NARLA

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Terrestrial Biodiversity Assessment

LOT 1, DP91180
22 Abernethy Street

Seaforth NSW 2092

Report prepared for Ed Hardy

NARLA
environmental

Prepared by:	Narla Environmental
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Report Certification

Works for this report were undertaken by:

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I, Kurtis Lindsay, certify that:

- this report has been prepared in accordance with the brief provided by the client.
- the information presented in this report is a true and accurate record of the study findings in the opinion of the authors.

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1. Introduction

1.1 Background and Project Proposal

Narla Environmental Pty Ltd (Narla) was engaged by Ed Hardy to provide this Terrestrial Biodiversity Report (TBR) to be lodged in association with the Development Application (DA) relating to '22 Abernethy Street, Seaforth" (the 'subject site') (**Appendix**).

The DA addresses the following works:

- Extension of the first floor of the building
- Extension of the bridge towards the front of the property (east)
- Extending the building over the existing paved and terraced garden areas
- Total area of proposed building will affect 32m^2 of garden area
- Removal of associated trees (two exotic palms) and garden plants including one large, planted tree fern
- Stockpiling of materials / plant required for construction on an existing/cleared carport. (**Plate 1**).

1.2 Zoning

The subject site is zoned 'E3 - Environmental Management' under the Manly Local Environmental Plan 2013 (LEP).

1.2.1 Objectives of zone

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To protect tree canopies and provide for low impact residential uses that does not dominate the natural scenic qualities of the foreshore.
- To ensure that development does not negatively impact on nearby foreshores, significant geological features and bushland, including loss of natural vegetation.
- To encourage revegetation and rehabilitation of the immediate foreshore, where appropriate, and minimise the impact of hard surfaces and associated pollutants in stormwater runoff on the ecological characteristics of the locality, including water quality.
- To ensure that the height and bulk of any proposed buildings or structures have regard to existing vegetation, topography and surrounding land uses.

1.2.2 Permitted without consent

Home-based childcare; Home occupations

1.2.3 Permitted with consent

Bed and breakfast accommodation; Dwelling houses; Environmental protection works; Flood mitigation works; Health consulting rooms; Home businesses; Roads; Secondary dwellings; Water supply systems

1.2.4 Prohibited

Industries; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3.

1.3 Northern Beaches Council (Manly Ward) Planning Requirements

This report addresses specific environmental planning requirements of the Manly Council Ward, Northern Beaches Council.

The site is located within the area mapped under the "Terrestrial Biodiversity" area within the Manly Local Environmental Plan (2013) (**Figure 1**). The DA must therefore consider clause 6.5 Terrestrial Biodiversity of the LEP as required for development on land contained on the LEP Terrestrial Biodiversity Map and all landscaping provisions relevant to the site (section 3.3.1 of the DCP).

The objectives of this clause include:

(1) The objective of this clause is to maintain terrestrial biodiversity by:

(a) protecting native fauna and flora, and

(b) protecting the ecological processes necessary for their continued existence, and;

(c) encouraging the conservation and recovery of native fauna and flora and their habitats.

(2) This clause applies to land identified as "Biodiversity" on the Terrestrial Biodiversity Map

(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:

(a) whether the development is likely to have:

(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and

(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and

(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and

(iv) any adverse impact on the habitat elements providing connectivity on the land, and

(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or

(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

2. Methods

A site assessment was performed by a Narla Environmental Ecologist on Monday the 19th December 2016. The Ecologist assessed the entire area of the proposed construction and associated stockpiling areas for any significant ecological features.

The following processes were undertaken during the site assessment:

- Recording the identification and extent of vegetation communities on the subject site, with a particular focus on the presence of any endangered ecological communities (EEC)
- Recording a list of flora species encountered on the proposed works site, with a focus on indigenous species including threatened species, species diagnostic of threatened ecological communities and noxious weeds.
- Recording opportunistic sightings of any fauna species seen or heard on or immediately surrounding the subject site
- Assessment of the connectivity and quality of the vegetation within the subject site and surrounding area
- Identifying and recording the locations of notable fauna habitat such as important nesting, roosting or foraging microhabitats.
- Targeting the habitat of any threatened and regionally significant fauna including:
    - tree hollows (habitat for threatened large forest owls, parrots, cockatoos and arboreal mammals)
    - caves and crevices (habitat for threatened reptiles, small terrestrial mammals and microbats)
    - termite mounds (habitat for threatened reptiles and the echidna)
    - soaks (habitat for threatened frogs and dragonflies)
    - wetlands (habitat for threatened fish, frogs and water birds)
    - drainage lines (habitat for threatened fish and frogs)
    - fruiting trees (food for threatened frugivorous birds and mammals)
    - flowering trees (food for threatened nectarivorous mammals and birds)
    - trees and shrubs supporting nest structures (habitat for threatened birds and arboreal mammals), and
    - any other habitat features that may support fauna (particularly threatened) species.

3. Results and Discussion

Visual inspection of the subject site, specifically the areas where proposed works are to be undertaken revealed that the works proposed involve removal or modification of suburban gardens with and limited potential threatened fauna habitat.

3.1 Trees and Plants Requiring Removal

The proposal will see the removal of:

- two non-native Kentia Palm (*Howea forsteriana*)
- one Tree Fern (*Cyathea cooperi*)
- three planted Broad-leaved Paperbark (*Melaleuca quinquinervia*) shrubs (approximately 1.5metres tall)
- two small garden beds containing garden plants and weeds

3.2 Threatened Species and Habitat

No threatened fauna or flora were found on the subject site.

Only one species of flora present in the construction area was thought to provide potential habitat for threatened fauna, this being Broad-leaved Paperbark (*Melaleuca quinquenervia)* (**Table 1**). Only three plants were present and all were large shrubs (approximately 1.5 metres tall). These shrubs are considered likely to have been planted.

Only two species of tree present in the stockpile area was thought to provide habitat for threatened fauna, Sydney Red Gum (*Angophora costata*) (1) and Brush Box (*Lophostemon confertus*) (1). The Sydney Red Gum may be remnant however the Brush Box is likely to have been planted. Neither of these trees will be removed or damaged by the proposed works as it is considered there will be sufficient space on the existing carport to stockpile materials for construction.

These trees and shrubs provide intermittent foraging habitat (nectar) for the Grey-headed Flying Fox (*Pteropus poliocephalus*) (listed vulnerable under the TSC Act and the *Environment Protection and Biodiversity Conservation Act* 1999 [EPBC Act]).

The loss of a maximum of three Broad-leaved Paperbark from the site is not considered to have any significant impact on any threatened species including the Grey-headed Flying Fox.

The remainder of the 'vegetation' proposed for removal consists of exotic garden beds, a planted tree fern and two planted exotic palm trees. None of this habitat provides any notable fauna habitat values, nor does it hold any local significance to the ecology in the area.

3.3 Fauna and Habitat

A single Common Ring-tailed Possum (*Pseudochirus peregrinus*) dray (nest) was found outside the proposed development area. No other similar habitat features were found. The proposed development is not considered to have any potential impacts on the dray. An Ecologist should be notified if any additional possum drays or birds' nests are found during the clearing process. No other fauna species were identified during the site visit on 19th December 2016.

3.4 Flora

None of the flora found on the subject site was considered to be significant. Only four species of native flora were found and all were thought to have been planted.

3.5 Weeds

The garden proposed to be removed is dominated by exotic ornamental plants. This is typical of most gardens in the locality.

Two of the plants recorded on the subject site were declared Noxious Weeds listed under the *Noxious Weed Act 1994*, they were:

- Turkey Rhubarb (*Acetosa sagittata*) - a Class 4 Noxious weed
- African Olive (*Olea europaea subsp. cuspidata*) - a Class 4 Noxious weed

Under the NW Act, Class 4 Noxious Weeds must be managed as such, "*growth of the plant must be managed in a manner that continuously inhibits the ability of the plant to spread and the plant must not be sold, propagated or knowingly distributed*".

Recommendations for removal and management of any noxious weeds, including Turkey Rhubarb and African Olive should follow those outlined by NSW WeedWise (2016).

3.6 SEPP 19

SEPP 19 Bushland in Urban Areas does not apply to this property, as the subject site does not directly border any council park or bushland.

3.7 Landscaping

Proposed works involve removing some associated trees and ornamental garden plants, which are not considered to provide important ecological function to the locality.

Where possible, locally indigenous native trees, shrubs and ground cover should be used in the landscaping of the subject site. Suitable recommendations that continue to provide suitable habitat include those provided by the Manly Coastal Native Plants Guide (Appendix). Recommended that local indigenous nectar berries should be used in local landscaping such as the Coastal Banksia (*Banksia integrifolia*).

3.8 Terrestrial Biodiversity Report

The objective of Clause 6.5 of the Manly Local Environmental Plan (2013) is to maintain terrestrial biodiversity by:

a) protecting native fauna and flora, and
b) protecting the ecological processes necessary for their continued existence, and
c) encouraging the conservation and recovery of native fauna and flora and their habitats.

(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:

(a) whether the development is likely to have:

(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land,

The subject site represents low ecological value and significance to local fauna/ flora as it is already situated within a highly urbanised landscape. No threatened flora or fauna species were identified during the site visit, however there is potential for at least one species to occur, the Grey-headed Flying-fox. At the time of survey, the habitat on site could only provide intermittent foraging for the Grey-headed Flying-fox and is therefore not considered to be significant for the survival of the species in the locality.

Recommendations including removal of weeds, in particular the identified noxious weeds, as well as the inclusion of native species to the new landscaping design have been provided. These recommendations are likely to positively influence the ecological value of the land.

(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna,

Whilst vegetation removal is required for the proposed works, impact to the survival of native fauna is considered low. Whilst some trees on the proposed development are considered potential habitat to some native fauna such as the Grey-headed Flying-fox.

The vegetation proposed for removal, is dominated by common garden plants that have been planted for the purpose of ornamentation. The areas proposed for clearing are small garden beds that do not currently provide any important ecological function to the locality. Recommended landscaping advice is aimed at improving the importance of the vegetation to the land by planting native indigenous plants where possible, in order to increase habitat for potential native fauna.

No vegetation will be removed where the possum dray is located, therefore no adverse impacts are expected to be inflicted on this particular species.

(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land,

The proposed works do not have any potential to fragment, or diminish the biodiversity structure, function and composition of the land within the locality and surrounds. The proposed works involves extending the existing building structure and removing a small area of garden plantings and ornamental trees. Proposed landscape works will contribute to improved biodiversity structure, function and composition of the land.

(iv) any adverse impact on the habitat elements providing connectivity on the land,

The proposal will not have any adverse impacts on the habitat elements providing connectivity to the land. Proposed landscape works will contribute to improved biodiversity structure, function and composition of the land. This includes removing noxious weeds and planting native indigenous vegetation where possible.

(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

All measure to avoid, minimise and mitigate the impacts of the development have been assessed. Landscaping recommendations for post removal of vegetation have been provided, with specific reference to planting native vegetation such as berry and nectar trees or shrubs where possible. The proposed works will have minimal impact on terrestrial biodiversity.

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

> **a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or**
>
> **(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or**
>
> **(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.**

Narla believe that the proposed development has been situation in a location that will have minimal environmental impact, and therefore does not believe there is a need to propose any alternative locations.

The development will be managed to avoid impact during the proposed construction phase. Trees proposed for removal have been assessed for their significance for fauna habitat and those that contain important habitat will not be removed.

4. Conclusions

No adverse impact on local flora, fauna or ecological communities are considered likely to result from the proposed works assessed within this Terrestrial Biodiversity Assessment.

It is recommended that the proposed works should be approved as there is no further need for assessment of impacts on biodiversity.

References

Manly Council (2013) Manly Development Control Plan (DCP), Amendment 7, Prepared by Land Use Planning Land Use & Sustainability Division in conjunction with the Manly LEP/DCP Working Group

Manly Council (2013) Manly Local Environmental Plan (MLEP), Current Version for 5 August 2016 to date http://www.legislation.nsw.gov.au/#/view/EPI/2013/140 [December 2016]

Northern Beaches Council (NBC) (2014) Zoning and Overlay Maps: DCP – Terrestrial Biodiversity Mapping [December 2016]

Office of Environment and Heritage (2016) List of key threatening processes http://www.environment.nsw.gov.au/threatenedspecies/KeyThreateningProcessesByDoctype.htm [December 2016]

PlantNET (2016)(The NSW Plant Information Network System). Royal Botanic Gardens and Domain Trust, Sydney. http://plantnet.rbgsyd.nsw.gov.au [December 2016]

WeedWise (2016) Weeds declared in the Local Control Authority area of Northern Beaches Local Government Authority http://weeds.dpi.nsw.gov.au/WeedDeclarations?RegionId=75

Manly Council (N.D) Manly Coastal Native Plant Guide.

Appendix

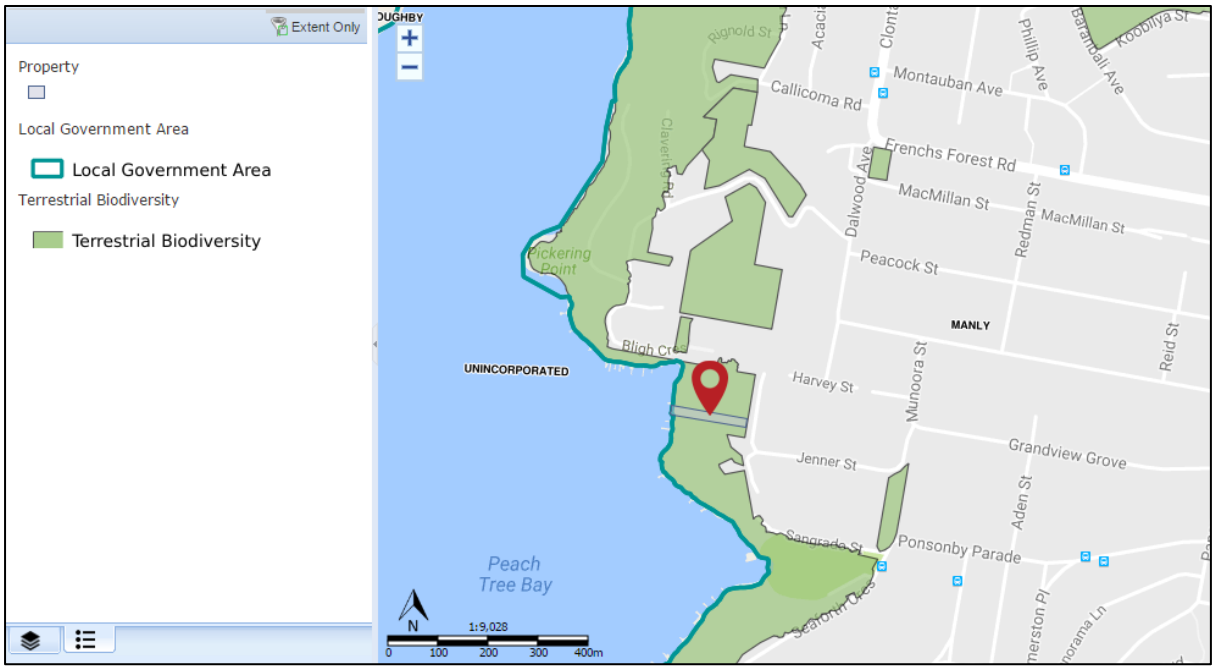

Figure 1. Manly LEP 'Terrestrial Biodiversity' Mapping Centred on 22 Abernethy Street, Seaforth

Table 1. Flora Species Identified on Site

Scientific Name	Common Name	Location on Property	Exotic	Status	Canopy	Understory	Shrub	Ground
Howea forsteriana	Kentia Palm	Northern Garden Bed	x		x			
Melaleuca quinquenervia	Broad-leaved Paperbark	Northern Garden Bed			x			
Ulmus spp.		Northern Garden Bed	x		x			
Magnolia spp.		Northern Garden Bed	x		x			
Trachelospermum jasminoides	Star Jasmine	Northern Garden Bed	x					x
Anigozanthos flavidus	Tall Kangaroo Paw	Northern Garden Bed	x					x
Agapanthus praecox	Lily of the Nile	Northern Garden Bed	x					x
Nephrolepis cordifolia	Fishbone Fern	Northern Garden Bed/Stockpile Site	x					x
Tradescantia fluminensis	Wandering Jew	Northern Garden Bed	x					x
Acetosa sagittata	Turkey Rhubarb	Northern Garden Bed	x	N				x
Cyathea cooperi	Straw treefern	Southern Garden Bed			x			
Camellia spp.		Southern Garden Bed	x				x	
Syzygium spp.	Lillypilly	Southern Garden Bed			x			x
Bidens pilosa	Cobblers Pegs	Southern Garden Bed	x					x
Solanum nigrum	Black-berry Nightshade	Southern Garden Bed	x					x
Ehrharta erecta	Panic Veldtgrass	Southern Garden Bed	x					x
Sida rhombifolia	Paddy's Lucerne	Southern Garden Bed	x				x	
Cissus antarctica	Kangaroo Vine	Southern Garden Bed						x
Angophora costata	Sydney Red Gum	Stockpile Site			x			
Plumbago auriculata	Blue Plumbago	Stockpile Site	x				x	
Agapanthus sp.	Agapanthus	Stockpile Site	x					x
Lophostemon confertus	Brush Box	Stockpile Site	x		x			
Jacaranda mimosifolia	Jacaranda	Stockpile Site	x		x			

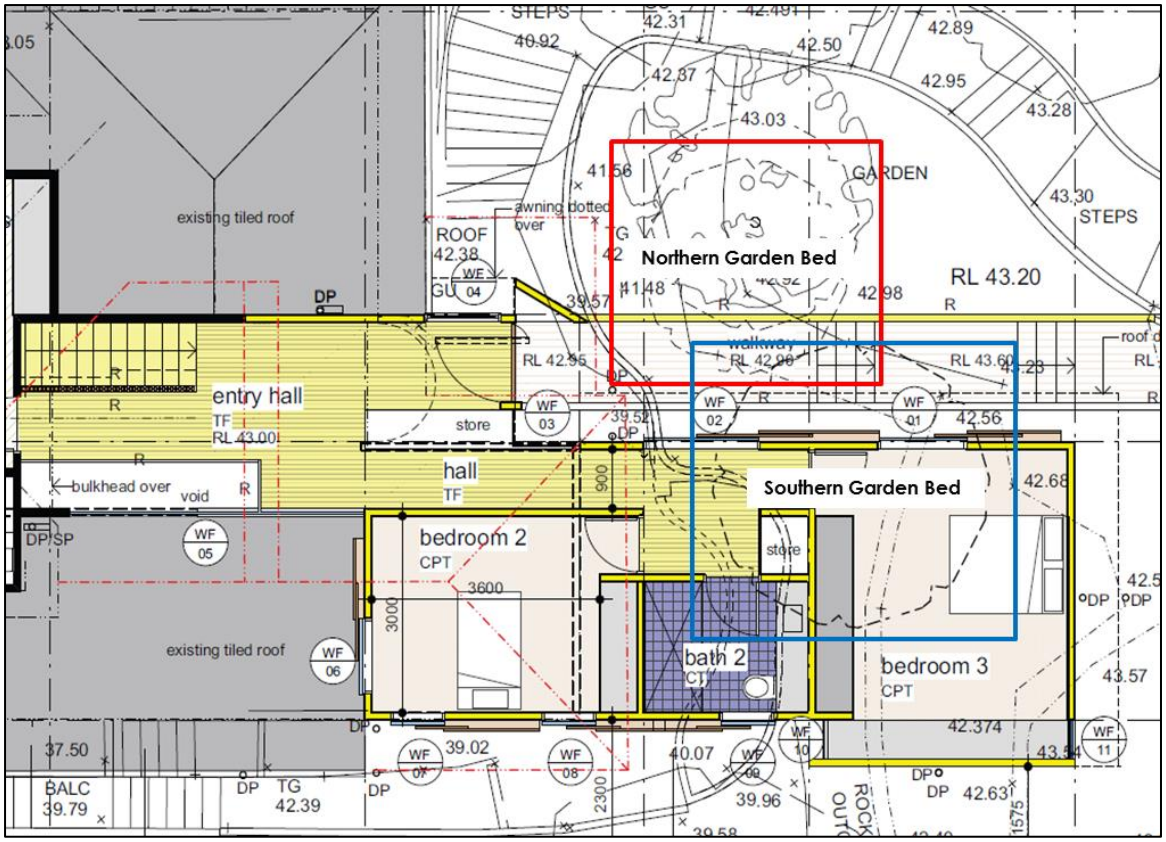

Figure 2. The Locations of the Northern and Southern Garden Beds.

Plate 1. Proposed Stockpile Site – car port with overhanging Sydney Red Gum (*Angophora costata*)

Figure 3. Native Plant Guide for the former Manly LGA