

Revised Vegetation Management Plan

For Major Project No. 05-0198 (as modified)
Approval Condition B23
Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928
& Lot 5 DP 1117326
Walmsley's Road and Stott Street, Bilambil Heights



Final Report

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1. Introduction

This Revised Vegetation Management Plan (VMP) has been prepared for the landowners for the proposed subdivision of Major Project No. 05_0198 (dated 2nd August 2012) (as modified) for the proposed subdivision at Lot 1 DP 167380, Lot 2 DP 961928, Lot 1 DP 134787 and Lot 5 DP 1117326, Walmsley's Road, Bilambil Heights (Figure 1) for the purposes of complying with:

- The NSW Government approval of Major Project No. 05_0198 (dated 2nd August 2012) as modified (MODs 1 to 4, 6 and 7);
- Rural Fire Service and Office of Environment and Heritage comments;
- The proposed Modification 4 for the major development currently with DPIE; and
- Feedback from, and outcomes of, consultation with Tweed Shire Council and the project's BPAD certifier, in relation to the initial Asset Protection Zone Management Plan submitted, as related to the VMP.

The proposed project (MP No. 08_0194 as modified) includes subdivision to provide:

- 77 Torrens title residential lots;
- A 6 lot Community Title scheme (5 residential and 1 neighbourhood property);
- An open space lot for public reserve lot;
- Sewage pumping station lot;
- An asset protection zone and environmental management area (APZ-EMA);
- Associated roads, stormwater and utility infrastructure; and
- Areas for habitat rehabilitation and restoration.

Background:

- On 2 August 2012, the Planning and Assessment Commission (PAC) issued Major Project Approval No. 05_0198 for an 84 lot subdivision of the subject land.
- On 5 June 2017, the Approval was modified (MOD1).
- On 12 October 2017, the Director of Modification Assessments modified the Project Approval (MOD2) by amending Condition A6 to extend the lapse date to 2 August 2018.

- On 6 July 2018, the Approval was modified (MOD3) to extend the lapse date to 2 August 2019.
- On 1 August 2018 Modification Application No. 4 was lodged via the Department's Online Lodgement Portal. MOD4 requests amendment of Conditions B24 and E7 as the conditions could not be complied with in their current form. On 17 August 2018, Tweed Shire Council made a submission in relation to MOD4 relating to ecological and bushfire issues.
- Mod 5 (approved on 14 June 2019) amended condition A2 to enable survey and geotechnical work not requiring tree removal to be carried out without the need for a Tree Removal Plan.

In accordance with Condition A2 (1A)(b)(Mod 5), drilling of geotechnical boreholes on road alignments and survey work that did not require tree removal has been completed. A Compliance Certificate has been obtained from the certifying authority.

1.1. Relevant Conditions of Approval

The primary conditions of MP No. 08_0194 (as modified) to which this VMP relates are Condition A2, B23, and several conditions relating to bushfire protection, and the registration of easements.

Relevant NSW Planning Assessment Commission Conditions of Approval

A2 Staging:

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

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

(a) 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:

(i) submit a Tree Removal Plan for the approval of the Secretary identifying all trees proposed to be removed within Stage 1A; and

- (ii) 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.
 - (b) Surveying of all proposed road alignments including placing pegs, observing levels, preparing spatial data drilling geotechnical bore holes on road alignments. Survey work and investigative geotechnical work that does not require tree removal.
 - (c) The following conditions of approval shall be complied with prior to commencing the preliminary works stage referred to in Condition A2(1A)(a): Conditions C1 to C4, Condition C10, and Conditions C12 to C14.
 - (d) The following conditions of approval shall be complied with prior to commencing the preliminary works stage referred to in Condition A2(1A)(b): Conditions C3 and C4.
-
- (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. 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:

- (iii) 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
 - (iv) 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 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:
 - (v) 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
 - (vi) 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 any part of the development."

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, prior to the issuing of a Construction Certificate for subdivision works.

Response: A Revised Tree Removal Plan (Biolink 2020) has been prepared to comply with this condition. The Tree Removal Plan (TRP) has relevance to this VMP in relation to Approval Condition B10.

B10 Site Regrading

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 m to vegetation management works at the eastern and western boundaries of the site.

Response: The measures to be put in place to address the requirements imposed by this condition are provided in Appendix 1 and the Tree Removal Plan (Biolink 2020). The approved EMA area will now form part of the APZ to achieve the required Planning for Bushfire Protection requirements, and additional habitat rehabilitation and restoration will be undertaken to compensate for any loss of rehabilitation and restoration areas in the approved EMA. Although the approval, required 5 m buffer which will impinge on the EMA in the vicinity of Road No. 4 (due to the requirement for the installation of a retaining wall to ensure all works remain clear of the EMA), this will no longer be an issue due to moving the entire rehabilitation/restoration areas below the EMA.

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 1, that proposes Objectives and Guiding Principles.

Response: This VMP has been prepared with consideration to the Objectives and Guiding Principles in Biolink (2011) and pursuant to Condition B23. There has been a minor deviation from this approval condition to address the Planning for Bushfire Guideline requirements, resulting in all the habitat rehabilitation and restoration areas situated below the APZ-EMA area. The habitat rehabilitation and restoration areas have been increased to compensate for areas in the EMA proposed in Biolink (2011) that are no longer being rehabilitated or restored.

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: Condition B24 1) has been addressed in the Additional Information – Bushfire report (BCA Check 2020). Where the APZ has deviated from or modified the recommendations in Biolink (2011) this is explained in BCA Check (2020). Any deviation and modification has served to improve both the outcomes for managing bushfire risk and for the environment. A proposed modification (MOD 4) is currently with the Department of Planning, Industry and Environment (DoPIE). Any further consideration by RFS will be at the time of assessing future proposed development of each individual Lot.

Approval Conditions B24 2), B24 3), E7, and E8 5) d) are also addressed in the Additional Information – Bushfire report (BCA Check 2020).

D5 Protection of Trees – on-site

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.

Response: The protection of trees to be retained are to be undertaken in accordance with Appendix 1 of this VMP, and with the Australian Standard AS4970-2009 *Protection of Trees on Development Sites*.

- 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: The project manager/landowner will ensure the requirements of this condition are reflected in the S88E Instrument as a Restriction to User. Additional Restrictions to User in relation to the VMP are to be included on the S88B Instrument, and these are detailed in Section 7 of this VMP.

E21 Vegetation Management Maintenance

All works associated with the Vegetation Management Plan (excluding ongoing maintenance) are to be completed to the satisfaction of PCA prior to the release of the Subdivision Certificate for Stages 4, 5, or 6 (whichever comes first). The land subject to the VMP is to be maintained in perpetuity in accordance with the VMP recommendations.

Response: The project manager/landowner will ensure the requirements of this condition are completed. The maintenance in perpetuity of the land subject to this VMP will be reflected in the S88E Instrument, as provided for in Section 7 of this VMP.

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 Management Zones 1 and 2 (Section 4 of this Plan) will be identified and marked once the final subdivision designs are completed and the survey pegs are in the ground delineating the boundaries of these management zones. The procedure for identifying plants and for minimising and avoiding impacts to rainforest plants are provided in Section 4.3.1. Maps showing the approximate locations of the threatened plants species is provided in Appendix 2 of this VMP.

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. Despite detailed searches in and around the locality of the *Niemeyera whitei* specimen recorded in the Biolink (2011) report, it could not be located, and is considered no longer present in this location. The location where this specimen occurred is marked as a virtual plant on Figure 1. A replacement specimen will be planted in this location and related management is further discussed in Sections 3-8.

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-EMA combined asset protection zone is wholly located within the boundaries of the lots within the 2c zoned area. The APZ-EMA area will not include any habitat rehabilitation or restoration. To compensate for this change, additional areas for rehabilitation and restoration have been identified below the APZ-EMA area. This is further addressed in the Additional Information – Bushfire report (BCA Check (2020)).

- *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 the Additional Information – Bushfire report (BCA Check 2020) and Section 7 of this report.

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

Response: Within the Habitat Restoration and Habitat Rehabilitation areas tree removal will be restricted to the removal of camphor laurels and large-leaved privet. Tree removal of the planted windbreak, and for the APZ and sewer lines are addressed in the TRP (Biolink 2020) and identified in Figures 8 and 9.

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

Response: Rear fencing requirements are to be placed on a Section 88B covenant, and are detailed in the Additional Information – Bushfire report (BCA Check 2020) and Section 7 of this report.

1.2. Aims and Objectives

The primary objectives of the VMP as identified by Biolink (2011) are:

- 1) increasing ecological integrity of remnant rainforest areas adjoining the proposed development precinct;
- 2) minimising potential for detrimental influence of abiotic edge effects;
- 3) reducing the influence and dominance of Camphor Laurel;
- 4) enhancing a level of east-west connectivity across the proposed development precinct; and
- 5) increasing community awareness.

Additional primary objectives of this VMP Plan are to provide strategies for:

- 1) achieving a pre-cleared ecological community of Lowland Rainforest in Management Zones 1 and 2;
- 2) compensation for the vegetation, constituting the Endangered Ecological Community *Lowland Rainforest in the North Coast and Sydney Basin Bioregions*, that will be removed as part of the approved development;
- 3) the conservation of native species, including threatened species, existing on the subject site;
- 4) the protection of native vegetation that is to be retained on the subject site;
- 5) the control and eradication of weed species in Management Zones 1, 2, & 3;
- 6) management of the rehabilitation and restoration areas;

- 7) appropriate on site management, maintenance and monitoring of the rehabilitation and restoration areas;
- 8) limiting the impacts on the adjacent areas of Lowland Rainforest; and
- 9) achieving site capture of Management Zones 1 and 2 within a 5 year maintenance period.

The primary objective of enhancing a measure of east-west connectivity across the proposed development precinct, is provided for through use of predominantly local native species in the approved site-based Landscaping Plan (Form Landscape Architects 2017).

2. Description of Subject Site

2.1. Location in the Landscape

The subject site is located within the Tweed Local Government Area on the far north coast of New South Wales, delineated by the boundaries of those parcels of land formerly described as Lot 1 DP 134787, Lot 1 DP 167380, Lot 2 DP 961928 and Lot 5 DP 1117326. The land is currently zoned R1 – Urban Expansion and 7(d) – Environmental Protection Scenic/ Escarpment) for purposes of the *Tweed Local Environmental Plan 2000*.

2.2. Land Use

The historic land use of the subject site and surrounding areas has been agricultural, primarily for beef cattle and horse grazing. The current land use is also agricultural, for beef cattle and horse grazing. The future land use of the subject site will be for the development of the approved subdivision including associated infrastructure, and the management and conservation of lowland rainforest as the subject of this VMP.

Future land uses of the adjacent areas are variable and include:

- The property to the south of this development will be subject to a 20-Lot subdivision and an area on Lot 12 is the subject of a Habitat Restoration Plan (Biolink 2019);

- The majority of the properties adjoining the subject site to the east and west will be managed for conservation, some areas of which will be rehabilitated or restored as part of this VMP;
- To the north of the subject site is largely existing residential development; and
- One property adjoining the subject site in the west is not part of any proposed or approved development. Whether or not this will be subject to a future development is not known. It is currently a mix of remnant and regenerating rainforest (including threatened plant species) with a high proportion of exotic species.

2.3. Site Characteristics

The study area 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*. Remaining vegetated areas are further characterised by their presence on steep slopes with south-westerly, north and north-easterly aspects.

The subject site is located on kraznozem and chocolate soils derived from Basalts associated with the Lamington Volcanics (Morand 1994). There are consequently numerous boulders of varying size on the subject site.

Site elevations within the study area vary from sea level to around 80m asl.

2.4. Biodiversity at the Landscape Level

The subject site and surrounding area, although somewhat fragmented is relatively intact for the purposes of a wildlife corridor, providing a mix of contiguous and stepping stone vegetation.

With the development of the site as well as the adjoining 20-Lot approved development, there will be some further fragmentation and isolation between east and west of the subject site. This fragmentation will be partially offset in the longer term by the proposed landscape plantings that will provide north-south and east-west corridors through both developments linking to habitat on and off the site. Despite the landscape

planting not providing for all species that are likely to utilise these areas currently, it is expected to provide a valuable resource for many species, particularly birds.

The subject site has local significance in supporting connectivity between adjacent patches of Lowland Rainforest vegetation and reducing the edge effects. The site and associated landscapes are considered of regional significance in maintaining contiguous vegetation as habitat for flora and fauna species.

2.5. Native Vegetation

The vegetation on the subject site is primarily open pasture with a few scattered remnant rainforest trees, and a planted windbreak. On the eastern and western boundaries there are areas of remnant vegetation that extends into the subject site.

Although not at the highest level of species diversity for Lowland Subtropical Rainforest, there is a moderate level of diversity on the subject site (Appendix 3). There is currently a lack of vegetation structure in all strata on most of the subject site, with patches of native grasses and groundcovers, isolated regenerating shrubs and trees, and a few mature remnant trees, with regeneration occurring underneath. In some of the adjacent vegetated areas there is a relatively high level of diversity in all strata.

The subject site contains very small areas that adjoin the western remnants that are consistent with Lowland Subtropical Rainforest and would meet the criteria for the NSW Endangered Ecological Community *Lowland Rainforest in the North Coast and Sydney Basin Bioregion* and the National Endangered Ecological Community *Lowland Rainforest of Subtropical Australia*.

Vegetation Communities

Biolink (2011) identified four main floristic communities in the study area, including the subject site and adjacent areas, namely:

1. Sclerophyll forest

(i) Tall open forest dominated by Turpentine *Syncarpia glomulifera*. This is a non-endemic community approximately 0.75 ha in size, entirely contained within the proposed development footprint and originally planted for the purposes of providing

a windbreak. Understorey vegetation in this narrow strip consists of isolated shrubs and saplings to 3m tall comprised of species such as Sweet Pittosporum *Pittosporum undulatum*, Tuckeroo *Cupaniopsis anacardioides*, Native Gardenia *Randia benthamiana*, Crow's Ash *Pentaceras australe* and Camphor Laurel *Cinnamomum camphora*.

(ii) Tall woodland dominated by Camphor Laurel, Brush Box *Lophostemon confertus* and Grey Gum *Eucalyptus propinqua*. Mid-stratum consists of mid-high to tall, mid-dense Foambark *Jagera pseudorhus*, Red Kamala *Mallotus philippensis*, Black Walnut *Endiandra globosa*, Red-fruited Laurel *Cryptocarya laevigata*, Brush Pepperbush *Tasmannia insipida*, Crow's Ash *Pentaceras australe* and Fire-wheel Tree *Stenocarpus salignus*. Understorey vegetation consists of native vine, grass and fern species such as Prickly Rasp Fern *Doodia aspera*, Lawyer Vine *Smilax australis* and Rough Saw-sedge *Gahnia aspera*.

(iii) Tall open forest dominated by Camphor Laurel and Tallowwood *Eucalyptus microcorys*, the latter planted during the 1950s (Chris Roberts pers. comm.). Mid-stratum consists of mid-high to tall rainforest indicator species such as Bangalow Palm *Archontophoenix cunninghamiana*, Straw Tree Fern *Cyathea cooperi*, Red Kamala, Sweet Pittosporum, Foambark and Brush Cherry *Syzygium australe*. Understorey is very sparse and mostly comprised of leaf litter and native vine and fern species such as Lawyer Vine, Prickly Rasp Fern and Common Bracken *Pteridium esculentum*.

2. Rainforest

This community best conforms to a regenerating, simple notophyll very tall closed forest dominated by Camphor Laurel with emergent Pink Bloodwood *Corymbia intermedia* and Brush Box, the latter more obvious in adjoining lands to the north west. Also present in some areas is an earlier successional stage of this community, again dominated by Camphor Laurel and with little or no midstratum. Understorey vegetation consists of shrubs and saplings to 3m comprised of rainforest species such as Sweet Pittosporum, Hairy Alectryon *Alectryon tomentosus*, and very sparse native groundcover such as Prickly Rasp Fern. Despite its young age and the presence of Camphor Laurel, a number of

threatened plant species were recorded, while the physiognomic attributes associated with this community further qualify it as an analog of the Endangered Ecological Community (EEC) *Lowland rainforest in the NSW North Coast and Sydney Basin Bioregion*.

Other vegetation communities present near the subject site includes a small exotic Pine *Pinus* sp. plantation in the north east of the study area, which Biolink (2011) described as “wet grassland” on the lower reaches of the catchment area immediately upstream of the impounded water body.

Threatened or rare flora species

Twelve rare or threatened plant species have been identified as occurring within the subject site and 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 2). 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.

2.6. Native Fauna

A list of native fauna recorded in the local area that includes one native frog species, eight snake species, four lizard species, over 50 bird species, and 14 mammal species (Biolink 2011; Bushland Restoration 2004; Chris Roberts, pers. comm.) is provided in Appendix 4.

2.7. Exotic Species

There are over 50 exotic weed species recorded on the subject site and in the surrounding areas. A list of these weed species is provided in Appendix 5.

Exotic animal species recorded in the local area include dog/fox, hare, house mouse and black rat. Scats from hares were observed on the subject site during the preparation of this report but no animals were observed. There was little evidence of grazing by hares. Cattle and horses are currently grazing in the paddock areas and will be removed for the development of the site and excluded from the restoration areas.

2.8. Ecosystem Resilience

The subject site and surrounding areas have a relatively high level of ecosystem resilience, evidenced by the many plants recolonising from seed or spores from adjacent areas, primarily through bird dispersal and perching on existing trees.

3. Management Issues

Management issues relevant to the VMP include:

- Ecological restoration strategies applicable to the site (natural regeneration, assisted natural regeneration, reconstruction);
- Translocation, reintroduction and introduction of *Niemeyera whitei*, and transplant salvage of *Lepiderema pulchella*;
- Weed management (weed species and abundance, weed dispersal to and from the site, management techniques with potential to impact on habitat values, qualifications of regenerators, and timeframes);

- Habitat reconstruction (planting design and planting list, propagule selection, fauna habitat reconstruction, vegetation structural complexity, food resources, and hygienic considerations);
- Fire management (appropriate for Lowland Rainforest);
- Soil management and erosion control;
- Provision and management of fencing (details of the type, location and purpose of fencing);
- Community awareness for protection of threatened species and Lowland Rainforest, and habitat for fauna; and
- The Registration of Easements.

3.1. Restoration Technique Selection

The restoration techniques selected include natural regeneration, assisted natural regeneration, and reconstruction, consistent with the requirements of the VMP guiding principles (Biolink 2011).

These restoration techniques apply to Management Zones 1 and 2, where there are small patches of naturally regenerating rainforest and open gaps. In the rehabilitation and reconstruction areas, natural regeneration should be encouraged to improve local resilience of the overall restoration area. The removal of weeds across the rehabilitation and restoration area will result in assisted natural regeneration. All existing native plants that have regenerating within the rehabilitation area are to be retained.

Ten *Lepiderema pulchella* plants will be translocated, as a transplant salvage, from the eastern end of the windbreak corridor. These plants are mostly small seedlings <40 cm, with two plants just over 1 m tall. There is a possibility of more *Lepiderema pulchella* plants germinating prior to the tree removal works. The transplanting is part of the TRP (Biolink 2020). Details of the translocation are provided in Section 4.

The *Niemeyera whitei* plant which has not been located is marked as a virtual plant on Figure 1. An individual of this species will be planted at that location, and two individuals in the restoration area, as part of the VMP establishment phase works. The

replacement and additional plants will be derived from local native stock and will be of a suitable size (50-75 cm) at time of planting. They will be adequately protected and will be monitored as part of the VMP implementation (Biolink 2020).

3.2. Clearing of Vegetation

Clearing of vegetation on the subject site comprises the clearing of:

- the planted windbreak and regenerating rainforest underneath (Figure 8), and for the APZ (Figure 9) and sewer line (Figure 10);
- the removal of Camphor Laurel from across the site and in the rehabilitation and restoration areas, including from Lots 38, 39, 40, 55, 57, 59, 60 and 61, as required by the approval conditions.

Management of the clearing of the planted windbreak trees and regenerating rainforest is addressed in the Tree Removal Plan (Biolink 2020).

The loss of Lowland Rainforest species across the site is compensated for through the management of the rehabilitation and restoration areas in Management Zones 1 and 2, and is described throughout Sections 3 and 4 of this Plan. The removal of Camphor Laurel is addressed in Sections 3.3., 4.3.3., and associated appendices.

Temporary bollards or barrier mesh will be established at the boundaries of the APZ-EMA habitat restoration and rehabilitation areas (Figure 1), and around individual trees to be retained prior to any other works commencing on site. Permanent concrete post and plain wire fencing will be established on the vegetation side of the temporary bollards or barrier mesh, around the area of *Macadamia tetraphylla* conservation, and around the boundaries of Lot 61 (Figure 1). No native vegetation is to be cleared for the establishment of either the temporary or permanent fencing.

3.3. Weed Management

Weed species and abundances are provided in Appendix 5. There is potential for weed dispersal from adjacent areas into the rehabilitation and restoration areas in Management Zones 1 and 2. The management techniques that are to be applied in these areas are provided in Section 4 and Appendices 6 and 7. The NPWS Checklist

for bush regeneration activities is included and Appendix 8 is to be followed in areas of existing vegetation.

Minimum qualifications and experience of a specialist ecological consultant practising in the Tweed Council LGA should comprise a tertiary degree in the natural sciences (or equivalent) and two years documented field experience in ecological restoration in north-eastern New South Wales and/or south-eastern Queensland. Additional TAFE Certificate IV qualifications in Bushland Regeneration or Natural Area Restoration are highly desirable.

Regenerators working on the subject site will also be required to have relevant licences and qualifications, including a Section 132C licence under the *National Parks and Wildlife Act 1974* when undertaking weed control in threatened species habitat, and up-to-date Chemical Users Certificate qualifications for the use of herbicides and fungicides. All works are to be undertaken in accordance with the legislative requirements of the relevant approvals and qualifications. In addition, regenerators working on the subject site will be required to work in accordance with the Job Safety and Risk Analysis provided in Appendix 9.

3.4. Habitat Regeneration and Restoration

Natural regeneration and assisted natural regeneration will comprise any native plants that emerge following site preparation works in Management Zones 1 and 2, particularly following weed control. These plants are to be marked, labelled and retained.

The habitat restoration will be undertaken in Management Zone 1 and will comprise retention of existing and naturally regenerating rainforest species, weed control, and planting of appropriate species for Lowland Rainforest in the Bilambil Heights area. Species selection for planting is based on species recorded on the subject site and adjacent areas (Appendix 3 and 10). As much as possible (*i.e.* subject to availability) plants will be sourced from local provenance of the Terranora sub-catchment in the first instance and the broader Tweed Valley where necessary. Plants will be sourced

from local nurseries with a guarantee of product that meets the requirements in Appendix 11.

The timing of planting, planting design, closing and after-care requirements are detailed in Sections 4.3.3, 4.3.4, 4.3.6, and 4.4.

3.5. Hygiene Management

Hygiene protocols have been developed (Appendix 11) and are to be implemented to address the:

- NSW Government listing of the key threatening process, *Infection of native plants by Phytophthora cinnamomi*, under the *Biodiversity Conservation Act* (NSW Scientific Committee, 2002);
- Australian Government listing of the key threatening process, *Dieback caused by the root-rot fungus Phytophthora cinnamomi*, under the EPBC Act (Australian Government Scientific Committee, 2000);
- associated Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi* (Australian Government Department of the Environment, 2014);
- NSW Government listing of the key threatening process, *Introduction and establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae*, under the *Biodiversity Conservation Act* NSW Scientific Committee, 2011);
- Australian Government listing of the key threatening process, *Novel biota and their impact on biodiversity*, under the EPBC Act (Australian Government Scientific Committee, 2013); and
- NSW Government preliminary determination to list *Rhodamnia rubescens* and *Rhodomyrtus psidioides* as endangered species (NSW Scientific Committee, 2017).

Lowland Rainforest and *Macadamia tetraphylla* are known to be susceptible to infection from *Phytophthora cinnamomi*. Several of the rainforest plants occurring on the site and surrounding areas, and proposed for planting including, *Melaleuca quinquenervia*, *Rhodamnia rubescens*, *Rhodamnia maideniana*, *Rhodomyrtus*

psidioides, and lillypilly species, are known to be susceptible to infection from Myrtle Rust.

3.6. Soil Management and Erosion Control

Soil management and erosion control measures will be necessary to ensure the protection of threatened species and rainforest plants to be retained on the subject site, particularly on the western and eastern boundaries. Soil management and erosion control for the development, in accordance with the approval conditions will avoid impacts to the vegetation being retained.

The restoration to be undertaken in Management Zone 1 (Section 4.1.1) may result in soil management issues and the need for erosion control as a result of the steepness of the restoration areas. The control of weed groundcovers, primarily exotic grasses during site preparation across the restoration area will potentially leave these steep slopes bare and subject to erosion and loss of topsoil. Measures to address these issues are provided in Sections 3.3, 4.2, and 4.4 of this VMP.

3.7. Fire Management

Fire management for the purposes of bushfire protection is addressed in the revised Asset Protection Zone Management Plan (BCA Check 2020). As fire kills most rainforest plants, with some species capable of re-sprouting following, fire is to be avoided within the existing regenerating rainforest and the rehabilitation and restoration areas (Management Zones 1 and 2).

3.8. Community Awareness

The VMP Objectives and Guiding Principles (Biolink 2020) identified that people living in residential estates adjoining natural areas are rarely informed as to ecological and/or management needs of such areas, including the consequences of dumping garden waste, vegetation trampling and the depredations of domestic animals.

The guiding principles recommend local residents must be informed of the site's context and the measures/actions they can take to assist long term maintenance of ecological values, including the use of native rainforest species for landscaping purposes.

To this end, a brochure detailing site context, threats and a *how you can help* section has been prepared (Appendix 12). To accompany the brochure, the VMP recommended new residents receive a gift of 10 – 12 suitable rainforest shrub and small tree species to be used for landscaping purposes subject to the provisions of the revised Asset Protection Zone Management Plan.

3.9. Registration of Easements

Under S88B and S88E Instruments, the registration of easements will be required for land in Management Zones 1, 2, and 3. The details of information to be included on the associated Restrictions to the User are provided in Section 7, and are consistent with the requirements of approval condition E8(5).

4. Management Strategy

The management approach is to:

- 1) establish Management Zones;
- 2) retain existing native plants within Management Zones 1, 2, and 3;
- 3) protect threatened plants and rainforest plants being retained from the impacts during the establishment of the subdivision and in the future;
- 4) prepare the rehabilitation and restoration areas on the subject site to facilitate planting, including primary weed control;
- 5) plant locally occurring rainforest species sourced from local provenance plants, within the restoration areas;
- 6) retain naturally regenerating native species in the rehabilitation and restoration areas;
- 7) follow-up site maintenance; and
- 8) monitoring and adaptive management.

4.1. Management Zones

For the purposes of this plan, four management zones are to be established (Figures 1, 2 and 3). The management approaches for each management zone is to follow the requirements in Sections 4.2, 4.3 and 4.4. Specific measures relevant to individual zones that are addressed in the following sub-sections.

Prior to any construction works commencing, temporary bollards or barrier mesh are to be placed at the interface of Management Zones 1 and 2, with the APZ-EMA. On the restoration and rehabilitation side of the bollards a permanent concrete post and plain wire fence is to be erected. Lot 61 is also to be permanently fenced with a concrete post and plain wire fence. The permanent fencing is to be fauna friendly and able to prevent cattle from accessing the restoration and rehabilitation areas. The permanent fencing is to be established by the end of the Year 1 establishment stage.

4.1.1. Management Zone 1: Restoration Areas

Management Zone 1 comprises the six open areas amongst the regenerating Lowland Rainforest (Figures 1, 4a and 4b). The restoration areas are adjacent to the APZ areas (Management Zone 3).

Weed control will be undertaken in accordance with the requirements and strategies in Sections 3.3, 4.3.2, and Appendices 6-9. The site will need to be prepared for planting with primary and follow-up weed control. Primary weed control may require at least two treatments to bring weeds under control or alternatively weed matting may be used in this area.

Management Zone 1 requires direct management intervention actions on three fronts simultaneously:

- 1) the establishment of a definable edge and sealing thereof.

Increasing the ecological integrity of remnant rainforest areas adjoining the APZ-EMA (Management Zone 3). The focus of Management Zone 1 is to seal exposed and open edges. In conjunction with proposed measures of Camphor Laurel control, all edges at the APZ-EMA/Management Zone 1 interface must be “sealed” using a combination of pioneer (edge) and late succession mixed species (infilling) planting. Plantings in Management Zone 1 are to be medium density (1 tree per

10-15 m²) plantings of later secondary and mature phase tree species in all internal gaps, transitioning to use of pioneer/early secondary species at higher density (1 plant per 3 - 5 m²) where the permanent edge is required. The edges are to effectively be sealed plus any associated infilling accomplished over a 3 - 5 year timeframe.

2) Camphor Laurel control.

The treatment of Camphor Laurel in Management Zone 1 is to be staged, with 100% of seedlings and juveniles (<100 mm dbh) controlled, and 20% of mature trees (>100mm dbh) killed by stem injection/frilling *in situ* in the first year establishment stage. During each of the subsequent 4 years of the maintenance period, the 100% control of Camphor Laurel seedlings and juveniles, and another 20% of mature Camphor Laurel. 100% Camphor Laurel treatment should be achieved by the end of Year 4 of the maintenance period. Follow up control will be required in Year 5 of the maintenance period.

3) the filling of extant canopy gaps and/or openings.

Planting is to be characteristic, structurally and floristically, of Lowland Rainforest, with plants to be randomly placed within the landscape. Plants species identified for planting in Management Zone 1 is provided in the Planting Schedule in Appendix 10. The densities of plantings identified above are to be achieved within the establishment phase and maintained at those levels or denser for the 5 year maintenance period.

Plants will need to be protected from grazing and wind damage, either through the use of individual plant guards, or shade cloth or fencing of broader areas.

This area will be the subject of a S88E covenant in conjunction with negotiations with the landholder. The landowner has provided consent for the proposed works to be undertaken and for the required easement and title to apply to the adjoining Lot 6 (C. Roberts pers. comm.).

4.1.2 Management Zone 2: Rehabilitation Areas

Management Zone 2 comprises weed control and natural regeneration in seven blocks (Figures 1 and 5). All native plants naturally regenerating in this area will be retained.

Weed control will be undertaken in accordance with the requirements and strategies in Sections 3.3, 4.3.2, and Appendices 6-9. The treatment of Camphor Laurel in Management Zone 2 is to be staged, with 100% of seedlings and juveniles (<100 mm dbh) controlled, and 20% of mature trees (>100mm dbh) killed by stem injection/frilling *in situ* in the first year establishment stage. During each of the subsequent 4 years of the maintenance period, the 100% control of Camphor Laurel seedlings and juveniles, and another 20% of mature Camphor Laurel. 100% Camphor Laurel treatment should be achieved by the end of Year 4 of the maintenance period. Follow up control will be required in Year 5 of the maintenance period.

Should natural regeneration fail, there is to be planting of species diversity and density, consistent with the restoration of Management Zone 1, and floristically consistent with that of a Lowland Rainforest. Plant species identified for planting in this area are provided in the Planting Schedule in Appendix 10.

Primary weed control may require at least two treatments to bring weeds under control or alternatively weed matting may be used in this area. Plants will need to be protected from grazing and wind damage, through the use of individual plant guards, and fencing of broader areas.

This area will be the subject of a S88E covenant in conjunction with negotiations with the landholder. The landowner has provided consent for the proposed works to be undertaken and for the required easement and title to apply to the adjoining Lot 6 (C. Roberts pers. comm.).

4.1.3. Management Zone 3: Asset Protection Management

Management Zone 3 comprises the Asset Protection Zones, the APZ-EMA on the eastern and western boundaries of the development (Figures 7a and 7b). Management of this Zone is provided for in the Additional Information Bushfire report

(BCA Check 2020). Management Zone 3 is the subject of S88B covenants with Restrictions as to User (Section 7).

Tree clearing associated with the establishment of the Asset Protection Zone is discussed in the Additional Information – Bushfire report for the site (BCA Check 2020) and the TRP (Biolink 2020). This clearing includes an extension to the clearing of the windbreak trees, which contains 36 Camphor Laurel trees and 15 native trees (Figure 9). The native trees in this area will be removed, as their retention will be extremely difficult given the surrounding Camphor Laurels must be removed, as well difficulties in maintaining these individuals in accordance with the standards for asset protection zones.

Within Management Zone 3, two rainforest trees will be retained, a Red Kamala *Mallotus philippensis* and a Teak *Flindersia australis*. These trees are marked on Figure 1 as to be retained. In addition, a replacement specimen of *Niemeyera whitei* is to be planted at the original location within Management Zone 3. The location of this plant is also marked on Figure 1. These trees to be retained or planted are to be protected from the development construction works and clearly marked with barrier mesh, installed no less than 2 m around the outside perimeter of each canopy.

4.1.4. Management Zone 4: Planted Windbreak

Management Zone 4 comprises the planted windbreak that runs east-west across the site (Figure 9).

This Management Zone covers the initial phase of clearing operations for Stage 1A. There will be no clearing or tree removal in Management Zone 4 until the VMP is approved by Tweed Shire Council.

Lepiderema pulchella (Fine-leaved Tuckeroo) is a listed threatened species in the vulnerable category both within NSW and nationally. The emergence of several individuals of *Lepiderema pulchella* after the assessment by Biolink (2011), necessitates the salvage translocation of these plants, comprising two individuals over 1 m in height, plus eight seedlings-juveniles.

The salvage of *Lepiderema pulchella* plants is to be undertaken prior to tree clearing. There is to be no clearing of non-threatened vegetation within this management zone until the *Lepiderema pulchella* plants identified for salvage have been removed from the clearing area.

The *Lepiderema pulchella* plants to be salvaged are located between plants 1-6 in the Tree Removal Schedule, and as identified in Figures 1 and 3d of the TRP (Biolink 2020). As there is potential for further germination of *Lepiderema pulchella* plants, a further search is to be undertaken under the windbreak trees prior to their removal. Any additional located specimens are to be included in the salvage operation. The transplants are to be planted primarily in the restoration areas (Management Zone 1 of the VMP), with a few specimens to be planted into the rehabilitation area (Management Zone 2 of the VMP).

Prior to salvaging, a health assessment of each specimen is to be recorded. Healthy plants are to be directly transplanted into pre-prepared holes, in accordance with the planting requirements in Section 4.3.4 of the VMP (Biolink 2020). Plants exhibiting signs of poor health (e.g., insect attack, rust, lack of new growth) are to be potted and maintained until considered sufficiently healthy for planting. All plants are to be trimmed of 75% of foliage prior to salvaging, in order to reduce transpiration.

When extracting the plants, care must be taken to minimize damage to the root system by leaving adequate soil around the root ball. The transplants are to be placed into a large pot with soil from the site and watered well in readiness for transfer to the restoration and rehabilitation areas or to a nursery for maintenance. All transplanted specimens are to be adequately watered following replanting to maximize survival.

Records of transplanted individuals are to include plant number, plant health at the time of transplanting, whether directly planted or potted, date of transplanting, timing of watering over the first 12 months, and survival of transplants.

The transplanted plants are to be monitored monthly for the first six months after replanting, and 6-monthly for a further 4.5 years (see Section 5.1 below).

The translocation, transplanting salvage, is to be consistent with the Australian Network for Plant Conservation's translocation guidelines (Vallee *et al.* 2004).

4.2. Site Preparation

In preparing the management zones, the following actions are to be undertaken:

- Establishment of Management Zone boundaries;
- Identification of trees to be removed within the Tree Removal Plan, including the removal of the planted windbreak, and for the establishment of the APZ and the sewer line.
- Establishment of tree-vegetation protection barriers around vegetation being retained and protected in Management Zones 1 and 2 from the earthworks and vegetation clearing associated with the development;
- Identification of threatened plants with permanent markers;
- Establishment of photo point locations;
- Temporary fencing of the restoration area; and
- Primary weed control and eradication to provide a suitable environment for planting.

4.3. Restoration Methods and Techniques

The restoration methods and techniques applied to this VMP are:

- the retention of existing threatened and rainforest plants in Management Zones 1 and 2;
- weed control;
- natural regeneration and assisted regeneration; and
- planting.

4.3.1. Retention of Existing Rainforest Plants

The existing remnant rainforest plants in the rehabilitation and restoration areas (Management Zones 1 and 2) are to be retained.

Within the rehabilitation and restoration areas it is possible that additional seedlings will have regenerated prior to site preparation works being undertaken. Any naturally regenerating native plants, or those regenerating with assistance (through weed

control) in these areas are to be retained, and will contribute to the overall densities to achieve site capture of Lowland Rainforest.

4.3.2. Weed control

Within the rehabilitation and restoration areas (Management Zones 1 and 2), primary weed control is intended to comprehensively remove all weed species within each Management Zone in the restoration area prior to planting. The list of the weed species recorded in the habitat restoration area and the control methods are provided in Appendix 6. There is likely to be some germination of weed species from the seedbank. These are to be subject to follow-up control before planting.

Grasses and annual plants are to be hand removed and/or sprayed. Dead plant material, without seed on, is to be retained to stabilise soil. Shrubs, small trees and large trees are to be controlled using cut and paint or frilling techniques. Vines are to be controlled using scrape and paint techniques.

Weeds emerging following planting are to be eradicated by follow-up weed control in Years 1-5. Measures for weed control and information to be collected is provided in Appendices 6 and 7.

In the first two years, weed control maintenance rotations are to be undertaken every two months, and every three months for the duration of the 5 year maintenance period. This will ensure that annual plants emerging at different times of the year are largely controlled, and will encourage natural regeneration. The number of hours will be dependent on the extent of regeneration of weeds during the implementation and will be commensurate with what is required to meet the objectives and actions in this Plan.

Weed waste that does not have seed on it is to be retained on site. Weed waste with seed is to be bagged and disposed of at the local Council rubbish tip.

4.3.3. Planting

The aim of the planting is to achieve Lowland Rainforest across Management Zones 1 and 2 in conjunction with natural regeneration and consistent with the diversity of species and number of individuals provided in Appendix 10, and density

targets identified for Management Zone 1 (Section 4.1.1). In conjunction with the baseline monitoring (which will identify current density of plants in each of the Management Zone Areas marked in Figure 1), monitoring at the end of each year of the monitoring period will determine whether density targets are likely to be met and if additional plants are to be sourced and planted. If any target plant species are unavailable at a given point, one or more substitute species from Schedule 10 are to be selected, ensuring that no individual species exceeds more than 5% contribution to density, with the exception of pioneer plants.

The schedules of species to be planted in Management Zones 1 and 2 are provided in Appendix 10. The planting arrangement in Management Zones 1 and 2 will be random, characteristic of Lowland Rainforest. The bush regenerator engaged by the landowner can use their discretion to best place the most appropriate species in each restoration location in Management 1, and across the rehabilitation areas in Management Zone 2, in accordance with this VMP.

The *Niemeyera whitei* plant which has not been located is marked as a virtual plant on Figure 1. An individual of this species will be planted at that location, and two individuals are to be planted in the restoration area during the establishment phase works. The replacement and additional plants will be derived from local native stock and will be of a suitable size (50-75 cm) at the time of planting. These specimens will be adequately protected and will be monitored.

The planting is to be undertaken in accordance with the standard *Dwg. No. S.D. 701-702 Tree and Shrub Planting Details and Standard Revegetation Detail* in TSC *Landscape Procedures and Style Manual Appendix H* (of the DCP A5 Subdivision Manual – D14 Landscaping Public Space) (Figure 6). All plants are to be staked, with each stake having a uniquely identifying plant code. The location of each plant is to be GPS recorded.

All plants are to be checked prior to leaving the nursery to ensure correct labelling with a unique code, and assessed for signs of disease, fungus, and insects, and pots checked for weeds, to avoid their introduction to the site, particularly for *Phytophthora*

and Myrtle Rust. Any unhealthy plants will be discarded and replaced with healthy plants.

To minimize weed emergence, weed free mulch is to be lightly placed around all plants. Plants are to be watered heavily on planting, and regularly for the first 6 months, and throughout the implementation of the VMP, as required and dependent on local rainfall.

4.4. Site Maintenance

The maintenance of the restoration plantings, regenerating native species and control of weed species is required to be undertaken for a period of 5 years after planting. Site maintenance is to include as required:

- Continued weed control;
- Resetting and relabeling the stakes;
- Assessment of plants to and treatment of those suspected as suffering from *Phytophthora* or Myrtle Rust using the most up-to-date treatment methods.
- Increasing level of mulch or maintaining mulch level as necessary to reduce weed infestations;
- Watering as determined necessary for the survival of plantings; and
- Establishing shade and wind barriers temporarily if needed to shelter plants.

In addition to the above requirements, site maintenance is to include:

- Checking of fences, and repairs as necessary;
- The removal of all domestic/commercial rubbish, debris and litter from Management Zones 1 and 2; and
- Maintenance of the restoration and rehabilitation areas free from domestic/commercial rubbish, debris and litter in Management Zones 1 and 2.

5. Monitoring and Evaluation

5.1. Monitoring

The monitoring period is to commence prior to any works with baseline monitoring to be undertaken. The baseline monitoring of number and density of regenerating rainforest plants will form part of the assessment used by the bush regenerator to determine additional planting needs to achieve Lowland Rainforest for each management unit within Management Zones 1 and 2. The VMP has a five (5) year monitoring commitment following planting in Management Zones 1 and 2, to coincide with the maintenance period. Monitoring of the Lowland Rainforest plantings, natural regeneration and weed control, are to be undertaken at 6-monthly intervals for the establishment period, and at the same regularity throughout the five (5) year maintenance period. This will enable corrective and follow-up actions to be implemented in a timely manner. The first monitoring event will commence six months after planting.

The monitoring is to include:

- Assessment of survival of restoration plantings and naturally regenerated plants in Management Zones 1 and 2;
- Assessment of survival of *Lepiderema pulchella* transplants, and *Niemeyera whitei* plantings are to be monitored monthly for the first six months after planting, and 6-monthly for a further 4.5 years. Monitoring is to include:
 - o *Growth*: height of plants;
 - o *Health*: signs of heat stress, with any signs of disease and pest damage addressed promptly; and
 - o *Survival*: assess options for addressing any losses, e.g., by collecting seed from adjacent areas to propagate additional plants, or watering more frequently.
- General assessment of weed control and regeneration in Management Zones 1, 2, and 3;
- Identification of reasons for any mortality, e.g. heat stress, disease, drought, grazed; and
- Photo point monitoring - photo point monitoring guidelines and record sheet are provided in Appendix 13.

5.2. Performance Criteria

The performance criteria are related to the objectives of this Plan to achieve site capture after a minimum 5-year maintenance period and are specific and measurable. In order to evaluate the implementation of the VMP and implement adaptive management practices as needed, the performance criteria are:

- 1) Revegetation of Management Zones 1 and 2, including the species diversity of plantings, has been undertaken in accordance with the management strategies in this VMP;
- 2) Trees to be retained on and adjacent to the subject site are protected in accordance with the management strategies in this VMP;
- 3) 95% control of all environmental weeds at the end of the Year 1 maintenance period, and maintained at that level for the remainder of the 5 year maintenance period;
- 4) 100% of existing native species, including threatened species, are conserved in Management Zones 1 and 2 in accordance with the management strategies in this VMP;
- 5) 95% plant survival rate shall be achieved in revegetation areas and is to be maintained at that rate for the entire 5-year maintenance period;
- 6) All non-surviving plants are replaced with the same species from local provenance, to ensure the 95% survival target is maintained ;
- 7) Evidence of increased recruitment of native species in Management Zones 1 and 2;
- 8) All *Macadamia tetraphylla* specimens (in the protection area in the far northeast), the replacement *Niemeyera whitei* (to be planted), and the individual Red Kamala and Teak trees identified for protection within Management Zone 3 are retained and protected;
- 9) All salvaged plants of *Lepiderema pulchella* survive translocation, and non-surviving plants are replaced with local provenance plants;
- 10) Site preparation has been undertaken in accordance with the management strategies in this VMP, including removal of domestic/commercial rubbish, debris and litter from Management Zones 1 and 2;
- 11) Maintenance of the restoration and rehabilitation areas free of domestic/commercial rubbish, debris and litter in Management Zones 1 and 2;

- 12) On-site management and maintenance has been undertaken in accordance with the management strategies in this VMP;
- 13) Monitoring of the restoration area has been undertaken in accordance with the management strategies in this VMP; and
- 14) Domestic stock has been excluded from the habitat restoration and rehabilitation areas, Management Zones 1 and 2, at the time of commencing implementation of the VMP.

5.3. Adaptive Management

Adaptive management will form part of this VMP. The adaptive management approach to be taken needs to enable any problems that arise, or that are identified in the progress reports, to be overcome, including but not limited to:

- Weed control effort insufficient to control weeds – weeds will require additional treatments;
- Lack of natural regeneration – may require additional plantings to fill gaps;
- Plantings failing to survive - may require additional plantings to meet the 95% target at end of the Plan's implementation;
- Erosion evident – additional controls to manage erosion will be put in place.

6. Reporting

Reporting will be provided under this Plan for a period of 5 years after planting – the maintenance period. The reports are to be sent from the bush regenerator to the client who will then forward them to relevant agencies for consideration.

The Year 1 Progress Report is to be provided at the end of Year 1 (*i.e.* 12 months after planting and primary weed control is completed) and is to include details of:

- Who is undertaking the restoration works, together with evidence of relevant qualifications, experience, and licences;
- The site preparation process, including any problems encountered;
- Natural regeneration and plants being retained; and
- Copies of daily work sheets and chemical operator's data sheet.

Progress reports are to be provided annually at the end of Years 2-5, and are to include:

- Completed monitoring forms and daily worksheets;
- Details of works undertaken and progress;
- Completed photo point recording forms and photos;
- Compliance with relevant performance criteria;
- Adaptive management changes made during implementation of the Plan;
- Any non-compliance with this Plan, and limitations of the restoration/regeneration, such as influence of season and weather conditions; and
- Recommendations for variations to future works.

A final report is to be provided at the end of Year 6 and is to include:

- A summary of works undertaken in Years 1-6;
- Completed monitoring forms and daily worksheets for Year 6;
- Adaptive management changes made during Plan implementation; and
- Any non-compliance with this Plan and limitations of the restoration/regeneration; such as influence of season and weather conditions.

7. Post-implementation Requirements

As required by the approval conditions, Management Zones 1, 2 and 3 are to be the subject of S88 Instruments under the Conveyancing Act.

The conditions on the covenant to be placed on the S88E Instrument for Management Zones 1 and 2 are:

- Management Zones 1 and 2 as identified in the Figures of the VMP, are to be managed in accordance with the VMP; and
- Management Zones 1 and 2 are to be managed in perpetuity for the purposes identified in this VMP.

The S88E Instrument Restriction as to User to apply to the APZ-EMA for Management Zone 3 of this VMP are:

- The landowner must maintain the APZ-EMA identified on relevant figures as an Asset Protection Zone, in accordance with Appendix 2 of the "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-EMA as a mowed lawn;
- The landowner will ensure no dwellings are constructed within the APZ-EMA and that only the permissible uses as private open space, roads, backyards, and pools are provided within the APZ-EMA; and
- The landowner will ensure the provision of a gate at the rear fence suitable to facilitate foot-based access for firefighting purposes.

A copy of the letter from the owners of Lot 6 granting consent to the creation of easements and carrying out work on their property in conjunction with this development is provided in Appendix 14.

9. Implementation Schedule

ACTION	DEVELOPMENT STAGE – TIMING	DURATION FREQUENCY	RESPONSIBILITY
1. All primary plantings installed and established for a minimum period of 6 months			
2. All primary environmental weed works (except for Camphor Laurel) undertaken, demonstrating 80% control and treatment			
3. The first stage of Camphor Laurel primary treatment completed			
4. Transplanting of <i>Lepiderema pulchella</i> plants from Management Zone 4 to Management Zones 1 and 2			
5. All domestic/commercial rubbish, debris and litter removed from Management Zones 1 and 2			
6. Delineation of temporary bollards and/or barrier mesh installed			
OTHER ACTIONS TO BE IMPLEMENTED			
1. Survey pegs in ground at APZ-EMA and Management Zones 2 and 3 boundaries, and the Macadamia conservation area	Pre-earthworks and tree clearing	One-off	Landowner Project Manager Surveyor
2. Stake, label and GPS locate all threatened plant species	Pre-earthworks and tree clearing	One-off	Ecologist
3. Put no-go zone barriers on edges between APZ-EMA and Management Zones 2 and 3	Pre-earthworks and tree clearing	One-off	Landowner Project Manager Construction Contractor
4. Put no-go zone barriers around remnant rainforest trees that are to be retained in Management Zone 3	Pre-earthworks and tree clearing	One-off	Landowner Project Manager Construction Contractor
5. Engage bush regenerator contractor, and identify nursery/ies for sourcing plants	Pre-earthworks and tree clearing	One-off – for period of implementation	Landowner/ Project Manager
6. Flag seedlings to be retained in Management Zones 1 and 2	Pre-earthworks and tree clearing	On-going for period of implementation	Bush Regenerator
7. Site preparation works – including primary weed control	Year 1	One-off	Bush Regenerator
8. Sourcing plants, including <i>Niemeyera whitei</i> replacement and 2 other individuals	Year 1-6	One-off to on-going, pending plant survival	Landowner/ Bush regenerator
9. Transplanting <i>Lepiderema pulchella</i>	Pre-tree clearing	One-off	Bush regenerator
10. Planting <i>Niemeyera whitei</i> replacement and putting no-go zone barriers around the	Post-tree clearing in APZ	One-off to on-going, pending plant survival	Bush Regenerator

ACTION	DEVELOPMENT STAGE – TIMING	DURATION FREQUENCY	RESPONSIBILITY
plant that is to be retained in Management Zone 3			
11. Control of Camphor Laurel from Management Zones 1, 2, and 3 in accordance with strategies in Section 4	Pre-earthworks and ongoing Years 1-6	On-going for period of 5 years after planting	Bush regenerator
12. Weed Control in Management Zones 1 and 2 in accordance with strategies in Section 4 and Appendices 6-9	Years 1-6	Commencing Year 1 (establishment period). Years 1-2 maintenance rotations 2-monthly. For the duration of the 5 year maintenance period, maintenance rotations 3-monthly	Bush regenerator
13. Maintenance of no-go zone barrier fencing	All stages	As needed, weekly checks for breached	Construction Contractor
14. Baseline Monitoring	Pre-earthworks and tree clearing	One-off	Bush Regenerator
15. Establishment Period Monitoring	Years 1-2	6 monthly	Bush regenerator
16. Maintenance Period Monitoring	Years 2-6	6 monthly	Bush regenerator
17. Reporting	All stages	On-going, Annually for 5 years after planting	Bush Regenerator
18. Post-implementation Requirements	Post-construction	One-off	Landowner/ Project Manager

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FIGURES

WALMSLEY'S ROAD

Figure 1
Subject Site Vegetation
Management Overview

Legend

- conservation fencing
- Macadamia protection
- fence delineation islands
- Sewage Line
- Rehabilitation and Restoration Areas
- Study Area
- Management Zone 1
- Management Zone 2
- 10m offset to managed vegetation
- Macadamia protection
- Management Zone 3

Source: 35054_3 PROP Rev R
(Landsurv, Rev Q,
13 June 2019)
aerial photo imagery: Rev R

Projection: GDA94 zone 56
Date: 1 June 2020

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The map displays an aerial view of a residential area with various vegetation management zones and restoration areas. The zones are color-coded and patterned according to the legend. The restoration areas are outlined in red. The map includes a scale bar (0 to 100 meters) and a north arrow. The map is titled 'WALMSLEY'S ROAD' and 'Subject Site Vegetation Management Overview'. The legend includes: conservation fencing, Macadamia protection, fence delineation islands, Sewage Line, Rehabilitation and Restoration Areas, Study Area, Management Zone 1, Management Zone 2, 10m offset to managed vegetation, Macadamia protection, and Management Zone 3. The source is cited as 35054_3 PROP Rev R (Landsurv, Rev Q, 13 June 2019) and aerial photo imagery: Rev R. The projection is GDA94 zone 56 and the date is 1 June 2020. A disclaimer states: 'This map remains the property of Biolink Pty Ltd and should not be reproduced without permission. Cartographic detail may not be accurate when used for survey purposes.'

Figure 2: Management Zones – Western

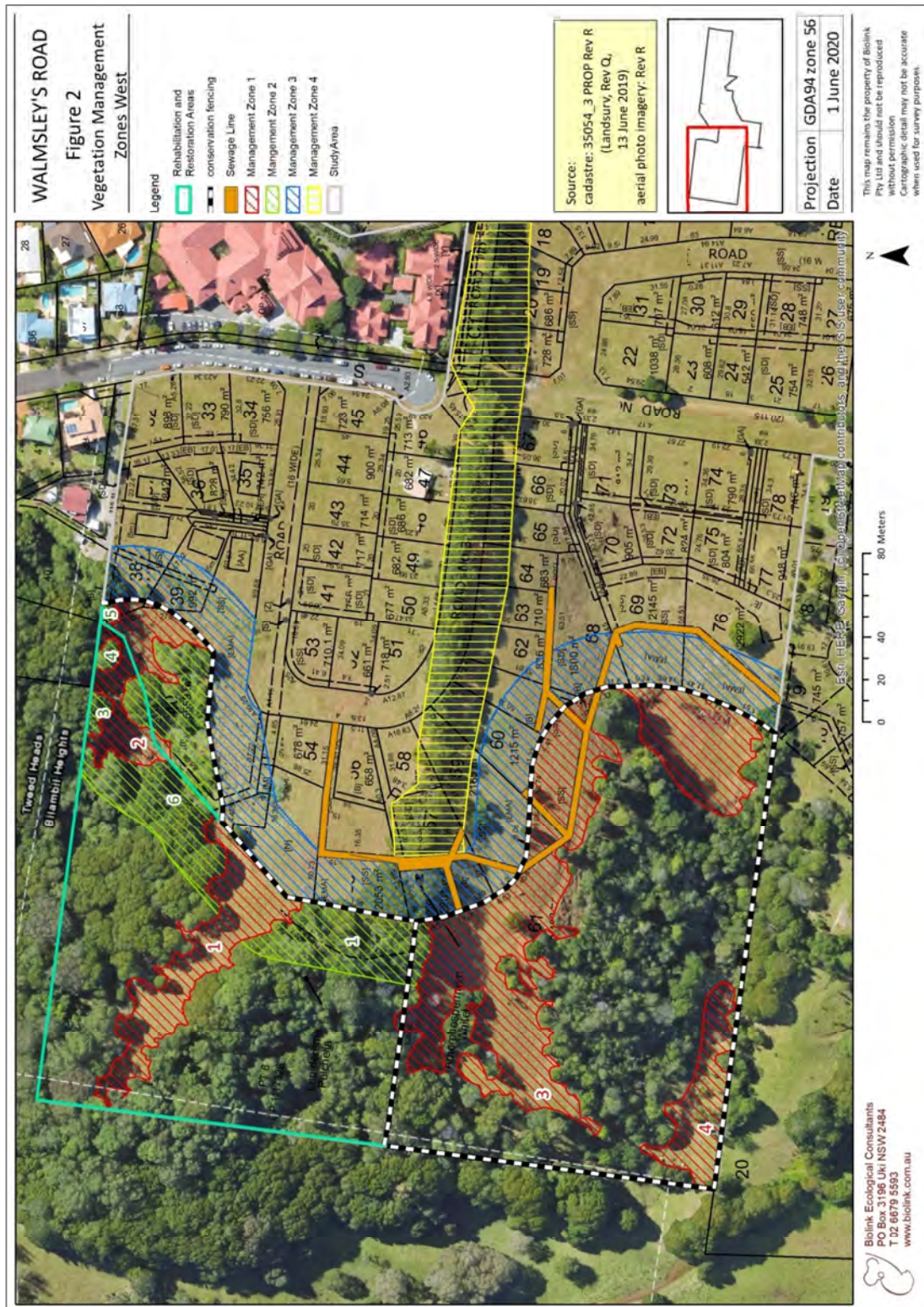
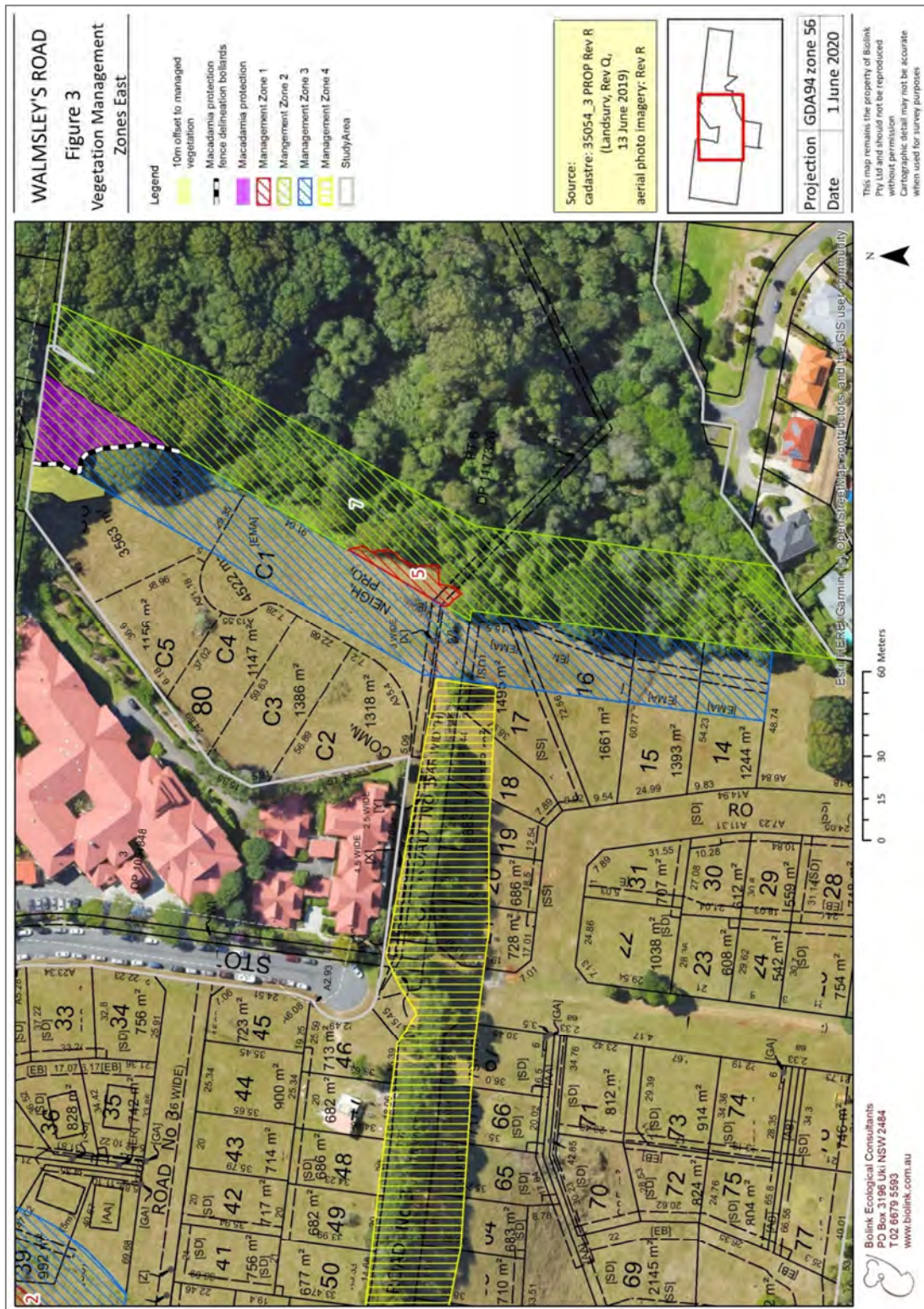


Figure 3: Management Zones – Eastern



WALMSLEY'S ROAD

Figure 4a

Management Zone 1 Restoration Areas West

Legend

- Rehabilitation and Restoration Areas
- Sewage Line
- Restoration Area
- APZ
- StudyArea

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Cartographic detail may not be accurate where used for survey purposes.

Projection GDA 94 zone 56
Date 16 January 2020

Source: 35054_3 PROP Rev R
cadastre: Landsurv Rev Q,
13 June 2019)
aerial photo imagery: Rev R

N

0 25 50 100 Meters

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Figure 4b: Management Zone 1 – Restoration Areas Eastern



ADVANCED TREE PLANTING ADJACENT TO KERB & CHANNEL
Scale: INTSL

ADVANCED TREE PLANTING IN TURF
Scale: INTSL

TYPICAL SHRUB/GROUNDCOVER PLANTING DETAIL
Scale: INTSL

NOTES:

- MINIMUM POT SIZE FOR SUBDIVISION PLANTING IS 45L.
- FOR SPECIFICATION REFER TO TSC DEVELOPMENT CONSTRUCTION SPECIFICATION- C273 LANDSCAPING.
- DETAIL TO BE READ IN CONJUNCTION WITH S.D.006 SERVICE LOCATIONS IN ROADWAYS.
- ROOT BARRIER INSTALL TO MANUFACTURE SPECIFICATION MINIMUM 600MM WIDTH PH 1300 13 66 44 OR EQUIVALENT PRODUCT.

Labels in diagrams:

- ADJACENT PATHWAY
- MIN. 100mm DEPTH MULCH SUBROUND TO TREES IN LANE.
- MIN. 400MM BACK FROM KERB EDGE
- 2400x50x50mm HARD STAKES TO TREES - STAKES MUST NOT INTERFERE WITH BRACING SYSTEM
- SECURE WITH 60mm LONG HESKON TIES IN SQUARE FOOT OR MAX. 100mm TO STAKES
- KEEP MULCH AWAY FROM TREE TRUNK
- MIN. 100mm DEPTH MULCH AS SPECIFIED FOR SHALLOW DISH DRAIN TO BASE OF TREE
- SPARE EDGE KERB AND CHANNEL
- EXCAVATE PLANTING HOLE TO THE SIZES SPECIFIED BACK FILL HOLE WITH GARDEN SOIL MIX AS SPECIFIED
- SUB GRADE
- CULTIVATE SUB GRADE TO MIN. 150mm DEPTH
- ADJACENT PATHWAY
- WITHIN 2m OF ADJACENT PATHWAY
- ROOT BARRIER AS SPECIFIED TO BE PLACED WHERE TREES ADJACENT TO ADJACENT PATHWAY
- PLANT AS SPECIFIED - REFER TO PLANTING DETAILS
- 100mm DEEP ORGANIC MULCH AS SPECIFIED
- 150 DEEP CULTIVATED SUB GRADE AS SPECIFIED
- 300 DEEP TOP SOIL AS SPECIFIED

Figure 7a: Management Zone 3 – APZ Western Boundary

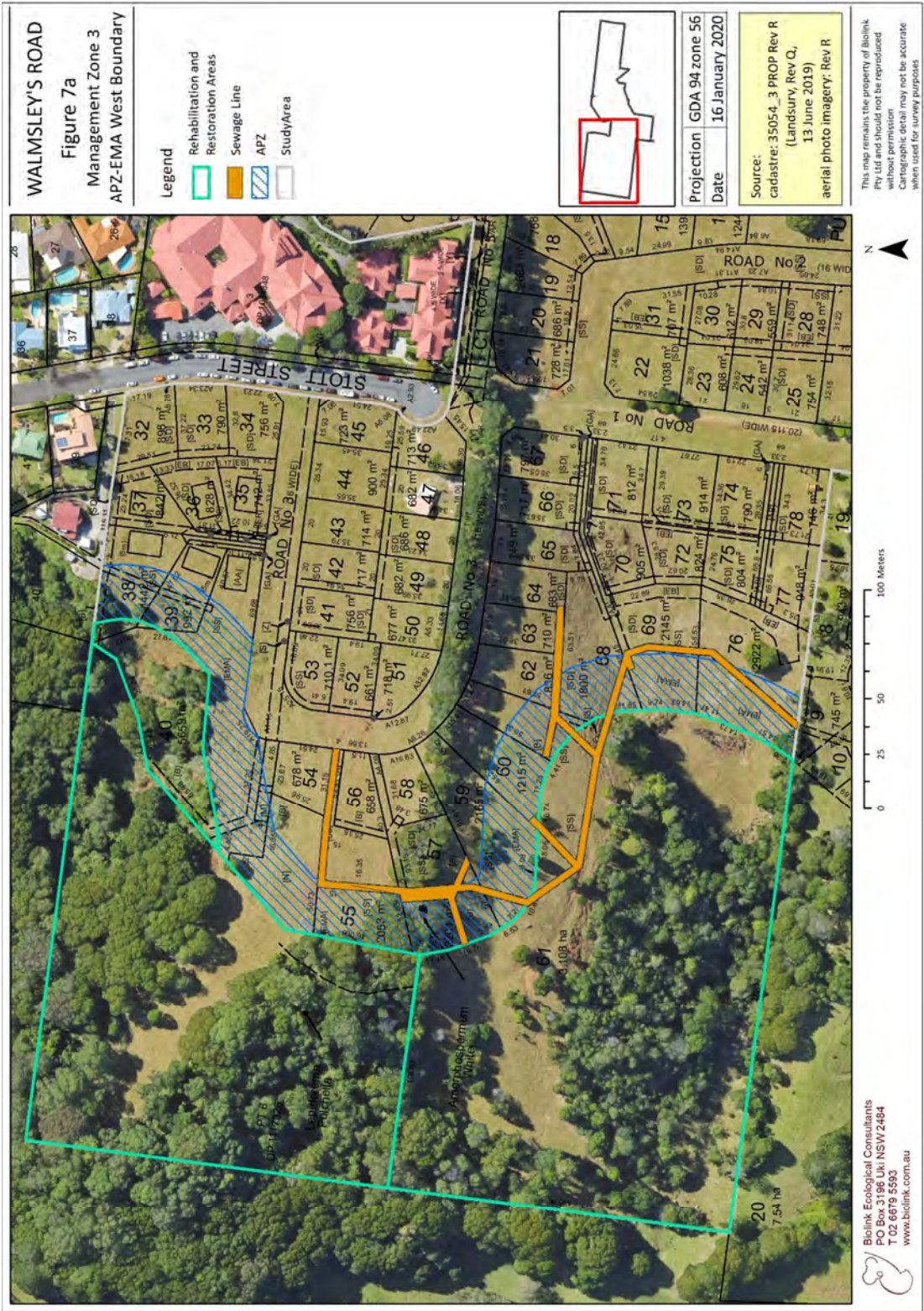


Figure 7b: Management Zone 3 – APZ Eastern Boundary

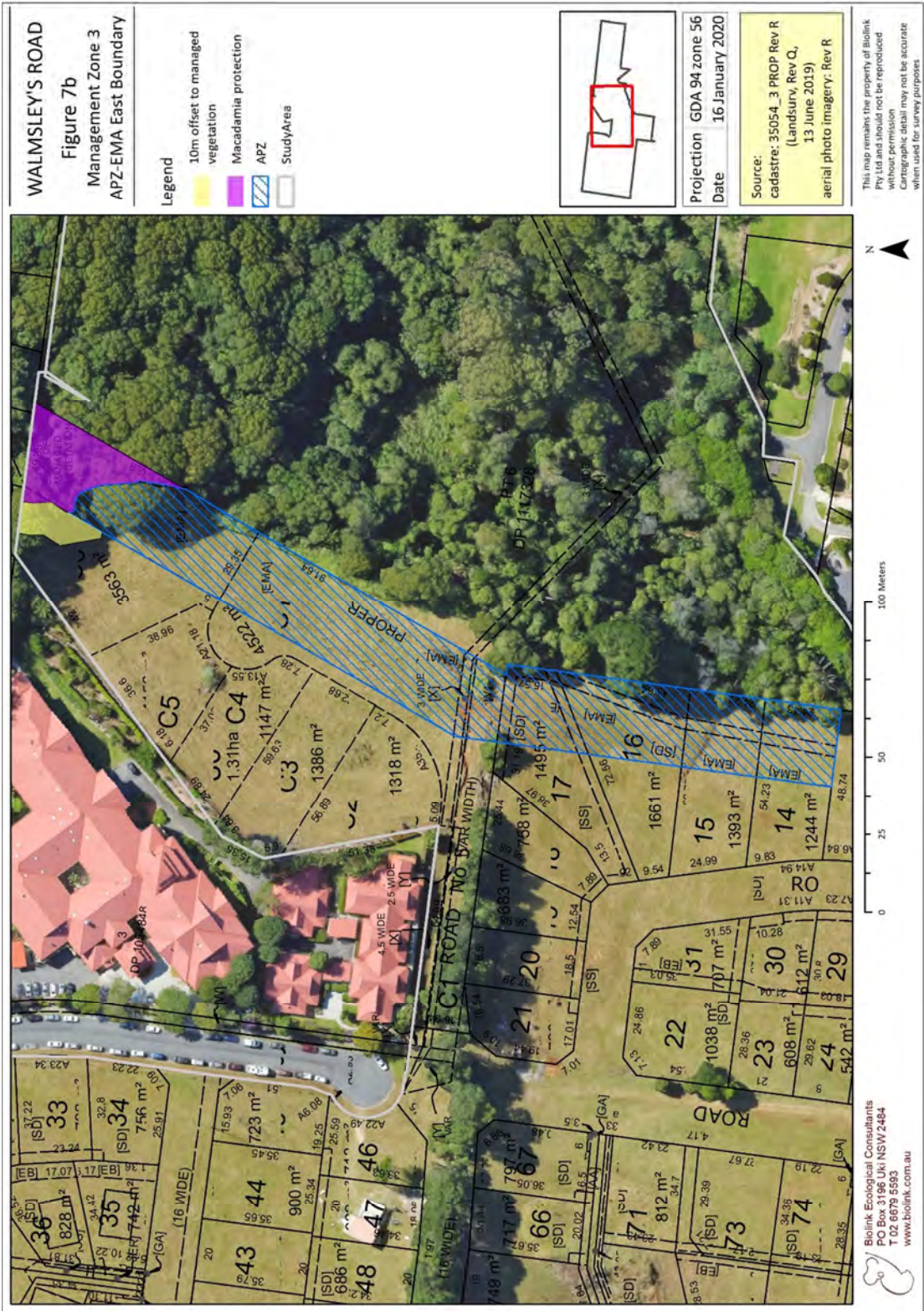


Figure 8a: Tree Removal in Management Zone 4 (Planted Windbreak) - Figure 2 of Tree Removal Plan (Biolink 2020)

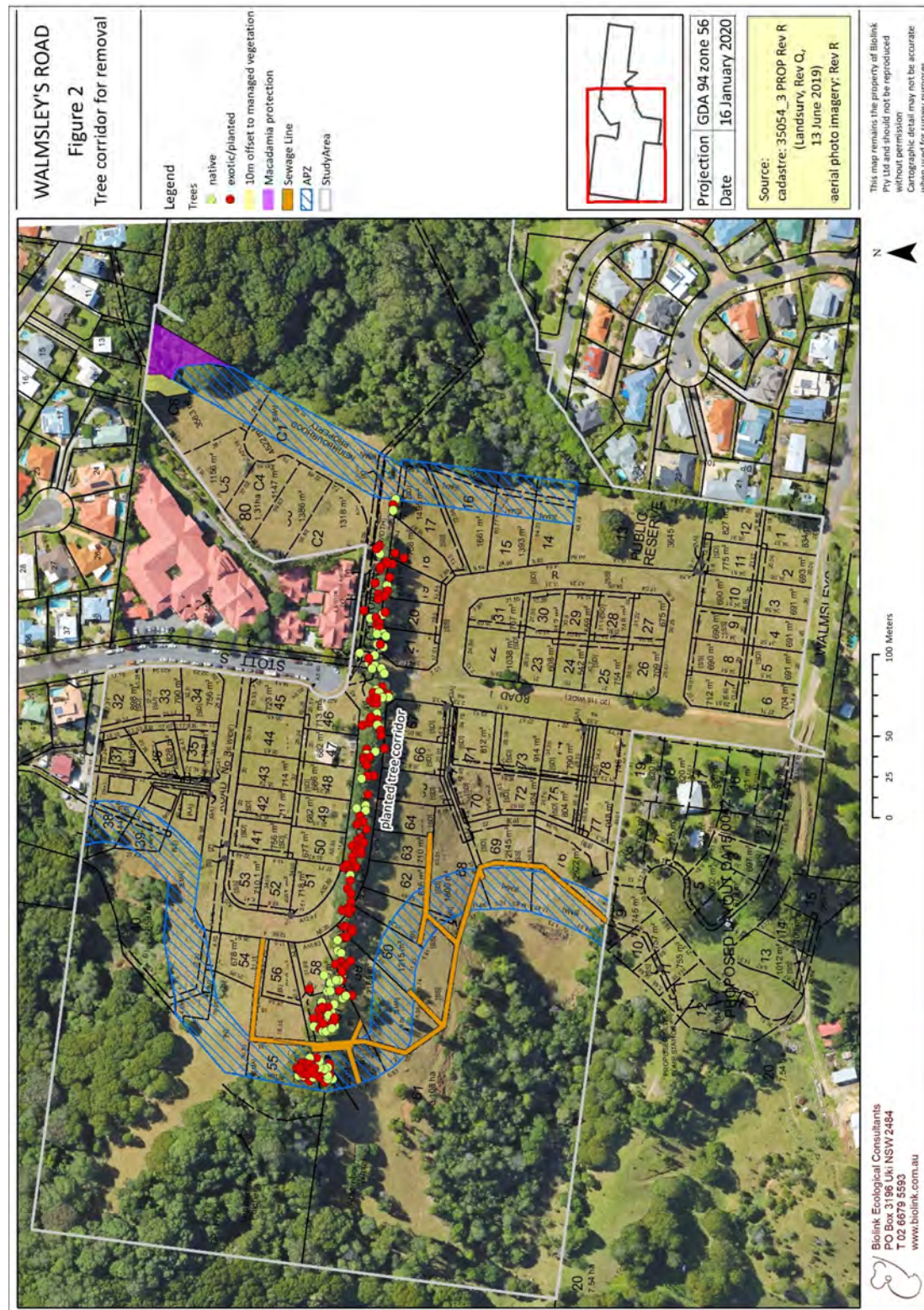


Figure 8b: Tree Removal in Management Zone 4 (Planted Windbreak)
***Lepiderema pulchella* translocation source plants - Figure 3d of Tree Removal Plan (Biolink 2020)**

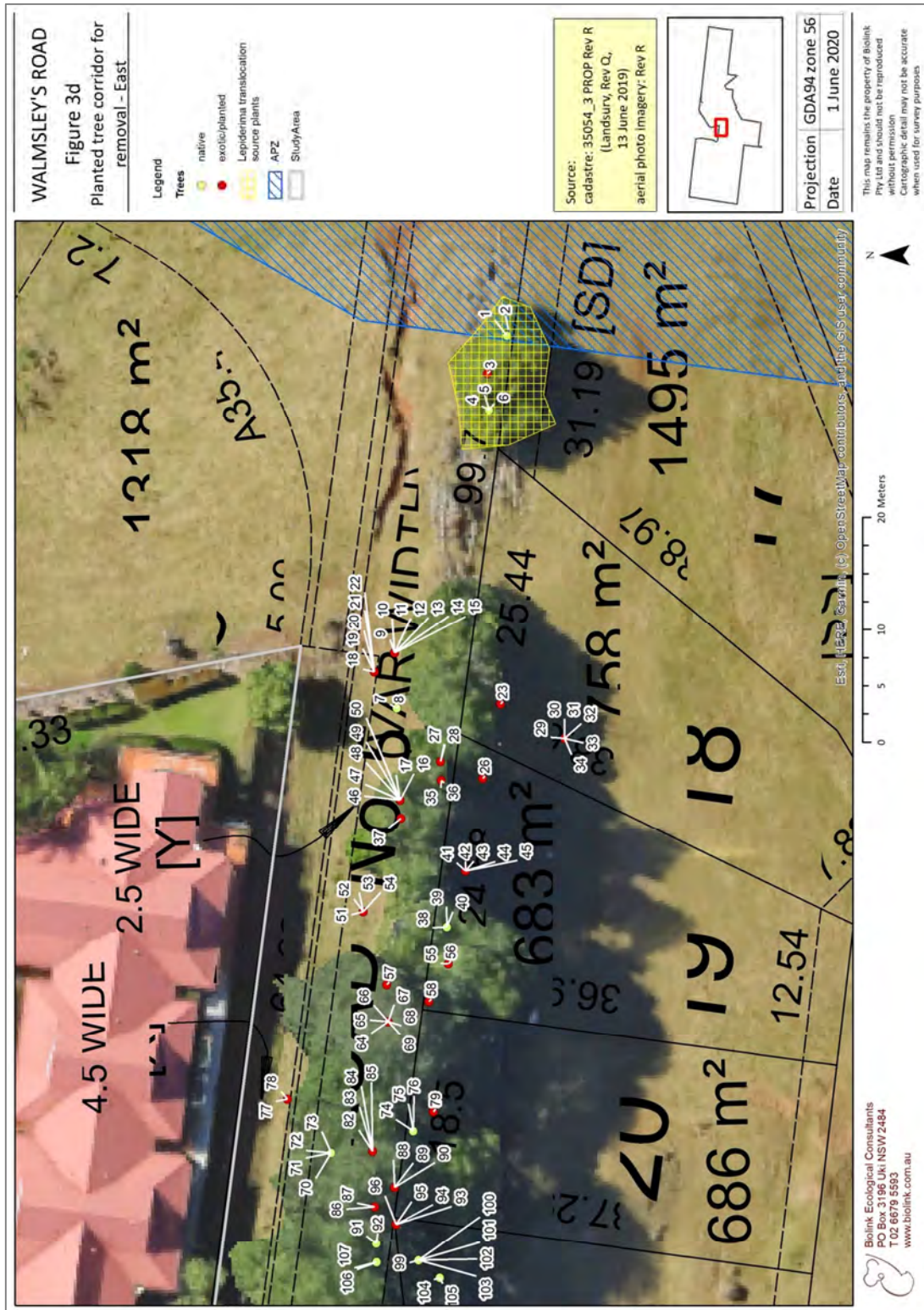


Figure 9: Tree Removal in APZ - Figure 4 of Tree Removal Plan (Biolink 2020)

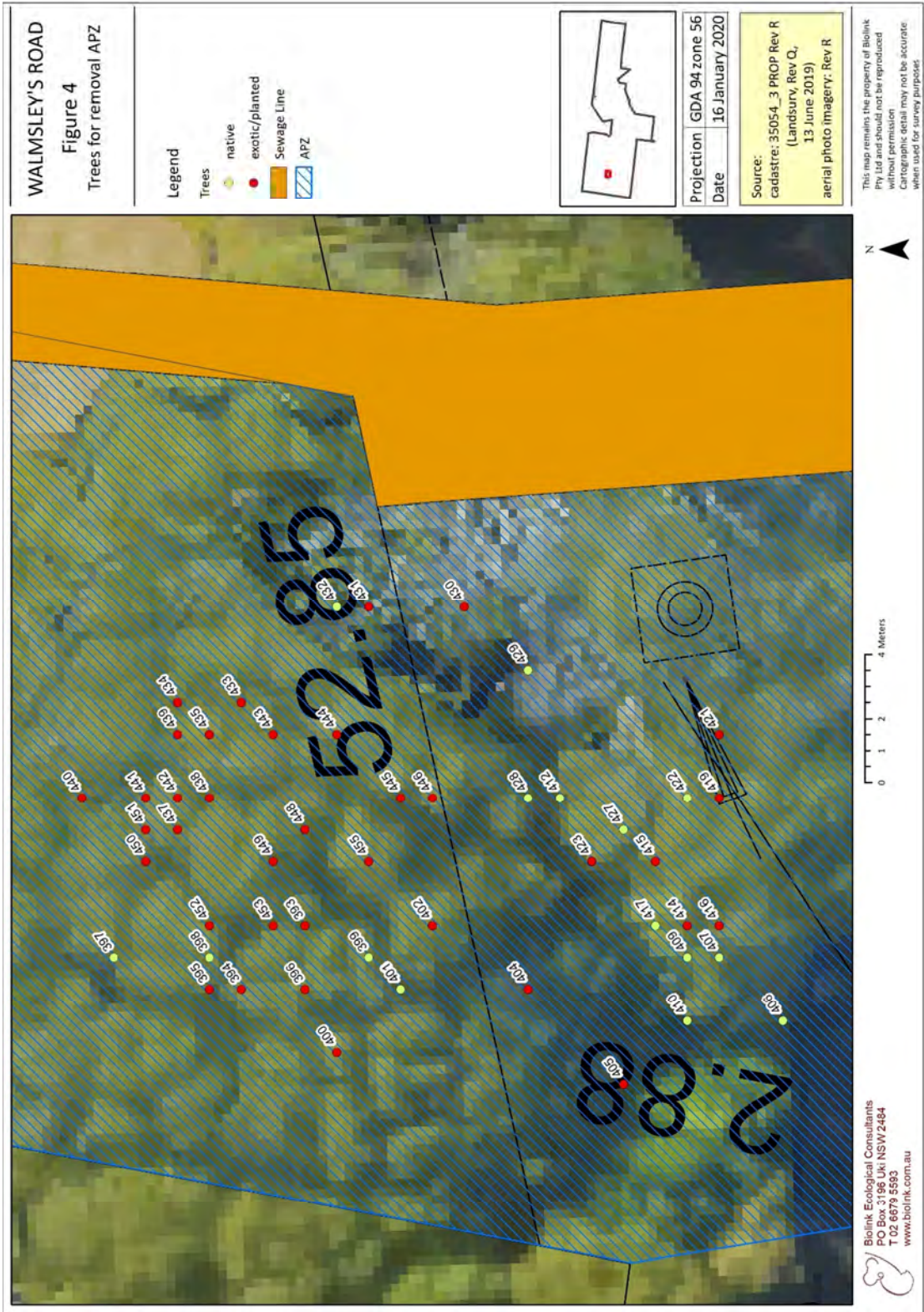


Figure 10: Tree Removal for Sewer Line - Figure 5 of Tree Removal Plan (Biolink 2020)



APPENDICES

Appendix 1: Measures for Protection of Vegetation - For Construction and Tree Clearing Workers

The landowner/project manager is to include this checklist in the brief for the engaged earthmoving and construction workers, and is to advise contractors and sub-contractors of these requirements. These measures are to be implemented during the pre-construction and construction stages of the development.

☐ The guidelines in Australian Standard *AS4970-2009 Protection of Trees on Development Sites* are to be followed to avoid damage to tree trunks and roots systems.

☐ The boundaries of the western and eastern rehabilitation areas (Management Zone 2) are to be delineated using orange construction barrier tape, and to have signs at regular intervals that identify the area as an environmental protection area, and no-go zones for construction and tree removal workers

☐ A worker is to be assigned as responsible for inspection of site twice daily to ensure construction limits (i.e. "no-go zones") set-up and maintained, and that sites for material storage, storage of construction equipment, vehicles turning, and toilets are located outside the "no-go zones". The assigned worker is to check for encroachment into "no-go zones", and to repair barrier tape and signs as needed

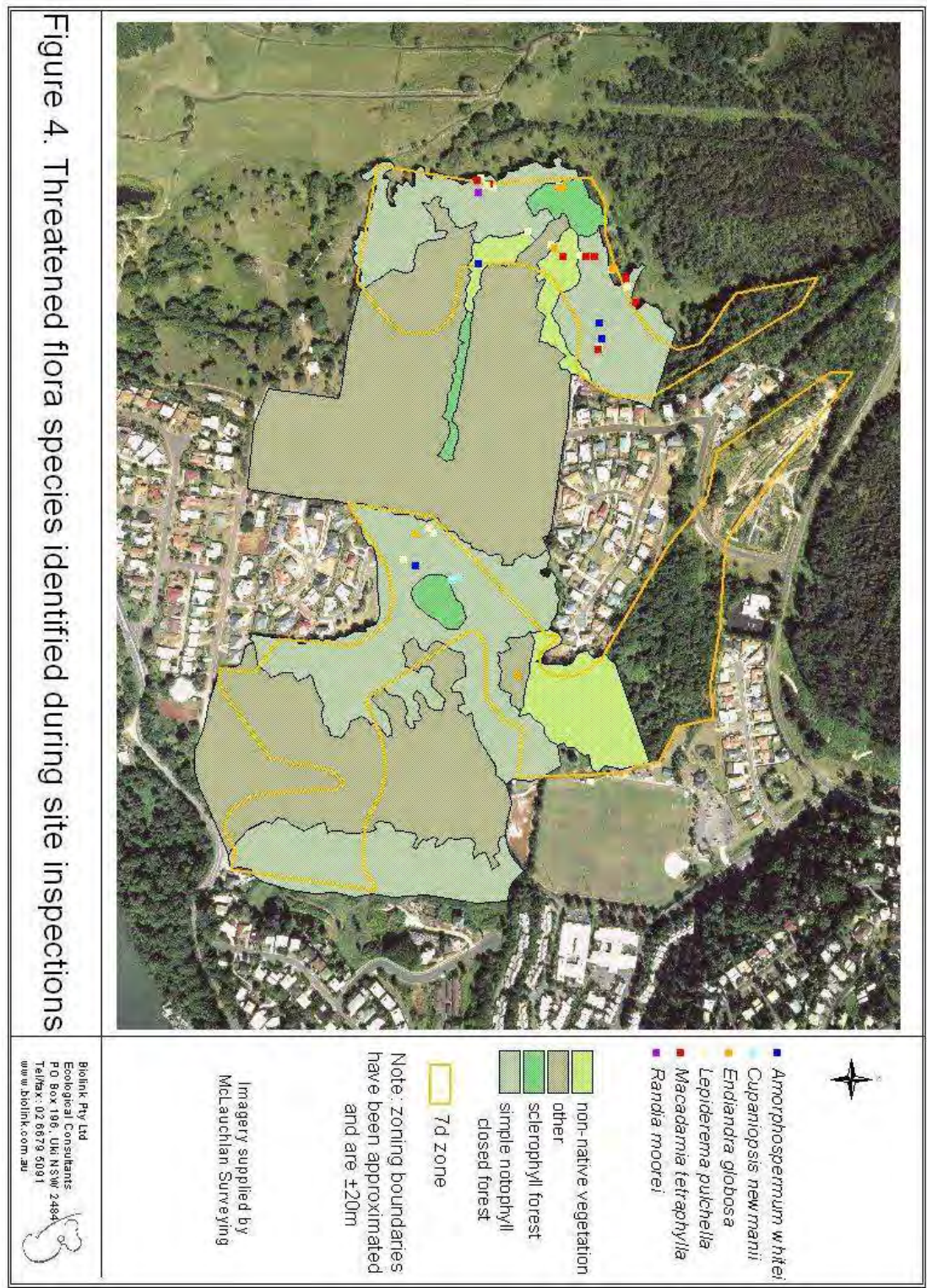
☐ Orange safety barrier tape erected prior to earthmoving and construction worker's commencing, to delineate "no-go zones"

☐ Appropriate erosion and sediment control structures and devices are to be installed prior to commencement of work

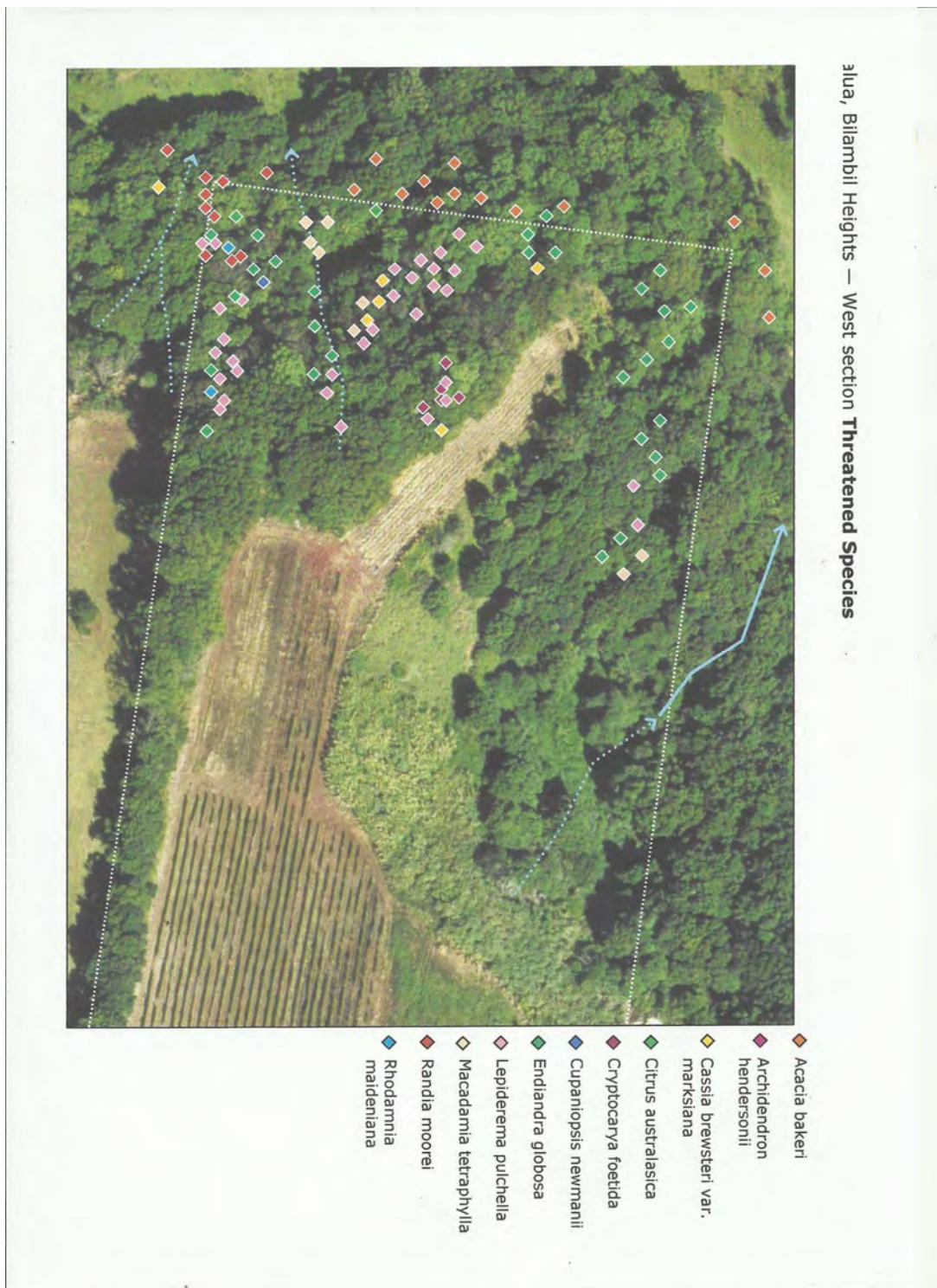
☐ Pre-construction briefings are to be conducted for construction workers and subcontractors, to ensure extra care is taken when moving vehicles around the site, to avoid indirect environmental impacts to vegetation, and to advise workers of "no-go zones", and provision of a plan that provided areas where vegetation can be removed, where the no go zones are located, the limits of construction, and where facilities and storage areas may be placed

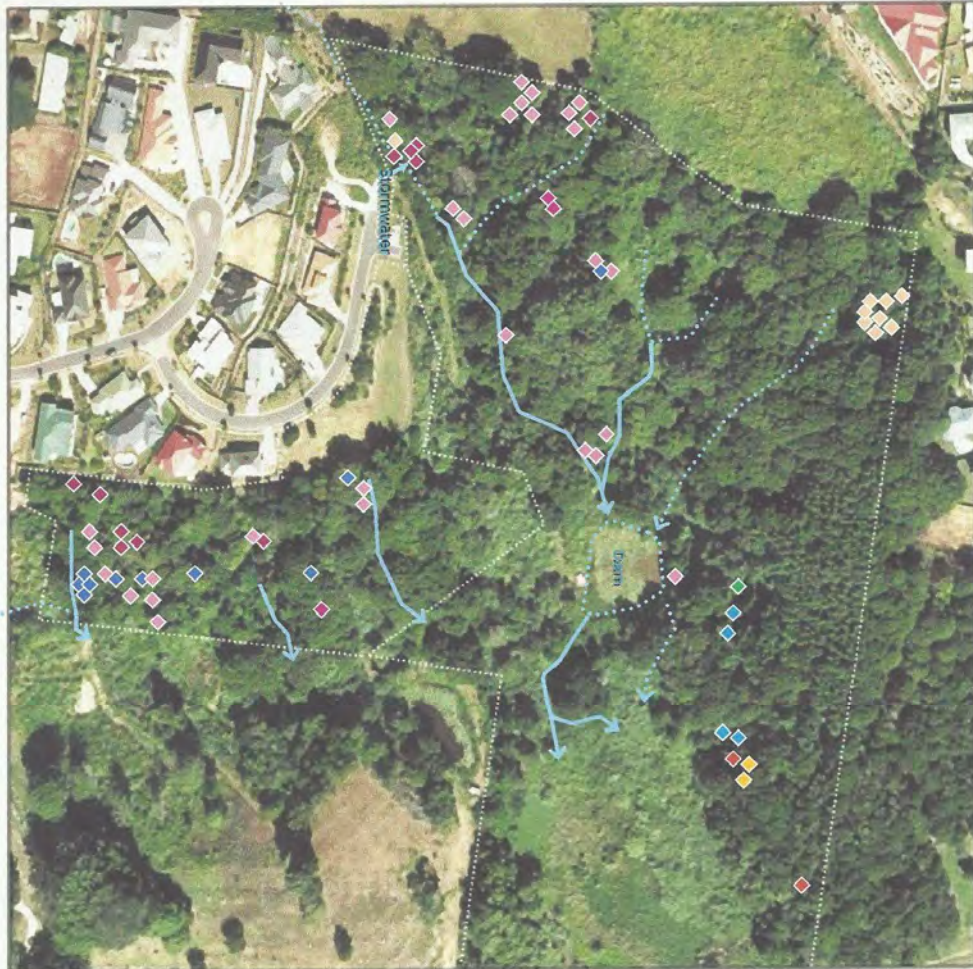
☐ Trees that may contain wildlife are to be marked with red tape and follow the guidelines in the Tree Removal Plan

Appendix 2: Rare and 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. *marksiana* (E)
- ◆ *Citrus australasica* (R)
- ◆ *Cryptocarya foetida* (V)
- ◆ *Cupaniopsis newmanii* (R)
- ◆ *Endiandra globosa* (R)
- ◆ *Lepiderema pulchella* (V)
- ◆ *Macadamia tetraphylla* (V)
- ◆ *Randia moorei* (E)
- ◆ *Rhodamnia maideniana* (R)

Appendix 3: Native Plant Species on the Subject Site and Nearby Remnants in Adjoining Properties (Recorded by Biolink 2011; Bushland Restoration and Rehabilitation Pty Ltd, 2004; Ecosure 2016; Chris Roberts, ongoing; Matthes, this study)

Species Name	Common Name
Trees	
<i>Acacia bakeri</i>	Marblewood
<i>Acacia melanoxylon</i>	Blackwood
<i>Actephila lindleyi</i>	Actephila
<i>Ailanthus triphysa</i>	White Bean
<i>Alectryon tomentosus</i>	Hairy Bird's Eye
<i>Alphitonia excelsa</i>	Red Ash
<i>Apananthe philippensis</i>	Rough-leaved Elm
<i>Araucaria cunninghamii</i>	Hoop Pine
<i>Archidendron hendersonii</i>	White Lace Flower
<i>Archidendron grandiflorum</i>	Pink Laceflower
<i>Archirhodomyrtus beckleri</i>	Rose Myrtle
<i>Archontophoenix cunninghamiana</i>	Bangalow Palm
<i>Arytera distyla</i>	Twin-leaved Coogera
<i>Atractocarpus benthamiana</i>	Native Gardenia
<i>Beilschmiedia elliptica</i>	Grey Walnut
<i>Cassia marksiana</i>	Brush Cassia
<i>Cinnamomum oliveri</i>	Oliver's Sassafras
<i>Citrus australasica</i>	Finger Lime
<i>Clerodendrum floribundum</i>	Smooth Clerodendrum
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Croton verreauxii</i>	Native Cascarilla
<i>Cryptocarya foetida</i>	Stinking Cryptocarya
<i>Cryptocarya glaucescens</i>	Jackwood
<i>Cryptocarya obovata</i>	Pepperberry
<i>Cryptocarya triplinervis</i> var. <i>pubens</i>	Three-veined Laurel
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Cupaniopsis newmanii</i>	Long-leaved Tuckeroo
<i>Daphnandra micrantha</i>	Socketwood
<i>Denhamia celastroides</i>	Orange Boxwood
<i>Diospyros pentamera</i>	Myrtle Ebony
<i>Diploglottis australis</i>	Native Tamarind
<i>Dysoxylum mollissimum</i>	Red Bean
<i>Elaeocarpus reticularis</i>	Blueberry Ash
<i>Elaeocarpus obovatus</i>	Hard Quandong
<i>Elaeodendron australe</i> var. <i>australe</i>	Red Olive Plum
<i>Endiandra discolor</i>	Rose Walnut
<i>Endiandra globosa</i>	Black Walnut
<i>Endiandra sieberi</i>	Hard Corkwood
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum
<i>Ficus coronata</i>	Creek Sandpaper Fig
<i>Ficus fraseri</i>	Sandpaper Fig
<i>Ficus macrophylla</i>	Moreton Bay Fig
<i>Ficus obliqua</i>	Small-leaved Fig

Species Name	Common Name
<i>Ficus rubiginosa</i>	Rusty Fig, Port Jackson Fig
<i>Ficus virens</i>	White Fig
<i>Ficus watkinsiana</i>	Strangler Fig
<i>Flindersia australis</i>	Crows Ash, Teak
<i>Flindersia schottiana</i>	Cudgerie
<i>Glochidion sumatranum</i>	Umbrella Cheese Tree
<i>Guioa semiglauc</i>	Guioa
<i>Jagera pseudorhus</i>	Foambark Tree
<i>Lepiderema pulchella</i>	Fine-leaved Tucker
<i>Lophostemon confertus</i>	Brush Box
<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut
<i>Mallotus philippensis</i>	Red Kamala
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark
<i>Melicope elleryana</i>	Pink Euodia
<i>Myrsine variabilis</i>	Muttonwood
<i>Neolitsea dealbata</i>	White Bollygum
<i>Niemeyera whitei</i>	Rusty Plum
<i>Notelaea johnsonii</i>	Veinless Mock Olive
<i>Notelaea longifolia</i>	Mock Olive
<i>Olea paniculata</i>	Native Olive
<i>Pentaceras australis</i>	Bastard CrowsAsh
<i>Pittosporum lancifolium</i>	Narrow-leaved Orange Thorn
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Pouteria queenslandica</i>	Blush Coondoo
<i>Polyscias murrayi</i>	Pencil Cedar
<i>Polyscias elegans</i>	Celerywood
<i>Pseudoweinmannia lachnocarpa</i>	Rose Marara
<i>Randia moorei</i>	Spiny Gardenia
<i>Rhodamnia argentea</i>	Malletwood
<i>Rhodamnia maideniana</i>	Smooth Scrub Turpentine
<i>Rhodamnia rubescens</i>	Scrub Turpentine
<i>Rhodomirtus psidioides</i>	Native Guava
<i>Rhodosphaera rhodanthema</i>	Tulip Satinwood
<i>Stenocarpus salignus</i>	Beef Scrubwood
<i>Stenocarpus sinuatis</i>	Firewheel Tree
<i>Streblus brunonianus</i>	Whalebone Tree
<i>Symplocos thwaitesii</i>	Buff Hazelwood
<i>Syncarpia glomulifera</i>	Turpentine (planted)
<i>Synoum glandulosum</i>	Scentless Rosewood
<i>Syzygium australe</i>	Brush Cherry
<i>Syzygium francisii</i>	Giant Water Gum
<i>Syzygium oleosum</i>	Blue Lillypilly
<i>Syzygium smithii</i>	Lillypilly
<i>Tasmania insipida</i>	Brush Pepperbush
<i>Toeckima dasyrrhache</i>	Blunt-leaved Steelwood
<i>Toeckima tenax</i>	Brush Teak
<i>Vitex lignum-vitae</i>	Lignum-vitae
<i>Wilkea huegliana</i>	Veiny Wilkea
<i>Wilkea austroqueenslandica</i>	Smooth Wilkea
Shrubs	
<i>Alpinia caerulea</i>	Native Ginger
<i>Breynia oblongifolia</i>	Native Coffee Bush
<i>Citrus australasica</i>	Finger Lime

Species Name	Common Name
<i>Cordyline petiolaris</i>	Broad-leaved Palm Lily
<i>Cordyline stricta</i>	Narrow-leaved Palm Lily
<i>Cryptocarya laevigata</i>	Glossy Laurel
<i>Eupomatia laurina</i>	Bolwarra
<i>Exocarpus latifolius</i>	Broad-leaved Cherry
<i>Homolanthus populifolius</i>	Bleeding Heart
<i>Macaranga tanarius</i>	Macaranga
<i>Ptilidostigma glabrum</i>	Plum Myrtle
<i>Psychotria simmondsiana</i> var. <i>glabrescens</i>	Small Psychotria
<i>Tabernaemontana pandacacui</i>	Banana Bush
<i>Trema tomentosa</i> var. <i>viridis</i>	Poison Peach
<i>Wilkea huegeliana</i>	Veiny Wilkea
Vines and Scramblers	
<i>Austrosteenisia blackii</i>	Blood Vine
<i>Calamus muelleri</i>	Lawyer Vine
<i>Carissa ovata</i>	Carissa
<i>Carronia multiseptata</i>	Carronia
<i>Celastrus australis</i>	Staff Vine
<i>Cissus antartica</i>	Water Vine
<i>Cissus hypoglauca</i>	Five-leaf Water Vine
<i>Derris involuta</i>	Native Derris
<i>Dioscorea transversa</i>	Native Yam
<i>Flagellaria indica</i>	Whip Vine
<i>Geitenoplesium cymosum</i>	Scrambling lilly
<i>Glycine microphylla</i>	Small-leaved Glycine
<i>Hibbertia scandens</i>	Guinea flower
<i>Maclura cochinchinensis</i>	Cockspur Thorn
<i>Parsonsia straminea</i>	Common Silkpod
<i>Rhodamnia maideniana</i>	Smooth Scrub Turpentine
<i>Ripogonum album</i>	White Supplejack
<i>Rubus moluccanus</i>	Molucca Bramble
<i>Rubus rosifolius</i>	Native Raspberry
<i>Smilax australis</i>	Austral Sarsparilla
<i>Stephania japonica</i> var. <i>discolor</i>	Snake Vine
<i>Trophis scandens</i>	Burny Vine
Groundcovers	
<i>Adiantum diaphanum</i>	Filmy Maidenhair Fern
<i>Adiantum formosum</i>	Giant Maidenhair Fern
<i>Asplenium australasicum</i>	Bird's Nest Fern
<i>Blechnum cartilagineum</i>	Gristle Fern
<i>Centella asiatica</i>	Pennywort
<i>Christella dentate</i>	Binung Fern
<i>Commelina cyanea</i>	Native Wandering Jew
<i>Cyathea australia</i>	Rough Treefern
<i>Cyathea cooperi</i>	Straw Treefern
<i>Cynodon dactylon</i>	Common Couch
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Doodia media</i>	Common Rasp Fern
<i>Gahnia aspera</i>	Red-fruited Saw-sedge
<i>Gleichenia</i> sp.	Coral Fern
<i>Hydrocotyle pedicellosa</i>	Pennywort
<i>Lomandra longifolia</i>	Spiny-headed Mat-Rush
<i>Oplismenus aemulus</i>	Basket Grass

Species Name	Common Name
<i>Oplismenus imbecillis</i>	Basket Grass
<i>Platycerum superbum</i>	Staghorn
<i>Psilotum nudum</i>	Skeleton Fork Fern
<i>Pteridium esculentum</i>	Bracken Fern
<i>Sticherus flabellatus</i>	Shiny Fan Fern

*Note: Species in **bold** are those identified as rare or threatened plant species*

**Appendix 4: Fauna Species Recorded on Subject Site and Nearby Remnants
(Recorded by Biolink 2011; Bushland Restoration and Rehabilitation Pty Ltd,
2004; Chris Roberts, ongoing)**

SPECIES NAME	COMMON NAME
AMPHIBIA	
<i>Chaunus marinus*</i>	Cane Toad
<i>Limnodynastes peroni</i>	Striped Marsh Frog
REPTILIA	
<i>Morelia spilota</i>	Carpet Python
<i>Boiga irregularis</i>	Brown Tree Snake
<i>Cacophis kreftii</i>	Dwarf Crown Snake
<i>Dendrelaphis punctulata</i>	Green Tree Snake
<i>Vermicella annulata</i>	Bandy-Bandy
<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake
<i>Pseudonaja textilis</i>	Eastern Brown Snake
<i>Tropidechis carinatus</i>	Rough-scaled Snake
<i>Cryptoblepharus virgatus</i>	Skink
<i>Lampropholis delicata</i>	Garden Skink
<i>Pogona barbata</i>	Eastern Bearded Dragon
<i>Tiliqua scincoides</i>	Eastern Blue-tongue Lizard
<i>Varanua varius</i>	Lace Monitor
AVES	
<i>Accipiter fasciatus</i>	Brown Goshawk
<i>Haliastur sphenurus</i>	Whistling Kite
<i>Anas superciliosa</i>	Pacific Black Duck
<i>Ardea ibis</i>	Cattle Egret
<i>Cracticus nigrogularis</i>	Pied Butcherbird
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Strepera graculina</i>	Pied Currawong
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Lalage leucomela</i>	Varied Triller
<i>Centropus phasianinus</i>	Pheasant Coucal
<i>Vanellus miles</i>	Masked Lapwing

<i>Psophodes olivaceus</i>	Eastern Whipbird
<i>Chalcophaps indica</i>	Emerald Dove
<i>Columbia livia</i> *	Rock Dove (Feral Pigeon)
<i>Geopelia humeralis</i>	Bar-shouldered Dove
<i>Leucosarcia melanoleuca</i>	Wonga Pigeon
<i>Lopholaimus antarcticus</i>	Topknot Pigeon
<i>Macropygia amboinensis</i>	Brown Cuckoo Dove
<i>Ocyphaps lophotes</i>	Crested Pigeon
<i>Ptilinopus regina</i>	Rose-crowned Fruit-dove
<i>Corvus sp.</i>	Raven/Crow
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo
<i>Dicaeum hirundinaceum</i>	Mistletoe Bird
<i>Dicrurus bracteatus</i>	Spangled Drongo
<i>Rhipidura fuliginosa</i>	Grey Fantail
<i>R.leucophrys</i>	Willie Wagtail
<i>R. rufifrons</i>	Rufous Fantail
<i>Falco berigora</i>	Brown Falcon
<i>F. longipennis</i>	Australian Hobby
<i>Dacelo novaeguineae</i>	Laughing Kookaburra
<i>Hirundo neoxena</i>	Welcome Swallow
<i>Malurus cyaneus</i>	Superb Fairy-wren
<i>Alectura lathami</i>	Australian Brush Turkey
<i>Lichmera indistincta</i>	Brown Honeyeater
<i>Manorina melanocephala</i>	Noisy Miner
<i>Meliphaga lewinii</i>	Lewin's Honeyeater
<i>Merops ornatus</i>	Rainbow Bee-eater
<i>Sphecotheres viridis</i>	Figbird
<i>Colluricincla harmonica</i>	Grey Shrike-thrush
<i>Pachycephala pectoralis</i>	Golden Whistler
<i>Acanthiza lineata</i>	Striated Thornbill
<i>A. pusilla</i>	Brown Thornbill
<i>Pardalotus punctatus</i>	Spotted Pardalote
<i>P. striatus</i>	Striated Pardalote
<i>Sericornis frontalis</i>	White-browed Scrubwren
<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin
<i>Neochmia temporalis</i>	Red-browed Finch

<i>Taeneopygia bichenovii</i>	Double-barred Finch
<i>Trichoglossus haemotodus</i>	Rainbow Lorikeet
<i>Threskiornis Molucca</i>	Australian White Ibis
<i>Zosterops lateralis</i>	Silvereye
MAMMALIA	
<i>Canis familiaris</i> */ <i>Vulpes vulpes</i>	Dog/Fox Scat
<i>Lepus capensis</i> *	Hare
<i>Wallabia bicolor</i>	Swamp Wallaby
<i>Saccolaimus flaviventris</i> 3	Yellow-bellied Sheathtail Bat
<i>Mus musculus</i> *	House Mouse
<i>Rattus fuscipes</i>	Bush Rat
<i>R. rattus</i> *	Black Rat
<i>Isodon macrourus</i>	Northern Brown Bandicoot
<i>Trichosurus caninus</i>	Bobuck
<i>Pseudocheirus peregrinus</i>	Ring-tailed Possum
<i>Trichosurus vulpecula</i>	Common Brushtail Possum
<i>Pteropus Alecto</i>	Black Flying-fox
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat
<i>Miniopterus australis</i>	Little Bent-wing Bat
<i>M. schreibersii oceanensis</i>	Eastern Bent-wing Bat
<i>Nyctophilus sp</i>	Long-eared Bat
<i>Vespadalus pumilus</i>	Eastern Forest Bat
<i>Tachyglossus aculeatus</i>	Echidna

* *Introduced species*

Appendix 5: Weed Species Recorded in surrounding area

(Recorded by Biolink 2011; Bushland Restoration and Rehabilitation Pty Ltd, 2004; Ecosure 2016; Chris Roberts, ongoing; Matthes, this study)

Species Name	Common Name
<i>Cinnamomum camphora</i>	Camphor Laurel
<i>Eriobotrya japonica</i>	Loquat
<i>Eugenia uniflora</i>	Brazilian Cherry
<i>Ficus benjamina</i> (planted)	Weeping Fig (?planted)
<i>Ligustrum lucidum</i>	Broad-leaved Privet
<i>Schefflera actinophylla</i>	Umbrella Tree
<i>Duranta erecta</i>	Duranta, Giesha Girl
<i>Lantana camara</i>	Lantana
<i>Ligustrum sinense</i>	Small-leaved Privet
<i>Ochna serrulata</i>	Ochna
<i>Ricinus communis</i>	Caster Oil Plant
<i>Rubus ellipticus</i>	Yellow Raspberry
<i>Senna alata</i>	Candlebush
<i>Senna pendula</i> var. <i>glabrata</i>	Winter Senna
<i>Senna septemtrionalis</i>	Arsenic Bush
<i>Solanum capsicoides</i>	Devil's Apple
<i>Solanum chrysotrichum</i>	Giant Devil's Fig
<i>Solanum mauritianum</i>	Wild Tobacco
<i>Triumfetta rhomboidea</i>	Chinese Burr
<i>Asparagus plumosus</i>	Climbing Asparagus
<i>Asparagus africanus</i>	Asparagus Fern
<i>Desmodium uncinatum</i>	Silver-leaf Desmodium
<i>Ipomoea cairica</i>	Five-leaf Morning Glory
<i>Macroptilium atropurpureum</i>	Siratro
<i>Neonotonia wightii</i>	Glycine
<i>Passiflora edulis</i>	Edible Passionfruit
<i>Passiflora suberosa</i>	Corky Passionfruit
<i>Passiflora subpeltata</i>	White Passionfruit
<i>Solanum seaforthianum</i>	Climbing Nightshade
<i>Vigna parkeri</i>	Creeping Vigna
<i>Ageratina adenophora</i>	Crofton Weed
<i>Ageratina riparia</i>	Mistflower
<i>Ageratum houstonianum</i>	Billy Goat Weed
<i>Asclepias curvassica</i>	Red-headed Cotton Bush
<i>Bidens pilosa</i>	Farmer's Friends
<i>Chamaesyce hirta</i>	Asthma Plant
<i>Chloris gayana</i>	Rhodes Grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conyza species</i>	Fleabane species
<i>Cuphea carthagenensis</i>	Cuphea
<i>Gomphocarpus fruticosus</i>	Milkweed
<i>Hypochaeris radicata</i>	Catsear, Flatweed
<i>Melinis minutiflora</i>	Molasses Grass
<i>Panicum maximum</i> var. <i>trichoglume</i>	Green Panic
<i>Paspalum wettsteinii</i>	Broad-leaved Paspalum
<i>Pennisetum purpureum</i>	Elephant Grass, Bahna Grass
<i>Senecio madagascariensis</i>	Fireweed

<i>Sida rhombifolia</i>	Paddy's Lucerne
<i>Sphagneticola trilobata</i>	Singapore Daisy
<i>Sporobolus</i> sp.	Rat's Tail Grass
<i>Tagetes minuta</i>	Stinking Roger
<i>Trifolium</i> species	Clover species

Appendix 6: Measures For Weed Control and Management

(adapted from BSRLG, 2000 and DPI, 2014)

Species Name	Common Name	Baseline Frequency	Management Approach and Control Method
Trees			
<i>Cinnamomum camphora</i>	Camphor Laurel	Common	Control isolated plants, seedlings and saplings before seed set as a priority. Hand pull seedlings and juveniles. Spray thickets of seedlings 1:50 + LI700. CS&P saplings 1:1.5 SI trees >25cm dbh undiluted 2ml/inject, SI trees less than 25cm dbh 1:1 2ml/inject
<i>Eriobotrya japonica</i>	Loquat	Not currently in HRA	If appears in restoration area, hand pull seedlings, C&P saplings and trees 1:1.5; spray regrowth 1:100 +LI700
<i>Eugenia uniflora</i>	Brazilian Cherry	Not currently in HRA	If appears in restoration area, hand pull seedlings; C&P saplings and trees 1:1.5; SI 1:1.5. Spray early autumn
<i>Ficus benjamina</i> (planted)	Weeping Fig (?planted)	Infrequent – One tree	May be able to be removed as part of earthworks, if not C&P 1:1.5
<i>Ligustrum lucidum</i>	Broad-leaved Privet	Occasional	Best time summer-autumn. Hand pull seedlings; spray seedlings 1:50 + LI700; CS&P saplings 1:1.5; SI undiluted 2 ml/inject.
<i>Schefflera actinophylla</i> #	Umbrella Tree	Not currently in HRA. One plant outside on western boundary to be controlled	If appears in restoration area, control isolated plants and mature plants before seed set. Hand pull seedlings and juveniles. CS&P trees 1:1.5. Prevent cut stems from resprouting on ground.
Shrubs			
<i>Duranta erecta</i>	Duranta, Giesha Girl	Infrequent	Spray seedlings 1:100 +LI700; CS&P 1:1.5; cut down and spray regrowth 1:100 + LI 700; SI 1:1.5 large shrubs when actively growing
<i>Lantana camara</i>	Lantana	Occasional	Control isolated plants and mature plants before seed set. Hand pull seedlings and juveniles
<i>Ligustrum sinense</i>	Small-leaved Privet	Infrequent	Control isolated plants and mature plants before seed set. Best time summer-autumn. Hand pull seedlings; spray seedlings 1:50 + LI700; CS&P saplings 1:1.5; SI undiluted 2 ml/inject.
<i>Ochna serrulata</i>	Ochna	Infrequent	Control before seed set. DO NOT Hand pull seedlings and juveniles. SI 1:1.5; cut low down CS&P

			undiluted; spray 1:50 +LI700. Spray late spring. May need to use a metsulfuron-methyl mix.
<i>Ricinus communis</i>	Caster Oil Plant	Not currently in HRA	If appears in restoration area, hand pull seedlings and small plants, knock down larger plants and spray seedlings and coppice shoots 1:50, CS&P 1:1.5
<i>Rubus ellipticus</i>	Yellow Raspberry	Infrequent	Hand remove small plants with care to remove all roots. C&P metsulphuron-methyl 28g/L of water
<i>Senna alata</i> #	Candlebush	Not currently in HRA. One plant outside on western boundary to be controlled	If appears in restoration area, Best time summer-autumn. C&P undiluted
<i>Senna pendula</i> var. <i>glabrata</i>	Winter Senna	Infrequent	Control plants before seed set. Bag seed heads. Hand pull seedlings and juveniles carefully. Shrubs C&P 1:1.5 or SI 1:1.5, spot spray 1:50
<i>Senna septemtrionalis</i>	Arsenic Bush, Smooth Senna	Not currently in HRA	If appears in restoration area, Control plants before seed set. Bag seed heads. Hand pull seedlings and juveniles carefully. Shrubs C&P 1:1.5 or SI 1:1.5, spot spray 1:50
<i>Solanum capsicoides</i>	Devil's Apple	Infrequent	Small plants hand remove with care not to get spiked. Spray 1:100 +LI700 or 1:50 with Brushoff (10g/100Lmix) with a wetting agent
<i>Solanum chrysotrichum</i> ^	Giant Devil's Fig	Common	Small plants hand remove with care not to get spiked. Handgun application 1:50 with Brushoff (10g/100Lmix) with a wetting agent
<i>Solanum mauritianum</i> ^	Wild Tobacco	Infrequent	Spray foliage seedlings 1:50; C&P or SI 1:1.5
<i>Triumfetta rhomboidea</i>	Chinese Burr	Common	Hand pull small seedlings, Foliar spray dense areas
Vines-Scramblers			
<i>Asparagus plumosus</i>	Climbing Asparagus	Not currently in HRA	If appears in restoration area, hand remove small plants, cut crown out, spot spray active regrowth 1:50 + LI700; CS&P 1:1.5
<i>Asparagus africanus</i>	Asparagus Fern	Infrequent	Hand remove small plants, cut crown out, spot spray between flower and fruit 1:50 + LI700; CS&P 1:1.5
<i>Desmodium uncinatum</i>	Silver-leaf Desmodium	Not currently in HRA	If appears in restoration area, spray 1:50 + LI700; CS&P tuberous root 1:1.5. Bag seed heads

<i>Ipomoea cairica</i>	Five-leaf Morning Glory	Infrequent	Roll up runners. Spot spray 1:100 +LI700 or 1:50 with metsulfuron-methyl (1.5g/10L), S&P 1:1.5
<i>Macroptilium atropurpureum</i>	Siratro	Occasional	spray 1:50 + LI700; CS&P 1:1 or foliar spray metsulfuron-methyl 1 g/10L of water. Bag seed heads
<i>Neonotonia wightii</i>	Glycine	Not currently in HRA	If appears in restoration area, spray 1:50 + LI700; CS&P 1:1. Bag seed heads
<i>Passiflora edulis</i>	Edible Passionfruit	Not currently in HRA	If appears in restoration area, hand pull or CS&P vines 1:1.5
<i>Passiflora suberosa</i>	Corky Passionfruit	Infrequent	Hand pull seedlings; CS&P vines 1:1.5; spray regrowth 1:50 + LI700
<i>Passiflora subpeltata</i>	White Passionfruit	Infrequent	Hand pull seedlings; CS&P vines 1:1.5; spray regrowth 1:50 + LI700
<i>Solanum seaforthianum</i>	Climbing Nightshade	Infrequent	Hand pull seedlings; CS&P vines 1:1.5; spray regrowth 1:100 + LI700
<i>Vigna parkeri</i>	Creeping Vigna	Common	spray 1:50 + LI700; CS&P 1:1. Bag seed heads may need 2,4-D
Groundcovers-Grasses-Annuals			
<i>Ageratina adenophora</i>	Crofton Weed	Infrequent	Hand pull seedlings. Spray during active growth 1:200 or 1:100 +LI700. May need metsulfuron-methyl mix 1.5g/10L of water
<i>Ageratina riparia</i>	Mistflower	Infrequent	Hand pull seedlings. Spray during active growth 1:200 or 1:100 +LI700. May need metsulfuron-methyl mix 2.5g/10L of water
<i>Ageratum houstonianum</i>	Billy Goat Weed	Occasional	Hand pull small seedlings. Spray during active growth 1:200 or 1:100 +LI700. May need metsulfuron-methyl mix 1g/10L of water with surfactant
<i>Asclepias curvassica</i>	Red-headed Cotton Bush	Infrequent	Hand pull all plants. Any roots in ground CS&P 1:1.5.
<i>Bidens pilosa</i>	Farmer's Friends	Infrequent	Control individuals prior to seed set. Hand pull.
<i>Chamaesyce hirta</i>	Asthma Plant	Infrequent	Hand pull. Foliar spray
<i>Chloris gayana</i>	Rhodes Grass	Common	Control individuals prior to seed set. Hand pull, mattock or spray thickets. Spray Glyphosate 1:100 +LI 700
<i>Cirsium vulgare</i>	Spear Thistle	Infrequent	Hand control before seed set.
<i>Conyza species</i>	Fleabane species	Occasional	Control individuals prior to seed set. Hand pull
<i>Cuphea carthagenensis</i>	Cuphea	Infrequent	Control individuals prior to seed set. Hand pull
<i>Gomphocarpus fruticosus</i>	Milkweed	Occasional	Hand pull all plants. Any roots in ground CS&P 1:1.5.
<i>Hypochaeris radicata</i>	Catsear, Flatweed	Occasional	Spot spray 1:150
<i>Melinis minutiflora</i>	Molasses Grass	Not currently in HRA	If appears in restoration area, control individuals prior to seed set. Hand pull, mattock or spray

			thickets. Spray Glyphosate 1:100 +LI 700
<i>Panicum maximum</i> var. <i>trichoglume</i>	Green Panic	Occasional	Control individuals prior to seed set. Hand pull, mattock or spray thickets. Spray Glyphosate 1:100 +LI 700
<i>Paspalum wetsteinii</i>	Broad-leaved Paspalum	Common	Control individuals prior to seed set. Hand pull, mattock or spray thickets. Spray Glyphosate 1:100 +LI 700
<i>Pennisetum purpureum</i>	Elephant Grass, Bana Grass	Not currently in HRA	If appears in restoration area, slash or chop out first, foliar spray 1:100 + LI700
<i>Senecio madagascariensis</i>	Fireweed	Occasional	Hand pull all plants.
<i>Sida rhombifolia</i>	Paddy's Lucerne	Infrequent	Chip plants out. Spot spraying young plants. Spray new growth.
<i>Sphagneticola trilobata</i>	Singapore Daisy	Infrequent	Spot spray 1:50, can add metsulfuron-methyl (1.5g/10L water)
<i>Sporobolus</i> sp.	Rat's Tail Grass	Infrequent	Spot spray 1:100 when plants actively growing
<i>Tagetes minuta</i>	Stinking Roger	Not currently in HRA	If appears in restoration area, hand pull prior to seeding.
<i>Trifolium</i> species	Clover species		Spot spray 1:100

Key:**CS&P – cut, scrape and paint****C&P – cut and paint****FI – frill inject****Numbers are glyphosate 360g/L dilution ratios****1:1.5** – 400 ml herbicide added to 600 ml of water**1:50** – 300 ml herbicide added to 15 litres of water**1:100** –150 ml herbicide added to 15 litres of water**LI700** – denotes use of penetrant**Weed Control Techniques**

Hand pulling – grab plant at base and pull out, ensuring all roots are removed. A large knife may assist in loosening plants from the ground

CS&P (also known as cut stump) – cut the stem 1-2 cm above ground level using secateurs, loppers, pruning saw, or chainsaw. Immediately apply herbicide to cut stump.

C&P (also known as cut stump) – cut the stem 1-2 cm above ground level using secateurs, loppers, pruning saw, or chainsaw. Immediately apply herbicide to cut stump.

Frill Inject – using an axe make a series of cuts into the stem approximately 20-30 mm deep as close to the ground level as possible. Before axe is removed fill cut with 1-2 ml of herbicide, refill cuts as herbicide absorbs.

Spraying – for thickets of weeds with no or little natives. Care is to be taken to avoid drift onto non-target species. Spot spraying is recommended to reduce drift.

Appendix 7: Daily Weed Control and Management Worksheet and Chemical Operators Data Sheet

DAILY WEED CONTROL AND MANAGEMENT WORK SHEET

DATE OF WORK: _____ TIME ON: _____ TIME-OFF: _____

NAME OF WORKER(S): _____

WEEDS CONTROLLED AND MANAGED

Common Name	Method of Weed Control
TREES	
Camphor Laurel	
Loquat	
Brazilian Cherry	
Weeping Fig (?planted)	
Broad-leaved Privet	
Umbrella Tree	
SHRUBS	
Duranta, Giesha Girl	
Lantana	
Small-leaved Privet	
Ochna	
Caster Oil Plant	
Yellow Raspberry	
Candlebush	
Winter Senna	
Arsenic Bush	
Devil's Apple	
Giant Devil's Fig	
Wild Tobacco	
Chinese Burr	
VINES-SCRAMBLERS	
Climbing Asparagus	
Asparagus Fern	
Silver-leaf Desmodium	
Five-leaf Morning Glory	
Siratro	
Glycine	
Edible Passionfruit	
Corky Passionfruit	
White Passionfruit	
Climbing Nightshade	
Creeping Vigna	
GROUNDCOVERS-GRASSES	
Crofton Weed	
Mistflower	
Billy Goat Weed	
Red-headed Cotton Bush	
Farmer's Friends	

Asthma Plant	
Rhodes Grass	
Spear Thistle	
Fleabane species	
Cuphea	
Milkweed	
Catsear, Flatweed	
Molasses Grass	
Green Panic	
Broad-leaved Paspalum	
Elephant Grass, Bana Grass	
Fireweed	
Paddy's Lucerne	
Singapore Daisy	
Rat's Tail Grass	
Stinking Roger	
Clover species	

NOTES (e.g. native species observed regenerating, previously unrecorded weed species):

LOCATION: _____

DATE OF WORK: _____ TIME ON: _____ TIME-OFF: _____

NAME OF WORKER(S): _____

Herbicide	Batch Number	Dilution Rate	Total Chemical Used	Operator Initials	Equipment
Additives					
Redeye					
Agral					
Li700					
Protec Plus					
Other					

Growing Conditions	Temperature	Weather Conditions	Wind speed/Direction
☐ very good	☐ cool <20°	☐ showers	
☐ good	☐ warm 21°-25°	☐ overcast	
☐ poor	☐ very warm 26°-30°	☐ clear sky	
☐ very poor	☐ hot >30°	☐ variable	

Zone/Area worked: _____

Comments: _____

Signature: _____

Appendix 8: NPWS Checklist for Bush Regeneration in Threatened Species Habitat or in an Endangered Ecological Community

Management Planning:	yes	no	more info attached
The proposed activities will be in accordance with a management plan or site plan (map). Please attach the plan or relevant sections of the plan or strategy to the licence application.			
The project has been discussed with the relevant Landcare coordinator. If not, provide details of any other professional advice you have sought, e.g. from a qualified bush regenerator.			
A NPWS Wildlife Atlas database search of a 5km radius of the site has been undertaken to identify threatened flora/fauna species known or likely to occur on the site.			
Prior to commencing any works on site, a permit or permission will be obtained from the relevant landowner(s) or land manager(s).			
Training and supervision:	yes	no	more info attached
All activities by workers will be regularly checked and approved by the co-ordinator.			
All workers will be informed of any threatened species or endangered ecological communities known from the area or which may occur in the area and the potential impacts of activities on these species/communities e.g. vines on the edge of a littoral rainforest remnant may protect the remnant from salt-bearing winds.			
All workers have adequate weed and native plant identification skills i.e. all workers can identify and differentiate between weeds and native plants that occur on the site.			
Workers will be familiar with the identifying features of threatened flora that are known or likely to occur in the project area. Where threatened species known from the area are similar to weed species, the distinguishing features between these will be understood prior to commencing the work.			
Access to site:	yes	no	more info attached
All vehicular access to the site will be restricted to formed roads.			
Unnecessary damage to sites will be avoided e.g. avoid working in wet weather to lessen soil compaction.			
To reduce the possibility of introducing plant diseases and weeds the following measures will be applied: (1) Secateurs will be sharp and cleaned with methylated spirits; and (2) Footwear will be cleaned of loose soil and preferably treated with bleach between sites.			
Impacts on flora:	yes	no	more info attached
Prior to any works being undertaken, the presence or absence of threatened flora will be determined by a thorough walking search of the area.			
All threatened flora will be tagged with highly visible flagging tape before work commences. If a number of individuals occur in a clump, the area should be marked out with flagging tape.			
Cutting or damaging of threatened flora will be avoided.			

All plants will be positively identified before they are removed (pulled, cut, poisoned etc).			
Weed removal within two metres of a threatened species will be undertaken by hand.			
Impacts on fauna:	yes	no	more info attached
All workers will be aware of any threatened fauna that are known or likely to occur on site, and the potential impacts of the proposed activities on those species.			
The habitat and refuge potential of weeds and rubbish will be considered prior to removal e.g. Lantana can provide cover for threatened fauna such as the Bush-hen. Dead Lantana and poisoned Camphor Laurels should, where possible, be left in situ.			
Weeds will be removed gradually in areas where an infestation is extensive. Ideally, 50% of weeds that may provide habitat should be left until native plant species have re-established and provide alternative refuge.			
Disturbance to, and removal of rocks, logs and other potential refuge sites will be avoided.			
A herbicide registered for use near waterways will be used within five metres of waterways.			
Herbicide spraying will be restricted to a distance greater than five metres from watercourses where threatened frogs are known or likely to occur and within a ten metre radius of records of threatened frogs.			
A buffer of one metre along other watercourses will be maintained in which no herbicide will be sprayed.			
Care will be taken to minimise disturbance to shy or cryptic species e.g. the Marbled Frogmouth roosts in vine 'curtains'.			
Care will be taken to minimise disturbance to the leaf litter layer.			
Reconstruction through revegetation: (Note - this section does not address propagation or planting of threatened species. This activity would need to be separately addressed).	yes	no	more info attached
Seed collection or cuttings will be from species, populations or ecological communities other than those listed as threatened (unless licensed)			
Prior to collecting any seed or cuttings permission will be obtained from the relevant landholder or manager of the site e.g. a licence is required to collect native plants on National Parks estate.			
Seed collection from any one species will be limited to less than 10% of the available crop at that site.			
Seed collection from any individual plant will be limited to less than 10% of the available crop.			
If your seed source is used by other seed collectors, has consideration been given to minimising any cumulative impacts to the source plants? Some individual plants are known as a reliable seed source and their seed is collected extensively. This may result in – (1) a reduction in genetic diversity); and (2) an impediment to the individual's natural ability to regenerate.			
When collecting propagation material from a wild population, collection will be random from as many individuals as possible across the population to ensure a representative range of genetic material is collected. Collectors will avoid selection of propagation			

material on the basis of physical attributes e.g. tallest, most attractive, greatest amount of seed or flowers.			
Plantings will be sourced from stock of local provenance.*			
Will propagated material collected only be used at the subject site? i.e. excess material will only be used at other sites if it meets the provenance criteria.			
(Plants are likely to be purchased from reputable commercial nurseries – appropriate seed collecting techniques assumed)			
A buffer of five metres will be maintained around all threatened plant specimens. Planting will only be undertaken outside this buffer. This requirement is intended to protect the roots of the threatened plant from damage or introduction of disease.			
Care will be taken to ensure that mulch does not introduce weeds or impede natural regeneration at the site.			
Care will be taken to ensure that weeds and/or <i>Phytophthora cinnamomi</i> are not introduced to a site from pots of cultivated plants.			
Consideration will be given to the possible impacts of plantings on the ecological requirements of threatened species at the site e.g. reduced light, competition, etc.			
Species will be planted within their natural habitat and range. Plantings will be guided by the plants' local habitat preferences e.g. the species used for plantings along watercourses should be those that naturally occur in that habitat in your local area.			
Herbicide use: (Note - A permit from the National Registration Authority for Agricultural and Veterinary Chemicals PO Box E240, Kingston ACT 2604 may be required for herbicide use that is not consistent with conditions specified on the label).	yes	no	more info attached
A buffer of two metres will be maintained around all threatened plant specimens. Herbicide use will only be undertaken outside this buffer.			
Herbicide use will cease where there are any signs of threatened species being affected by herbicide e.g. browning off, wilting or deformed growth.			
All herbicide spray operators will be capable of undertaking precise and effective weed control.			
Spray will be directed away from threatened flora.			
Herbicide will only be sprayed in suitable weather conditions when the impact of spray drift (windy) or run-off (wet) on threatened flora is minimised.			
Marker dyes e.g. white field marker' will be mixed with herbicide before use. Marker dye enables the worker to see where the spray is landing.			
Reporting and data records:	yes	no	more info attached
Any new records of threatened species will be provided within three months to NPWS. These records will be in a format appropriate for entry into the Wildlife Atlas, once identification of a threatened species is confirmed by a recognised authority.			

* Local provenance species should be regarded as those species propagated from material that has been collected from a natural wild population as close as possible to a site. For example, within the local catchment which may be based on a local creek.

Appendix 9: Project Risk Assessment Form and Matrix

Risk Assessment Form

HAZARD IDENTIFIED	RISK RATING	CONTROL MEASURE RISK ASSESSMENT
Working in close proximity to construction work		☐ Use of witches hats or temporary barrier ☐ High visibility clothing ☐ Inform site manager of presence on site
Sun Exposure Hot conditions		☐ Reduce exposure time – rest breaks ☐ Provide ample water ☐ Protective clothing and sunscreen
Working With Chemicals		☐ Current MSDS held ☐ Adequate washing facilities ☐ Hazardous substances stored and labelled correctly ☐ Use of personal protective clothing ☐ Rotate tasks to avoid prolonged exposure
Biological Hazard Needle stick injury		☐ Inspect site before work commences ☐ Provide appropriate waste disposal container ☐ Personal protective equipment
Manual Handling Handling heavy objects		☐ Use correct lifting and carrying techniques ☐ Use lifting aids ☐ Use wheelbarrow etc wherever possible ☐ Ensure clear area before lifting ☐ Share the load ☐ Rotate activities or rest breaks ☐ Appropriate personal protective clothing
Crush Impact Cut, crush and impact		☐ Knowledge and correct use of tools ☐ Appropriate personal protective clothing ☐ Correct tool for job
Slips, Trips and Falls		☐ Avoid carrying awkward or heavy objects on uneven ground ☐ Remove all potential hazards if possible or mark with coloured tape ☐ Do not leave tools lying in pathways ☐ Do not run ☐ Ensure boots are firmly laced
Hazardous Plants Plants that may cause allergic reaction		☐ Identify plants which may cause allergic reactions ☐ Mark area with coloured tape
Bites and Stings		☐ Create disturbance on site before beginning work ☐ Apply insect repellent ☐ Wear appropriate personal protective equipment

Risk Assessment Matrix

How severely could it hurt someone OR How ill could it make someone	Very likely - could happen anytime	Likely - could happen sometime	Unlikely - could happen, but very rarely	Very unlikely- could happen, but probably never will
☠ kill or cause permanent disability or ill health	1	1	2	3
Long term illness or serious injury	1	2	3	4
Medical attention and several days off work	2	3	4	5
! First aid needed	3	4	5	6

Appendix 10: Planting Schedule

Restoration and Rehabilitation Areas Management Zones under S88E Instrument

Species Name	Common Name	Mature Height	No. of Plants®	% of plants&	MZ 1U	MZ 1L	MZ 2U	MZ 2L
Trees								
<i>Acacia melanoxylon</i>	Blackwood	18 m	10	5.02	X	X		X
<i>Actephila lindleyi</i>	Actephila	12 m	4	2.01	X	X		X
<i>Alectryon tomentosus</i>	Hairy Bird's Eye	15 m	8	4.02	X	X	X	X
<i>Alphitonia excelsa</i>	Red Ash	20 m	8	4.02	X	X		X
<i>Apananthe philippensis</i>	Rough-leaved Elm	35 m	2	1.0	X	X		X
<i>Archidendron grandiflorum</i>	Pink Laceflower	15 m	2	1.0	X	X		X
<i>Archirhodomyrtus beckleri</i>	Rose Myrtle	15 m	6	3.01	X	X		X
<i>Arytera distylis</i>	Twin-leaved Coogera	24 m	6	3.01		X		X
<i>Cinnamomum oliveri</i>	Oliver's Sassafras	30 m	1	0.5		X		
<i>Clerodendrum floribundum</i>	Smooth Clerodendrum	20 m	5	2.51	X	X		X
<i>Croton verreauxii</i>	Native Cascarilla	20 m	4	2.01	X	X		X
<i>Commersonia bartramia</i>		25 m	2	1.0		X		X
<i>Cryptocarya glaucescens</i>	Jackwood	30 m	1	0.5		X		
<i>Cryptocarya triplinervis</i> var. <i>pubens</i>	Three-veined Laurel	18 m	6	3.01	X	X		X
<i>Cupaniopsis anacardioides</i>	Tuckeroo	15 m	6	3.01	X	X		X
<i>Daphnandra micrantha</i>	Socketwood	20 m	4	2.01		X		X
<i>Denhamnia celastroides</i>	Orange Boxwood	18 m	2	1.0	X			X
<i>Elaeocarpus obovatus</i>	Hard Quandong	45 m	2	1.0		X		X
<i>Endiandra sieberi</i>	Hard Corkwood	30 m	1	0.5		X		
<i>Ficus rubiginosa</i>	Rusty Fig, Port Jackson Fig	30 m	1	0.5		X		
<i>Ficus virens</i>	White Fig	30 m	1	0.5				X
<i>Flindersia australis</i>	Crows Ash, Teak	40 m	1	0.5		X		
<i>Glochidion sumatranum</i>	Umbrella Cheese Tree	15 m	10	5.02	X	X		X
<i>Guioa semiglaucula</i>	Guioa	18 m	10	5.02	X	X		X
<i>Jagera pseudorhus</i>	Foambark Tree	30 m	4	2.01		X		X
<i>Lepiderema pulchella</i>#	Fine-leaved Tuckeroo	15m	10	5.02	X	X	X	X
<i>Lophostemon confertus</i>	Brushbox	25 m	2	1.0		X		
<i>Mallotus philippensis</i>	Red Kamala	25 m	8	4.02	X	X		X
<i>Melicope elleryana</i>	Pink Euodia	25 m	2	1.0		X		
<i>Myrsine variabilis</i>	Muttonwood	15 m	6	3.01	X	X		X

Species Name	Common Name	Mature Height	No. of Plants®	% of plants&	MZ 1U	MZ 1L	MZ 2U	MZ 2L
<i>Neolitsea dealbata</i>	White Bollygum	12 m	8	4.02	X	X		X
<i>Niemeyera whitei</i>	Rusty Plum	20m	2	1.0		X		
<i>Notelaea longifolia</i>	Mock Olive	9 m	8	4.02	X	X		X
<i>Olea paniculata</i>	Native Olive	30 m	1	0.5				X
<i>Pentaceras australis</i>	Bastard CrowsAsh	18 m	4	2.01	X			X
<i>Pittosporum lancifolium</i>	Narrow-leaved Orange Thorn	25 m	1	0.5				X
<i>Pittosporum undulatum</i>	Sweet Pittosporum	25 m	5	2.51	X	X		X
<i>Polyscias elegans</i>	Celerywood	30 m	1	0.5				X
<i>Rhodamnia argentea</i>	Malletwood	30 m	1	0.5				X
<i>Rhodamnia rubescens</i>	Scrub Turpentine	30 m	1	0.5				X
<i>Rhodomyrtus psidioides</i>	Native Guava	12 m	8	4.02	X	X		X
<i>Rhodosphaera rhodanthema</i>	Tulip Satinwood	25 m	1	0.5				X
<i>Stenocarpus salignus</i>	Beef Scrubwood	30 m	1	0.5		X		
<i>Streblus brunonianus</i>	Whalebone Tree	30 m	1	0.5		X		
<i>Symplocos thwaitesii</i>	Buff Hazelwood	17 m	2	1.0	X			X
<i>Synoum glandulosum</i>	Scentless Rosewood	18 m	6	3.01	X			X
<i>Syzygium oleosum</i>	Blue Lillypilly	15 m	6	3.01	X			X
<i>Syzygium smithii</i>	Lillypilly	20 m	2	1.0		X		
<i>Toeckima dasyrrhache</i>	Blunt-leaved Steelwood	30 m	1	0.5				X
<i>Toeckima tenax</i>	Brush Teak	18 m	4	2.01	X			X
Sub-total			199					
Shrubs-Small Trees								
<i>Alpinia caerulea</i>	Native Ginger	2.5 m	20	6.51	X	X	X	X
<i>Atractocarpus benthamiana</i>	Native Gardenia	8 m	10	3.25	X	X		X
<i>Breynia oblongifolia</i>	Native Coffee Bush	3 m	20	6.51	X	X	X	X
<i>Cordyline petiolaris</i>	Broad-leaved Palm Lily	5 m	20	6.51	X	X	X	X
<i>Cordyline stricta</i>	Narrow-leaved Palm Lily	5 m	20	6.51	X	X	X	X
<i>Cryptocarya laevigata</i>	Glossy Laurel	6 m	10	3.25	X	X		X
<i>Elaeodendron australe</i> var. <i>australe</i>	Red Olive Plum	9 m	10	3.25	X	X	X	X
<i>Eupomatia laurina</i>	Bolwarra	7 m	20	6.51	X	X	X	X
<i>Homolanthus populifolius</i> ^	Bleeding Heart	6 m	30	9.77	X	X		X
<i>Macaranga tanarius</i> ^	Macaranga	6 m	30	9.77	X	X		X
<i>Pilidiostigma glabrum</i>	Plum Myrtle	5m	15	4.88	X	X		X
<i>Psychotria simmondsiana</i> var. <i>glabrescens</i>	Small Psychotria	4 m	20	6.51	X	X	X	X

Species Name	Common Name	Mature Height	No. of Plants [@]	% of plants ^{&}	MZ 1U	MZ 1L	MZ 2U	MZ 2L
<i>Tabernaemontana pandacqui</i>	Banana Bush	5 m	20	6.51	X	X	X	X
<i>Trema tomentosa</i> var. <i>viridis</i> [^]	Poison Peach	6 m	50	16.28	X	X		X
<i>Wilkea huegeliana</i>	Veiny Wilkea	8 m	6	1.95	X	X		X
<i>Wilkea austroqueenslandica</i>	Smooth Wilkea	9 m	6	1.95	X	X	X	X
Sub-total			307					
Vines-Scramblers								
<i>Carissa ovata</i>	Carissa	2 m	5	33.33	X	X		X
<i>Carronia multifsepala</i>	Carronia	1.5 m	5	33.33	X	X		X
<i>Geitenoplesium cymosum</i>	Scrambling lilly	2 m	5	33.33	X	X		X
Sub-total			15					
Groundcovers-Ferns								
<i>Adiantum diaphanum</i>	Filmy Maidenhair Fern	0.3 m	30	10.34	X	X	X	X
<i>Adiantum formosum</i>	Giant Maidenhair Fern	1.2 m	30	10.34	X	X	X	X
<i>Christella dentata</i>	Binung Fern	0.5 m	40	13.79	X	X	X	X
<i>Dianella caerulea</i>	Blue Flax Lily	2 m	30	10.34	X	X	X	X
<i>Doodia media</i>	Common Rasp Fern	0.4 m	25	8.62	X	X	X	X
<i>Doodia aspera</i>	Prickly Rasp Fern	0.35 m	25	8.62	X	X	X	X
<i>Lomandra longifolia</i>	Spiny-headed Mat-Rush	1 m	30	10.34	X	X	X	X
<i>Pellaea falcata</i> [#]	Sickle Fern	0.6 m	20	6.89	X	X	X	X
<i>Sticherus flabellatus</i>	Shiny Fan Fern	1.5 m	10	3.44	X	X	X	X
<i>Viola hederacea</i>	Native Violet	0.1 m	50	17.24	X	X	X	X
Sub-total			290					
TOTAL			811					

[#] *Lepiderema pulchella* is to be planted from the salvaged transplants

[^] Pioneer species to be planted at higher density on edges to seal from edge effects

[@] Not all species may be able to be sourced, so where a species is not available, one or more substitute species from Schedule 10 are to be selected, ensuring that no individual species of plant shall exceed more than 5% contribution to density, with the exception of pioneer plants.

[&] Percentage of plants within each vegetation stratum.

MZ1U = Management Zone 1: Upper – from mid slope to top of the slope

MZ1L = Management Zone 1: Lower – from mid slope to bottom of the slope

MZ2U = Management Zone 2: Upper – from top of slope down 10 m

MZ2L = Management Zone 2: Lower – from MZ2U 10 m downslope

Notes:

1. Mature plant heights based on maximum height the plant species could attain.
2. Additional plants, particularly pioneer species, may need to be sourced and planted depending on natural regeneration and gaps following control of Camphor Laurel that may need to be filled with plantings.

Appendix 11: Nursery Plant Quality Guarantee

This checklist is to be used to support selection of nurseries to provide plants for the habitat restoration planting and threatened plant propagation for the Major Project Walmsley's Road Bilambil Heights. It is aimed at reducing the potential for pathogens, bacteria, pests and weeds being inadvertently introduced to the property, in particular *Phytophthora* to which *Macadamia tetraphylla* is susceptible, and Myrtle Rust, to which many species in the Myrtaceae family are susceptible.

Name of Nursery Supplying Plants

Check those measures in place at the nursery. Any items not checked require a precautionary management approach for *Macadamia* and Myrtaceae species

Hygiene Management Protocol for Nursery Facilities and Equipment

- ☐ uses chloramine and chlorhexidine based products for cleaning and disinfecting surfaces, including cracks and joints, washing facilities, working surfaces-benches, trolleys trays, floors, walls, pathways, beds, containers (tubes, pots, trays), propagation tools and vehicles
- ☐ uses sterile disinfecting footbaths to access nursery areas
- ☐ has special measures in place to avoid-minimise chalara, phytophthora and myrtle rust
- ☐ uses treatment suitable for non-porous surfaces, such as capillary mats, production surfaces, cement, gravel, sand beds

Hygiene Management Protocol for Plants grown and held at the nursery

- ☐ has measures in place to prevent infection of growing media
- ☐ has an isolated preparation area
- ☐ maintains and monitors mother-stock plants to reduce opportunities for infection and spread of pests and pathogens

Hygiene Management Protocol for Staff

- ☐ trains staff in personal hygiene related to management of pests and pathogens
- ☐ provides signs in prominent places to remind staff of the importance of hygiene in nursery

Hygiene Management Protocol for Active Pests and Pathogens

- ☐ has a Monitoring Program to detect active pests and pathogens
- ☐ has a disinfestation protocol for active problems
- ☐ has procedures for isolation and treatment if pests and pathogens are detected, in particular for *Phytophthora* and Myrtle Rust

Appendix 12: Community Awareness Brochure

BILAMBIL HEIGHTS

NATURAL ENVIRONMENT

We need to care for and protect local bushland areas, such as that at Bilambil Heights



What is special about Bilambil Heights?

Endangered Lowland Rainforest

Rare and Threatened Rainforest Plants

Habitat for Butterflies, Birds, Possums, Wallabies, Frogs and Lizards



Why should we care?

Looking after our natural environment now, is looking after it for future generations. If we don't care who will?

Many of our plants and animals are threatened with extinction, weeds infest our bushland areas, and our waterways are polluted.

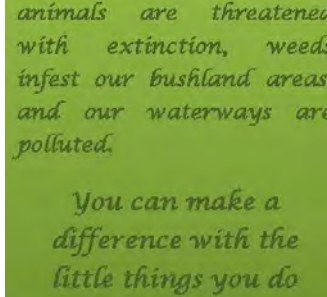
You can make a difference with the little things you do



Bilambil Heights – home to over 150 native plants, mostly rainforest species

And to over 50 species of birds

With your help they will remain.







Your guide to understanding, enjoying, and protecting our beautiful area

Ways we can impact on the natural environment and what we can do to help

If you are lucky enough to live near or adjacent to bushland, or if you have remnant vegetation on your property, there is a lot you can do to help



Pets harassing wildlife
Cats and dogs can harass, injure and kill wildlife, naturally preying on native animals.

Keep cats and dogs inside or confined overnight, particularly between dusk and dawn

Get cats and dogs de-sexed

Take unwanted cats and dogs to the RSPCA or animal rescue

Use of fertilisers, detergents, herbicides, and pesticides

can runoff downslope during rain increase nutrients in bush and waterways

better for weeds not natives

affecting water quality, and aquatic plants and animals

affect birds that eat seeds and insects on the ground

Consider using no phosphorus detergents and washing your car on the lawn

Consider alternatives

Soil in Bilambil Heights is high in nutrients, fertiliser shouldn't be needed



Put two bells on a cat collar

Train dogs not to bark at or harass wildlife

Pick up dog faeces

Walk your dog on a lead



Weed Invasion

Changes nutrients, competes with natives, destroys bushland

Dumping garden waste over back fence can increase nutrients and provide a source of weed seeds

Use garden waste to start a compost and worm farm, and feed your vegetable and herb garden



*We did not inherit the Earth from our ancestors,
We are borrowing it from our children*

Ralph Waldo Emerson

Vehicle collisions with wildlife

Wildlife, such as wallabies and possums, are nocturnal, and could cross the landscape, particularly between dusk and dawn

Birds could cross roads to get to other food or resting trees

Drive with care and be wildlife aware

If you injure or see an injured native animal call Tweed Valley Wildlife Carers





Birds colliding with windows

Birds regularly collide with windows, particularly if they can see light or trees through the other side

Curtains and hanging ornaments can reduce bird collisions with windows

If a bird is injured call Tweed Valley Wildlife Carers



Anything can become habitat









Loss of Habitat

Create a butterfly garden

Make a frog pond

Plant a native garden





Avoid trampling bush



Join your local Landcare group




*Nature is painting for us, day after day,
pictures of infinite beauty*

John Ruskin

Tips for attracting beautiful birds to your garden

To attract birds to your garden, you need to provide food, water and shelter



Bird Baths

*Put the bird bath around vegetation - birds like to feel safe and protected
Plant small shrubs with dense foliage around the bird bath*

Keep it filled with fresh water and the birds will know where to come



Bushrock

*Put some bushrock around the bird bath
Many birds like to sing or play around rocks.*

Bushrock can also provide a better vantage point to see ants and other insects on the ground

It will also provide habitat for small lizards



Plant nectar-producing and rainforest fruiting shrubs and small trees

For more information about the natural environment

Tweed Shire Council 02 6670 2400 www.tweed.nsw.gov.au

Office of Environment and Heritage 02 9995 5000 www.environment.nsw.gov.au

North Coast Local Land Services 02 6623 3900 www.northcoast.lls.nsw.gov.au

Tweed Landcare Inc. 02 6670 2199 www.tweedlandcare.org.au

Tweed Valley Wildlife Carers 02 6672 4789 www.twwc.org.au

This brochure was prepared by Biolink Pty Ltd 2017

Photo credits: Maria Matthes

Appendix 13: Photo Point Monitoring Guidelines and Record Sheet

Photo Point Monitoring Guidelines

The aim of the photo point monitoring is to use photographs to document the effect of management actions, and to record and compare changes to the vegetation over time.

Setting Up

- Select six locations in Management Zone 1 Restoration Areas, and four locations in Management Zone 2 Rehabilitation Areas, using the guidance on the Photo Point Monitoring Record Sheet, making sure the locations will be accessible to take photos in the future.
- At each photo point location, place four star pickets in the ground, approximately 5 m apart, in the direction the photo is to be taken (e.g. from north east corner to the south). Three photo directions are to be taken from each locations and details recorded on the Photo Point Monitoring Record Sheet. One star picket will be the camera post and one will be the sighter post.
- Roughly mark the location of the photo points on a map, and use an arrow to indicate the direction of the photo. Use the photo point and photo numbers on the Photo Point Monitoring Record Sheet.
- Record the location of each photo point using a GPS.

Taking Photos

- Photos are to be taken from photo points:
 - prior to the initial weed control works commencing;
 - after the initial weed control;
 - before and after the secondary primary weed control, prior to planting; and
 - following planting
 - annually for 5 years after planting
- Photos are to be taken, preferably, on a cloudy but bright day when shadows are minimised.
- Note on the photo – the photo point number, the photo number and the date of the photo.
- Complete a photo record sheet for each monitoring event

PHOTO MONITORING RECORD SHEET**LOCATION:** Scott Street Walmsley Road, Bilambil Heights**DATE OF PHOTOGRAPHS:** _____**TIME PHOTOGRAPHS TAKEN:** _____**WEATHER CONDITIONS:** _____**NAME OF PHOTOGRAPHER:** _____

Photo point 1	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 2	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 3	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			

Observations – planting and transplanting growth and survival			
Photo point 4	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 5	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 6	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 1			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 7	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 2			

Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 8	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 3			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 9	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 2			
Observations – weed growth			
Observations – planting and transplanting growth and survival			
Photo point 10	Photo 1	Photo 2	Photo 3
Location and Direction of Photo Management Zone 2			
Observations – weed growth			
Observations – planting and transplanting growth and survival			

Appendix 14: Letter from owners of Lot 6 granting consent to the creation of easements and carrying out work.

20 February 2018

DAC Ref: DIC 15/71 Pt 1 & DIC 17/01

Directors WDLIC Pty Ltd, Vicky Bailey, Helen Mabbutt,
Peter Walmsley, Roy Walmsley & Diane Millar
c/o P O Box 5305
Murwillumbah NSW 2484

Dear Sir/Madam

**Major Project Approval No. 05-0198 (as modified) for an 85 Lot Residential Subdivision
of Lot 2 DP 961928, Lot 1 DP 134787, Lot 5 DP 1117326 & Lot 1 DP 167380
Stoff Street and Walmsleys Road, Bilambil Heights**

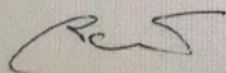
As owner of Lot 6 DP 1117326 Stoff Street, Bilambil Heights, I hereby consent to the following in respect of Lot 6 DP 1117326:

1. The creation of easements and Restrictions on Use as required by Major Project Approval No. 05_0198 (as modified) and the approved Asset Protection Zone Management Plan (APZMP) and approved Vegetation Management Plan (VMP).
2. Carrying out of works to implement the approved APZMP as required by Condition B24 of MP05_0198 (as modified).
3. Carrying out of work to implement the approved VMP as required by Condition B23 of MP05_0198 (as modified).

I also agree that I will enter into a formal Deed of Agreement with WDLIC Pty Ltd, Vicky Bailey, Helen Mabbutt, Peter Walmsley, Roy Walmsley and Diane Millar to reflect the above terms with such agreement to be binding on successors in title.

I also agree that in the event that I propose to sell Lot 6 DP 1117326 before the Deed of Agreement is finalised, I will include a provision in the contract for sale requiring the purchaser to agree to the terms in Items 1 to 3 above and to enter into a formal Deed of Agreement incorporating these terms.

Yours faithfully
Chris Roberts



Registered Proprietor
Lot 6 DP 1117326