

ATTACHMENT B – VEGETATION MANAGEMENT PLAN ADVICE (CUMBERLAND ECOLOGY, 2016)

25 November 2016

Mr Peter Roach
Director
Cariste Pty Ltd
PO Box 7099
McMahons Point 2060

**RESPONSE TO PITTWATER COUNCIL FOR PROVISION OF
VEGETATION MANAGEMENT SUB-PLANS FOR PROPOSED LOTS 1A,
1B, 1C AND 1D IN THE SUBDIVISION OF LOT 1 DP 408800**

Cumberland Ecology
PO Box 2474
Carlingford Court 2118
NSW Australia
Telephone (02) 9868 1933
Mobile 0425 333 466
Facsimile (02) 9868 1977
Web: www.cumberlandecology.com.au

Dear Peter,

The purpose of this letter is to respond to a request for additional information from Northern Beaches Council - Pittwater (Council) in regard to the development application (DA) for the proposed sub-division of Lot 1 DP 408800. Council have requested the provision of Vegetation Management Sub-plans, as additional information, to guide the management and restoration of retained native vegetation within proposed Lots 1a, 1b, 1c and 1d. The Sub-plans form part of the master Vegetation Management Plan (VMP), which guides the management and restoration works for all four proposed lots, as part of the proposed sub-division of Lot 1 DP 408800. Council's request for additional information is summarised below, and responses are provided beneath each point:

The following information has been requested by Council's Natural Environmental Officer:

1. *The submitted Species Impact Statement (SIS) states that a trust is to be established to pay for implementation of the Vegetation Management Plan (VMP) which will be funded by a portion of the sale from each lot with limited future maintenance works. The timeframe for 'implementation' needs to be defined. The VMP lists an initial primary weeding program of 6 months. This would ideally be funded by the conservation trust and listed as the 'implementation' phase;*

The implementation phase, which will be funded by a portion of the sale from each lot, will include the primary weeding program of 6 months. The sum entered into the fund will be estimated based on the upper estimate for the cost of implementation works, with a 10% surcharge added. The surcharge will act as a conservation bond that will remain in the fund, will be self-perpetuating through

interest earned, and can be used if the implementation works fail to achieve the objectives stated in the VMP sub-plan (see below), or the future residents default on their obligations. The future residents will be responsible for funding the works for the individual allotments beyond the implementation phase.

2. *The VMP needs to be broken down into individual allotments; while ideally the entire site would be managed as one this would not be the reality after subdivision has occurred. Each individual lot after subdivision and implementation phase of the VMP therefore needs to have a plan so that they can be managed independently (and therefore funded independently by the owner);*

The Sub-plans for each proposed lot (as shown in **Figure 1** in **Appendix A** to this letter) are provided as appendices to this letter, and should be read in conjunction with the master VMP (Cumberland Ecology, 2016). This is appropriate, as the restoration and management methods will be consistent across all proposed lots. The VMP Sub-plans for each lot are included in **Appendices B-E** of this letter.

3. *The proposed S88B covenant needs to be clearly stated in detail so that it can be applied to the individual lots*

A covenant under Section 88B of the *Conveyancing Act 1919* will be registered on the title of on each of the proposed lots 1a, 1b, 1c and 1d, and also a small area of the adjoining Lot 22 in DP 1036400 for the provision of an Asset Protection Zone (APZ) for proposed Lot 1a.

A positive covenant for maintenance or repair may be created by a Section 88B Instrument as a separate Positive Covenant, the terms of which must relate to another easement created in the same instrument. Under s.88BA *Conveyancing Act 1919*, the covenant is an impediment on title (independent of ownership) and will continue in force until varied or released.

The instrument used to create the positive covenant must:

- specifically refer to the easement and land to which it relates (including title reference);
- indicate the land burdened and the land or prescribed authority with the benefit; and
- be executed by each person bound by it and by all persons having an interest in the land.

The Section 88B Covenant will be finalised on approval of the subdivision by Council, in accordance with any consent conditions to that effect, and officialised by a legal representative. A draft example of the details of the covenant is provided in **Appendix F**. As identified in Part 1 of the 88B Instrument as: "Restriction on the use of land" the following measures to be enforced:

- No development shall be permitted on the lots hereby burdened within the restricted development area, shown as Management Zone 1 and 2 in Figures 1-5 in **Appendix A** to this letter, and on the adopted plan complying with the requirements of Northern Beaches Council;

Identified in Part 1 of the 88B Instrument as: "Positive covenant", the following measures will be enforced:

- The registered proprietor of the lots hereby burdened must comply with the vegetation management plan prepared by Cumberland Ecology (2016) relating to the restricted development area shown as Management Zone 1 and 2 in Figures 1-5 in **Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council, throughout the occupation and use of the development complying with the requirements of Northern Beaches Council; and
- The registered proprietor of the lots hereby burdened will maintain at the sole expense of the registered proprietor the whole of the asset protection zone delineated as Management Zone 3 in Figures 1-5 in **Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council, including, but not limited to, the removal of vegetation in accordance with fuel load requirements and restricting the placement of combustible materials, with the vegetation management plan prepared by Cumberland Ecology (2016) and complying with the requirements of Northern Beaches Council and the NSW Rural Fire Service relevant and applicable at the time.

For provision of an APZ for Lot 1a, an area on the eastern edge of Lot 22 in DP 1036400, as shown in **Figures 1 and 2 in Appendix A** to this letter, and on the adopted plan complying with the requirements of Northern Beaches Council, will be burdened with a S88B Covenant. The Section 88B Covenant will be finalised on approval of the subdivision by Council, in accordance with any consent conditions to that effect, and officialised by a legal representative. A draft example of the details of the covenant is provided in **Appendix F**.

Identified in Part 1 of the 88B Instrument as: "Positive covenant", the following measures will be enforced:

- Right of access is granted over Lot 22 DP 1036400, within the area burdened by the Section 88B Covenant and shown in **Figures 1 and 2 in Appendix A**, to the registered proprietor of Lot 1a; and
- The registered proprietor of Lot 1a hereby burdened will maintain at the sole expense of the registered proprietor the whole of the asset protection zone within Lot 22 DP 1036400 delineated as part of Management Zone 3 in **Figures 1 and 2 in Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council, including, but not limited to, the removal of vegetation in accordance with fuel load requirements and restricting the placement of combustible materials, with the vegetation management plan prepared by Cumberland Ecology (2016) and complying with the requirements of Northern Beaches Council and the NSW Rural Fire Service relevant and applicable at the time.

4. *The building envelopes are to be set and not be 'indicative';*

The building envelopes provided represent the maximum footprint, which will be within the area indicated in the Statement of Environmental Effects (SEE) and assessed as part of the SIS. No additional structures will be permitted outside of this footprint. However, detailed design for each individual dwelling will vary due to the slope constraints, and individual preference, subject to approval of a future DA. It is anticipated that design will include pole housing, which is common in the area due to the slope, and to retain the natural bush-rock, which is a desirable feature of the landscape.

5. *The VMP refers to a review being carried out and decisions made on future management based on those reviews however it does not state who would be responsible for carrying out such a task; such information therefore needs to be indicated.*

A review of each VMP Sub-plan, and the implementation of the master VMP, will be carried out by an appropriately qualified ecologist or bush-regeneration contractor, appointed by the landowner of each lot. A summary of the works conducted during the management period will be presented as part of the review, and any amendments to the VMP will be outlined. This brief report will be made available to Council at years 3, 5 and 10 of the program.

The VMP Sub-plans for each lot are included in the following Appendices:

- Appendix A – Figures
- Appendix B - Lot 1a VMP Sub-plan;
- Appendix C – Lot 1b VMP Sub-plan;
- Appendix D – Lot 1c VMP Sub-plan; and
- Appendix E – Lot 1d VMP Sub-plan

Yours sincerely



Vanessa Orsborn
Project Manager / Ecologist
vanessa.orsborn@cumberlandecology.com.au

Appendix A

Figures



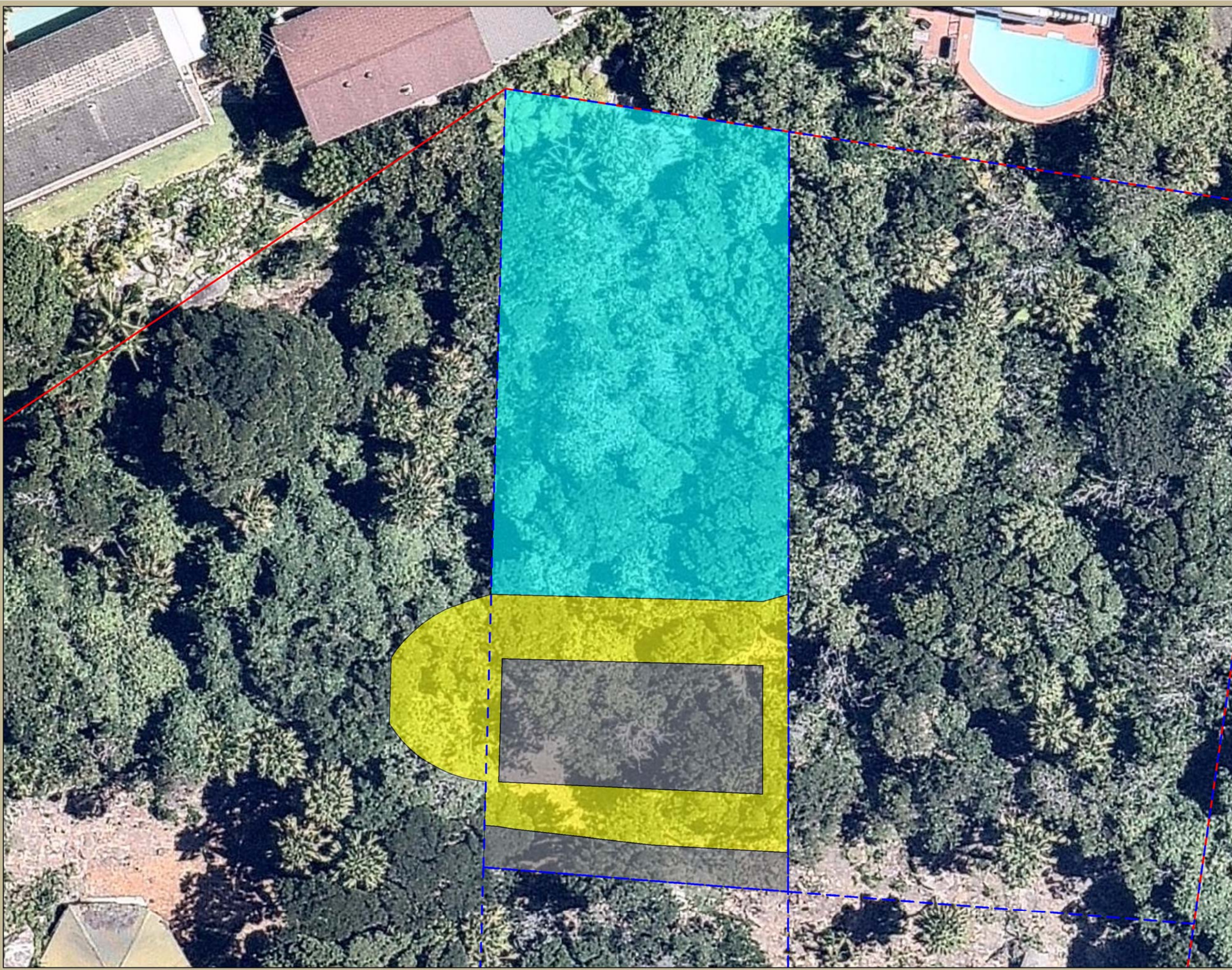
- Legend**
- Subject Site
 - Proposed Lot Boundary
 - Existing Lot Boundary

Image Source:
Image © Nearmap
(dated 30-12-2014)



Figure 1. Location of the Subject Site





- Legend**
- Subject Site
 - Lot Boundary
 - Development Area
- Management Zones**
- Management Zone 1
 - Management Zone 3

Image Source:
NearMap
(dated 30-12-2014)



Figure 2. Lot 1a Management Zones





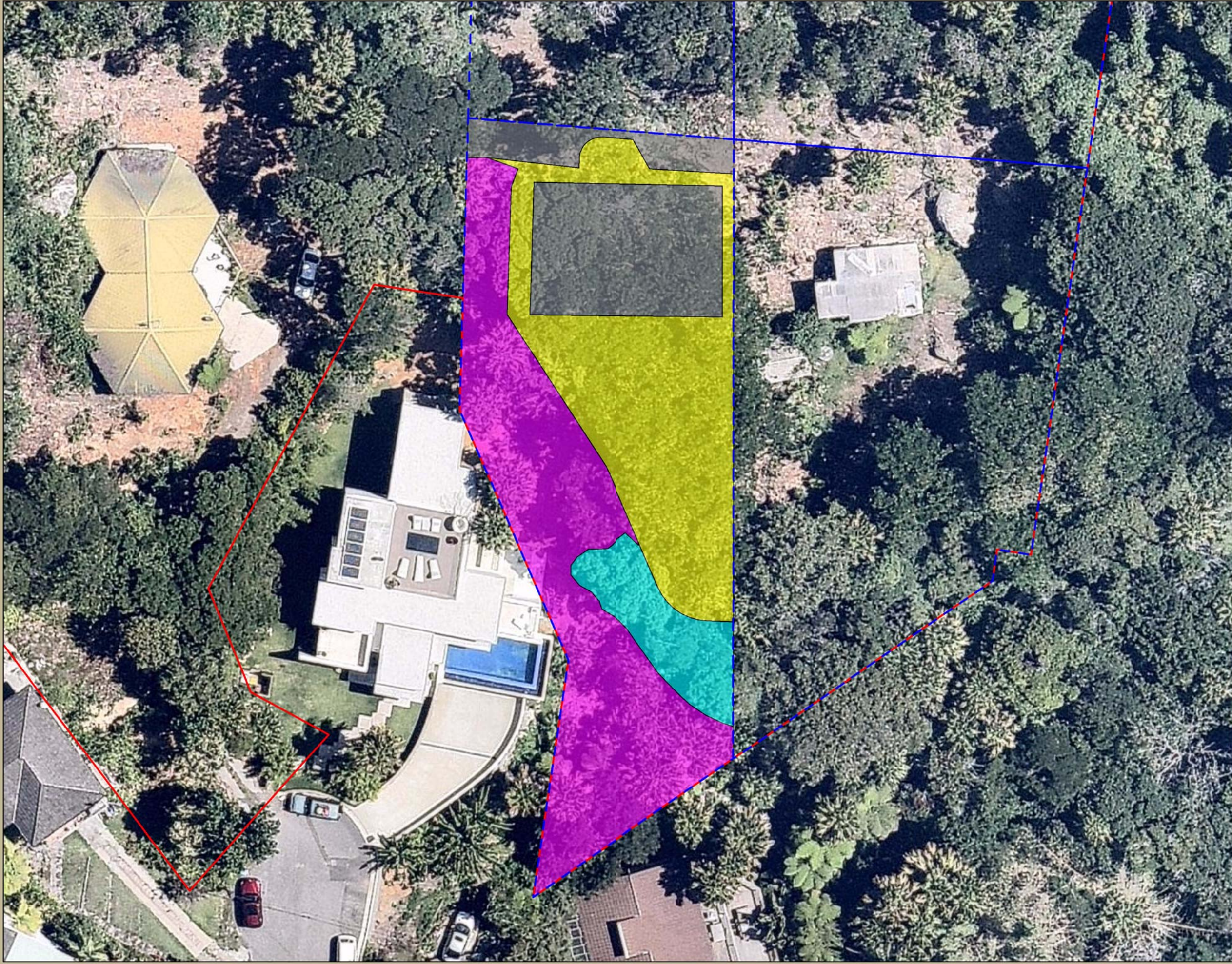
- Legend**
- Subject Site
 - Lot Boundary
 - Development Area
- Management Zones**
- Management Zone 1
 - Management Zone 3

Image Source:
NearMap
(dated 30-12-2014)



Figure 3. Lot 1b Management Zones





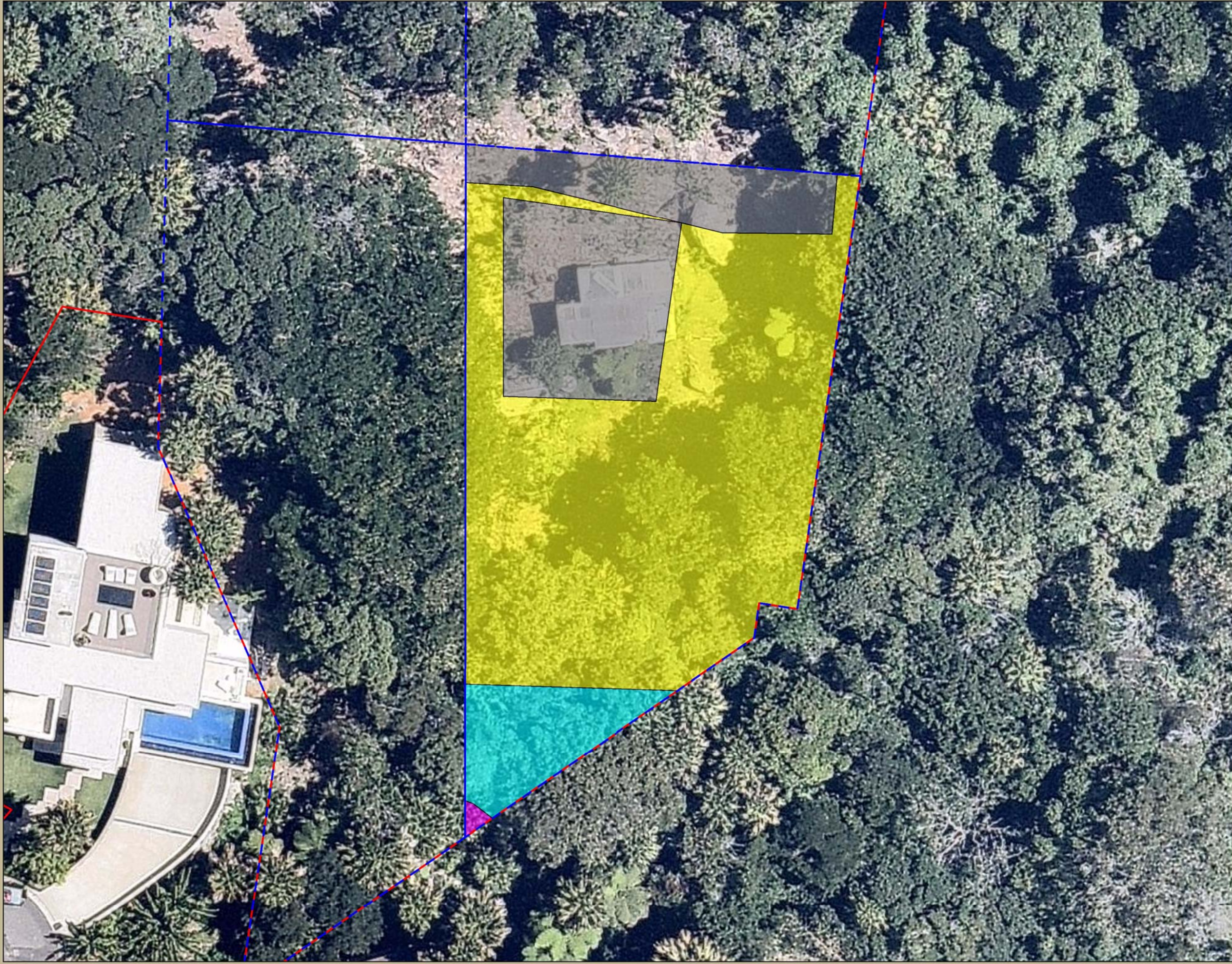
- Legend**
- Subject Site
 - Lot Boundary
 - Development Area
- Management Zones**
- Management Zone 1
 - Management Zone 2
 - Management Zone 3

Image Source:
NearMap
(dated 30-12-2014)



Figure 4. Lot 1c Management Zones





- Legend**
- Subject Site
 - Lot Boundary
 - Development Area
- Management Zones**
- Management Zone 1
 - Management Zone 2
 - Management Zone 3

Image Source:
NearMap
(dated 30-12-2014)



Figure 5. Lot 1d Management Zones



Appendix B

Lot 1a VMP Sub-plan

B.1 Introduction

Cumberland Ecology was commissioned by Martens & Associates Pty Ltd on behalf of Cariste Pty Ltd, to prepare a Vegetation Management Plan (VMP) to support a Development Application for the proposed 4 lot subdivision of Lot 1 DP 408800, also known as 62 Hillside Road, Newport, in the Pittwater Local Government Area (LGA), as shown in **Figure 1.1** of the VMP (Cumberland Ecology, 2016).

The VMP (Cumberland Ecology, 2016) is considered the 'master' document, and should be read in conjunction with this VMP sub-plan for proposed Lot 1a. The master VMP outlines the details of the works in each zone and that these sub-plans only outline the relevant management for each Lot. The duration of the VMP is 5 years, and a detailed schedule of works is contained in Appendix A of the VMP (Cumberland Ecology, 2016). Proposed Lot 1a is located in the north western portion of the subject site, and includes an area of Asset Protection Zone (APZ) that extends to the adjoining Lot 22 DP1036400. The APZ and all retained vegetation within a 'conservation area' will be burdened with a Section 88B covenant.

The subject site contains Littoral Rainforest, which is listed as an Endangered Ecological Community (EEC) under the New South Wales *Threatened Species Conservation Act 1995* (TSC Act). Parts of the community also comply with the listing for Littoral Rainforest and Coastal Vine Thickets of Eastern Australia Critically Endangered Ecological Community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The purpose of this VMP sub-plan is to guide the management and restoration of Littoral Rainforest that will be retained outside of the development footprint, and conserved within the area affected by an 88B Covenant.

B.2 Site Description

Lot 1a consists mostly of a southern facing, forested slope, as shown in **Figure 1** in **Appendix A**). A drainage line runs through the south west of the lot in a south-easterly direction. Lot 1a is surrounded by residential properties to the west and north. Some of the adjoining properties to the north appear to have encroached at the boundary, potentially through clearing beyond their boundaries, lack of noxious weed control, and/or the release of uncontrolled stormwater. To the east of Lot 1a is the proposed residential Lot 1b and to the south in proposed lot 1c, also containing remnant and revegetated native communities.

B.3 Duration of the VMP

The management period of the VMP Sub-plan is five years. After this time progress made on site should be reviewed against the management objectives of the VMP to determine the future management of the site. The review must be completed by a qualified bush regeneration contractor or ecologist and submitted to Pittwater Council.

B.4 Responsibilities

The majority of works to be undertaken under this VMP Sub-plan will be undertaken by a qualified bushland regeneration contractor, as specified in the master VMP (Cumberland Ecology 2016).

B.5 Management Zones

Management zones contained within Lot 1a are shown in **Figure 2** in **Appendix A** to this letter. Each zone is briefly described below, and details of the actions required in each management zone are prescribed in the master VMP for the subject site (Cumberland Ecology, 2016).

B.5.1 Management Zone 1 – Intact Littoral Rainforest

Vegetation in this area has a diverse array of native species present in all vegetation strata. Management within this area will require weed and erosion control only, and regeneration of native species will be through control of weeds preventing natural regeneration through competition for resources (light, water, nutrients space).

There is one small area in the north west of this zone that has experienced urban encroachment for the upslope adjoining landowner. This small patch of exotic vegetation should be removed, using natural bush-regeneration techniques, and is expected to regenerate as Littoral Rainforest. If natural regeneration processes have not been initiated by the end on the implementation stage, planting of native canopy and understorey species will be required.

B.5.2 Management Zone 3 – Asset Protection Zones and Development Set-backs

Management within APZs and development set-back areas will involve weed control and erosion control. Vegetation management must aim to reduce the spread of bush fire and should include the following:

- Retention of rainforest canopy of trees, including Cabbage Tree Palms, as they do not contribute to fire behaviour when under fuels are well managed. Planting density of 1 unit/20m² in open areas;
- Shrubs sparsely separated into clumps. Planting density of 1 unit/10m² for shrubs and 4 units/2m² for groundcovers, with spacing's of at least 5m between clumps.
- Low groundcover species managed by raking to remove excess plant matter;
- Excessive fuel loads on the ground surface (above 10-12mm for the soil) raked and removed from the site; and
- Trees and other vegetation in the vicinity of power lines and tower lines should be managed and trimmed in accordance with the specifications in "Vegetation Safety Clearances" issued by Energy Australia (2002).

Appendix A5.5 of Planning for Bushfire Protection 2006 outlines the following property maintenance items to be undertaken in advance of the bush fire season:

- Removal of material such as litter from the roof and gutters;
- Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps;
- Check water supplies are available and in working order;
- Check tiles and roof lines for broken tiles or dislodged roofing materials;
- Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;
- Hoses and hose reels are not perished and fittings are tight and in good order;
- Doors are fitted with draught seals and well maintained;
- External mats are of non-combustible material; and
- Combustible materials are located well away from the dwelling.

B.6 Monitoring and Reporting

A qualified bushland management or ecological consultant will carry out a program of regular monitoring of the implementation of the VMP in relation to the works schedule (see **Appendix A** of the master VMP). The monitoring program will be carried out for the duration of the VMP and a monitoring survey will be completed every six months for five year management period of the VMP. Annual reports will be prepared and submitted to Pittwater Council.

Appendix C

Lot 1b VMP Sub-plan

C.1 Introduction

Cumberland Ecology was commissioned by Martens & Associates Pty Ltd on behalf of Cariste Pty Ltd, to prepare a Vegetation Management Plan (VMP) to support a Development Application for the proposed 4 lot subdivision of Lot 1 DP 408800, also known as 62 Hillside Road, Newport, in the Pittwater Local Government Area (LGA), as shown in **Figure 1.1** of the VMP (Cumberland Ecology, 2016).

The VMP (Cumberland Ecology, 2016) is considered the 'master' document, and should be read in conjunction with this VMP sub-plan for proposed Lot 1b. The master VMP outlines the details of the works in each zone and that these sub-plans only outline the relevant management for each Lot. The duration of the VMP is 5 years, and a detailed schedule of works is contained in Appendix A of the VMP (Cumberland Ecology, 2016).

Proposed Lot 1b is located in the north eastern portion of the subject site, and adjoins the boundary of Attunga Reserve to the east. The development will include a single dwelling and driveway, ancillary works, and establishment of an Asset Protection Zone (APZ) and 'conservation area' across the balance of the vegetated site. The APZ and all retained native vegetation will be burdened with a Section 88B covenant.

The subject site contains Littoral Rainforest, which is listed as an Endangered Ecological Community (EEC) under the New South Wales *Threatened Species Conservation Act 1995* (TSC Act). Parts of the community also comply with the listing for Littoral Rainforest and Coastal Vine Thickets of Eastern Australia Critically Endangered Ecological Community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The purpose of this VMP sub-plan is to guide the management and restoration of Littoral Rainforest that will be retained outside of the development footprint, and conserved within the area affected by an 88B Covenant.

C.2 Site Description

Lot 1b consists mostly of a southern facing, forested slope, as shown in **Figure 1** in **Appendix A**). Lot 1b is surrounded by residential properties to the north. Some of the adjoining properties to the north appear to have encroached at the boundary, potentially through clearing beyond their boundaries, lack of noxious weed control, and/or the release of uncontrolled stormwater. To the east is Attunga Reserve, to the west is the proposed residential Lot 1a, and to the south is proposed lot 1d, also containing remnant and revegetated native communities.

C.3 Duration of the VMP

The management period of the VMP Sub-plan is five years. After this time progress made on site should be reviewed against the management objectives of the VMP to determine the future management of the site. The review must be completed by a qualified bush regeneration contractor or ecologist and submitted to Pittwater Council.

C.4 Responsibilities

The majority of works to be undertaken under this VMP Sub-plan will be undertaken by a qualified bushland regeneration contractor, as specified in the master VMP (Cumberland Ecology 2016).

C.5 Management Zones

Management zones contained within Lot 1b are shown in **Figure 3** in **Appendix A** to this letter. Each zone is briefly described below, and details of the actions required in each management zone are prescribed in the master VMP for the subject site (Cumberland Ecology, 2016).

C.5.1 Management Zone 1 – Intact Littoral Rainforest

Vegetation in this area has a diverse array of native species present in all vegetation strata. Management within this area will require weed and erosion control only, and regeneration of native species will be through control of weeds preventing natural regeneration through competition for resources (light, water, nutrients space).

There is one small area in the north of this zone that has experienced urban encroachment for the upslope adjoining landowner. This small patch of exotic vegetation should be removed, using natural bush-regeneration techniques, and is expected to regenerate as Littoral Rainforest. If natural regeneration processes have not been initiated by the end on the implementation stage, planting of native canopy and understorey species will be required.

C.5.2 Management Zone 3 – Asset Protection Zones and Development Set-backs

Management within APZs and development set-back areas will involve weed control and erosion control. Vegetation management must aim to reduce the spread of bush fire and should include the following:

- Retention of rainforest canopy of trees, including Cabbage Tree Palms, as they do not contribute to fire behaviour when under fuels are well managed. Planting density of 1 unit/20m² in open areas;
- Shrubs sparsely separated into clumps. Planting density of 1 unit/10m² for shrubs and 4 units/2m² for groundcovers, with spacing's of at least 5m between clumps.
- Low groundcover species managed by raking to remove excess plant matter;
- Excessive fuel loads on the ground surface (above 10-12mm for the soil) raked and removed from the site; and
- Trees and other vegetation in the vicinity of power lines and tower lines should be managed and trimmed in accordance with the specifications in "Vegetation Safety Clearances" issued by Energy Australia (2002).

Appendix A5.5 of Planning for Bushfire Protection 2006 outlines the following property maintenance items to be undertaken in advance of the bush fire season:

- Removal of material such as litter from the roof and gutters;
- Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps;
- Check water supplies are available and in working order;
- Check tiles and roof lines for broken tiles or dislodged roofing materials;
- Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;
- Hoses and hose reels are not perished and fittings are tight and in good order;
- Doors are fitted with draught seals and well maintained;
- External mats are of non-combustible material; and
- Combustible materials are located well away from the dwelling.

C.6 Monitoring and Reporting

A qualified bushland management or ecological consultant will carry out a program of regular monitoring of the implementation of the VMP in relation to the works schedule (see **Appendix A** of the master VMP). The monitoring program will be carried out for the duration of the VMP and a monitoring survey will be completed every six months for five year management period of the VMP. Annual reports will be prepared and submitted to Pittwater Council.

Appendix D

Lot 1c VMP Sub-plan

D.1 Introduction

Cumberland Ecology was commissioned by Martens & Associates Pty Ltd on behalf of Cariste Pty Ltd, to prepare a Vegetation Management Plan (VMP) to support a Development Application for the proposed 4 lot subdivision of Lot 1 DP 408800, also known as 62 Hillside Road, Newport, in the Pittwater Local Government Area (LGA), as shown in **Figure 1.1** of the VMP (Cumberland Ecology, 2016).

The VMP (Cumberland Ecology, 2016) is considered the 'master' document, and should be read in conjunction with this VMP sub-plan for proposed Lot 1c. The master VMP outlines the details of the works in each zone and that these sub-plans only outline the relevant management for each Lot. The duration of the VMP is 5 years, and a detailed schedule of works is contained in Appendix A of the VMP (Cumberland Ecology, 2016).

Proposed Lot 1c is located in the south western portion of the subject site. The development will include a single dwelling and driveway, ancillary works, and establishment of an Asset Protection Zone (APZ) and 'conservation area' across the balance of the vegetated site. The APZ and all retained native vegetation will be burdened with a Section 88B covenant.

The subject site contains Littoral Rainforest, which is listed as an Endangered Ecological Community (EEC) under the New South Wales *Threatened Species Conservation Act 1995* (TSC Act). Parts of the community also comply with the listing for Littoral Rainforest and Coastal Vine Thickets of Eastern Australia Critically Endangered Ecological Community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The purpose of this VMP sub-plan is to guide the management and restoration of Littoral Rainforest that will be retained outside of the development footprint, and conserved within the area affected by an 88B Covenant.

D.2 Site Description

Lot 1c consists mostly of a southern facing, forested slope, as shown in **Figure 1** in **Appendix A**). An existing derelict shed is present in the north of the site, which will be demolished as part of the future development. A drainage line runs through the south west of the lot in a southeasterly direction. Lot 1c is surrounded by residential properties to the west and proposed lot 1a to the north and proposed lot 1d to the east. To the south is Attunga Reserve containing native communities.

D.3 Duration of the VMP

The management period of the VMP Sub-plan is five years. After this time progress made on site should be reviewed against the management objectives of the VMP to determine the future management of the site. The review must be completed by a qualified bush regeneration contractor or ecologist and submitted to Pittwater Council.

D.4 Responsibilities

The majority of works to be undertaken under this VMP Sub-plan will be undertaken by a qualified bushland regeneration contractor, as specified in the master VMP (Cumberland Ecology 2016).

D.5 Management Zones

Management zones contained within Lot 1c are shown in **Figure 4** in **Appendix A** to this letter. Each zone is briefly described below, and details of the actions required in each management zone are prescribed in the master VMP for the subject site (Cumberland Ecology, 2016).

D.5.1 Management Zone 1 – Intact Littoral Rainforest

Vegetation in this area has a diverse array of native species present in all vegetation strata. Management within this area will require weed and erosion control only, and regeneration of native species will be through control of weeds preventing natural regeneration through competition for resources (light, water, nutrients space).

This zone is fairly restricted on Lot 1c, due to the extent of exotic vegetation present in relation to the existing derelict shed (which is to be demolished as part of the development of Lot 1c), located on the upper slope. It is expected that weed control will be required in this zone, using natural bush-regeneration techniques, and is expected to regenerate as Littoral Rainforest. If natural regeneration processes have not been initiated by the end on the implementation stage, planting of native canopy and understorey species will be required.

D.5.2 Management Zone 2 – Degraded Littoral Rainforest

The majority of this zone within Lot 1c is associated with the existing drainage line, which will be slightly modified as part of the proposed development, to ensure that the expected stormwater velocity can be managed, and erosion avoided. This zone will form a riparian zone, although the vegetation type will remain as Littoral Rainforest, as with the adjoining areas.

Vegetation within this area will require weed and erosion control, and some areas may require planting to fill gaps in native vegetation strata. Initially, within six months of control of major weed infestations, erosion and weed control should be undertaken and planting used only if adequate native plant coverage and diversity are not observed regenerating from the soil seed bank.

Key weed species in this zone include; *Erythrina x sykesii* (Coral Tree), *Asparagus aethiopicus* (Sprenger's Asparagus), *Tradescantia fluminensis* (Wandering Jew), *Araujia sericifera* (Moth Vine), *Ipomoea indica* and *Ipomoea purpurea* (Blue Morning Glory and Common Morning Glory), *Cinnamomum camphora* (Camphor Laurel), *Ligustrum sinense* and *Ligustrum lucidum* (Small-leaved Privet and Broad-leaf Privet) and *Lantana camara* (Lantana).

Control methods for these weed species, and others present in Lot 1c, are described in detail in the master VMP (Cumberland Ecology, 2016).

D.5.3 Management Zone 3 – Asset Protection Zones and Development Set-backs

Management within APZs and development set-back areas will involve weed control and erosion control. Vegetation management must aim to reduce the spread of bush fire and should include the following:

- Retention of rainforest canopy of trees, including Cabbage Tree Palms, as they do not contribute to fire behaviour when under fuels are well managed. Planting density of 1 unit/20m² in open areas;
- Shrubs sparsely separated into clumps. Planting density of 1 unit/10m² for shrubs and 4 units/2m² for groundcovers, with spacing's of at least 5m between clumps.
- Low groundcover species managed by raking to remove excess plant matter;
- Excessive fuel loads on the ground surface (above 10-12mm for the soil) raked and removed from the site; and
- Trees and other vegetation in the vicinity of power lines and tower lines should be managed and trimmed in accordance with the specifications in "Vegetation Safety Clearances" issued by Energy Australia (2002).

Appendix A5.5 of Planning for Bushfire Protection 2006 outlines the following property maintenance items to be undertaken in advance of the bush fire season:

- Removal of material such as litter from the roof and gutters;
- Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps;
- Check water supplies are available and in working order;
- Check tiles and roof lines for broken tiles or dislodged roofing materials;
- Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;
- Hoses and hose reels are not perished and fittings are tight and in good order;
- Doors are fitted with draught seals and well maintained;
- External mats are of non-combustible material; and
- Combustible materials are located well away from the dwelling.

D.6 Monitoring and Reporting

A qualified bushland management or ecological consultant will carry out a program of regular monitoring of the implementation of the VMP in relation to the works schedule (see **Appendix A** of the master VMP). The monitoring program will be carried out for the duration of the VMP and a monitoring survey will be completed every six months for five year management period of the VMP. Annual reports will be prepared and submitted to Pittwater Council.

Appendix E

Lot 1d VMP Sub-plan

E.1 Introduction

Cumberland Ecology was commissioned by Martens & Associates Pty Ltd on behalf of Cariste Pty Ltd, to prepare a Vegetation Management Plan (VMP) to support a Development Application for the proposed 4 lot subdivision of Lot 1 DP 408800, also known as 62 Hillside Road, Newport, in the Pittwater Local Government Area (LGA), as shown in **Figure 1.1** of the VMP (Cumberland Ecology, 2016).

The VMP (Cumberland Ecology, 2016) is considered the 'master' document, and should be read in conjunction with this VMP sub-plan for proposed Lot 1d. The master VMP outlines the details of the works in each zone and that these sub-plans only outline the relevant management for each Lot. The duration of the VMP is 5 years, and a detailed schedule of works is contained in Appendix A of the VMP (Cumberland Ecology, 2016).

Proposed Lot 1d is located in the south eastern portion of the subject site. The development will include a single dwelling and driveway, ancillary works, and establishment of an Asset Protection Zone (APZ) and 'conservation area' across the balance of the vegetated site. The APZ and all retained native vegetation will be burdened with a Section 88B covenant.

The subject site contains Littoral Rainforest, which is listed as an Endangered Ecological Community (EEC) under the New South Wales *Threatened Species Conservation Act 1995* (TSC Act). Parts of the community also comply with the listing for Littoral Rainforest and Coastal Vine Thickets of Eastern Australia Critically Endangered Ecological Community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The purpose of this VMP sub-plan is to guide the management and restoration of Littoral Rainforest that will be retained outside of the development footprint, and conserved within the area affected by an 88B Covenant.

E.2 Site Description

Lot 1d consists mostly of a southern facing, forested slope, as shown in **Figure 1** in **Appendix A**, with an existing derelict dwelling in the north of the site. Lot 1d is surrounded by proposed lot 1c to the west, proposed lot 1b to the north and Attunga Reserve to the east and south, all of which contain remnant native vegetation.

E.3 Duration of the VMP

The management period of the VMP Sub-plan is five years. After this time progress made on site should be reviewed against the management objectives of the VMP to determine the future management of the site. The review must be completed but a qualified bush regeneration contractor or ecologist and submitted to Pittwater Council.

E.4 Responsibilities

The majority of works to be undertaken under this VMP Sub-plan will be undertaken by a qualified bushland regeneration contractor, as specified in the master VMP (Cumberland Ecology 2016).

E.5 Management Zones

Management zones contained within Lot 1d are shown in **Figure 5** in **Appendix A** to this letter. Each zone is briefly described below, and details of the actions required in each management zone are prescribed in the master VMP for the subject site (Cumberland Ecology, 2016).

E.5.1 Management Zone 1 – Intact Littoral Rainforest

Vegetation in this area has a diverse array of native species present in all vegetation strata. Management within this area will require weed and erosion control only, and regeneration of native species will be through control of weeds preventing natural regeneration through competition for resources (light, water, nutrients space).

This zone is fairly restricted on Lot 1d, due to the extent of exotic vegetation present in relation to the existing derelict dwelling (which is to be demolished as part of the development), located on the upper slope. It is expected that weed control will be required in this zone, using natural bush-regeneration techniques, and is expected to regenerate as Littoral Rainforest. If natural regeneration processes have not been initiated by the end on the implementation stage, planting of native canopy and understorey species will be required.

E.5.2 Management Zone 2 – Degraded Littoral Rainforest

The majority of this zone within Lot 1d is associated with the exotic dominated garden area surrounding the existing dwelling. Vegetation within this area will require weed and erosion control, and some areas may require planting to fill gaps in native vegetation strata. Initially, within six months of control of major weed infestations, erosion and weed control should be undertaken and planting used only if adequate native plant coverage and diversity are not observed regenerating from the soil seed bank.

Key weed species in this zone include; *Erythrina x sykesii* (Coral Tree), *Asparagus aethiopicus* (Sprenger's Asparagus), *Cestrum parqui* (Green Cestrum), *Senna pendula var. glabrata* (Senna), *Tradescantia fluminensis* (Wandering Jew), *Olea europaea subsp. cuspidata* (African Olive), *Ochna serrulata* (Mickey Mouse Bush), *Cinnamomum camphora* (Camphor Laurel), *Ligustrum sinense* and *Ligustrum lucidum* (Small-leaved Privet and Broad-leaf Privet) and *Lantana camara* (Lantana).

Control methods for these weed species, and others present in Lot 1d, are described in detail in the master VMP (Cumberland Ecology, 2016).

E.5.3 Management Zone 3 – Asset Protection Zones and Development Set-backs

Management within APZs and development set-back areas will involve weed control and erosion control. Vegetation management must aim to reduce the spread of bush fire and should include the following:

- Retention of rainforest canopy of trees, including Cabbage Tree Palms, as they do not contribute to fire behaviour when under fuels are well managed. Planting density of 1 unit/20m² in open areas;
- Shrubs sparsely separated into clumps. Planting density of 1 unit/10m² for shrubs and 4 units/2m² for groundcovers, with spacing's of at least 5m between clumps.
- Low groundcover species managed by raking to remove excess plant matter;
- Excessive fuel loads on the ground surface (above 10-12mm for the soil) raked and removed from the site; and
- Trees and other vegetation in the vicinity of power lines and tower lines should be managed and trimmed in accordance with the specifications in "Vegetation Safety Clearances" issued by Energy Australia (2002).

Appendix A5.5 of Planning for Bushfire Protection 2006 outlines the following property maintenance items to be undertaken in advance of the bush fire season:

- Removal of material such as litter from the roof and gutters;
- Ensure painted surfaces are in good condition with decaying timbers being given particular attention to prevent the lodging of embers within gaps;
- Check water supplies are available and in working order;
- Check tiles and roof lines for broken tiles or dislodged roofing materials;
- Screens on windows and doors are in good condition without breaks or holes in flyscreen material and frames are well fitting into sills and window frames;
- Hoses and hose reels are not perished and fittings are tight and in good order;
- Doors are fitted with draught seals and well maintained;
- External mats are of non-combustible material; and
- Combustible materials are located well away from the dwelling.

E.6 Monitoring and Reporting

A qualified bushland management or ecological consultant will carry out a program of regular monitoring of the implementation of the VMP in relation to the works schedule (see **Appendix A** of the master VMP). The monitoring program will be carried out for the duration of the VMP and a monitoring survey will be completed every six months for five year management period of the VMP. Annual reports will be prepared and submitted to Pittwater Council.

Appendix F

Draft Example for Annexure for S88B
Positive Covenants

DRAFT EXAMPLE OF ANNEXURE FOR POSITIVE COVENANT FOR A RESTRICTED DEVELOPMENT AREA

This is **Annexure A** to the Positive Covenant under section 88B of the *Conveyancing Act 1919*

Dated the Of 20..

Land being Lot 1(..) in DP.....

Terms of Positive Covenant

The Registered Proprietor will at his own expense well and sufficiently maintain the lot burdened to comply with the vegetation management plan prepared by Cumberland Ecology (2016) relating to the restricted development area shown as Management Zone 1 and 2 in Figures 1-5 in **Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council.

Where the Registered Proprietor of the burdened lot fails to maintain the burdened lot in accordance with the approved Vegetation Management Plan prepared by Cumberland Ecology (2016) and fails to comply with any written request of the Northern Beaches Council within such reasonable time as nominated in said request, the Registered Proprietor shall meet any reasonable costs incurred by the Northern Beaches Council in carrying out works necessary to reinstate satisfactory performance criteria.

The term "Registered Proprietor" shall include the Registered Proprietor of the land from time to time, and all his heirs, executors, assigns and successors in title to the land and where there are two or more registered proprietors of the land the terms of this covenant shall bind all those registered proprietors jointly and severally.

Name of the body empowered to release, vary or modify the terms of positive covenant referred to, Northern Beaches Council.

Execution by the prescribed authority

.....

Signature of witness

.....

Signature of Authorised Officer

Execution by the proprietor

.....

Signature of witness

.....

Signature of proprietor

Consent of the lessee/mortgagee/chargee

.....

Signature of witness

.....

Signature of mortgagee

DRAFT EXAMPLE OF ANNEXURE FOR POSITIVE COVENANT FOR AN ASSET PROTECTION ZONE

This is **Annexure A** to the Positive Covenant under section 88B of the *Conveyancing Act 1919*

Dated the Of 20..

Land being Lot 1(..) in DP.....

Terms of Positive Covenant

The Registered Proprietor will at his own expense well and sufficiently maintain the lot burdened to comply with the Asset Protection Zone delineated as Management Zone 3 in Figures 1-5 in **Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council, and complying with the requirements of Northern Beaches Council and the NSW Rural Fire Service relevant and applicable at the time.

Where the Registered Proprietor of the burdened lot fails to maintain the burdened lot in accordance with the specifications for an APZ, as per the approved Vegetation Management Plan prepared by Cumberland Ecology (2016), and fails to comply with any written request of the Northern Beaches Council within such reasonable time as nominated in said request, the Registered Proprietor shall meet any reasonable costs incurred by the Northern Beaches Council in carrying out works necessary to reinstate satisfactory performance criteria.

The term "Registered Proprietor" shall include the Registered Proprietor of the land from time to time, and all his heirs, executors, assigns and successors in title to the land and where there are two or more registered proprietors of the land the terms of this covenant shall bind all those registered proprietors jointly and severally.

Name of the body empowered to release, vary or modify the terms of positive covenant referred to, Northern Beaches Council.

Execution by the prescribed authority

.....

Signature of witness

.....

Signature of Authorised Officer

Execution by the proprietor

.....

Signature of witness

.....

Signature of proprietor

Consent of the lessee/mortgagee/chargee

.....

Signature of witness

.....

Signature of mortgagee

DRAFT EXAMPLE OF ANNEXURE FOR POSITIVE COVENANT FOR AN ASSET PROTECTION ZONE

This is **Annexure A** to the Positive Covenant under section 88B of the *Conveyancing Act 1919*

Dated the Of 20..

Land being Part Lot 22 in DP 408800

Terms of Positive Covenant

The Registered Proprietor will allow access to the portion of the lot burdened to the Registered Proprietor of Lot 1a. The Registered Proprietor of Lot 1a will at his own expense well and sufficiently maintain the portion of the Lot burdened, to comply with the Asset Protection Zone delineated as Management Zone 3 in **Figures 1 and 2 in Appendix A**, and on the adopted plan complying with the requirements of Northern Beaches Council, and complying with the requirements of Northern Beaches Council and the NSW Rural Fire Service.

Where the Registered Proprietor of Lot 1a fails to maintain the burdened part lot in accordance with the specifications for an APZ, as per the approved Vegetation Management Plan prepared by Cumberland Ecology (2016), and fails to comply with any written request of the Northern Beaches Council within such reasonable time as nominated in said request, the Registered Proprietor shall meet any reasonable costs incurred by the Northern Beaches Council in carrying out works necessary to reinstate satisfactory performance criteria.

The term "Registered Proprietor" shall include the Registered Proprietor of the land from time to time, and all his heirs, executors, assigns and successors in title to the land and where there are two or more registered proprietors of the land the terms of this covenant shall bind all those registered proprietors jointly and severally.

Name of the body empowered to release, vary or modify the terms of positive covenant referred to, Northern Beaches Council.

Execution by the prescribed authority

.....

Signature of witness

.....

Signature of Authorised Officer

Execution by the proprietor

.....

Signature of witness

.....

Signature of proprietor

Consent of the lessee/mortgagee/chargee

.....

Signature of witness

.....

Signature of mortgagee