intentions of Biolink (2011) and the Standards for Asset Protection Zones (Appendix 3). The current adjoining landholders have agreed to the rehabilitation of Lowland Rainforest in this area with details to be negotiated between the developers and the adjoining landholders,

*3) Thinning of Camphor Laurel trees within the APZ for Lots 38,39, 40, 55, 57, 59, 60 and 61 is required in order to comply with Planning for Bushfire Protection (2006) as part of the ongoing maintenance of adequate bushfire protection.*

Response: The VMP addresses the thinning of Camphor Laurel trees from the identified Lots.

#### E7 Asset Protection Zones (APZs)

*1) Prior to the issue of a subdivision certificate for the relevant Stage, certification from a Fire Protection Association Australia (FPA Australia) accredited Bushfire Planning and Design (BPAD) certified practitioner, must be submitted to the PCA, confirming that the subject development complies with the Rural Fire Service's General Terms of Approval imposed under Section 100B of the Rural Fires Act 1997 on the consent.*

Response: An accredited Bushfire Planning and Design (BPAD) certified practitioner, will be engaged to provide certification, which will be provided to Tweed Shire Council as the PCA for the development.

*2) No dwellings shall be constructed within the APZ. Private open space, roads, backyards, and pools are permissible within the APZ.*

Response: The project manager/landowner will ensure the requirements of this condition are reflected in the S88B Instrument as a Restriction to User, and is addressed further under Condition of approval E8.

#### E8 Registration of Easements

*5)d) The following is to be included in the Section 88B Instrument to accompany the final plan subdivision. A Restriction as to User for any indicated Asset Protection Zone. No dwellings are to be constructed in this area. The Restriction as to User shall advise the landowner of the need to maintain this area as an Asset Protection Zone.*

Response: The project manager/landowner will ensure the requirements of this condition are reflected in the S88B Instrument as a Restriction to User, and is addressed further under Condition of approval E8. Additional Restrictions to User in relation to APZ maintenance are to be included in the S88B Instrument, and these are detailed in Section 6 of this Plan.

*6) A public positive covenant is to be created under Section 88E of the Conveyancing Act 1919, to require that the land subject to the VMP is to be maintained in accordance with the requirements of the VMP.*

Response: This condition has relevance to the APZMP in that the APZMP forms a Management Zone in the Vegetation Management Plan for the Major Project (Biolink 2017b).

#### Schedule 3 The Proponent's Statement of Commitments (October 2001)

*For the protection of existing threatened species of flora and biodiversity, and the rehabilitation of 7 d zoned land*

- *Final subdivision design shall demonstrate that the rare and/or threatened flora species (A. whitei, E. globosa, L. pulchella, M. tetraphylla) that occur in close proximity to the 2(c)/7(d) boundary are located and appropriately identified and/or signposted such that they remain unaffected by any activities (including provision of any asset protection zones for bushfire management purposes) associated with the development of the site.*

Response: The location of threatened plants in relation to the APZ IPO and EMA-APZ OPA will be identified and marked once the final subdivision designs are completed and the survey pegs are in the ground delineating the APZ boundaries. The procedure for identifying plants and for minimising and avoiding impacts to rainforest plants are provided in Section 5.

Note - The threatened plant *Amorphospermum whitei* (*A. whitei*) has been subject to a name change and is now known as *Niemeyera whitei*. For the purposes of this report, the currently recognised name will be used.

*For the purposes of complying with Planning for Bushfire Protection 2006:*

- *A minimum 25 m combined asset protection zone and Ecological Management Area must be located wholly within the boundaries of the lots within the 2c zoned area.*

Response: The 25 m APZ and EMA combined asset protection zone is wholly located within the boundaries of the lots within the 2c zoned area. An additional 20 m rehabilitation zone for fire management purposes has been included above the rehabilitation area identified in Biolink (2011).

- *A Section 88B Covenant shall be created requiring the asset protection zone area to be maintained as mowed lawn with any plantings restricted to endemic Lowland Rainforest species such that no more than 20% of the asset protection zone is covered by tree canopy or tree crowns to be separated by a minimum distance of 2-5 m.*

Response: The requirements to be placed on a Section 88B covenant under this commitment are detailed in Section 7 of this VMP, and a list of species suitable for Planting in the APZs are provided in the APZMP (Appendix 4).

- *Where canopy thinning is required, tree removal is restricted to camphor laurels only.*

Response: Tree removal will be restricted to the removal of camphor laurels and large-leaved privet.

- *Rear fencing of residential allotments abutting the 7d zoned areas must include a gate to facilitate access for fire fighting purposes.*

Response: The requirements to be placed on a Section 88B covenant under this commitment are detailed in Section 7 of this VMP.

- *At the commencement of subdivision works and in perpetuity, the entire site shall be managed as an APZ as outlined within Appendices 2 and 5 of Planning for Bushfire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.*

Response: At the commencement of subdivision works the entire site will be managed as an APZ in accordance with Appendices 2 and 5 of Planning for Bushfire Protection 2006, the NSW Rural Fire Service's document Standards for asset protection zones, the BPAD endorsed APZMP (Appendix 4), and the requirements of this VMP.

- *The proposed 25 m APZ and Ecological Management Area to the west of proposed Lot 54 lies outside the boundary of the property and is required to be protected and maintained in perpetuity. The APZ shall be managed as outlined within Appendices 2 and 5 of Planning for Bushfire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.*
- *An easement shall be created over the APZ west of Lot 54.*

Response: An easement will be created over the APZ west of Lot 54, and Restrictions as to User are identified in Section 7 of this VMP. *Note:* The adjoining landholder has provided consent for the management of the APZMP on Lot 6 adjoining Lot 54. The details of the easement and title on land are currently being negotiated with the adjoining landholder.

- *Landscaping, restoration and regeneration works within the site is to comply with the principles of Appendix 4 of Planning for Bushfire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.*

Response: The landscaping, restoration and regeneration works within and adjacent to the development site (as covered by this VMP) complies with the principles of Appendix 4 of Planning for Bushfire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones, and will be endorsed by a BPAD certifier.

### ***Relevant Tweed Council Conditions of Consent***

*Condition 93: prior to the issue of a Subdivision Certificate, certification from a Fire Protection Association Australia (FPA Australia) accredited Bushfire Planning and Design (BPAD) certified practitioner, must be submitted to the PCA, confirming that the subject development complies with the Rural Fire Service's General Terms of Approval imposed under Section 100B of the Rural Fires Act 1997 on the consent.*

Response: An accredited Bushfire Planning and Design (BPAD) certified practitioner, will be engaged to provide certification, which will be provided to Tweed Shire Council as the PCA for the development.

*Condition 94. The creation of easements for services, rights of carriageway, restrictions as to user (including restrictions associated with planning for bushfire) as may be applicable under Section 88B of the Conveyancing Act including but not limited to:*

- c. Positive Covenant over the subject land (as applicable) to ensure that the required provisions of the "Planning for Bushfire Protection 2006 Guidelines" and the General Terms of Approval of the consent as imposed under Section 100B of the Rural Fires Act 1997 are enforced in perpetuity.*

Response: The project manager/landowner will ensure the requirements of this condition are reflected in the S88B Instrument as a Restriction to User, and is addressed further under Condition of approval E8. Additional Restrictions to User in

relation to APZ maintenance are to be included in the S88B Instrument, and these are detailed in Section 6 of this Plan.

*The RFS General Terms of Approval include:*

*1. Asset Protection Zones*

*The intent of measures is to provide sufficient space and maintain reduced fuel loads so as to ensure radiant heat levels of buildings is below critical limits and to prevent direct flame contact with a building. To achieve this the following conditions shall apply:*

*2. At the issue of the subdivision certificate and then in perpetuity the entire property, except for the following areas, shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bushfire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones':*

- The western part of proposed Lot 12 that is wholly contained in the area between the "10m Buffer" line and the "Potential EEC" line, as identified on the Plan prepared by Cozens, Regan, Williams, Prove Pty Ltd, numbered 14446, Drawing No. Sk.1 Revision Q and dated June 2016.*

Response: This plan has been prepared with consideration to these documents and is addressed in Section 4.3 of this Plan (Management Zone 3).

## **1.2. Legislative Context**

*Rural Fires and Environmental Assessment Legislation Amendment Act 2002* amended both the *Environmental Planning and Assessment Act 1979* and the *Rural Fires Act 1997* to enhance bushfire protection measures through the development assessment process. Bushfire planning in New South Wales is currently guided by the *Planning for Bushfire Protection* guideline (NSWRFS 2006) and the Standards for Asset Protection Zones (RFS undated). Amongst other things, the guidelines propose that APZs and other measures be imposed where development precincts abut areas that are perceived to be bushfire prone.

## 2. The Subject Site

The subject site is located within the Tweed Local Government Area on the far north coast of New South Wales and for the purposes of this plan, encompasses the areas of both the Major Project and adjoining 20-Lot development, as well as some areas of adjoining private land.

The subject site currently present as a habitat matrix of agricultural land and regenerating patches of native vegetation containing a high proportion of exotic species, notably Camphor Laurel *Cinnamomum camphora* and Large-leaved Privet *Ligustrum lucidum*. Located on kraznozem and chocolate soils derived from Basalts associated with the Lamington Volcanics (Morand 1994), remaining vegetated areas are further characterised by their presence on steep slopes with south-westerly, north and north-easterly aspects. Site elevations within the study area vary from sea level to about 80m asl.

## 3. Vegetation

An ecological and bushfire planning assessment was undertaken for the study area (Biolink 2011). The area of the subject site proposed for development has been used for agricultural purposes and is largely devoid of native vegetation. In eastern and western areas on slopes below the existing cleared areas, the site supports a simple notophyll closed forest community with small patches of sclerophyll forest. On the adjacent properties, there are areas of sclerophyll forest and woodland.

### Vegetation Communities

Four main vegetation communities were identified in Biolink (2011), two of which will be impacted by the establishment of the APZs:

- The tall, open sclerophyll forest community, was originally planted for the purposes of providing a windbreak, and is dominated by Turpentine *Syncarpia glomulifera* and Camphor Laurel *Cinnamomum camphora* with understorey vegetation predominantly consisting of regenerating rainforest species. This is

a non-endemic community of which approximately 0.27 ha in falls into the approved APZ area; and

- The Lowland Rainforest community is best described as a regenerating, simple notophyll very tall closed forest dominated by Camphor Laurel with emergent Pink Bloodwood *Corymbia intermedia* and Brush Box *Lophostemon confertus*, with regenerating rainforest in the understorey. Approximately 0.9 ha of this community falls into the area of the APZ and will be modified or removed.

The rainforest community on the development sites is consistent with the criteria for the Endangered Ecological Community (EEC) *Lowland rainforest in the NSW North Coast and Sydney Basin Bioregion*. For assessment purposes the limits of the EEC on the site are best approximated by the 50m contour interval. Above this interval and along the associated patch edges there is an increasing tendency towards an overriding dominance by Camphor Laurel (Biolink 2011). These edge areas have been included within the broad gamut of the EEC in order to achieve more effective management of both the EEC and bushfire risk, through removal of the more flammable Camphor Laurel, and replacement with less flammable rainforest species.

#### Threatened or rare flora species

Twelve rare or threatened plant species have been identified as occurring within the areas covered by the APZMP and/or the adjacent vegetation:

- Marblewood *Acacia bakeri*
- White Laceflower *Archidendron hendersonii*
- Brush Cassia *Cassia marksiana*
- Finger Lime *Citrus australasica*
- Stinking Cryptocarya *Cryptocarya foetida*
- Long-leaved Tuckeroo *Cupaniopsis newmanii*
- Black Walnut *Endiandra globosa*
- Fine-leaved Tuckeroo *Lepiderema pulchella*
- Rough-leaved Bush Nut *Macadamia tetraphylla*
- Rusty Plum *Niemeyera whitei*
- Spiny Gardenia *Randia moorei*
- Smooth Turpentine Scrub *Rhodamnia maideniana*

Several of these species including Black Walnut *Endiandra globosa*, Fine-leaved Tuckeroo *Lepiderema pulchella*, Spiny Gardenia *Randia moorei*, Long-leaved Tuckeroo *Cupaniopsis newmanii* and Rough-shelled Bush Nut *Macadamia tetraphylla*, occur in close proximity to precinct boundaries along the north, east and west of the precinct (Appendix 5). For purposes of clarity not all individuals have been plotted, but are indicative of locations. Each plant will be clearly marked and labelled in the field prior to works commencing.

#### **4. Bushfire Planning Assessment**

The subject site is located in the Far North Coast Fire Area (FDI Rating: 80) and is mapped as bushfire prone land. Appendix 2 of *Planning for Bushfire Protection* (NSWRFS 2006) specifies the means by which development precincts are to be assessed for the purposes of bushfire planning.

The bushfire planning assessment of vegetation and slope classifications at key points surrounding the proposed residential area footprint (Biolink 2011) identified rainforest as the dominant vegetation community, with an effective slope of 15 -18 degrees downslope for bushfire planning purposes.

Biolink (2011) determined that the vegetation on the site varied in species composition, and while dominated overall by Camphor Laurel, the predominant vegetation type surrounding the precinct is rainforest, and a small area of planted windbreak trees with a regenerating rainforest understorey.

Slope is variable across the area of the APZ and in areas where the slope is steep, the landform may be modified through establishment of the development. Some of the steepest sections include slopes in excess of 15°. The slope category for purposes of bushfire planning is 15 – 18° with downslope vegetation.

##### ***Western boundary***

The western boundary also includes the north western corner that contains lowland rainforest and Camphor Laurel. Biolink (2011) determined that:

*“The longitudinal gradient along the 2(c)/7(d) interface exceeds the maximum slope of 15° in some areas, with slope perpendicular to the 7(d) boundary (on average also in the range of 12 – 15 degrees, potentially dictating the need for extensive battering and cut and fill type earthworks in order to establish either a trafficable trail for fire-fighting purposes or a perimeter road. Because of these considerations and the need to consider the potential for impact upon both the adjoining EEC and threatened flora species, neither is recommended, thus mandating that a 10m wide APZ be imposed from the agreed 7(d) boundary into any adjoining lots.*

*Towards the western property boundary, the existing 2(c) Urban Expansion zoning changes to 7(d) Environmental Protection – Scenic/ Escarpment; the slope in excess of 15° and evidencing a transition from pasture grassland to rainforest.*

Both the APZ IPA and the APZ-EMA OPA will lie predominantly within privately owned backyards where planting will be largely prohibited for the purposes of bushfire protection. The management of this area is described in Section 4.

Within the rehabilitation areas (Management Zone 2 of the VMP) adjoining the APZ IPA and APZ-EMA OPA, there is some overlap with the restoration areas (Management Zone 1 of the VMP). Details of the management of these areas is provided in the VMP (Biolink 2017b).

### ***Eastern boundary***

The eastern boundary also includes the north eastern corner that contains lowland rainforest species, including *Macadamia tetraphylla*, and Camphor Laurel. Biolink (2011) determined that:

*“Approximately 60% of the eastern portion of the site is bordered by a 7(d) zone interface approximately 300m in length, beyond which the predominant vegetation type is rainforest, again extending over an effective slope of 15 – 18 degrees downslope for bushfire planning purposes. Both the vegetation group and effective slope determination again dictates a minimum APZ of 10m. While the longitudinal gradient would theoretically permit either a fire trail or a perimeter road to be constructed, placement becomes problematical in the northeastern corner of the development precinct where existing development has constrained design flexibility. Accordingly, a design response incorporating a combination of larger allotments and*

*perimeter road elements should enable APZ requirements to be met as detailed above."*

Similarly, the eastern property boundary abuts rainforest, with the land sloping to the east-northeast averaging 14°. Management of this area is described in Section 4.

Based on the RFS General Terms of Approval (Appendix 1) and the required performance criteria specified in Chapter 4 of *Planning for Bushfire Protection* (2006), Biolink (2011) recommended performance criteria based on planning solutions to minimise the impact on threatened plant species and Lowland Rainforest, and for the purposes of mitigating bushfire risk. These recommendations were adopted in the conditions of approval.

For the Asset Protection Zone, Biolink (2011) identified the following management recommendations:

- Radiant heat levels at any one point on a proposed building will not exceed 29kW/m<sup>2</sup>;
- a minimum 10m APZ must be located wholly within the boundaries of 2(c) area;
- APZs are managed and maintained to prevent the spread of a fire towards a house;
- a Sec 88b covenant mandating that the APZ area must be maintained as
- mown lawn with any plantings restricted to endemic lowland rainforest species such that no more than 20% of the APZ area is covered by tree canopy OR tree crowns to be separated by a minimum distance of 2 –5 m;
- where canopy thinning is required, tree removal must be restricted to Camphor Laurel trees only;
- rear fencing of residential allotments backing onto 7(d) areas must include a gate that allows access by personnel for firefighting purposes;
- APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated; and
- the majority of the proposed APZ is located on land(s) where slope does not exceed 18 degrees.

In addition to proposal for the 10m APZ to be wholly contained within the 2c zoning, Biolink (2011) also recommended an additional 15 m Ecological Management Area (EMA) to adjoin the APZ, occurring either side of the 2c)/7d) interface, with additional rehabilitation work to also be undertaken for a further 20-25 m downslope of the existing edge. This APZMP includes an additional 20m fire management zone above the recommended rehabilitation area.

### ***20-Lot Subdivision***

The environment of the 20-Lot subdivision is similar to the Major Project Western Boundary, with regenerating rainforest and Camphor Laurel, on slopes 15-18°. The RFS has required in their General Terms of Approval that the entire site, with the exception of the Habitat Restoration Area on Lot 12 be managed as an APZ Inner Protection Area (Fig. 4). The management of this area is described in Section 5.

For the purposes of this management plan, the recommendations in Biolink (2011) that form part of the Conditions of Approval are detailed in Sections 5 and 6 of this APZMP, where related to the overall performance of the APZ towards minimising the risk of bushfire, and managing Lowland Rainforest.

## **5. Establishment of APZ and EMA Complex**

The purpose of the establishment of the APZ and EMA complex is to address the conditions of the approval and consent for the developments, with consideration to the Bushfire Planning Assessment (Biolink (2011), Standards for Asset Protection Zones (Appendix 3), the RFS General Terms of Approval (Appendix 1), and the Office of Environment and Heritage's issues (Appendix 2).

### **5.1. Management Zone 1 – APZs and EMAs Western Boundary**

Management Zone 1 (Figure 2) lies on the western boundary within the Major Project site. There are four subzones that comprise Management Zone 1. Subzone 1 and 2 form the primary asset protection zone (Inner Protection Area and Outer Protection Area), and subzones 3 and 4 provide a mix of bushfire protection measures and rainforest rehabilitation.

### Subzone 1: APZ Inner Protection Area

Subzone 1 is the 10 m APZ referred to in Biolink (2011). This area is to be managed as an inner protection area (IPA) and maintained as a cleared area within property boundaries, in accordance with the Standards for Asset Protection (Appendix 3).

Any threatened plants and Lowland Rainforest plants occurring in this area are to be retained. They are to be staked and identified after final design survey pegs are in the ground, and are not to be removed. There is to be no planting in this subzone. Only Camphor Laurel and other weed species are to be removed from this subzone.

RFS advice is that they will review whether this is adequate for Bushfire Protection at the time of assessing development applications for individual allotments. To address the potential conflict between the possible RFS requirement to remove threatened plants or rainforest plants in the future, a translocation plan will be required and this requirement will be included on the S88E Instrument pertaining to the relevant Lots.

### Subzone 2: EMA-APZ Outer Protection Area

Subzone 2 is the 15 m EMA referred to in Biolink (2011). This area is to be managed as an outer protection area (OPA) and maintained as a largely cleared area within property boundaries, in accordance with the Standards for Asset Protection (Appendix 3).

The 15 m EMA-APZ Outer Protection Area will also be located entirely within the rear of Lots, with the exception of at the rear of Lot 55, where the APZ is occurring on private property outside the development footprint, and is subject to negotiation between the landowners. This property to the rear of Lot 55 has a building entitlement and the inclusion of the APZ and EMA over this area may require an adjustment to this plan, subject to landholder negotiations and RFS requirements.

Prior to the commencement of development works, all rare and/or threatened flora species that occur within subzone 2 are to be located and appropriately identified and/or signposted such that they remain unaffected by any activities. There is to be

limited planting in this subzone, in accordance with Appendix 6. Only Camphor Laurel and other weed species are to be removed from this subzone.

RFS advice is that they will review whether this is adequate for Bushfire Protection at the time of assessing development applications for individual allotments. To address the potential conflict between the possible RFS requirement to remove threatened plants or rainforest plants in the future, a translocation plan will be required and this requirement will be included on the S88E Instrument pertaining to the relevant Lots.

### Subzone 3: EMA Fire Management

Subzone 3 lies outside the development boundary and is an additional management area to those identified in Biolink (2011). As the RFS may need to access beyond the property boundaries in the event of a bushfire, and given the risk of a bushfire igniting vegetation in the EMA-APZ Outer Protection Area, this subzone is intended to improve management of bushfire risk.

Within this EMA fire management subzone existing rainforest trees will be retained, and threatened plants will be retained and marked for identification. Planting in this subzone will be limited to primarily shrub and groundcover species growing less than 2 m in height for the first 10 m and primarily plants less than 10 m for the 10 m adjoining subzone 4. The occasional plant taller than 2 m will be permissible in the first 10 m, and taller than 10 m in the second 10 m of this Management Zone. Species for planting in this subzone are identified in Appendix 6. Major weed species are to be controlled in this area. The management of this area is guided by the Vegetation Management Plan (Biolink 2017b).

### Subzone 4: EMA Rehabilitation

Subzone 4 also lies outside the development boundary and is the EMA rehabilitation area referred to in Biolink (2011). This subzone is intended to compensate for the loss of Lowland Rainforest species (primarily those regenerating underneath the windbreak area) as a result of the development, while still minimising risk of fire and improving the integrity of the edge of Lowland Rainforest. This will enable the intentions of Biolink (2011) to be achieved, and the issues raised by OEH to be addressed.

Within this EMA fire management subzone existing rainforest trees will be retained, and threatened plants will be retained and marked for identification. Planting in this subzone will be limited to species growing less than 25 m in height, lacking oils in leaves, and having relatively high leaf moisture. Species for planting in this subzone are identified in Appendix 6. Major weed species are to be controlled in this area. The management of this area is guided by the Vegetation Management Plan (Biolink 2017b).

## **5.2. Management Zone 2 – APZ Eastern Boundary**

Management Zone 2 (Fig. 3) lies on the eastern boundary within the Major Project site. There are four subzones that comprise Management Zone 2. Subzone 1 and 2 form the primary asset protection zone (Inner Protection Area and Outer Protection Area), while subzones 3 and 4 provide a mix of bushfire protection measures and rainforest rehabilitation.

### **Subzone 1: APZ Inner Protection Area**

Subzone 1 is the 10m APZ referred to in Biolink (2011). This area is to be managed as an inner protection area (IPA) and maintained as a cleared area within property boundaries, in accordance with the Standards for Asset Protection (Appendix 3).

Any threatened plants and Lowland Rainforest plants occurring in this area are to be retained. They are to be staked and identified after the final design survey pegs are in the ground, and are not to be removed. There is to be no planting in this subzone. Only Camphor Laurel and other weed species are to be removed from this subzone.

RFS advice is that they will review whether this is adequate for Bushfire Protection at the time of assessing development applications for individual allotments. To address the potential conflict between the possible RFS requirement to remove threatened plants or rainforest plants in the future, a translocation plan will be required and this requirement will be included on the S88E Instrument pertaining to the relevant Lots.

### Subzone 2: EMA-APZ Outer Protection Area

Subzone 2 is the 15 m EMA referred to in Biolink (2011). This area is to be managed as an outer protection area (OPA) and maintained as a largely cleared area within property boundaries, in accordance with the Standards for Asset Protection (Appendix 3).

The 15 m wide EMA-APZ Outer Protection Area will also be located entirely within the rear of Lots, with the exception of the Community Title Lot, and will be included in the Community Title Management Plan.

Prior to the commencement of development works, all rare and/or threatened flora species that occur within subzone 2 are to be located and appropriately identified and/or signposted such that they remain unaffected by any activities. There is to be limited planting in this subzone, in accordance with Appendix 6. Only Camphor Laurel and other weed species are to be removed from this subzone.

RFS advice is that they will review whether this is adequate for Bushfire Protection at the time of assessing development applications for individual allotments. To address the potential conflict between the possible RFS requirement to remove threatened plants or rainforest plants in the future, a translocation plan will be required and this requirement will be included on the S88E Instrument pertaining to the relevant Lots.

### Subzone 3: EMA Fire Management

Subzone 3 lies outside the development boundary and is an additional management area to those identified in Biolink (2011). As the RFS may need to access beyond the property boundaries in the event of a bushfire, and given the risk of a bushfire igniting vegetation in the EMA-APZ Outer Protection Area, this subzone is intended to improve management of bushfire risk.

As this area occurs on private land, the landowner has given approval for this area to be rehabilitated. Within this EMA fire management subzone existing rainforest trees will be retained, and threatened plants will be retained and marked for identification. There will be no planting in this subzone. Major weed species are to be controlled in

this area. Management of this area is in part guided by the Vegetation Management Plan (Biolink 2017b).

#### Subzone 4: EMA Rehabilitation

Subzone 4 also lies outside the development boundary and is the EMA rehabilitation area referred to in Biolink (2011). This subzone is intended to compensate for the loss of Lowland Rainforest species (primarily those regenerating underneath the windbreak area) as a result of the development, while minimising risk of fire and improving the integrity of the edge of Lowland Rainforest. This will enable the intentions of Biolink (2011) to be achieved, and the corresponding issues raised by OEH to be addressed.

Within this EMA fire management subzone existing rainforest trees will be retained, and threatened plants will be retained and marked for identification. Planting in this subzone will be limited to species growing less than 25 m in height, lacking oils in leaves, and with relatively high leaf moisture. Species for planting in this subzone are identified in Appendix 6. Major weed species are to be controlled in this area. The management of this area is guided by the Vegetation Management Plan (Biolink 2017b).

### **5.3. Management Zone 3 – 20 Lot Subdivision**

The RFS General Terms of Approval require that the entire property, with the exception of the restoration area, be managed as an Asset Protection Zone Inner Protection Area. The area identified as the Asset Protection Zone Inner Protection Area on Figure 4 will be managed in accordance with the Standards for Asset Protection Zones (Appendix 3). The development will result in the majority of existing vegetation being removed, with the exception of plants identified to be retained and the designated habitat restoration area. The landscaping plan for the development will need to ensure that it also complies with the Standards for Asset Protection Zones (Appendix 3).

## 6. Maintenance of Asset Protection Zones

The maintenance of the Asset Protection Zones will be the responsibility of the land owners and managers of individual Lots. Maintenance is to be undertaken in accordance with this APZMP, and any subsequent amendments as required by the RFS, as well as with the terms of the S88E Instrument placed on the Title of the Land.

The S88E Instrument Restriction as to User is to apply to the APZ Inner Protection Areas and APZ-EMA Outer Protection Areas in each of the Management Zones. The Restriction as to User is to include the following:

- The landowner must maintain the APZ IPO and APZ-EMA OPA identified on relevant figures of the APZMP as an Asset Protection Zone, in accordance with Appendix 2 "Planning for Bushfire Protection 2006 Guidelines", the Standards for Asset Protection Zones, and the General Terms of Approval of the consent as imposed under Section 100B of the Rural Fires Act 1997, in perpetuity;
- The landowner must maintain the APZ IPO as a mowed lawn;
- The location of threatened species identified in Appendix 5 of this Plan and as marked on the ground are to be retained within the APZ IPO and the APZ-EMA OPA;
- The landowner will be required to prepare a translocation (salvage) plan, should the RFS require threatened plants retained within the APZ IPO and APZ-EMA OPA to be removed in the future;
- The landowner will limit planting within the APZ IPA and APZ-EMA OPA to those species identified in Schedule B in Appendix 13;
- The landowner will ensure any plantings and existing vegetation that must be retained do not exceed more than 20% tree canopy coverage, or tree crowns are to be separated by a minimum distance of 2-5 m in the asset protection zones;
- The landowner will ensure no dwellings are constructed within the APZ and that only the permissible uses as private open space, roads, backyards, and pools are provided within the APZ; and
- The landowner will ensure the provision of a gate at the rear fence suitable to facilitate access for firefighting purposes.

## References

Biolink. 2011. *Ecological & Bushfire Planning Assessment of Lot 1 DP 167380, Lot 2 DP 961928 & Lot 4 DP 1054848 Walmsley's Road, Bilambil Heights – Final Report*. Prepared for Darryl Anderson Consulting Pty Ltd.

Biolink. 2017a. *Habitat Restoration Plan for DA 15/0042 Consent Condition 32b) Approved Lot 12 at Lot 1 DP 1098348, Lot 2 DP 1098348, Lot 1 DP 134787 55 and 57 Walmsley's Road, Bilambil Heights*. Prepared for Darryl Anderson Consulting Pty Ltd. Biolink Ecological Consultants, Uki. NSW.

Biolink. 2017b. *Vegetation Management Plan Lot 1 DP 167380, Lot 2 DP 961928 & Lot 4 DP 1054848 Walmsley's Road, Bilambil Heights*. Prepared for Darryl Anderson Consulting Pty Ltd. Biolink Ecological Consultants, Uki. NSW.

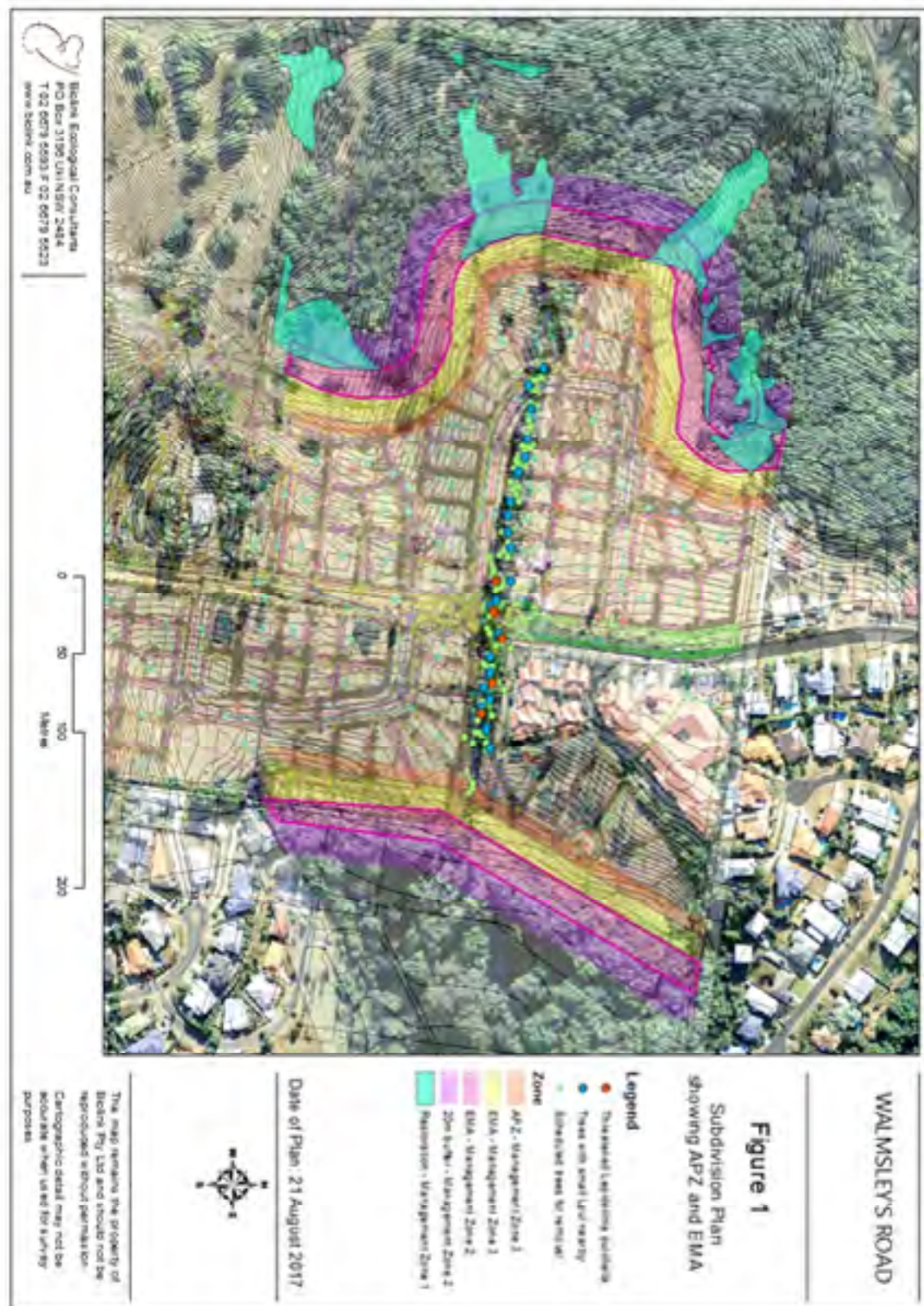
Morand, D.T. 1994. *Soil Landscapes of Lismore – Ballina 1:100000 Sheet*. Soil Conservation Service of New South Wales, Sydney.

NSW RFS. 2006. *Planning for Bushfire Protection: a guide for Councils, Planners, Fire Authorities and Developers*. NSW Rural Fire Service.

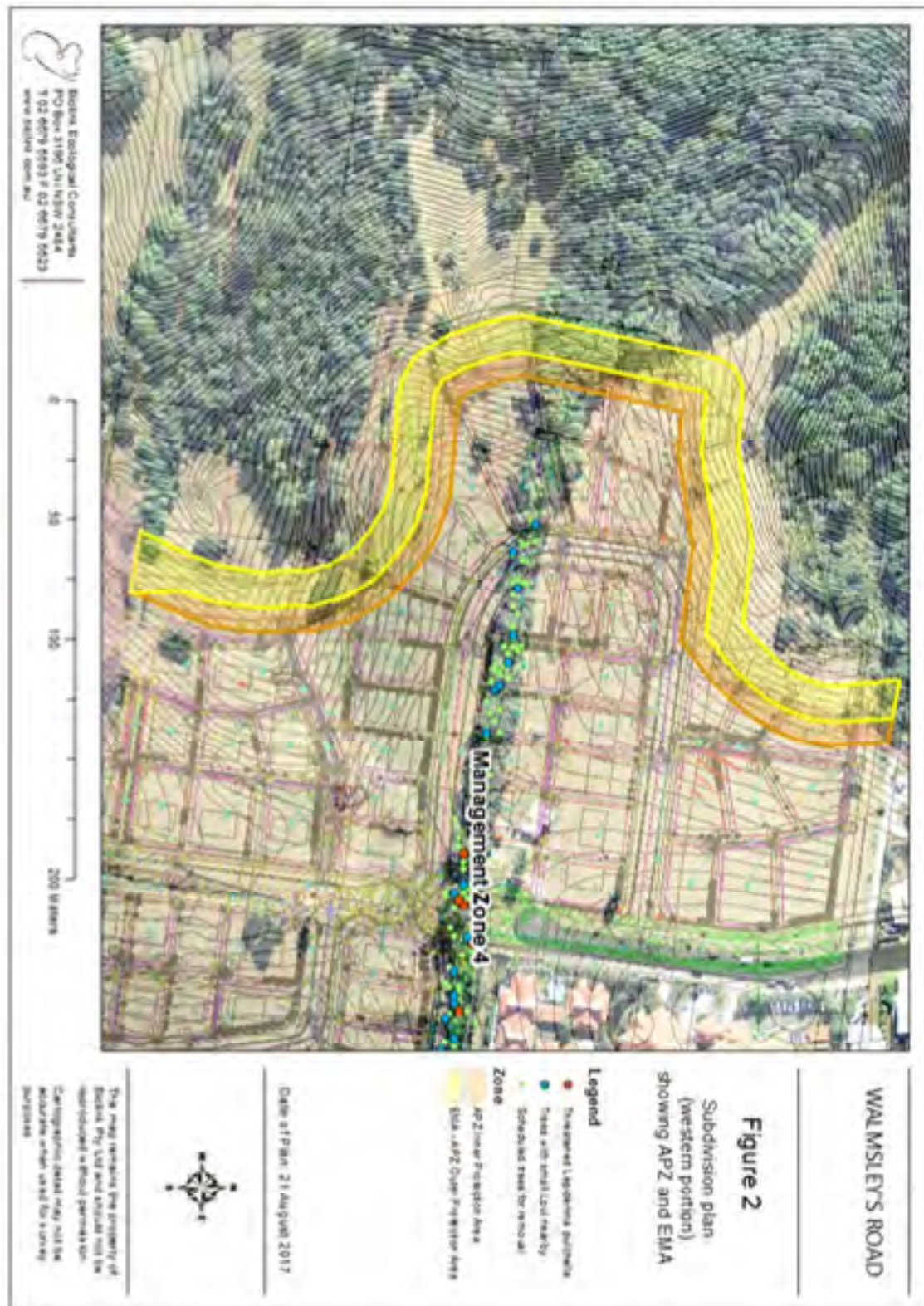
NSW RFS. Undated. *Standards for Asset Protection Zones*. NSW Rural Fire Service.

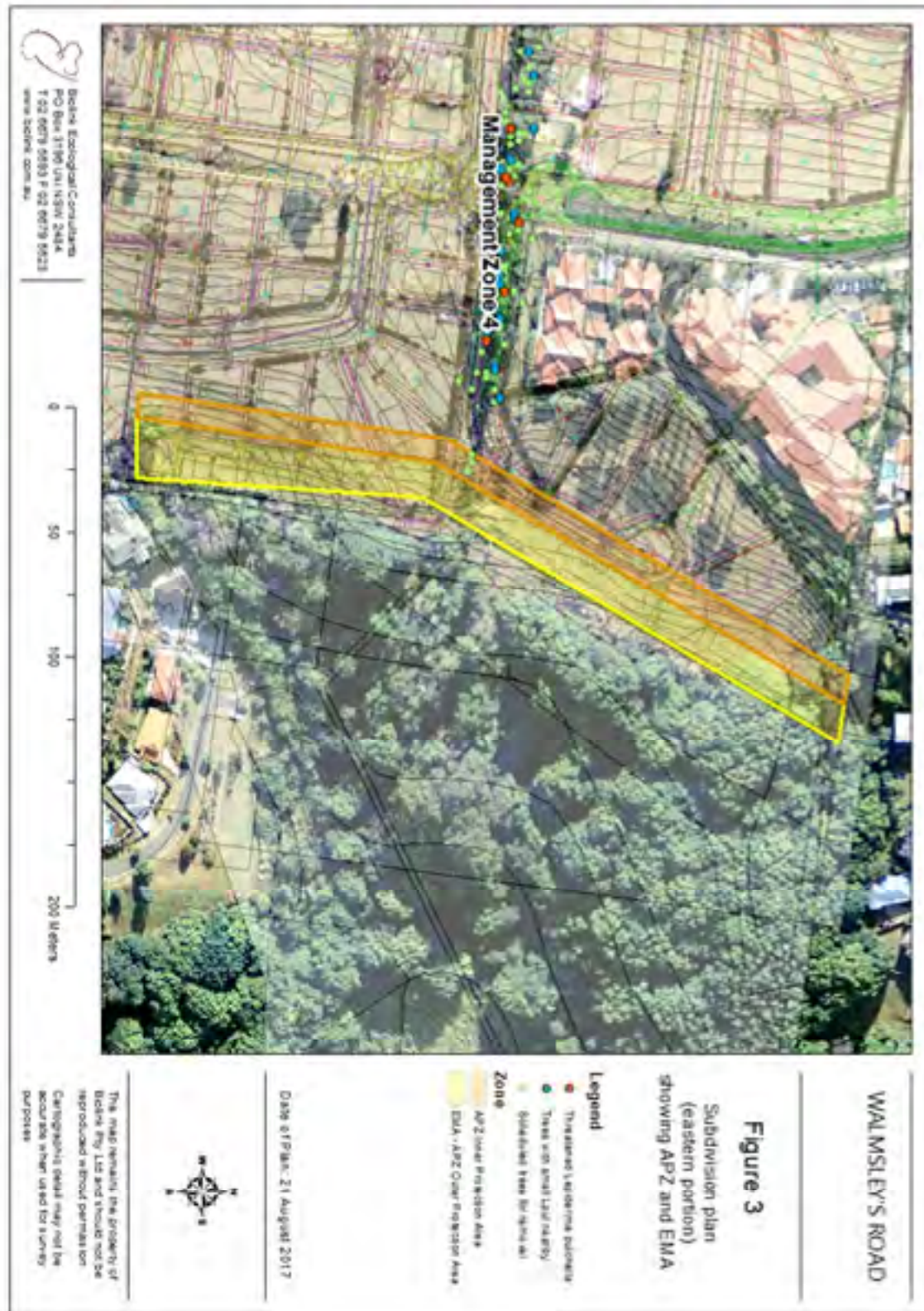
## **FIGURES**

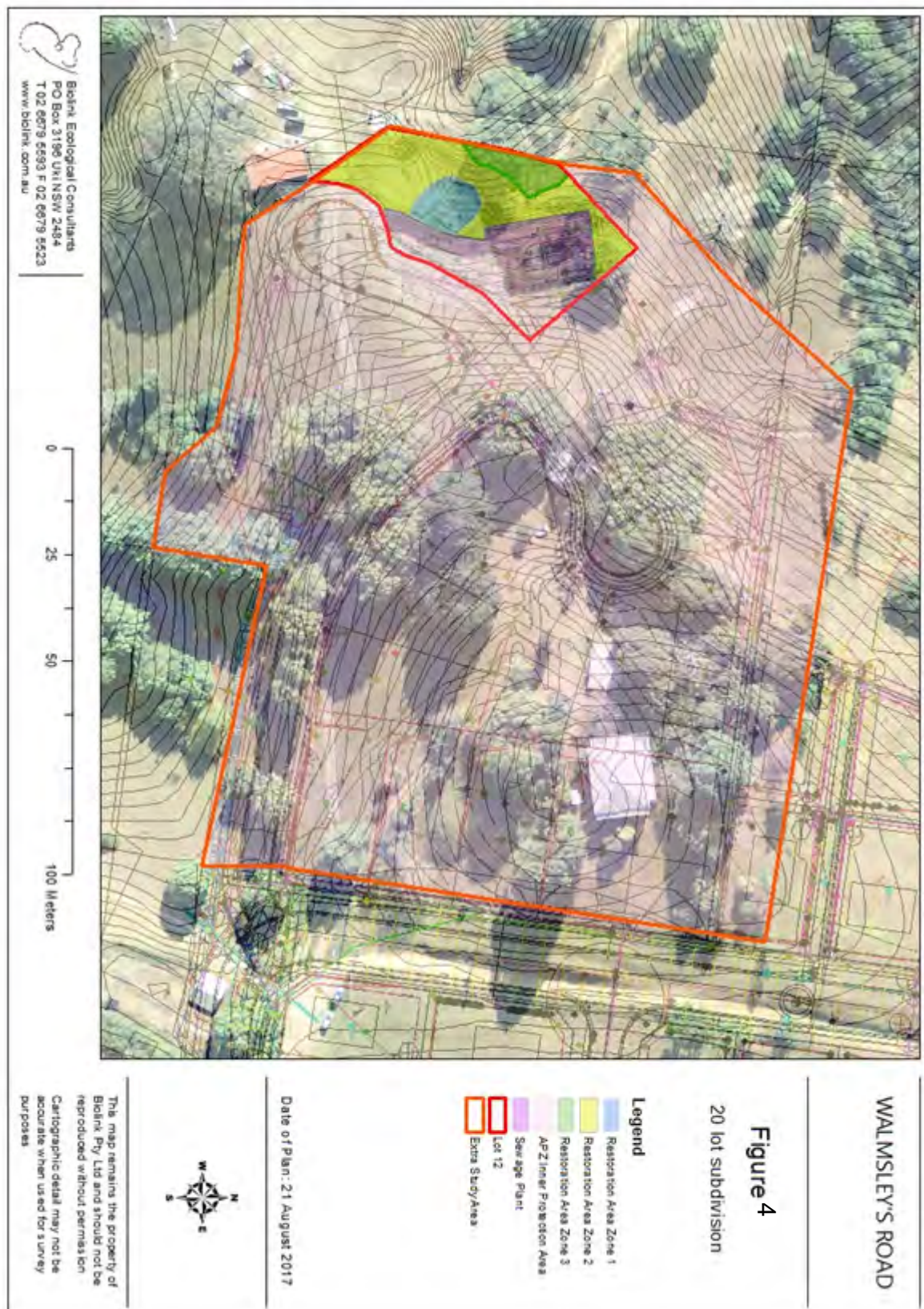
**Figure 1: APZs on Major Project Site**



**Figure 2: APZ Western Boundary**



**Figure 3: APZ Eastern Boundary**

**Figure 4: Management Zone 3: 20-Lot Subdivision**

## **APPENDICES**

**APPENDIX 1: Rural Fire Service's Requirements**

All communications to be addressed to:

Headquarters  
NSW Rural Fire Service  
Locked Mail Bag 17  
GRANVILLE NSW 2142

Headquarters  
NSW Rural Fire Service  
15 Carter Street  
HOMEBUSH BAY NSW 2127

Telephone: (02) 8741 5555  
e-mail: development.assessment@rfs.nsw.gov.au

Facsimile: (02) 8741 5550



Department of Planning  
Coastal Assessments  
GPO Box 39  
SYDNEY NSW 2001

Attention: Jane Flanagan

Dear Ms Flanagan,

RE: **Environmental Assessment – MP 05-0198**  
**Walmsley Road & Stott Street, Bilambil Heights**

I refer to your letter dated 19 August 2009 seeking comment on the environmental assessment regarding bush fire protection for the proposed development in accordance with s75F(4) of the *Environment Planning and Assessment Act 1979*.

**Asset Protection Zone (APZ)**

The intent of measures is to provide sufficient space and maintain reduced fuel loads so as to ensure radiant heat levels of buildings are below critical limits and to prevent direct flame contact with a building.

1. At the commencement of subdivision works and in perpetuity the entire site shall be managed as an APZ as outlined within Appendices 2 & 5 of *Planning for Bush Fire Protection 2006* and the NSW Rural Fire Service's document *Standards for asset protection zones*.
2. The proposed 25 metre APZ to the west of proposed Lot 56 lies outside the boundary of the property and is required to be protected and maintained in perpetuity. The APZ shall be managed as outlined within Appendices 2 & 5 of *Planning for Bush Fire Protection 2006* and the NSW Rural Fire Service's document *Standards for asset protection zones*.

**Water and Utilities**

The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

1 of 2

3. The proposed reticulated water supply shall comply with the requirements for services as outlined within section 4.1.3 of *Planning for Bush Fire 2006*.

#### **Access**

The intent of measures for public roads is to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.

4. The proposed public and private roads shall comply with the requirements of section 4.1.3 (1) of *Planning for Bush Fire Protection 2006*. A perimeter road is not required in this instance.

#### **Landscaping**

5. Landscaping, restoration and regeneration works within the site is to comply with the principles of Appendix 5 of *Planning for Bush Fire Protection 2006*.

#### **General Advice**

For the proposed Lots 38, 39, 40, 41, 42, 57, 59, 60 & 61, the thinning of Camphor Laurel trees only within the 25 metre recommended APZ may not be sufficient to meet the requirements as outlined within Appendices 2 & 5 of *Planning for Bush Fire Protection 2006* and the NSW Rural Fire Service's document *Standards for asset protection zones*.

This response is on the subdivision of the land only. Future development may be subject to separate application and the requirements of *Planning for Bush Fire Protection 2006*.

For any enquiries regarding this correspondence please contact Garth Bladwell.

Yours faithfully,



Corey Shackleton  
**A/Team Leader**  
**Development Assessment and Planning**

For information on *Planning for Bush Fire Protection 2006* visit the RFS web page [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)



transferred to Council in fee simple, at no cost to Council within 28 days of the date of registration of the plan of subdivision.

**GENERAL TERMS OF APPROVAL UNDER SECTION 100B OF THE RURAL FIRES ACT 1997**

1. The development proposal is to comply with the subdivision layout identified on the drawing prepared by Cozens, Regan, Williams, Prove Pty Ltd, numbered 14446, Drawing No. Sk.1 Revision Q, and dated June 2016.

**Asset Protection Zones**

The intent of measures is to provide sufficient space and maintain reduced fuel loads so as to ensure radiant heat levels of buildings are below critical limits and to prevent direct flame contact with a building. To achieve this, the following conditions shall apply:

2. At the issue of subdivision certificate and then in perpetuity the entire property, except for the following areas, shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones':
  - The western part of proposed Lot 12 that is wholly contained in the area between the "10m EEC Buffer" line and the "Potential EEC" line, as identified on the plan prepared by Cozens, Regan, Williams, Prove Pty Ltd, numbered 14446, Drawing No. Sk.1 Revision Q, and dated June 2016.

**Water and Utilities**

The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions shall apply:

3. Water, electricity and gas are to comply with section 4.1.3 of 'Planning for Bush Fire Protection 2006'.

**Access**

The intent of measures for public roads is to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area. To achieve this, the following conditions shall apply:

4. Public road access shall comply with section 4.1.3 (1) of 'Planning for Bush Fire Protection 2006'.

**General Advice - consent authority to note**

- This approval is for the subdivision of the land only. Any further development application for class 1,2 & 3 buildings as identified by the 'Building Code of Australia' must be subject to separate application under section 79BA of the EP & A Act and address the requirements of 'Planning for Bush Fire Protection 2006'.
- This BFSA has been assessed (in part) against information provided from Tweed Shire Council identifying that the EEC buffer, located in the Western section of proposed Lot 12, will be revegetated with a rainforest species mix as part of compensatory plantings.

The reasons for the imposition of conditions are to minimise any adverse impact the development may cause and to give effect to the objectives of the Environmental Planning and Assessment Act, 1979.

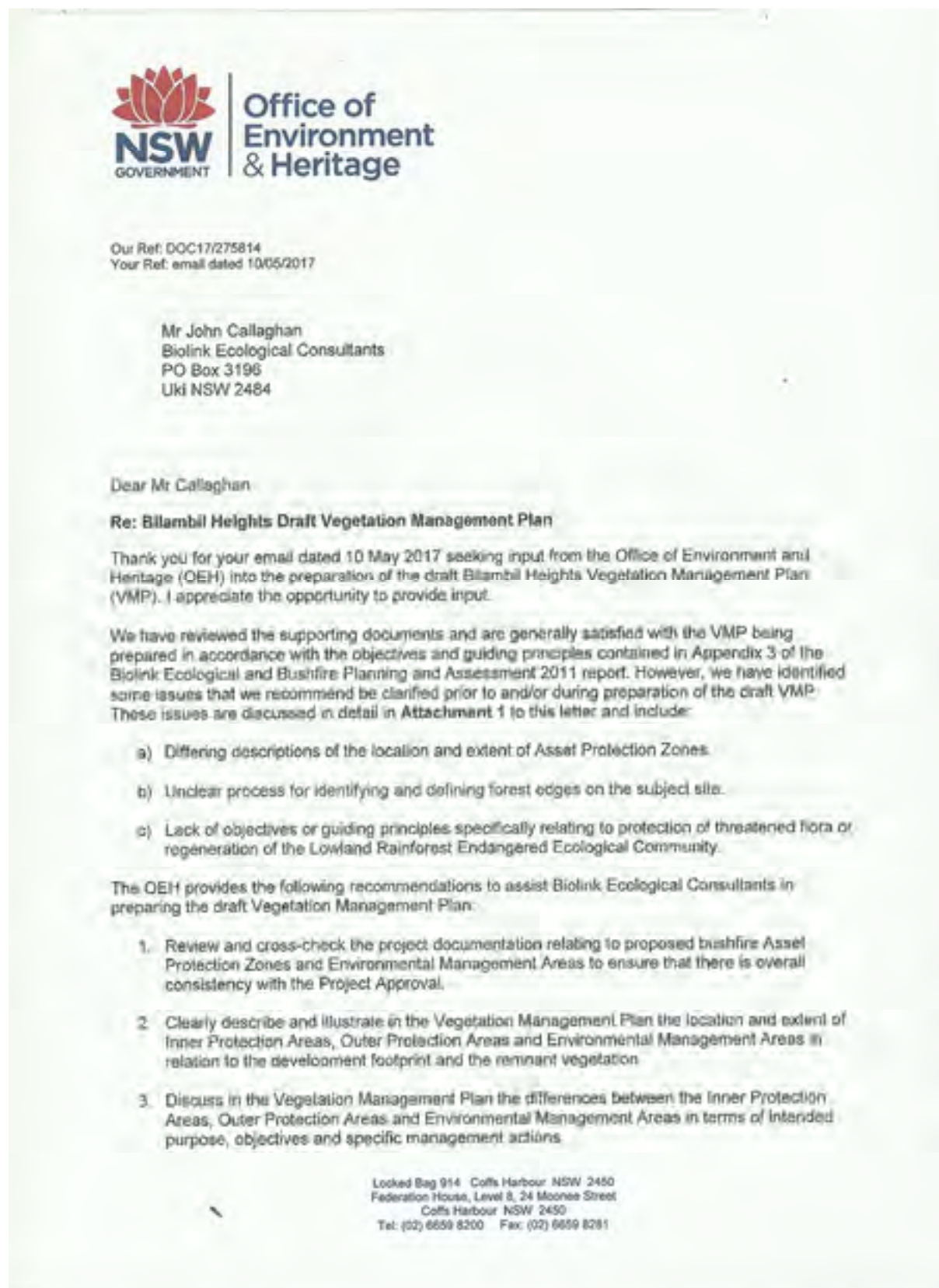
The application was determined on:

**1 December 2016**

The consent to operate from:

**6 December 2016**

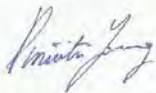
The consent to lapse on 6 December 2021 unless commenced prior to that date.

**Appendix 2: Office of Environment and Heritage Letter**

4. Include in the Vegetation Management Plan the process for identifying and establishing the definable forest edge.
5. In addition to the objectives and guiding principles contained in the Biolink Ecological and Bushfire Planning and Assessment 2011 report, the Vegetation Management Plan should include objectives and management actions that relate specifically to:
  - a) protection of threatened flora species on site, particularly those within or adjoining the proposed Asset Protection Zone/Environmental Management Area buffer zone; and
  - b) regeneration of Lowland Rainforest Endangered Ecological Community.

We look forward to the opportunity to review the draft VMP once it has been prepared. If you have any further questions about this issue, Mr Don Owner, Regional Operations Officer, Regional Operations, OEH, can be contacted on 6659 8233 or at [don.owner@environment.nsw.gov.au](mailto:don.owner@environment.nsw.gov.au).

Yours sincerely

 29 May 2017

**DIMITRI YOUNG**  
**Senior Team Leader Planning, North East Branch**  
**Regional Operations**

Contact officer: DON OWNER  
6659 8233

Enclosure: Attachment 1: Detailed OEH Comments – Bilambil Heights Draft Vegetation Management Plan

## **Attachment 1: Detailed OEH Comments – Bilambil Heights Draft Vegetation Management Plan**

### Bushfire Asset Protection Zones (APZs) and Environmental Management Areas (EMAs)

The widths of proposed bushfire Asset Protection Zones (APZs) and Environmental Management Areas (EMAs) illustrated in Figure 7 of the Approval Plans differ to the proposed widths of APZs and EMAs in Figure 3 of the Ecological and Bushfire Planning and Assessment (EBPA) report prepared by Biolink in 2011. Figure 7 of the Approval Plans identifies 10 metre wide APZs and 15 metre wide EMAs. Conversely, Figure 3 of the EBPA report illustrates a 10 metre wide APZ and a 25 metre wide dual purpose APZ/EMA buffer zone.

In addition, neither the Approval Plans nor the EBPA report describes the proposed APZs in terms of Inner Protection Area (IPA) and Outer Protection Area (OPA) components. The IPA and OPA have different management and maintenance requirements, which will have different levels of impact on threatened flora species known to occur within the buffer zone and the endangered ecological community (EEC) adjoining the buffer zone.

#### *OEH Recommendations:*

1. Review and cross-check the project documentation relating to proposed APZs and EMAs to ensure that there is overall consistency with the Project Approval.
2. Clearly describe and illustrate in the VMP the location and extent of IPAs, OPAs and EMAs in relation to the development footprint and the remnant vegetation.
3. Discuss in the VMP the differences between the IPAs, OPAs and EMAs in terms of intended purpose, objectives and specific management actions.

#### Defining the Forest Edge

The EBPA report states that it is '*unnecessary to buffer the vegetation community based on the existing vegetation boundary*' and instead there was a need for the '*establishment of a definable edge*'. However, the EBPA report does not include a procedure for identifying the definable edge of the forest. This is an important step given that the main components of the VMP (e.g. IPA, OPA, EMA and extent of other vegetation management works) will be measured from the forest edge.

#### *OEH Recommendation:*

4. Include in the VMP the process for identifying and establishing the definable forest edge.

### VMP Objectives and Guiding Principles

The EBPA report contains recommendations relevant to the preparation of the VMP, including:

- a) *prior to the commencement of development works, all rare and/or threatened flora species that occur within proposed APZ and EMA areas be located and appropriately identified and/or signposted such that they remain unaffected by any activities (including provision of APZs for bushfire management purposes); and*
- b) *The VMP must detail measures that diminish the threat of invasive species, support ongoing restoration of the regenerating rainforest community therein and protect threatened flora species known to occur on the site, but also the means by which this will be achieved.*

However, the proposed VMP objectives and guiding principles contained within Appendix 3 of the EBPA report do not provide any objectives or guiding principles relating specifically to the protection of threatened flora species on the site. Furthermore, although the objectives and principles do focus

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Attachment 1: Detailed OEH Comments – Bilambil Heights Draft Vegetation Management Plan

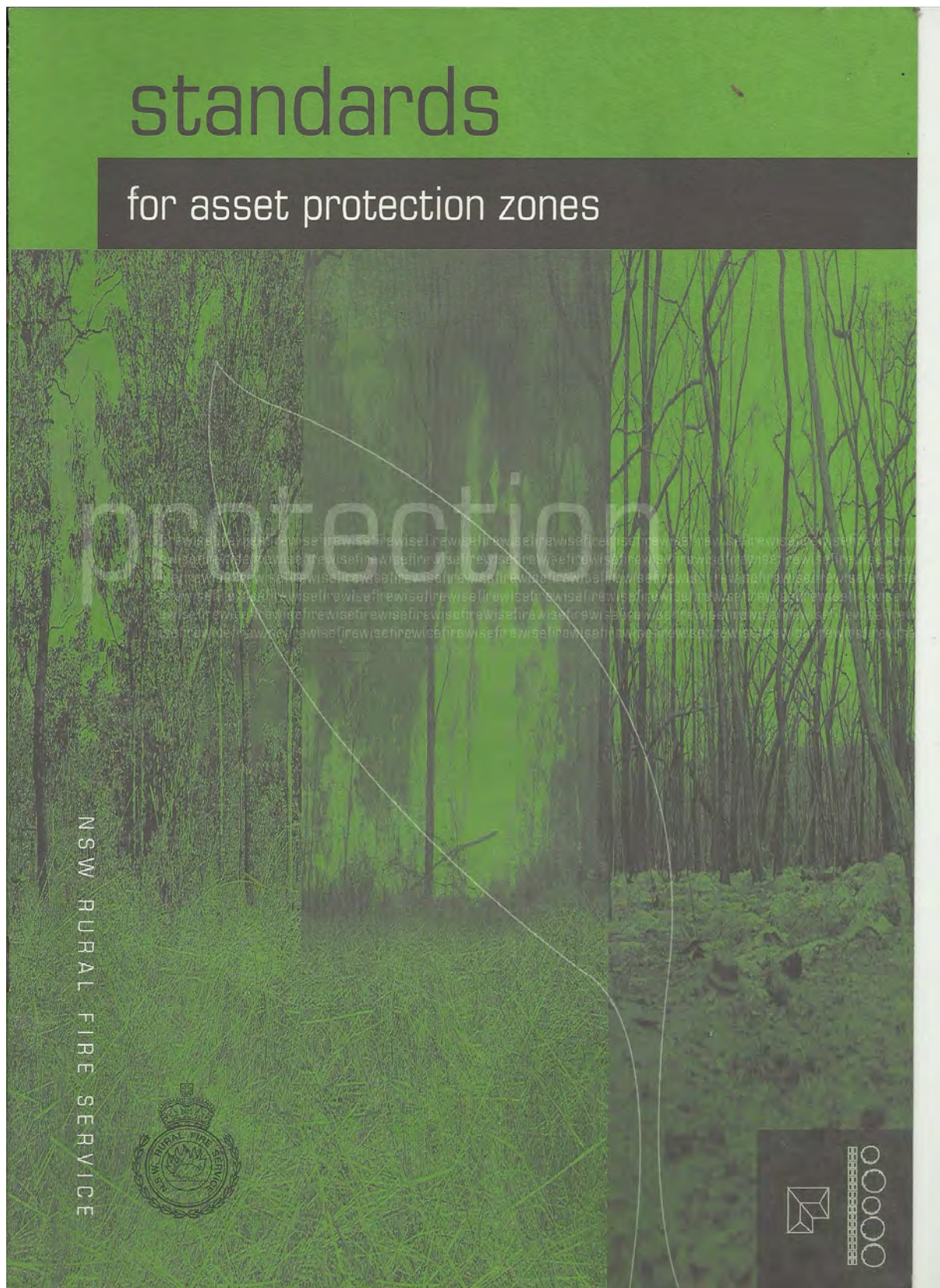
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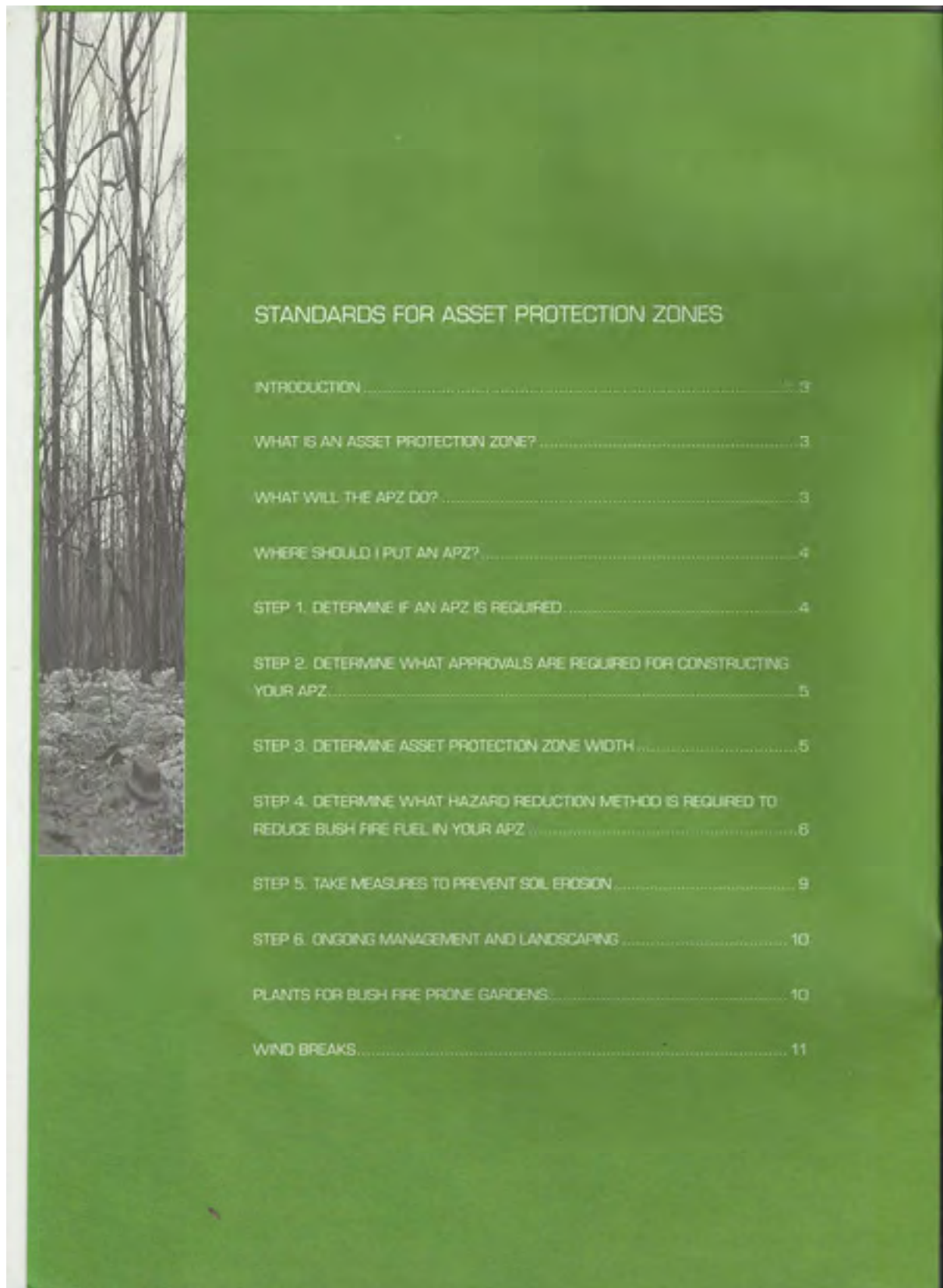
on increasing the integrity of remnant rainforest areas on site, the more specific requirement to regenerate Lowland Rainforest Endangered Ecological Community (LR EEC) is not referred to.

*OEH Recommendation:*

5. In addition to the objectives and guiding principles contained in the EBPA report, the VMP should include objectives and management actions that relate specifically to:
  - c) protection of threatened flora species on site, particularly those within or adjoining the proposed APZ/EMA buffer zone; and
  - d) regeneration of LR EEC.

## Appendix 3: Standards for Asset Protection Zones







## INTRODUCTION

For thousands of years bush fires have been a natural part of the Australian landscape. They are inevitable and essential, as many Australian plants and animals have adapted to fire as part of their life cycle.

In recent years developments in bushland areas have increased the risk of bush fires harming people and their homes and property. But landowners can significantly reduce the impact of bush fires on their property by identifying and minimising bush fire hazards. There are a number of ways to reduce the level of hazard to your property, but one of the most important is the creation and maintenance of an Asset Protection Zone (APZ).

A well located and maintained APZ should be used in conjunction with other preparations such as good property maintenance, appropriate building materials and developing a family action plan.

## WHAT IS AN ASSET PROTECTION ZONE?

An Asset Protection Zone (APZ) is a fuel reduced area surrounding a built asset or structure. This can include any residential building or major building such as farm and machinery sheds, or industrial, commercial or heritage buildings.

An APZ provides:

- a buffer zone between a bush fire hazard and an asset;
- an area of reduced bush fire fuel that allows suppression of fire;
- an area from which backburning may be conducted; and
- an area which allows emergency services access and provides a relatively safe area for firefighters and home owners to defend their property.

Potential bush fire fuels should be minimised within an APZ. This is so that the vegetation within the planned zone does not provide a path for the transfer of fire to the asset either from the ground level or through the tree canopy.

## WHAT WILL THE APZ DO?

An APZ, if designed correctly and maintained regularly, will reduce the risk of:

- direct flame contact on the asset;
- damage to the built asset from intense radiant heat; and
- ember attack on the asset.



## WHERE SHOULD I PUT AN APZ?

An APZ is located between an asset and a bush fire hazard.

The APZ should be located wholly within your land. You cannot undertake any clearing of vegetation on a neighbour's property, including National Park estate, Crown land or land under the management of your local council, unless you have written approval.

If you believe that the land adjacent to your property is a bush fire hazard and should be part of an APZ, you can have the matter investigated by contacting the NSW Rural Fire Service (RFS).

There are six steps to creating and maintaining an APZ. These are:

1. Determine if an APZ is required;
2. Determine what approvals are required for constructing your APZ;
3. Determine the APZ width required;
4. Determine what hazard reduction method is required to reduce bush fire fuel in your APZ;
5. Take measures to prevent soil erosion in your APZ; and
6. Landscape and regularly monitor in your APZ for fuel regrowth.

### STEP 1. DETERMINE IF AN APZ IS REQUIRED

Recognising that a bush fire hazard exists is the first step in developing an APZ for your property.

If you have vegetation close to your asset and you live in a bush fire prone or high risk area, you should consider creating and maintaining an APZ.

Generally, the more flammable and dense the vegetation, the greater the hazard will be. However, the hazard potential is also influenced by factors such as slope.

- A large area of continuous vegetation on sloping land may increase the potential bush fire hazard.
- The amount of vegetation around a house will influence the intensity and severity of a bush fire.
- The higher the available fuel the more intense a fire will be.



Isolated areas of vegetation are generally not a bush fire hazard, as they are not large enough to produce fire of an intensity that will threaten dwellings.

This includes:

- bushland areas of less than one hectare that are isolated from large bushland areas; and
- narrow strips of vegetation along road and river corridors.

If you are not sure if there is a bush fire hazard in or around your property, contact your local NSW Rural Fire Service Fire Control Centre or your local council for advice.



## STEP 2. DETERMINE WHAT APPROVALS ARE REQUIRED FOR CONSTRUCTING YOUR APZ

If you intend to undertake bush fire hazard reduction works to create or maintain an APZ you must gain the written consent of the landowner.

### Subdivided land or construction of a new dwelling

If you are constructing an APZ for a new dwelling you will need to comply with the requirements in *Planning for Bushfire Protection*. Any approvals required will have to be obtained as part of the Development Application process.

### Existing asset

If you wish to create or maintain an APZ for an existing structure you may need to obtain an environmental approval. The RFS offers a free environmental assessment and certificate issuing service for essential hazard reduction works. For more information see the RFS document *Application Instructions for a Bush Fire Hazard Reduction Certificate* or contact your local RFS Fire Control Centre to determine if you can use this approval process.

Bear in mind that all work undertaken must be consistent with any existing land management agreements (e.g. a conservation agreement, or property vegetation plan) entered into by the property owner.

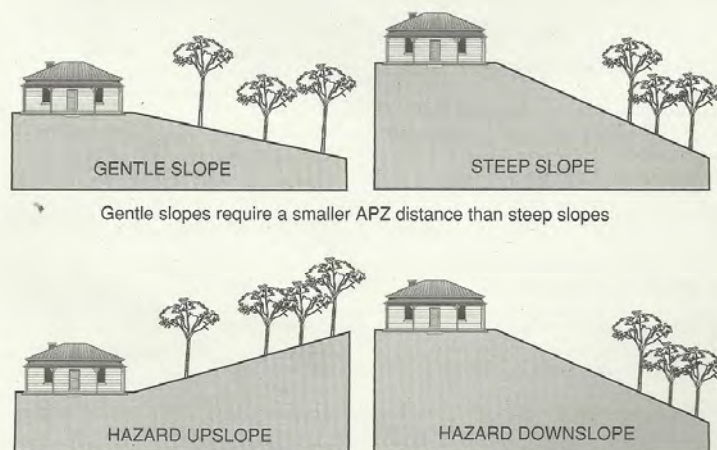
If your current development consent provides for an APZ, you do not need further approvals for works that are consistent with this consent.

If you intend to burn off to reduce fuel levels on your property you may also need to obtain a Fire Permit through the RFS or NSW Fire Brigades. See the RFS document *Before You Light That Fire* for an explanation of when a permit is required.

## STEP 3. DETERMINE THE APZ WIDTH

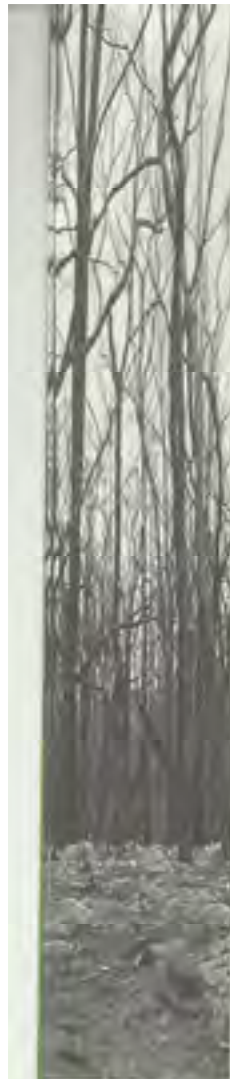
The size of the APZ required around your asset depends on the nature of the asset, the slope of the area, the type and structure of nearby vegetation and whether the vegetation is managed.

Fires burn faster uphill than downhill, so the APZ will need to be larger if the hazard is downslope of the asset.



Gentle slopes require a smaller APZ distance than steep slopes

A hazard downslope will require a greater APZ distance than a hazard upslope of the asset



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Different types of vegetation (for example, forests, rainforests, woodlands, grasslands) behave differently during a bush fire. For example, a forest with shrubby understorey is likely to result in a higher intensity fire than a woodland with a grassy understorey and would therefore require a greater APZ width.

A key benefit of an APZ is that it reduces radiant heat and the potential for direct flame contact on homes and other buildings. Residential dwellings require a wider APZ than sheds or stockyards because the dwelling is more likely to be used as a refuge during bush fire.

#### **Subdivided land or construction of a new dwelling**

If you are constructing a new asset, the principles of *Planning for Bushfire Protection* should be applied. Your Development Application approval will detail the exact APZ distance required.

#### **Existing asset**

If you wish to create an APZ around an existing asset and you require environmental approval, the Bush Fire Environmental Assessment Code provides a streamlined assessment process. Your Bush Fire Hazard Reduction Certificate (or alternate environmental approval) will specify the maximum APZ width allowed.

For further information on APZ widths see *Planning for Bushfire Protection* or the *Bush Fire Environmental Assessment Code* (available on the RFS website), or contact your local RFS Fire Control Centre.

### **STEP 4. DETERMINE WHAT HAZARD REDUCTION METHOD IS REQUIRED TO REDUCE BUSH FIRE FUEL IN YOUR APZ**

The intensity of bush fires can be greatly reduced where there is little to no available fuel for burning. In order to control bush fire fuels you can reduce, remove or change the state of the fuel through several means.

Reduction of fuel does not require removal of all vegetation, which would cause environmental damage. Also, trees and plants can provide you with some bush fire protection from strong winds, intense heat and flying embers (by filtering embers) and changing wind patterns. Some ground cover is also needed to prevent soil erosion.

#### **Fuels can be controlled by:**

##### **1. raking or manual removal of fine fuels**

Ground fuels such as fallen leaves, twigs (less than 6 mm in diameter) and bark should be removed on a regular basis. This is fuel that burns quickly and increases the intensity of a fire.

Fine fuels can be removed by hand or with tools such as rakes, hoes and shovels.

##### **2. mowing or grazing of grass**

Grass needs to be kept short and, where possible, green.

##### **3. removal or pruning of trees, shrubs and understorey**

The control of existing vegetation involves both selective fuel reduction (removal, thinning and pruning) and the retention of vegetation.

Prune or remove trees so that you do not have a continuous tree canopy leading from the hazard to the asset. Separate tree crowns by two to five metres. A canopy should not overhang within two to five metres of a dwelling.

Native trees and shrubs should be retained as clumps or islands and should maintain a covering of no more than 20% of the area.

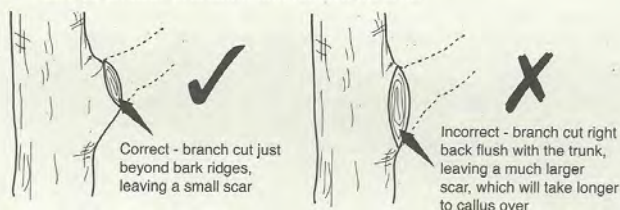
When choosing plants for removal, the following basic rules should be followed:

1. Remove noxious and environmental weeds first. Your local council can provide you with a list of environmental weeds or 'undesirable species'. Alternatively, a list of noxious weeds can be obtained at [www.agric.nsw.gov.au/noxweed/](http://www.agric.nsw.gov.au/noxweed/);
2. Remove more flammable species such as those with rough, flaky or stringy bark; and
3. Remove or thin understorey plants, trees and shrubs less than three metres in height.

The removal of significant native species should be avoided.

Prune in accordance with the following standards:

- Use sharp tools. These will enable clean cuts and will minimise damage to the tree.
- Decide which branches are to be removed before commencing work. Ensure that you maintain a balanced, natural distribution of foliage and branches.
- Remove only what is necessary.
- Cut branches just beyond bark ridges, leaving a small scar.
- Remove smaller branches and deadwood first.



There are three primary methods of pruning trees in APZs:

#### 1. Crown lifting (skirting)

Remove the lowest branches (up to two metres from the ground). Crown lifting may inhibit the transfer of fire between the ground fuel and the tree canopy.

#### 2. Thinning

Remove smaller secondary branches whilst retaining the main structural branches of the tree. Thinning may minimise the intensity of a fire.

#### 3. Selective pruning

Remove branches that are specifically identified as creating a bush fire hazard (such as those overhanging assets or those which create a continuous tree canopy). Selective pruning can be used to prevent direct flame contact between trees and assets.

Your Bush Fire Hazard Reduction Certificate or local council may restrict the amount or method of pruning allowed in your APZ.

See the *Australian Standard 4373 (Pruning of Amenity Trees)* for more information on tree pruning.

#### 4. Slashing and trittrering

Slashing and trittrering are economical methods of fuel reduction for large APZs that have good access. However, these methods may leave large amounts of slashed fuels (grass clippings etc) which, when dry, may become a fire hazard. For slashing or trittrering to be effective, the cut material must be removed or allowed to decompose well before summer starts.

If clippings are removed, dispose of them in a green waste bin if available or compost on site (dumping clippings in the bush is illegal and it increases the bush fire hazard on your or your neighbour's property).

Although slashing and trittrering are effective in inhibiting the growth of weeds, it is preferable that weeds are completely removed.

Care must be taken not to leave sharp stakes and stumps that may be a safety hazard.



#### 5. Ploughing and grading

Ploughing and grading can produce effective firebreaks. However, in areas where this method is applied, frequent maintenance may be required to minimise the potential for erosion. Loose soil from ploughed or graded ground may erode in steep areas, particularly where there is high rainfall and strong winds.

#### 6. Burning (hazard reduction burning)

Hazard reduction burning is a method of removing ground litter and fine fuels by fire. Hazard reduction burning of vegetation is often used by land management agencies for broad area bush fire control, or to provide a fuel reduced buffer around urban areas.

Any hazard reduction burning, including pile burns, must be planned carefully and carried out with extreme caution under correct weather conditions. Otherwise there is a real danger that the fire will become out of control. More bush fires result from escaped burning off work than from any other single cause.

**It is YOUR responsibility to contain any fire lit on your property. If the fire escapes your property boundaries you may be liable for the damage it causes.**

Hazard reduction burns must therefore be carefully planned to ensure that they are safe, controlled, effective and environmentally sound. There are many factors that need to be considered in a burn plan. These include smoke control, scorch height, frequency of burning and cut off points (or control lines) for the fire. For further information see the RFS document *Standards for Low Intensity Bush Fire Hazard Reduction Burning*, or contact your local RFS for advice.

#### 7. Burning (pile burning)

In some cases, where fuel removal is impractical due to the terrain, or where material cannot be disposed of by the normal garbage collection or composted on site, you may use pile burning to dispose of material that has been removed in creating or maintaining an APZ.

For further information on pile burning, see the RFS document *Standards for Pile Burning*.

In areas where smoke regulations control burning in the open, you will need to obtain a Bush Fire Hazard Reduction Certificate or written approval from Council for burning. During the bush fire danger period a Fire Permit will also be required. See the RFS document *Before You Light that Fire* for further details.



## STEP 5. TAKE MEASURES TO PREVENT SOIL EROSION

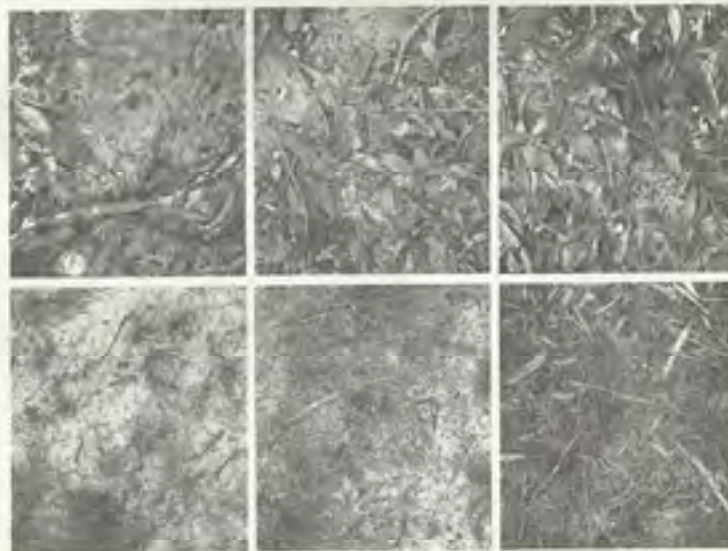
While the removal of fuel is necessary to reduce a bush fire hazard, you also need to consider soil stability, particularly on sloping areas.

Soil erosion can greatly reduce the quality of your land through:

- loss of top soil, nutrients, vegetation and seeds
- reduced soil structure, stability and quality
- blocking and polluting water courses and drainage lines

A small amount of ground cover can greatly improve soil stability and does not constitute a significant bush fire hazard. Ground cover includes any material which directly covers the soil surface such as vegetation, twigs, leaf litter, clippings or rocks. A permanent ground cover should be established (for example, short grass). This will provide an area that is easy to maintain and prevent soil erosion.

When using mechanical hazard reduction methods, you should retain a ground cover of at least 75% to prevent soil erosion. However, if your area is particularly susceptible to soil erosion, your Hazard Reduction Certificate may require that 80% ground cover be retained.



50%

75%

100%

Ground Cover

To reduce the incidence of soil erosion caused by the use of heavy machinery such as ploughs, dozers and graders, machinery must be used parallel to the contours. Vegetation should be allowed to regenerate, but be managed to maintain a low fuel load.



## STEP 6. ONGOING MANAGEMENT AND LANDSCAPING

Your home and garden can blend with the natural environment and be landscaped to minimise the impact of fire at the same time. To provide an effective APZ, you need to plan the layout of your garden to include features such as fire resistant plants, radiant heat barriers and windbreaks.

### Layout of gardens in an APZ

When creating and maintaining a garden that is part of an APZ you should:

- ensure that vegetation does not provide a continuous path to the house;
- remove all noxious and environmental weeds;
- plant or clear vegetation into clumps rather than continuous rows;
- prune low branches two metres from the ground to prevent a ground fire from spreading into trees;
- locate vegetation far enough away from the asset so that plants will not ignite the asset by direct flame contact or radiant heat emission;
- plant and maintain short green grass around the house as this will slow the fire and reduce fire intensity. Alternatively, provide non-flammable pathways directly around the dwelling;
- ensure that shrubs and other plants do not directly abut the dwelling. Where this does occur, gardens should contain low-flammability plants and non flammable ground cover such as pebbles and crush tile; and
- avoid erecting brush type fencing and planting "pencil pine" type trees next to buildings, as these are highly flammable.



### Removal of other materials

Woodpiles, wooden sheds, combustible material, storage areas, large quantities of garden mulch, stacked flammable building materials etc. should be located away from the house. These items should preferably be located in a designated cleared location with no direct contact with bush fire hazard vegetation.

### Other protective features

You can also take advantage of existing or proposed protective features such as fire trails, gravel paths, rows of trees, dams, creeks, swimming pools, tennis courts and vegetable gardens as part of the property's APZ.

## PLANTS FOR BUSH FIRE PRONE GARDENS

When designing your garden it is important to consider the type of plant species and their flammability as well as their placement and arrangement.

Given the right conditions, all plants will burn. However, some plants are less flammable than others.

Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage the ground fire to spread up to, and then through, the crown of the trees.

Plants that are less flammable, have the following features:

- high moisture content
- high levels of salt
- low volatile oil content of leaves
- smooth barks without "ribbons" hanging from branches or trunks; and
- dense crown and elevated branches.

When choosing less flammable plants, be sure not to introduce noxious or environmental weed species into your garden that can cause greater long-term environmental damage.

For further information on appropriate plant species for your locality, contact your local council, plant nurseries or plant society.

If you require information on how to care for fire damaged trees, refer to the Firewise brochure *Trees and Fire Resistance: Regeneration and care of fire damaged trees*.

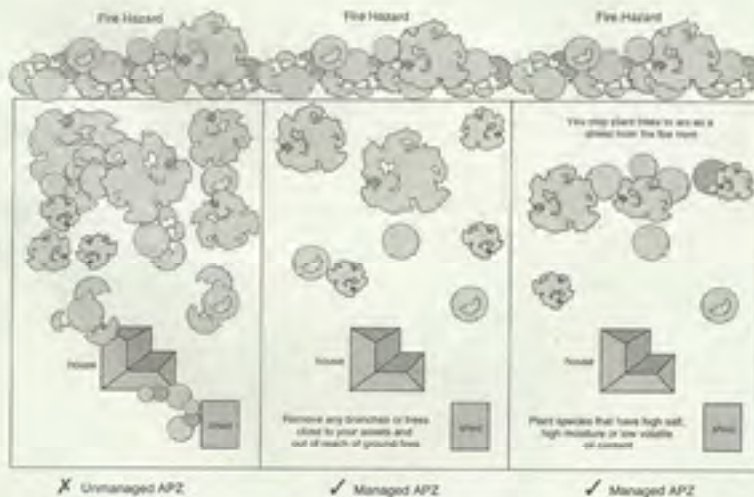
## WIND BREAKS

Rows of trees can provide a wind break to trap embers and flying debris that could otherwise reach the house or asset.

You need to be aware of local wind conditions associated with bush fires and position the wind break accordingly. Your local RFS Fire Control Centre can provide you with further advice.

When choosing trees and shrubs, make sure you seek advice as to their maximum height. Their height may vary depending on location of planting and local conditions. As a general rule, plant trees at the same distance away from the asset as their maximum height.

When creating a wind break, remember that the object is to slow the wind and to catch embers rather than trying to block the wind. In trying to block the wind, turbulence is created on both sides of the wind break making fire behaviour erratic.



## HOW CAN I FIND OUT MORE?

The following documents are available from your local Fire Control Centre and from the NSW RFS website at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

- Before You Light That Fire
- Standards for Low Intensity Bush Fire Hazard Reduction Burning
- Standards for Pile Burning
- Application Instructions for a Bush Fire Hazard Reduction Certificate

If you require any further information please contact:

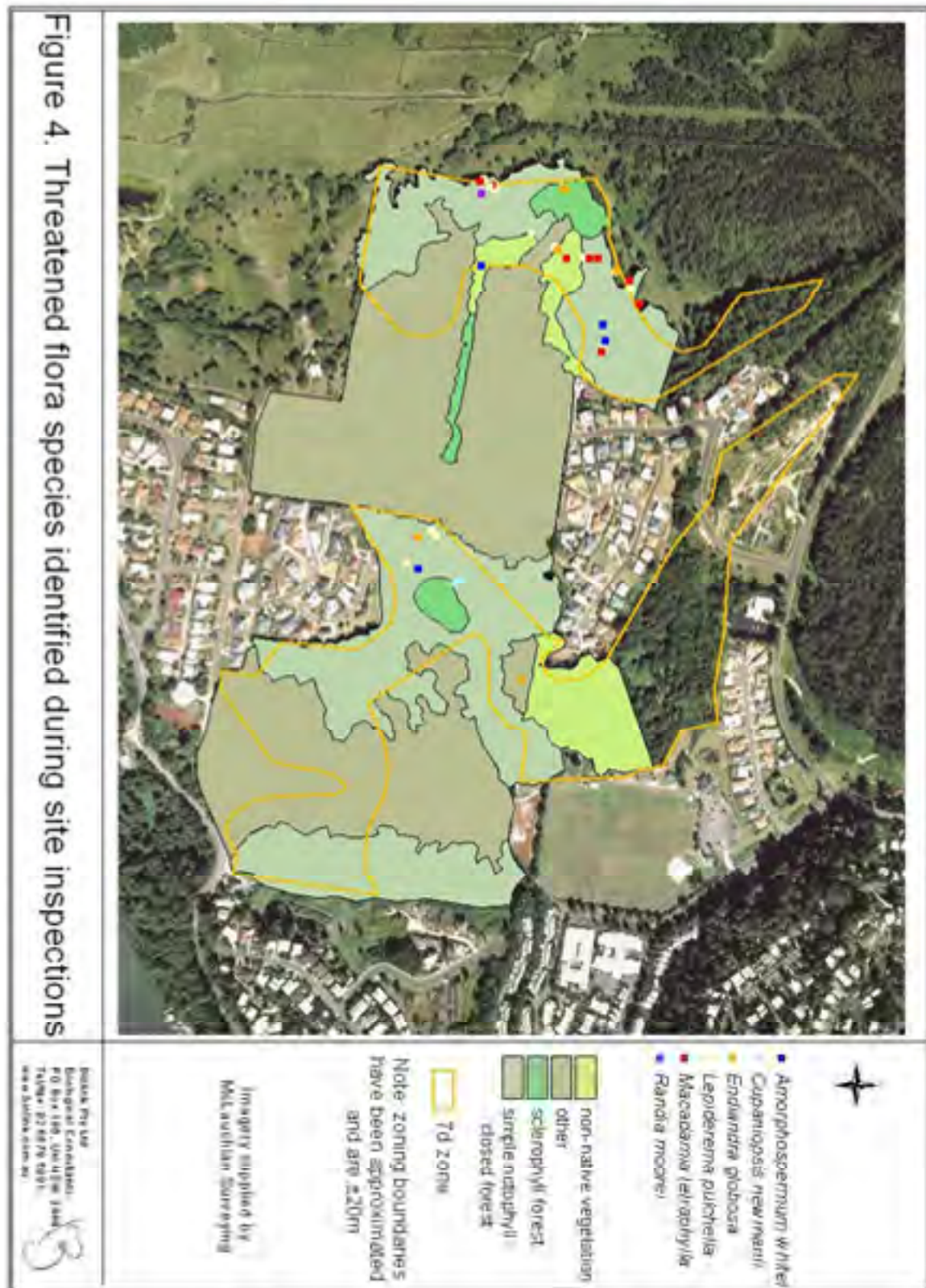
- your local NSW Rural Fire Service Fire Control Centre. Location details are available on the RFS website or
- call the NSW RFS Enquiry Line 1800 679 737 (Monday to Friday, 9am to 5pm), or
- the NSW RFS website at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

**Produced by the NSW Rural Fire Service, Locked Mail Bag 17,  
GRANVILLE, NSW 2142. Ph. 1800 679 737**  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)

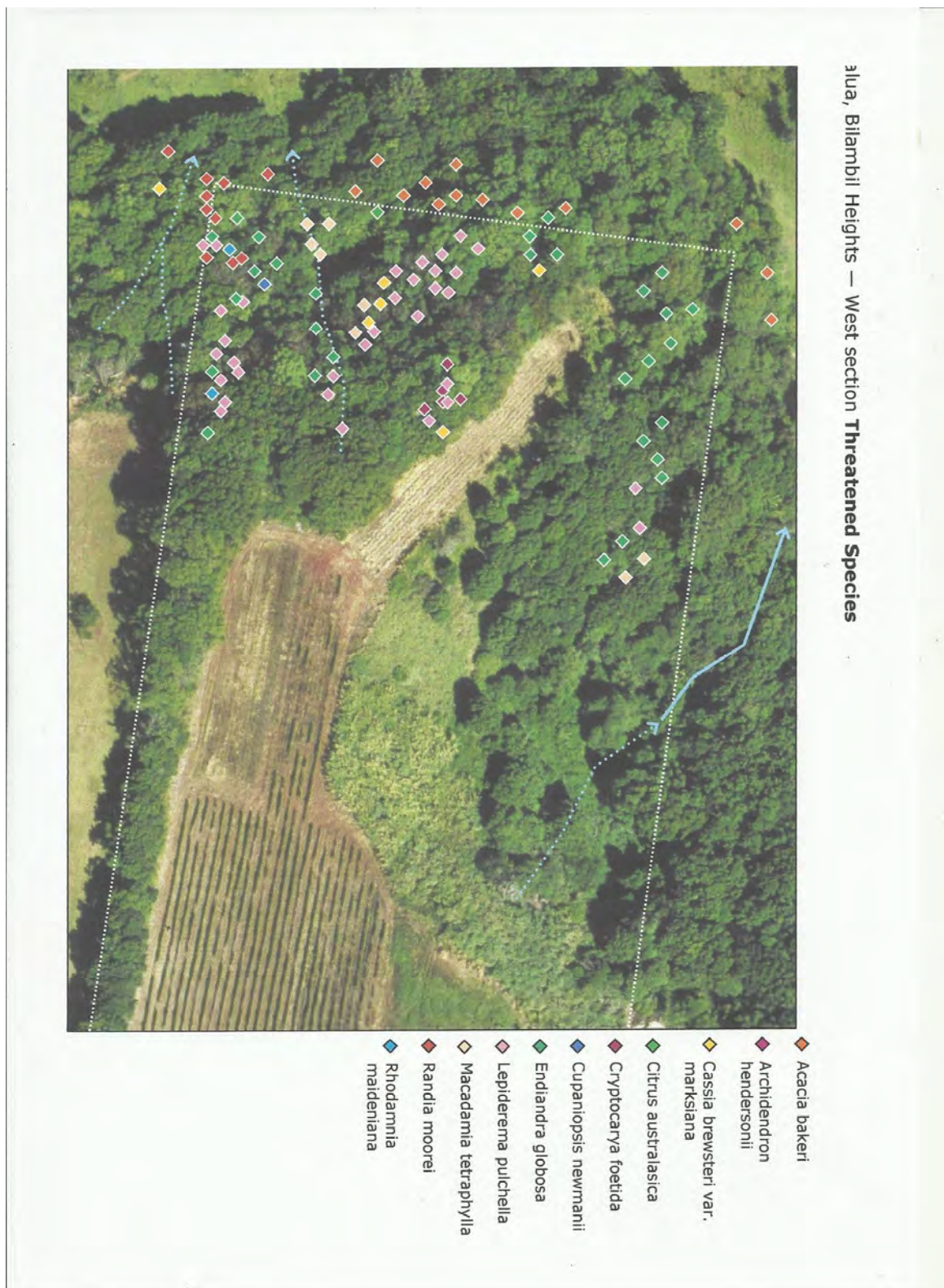
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## APPENDIX 4: Threatened Plant Locations

From Biolink (2011)



From Chris Roberts





Malua, Bilambil Heights – Central  
section **Threatened Species** –  
April 2006

- ◆ *Acacia bakeri* (V)
- ◆ *Archidendron hendersonii* (V)
- ◆ *Cassia brewsteri* var. *markiana* (E)
- ◆ *Citrus australasica* (R)
- ◆ *Cryptocarya foetida* (V)
- ◆ *Cupaniopsis newmanii* (R)
- ◆ *Endiandra globosa* (R)
- ◆ *Lepiderama pulchella* (V)
- ◆ *Macadamia tetraphylla* (V)
- ◆ *Randia moorei* (E)
- ◆ *Rhodamnia maideniana* (R)

## APPENDIX 5: Planting Schedule for APZ OPA-EMA, EMA Fire Management, and EMA Rehabilitation

| Species Name                                                        | Common Name             | APZ-<br>OPA-<br>EMA | EMA<br>Fire<br>Mgmt<br>10m<br>inner | EMA<br>Fire<br>Mgmt<br>10m<br>outer |
|---------------------------------------------------------------------|-------------------------|---------------------|-------------------------------------|-------------------------------------|
| <b>Shrubs-Small Trees</b>                                           |                         |                     |                                     |                                     |
| <i>Alpinia caerulea</i>                                             | Native Ginger           | X                   | X                                   | X                                   |
| <i>Atractocarpus benthamiana</i>                                    | Native Gardenia         | X                   | X                                   | X                                   |
| <i>Breynia oblongifolia</i> <sup>Λ</sup>                            | Native Coffee Bush      |                     | X                                   | X                                   |
| <i>Cordyline petiolaris</i>                                         | Broad-leaved Palm Lily  | X                   | X                                   | X                                   |
| <i>Cordyline stricta</i>                                            | Narrow-leaved Palm Lily | X                   | X                                   | X                                   |
| <i>Cryptocarya laevigata</i> <sup>Λ</sup>                           | Glossy Laurel           |                     |                                     | X                                   |
| <i>Elaeodendron australe</i> var. <i>australe</i> <sup>Λ</sup>      | Red Olive Plum          |                     |                                     | X                                   |
| <i>Eupomatia laurina</i> <sup>Λ</sup>                               | Bolwarra                |                     | X                                   | X                                   |
| <i>Homolanthus populifolius</i>                                     | Bleeding Heart          |                     |                                     | X                                   |
| <i>Macaranga tanarius</i>                                           | Macaranga               |                     |                                     | X                                   |
| <i>Ptiliostigma glabrum</i>                                         | Plum Myrtle             |                     |                                     | X                                   |
| <i>Psychotria simmondsiana</i> var. <i>glabrescens</i> <sup>Λ</sup> | Small Psychotria        |                     | X                                   | X                                   |
| <i>Tabernaemontana pandacaqui</i> <sup>Λ</sup>                      | Banana Bush             | X                   | X                                   | X                                   |
| <i>Trema tomentosa</i> var. <i>viridis</i>                          | Poison Peach            |                     |                                     | X                                   |
| <i>Wilkea austroqueenslandica</i> <sup>Λ</sup>                      | Smooth Wilkea           | X                   | X                                   | X                                   |
| <i>Wilkea huegeliana</i>                                            | Veiny Wilkea            |                     |                                     | X                                   |
| <b>Groundcovers</b>                                                 |                         |                     |                                     |                                     |
| <i>Adiantum diaphanum</i>                                           | Filmy Maidenhair Fern   | X                   | X                                   | X                                   |
| <i>Adiantum formosum</i>                                            | Giant Maidenhair Fern   | X                   | X                                   | X                                   |
| <i>Asplenium australasicum</i>                                      | Bird's Nest Fern        | X                   | X                                   | X                                   |
| <i>Blechnum cartilagineum</i>                                       | Gristle Fern            |                     |                                     | X                                   |

| Species Name                   | Common Name          | APZ-<br>OPA-<br>EMA | EMA<br>Fire<br>Mgmt<br>10m<br>inner | EMA<br>Fire<br>Mgmt<br>10m<br>outer |
|--------------------------------|----------------------|---------------------|-------------------------------------|-------------------------------------|
| <i>Centella asiatica</i>       | Pennywort            | X                   | X                                   | X                                   |
| <i>Christella dentata</i>      | Binung Fern          |                     | X                                   | X                                   |
| <i>Commelina cyanea</i>        | Native Wandering Jew | X                   | X                                   | X                                   |
| <i>Cynodon dactylon</i>        | Common Couch         | X                   | X                                   | X                                   |
| <i>Dianella caerulea</i>       | Blue Flax Lily       | X                   | X                                   | X                                   |
| <i>Doodia aspera</i>           | Prickly Rasp Fern    |                     | X                                   | X                                   |
| <i>Doodia media</i>            | Common Rasp Fern     |                     |                                     | X                                   |
| <i>Hydrocotyle pedicellosa</i> | Pennywort            | X                   | X                                   | X                                   |
| <i>Oplismenus aemulus</i>      | Basket Grass         | X                   | X                                   | X                                   |
| <i>Oplismenus imbecillis</i>   | Basket Grass         | X                   | X                                   | X                                   |
| <i>Pellaea falcata</i>         | Sickle-Fern          | X                   | X                                   | X                                   |
| <i>Platynerum superbum</i>     | Staghorn             | X                   | X                                   | X                                   |
| <i>Psilotum nudum</i>          | Skeleton Fork Fern   |                     | X                                   | X                                   |
| <i>Sticherus flabellatus</i>   | Shiny Fan Fern       | X                   | X                                   | X                                   |
| <i>Viola hederacea</i>         | Native Violet        | X                   | X                                   | X                                   |

^ indicates plants to be planted occasionally within the Asset Protection Zones (IPA and EMA-OPA) and within the EMA-inner area

Note: The Planting allowed within the Asset Protection Zones (IPA and EMA-OPA) planting is also identified in Schedule B of the VMP for this site (Biolink 2017b). The Planting allowed within the EMA areas is also identified in Schedule A of the VMP for this site (Biolink 2017b).