Flora and Fauna Assessment

for a

Construction of New Dwelling

at

231/233 McCarrs Creek Road, Church Point

Date Published: 01/05/2025

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We acknowledge the traditional owners of this land and pay respect to Elders, past, present, and emerging.

Table of Contents

List of Maps

List of Tables

List of Photos

1 Introduction

1.1 Background

This report describes the ecological values and constraints at the Study Site which is Lot 34/35 in DP 20097 also known as 231/233 McCarrs Creek Road, Church Point in the Northern Beaches Local Government Area. The importance of the land to the conservation of Threatened flora and fauna species, and ecological communities and the likely impacts of the proposed development on terrestrial biodiversity are assessed as required by Federal, State and Local Government legislation.

Impacts to Threatened and other native plants and animals that are likely occur during construction and occupation, are identified. Ways these impacts can be avoided and minimised have been discussed with the developer and the plans have been modified. Recommendations to ameliorate ecological impacts are included in this report.

An accurate description of the flora and fauna and an assessment of the ecological impact is required when submitting development applications to allow assessment of the application in relation to the following legislation; *Environmental Planning and Assessment Act 1979*, *Fisheries Management Act 1994*, the *Biodiversity Conservation Act 2016* and the Federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999). In addition, the information in this report may be needed to assess the development with respect to other acts, policies, regulations, SEPPs, local government controls, orders and policies such as; LEPs, DCPs.

1.1 Aims of this Report

The aims of this flora and fauna assessment are to:

- Record the **findings of an ecological survey** that describes the flora, fauna and ecological communities and their habitats of the site and surrounding land and the likely impacts the proposal;
- Describe the **importance of the habitat** on the site to the conservation of native flora and fauna, including fauna not found during the survey.
- Determine the ecological **constraints** of the site and provide advice to the applicant on ways the impact can be **avoided** and **minimised** before finalising the proposal plans as required by the mitigation hierarchy of the Biodiversity Conservation Act 2016;
- **Assess** the likely **ecological impact** of the proposal (as described in this report) on the ecological values of the site in particular the significance of the impact to Threatened species, populations and ecological communities or their habitats in accordance with the requirements of the *Environment Planning and Assessment Act* (EP&A Act) Sections 4.15(1) a, b and c, the *Biodiversity Conservation Act 2016* (including threshold test and 5-Part assessment of Significance) and determination of compliance with other relevant NSW legislation including; Acts, regulations SEPPs, LEP and DCPs;
- Determine if the proposal triggers the **BOS threshold test** as required by the *Biodiversity Conservation Act 2016*, which would require the application of the Biodiversity Assessment Method (BAM) and a BDAR assessment;
- Determine if the proposal needs a **referral** to the Federal government for assessment under the EPBC Act;
- Recommend ways the **ecological impacts** can be further **ameliorated** and management actions during construction and for the life of the development.

1.2 Ecologically Relevant Legislation

The ecological legislation relevant to this proposal is listed in Table 1 and the relevant ones are described in section 1.3.

Table 1: Ecologically Relevant Legislation Summary

Legislation/Policy	Triggers	Requirement	Assessment Requirements	How Addressed
Environment Planning and Assessment Act 1979	Part 4 Local Development Applications that are not Complying or State Significant. Heads of Consideration 4.15 parts a, b, and c	Yes	Requires other State and Local Government legislation and policies to be assessed	Addressed by this report and in the conclusions in section 5.
Biodiversity Conservation Act 2016 (BC Act)	Threshold Test and 5-part tests of significance s7.3 required for all part 4 DAs These are triggers for entry into BOS.	Yes	Threshold Test, 5-part tests of significance. BAM assessment not required.	5-part Test of Significance in Appendix A of this report. Entry into BOS not required.
Local land Services Act 2013 (LLS Act)	Native Vegetation Regulatory Map	Excluded		
Vegetation in Non-Rural Areas SEPP	Clearing of vegetation when there is no DA.	No		
Water Management Act 2000	Controlled activity on waterfront land and more than one dwelling.	Not waterfront, single dwelling		
Fisheries Management Act 1994 (FM Act)	Impact to marine vegetation or Threatened species listed in the FM Act.	No		
Coastal Management SEPP 2018	Mapped on SEPP Coastal Management Map	Yes		
Biosecurity Act 2015 (Bio Act)	Priority weeds of environmental weeds at the site.	Yes	All Weeds are identified	All weeds are identified and classified.
Koala Habitat Protection SEPP 2019	Evidence of viable Koala population in the locality	No property less than 1ha		
Local Council LEP and DCP		Yes	LEP and DCP addressed by Planning Report	
SEPPS	Mostly maps	Yes	Addressed by Planning Report	Addressed by Planning Report
Federal Environment Protection and Biodiversity Conservation Act 1999	Actions do not meet criteria	No		

1.3 Legislation Addressed by the Report

1.3.1 Environment Planning and Assessment Act 1979

The NSW Environment Planning and Assessment Act 1979 is the framework for approval of development in NSW. The proposed development will be assessed under Part 4 of the NSW Environmental Planning and Assessment Act. Section 4.15(1)(a) of the Act requires that consent authorities must take into consideration any environmental planning instruments. Section 4.15(1)(b) requires the assessment of the likely impacts of development, including environmental impacts on both the natural and built environments. Section 4.15(1)(c) requires an assessment of the suitability of the land for development.

1.3.2 Biodiversity Conservation Act 2016

https://legislation.nsw.gov.au/view/html/inforce/current/act-2016-063

NSW Biodiversity Conservation Act 2016 establishes a legal framework for conserving biodiversity, and assessment of likely impact caused by development application (DAs). Supporting the BC Act are the Biodiversity Conservation **Regulation** 2017 and a large amount of associated documents and guidelines.

One of the main purposes of the BC Act is to ensure that environmental impact is Avoided and Minimised and any remaining impact is appropriately offset using the BOS. Other core parts relevant to assessment of developments are: Biodiversity Assessment Method (**BAM**), the Biodiversity Assessment Method Calculator (**BAM-C**), Biodiversity Development Assessment Report (**BDAR**) and Accredited Assessors. These together establish a scientifically rigorous method to assess the likely impacts of planning applications (Part 4 DAs, Part 5 EPA Act) on biodiversity values and calculate appropriate offsets.

The BC Act contains many other necessary parts of the framework including: Schedules of **Threatened Species** (BC Act, Schedule 1), descriptions of **Threatened Ecological Communities** (BC Act, Schedule 2), an **Assessment of Significant Impact** (5-part Test), a **Threshold Test**, exemptions in special cases and definitions of Endangered Ecological Communities, Areas of Outstanding Biodiversity value (AOBV), Serious And Irreversible Impacts (SAII), key threatening processes, establishment of conservation programs, offences, protection of native animals, defences, licences, fines, penalties, Prescribed Impacts, public registers and associated legislation.

Key concepts are vegetation integrity, habitat suitability and biodiversity values, serious and irreversible impact, conservation of habitat, protection of threatened species and ecological communities and residual impact.

The BC Act is consistent with the principles of Ecologically Sustainable Development (ESD) and includes a strategy to achieve a Net Positive biodiversity outcome to provide for the needs of future generations. The BC Act only applies to terrestrial environments and applies to all tenures.

Section 7.7(2) of the BC Act states that Council cannot approve a Development Application (DA) that is **likely to significantly affect threatened species** unless the application is accompanied by a valid biodiversity development assessment report (BDAR).

Determining the need for a BAM Assessment, BDAR report, application of the BAM-C and offsetting

To determine if a development or an activity **is likely to significantly affect threatened species** (s7.2 BC Act) the following **Assessment of Significance** is required. This has 3 parts:

(a) the DA is likely to **significantly affect threatened species or ecological communities, or their habitats**, according to the test (**5 part test** see below) in section 7.3 of the BC Act **or**

(b) the development exceeds either of the two the biodiversity offsets scheme **threshold triggers** (s7.4 BC Act, an area limit and an overlap of the Biodiversity Values Map s7.4(3)) see below, **or**

(c) it is carried out in a declared area of outstanding biodiversity value AOBV (not relevant to this DA).

If any triggers are met the **Biodiversity Assessment Method** (BAM) applies and residual impacts of the proposal must be offset in accordance with the **Biodiversity Offset Scheme** (BOS).

5 Part Test (s7.3 BC Act) Significantly Affect

The Test for determining whether proposed development or activity likely to significantly affect threatened species or ecological communities, or their habitats that is in s7.3 of the BC Act needs to be applied to every Threatened plant and animal species that may occur on the site. This requires ecological skill and experience or it will not be accepted by Council. The 5 questions assess the impact of the proposal on each potential Threatened species (Schedules 1 and 2 of the BC Act) that may occur on the site.

The relevant Threatened species are determined in Table 2 and the required 5 parts tests for this proposal at this site are provided in Appendix A.

Threshold Triggers (s7.4 BC Act, BC Act Regulation)

Proposed development exceeds the biodiversity offsets scheme threshold if it is development of an extent or kind that the regulations (BC Act Regulation) declare to be development that exceeds the threshold.

The two triggers are applied to this proposal at the proposed location below.

The first is triggered if the area of the **clearing** of **Native Vegetation** exceeds a limit that is dependent of the minimum lots size of the lot on Councils LEP.

Clearing Footprint - Include all buildings and ancillary uses such as asset protection zones (APZ), tree protection zones (TPZ), landscaping, fence lines, driveways, services (refer to civil works plans) and any temporary works or facilities required during construction or operation. For proposed subdivision developments under Part 4 of the Environmental Planning and Assessment Act 1979, include the total area of native vegetation clearing that, in the opinion of the consent authority, is required or likely to be required for future land use (such as housing development); for example, areas of future vegetation degradation or clearing resulting from operational use.

Native Vegetation – as defined in the Local Land Services Act 2013 section 60B. See definitions section.

The relevant minimum lot size, threshold limit, area of clearing of native vegetation for this proposal at the proposed location are determined in the next section.

The results of an Assessment of Impact for this proposal, for the footprint proposed has been carried out by an Accredited Assessor and is provided below for Councils consideration.

If the proposed development or activity is likely to significantly affect a Threatened species or ecological community, or their habitats then a BDAR report including a BAM Assessment, application of the BAM-C and potential offsetting with payment into the BOS will be required.

If a BDAR report and BAM assessment is required and Council approved the development, then a condition of consent will be part of the approval that requires retiring (buying and extinguishing) appropriate number and type of biodiversity offset credits prior to issue of any Construction Certificate. A BDAR report must be prepared by a qualified ecologist.

If a development application does not meet the threshold or any other triggers, then a smaller ecological report is still required to address the ecologically relevant “heads of consideration” in section 4.15 of the EP&A Act other Acts, SEPP and LEP/DCP requirements.

1.4 Biodiversity Conservation Act BAM Threshold Assessment

The Biodiversity Conservation Regulation 2017 sets out threshold tests for when the Biodiversity Offset Scheme (BOS) will be triggered and a BAM assessment in the form of a BDAR report is required to accompany the DA.

The area threshold varies depending on the minimum lot size (shown in the Lot Size Maps made under the relevant Local Environmental Plan (LEP)), or actual lot size (where there is no minimum lot size provided for the relevant land under the LEP).

Native vegetation clearing thresholds that trigger the BOS.

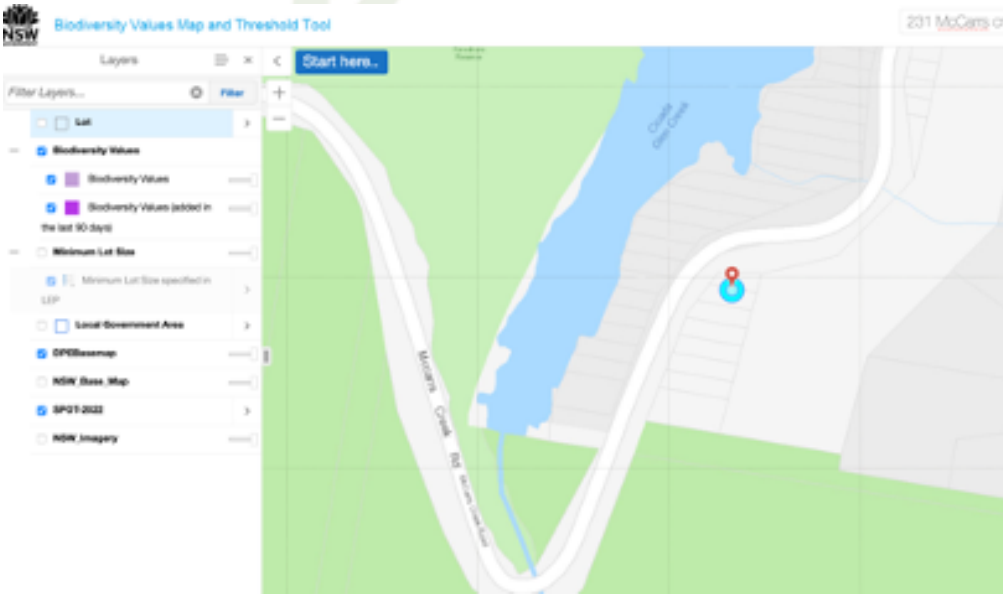
Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme apply
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha	0.5 ha or more
40 ha to less than 1000 ha	1 ha or more
1000 ha or more	2 ha or more

The areas of native vegetation on the site are shown on Map 4. The part of the site that is likely to be disturbed is shown on Map 6.

This proposal (see Map 5) is **not** considered to meet the BC Act threshold as;

1) The LEP minimum lot size for this location is less than 1ha, therefore the maximum cut-off for clearing "Native vegetation" is 0.25ha. The total amount of disturbance to native vegetation by this proposal is 0.11ha which is below the threshold limit. Therefore, this proposal does not trigger this threshold limit, **and**
2) The *Biodiversity Conservation Regulation 2017,* Biodiversity Values Map (BV Map) identifies land with high biodiversity value, as defined by the *Biodiversity Conservation Regulation 2017*. The Biodiversity Offsets Scheme applies if the proposal occurs on land mapped on the Biodiversity Values Map. This site **is not** mapped on the "Biodiversity Values" Map, see map below, **and**
3) There is **not** likely to be a significant effect (5-part assessment of significance test Section 7.3, BC Act) on any Threatened species or ecological communities or their habitats as has been determined by this report.

Therefore, the proposal **does not trigger the need for a BAM assessment report (BDAR)** and offsetting. However, the DA does need a Flora and Fauna Report to address Council legislation and development controls and section 4.55 of the EP&A Act.



https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap

1.4.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The State Environmental Planning Policy (SEPP) (Biodiversity and Conservation) 2021 consolidates and replaces 11 previously distinct SEPPs including those relating to vegetation in non-rural areas, koala habitat protection, bushland in urban areas, canal estate development, as well as other regional-specific SEPPs. Chapter 4 regarding Koala Habitat Protection is addressed in this report. Other parts of this SEPP are addressed in the accompanying Statement of Environmental Effects.

Chapter 4 Koala Habitat Protection 2021 aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline. Part 4.2 states that if an approved koala plan of management applies to land within the LGA, the determination of development consent must be consistent with the plan. If there is no approved Koala Management Plan applying to the project site, the SEPP applies. If the property is greater than 1 hectare (including any adjoining land under the same ownership), the Council needs to be satisfied that the project site is not a core koala habitat (as defined in Section 4.2 of the SEPP).

The Study Site is in the Northern Beaches LGA which was formed following the amalgamation of Manly, Warringah and Pittwater LGAs. Both Warringah LGA and Pittwater LGA were listed in Schedule 1 of SEPP 44, the SEPP 2019 applies.
The Koala Development Application Maps prepared under SEPP 2019 – Koala Habitat Protection, with areas identified as 'pink' on the map being subject to the provision of the SEPP. The entire Study Site is mapped as 'blue' on the Koala Development Application Map. Thus, the development assessment process under SEPP 2019 – Koala Habitat Protection does not apply to the proposal.

1.4.2 NSW Biosecurity Act 2015 - Weeds

The aim of the *Biosecurity Act 2015* is to protect the economy, environment, and community from the negative impact of pests, diseases, and weeds.

The NSW *Biosecurity Act 2015* includes a General Biosecurity Duty, as set out in Part 3 Section 22, which requires that "*the responsibility of any person who has any dealing with weeds (biosecurity matter), whether they have an infestation on their land, are selling a potentially invasive species, dumping garden rubbish, or supplying contaminated fodder or the like, must prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable)*".

Under the Act, all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. All landowners or land managers who deal with any plant, who know (or ought to know) of any biosecurity risk, have a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. The obligations of landowners or land managers in relation to specific weed species are outlined in regional Weed Management Plans (WMPs).

The regional Weed Management Plans seek to provide guidance on the management of weeds on a local scale in order to comply with the NSW *Biosecurity Act 2015*. Appendix 1.1 of the Regional Weed Management Plan identifies 'State Priority Weeds" and is broken up into the strategic response categories of 'Prevention', 'Eradication', 'Containment' and 'Asset Protection'. Appendix 1.2 outlines the 'Regional Priority Weeds' and is also broken up into these same four strategic responses. Weeds in the 'Prevention' category have not yet been identified in the state, but they pose a large biosecurity risk, so it is important that these are prevented from entering the state. 'Eradication' applies to weeds that are only limited in distribution and abundance, and so, these must be fully removed. 'Containment' is appropriate for weeds that have a wide distribution, hence widescale eradication is not currently possible, but these must be prevented from spreading further. 'Asset Protection' refers to Weeds of National Significance whose spread must be minimised.

This report addresses the NSW *Biosecurity Act 2015* by referring to the document 'Greater Sydney Regional Strategies Weed Management Plan 2023-2027' by the Local Land Services of Greater Sydney.

1.4.3 Commonwealth Environment Protection and Biodiversity Conservation Act, EPBC Act

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the Commonwealth Government's main piece of environmental legislation. Two primary aims of the Act are to conserve biodiversity and provide for the protection of the environment, especially regarding Matters of National Environmental Significance (MNES). There are currently nine MNES:
(1) world heritage properties;
(2) national heritage places;
(3) wetlands of international importance;
(4) nationally threatened species and ecological communities;
(5) migratory species;
(6) Commonwealth marine areas;
(7) the Great Barrier Reef Marine Park;
(8) nuclear actions (including uranium mining); and
(9) a water resource, in relation to coal seam gas development and large coal mining development.

The NSW Biodiversity Offsets Scheme (BOS) has been endorsed by the Australian Government for assessment and offsetting of all projects requiring approval under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This was achieved via an amendment to an existing Bilateral Agreement with the NSW Government and formal endorsement of the BOS under the Australian Government's EPBC Act Condition Setting Policy. Proponents will need to meet their offset requirement for EPBC-listed entities in accordance with clause 6.6A of the Biodiversity Conservation Regulation, by retiring like-for-like credits, paying into the Biodiversity Conservation Fund, or funding a conservation action. This means that NSW proponents who need EPBC Act approval can use the NSW BOS to assess and meet their biodiversity offset requirements for biota that occur under both Acts. There is a Bilateral Agreement between the Federal Government and the NSW Government in which section 4.1 states that an action does not require assessment under part 8 of the EPBC Act if the action is being assessed as a DA under Part 4 Division 4 NSW EP&A Act.

This report also identifies flora and fauna species or communities, relevant to the site that are listed under Part 13 Division 1 of the *Environment Protection & Biodiversity Act 1999 (Cwlth)* (EPBC). Species or communities listed in the Act are considered to be "matters of national environmental significance" and consideration needs to be given as to whether the proposed development will or is likely to have a "significant impact" on "matters of national environmental significance". In determining whether a "significant impact" will occur, consideration is given to the document EPBC Act Administrative guidelines on significance (DEH 2006).

Should the assessment in this report determine that a "significant impact" will occur or is likely to occur on "matters of national environmental significance", the proposed development will need to be referred to the Minister (Cwlth) to determine whether or not the proposed development is a "controlled action".

Part 13 Division 1 of the *Environment Protection & Biodiversity Conservation Act 1999 (Cwlth)* (EPBC) lists flora, fauna and ecological communities that are considered to be "matters of national environmental significance". Under the Act consideration must be given as to whether the proposed actions will or is likely to have a "significant impact" on "matters of national environmental significance".

Assessment of a Development Application with respect to the EPBC Act 1999 is not a Council issue but is the responsibility of the proponent. Proponents should be advised by their ecological consultant whether a referral is necessary. Assessment under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is needed if the proposal is considered likely to have an impact on a 'matter of National Environmental Significance (MNES)'. The proposal would then need detailed assessment and referral to the Federal Department of Environment and Energy (DEE), thus providing a trigger for referral of the proposal to the Environment Department for assessment. Matters of national environmental significance identified in the Act are: world heritage properties; national heritage places; RAMSAR wetlands; nationally threatened species and communities; migratory species protected under international agreements; the Commonwealth marine environment; nuclear actions and a water resource, in relation to coal seam gas development and large coal mining development.

The Act also protects the environment when actions are taken on Commonwealth land, and impact upon Commonwealth land by an Australian Government agency anywhere in the world that impacts Commonwealth Heritage places or areas overseas.

This report addresses the requirements of this legislation.

1.5 Definitions and Acronyms

APZ (Bushfire hazard fuel reduction Asset Protection Zone) - Defined in the document '*Planning for Bushfire Protection 2006*' by the NSW Rural Fire Service. Usually consisting of an Inner Protection Area (**IPA**) and an Outer Protection Area (**IPA**)

BAM - Biodiversity Assessment Method described by Office of Environment and Heritage August 2017 and referred to by the BC Act regulation.

BC Act - (NSW Biodiversity Conservation Act 2016) - Contains the lists of threatened species, the definitions of the threatened ecological communities, the 5-part Test of Significance and the BOS. There are associated Biodiversity Conservation regulations which refers to the BAM.

BOS – Biodiversity Offset Scheme the system of trading biodiversity offset credits, paying for offsets and the Biodiversity Trust.

DAWE – Commonwealth Department of Agriculture, Water and the Environment

DCP -(Development Control Plan) - A local planning instrument for each LGA.

Direct Impacts - impacts that directly affect habitat, ecosystems and individuals. They include, but are not limited to, death, trampling, poisoning of the animal/plant itself and the removal of vegetation and suitable habitat. When applying each factor, consideration must be given to all of the likely direct impacts of the proposed activity or development during construction. As defined by the 2006 DECC Assessment of significance guidelines.

DPIE – NSW Government of Department of Planning, Industry and Environment

EES – Environment Energy and Science, DPIE group formerly OEH, NPWS, DEC, DECC and DECCW. The department responsible for the conservation of native flora and fauna.

EPA Act (EP&A Act) – NSW Environment Planning and Assessment Act 1979, controls development in NSW.

EPBC Act - (Federal Environment Protection and Biodiversity Conservation Act 1999) – Identifies matters of national environmental significance to protect nationally significant fauna, ecological communities and heritage sites.

Indirect Impacts - Occur when project-related activities affect species, populations or ecological communities in a manner other than direct loss. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities, loss of shade/shelter, deleterious hydrological changes, increased soil salinity, erosion, inhibition of nitrogen fixation, weed invasion, fertiliser drift, or increased human activity within or directly adjacent to sensitive habitat areas. Indirect impacts may occur after construction during the life of the development, e.g. escape of garden plants, excess nutrients and changes in fire frequency and grazing. As with direct impacts, consideration must be given, to all of the likely indirect impacts of the proposed activity or development (2006 DECC Assessment of Significance Guidelines)

LEP (Local Environment Plan) - A local planning instrument for each LGA.

Native Vegetation - as defined in the LLS Act section **60B:** Meaning of "native vegetation"

"**native vegetation**" means any of the following types of plants native to New South Wales:

(1) (a) trees (including any sapling or shrub or any scrub),

(b) understorey plants,

(c) groundcover (being any type of herbaceous vegetation),

(d) plants occurring in a wetland.

(2) A plant is native to New South Wales if it was established in New South Wales before European settlement. The regulations may authorise conclusive presumptions to be

made of the species of plants native to New South Wales by adopting any relevant classification in an official database of plants that is publicly accessible.

(3) For the purposes of this Part, native vegetation extends to a plant that is dead or that is not native to New South Wales if:

(a) the plant is situated on land that is shown on the native vegetation regulatory map as category 2-vulnerable regulated land, and

(b) it would be native vegetation for the purposes of this Part if it were native to New South Wales.

(4) For the purposes of this Part, native vegetation does not extend to marine vegetation (being mangroves, seagrasses or any other species of plant that at any time in its life cycle must inhabit water other than fresh water). A declaration under section 14.7 of the *Biodiversity Conservation Act 2016* that specified vegetation is or is not marine vegetation also has effect for the purposes of this Part.

OPA (Bushfire hazard Outer Protection Area) - Defined in the document '*Planning for Bushfire Protection 2006*'.

Property – Adjacent or nearby lot(s) that have the same ownership.

Study Area - The subject Site and any additional areas which are likely to be affected by the proposal, either directly or indirectly. The study area should extend as far as is necessary to take all potential impacts into account (DECC 2006).

Subject Site - The area directly affected by the proposal (DECC 2006).

Test of Significance (5-Part Test) - Assessment under Section 7.3 of the BC Act to determine whether a proposed development or activity is likely to significantly affect threatened species, or ecological communities, or their habitats.

Threatened Species or Ecological Community - Refers to those biotas listed in the schedules of the Biodiversity Conservation Act 2016 as "Critically Endangered ", "Endangered" or "Vulnerable".

For definitions that are relevant to the Assessment of Significance such as ***Life cycle***, ***Viable***, ***Local population***, ***Risk of extinction, Local occurrence***, ***Risk of extinction, Composition***, ***Habitat***, ***Extent***, ***Importance***, ***Locality***, "***likely***" and "***significant***" "***affect***" see the Assessment of Significance Appendix.

1.6 Assumptions and Limitations

- This report only addresses the impacts of the proposal described in this report and shown on the maps in this report. If there are changes or additions to the ecological impact of the proposal, then this report will require updating.
- This report describes the habitat and species within the Study Area at the time of the field survey. Vegetation and habitat will change over time, as does legislation. Therefore, the findings of this report are likely to be out of date in 12 months.
- This report assesses only the current proposal and does not consider the cumulative impact of other developments on this property or on adjacent land or the potential edge effects or impacts caused by the occupation of the land.
- There may be flora and/or fauna species present within the study area that were not recorded because they are seasonal, cryptic and/or have large home ranges. Some threatened species may use the study area as habitat at some time. The conclusions drawn in this report are a result of testing, observation and experience.
- This report should be read in its entirety and no part should be taken out of context.
- No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.
- The preparation of this report has been in accordance with the brief provided by the Client and has relied upon the data and results collected within the time constraints set by the Client and as specified in the report. All findings, conclusions or recommendations contained within the report are based only on the aforementioned circumstances.

1.7 Qualifications and Experience of the Field Ecologist and Authors

Nicholas Skelton's formal qualifications include a Bachelor of Science with Honours (B. Sc. (Hons) USyd) and a Masters in Applied Science (M. App. Sc. in Vegetation Management UNSW). Nick has been an environmental scientist for 25 years, including a university lecturer, research ecologist and a bush regenerator for 8 years. His work is focused on the Sydney bioregion and he has published many papers in independently reviewed journals on the ecology of NSW. He has expert knowledge of the local soils, the climate of this area and the local indigenous plants and animals as a result of over 900 ecological surveys. Nick is a member of the relevant professional organisations including: a practising member of the Ecological Consultants Association of NSW and Royal Zoological Society. He is licensed by NSW OEH and NSW Department of Primary Industries to carry out surveys on threatened plants and animals and he is a qualified Biodiversity Assessor under the BC Act 2016. Nick was the principal ecologist on all field surveys and was responsible for map making and report writing and editing. Further details can be found at ecology.net.au.

Andreas Bartnitzky holds a Bachelor of Science in Ecology. Andreas has over one year of experience in report writing on ecological matters and two years of fieldwork experience within the Sydney basin bioregion.

2 The Proposal

Proposal Summary	
Owner / Company	Mr Wang & Mrs Ma
ABN if a company	n/a
DA Number (if known)	Not yet allocated
Applicant	Mr Wang & Mrs Ma
Local Government Area (LGA)	Northern Beaches Council
Type of Proposal	The proposal is a development that requires consent under Part 4 of the *Environmental Planning & Assessment Act 1979 (*EP&A Act*)*, that involves terrestrial biodiversity values

The proposal is shown on Map 5 and includes:

- The removal of several trees;
- Construction of a new 3 storey dwelling, including a garage, and driveway;
- Establishment of a Bushfire Asset Protection Zone APZ.

2.1 Bushfire Asset Protection

The subject site is mapped as Bushfire Prone Land Category 1 and Buffer on the Bushfire Prone Land Map.

2.2 Wastewater Disposal

There is a SMH (Sewer Manhole) present on the western side of the property that will be used for wastewater disposal, but no connection between it and the property is currently illustrated on the plans.

2.3 Proposal Plans and Reports Used for this Report

Title	Author	Rev	DWG./Doc. No./Ref.	Date
Site Plan	S&E Design Studio	C	01	18/03/2025
Arboricultural Impact Assessment Report	Blues Bros Arboriculture	1	-	31/03/2025
Bush Fire Assessment Report	Bushfire Consulting Services PTY LTD	2	J22/1023	12/04/2024
Re: Sight Line Analysis	ParkTransit Australia P/L	-	-	16/04/2024
Landscape Plan	Contour Landscape Architecture	G	-	03/04/2024
Site Stormwater Management Layout	Alwdesign Civil Engineering Consultants	C	SW22252 – S2	16/04/2024

Legend

231-333 McCarrs Creek Rd, Church Point

Property Lots 34 and 35, DP 20097, 388 and 510sqm

Northern Beaches some Geo

Contour

2 metre

Road

Arterial Road

Cadastre

Source of Aerial Photo: Google

Map 1
Site, Aerial Photograph

Date: 12/12/2021
Drawn by: Nicholas Skelton
Version 1
Projection: GDA 94 MGA 56

0 5 10 m

N

Legend

231-333 McCarrs Creek Rd, Church Point

Property 231 Mc Carrs Ck Rd 733sqm

Buffer 1500m

Sydney GIS Layers

Suburb

Lot

Source of Aerial Photo: Google

Map 2
Locality, Aerial Photograph

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Date: 30/3/2022
Drawn by: Nicholas Skelton
Version 1
Projection: GDA 94 MGA 56

0 300 600 m

3 Subject Site

The site is Lots 34 & 35 in DP 20097 also known as 231-233 McCarrs Creek Road, Church Point which is 898m^2 in size. The property is shown with a red outline on Maps 1 – 6. The construction site is the area that will be directly or indirectly impacted. On this site, it is entirety of the property including the driveway connecting the road.

3.1 Geographic co-ordinates

The geographic co-ordinates of the study area are (latitude and longitude) 151.273534885° E, -33.657861162° S or MGA 339918.91 E, 6274441.69 S.

3.2 Topography

The land slopes steeply to the west. Maps 1, 5 and 6 shows the site with 2 m contours and the topography in the locality is shown on Map 3.

3.3 Drainage and Riparian Land

Cicada Creek is located about 150m to the West and 200m to the North of the property.

The site is not identified as containing Riparian Land.

This site is mapped by the Coastal Management SEPP as “Coastal Use Area” and “Coastal Environment Area”.

4 Locality and Adjacent Environmental Features

The following is a result of an initial desktop assessment, then field survey.

The site is located within the Church Point area within the Northern Beaches Council area. There is an urban road to the west and the north called McCarrs Creek Road, with a native vegetation road verge. The eastern boundary is adjacent to East McCarrs Creek Reserve, a native bushland reserve connecting the urban vegetation to Ku-ring-gai Chase National Park. To the south is a vacant lot with native vegetation followed by several houses under construction.

The suburb is surrounded by extensive areas of native bushland on crown land and National Park. The proximity of the site to nearby bushland is shown on Maps 1, 2, 3 and 4.

The location of the site and its context and the environmental features in the locality are shown on Maps 1, 2, 3, and 4.

4.1 Vegetation Mapping in the Locality

When the methods were applied it was determined that the site contains Turpentine-Rough-barked Apple-forest Oak Moist Shrubby tall open forest of the Central Coast (Central Coast Escarpment Moist Forest PCT 1565).

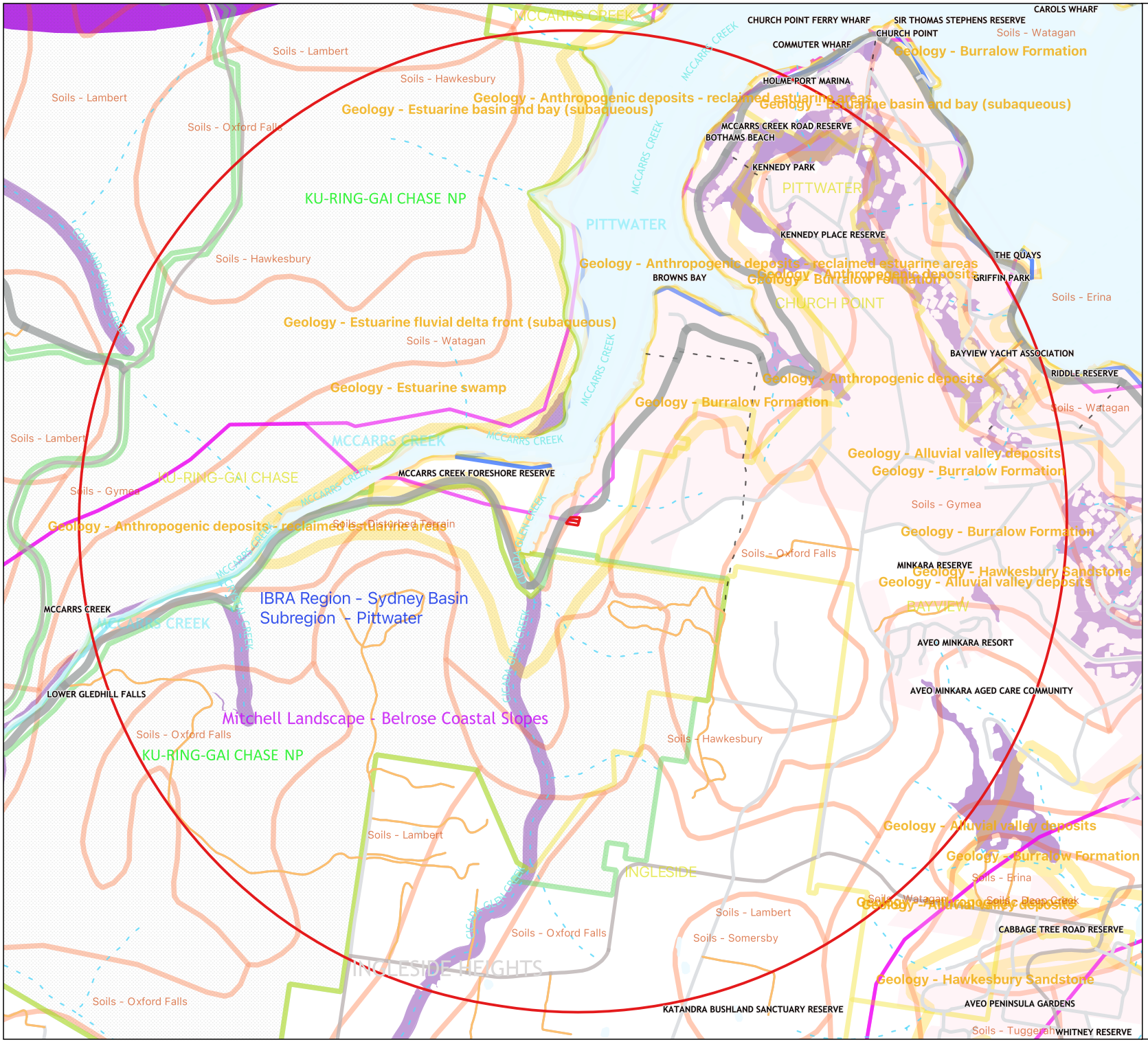
4.2 Wildlife Corridors

There is bushland to the south of the property which continues to the west of the site then north to the large area of bushland of the National Park is on the edge of wildlife habitat. McCarrs creek road is on the west side of the property. The site forms part of a north-south wildlife corridor. This can be seen in the locality aerial photograph on Map 2 and the vegetation map on Map 4.

4.3 Geology and Soils

The soils in the locality are shown in thick light brown outline on Map 3. The site is mapped as Watagan soil type.

Watagan is derived from interbedded laminate and shale resulting in heavy higher nutrient clay soils (Soil Landscapes Sydney, Chapman and Murphy 1989).



Legend

McCarrs Creek Rd, Church Point

- Property, 231-133 Mc Carrs Ck Rd 733sqm
- Assessment Area, 1500m Buffer

Road

- Arterial Road
- Distributor Road
- Local Road
- Urban Service Lane
- Track-Vehicular
- Path
- Water Body
- Drainage Body

Drainage

- Watercourse Non Perennial
- Watercourse Perennial
- Suburb
- NPWS Estate
- Built Up Area
- Mitchell Landscape V3.1
- IBRA V7 Regions and Subregions

Geology and Soils

- Soil Landscapes of the Sydney 1:100k Chapman, et,al.,
- Geology Sydney Rock Units Seemless 2.0

Biodiversity Values Map

Biodiversity Values Map (DPIE)

- Biodiversity Values
- Biodiversity Values added in the last 90 days

Map 3
Locality, Topography and Features

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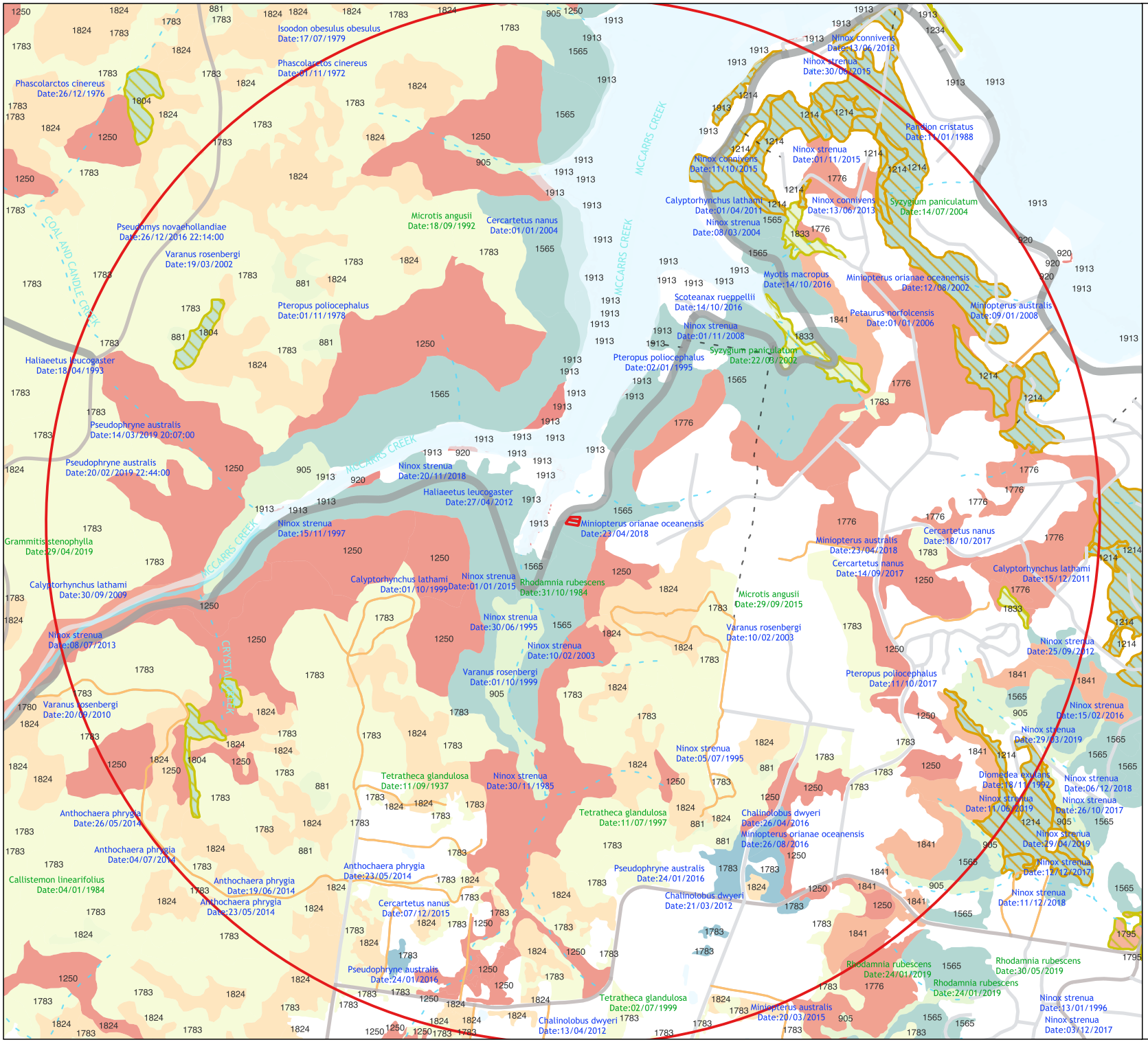
Date: 3/4/2022
Drawn by: Nicholas Skelton
Version 1
Projection: GDA 94 MGA 56

0 200 400 m



Legend

McCarrs Creek Rd, Church Point

- Property, 231-133 Mc Carrs Ck Rd 733sqm
- Assessment Area, 1500m Buffer

Vegetation Type/Ecological Community PCT

Threatened Ecological Communities 2021 Status

- Endangered SAII
- Endangered

Sydney Metro v3.1 DPE 2016 Native with PCT Code

- Aquatic PCT Number: 1913
  S_SW03: Seagrass Meadows
- Forest/Open Woodland PCT Number: 920
  S_SW01: Estuarine Mangrove Forest
- Forest PCT Number: 1234
  S_FoW08: Estuarine Swamp Oak Forest
- Forest PCT Number: 1250
  S_DSF09: Coastal Sandstone Gully Forest
- Forest PCT Number: 1776
  S_DSF04: Coastal Enriched Sandstone Dry Forest
- Forest PCT Number: 1780
  S_DSF08: Coastal Sandstone Riparian Forest
- Forest PCT Number: 1795
  S_FoW02: Coastal Flats Swamp Mahogany Forest
- Forest PCT Number: 1841
  S_WSF02: Coastal Enriched Sandstone Moist Forest
- Heath/Tall Scrub PCT Number: 1824
  S_HL08: Coastal Sandstone Heath-Mallee
- Low Open Woodland PCT Number: 1783
  S_DSF11: Sydney North Exposed Sandstone Woodland
- Mallee/Low Woodland PCT Number: 1824
  S_HL08: Coastal Sandstone Heath-Mallee
- Open Heath PCT Number: 881
  S_HL09: Coastal Sandstone Rock Plate Heath
- Rainforest PCT Number: 1833
  S_RF07: Coastal Escarpment Littoral Rainforest
- Rainforest PCT Number: 905
  S_RF03: Coastal Warm Temperate Rainforest
- Sedgeland/Heath PCT Number: 1804
  S_FrW02: Coastal Upland Wet Heath Swamp
- Tall Forest PCT Number: 1214
  S_WSF11: Pittwater Spotted Gum Forest
- Tall Forest PCT Number: 1565
  S_WSF33: Central Coast Escarpment Moist Forest
- Woodland/Forest PCT Number: 1783
  S_DSF11: Sydney North Exposed Sandstone Woodland

Map 4
Locality, Mapped Vegetation Types and Threatened Species

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Date: 3/4/2022
Drawn by: Nicholas Skelton
Version 1
Projection: GDA 94 MGA 56

0 200 400 m

5 Methods

5.1 Literature and Database Search

Relevant information was obtained from literature, local knowledge and established sources such as scientific journals, electronic databases and reports. Historic records from electronic databases included: BioNet (DPIE EES Atlas of NSW Wildlife records) eBirds, iNaturalist, Atlas of Australia, Protected Matters Search Tool (DOEE) and the BAM-C.

This information was used to ascertain which threatened species are known to occur within approximately 5km of the study area. The data were then combined with local knowledge and the environmental features, as shown in Maps 1-5) and habitat conditions found during the field survey to compile a list of plant and animal species for specific targeting during the fieldwork. See Table 2.

The sources of the Spatial data is documented on the maps.

Relevant information was collated from printed literature, scientific journals, electronic databases, and reports and local knowledge, they are referenced in the text and the references are listed in the General references section, on maps, and below.

The databases consulted include;

BioNet

BAM Calculator

BioNet Vegetation Classification

BioNet Threatened Biodiversity Data Collection (TBDC)

BioNet Atlas

Directory of Important Wetlands in Australia https://www.environment.gov.au/cgi-bin/wetlands/search.pl?smode=DOIW

Spatial databases used for mapping and spatial searches include:

Google earth, https://earth.google.com/web/

Six spatial information, https://six.nsw.gov.au

eSPADE https://www.environment.nsw.gov.au/eSpade2Webapp for Geology and soils

SEED https://www.seed.nsw.gov.au/

Data used in maps are also referenced on the corresponding map.

5.2 Targeted Threatened Species

Table 2 lists the threatened species that have been historically found near the site, these species were determined by a spatial search of the NSW BioNet Atlas and other electronic databases (iNaturalist, eBird, BAM-C and Atlas of Australia) for historic records within 5km of this site, these species were assessed after a field survey by an ecologist with more than 30 years experience in assessing threatened species of Sydney area to determine the species to target for further assessment.

These species were actively targeted during the field survey and are further assessed in Table 5.

5.3 Field Survey

The field survey was completed on April 19th 2025 by an ecologist for 2 person-hours. The weather was clear and temperature was 21ºC, recent rainfall occurred on the days prior. The previous field survey was carried out on the 7th of March 2022 by experienced ecologists over 3 person-hours. The weather was clear, and temperature was 22ºC. During the field surveys, all sections of the study area and some of the surrounding land were traversed on foot. The study area was searched for

the presence of threatened flora and fauna species and their habitats. Endangered Ecological Communities were assessed for likelihood of occurrence.

The field survey involved the following procedures:

- Initial familiarisation with the study area and its extent and surrounding land;
- Assessment of the physical characteristics of the study area and location of the proposal;
- Identification and recording of all flora species using a random meander across the whole of the property;
- Identification of fauna through sightings, calls and potential habitat;
- Search for scats, remains, nests, dreys, bones, feathers, fur, diggings, scratches, tracks, owl white-wash and food sources. Examination of trees for scratchings, sap-feeding notches and hollows;
- Classification of any vegetation into communities according to their structural and floristic attributes;
- Assessment of the habitats within the Study Area;
- Detailed search for targeted threatened species;
- Assessment of the extent of disturbance and weed invasion;
- Photography of the study area;

5.3.1 Vegetation Survey

Field Assessment of the Vegetation Types (PCT)

The vegetation within the study area was classified using structural and floristic indicators and was compared with threatened ecological communities listed in the BC Act 2016 and with the document titled The Native Vegetation of the Sydney Metropolitan Area V3 Volume 2 (OEH 2016) and the Bionet PCT vegetation type database. A detailed description of the method to determine the presence of Threatened Ecological Communities (EEC) within the study area was determined.

The floristic composition (plant species that occur on the site) listed in Table 4.

This information was then used to determine the Plant Community Types (PCT) present (or most likely PCTs) and the presence of any endangered ecological communities (EECs) listed in schedule 2 of the BC Act 2016 and the composition and structure of the native vegetation.

5.3.2 Threatened Fauna Habitat Survey

Fauna species were actively searched for by examining rock crevices, searching for tree hollows and looking for animals and/or for signs of use by animals. Elliott, cages or ‘harp’ traps were not used to reduce any stress to animals. Hollows were investigated internally using an endoscopic camera attached to a pole where necessary. A list of non-threatened fauna found on the site can be found in table 3.

Table 2. Initial Potential Threatened Species, Databases Predicted

Assessment of Threatened Species for Targeted Searching and Further Assessment

231-233 McCarrs Creek Road, Church Point

Assessment by Nicholas Skelton, GIS Environmental Consultants

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Databases interrogated include: DPIE Wildlife BioNet Atlas, iNaturalist, eBird, BAM-C and Atlas of Australia

Taxonomic Group	Common Name	Genus and Species	BC Act status	EPBC Act status	Bionet records in 5km	Likelihood of Occurrence Ecologist Assessment based on field inspection, environmental data from Maps 1-5 and the TBDC.
Animalia						
Amphibia						
Myobatrachidae	Red-crowned Toadlet	Pseudophryne australis	V,P		97	Potential habitat occurs, needs further assessment
Hylidae	Green and Golden Bell Frog	Litoria aurea	E1,P	V	3	Excluded, No suitable habitat.
Limnodynastidae	Giant Burrowing Frog	Heleioporus australiacus	V,P	V	52	Excluded, No suitable habitat.
Reptilia						
Cheloniidae	Loggerhead Turtle	Caretta caretta	E1,P	E	2	Excluded, No suitable habitat.
	Green Turtle	Chelonia mydas	V,P	V	7	Excluded, No suitable habitat.
Varanidae	Rosenberg's Goanna	Varanus rosenbergi	V,P		58	Potential habitat occurs, needs further assessment
Aves						
Columbidae	Rose-crowned Fruit-Dove	Ptilinopus regina	V,P		2	Excluded, No suitable habitat.
	Superb Fruit-Dove	Ptilinopus superbus	V,P		3	Excluded, No suitable habitat.
Apodidae	Fork-tailed Swift	Apus pacificus	P	C,J,K	2	Excluded, No suitable habitat.
	White-throated Needletail	Hirundapus caudacutus	P	V,C,J,K	10	Excluded, No suitable habitat.
Diomedeidae	Wandering Albatross	Diomedea exulans	E1,P	E	1	Excluded, No suitable habitat.
	Shy Albatross	Thalassarche cauta	V,P	V	1	Excluded, No suitable habitat.
	Grey-headed Albatross	Thalassarche chrysostoma	P	E	1	Excluded, No suitable habitat.
Procellariidae	Sooty Shearwater	Ardenna grisea	P	J	3	Excluded, No suitable habitat.
	Wedge-tailed Shearwater	Ardenna pacifica	P	J	2	Excluded, No suitable habitat.
	Short-tailed Shearwater	Ardenna tenuirostris	P	C,J,K	13	Excluded, No suitable habitat.
Fregatidae	Lesser Frigatebird	Fregata ariel	P	C,J,K	1	Excluded, No suitable habitat.
Ardeidae	Australasian Bittern	Botaurus poiciloptilus	E1,P	E	2	Excluded, No important habitat, part of a very large home range
	Black Bittern	Ixobrychus flavicollis	V,P		13	Excluded, No suitable habitat.
Accipitridae	White-bellied Sea-Eagle	Haliaeetus leucogaster	V,P		40	Excluded, No suitable habitat.
	Little Eagle	Hieraaetus morphnoides	V,P		8	Excluded, No suitable habitat.
	Square-tailed Kite	^^Lophoictinia isura	V,P,3		5	Excluded, No suitable habitat.
	Eastern Osprey	^^Pandion cristatus	V,P,3		21	Excluded, No suitable habitat.
Burhinidae	Bush Stone-curlew	Burhinus grallarius	E1,P		12	Excluded, No suitable habitat.
Haematopodidae	Sooty Oystercatcher	Haematopus fuliginosus	V,P		6	Excluded, No suitable habitat.
Charadriidae	Grey Plover	Pluvialis squatarola	P	C,J,K	1	Excluded, No suitable habitat.
Rostratulidae	Australian Painted Snipe	Rostratula australis	E1,P	E	3	Excluded, No suitable habitat.
Scolopacidae	Latham's Snipe	Gallinago hardwickii	P	J,K	1	Excluded, No suitable habitat.
	Bar-tailed Godwit	Limosa lapponica	P	C,J,K	4	Excluded, No suitable habitat.
	Eastern Curlew	Numenius madagascariensis	P	CE,C,J,K	1	Excluded, No suitable habitat.
	Terek Sandpiper	Xenus cinereus	V,P	C,J,K	2	Excluded, No suitable habitat.
Laridae	Caspian Tern	Hydroprogne caspia	P	J	1	Excluded, No suitable habitat.
	Common Tern	Sterna hirundo	P	C,J,K	1	Excluded, No suitable habitat.
	Crested Tern	Thalasseus bergii	P	J	11	Excluded, No suitable habitat.
Cacatuidae	Gang-gang Cockatoo	^^Callocephalon fimbriatum	V,P,3	E	3	Potential habitat occurs, needs further assessment
	Glossy Black-Cockatoo	^Calyptorhynchus lathami	V,P,2		93	Potential habitat occurs, needs further assessment
Psittacidae	Little Lorikeet	Glossopsitta pusilla	V,P		10	Excluded, No important habitat, part of a very large home range
	Swift Parrot	^^Lathamus discolor	E1,P,3	CE	24	Excluded, No important habitat, part of a very large home range
	Turquoise Parrot	^^Neophema pulchella	V,P,3		1	Excluded, No important habitat, part of a very large home range
Strigidae	Barking Owl	^^Ninox connivens	V,P,3		28	Potential habitat occurs, needs further assessment
	Powerful Owl	^^Ninox strenua	V,P,3		409	Potential habitat occurs, needs further assessment
Tytonidae	Masked Owl	^^Tyto novaehollandiae	V,P,3		6	Potential habitat occurs, needs further assessment
Meliphagidae	Regent Honeyeater	Anthochaera phrygia	E4A,P	CE	40	Excluded, Not within natural range.
	Black-chinned Honeyeater (eastern subs	Melithreptus gularis gularis	V,P		1	Excluded, No important habitat, part of a very large home range
Neosittidae	Varied Sittella	Daphoenositta chrysoptera	V,P		3	Excluded, No important habitat, part of a very large home range
Artamidae	Dusky Woodswallow	Artamus cyanopterus cyanopterus	V,P		3	Excluded, No important habitat, part of a very large home range
Petroicidae	Scarlet Robin	Petroica boodang	V,P		2	Excluded, No important habitat, part of a very large home range
Mammalia						
Dasyuridae	Spotted-tailed Quoll	Dasyurus maculatus	V,P	E	12	Excluded, No important habitat, part of a very large home range
Peramelidae	Southern Brown Bandicoot (eastern)	Isoodon obesulus obesulus	E1,P	E	100	Potential habitat occurs, needs further assessment
Phascolarctidae	Koala in the Pittwater Local Government	Phascolarctos cinereus	E2,V,P	E	47	Excluded, No important habitat, part of a very large home range
	Koala	Phascolarctos cinereus	V,P	E	58	Excluded, No important habitat, part of a very large home range
Burramyidae	Eastern Pygmy-possum	Cercartetus nanus	V,P		479	Excluded, No important habitat, part of a very large home range
Petauridae	Squirrel Glider	Petaurus norfolcensis	V,P		7	Excluded, No important habitat, part of a very large home range
Pteropodidae	Grey-headed Flying-fox	Pteropus poliocephalus	V,P	V	102	Excluded, No important habitat, part of a very large home range
Emballonuridae	Yellow-bellied Sheathtail-bat	Saccolaimus flaviventris	V,P		1	Excluded, No important habitat, part of a very large home range

Taxonomic Group	Common Name	Genus and Species	BC Act status	EPBC Act status	Bionet records in 5km	Likelihood of Occurrence Ecologist Assessment based on field inspection, environmental data from Maps 1-5 and the TBDC.
Molossidae	Eastern Coastal Free-tailed Bat	Micronomus norfolkensis	V,P		21	Excluded, No important habitat, part of a very large home range
Vespertilionidae	Large-eared Pied Bat	Chalinolobus dwyeri	V,P	V	15	Excluded, No important habitat, part of a very large home range
	Eastern False Pipistrelle	Falsistrellus tasmaniensis	V,P		3	Excluded, No important habitat, part of a very large home range
	Southern Myotis	Myotis macropus	V,P		36	Excluded, No important habitat, part of a very large home range
	Greater Broad-nosed Bat	Scoteanax rueppellii	V,P		7	Excluded, No important habitat, part of a very large home range
	Eastern Cave Bat	Vespadelus troughtoni	V,P		1	Excluded, No important habitat, part of a very large home range
Miniopteridae	Little Bent-winged Bat	Miniopterus australis	V,P		43	Excluded, No important habitat, part of a very large home range
	Large Bent-winged Bat	Miniopterus orianae oceanensis	V,P		85	Excluded, No important habitat, part of a very large home range
Muridae	New Holland Mouse	Pseudomys novaehollandiae	P	V	4	Excluded, No important habitat, part of a very large home range
Otariidae	Australian Fur-seal	Arctocephalus pusillus doriferus	V,P		1	Excluded, No suitable habitat.
Balaenidae	Southern Right Whale	Eubalaena australis	E1,P	E	2	Excluded, No suitable habitat.
Balaenopteridae	Humpback Whale	Megaptera novaeangliae	V,P	V	2	Excluded, No suitable habitat.
Plantae						
Flora						
Elaeocarpaceae		Tetratheca glandulosa	V		58	Excluded, No suitable habitat.
Ericaceae		Epacris purpurascens var. purpurascens	V		3	Excluded, Obvious species, site adequately searched
Euphorbiaceae	Sand Spurge	Chamaesyce psammogeton	E1		5	Excluded, No suitable habitat.
Grammitidaceae	Narrow-leaf Finger Fern	^^Grammitis stenophylla	E1,3		1	Excluded, Obvious species, site adequately searched
Lamiaceae	Villous Mint-bush	Prostanthera densa	V	V	1	Excluded, Obvious species, site adequately searched
Malvaceae		Lasiopetalum joyceae	V	V	2	Excluded, Obvious species, site adequately searched
Myrtaceae	Netted Bottle Brush	^^Callistemon linearifolius	V,3		5	Excluded, Obvious species, site adequately searched
	Camfield's Stringybark	Eucalyptus camfieldii	V	V	11	Excluded, Obvious species, site adequately searched
		Kunzea rupestris	V	V	3	Excluded, Obvious species, site adequately searched
	Scrub Turpentine	Rhodamnia rubescens	E4A	CE	31	Excluded, Obvious species, site adequately searched
	Magenta Lilly Pilly	Syzygium paniculatum	E1	V	14	Excluded, Obvious species, site adequately searched
Orchidaceae	Leafless Tongue Orchid	^Cryptostylis hunteriana	V,P,2	V	1	Potential habitat occurs, needs further assessment
	Bauer's Midge Orchid	^Genoplesium baueri	E1,P,2	E	1	Excluded, Obvious species, site adequately searched
	Angus's Onion Orchid	^Microtis angusii	E1,P,2	E	167	Potential habitat occurs, needs further assessment
Proteaceae	Caley's Grevillea	^^Grevillea caleyi	E4A,3	CE	551	Excluded, Obvious species, site adequately searched
	Hairy Geebung	^^Persoonia hirsuta	E1,P,3	E	5	Excluded, Obvious species, site adequately searched
Rutaceae	Orara Boronia	Boronia umbellata	V,P	V	1	Potential habitat occurs, needs further assessment
Thymelaeaceae		Pimelea curviflora var. curviflora	V	V	7	Potential habitat occurs, needs further assessment

^ = sensitive species

^^ = sensitive species

Key for BC Act Status

Status	Status	Status Notes
P	Protected Animal	Fauna not listed in Schedule 11 of the NPW Act 1974. Only shown for species that are listed in the other Acts
V	Vulnerable	Schedule 1, part 3, BC Act 2016, Likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate.
E1	Endangered	Schedule 1, part 2, BC Act 1995, Likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary stop, in immediate danger of extinction
E2	Endangered Population	Schedule 1, part 2, division 4, BC Act 2016, Population where, numbers have been reduced to such a critical level, or its habitat has been so drastically reduced, that it is in immediate danger of extinction
3	Category 3 sensitive species	Species are classed as of medium sensitivity, and provision of precise locations would subject the species to medium risk from threats such as collection/deliberate damage.

Key for EPBC Act Status

Code	Description	Definition under the EPBC Act 1999, and Migratory Birds agreement.
C	CAMBA	China-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
E	Endangered	Refers to a native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria (Subdivision A of Division 2 of Part 13, Commonwealth EPBC Act 1999).
J	JAMBA	Japan-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
K	ROKAMBA	Republic of Korea-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the Republic of Korea for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
V	Vulnerable	Refers to a native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
X	Extinct	Refers to a native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).

6 Findings

6.1 Disturbance History

The property is heavily vegetated as can be seen on the aerial photo on Maps 1 and 2. There is very little disturbance history on the site. It is made up mostly of native vegetation, with some weeds as an indirect impact of the nearby road and development.

6.1.1 Fire History

The site has two recorded prescribed burns on 15th August 2004 and 9th of October 2021. There were signs a low-burn on some of the trees, particularly to the eastern side of the site.

6.2 Existing Habitat

The trees provide foraging and roosting habitat for native birds and habitat for possums and potential foraging habitat for several Threatened species. A large fallen log on site is potential shelter for small ground-dwelling mammals.

The site is likely to be part of a large foraging home range for common and threatened birds, small reptiles, mammals and microbats but does not contain any specific or important habitat for threatened species. It contains food trees for Glossy Black Cockatoos.

Tables 2 and 6 are an assessment of the suitability and importance of the site for the conservation of Threatened plant and animal species.

The habitat features on this site is shown on Maps 4 and 6, and on the cover photo.

6.3 Plant Species

There are 49 plant species on the site, 46 of these are native to NSW. There is 9 species of native tree and 9 native shrubs. There are four local native ferns, five grasses, twelve herbs and three vines. See Table below.

The native species richness is high and reflects the adjacent vegetation.

The list of native species is Table 4, which shows each species scientific name, common name, family, growth form and status. The plant species list is inconsistent with the Arboricultural Impact Assessment Report as the Arborist has made several identification errors.

Photo 1: Looking north towards the street.

6.4 Fauna Species

During the field survey the following fauna species were found using the study area:

Table 3: Fauna Species Found

Common Name	Scientific Name	Evidence
Birds		
Barking Owl	*Ninox connivens*	Anecdotal (resident)
Eastern Whipbird	*Psophodes olivaceus*	Heard
Gang-gang Cockatoo	*Callocephalon fimbriatum*	Anecdotal (resident)
Glossy-black Cockatoo	*Calyptorhynchus lathami*	Anecdotal (resident)
King Parrot	*Alisterus scapularis*	Observed
Laughing Kookaburra	*Dacelo novaeguineae*	Observed
Noisy Miner	*Manorina melanocephala*	Observed
Powerful Owl	*Ninox strenua*	Anecdotal (resident)
Rainbow Lorikeet	*Trichoglossus moluccanus*	Heard
Sulphur-Crested Cockatoo	*Cacatua galerita*	Observed
Superb Lyrebird	*Menura novaehollandiae*	Heard
White-cheeked Honeyeater	*Phylidonyris niger*	Anecdotal (resident)
Reptiles		
Australian Water Dragon	*Intellagama lesueurii*	Anecdotal (neighbour)
Blue-tongued Lizard	*Tiliqua scincoides*	Anecdotal (neighbour)
Diamond Python	*Morelia spilota spilota*	Anecdotal (neighbour)
Garden Skink	*Lampropholis guichenoti*	Observed
Goanna	*Varanus sp.*	Anecdotal (resident)
Green Tree Snake	*Dendrelaphis punctulatus*	Anecdotal (neighbour)
Red-bellied Black Snake	*Pseudechis porphyriacus*	Anecdotal (neighbour)
Mammals		
Bandicoot		Foraging and digging activity
Brush Tailed Phascogale*	*Phascogale tapoatafa*	Australian Museum record & anecdotal (neighbour)
Brush-tailed Possum	*Trichosurus vulpecula*	Anecdotal (neighbour)
Feathertail Glider	*Acrobates pygmaeus*	Anecdotal (neighbour)
Ring-tailed Possum	*Pseudocheirus peregrinus*	Suitable habitat
Short-beaked Echidna	*Tachyglossus aculeatus*	Anecdotal (neighbour)
Squirrel Glider	*Petaurus norfolcensis*	Anecdotal (neighbour)
Sugar Glider	*Petaurus breviceps*	Anecdotal (neighbour)
Swamp Wallaby	*Wallabia bicolor*	Anecdotal (neighbour)

*Brush Tailed Phascogale was anecdotally found on site and a specimen sent to the Australian Museum. The record will be confirmed when identification results are confirmed with the museum.

6.5 Threatened Species Occurrence

It is highly likely that wide ranging threatened fauna species that occur in the locality use the site. It is good quality habitat for foraging and supports a high species richness. However, the proposal will not harm any mapped important habitat and the habitat on the site is mostly foraging habitat or as a corridor. The proposal is expected to remove one hollow-bearing tree. The likelihood of targeted Threatened flora and fauna species occurring on the study area and potential impacts to the target Threatened flora and fauna species is assessed in Table 6.

Table 4. Plant Species List
Floristics and Relative Abundances

231-233 McCarrs Creek Road, Church Point

14 April 2025

by Nicholas Skelton, GIS Environmental Consultants

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Floristics

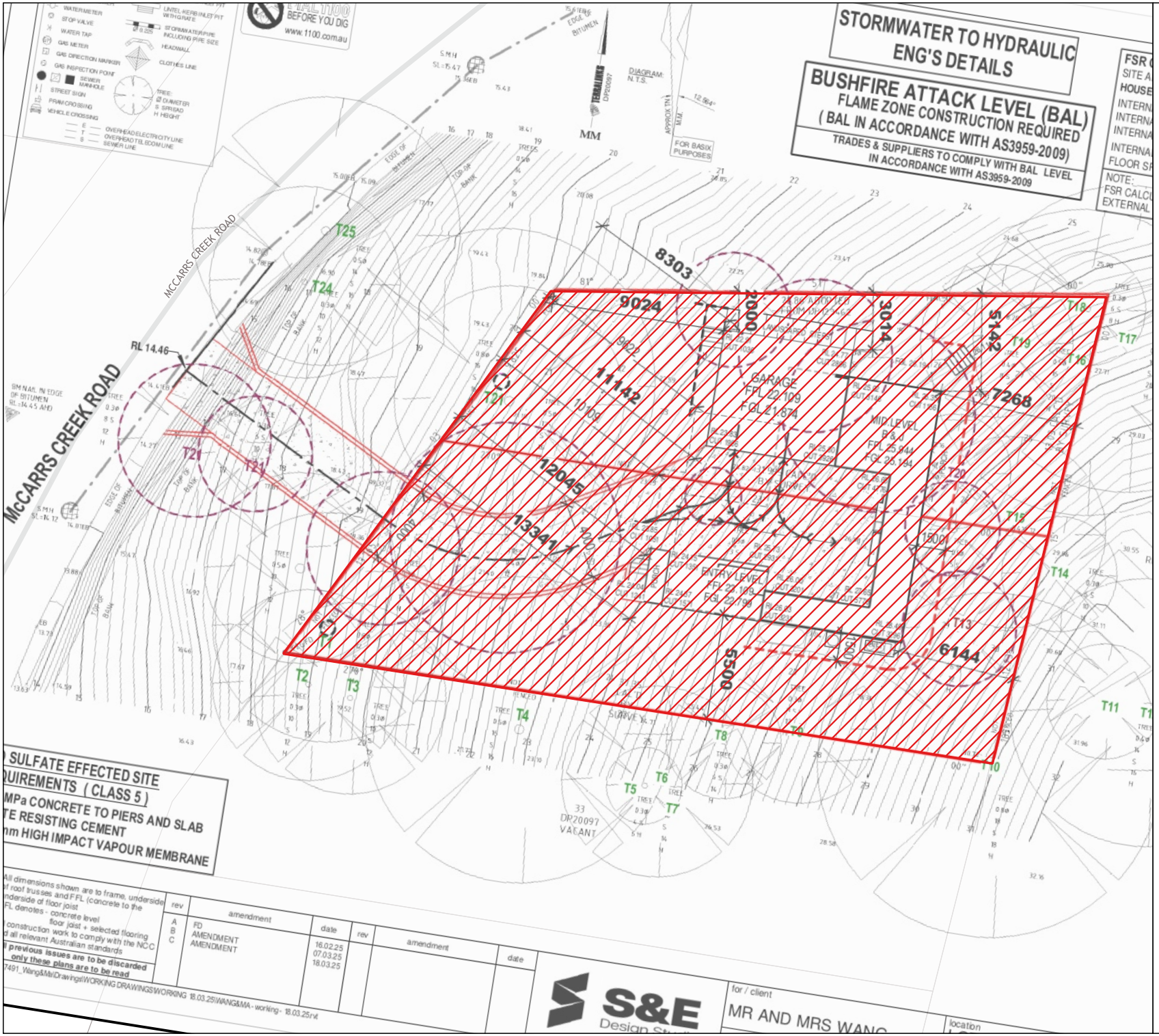
Species Richness Inside and outside Plots, Summarised by Growth Form and Status

	Local Native in plot	Weed in Plot	Additional outsie Plot	Total
Fern	4			4
Grass	5			5
Herb	12	2		14
Rush				0
Sedge				0
Shrub	9	1		10
Tree	7			7
Vine	7			7
	44	**3**	**0**	**47**

Plant Species

Genus and Species	Family	Growth Form	Common name	Status
Acacia linifolia	FABACEAE	Shrub	Flax-leaved Wattle	Local Native Species
Allocasuarina torulosa	CASUARINACEAE	Tree	Forest She-oak	Local Native Species
Anisopogon avenaceus	POACEAE	Grass	Oat Speargrass	Local Native Species
Astrotricha latifolia	ARALIACEAE	Shrub		Local Native Species
Blechnum cartilagineum	BLECHNACEAE	Fern	Cartilage Fern	Local Native Species
Calochlaena dubia	DICKSONIACEAE	Fern	Soft Bracken	Local Native Species
Cayratia clematidea	VITACEAE	Vine	Slender Grape	Local Native Species
Cissus hypoglauca	VITACEAE	Vine	Native Grape	Local Native Species
Clematis aristata	RANUNCULACEAE	Herb	Old Man's Beard	Local Native Species
Dampiera purpurea	GOODENIACEAE	Herb		Local Native Species
Entolasia stricta	POACEAE	Grass	Wiry Panic	Local Native Species
Eucalyptus paniculata	MYRTACEAE	Tree	Grey Ironbark	Local Native Species
Eucalyptus piperita	MYRTACEAE	Tree	Sydney Peppermint	Local Native Species
Eustrephus latifolius	LUZURIAGACEAE	Vine	Wombat Berry	Local Native Species
Exocarpos strictus	SANTALACEAE	Shrub	Dwaft Current	Local Native Species

Ficus coronata	MORACEAE	Tree	Sandpaper Fig	Local Native Species
Goodenia heterophylla subsp. eglandul	GOODENIACEAE	Herb	Variable-leaved Goodeni	Local Native Species
Grevillea linearifolia	PROTEACEAE	Shrub	White Spider Flower	Local Native Species
Homalanthus populifolius	EUPHORBIACEAE	Shrub	Bleeding Heart	Local Native Species
Hydrocotyle peduncularis	APIACEAE	Herb		Local Native Species
Imperata cylindrica	POACEAE	Grass	Blady Grass	Local Native Species
Lantana camara	VERBENACEAE	Shrub	Lantana	Weed
Leptospermum laevigatum	MYRTACEAE	Shrub	Coastal Tea-tree	Local Native Species
Lobelia purpurascens	LOBELIACEAE	Herb	White Root	Local Native Species
Lomandra longifolia	LOMANDRACEAE	Herb	Spiny-headed Mat-rush	Local Native Species
Lomandra multiflora	LOMANDRACEAE	Herb	Many-flowered Mat-rush	Local Native Species
Maytenus silvestris	CELASTRACEAE	Shrub		Local Native Species
Notodanthonia longifolia	POACEAE	Grass	Long-leaved Wallaby Gra	Local Native Species
Olearia tomentosa	ASTERACEAE	Herb	Daisy-bush	Local Native Species
Oplismenus aemulus	POACEAE	Grass	Basket Grass	Local Native Species
Oxalis corniculata	OXALIDACEAE	Herb	Yellow Oxalis (exotic)	Weed
Ozothamnus diosmifolius	ASTERACEAE	Herb		Local Native Species
Piper novae-hollandiae	PIPERACEAE	Vine	Native Pepper	Local Native Species
Podolobium ilicifolium	FABACEAE - FABOIDEAE	Shrub	Native Holly	Local Native Species
Pomaderris elliptica	RHAMNACEAE	Shrub		Local Native Species
Pseuderanthemum variabile	ACANTHACEAE	Herb	Pastel Flower	Local Native Species
Pteridium esculentum	DENNSTAEDTIACEAE	Fern	Bracken	Local Native Species
Pteridium esculentum	DENNSTAEDTIACEAE	Fern	Bracken	Local Native Species
Smilax australis	SMILACACEAE	Vine	Lawyer Vine	Local Native Species
Solanum nigrum	SOLANACEAE	Herb	Black-berry Nightshade	Weed
Solanum pungetium	SOLANACEAE	Herb		Local Native Species
Stephania japonica var. discolor	MENISPERMACEAE	Vine	Snake Vine	Local Native Species
Syncarpia glomulifera	MYRTACEAE	Tree	Turpentine	Local Native Species
Syncarpia glomulifera	MYRTACEAE	Tree	Turpentine	Local Native Species
Synoum glandulosum	MELIACEAE	Tree	Scentless Rosewood	Local Native Species
Tylophora barbata	ASCLEPIADACEAE	Vine		Local Native Species
Xanthosia pilosa	APIACEAE	Herb	Wooly Xanthosia	Local Native Species



Legend

231-233 Mc Carrs Ck Rd

- Property
- APZ
- Cadastre

Road

- Arterial Road

Basemap is the Site Plan dated 18.03.2025

Map 5
Site, Bushfire APZ

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Date: 30/4/2025
Cartographer: Nicholas Skelton
Version: 1.0
File Path: Server/Projects/Current/GIS/Maps
Projection: GDA 94 MGA 56

0 4 8 m

6.6 Vegetation Types (Ecological Communities, PCT)

When the methods were applied, it was determined that the site contains the PCT of, Turpentine – Rough-barked Apple – Forest Oak moist shrubby tall open forest of the Central Coast (PCT 1565).

6.7 Presence of Threatened Ecological Communities

6.7.1 Threatened Ecological Communities in the Locality

The NSW Biodiversity Conservation Act, 2016 lists Threatened Ecological Communities (TECs) and Threatened Species that are likely to become extinct in nature unless the circumstances and factors threatening their survival cease to operate.

6.7.2 Method of Establishing if EEC's Occur on this Study area

To establish if any endangered ecological community occurs within the study area and combination of three separate methods were used:

Mapping Method: The most accurate and up-to-date vegetation maps that are available were used to determine what is already known about the distribution of vegetation types in the locality. Vegetation mapping has inherent errors such as classification accuracy is limited due to the amount of field verification that was carried out when they were made, the spatial accuracy of the mapping and how old the mapping is. There are often different classification interpretations and the newest is not necessarily the best. Vegetation maps do not provide a sufficient level of spatial accuracy for the assessment of the impact at the scale of this proposal but are useful in determining the ecological communities that are likely to occur in the vicinity. These maps are based on aerial photography and normally little local field verification. They were produced for regional planning and are often not of an appropriate scale to be relied on for a DA proposal. Fieldwork is necessary to determine the site-specific accurate vegetation mapping.

Correlation Method: Correlations between the species that occur in the study area and the listed characteristic species for the Endangered Ecological Community in; the Final Determination in Part 3 of Schedule 1 of the Threatened Species Conservation Act (1995), description were used to assist to determine if any EECs occur in the study area. The floristics were also compared to the document 'Vegetation of the Sydney Metropolitan Area V3' by OEH 2016.

Comparison Method: Comparison of the ecological features on the site to the environmental description in the legal definition of the Endangered Ecological Community in the Final Determination in Biodiversity Conservation Act (2016). This comparison is essential when determining if the type of ecological community that occurs within a study area is an endangered community. Not all the sections of the determinations need to apply to the study area and the earlier sections are more important and should be given more weight (Preston and Adams).

6.7.3 Occurrence of EECs in this Study Area

Mapping Result

Map 4 shows the vegetation types (ecological communities) that have been mapped in the locality. This site is mapped as having "Central Coast Escarpment Moist Forest" which correlates to Turpentine-Rough-barked Apple-forest Oak Moist Shrubby tall open forest of the Central Coast (PCT 1565, HN664; HU779).

Comparison Result – Ecological Features within the TSC Final Determination

The species of plant on the site do not correlate to any Threatened Ecological Community.

Further assessment in the form of an Assessment of Significance (5-Part Test) is not considered to be required for this proposal.

Conclusion regarding occurrence of TECs on the Site

When the methods were applied it was determined that the site contains Turpentine-Rough-barked Apple-forest Oak Moist Shrubby tall open forest of the Central Coast (Central Coast Escarpment Moist Forest PCT 1565).

7 Impact Assessment

7.1 Avoidance and Minimisation of Impact

The Biodiversity Conservation Act 2016 requires that all developments "Avoid" then "Minimise" ecological impacts.

The main ecological constraints that have been identified are the native vegetation throughout the site, and hollow-bearing trees.

Due to setbacks, there is no scope for moving the proposed new dwelling to avoid the removal of these ecological features.

7.2 Description of Impacts

7.2.1 Vegetation and Tree Loss

The proposal will remove at least 11 of the 14 living trees on the site and will remove all the understorey and groundcover in accordance with the Bush Fire Assessment Report, dated the 12th of April 2024. The tree impact is shown on Map 7. The development impact footprint will be 1,142 sqm in total, shown in Map 6.

The Bush Fire Assessment Report identifies the property as a flame zone and requires there be an Asset Protection Zone (APZ) across the entire property. No further modifications are required to establish this APZ, but it will need to be maintained to meet requirements. Hence, vegetation will not be able to re-establish within this area. The APZ requirement for separation of canopy between trees by 2 – 5 meters would likely require the removal of T16 and T18. These trees are marked as being retained in all other reports.

The Site Survey Tree Removal Plan retains Tree 15. The Arborist report states this tree is to be removed as it's significantly close to the proposed development.

The Site Stormwater Management Layout shows a pipe running through the Structural Root Zone of T21 marked out in the Arborists Report.

Due to the inconsistencies between reports and plans, the exact extent of vegetation loss is unclear. The table below is based on the Arborists report with an important note. The trees likely to be removed due to the APZ have been listed in Table 5. If these trees are removed only one tree will be retained on the site.

Table 5: On Site Tree Impact Summary

Impact Reason	Native to NSW	Non-native	Weed*	Total
Keep, Retain and Protect	On site: T1, T17, T18 Off site: T2, T3, T4, T5, T6, T7, T8, T10, T11, T14, T21A, T21B, T25, A	None	None	**17**
Remove or recently removed - Exempt from DA assessment due to hazard to **existing building** as per arborist report. **Impact Assessed and Approved by Separate Application**	On site: T19, E Off site: T12	None	None	**3**
Remove - for Bushfire Protection (APZ) as per bushfire report. **Impact Requires Assessment**	T16	None	None	**1**
Remove - due to **Construction as per arborist report and various plans. Impact Requires Assessment**	On site: T13, T15, T20, T22, T23, B, C, D, F, G, I Off site: T9, T24	None	None	**13**
Total	**34**	**Nil**	**Nil**	**34**

Definitions for table above and figure

***Weed** = non-native that is either a Priority Weed on the Regional Weed Plan, WONS, high-threat weed (HTW) or an environmental weed. See Weeds section.

Keep, Retain and Protect – trees to be retained and protected during construction and for the life of the development. These trees will need to be certified as being present and healthy prior to the issue of the Occupation Certificate. This ecological impact assessment report relies on these trees not being impacted.

Remove - Exempt from DA assessment due to hazard to existing building as per arborist report. Impact Assessed by separate application – trees that the arborist considers dangerous to the current occupants of the existing house. An application to remove such trees needs to be lodged before DA submission and approval will need to be attached to this report. This tree impact is not included in the BAM assessment.

Remove for Bushfire Protection (APZ) as per bushfire report. Impact Requires Assessment – trees that are required to be removed for bushfire protection as required by the bushfire report that is part of the DA.

Remove due to Construction as per arborist report and various plans. Impact Requires Assessment – trees to be removed to accommodate the proposed development and as part of construction as described by the arborist report and shown other DA plans.

7.2.2 Impact on Wildlife Corridor

This site is part of a north-south corridor and development would reduce this.

7.2.3 Loss of Tree Hollows

The proposal will involve the removal of one hollow-bearing tree, T15.

7.2.4 Potential Indirect Impacts

The close proximity of the house to the trees to be retained may impact the viability of these trees in the future.

Table 5. Threatened Species Assessment

Sources: TBDC, Historic Records and Preliminary Field Survey

231-233 McCarrs Creek Road, Church Point

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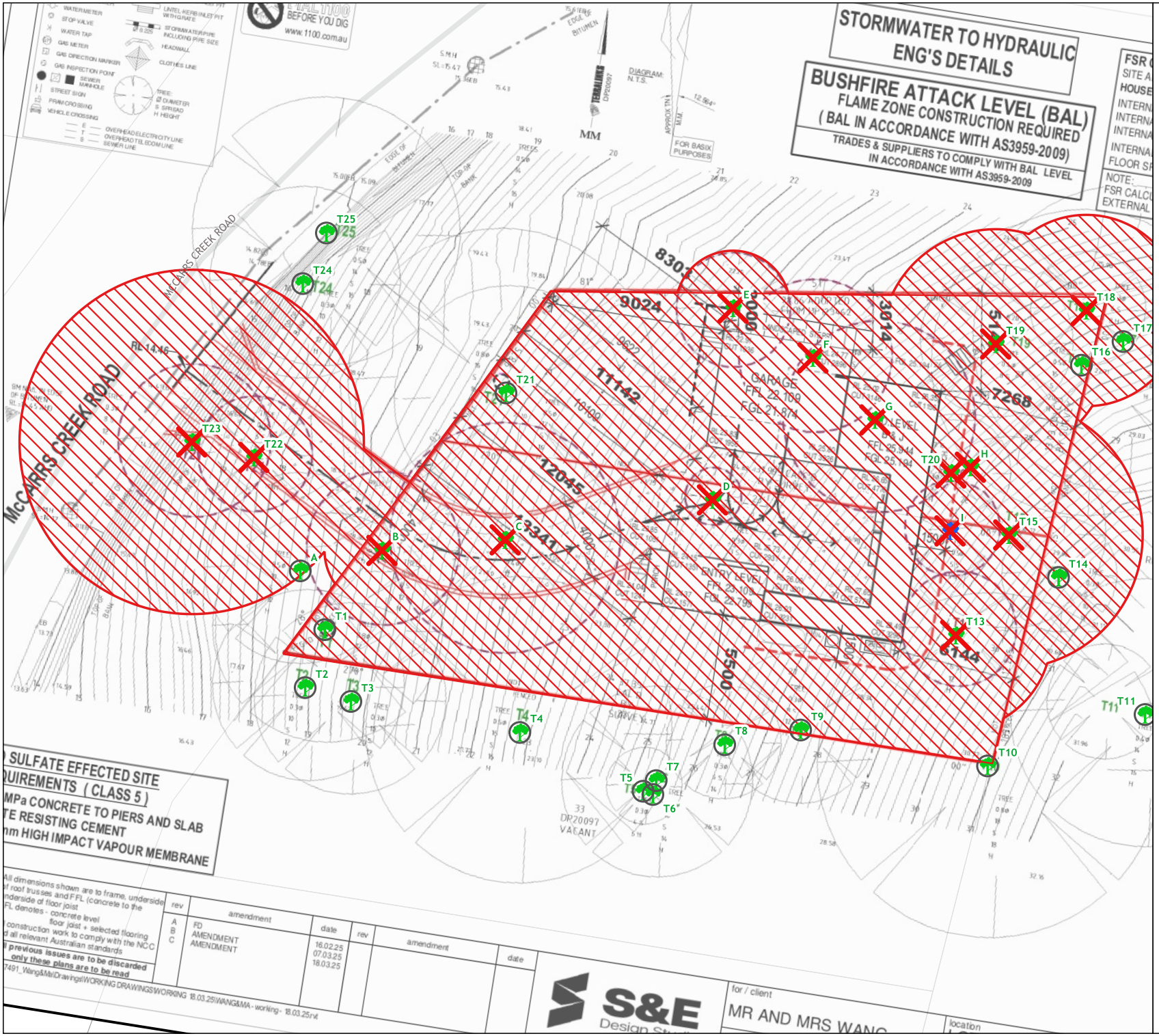
		Habitat Suitability on the Site from TBDC, literature or BAM-C calculator tick boxes		Proximity of Historic Records from past reports and databases		
Derived (Predicted) Potential Candidate Species	**Habitat Requirements and Preferences (constraints) from DPIE, species profile, TBDC and literature**	**Habitat Requirements (constraints) within the entire subject land**	**Disturbance, Habitat Degradation existing within subject land**	**Historic Occurrence on or immediately adjacent to Development Site**	**Did you find it?**	**5 Part test needed**
Callocephalon fimbriatum-endangered population in Hornsby and Kur-ring-gai LGAs Gang-Gang Cockatoo **(Breeding only)** *Vulnerable*	**Habitat Requirements:** The only known breeding areas in the Sydney region are within the Hornsby and Kur-ring-gai LGAs which is also an endangered population, hollow bearing Eucalypts with hollow greater than 9cm diameter. **Habitat Preferences:** Occurs in tall mountain forests and woodlands during spring and summer. In autumn and winter it moves to lower altitudes in drier more open eucalypt forests or in coastal areas. Often found in urban areas. **Disturbance Factors:** None documented. **Breeding:** Nests are located in hollows that are 10 cm in diameter or larger and at least 9 m above the ground in eucalypts.	The subject land does not occur within known breeding areas in the Sydney region.	Often found in urban areas.	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Calyptorhynchus lathami Glossy Black-Cockatoo **(Breeding only)** *Vulnerable*	**Habitat Requirements:** Dependent on large hollow-bearing eucalypts for nest sites. **Habitat Preferences:** Feeds almost exclusively on the seeds of several species of she-oak (Casuarina and Allocasuarina species), shredding the cones with its massive bill. **Disturbance Factors:** None documented. **Breeding:** Nests in large hollow-bearing eucalypts close to food trees (Mooney & Pedler, 2005). A single egg is laid between March and May.	The subject land does contain a large hollow, but it is unlikely to be suitable for breeding	No sensitivity documented	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern) *Endangered*	**Habitat Requirements:** Dense ground cover. Requires vegetation structure with 50-80% average foliage density in the 0.2-1m height range (DSEWPC, 2011). **Habitat Preferences:** Usually found in heath or open forest with a dense understorey on sandy or friable soils. Feeds on a variety of ground-dwelling invertebrates and the fruit-bodies of hypogenous (underground-fruiting) fungi. Home range vary from 0.5 to 9 ha or 2.5 (50%KDE) (Copley et al, 1990, Heinsohn, 1966, Lobert, 1990, McKenzie, 1967, Moloney, 1982, Paull, 1993, Wilson, 2004 cited in DSEWPC, 2011, Hope 2012). Connectivity is likely to be an important factor in the species survival in fragmented and isolated habitats (Brown & Main, 2010 cited in DSEWPC, 2011). Shelters during the day in a shallow depression in the ground covered by leaf litter, grass or other plant material. **Disturbance Factors:** Understorey and ground cover. Lack of suitable fire frequency and patchiness will reduce habitat suitability. Foxes and dogs are known to regularly prey on bandicoots. **Breeding:** Mating occurs any time of the year, usually following	The subject land contains some small scattered patches of suitable habitat where there is dense understorey.	Appropriate fire frequencies are not likely to be able to be applied to this patch of vegetation.	None on or directly adjacent to the site	No, but historic bandicoot digging were found	**This species is known to occur in general location, and suitable habitat occurs on the site, and the site is not too disturbed. A targeted field survey is required or this species can be assumed to occur**
Ninox connivens Barking Owl **(Breeding only)** Vulnerable	**Habitat Requirements:** Tree hollows along creeklines. **Habitat Preferences:** Inhabits eucalypt woodland, open forest, swamp woodlands along watercourses. Feeds on a variety of prey, with invertebrates predominant for most of the year, and birds and mammals during breeding. Roosts along creek lines, usually in tall understorey trees with dense foliage such as Acacia and Casuarina species, or the dense clumps of canopy leaves in large Eucalypts. **Disturbance Factors:** None documented. **Breeding:** Two or three eggs are laid in hollows of large, old trees. Living eucalypts are preferred though dead trees are also used.	No large hollows along a creekline.	No sensitivity documented	N/A	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Ninox strenua Powerful Owl **(Breeding only)** Vulnerable	**Habitat Requirements:** Tree hollows within 100m of a creekline. Living or dead trees with hollow greater than 20cm diameter. **Habitat Preferences:** Inhabits large tracts (but can occur in fragmented landscapes) of forest in a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. **Disturbance Factors:** Most prey species require hollows and a shrub layer. **Breeding:** Nests in large tree hollows along creeks.	There is no suitable tree hollows on the entire subject land	Not sensitive	N/A	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Pseudophryne australis Red-crowned Toadlet *Vulnerable*	**Habitat Requirements:** Periodically wet drainage line. **Habitat Preferences:** Occurs in open forests. Inhabits periodically wet drainage lines below sandstone ridges that often have shale lenses or capping's. Shelters under rocks and amongst masses of dense vegetation or thick piles of leaf litter. **Disturbance Factors:** Water quality. **Breeding:** Breeding congregations occur in dense vegetation and debris beside ephemeral creeks and gutters. Eggs are laid in moist leaf litter, from where they are washed by heavy rain.	There are no semi permanent or permanent drainage lines with adjacent vegetation or areas of seepage within the subject land. There are no rocks, and the vegetation is not very dense	Water quality is likely to be polluted as it is near a moderately-used harbour.	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Tyto novaehollandiae Masked Owl **(Breeding only)** *Vulnerable*	**Habitat Requirements: Living or dead trees with hollows greater 20cm diameter.** Tree hollows greater than 40cm wide and 100cm deep and more than 3m above the ground, in Eucalypt trees at least 90cm (DEC 2006) or caves. **Habitat Preference:** Lives in dry eucalypt forests and woodlands from sea level to 1100 m. Hunts tree-dwelling and ground mammals, especially rats along the edges of forests, including roadsides. **Disturbance Factors:** None documented. **Breeding:** Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting.	No suitable large tree hollows occur on entire subject land.	No sensitivity documented	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Varanus rosenbergi Rosenburg's Goanna	**Habitat Requirements:** Termite mounds, large area of habitat. **Habitat Preferences:** Heath, open forest and woodland. **Disturbance Factors:** Sensitive to habitat loss and fragmentation. **Breeding:** Lays eggs in termite mounds.	The subject land does not contain any suitable termite mounds.	The subject land is part of a large area of habitat.	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**

		Habitat Suitability on the Site from TBDC, literature or BAM-C calculator tick boxes		Proximity of Historic Records from past reports and databases		
Derived (Predicted) Potential Candidate Species	**Habitat Requirements and Preferences (constraints) from DPIE, species profile, TBDC and literature**	**Habitat Requirements (constraints) within the entire subject land**	**Disturbance, Habitat Degradation existing within subject land**	**Historic Occurrence on or immediately adjacent to Development Site**	**Did you find it?**	**5 Part test needed**
Boronia umbellata Orara Boronia	**Habitat Requirements:** Distribution is limited to only a few locations between Glenreagh and Lower Bucca, as well as north of Coffs Harbour. However, there is also one collection in Pittwater. **Habitat Preferences:** Gullies in wet open forest. **Disturbance Factors:** Appears to regenerate well after disturbance, but it is unknown if prolonged or repeated disturbance affects long-term persistance.	The subject land may contain suitable vegetation, but is not within the known distribution of this species.	No disturbance.	None on or directly adjacent to the site. There is a historic record located northwest of the site.	No	**The site is not within the geographic restriction and the species is unlikely to occur. No further assessment is required for this species.**
Cryptostylis hunteriana Leafless Tongue Orchid *Vulnerable*	**Habitat Requirements:** The larger populations typically occur in woodland dominated by Scribbly Gum (Eucalyptus sclerophylla), Silvertop Ash (E. sieberi), Red Bloodwood (Corymbia gummifera) and Black She Oak (Allocasuarina littoralis). It appears to prefer open areas in the understorey and is often found in association with the Large Tongue Orchid (C. subulata) and the Tartan Tongue Orchid (C. erecta). **Habitat Preferences:** Does not appear to have well defined habitat preferences and is known from a range of communities, including swamp-heath and woodland (Benson & McDougall, 1993). **Disturbance Factors:** None documented.	The subject land does not contain suitable vegetation	N/A	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Microtis angusii *Angus's Onion Orchid* *Endangered*	**Habitat Requirements:** Currently known from only several sites at Ingleside, north of Sydney. **Habitat Preferences:** The Ingleside population occurs on soils that have been modified but were originally those of the restricted ridgetop lateritic soils in the Duffys Forest - Terrey Hills - Ingleside and Belrose areas. Cryptic and sporadic species. **Disturbance Factors:** Occurs on disturbed areas.	The subject land does not contain suitable vegetation	There are no areas of disturbance at the subject land	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**
Pimelea curviflora var. curviflora Curved Rice Flower *Vulnerable*	**Habitat Requirements:** Confined to the coastal area of Sydney between northern Sydney in the south and Maroota in the north-west. **Habitat Preferences:** Usually found in shale/sandstone transition woodland on sandstone and laterite soils. It often grows among dense grasses and sedges. Cryptic and sporadic species. Flowers October to January. **Disturbance Factors:** Weed invasion.	Not location or soil distribution.	No weeds.	None on or directly adjacent to the site	No	**No species requirements (constraints) occur on this site and the species is unlikely to occur. No further assessment is required for this species.**



Legend

231-233 Mc Carrs Ck Rd

- Property
- Tree Impact
  - Keep
  - Remove
- Tree Status
  - Dead
  - Native to NSW
- Development Impact Footprint 1142sqm
- Cadastre

Road

- Arterial Road

Basemap is the Site Plan dated 18.03.2025

Map 6
Site, Development Impact Footprint

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Date: 30/4/2025
Cartographer: Nicholas Skelton
Version: 1.0
File Path: Server/Projects/Current/GIS/Maps
Projection: GDA 94 MGA 56

0 4 8 m

7.3 Assessment of Significance 5-Part Test

No Threatened ecological communities were found during the field survey.

Bandicoot diggings were found during the field survey which are most likely from the Endangered Southern Brown Bandicoot (eastern) population which occurs in Ku-rin-gai Chase National Park to the west. This is evidence that the Southern Brown Bandicoots have been using this site as foraging habitat in the past. A 5-part test has been carried out in Section 10.2.

No important habitat for other Threatened Species occurs on the site.

7.4 Biodiversity Conservation Act BAM Threshold Assessment

The part of the site that is likely to be disturbed is shown on Maps 5 and 6.

This proposal (see Map 5) is **not** considered to meet the BC Act threshold as:

4) The LEP minimum lot size for this location is less than 1ha, therefore the maximum cut off for clearing "Native vegetation" is 0.25ha. The total amount of disturbance to native vegetation by this proposal is 0.129 which is below the threshold limit. Therefore, this proposal does not trigger this threshold limit, **and**
5) The *Biodiversity Conservation Regulation 2017,* Biodiversity Values Map (BV Map) identifies land with high biodiversity value, as defined by the *Biodiversity Conservation Regulation 2017*. The Biodiversity Offsets Scheme applies to all local developments, major projects or the clearing of native vegetation where the *State* Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 applies. Any of these will require entry into the Biodiversity Offsets Scheme if they occur on land mapped on the Biodiversity Values Map. The area of impact is **not** mapped on the "Biodiversity Values" Map as having high biodiversity values, **and**
6) There is **not** likely to be a significant affect (5-part assessment of significance test Section 7.3, BC Act) on Threatened species or ecological communities or their habitats as has determined by this report. See Appendix A (Section 10) of this report for the 5-part test.

Therefore, the proposal **does not require a BAM assessment report (BDAR),** but does need a Flora and Fauna Report to address Council legislation and development controls, and section 79C of the EP&A Act.

The Biodiversity Assessment Method (BAM) has been used as a guide for the field survey and vegetation assessment in this report, however, no offsetting is required.

7.5 EPBC Act 1999 Assessment

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) would only become relevant if it was considered that an impact on a Matter of National Environmental Significance (MNES) were likely, thus providing a trigger for referral of the proposal to the Department of the Environment and Water Resources.

A Protected Matters search was conducted within a 10km radius of the site. A Protected Matters search is a broad scale assessment that includes World Heritage Properties, National Heritage Places, Wetlands of International Importance, Great Barrier Reef Marine Park, Commonwealth Marine Areas, Listed Threatened Ecological communities, Listed Threatened Species and Listed Migratory Species.

The report lists the following ecologically relevant items:

- Threatened Ecological Communities
- Threatened species
- Migratory Species

Most of the migratory and aquatic bird species, as well as the fish, sharks and marine mammals are not assessed in this report. This report addresses terrestrial species, which are likely to have potential habitat on the site.

Twenty-one (21) of the species from the targeted species are listed as Endangered or Vulnerable in the Federal EPBC Act. These species have been assessed under TSC Act criteria in this Flora and Fauna Impact Assessment report. The assessments concluded that no significant impacts are likely to occur to those species as a result of the proposal and a similar conclusion was also reached after consideration of the Commonwealth criteria. It is recommended that this proposal (see Map 5) does not need to be referred to Environment Australia.

7.6 SEPP Coastal Management 2018 Assessment

The site is mapped as Coastal Environment Area and Coastal Use Area in the Coastal Management SEPP 2018 map.

The site is not mapped as containing Littoral Rainforest, Coastal Wetland, Proximity to Littoral Rainforest or Proximity to Coastal Wetland.

(a) The proposed development should have a neutral or beneficial effect on the quality of water entering the waterways

(b) The proposed development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities)

(c) The proposed development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities)

(d) The proposed development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access

(e) The proposed development should protect and reinstate natural intertidal foreshore areas, natural landforms and native vegetation

(f) The proposed development should retain, rehabilitate and restore riparian land

(g) The proposed development on land adjoining wetlands should maintain and enhance the ecological integrity of the wetlands and, where possible, should provide a vegetative buffer to protect the wetlands

(h) The cumulative environmental impact of development

(i) Whether sediments in the waterway adjacent to the development are contaminated, and what means will minimise their disturbance.

(a) to protect the natural and cultural values of waters in this zone,

(b) to prevent damage or the possibility of longer term detrimental impacts to the natural and cultural values of waters in this zone and adjoining foreshores,

(c) to give preference to enhancing and rehabilitating the natural and cultural values of waters in this zone and adjoining foreshores,

(d) to provide for the long-term management of the natural and cultural values of waters in this zone and adjoining foreshores.

7.7 Biodiversity Impact Conclusions

The ecological values on the site are shown in Maps 4 and 5, and are described in section 3 of this report.

- The site contains intact native Turpentine – Rough-barked Apple – Forest Oak moist shrubby tall open forest of the Central Coast (PCT 1565).
- The native species richness is high and reflects the adjacent vegetation holding high biodiversity value.
- There is medium quality fauna habitat on the site.

- The proposal as described in this report is not likely to have a significant effect to any Threatened species or ecological community and none of the BC Act thresholds are met, therefore a Biodiversity Development Assessment Report (BDAR) is not recommended in relation to this proposal. It must be noted that this conclusion only applies to the proposal described in this report, the assumptions made in this report and the development shown on the Maps in this report. The recommendations below should be followed to further reduce the impact of the proposal on the ecological values within the study area.
- The ecological impact of the proposal is not likely to be an unacceptable impact by itself under Section 4.55 of the EPA Act or to have a significant impact under part 5A.
- The proposal is not considered to be a 'matter of National Environmental Significance (NES)' EPBC Act referral of the proposal to the Department of the Environment and Water Resources is not considered necessary.
- The site is part of a wildlife corridor and it will be reduced by the development.
- The proposal will involve both removal and retention of native trees.
- There was evidence of Bandicoots using this site for foraging. An Assessment of Significance (5-part test) for the Endangered Southern Brown Bandicoot (eastern) population was carried out in Appendix A (Section 10.2) of this report and found that this proposal would not have a significant important on this Threatened population.

8 Ameliorative Conditions & Recommendations

It is recommend that ameliorative conditions and management recommendations in this report be followed to reduce disturbance during construction and to improve ecological outcomes.

- Workers at the site should be **made aware** of the likely presence of endangered bandicoots and other wildlife and the appropriate measures that should be carried out if the encounter bandicoots. To the untrained eye, an Endangered Long-nosed Bandicoot may be mistaken for a rat. To avoid direct physical harm to Long-nosed Bandicoots, it is important that workers on the site are aware of their presence, their conservation significance, and the steps to take to protect them.
- Areas of Bandicoot habitat on the site should be **cleared of sheltering bandicoots** before the use of harmful machinery to reduce the chance of bandicoots being harmed.
- If any Bandicoot is **found on the site during works**, works must be stopped until the Bandicoot has safely exited the site.
- **Access** between the road reserve and the sites front garden should be maintained.
- Any **injured or dead Bandicoots** within the site should be reported to National Wildlife Services or Northern Beaches Council.
- New or replaced boundary fences (with the exception of swimming pool fencing) where the finished soil level on either side is within 300mm are to be made passable to native fauna through the provision of **access gaps** are to have 150mm-300mm gaps every two metres along the fence at ground level (see Photo Page 3 for examples).
- It is recommended that any new **replacement gates** have gaps of at least 150mm under the full length of the gate.
- **Protection of natural features** such as rock outcrops, native vegetation that are not approved to be removed are to be actively protected during construction.
- All native fauna are protected, if any **native animals are harmed or killed** during construction, contact the author of this report for advice.
- In areas of habitat for the long-nosed bandicoot, **landscape design** should include native plant species to provide new and/or improved low dense clumping habitat to provide for potential foraging and nesting.
- If the **plans change** from what is described in this report and is shown on Map 5 then the impacts will change, and this report may need reviewing.
- **Noise and vibration** discourage bandicoot occupation of this and adjacent sites. Normal construction hours are to be adhered to, with no machinery to be used outside the hours of 7:30am and 4:30pm.
- Bright lighting discourages bandicoot occupation. No bright lighting or motion detector lights are to be installed to illuminate the lawn or garden areas. A modest amount of low lighting is acceptable for safety purposes only.
- Trees containing hollows should be retained where possible. Should hollows require removal, they should be replaced with suitable nesting boxes at a ratio of 1:2. The nesting boxes should be installed on the property prior to tree removal. It is recommended that the installation of the nesting boxes should be supervised by an ecologist.
- Continued maintenance of the APZ is to be achieved by firstly; 1. removal of weeds then 2. Reduction of flash dead fuel such as twigs, hanging dead branches and thinning of the shrub layer then 3. thinning of the tree canopy with a preference for the more flammable rough barked casuarinas. The cut material and flash fuel must be removed from the property.
- Landscape plans should include mainly native species from the vegetation communities in the locality. It must include replacement tree planting with ratio of at least 1:1 to compensate for the removal of native trees.

9 General References

Spatial (GIS) data sources are listed in section 5.1

State and Local government legislation and guidelines are referenced is listed in 1.3.

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10 Appendix A: 5-part Tests of Significance

10.1 Making an assessment of significance (DECC Guidelines 2007)

The threatened species assessment of significance should not be considered a 'pass or fail' test. Instead, consideration of the factors will inform the decision-making process of the likelihood of significant effect. Where necessary, the process will trigger further assessment.

All factors should be considered as well as any other information deemed relevant to the assessment. Application of the precautionary principle requires that a lack of scientific certainty about the potential impacts of an action does not itself justify a decision that the action is not likely to have a significant impact. If information is not available to conclusively determine that there will not be a significant impact on a threatened species, population or ecological community, or its habitat, then it should be assumed that a significant impact is likely and a species impact statement should be prepared.

Proposed measures that mitigate, improve or compensate for the action, development or activity should not be considered in determining the degree of the effect on threatened species, populations or ecological communities, unless the measure has been used successfully for that species in a similar situation.

In many cases where complex mitigating, ameliorative or compensatory measures are required, such as translocation, bush restoration or purchase of land, further assessment through the species impact statement process is likely to be required.

In determining the nature and magnitude of an impact, it is important to consider matters such as:

- *pre-construction, construction and occupation/maintenance phases,*
- *all on-site and off-site impacts, including location, installation, operation and maintenance of auxiliary infrastructure and fire management zones,*
- *all direct and indirect impacts,*
- *the frequency and duration of each known or likely impact/action,*
- *the total impact which can be attributed to that action over the entire geographic area affected, and over time,*
- *the sensitivity of the receiving environment,*
- *the degree of confidence with which the impacts of the action are known and understood.*

10.1.1 Definitions needed for Assessment of Significance, 5-Part Test DECC 2006 Guidelines

Direct impacts *- are those that directly affect the habitat and individuals. They include, but are not limited to, death through predation, trampling, poisoning of the animal/plant itself and the removal of suitable habitat. When applying each factor, consideration must be given to all of the likely direct impacts of the proposed activity or development.*

Indirect impacts *- occur when project-related activities affect species, populations or ecological communities in a manner other than direct loss. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities, loss of shade/shelter, deleterious hydrological changes, increased soil salinity, erosion, inhibition of nitrogen fixation, weed invasion, fertiliser drift, or increased human activity within or directly adjacent to sensitive habitat areas. As with direct impacts, consideration must be given, when applying each factor, to all of the likely indirect impacts of the proposed activity or development.*

Life cycle*: the series or stages of reproduction, growth, development, ageing and*

death of an organism.

Viable*: the capacity to successfully complete each stage of the life cycle under normal conditions.*

Local population*: the population that occurs in the study area. The assessment of the local population may be extended to include individuals beyond the study area if it can be clearly demonstrated that contiguous or interconnecting parts of the population continue beyond the study area, according to the following definitions.*

- *The local population of a threatened plant species comprises those individuals occurring in the study area or the cluster of individuals that extend into habitat adjoining and contiguous with the study area that could reasonably be expected to be cross-pollinating with those in the study area.*
- *The local population of resident fauna species comprises those individuals known or likely to occur in the study area, as well as any individuals occurring in adjoining areas (contiguous or otherwise) that are known or likely to utilise habitats in the study area.*
- *The local population of migratory or nomadic fauna species comprises those individuals that are likely to occur in the study area from time to time. In cases where multiple populations occur in the study area, each population should be assessed separately.*

Risk of extinction: *the likelihood that the local population will become extinct either in the short-term or in the long-term as a result of direct or indirect impacts on the viability of that population.*

Local occurrence*: the ecological community that occurs within the study area. However, the local occurrence may include adjacent areas if the ecological community on the study area forms part of a larger contiguous area of that ecological community and the movement of individuals and exchange of genetic material across the boundary of the study area can be clearly demonstrated.*

Risk of extinction*: similar to the meaning set out in factor (a), this is the likelihood that the local occurrence of the ecological community will become extinct either in the short-term or in the long-term as a result of direct or indirect impacts on the ecological community, and includes changes to ecological function.*

Composition*: both the plant and animal species present, and the physical structure of the ecological community. Note that while many ecological communities are identified primarily by their vascular plant composition, an ecological community consists of all plants and animals as defined under the TSC and FM Acts that occur in that ecological community.*

Habitat*: the area occupied, or periodically or occasionally occupied, by any threatened species, population or ecological community and includes all the different aspects (both biotic and abiotic) used by species during the different stages of their life cycles.*

Extent: *the physical area removed and/or to the compositional components of the habitat and the degree to which each is affected.*

Importance: *related to the stages of the species' life cycles and how reproductive success may be affected.*

Locality: *the same meaning as ascribed to local population of a species or local occurrence of an ecological community.*

*"**likely**" with respect to "significant affect" the term "likely" in the context of s 78A(8)(b) of the EPA Act means a "**real chance or possibility**". It does not mean "more probable than not". Case law*

*"**significant**" qualifying the verb "**affect**" means "**important**", "**notable**", "**weighty**" or "**more than ordinary**". Case law*

10.2 Assessment of Significance (5-Part Test) for Southern Brown Bandicoot (eastern)

1) **The following is to be taken into account for the purposes of determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats:**
   a) *in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,*

Response:

The Southern Brown Bandicoot eastern population is listed in Schedule 1, Part 2, Division 4 of the BC Act 2016 as an Endangered Species Population.

The local population is viable at least in the short term. The local population occurs within Ku-rin-gai Chase National Park which is adjacent to the subject land. The subject land has previously been used for foraging by the Southern Brown Bandicoot based on historic bandicoot diggings found on the site. However, the area is unlikely to be important habitat and some foraging habitat will be retained in parts of the subject land.

The whole site is currently suitable as foraging habitat for the Southern Brown Bandicoot, but not suitable for breeding or sheltering. The proposal will result in a reduction of bandicoot foraging habitat by 898 sqm.

Access will remain the same if recommendations are followed.

This local population is located within Ku-rin-gai Chase National Park which is 14, 977 ha in size. The proposal is not likely to have a significant negative effect on the life cycle of this population such that the viability of the population is compromised and placed at risk of extinction.

(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

*(i) is likely to have an adverse effect on the **extent** of the ecological community such that its **local occurrence is likely to be placed at risk of extinction, or***

*(ii) is likely to **substantially and adversely modify the composition of the ecological community** such that its **local occurrence is likely to be placed at risk of extinction,***

Response:

The Southern Brown Bandicoot eastern population is listed as a threatened population and not an Endangered or Critically Endangered Ecological Community; therefore, this question is not applicable.

(c) in relation to the habitat of a threatened species or ecological community:

*(i) the **extent** to which habitat is likely to be removed or modified as a result of the proposed development or activity, and*

Response:

The site currently contains 898 sqm of potential bandicoot foraging habitat (the entire site) as it is all compromised of native vegetation. The proposal will result in a reduction of foraging habitat within the property.

The proposal will provide 250 sqm (approximately 27% of the site) of potential foraging habitat Access will remain the same if recommendations are followed.

The population occurs thourhgout Ku-rin-gai Chase National Park (14, 977 ha). The proposal is not likely to result in a significant removal of habitat.

The change in the extent of bandicoot habitat is of a scale that is not likely to lead to the reduction in the population size or reproduction success of individuals, the population or their habitat. If the recommendations of this report are followed, the proposed development will not change the access to this habitat.

*(ii) whether an area of habitat is likely to become **fragmented or isolated** from other areas of habitat as a result of the proposed development or activity, and*

Response:

The native vegetation adjacent to the property is to the east, south, and north. Hence, the property does not connect areas of vegetation and the proposal will therefore not cause fragmentation or isolation of the habitat.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,

Response:

The only native vegetation adjacent to the property is to the east and south. Hence, the property does not connect areas of vegetation and the proposal will therefore not cause fragmentation or isolation of the habitat.

The development only removes a small amount of vegetation connected to, but outside of Ku-rin-gai Chase National Park. The understorey on the site is patchy, with only some areas containing dense vegetation. There are also no suitable rocks on the site that could be used for shelter by the bandicoots.

Hence, the habitat being removed is of low significance for Southern Brown Bandicoot, and this small development area should not have a significant impact on the long-term survival of the Southern Brown Bandicoot eastern population.

(d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),

Response:

The site is not mapped or defined as an Area of Outstanding Biodiversity Value. The proposal will unlikely directly or indirectly impact any Area of Outstanding Biodiversity Value.

(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

Response:

Key Threatening Processes that are listed in the Biodiversity Conservation Act 2016 and that are relevant to this site include:

Clearing of Native Vegetation

The proposal will remove less than 750sqm of highly disturbed native vegetation.

High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition

This proposal will not increase the frequency of fire.

Predation by the Feral Cat *Felis catus* and Predation by the European Red Fox *Vulpes vulpes*

The proposal will not increase predation by feral cats or Europeans foxes.

The proposal will unlikely result in the increase of the impact of a Key Threatening Process.

Conclusion to the 5-part test of significance for the impact of the proposed development on Southern Brown Bandicoot (eastern)

Bandicoot diggings were observed on the site, providing evidence that bandicoot foraging has previously occurred on this site. The local Southern Brown Bandicoot population occurs within the Ku-rin-gai Chase National Park, to the west of the property. The site is on the edge of the native and unurbanized land adjacent to the National Park. This proposal will only remove a small amount of foraging habitat, will not impede on the population's life cycle or breeding habits, and will not fragment or significantly reduce this local population's distribution.

The proposal (see Map 5) described in this report not likely to have a significant effect to any threatened species, population or ecological community. It should be noted that this conclusion only applies to the proposal described in this report, the assumptions made in this report and the development shown on the Maps in this report.

Photo Page 1 - Site Features

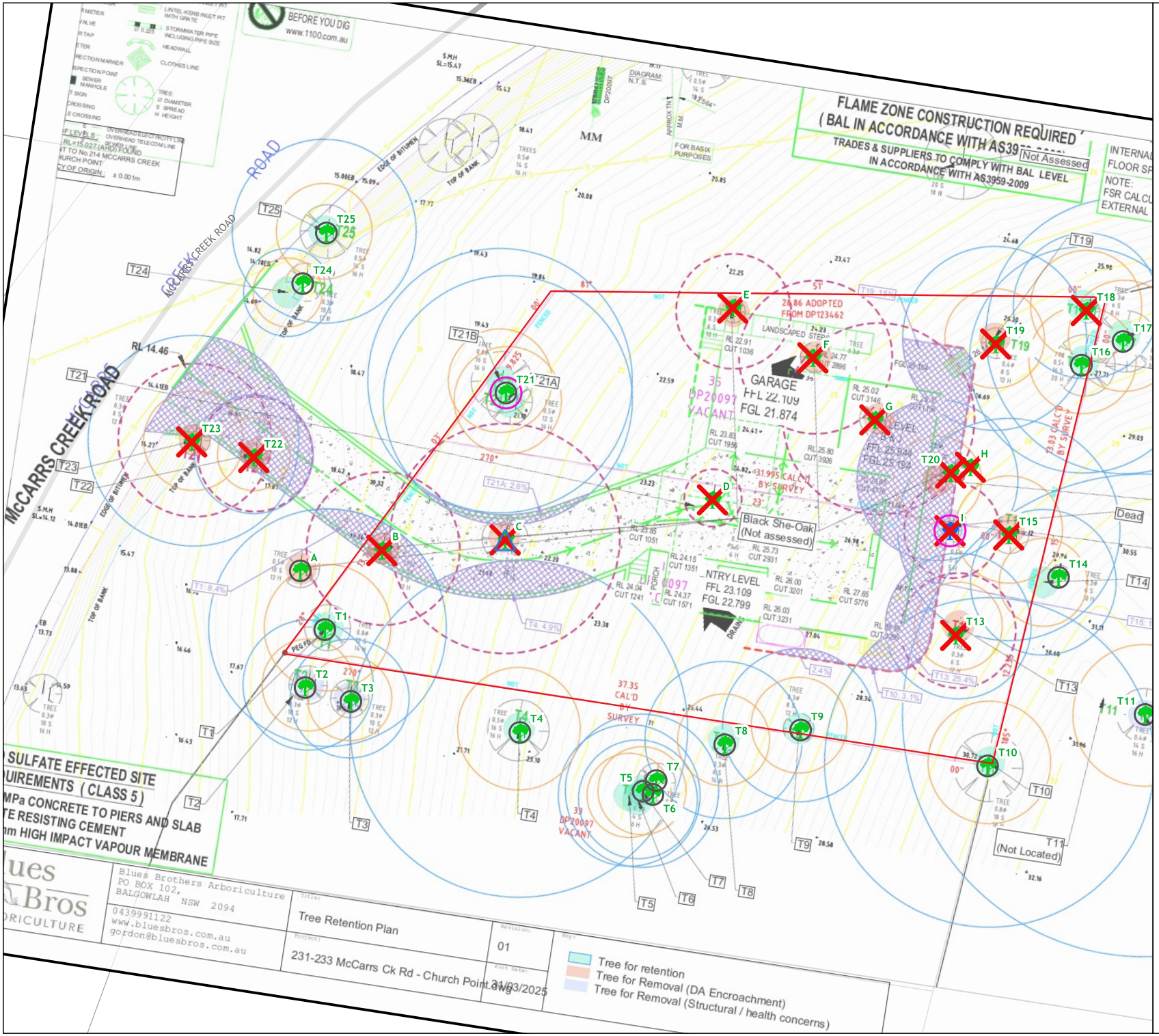
Photo 1. Centre of the site, looking North-East

Photo 2. Evidence of low bushfire present on tree trunks

Photo 3. View of the site from McCarrs Creek Road

Photo 4. Fallen log near the centre of the site

Photo 5. Tree 21 with hollow



Legend

231-233 Mc Carrs Ck Rd

Property

Hollows

Hollow

Nest

Tree Impact

Keep

Remove

Tree Status

Dead

Native to NSW

Cadastre

Road

Arterial Road

Basemap is the Tree Retention Plan dated 21.03.2025

Map 7
Site, Tree Impacts

GIS Environmental Consultants
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Date: 30/4/2025
Cartographer: Nicholas Skelton
Version: 1.0
File Path: Server/Projects/Current/GIS/Maps
Projection: GDA 94 MGA 56

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