

Abel Ecology

Biodiversity Development Assessment Report Waiver (BDAR Waiver)

Residential flat building with in-fill affordable housing

2-4 Woodside Avenue and 1-3 Reid Street,
Lindfield NSW 2070

Lots 98, 99, & 104 DP6608, Lot 10 DP794252, Lot X DP377076,
and Lot A DP354389

Prepared for:	CPDM Pty Ltd
Report No:	AE25-2774-BDARW-ISS-2-11NOV25
Prepared by:	Abel Ecology
Date:	11 November 2025



Disclaimer

This report has been prepared in accordance with the scope of services described in agreement between Abel Ecology and the Client.

In preparing this report, Abel Ecology has relied upon data, surveys and site inspection results taken at or under the particular time and/or conditions specified herein. Abel Ecology has also relied on certain verbal information and documentation provided by the Client and/or third parties, but did not attempt to independently verify the accuracy or completeness of that information. To the extent that the conclusions and recommendations in this report are based in whole or in part on such information, they are contingent on its validity. Abel Ecology assumes no responsibility for any consequences arising from any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to Abel Ecology.

The findings contained in this report are the result of discrete/specific methods used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the general condition of the site in question. Under no circumstances, however, can it be considered that these findings represent the actual state of the site/sites at all points.

Any representation, statement, opinion or advice, expressed or implied in this publication is made in good faith but on the basis that Abel Ecology, its agents and employees are not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever, which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement, or advice referred to above. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client.

Furthermore, this report has been prepared solely for use by the Client. Abel Ecology accepts no responsibility for its use by other parties.

I confirm that I have read the NSW Land and Environment Court Practice Note commencing on 14 May 2007, Division 2, Part 31 of the Uniform Civil Procedure Rules 2005 and the Expert Witness Code of Conduct in Schedule 7 to the Uniform Civil Procedure Rules 2005. I have prepared this advice in accordance with the requirements of the Practice Note and Code of Conduct and believe this report is consistent with the requirements of the Practice Note and the Code of Conduct. I agree to be bound by the Practice Note and Code of Conduct.

Document History


Report	Version	Prepared by	Technical Review by	Proofread by	Submission	
					Method	Date
Report	Draft A	Erin Parker Callista Harris Nicholas Tong (BAAS22012) 		Sue Simmons	Dropbox	28 January 2025
Report	Issue 1	Callista Harris Erin Parker		Corinna Campbell	Dropbox	14 February 2025
Report	Issue 2	Emma Colless	Nicholas Tong	Stacey Burn	Dropbox	11 November 2025



Table of Contents

Table of Contents	3
1. Introduction	4
2. The Project	8
3. BDAR waiver request information	9
4. Flora species list	21
5. Conclusion	24
6. Bibliography	25
7. Company Profile	26

Table of Figures

Figure 1. The locality	5
Figure 2. The subject site on 30 October 2024	6
Figure 3. Site plan deep soil and landscape area	7
Figure 4. Planted gardens at 3 Reid Street	14
Figure 5. Turpentine tree at 1 Reid Street	15
Figure 6. Area Mapped as Blue Gum High Forest	16
Figure 7. Impacts to vegetation.	17
Figure 8. State Vegetation Type Map of the locality	18
Figure 9. Railway line as seen from Lindfield Avenue	19
Figure 10. Biodiversity Values map	20

Table of Tables

Table 1. BDAR Waiver Request information requirements	9
Table 2. Impacts of the proposed development on biodiversity values	11
Table 3. compares the vegetation at the subject site to the PCTs mapped in the locality (NSW DEH, 2025)	23



1. Introduction

CPDM Pty Ltd (the Proponent) proposes to construct a residential flat building with in-fill affordable housing (the Project) at 2-4 Woodside Avenue and 1-3 Reid Street, Lindfield NSW 2070 (the subject site) (Figure 1 & Figure 2). The site plan is shown in both Figure 3. A separate SSDA is proposed for the adjacent set of lots as seen in Figure 3, however this is not a part of this assessment.

The proposal is classified as State Significant Development (SSD) as it falls within the requirements of Clause 26A (“In-fill Affordable Housing”) of Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021*.

A biodiversity survey of the subject site was undertaken by Abel Ecology (AE) on 16 January 2025 to identify vegetation species, threatened species habitat, and the presence of ecological communities. Habitat connectivity, threatened species movement, and flight paths were also considered when undertaking the survey.

While habitat surveys were undertaken for microbats, there was no suitable habitat for microbats present on the site. As a result, no further ultrasonic surveys were undertaken.

While there were houses and garden structures on the property, they were not suitable roosting habitat for microbats, as the structures were either well sealed or open patios.

No hollows or flaking bark was observed on the site.

This BDAR Waiver Request will be submitted to the Biodiversity, Conservation and Science Group of the NSW Department of Climate Change, Energy, the Environment and Water.



Figure 1. The locality

Source: (NSW Spatial Services, 2024)



Figure 2. The subject site on 30 October 2024

Source: (Nearmap, 2024)



2. The Project

The Project is for construction of a nine-storey building containing a percentage of in-fill affordable housing. Figure 3 shows the site plan.



3. BDAR waiver request information

This section provides the information detailed in Tables 1 and 2 of The Department of Planning, Industry & Environment’s guideline ‘How to apply for a biodiversity development assessment report waiver for a Major Project Application’.

Table 1. BDAR Waiver Request information requirements

<p>Proponent name Contact details</p>	<p>Proponent: CPDM Pty Ltd</p> <p>Contact: Michael Gee Development Manager Woodside Residence DM Pty Ltd Email: michaelg@cpdm.com.au Phone: 0422 072 180 Address: Suite G02, Ground Floor, 22 Atchison Street, St Leonards, NSW 2065.</p>
<p>Site details</p>	<p>Residential flat building with in-fill affordable housing – Reid Street and Woodside Avenue, Lindfield Application number: SSD-79261463 Current status: Response to Submission</p>
<p>Scientist Name Ecological qualifications for completing Table 2</p>	<p>Nicholas Tong, BSc (Biology), MPhil (Ecology), Cert. III CLM, MECA NSW, BAM Accredited Assessor (BAAS22012), 6 years ecological consulting experience.</p>
<p>Site details</p>	<p>The subject site (Figure 1 & Figure 2) is located in the suburb of Lindfield on the western side of the Pacific Highway, approximately 300 m north of Lindfield railway station. The site is bounded by Lindfield Avenue to the west, between Woodside Avenue to the south and Reid Street to the north. The site comprises of:</p> <ul style="list-style-type: none"> • 1 Reid Street – Lot 98 DP6608 • 3 Reid Street – Lot 99 DP6608 • 2 Woodside Avenue - Lot 10 DP794252 • 4 Woodside Avenue – Lot 104 DP6608, Lot X DP377076, and Lot A DP354389



	<p>The subject site is within the Ku-ring-gai Council area. The land is zoned R2 - Low Density Residential and is adjacent to land zoned R4 - High Density Residential and R3 - Medium Density Residential.</p>
<p>Description of existing development site, i.e., the area of land that is subject to the proposed development application</p>	<p>The subject site contains planted gardens, primarily made up of exotic species. Refer to Figure 4 for an example.</p> <p>A few species were observed that are native to NSW. These all appear to have been planted, with the exception of one Turpentine tree (<i>Syncarpia glomulifera</i>) at 1 Reid Street, which appears to be self-seeded from the nearby remnant community (Figure 5). This Turpentine tree is not proposed to be removed for the purpose of the project.</p> <p>Of the native NSW species, four (4) are species found in the local remnant Plant Community Type (PCT), including the Turpentine tree.</p> <p>Refer to Figure 7, Figure 8 and section 4 for further information.</p>
<p>Site Map</p>	<p>Location map: Refer to Figure 1.</p> <p>Aerial image map: Refer to Figure 2.</p> <p>Impact area map: No map has been provided because the entire subject site would be cleared to facilitate the Project.</p>
<p>Proposed development</p>	<p>The Project is construction of a nine-storey building containing a percentage of in-fill affordable housing. Figure 3 shows the site plan.</p>
<p>Impacts on biodiversity values</p>	<p>A portion of the subject site is included on the Biodiversity Values Map (Figure 10).</p> <p>Refer to Table 2 for an assessment of potential impacts on Biodiversity Values.</p>



Table 2. Impacts of the proposed development on biodiversity values

Biodiversity Value	Meaning	Relevance (✓ or N/A)	Impact Assessment	
			Applicant comment/justification	BCS comment
Vegetation abundance 1.4(b) BC Regulation	Occurrence and abundance of vegetation at a particular site.	✓	<p>The subject site contains planted gardens, primarily made up of exotic species. Refer to Figure 4 for an example.</p> <p>A few species were observed that are native to NSW. These all appear to have been planted, with the exception of one Turpentine tree (<i>Syncarpia glomulifera</i>) at 1 Reid Street, which appears to be remnant (self seeded from the surrounding landscape) (Figure 5).</p> <p>The patch of Blue Gum High forest in the south-west of the subject site has been incorrectly mapped and contains planted native vegetation as formal hedging and aesthetic plantings (Figure 6).</p> <p>The Project requires clearing of approximately 1,921 m² of exotic vegetation and 62 m² of native vegetation (Figure 7).</p> <p>Negligible impact.</p>	
Vegetation integrity 1.5(2)(a) BC Act 2016	Degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near-natural state.	✓	<p>The subject site has been developed with dwellings since at least 1930.</p> <p>The vegetation within the subject site has been heavily altered from a natural state (refer to example in Figure 4).</p> <p>Most strata of native vegetation have been historically cleared and the site has been regraded. The only remnant vegetation on the subject site appears to be the Turpentine tree.</p> <p>Negligible Impact.</p>	
Habitat suitability 1.5(2)(b) BC Act 2016	Degree to which the habitat needs of threatened species are present at a particular site.	✓	<p>The subject site contains planted gardens, which provide minimal foraging habitat for threatened species. No hollows, nests or other habitat features were observed on the site.</p> <p>While there were houses and garden structures on the property they were not suitable roosting habitat</p>	



Biodiversity Value	Meaning	Relevance (✓ or N/A)	Impact Assessment	
			Applicant comment/justification	BCS comment
			<p>for microbats, as the structures were either well sealed or open patios.</p> <p>No hollows or flaking bark was observed on the site.</p> <p>Negligible impact.</p>	
Threatened species abundance 1.4(a) BC Regulation	Occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site.	✓	<p>No threatened species were observed during the site survey.</p> <p>The subject site is within a residential area and it is unlikely that threatened species would visit the site.</p> <p>The vegetation on the subject site does not comprise any PCT or Threatened Ecological Community.</p> <p>Negligible impact.</p>	
Habitat connectivity 1.4(c) BC Regulation	Degree to which a particular site connects different areas of habitat of threatened species to facilitate the movement of those species across their range.	✓	<p>The subject site is surrounded by residential development and provides very limited habitat connectivity.</p> <p>Limited connectivity to rail corridor.</p> <p>Negligible impact.</p>	
Threatened species movement 1.4(d) BC Regulation	Degree to which a particular site contributes to the movement of threatened species to maintain their life cycle.	✓	<p>The subject site is surrounded by residential development and does not contribute to the movement of threatened species.</p> <p>Negligible impact.</p>	
Flight path integrity 1.4(e) BC Regulation	Degree to which the flight paths of protected animals over a particular site	✓	<p>The subject site currently contains single dwellings of one storey in height.</p> <p>The Project would be nine storeys with a total height of approximately 28.6m.</p>	



Biodiversity Value	Meaning	Relevance (✓ or N/A)	Impact Assessment	
			Applicant comment/justification	BCS comment
	are free from interference.		<p>The subject site is located within a residential area, close to a railway line and the Pacific Highway.</p> <p>The subject site is at an elevation of about 91 m Australian Height Datum (AHD) (ICSM, 2025). The railway line to the west is at an elevation of about 100 m AHD (Figure 9). Tall trees grow along the railway line.</p> <p>Due to the presence of the railway line and tall trees, the Project is unlikely to interfere with the flight paths of protected animals.</p> <p>Negligible impact.</p>	
Water sustainability 1.4(f) BC Regulation	Degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	✓	<p>There are no water bodies or water courses within the vicinity of the Project site.</p> <p>The Project will be constructed in accordance with a development approval, which would contain appropriate sediment and erosion controls.</p> <p>The Project is not expected to have any significant impact on water quality, water bodies or hydrological processes.</p> <p>Negligible impact.</p>	



Figure 4. Planted gardens at 3 Reid Street



Figure 5. Turpentine tree at 1 Reid Street



Figure 6. Area Mapped as Blue Gum High Forest



Figure 7. Impacts to vegetation.



Figure 8. State Vegetation Type Map of the locality

Source: (NSW DCCEEW, 2024)



Figure 9. Railway line as seen from Lindfield Avenue

Source: Google Maps



Figure 10. Biodiversity Values map

Source: (NSW DCCEEW, 2025)



4. Flora species list

The grid reference for this locality is 330340.0 East, 6261559.3 North (Geographic).

Family	Scientific name	Common name	Origin	2 Woodside Avenue – Lot 10 DP794252	4 Woodside Avenue – Lot 104 DP6608	3 Reid Street – Lot 99 DP6608	1 Reid Street – Lot 98 DP6608
Adoxaceae	<i>Viburnum suspensum</i> *		E, P			Y	
Alliaceae	<i>Agapanthus praecox</i> *		E, P	Y	Y	Y	
Amaryllidaceae	<i>Clivia miniata</i> *		E, P		Y		Y
Apocynaceae	<i>Nerium oleander</i> *	Oleander	E, P				Y
Araliaceae	<i>Hedera spp.</i> *		E, P			Y	
Asteraceae	<i>Bidens pilosa</i> * HTW	Cobbler's Pegs	E		Y		
	<i>Sonchus oleraceus</i> *	Common Sowthistle	E	Y			
Bignoniaceae	<i>Jacaranda mimosifolia</i> *	Jacaranda	E, P	Y			
Bromeliaceae	<i>Aechmea spp.</i> *		E, P	Y			Y
Buxaceae	<i>Buxus spp.</i> *		E, P	Y			
Cupressaceae	<i>Chamaecyparis lawsoniana</i> *	Lawson's Cypress	E, P			Y	
	<i>Cupressus leylandii</i> *		E, P				Y
	<i>Cupressus torulosa</i> *		E, P				Y
	<i>Juniperus squamata 'Prostrata'</i> *	Flakey Juniper	E, P	Y			
Cyatheaceae	<i>Cyathea cooperi</i>	Straw Treefern	N, P, L	Y			
Cycadaceae	<i>Cycas revoluta</i> *		E, P	Y			
Ericaceae	<i>Pieris japonica</i> *	Japanese pieris	E, P				Y
Euphorbiaceae	<i>Euphorbia peplus</i> *	Petty Spurge	E		Y		
Fagaceae	<i>Quercus robur</i> *	English Oak	E, P			Y	
Haemodoraceae	<i>Anigozanthos flavidus</i> *	Tall Kangaroo Paw	E (Western Australian species), P	Y			
Hydrangeaceae	<i>Hydrangea macrophylla</i> *		E, P				Y
Iridaceae	<i>Dietes grandiflora</i> *		E, P	Y			
	<i>Iris sibirica</i> *	Siberian Iris	E, P	Y			
Lamiaceae	<i>Mentha spicata</i> *	Spearmint	E, P				Y
	<i>Prostanthera incisa</i>	Cut-leaved Mint-bush	N, P				Y
	<i>Salvia rosmarinus</i> *	Rosemary	E, P				Y
Liliaceae	<i>Liriope muscari</i> *	Big blue Lilyturf	E, P				Y
Lythraceae	<i>Lagerstroemia indica</i> *	Crepe Myrtle	E, P		Y		
Magnoliaceae	<i>Magnolia x soulangeana</i> *		E, P			Y	
Myrtaceae	<i>Acmena smithii</i>	Lilly Pilly	N, P, L	Y			
	<i>Callistemon salignus</i>	Willow Bottlebrush	N, P, L				Y
	<i>Callistemon viminalis</i>	Weeping Bottlebrush	N, P	Y			Y
	<i>Leptospermum petersonii</i>	Lemon-scented Teatree	N, P	Y			
	<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	N, P				Y
	<i>Sannantha angusta</i>		N, P	Y			
	<i>Syncarpia glomulifera</i>	Turpentine	N, L				Y
	<i>Syzygium australe</i>	Brush Cherry	N, P				Y
	<i>Syzygium luehmannii</i>	Small-leaved Lilly Pilly	N,P	Y			
Nandinaceae	<i>Nandina domestica</i> *	Japanese Sacred Bamboo	E, P				Y
Ochnaceae	<i>Ochna serrulata</i> * HTW	Mickey Mouse Plant	E, P		Y		



Family	Scientific name	Common name	Origin	2 Woodside Avenue – Lot 10 DP794252	4 Woodside Avenue – Lot 104 DP6608	3 Reid Street – Lot 99 DP6608	1 Reid Street – Lot 98 DP6608
Oleaceae	<i>Olea europaea</i> * HTW	Common Olive	E, P	Y			
Oxalidaceae	<i>Oxalis latifolia</i> *		E, P		Y		
aceae	<i>Phormium tenax</i> *	New Zealand Flax	E, P			Y	
Pinaceae	<i>Cedrus atlantica</i> *		E, P				Y
	<i>Pinus thunbergii</i> *	Japanese Back Pine	E, P	Y			
	<i>Pseudotsuga menziesii</i> *	Oregon Pine	E, P			Y	
Plantaginaceae	<i>Veronica odora</i> (syn: <i>Hebe anomala</i> *)		E, P	Y			
Poaceae	<i>Bambusa spp.</i> *	Unidentified bamboo	E, P				Y
	<i>Paspalum spp.</i> *	Paspalum Grass	E		Y		
	<i>Stenotaphrum secundatum</i> * HTW	Buffalo Grass	E, P	Y	Y	Y	Y
Polypodiaceae	<i>Platynerium bifurcatum</i>	Elkhorn Fern	N,P	Y			
	<i>Platynerium spp.</i>		N,P	Y			
Portulacaceae	<i>Portulaca oleracea</i>	Pigweed	N,P		Y		
Proteaceae	<i>Banksia serrata</i>	Old-man Banksia	N,P	Y			
	<i>Telopea speciosissima</i>	Waratah	N,P			Y	
Rhamnaceae	<i>Azalea spp.</i> *		E, P	Y			Y
Rosaceae	<i>Prunus spp.</i> *		E, P	Y			
	<i>Rosa rubiginosa</i> * HTW	Sweet Briar	E, P				Y
Rutaceae	<i>Citrus hystrix</i> *	Kafir Lime	E, P	Y			
	<i>Citrus spp.</i> *		E, P				Y
	<i>Murraya paniculata</i> *	Mock Orange	E, P			Y	
Sapindaceae	<i>Acer palmatum</i> *	Japanese Maple	E, P	Y			Y
Solanaceae	<i>Solanum nigrum</i> *	Black-berry Nightshade	E		Y		
Strelitziaceae	<i>Strelitzia nicolai</i> *		E, P				Y
	<i>Strelitzia spp.</i> *		E, P		Y		
Theaceae	<i>Camellia japonica</i> *	Camellia	E, P	Y	Y	Y	Y
	<i>Camellia spp.</i> *		E, P				Y
Tropaeolaceae	<i>Tropaeolum majus</i> *	Nasturtium	E, P				Y
Xanthorrhoeaceae	<i>Xanthorrhoea spp.</i>		N,P	Y			
Zingiberaceae	<i>Hedychium gardnerianum</i> *	Ginger Lily	E, P				Y

Key	Origin
* Introduced species	E: Exotic
WTW – High Treat Weed	N: Native to NSW
PW – Priority weeds for Greater Sydney	P: Planted
WONS – Weeds Of National significance	L: Native to potential local remnant communities (PCT 3262 – Sydney Turpentine Ironbark Forest, or PCT - 3136 Blue Gum High Forest)



Table 3. compares the vegetation at the subject site to the PCTs mapped in the locality (NSW DEH, 2025)

Family	Scientific name	Common name	Origin	PCT 3262 – Sydney Turpentine Ironbark Forest	PCT - 3136 Blue Gum High Forest
Cyatheaceae	<i>Cyathea cooperi</i>	Straw Treefern	N, P, L	-	Y
Myrtaceae	<i>Acmena smithii</i>	Lilly Pilly	N, P, L	Y	Y
	<i>Callistemon salignus</i>	Willow Bottlebrush	N, P, L	-	Y
	<i>Syncarpia glomulifera</i>	Turpentine	N, L	Y	Y



5. Conclusion

A BDAR is not considered necessary for the Project for the following reasons:

- The Project primarily involves the removal of planted residential gardens.
- No threatened species or threatened ecological communities were observed during the site survey.
- The site is not part of a recognised movement corridor between breeding grounds, foraging grounds, or other habitats important for the lifecycle of species such as staging points for migration. The site provides very limited connectivity in the urban matrix.
- Flight path integrity is unlikely to be impacted.
- There are no waterbodies or watercourses within the vicinity of the site. Water quality, water bodies and hydrological processes are unlikely to be impacted by the proposed development.



6. Bibliography

ICSM, 2025. *Elvis - Elevation and Depth - Foundation Spatial Data.* [Online]
Available at: <https://elevation.fsf.org.au/>

Nearmap, 2024. *Nearmap.* [Online]
Available at: www.nearmap.com

NSW DCCEEW, 2024. *NSW State Vegetation Type Map Release C2.0.M2.1.* [Online]
Available at: <https://datasets.seed.nsw.gov.au/dataset/nsw-state-vegetation-type-map>

NSW DCCEEW, 2025. *Biodiversity Values Map.* [Online]
Available at: <https://datasets.seed.nsw.gov.au/dataset/biodiversity-values-map>

NSW DEH, 2025. *About BioNet Vegetation Classification.* [Online]
Available at: <https://www2.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification>

NSW Spatial Services, 2024. *NSW Base Map.* [Online]
Available at: <https://datasets.seed.nsw.gov.au/dataset/nsw-basemap>



7. Company Profile

Abel Ecology has been in the biodiversity consulting business since 1991, starting in the Sydney Region, and progressively more state-wide in New South Wales since 1998, and now also in Victoria. During this time extensive expertise has been gained with regard to Master Planning, Environmental Impact assessments including flora and fauna, bushfire reports, Vegetation Management Plans, Management of threatened species, Review of Environmental Factors, Species Impact Statements, Biodiversity Development Assessment Reports and as Expert Witness in the Land and Environment Court. We have done consultancy work for industrial and commercial developments, golf courses, civil engineering projects, tourist developments as well as residential and rural projects. This process has also generated many connections with relevant government departments and city councils in NSW. Our team consists of seven scientists and four administrative staff, plus casual assistants as required.

Licences

NPWS s132C Scientific licence number is SL100780.

NPWS GIS data licence number is CON95034.

NSW Dept of Primary Industries Secretary's Animal Care and Ethics Committee Approval: 18/575.

NSW Dept of Primary Industries Animal Research Authority. Accreditation No: 84207.

The Consultancy Team

Dr Danny Wotherspoon

Principal

BSc, DipEd, MA, PhD, Grad Dip Bushfire Protection,
MECA NSW, MEPLA, MNELA, MESA, MEIANZ, White card.

Danny has practised as an ecological and bushfire consultant since 1991. He is a consulting ecologist to private developers, State Government agencies and various City Councils on a regular basis, for development applications, government projects, and as expert witness in the NSW Land and Environment Court.

Danny's PhD researched fragmented vegetation and fauna habitat use. He has special expertise in fauna habitat use. Danny has presented invited papers at international conferences since 2001 in Australia, China, South Africa, Sri Lanka and Israel on his PhD and other research, including golf course habitat management. Danny's scientific papers have been published in both international and Australian academic journals.



Mark Mackinnon

Snr Bushfire Specialist / Snr Ecologist

Bushfire Planning & Design (BPAD), Accredited Practitioner Level 3. Accreditation number 36395.

B Env. Sci. (Hons); Grad. Dip. in Bushfire Protection

MEIANZ, White Card

Mark is a passionate and enthusiastic scientist who thrives in the field of natural resource management. Mark has worked for a number of inter-state government agencies and environmental consultancies. He has experience in threatened species, fire ecology, bushfire management, pest plant and animals, and landscape restoration. In particular, he specializes in ornithology and bushfire management. Mark has many specialised field-based skills including simple and complex tree climbing, working at heights, general firefighter departmental fire accreditation, venomous snake and reptile handling, immunization to handle bat species, and an A - class bird banding license with mist-net endorsement. Mark is also skilled in Arc and QGIS mapping, first-aid and four - wheel-driving.

Mark Sherring

Snr Botanist

BM, MAABR, Cert. Hort., Cert. Bush Regen, Cert. Rural Ops, White Card.

Member of the Australian Association of Bush Regenerators

Mark has extensive knowledge and experience of plant species in New South Wales. He has built up his expert knowledge on NSW native plant species over the many years that he has practised as a Botanist. He is regularly asked to contribute to the extensive (ongoing) flora surveys of the Sydney Basin and Blue Mountains carried out by the Royal Botanic Gardens, Sydney. Mark has extensive field survey experience, having worked for over ten years in various plant-related roles. His role in Abel Ecology is to provide expert advice on flora and on the full range of flora management issues encountered and in the design and management of environmental monitoring projects.

Nick Tong

Snr Ecologist

BAM Accredited Assessor (BAAS22012),

BSc (Biology), MPhil (Ecology), Cert. III CLM

MECA NSW, Snr First Aid, White card.

Nicholas is an experienced ecologist with expertise in fauna, plant species identification, vegetation assessment and ecological restoration. In the last six years, he has been a consulting ecologist to private developers and large corporations, for a variety of projecting including State Significant Developments. Nick has extensive field work experience in Sydney, the Blue Mountains and Central West NSW. His Master's project investigated the impacts of exotic predators on herpetofauna in the arid zone. His role at Abel Ecology is to provide expert advice on fauna and the application of the Biodiversity Offset Scheme.



Andy Araya

Ecologist

B Env. Sci. MTeach (Env., Marine, Agr., Bio., Chem.), Dip. Marine Operations

First Aid Cert. White Card. ACDC Chemical Licence, NSW Boating Licence, Marine Radio Licence, Security Licence, Chainsaw Licence.

Andy has over 15 years' experience as a bush regeneration supervisor working across a number of environments throughout NSW and QLD from EEC of the Cumberland Plain, riparian and wetland areas, sand dunes and rainforests, to the higher elevations of the Blue Mountains National Park. Managing teams of up to 10 staff in remote areas as well as urban environments has allowed Andy to hone his skills of communication and native species identification. Andy's additional experience as a builder in the building and construction industry gives him a solid understanding of the considerations and legal requirements clients face in mitigating environmental and personal harm.

Emily Barbaro

Ecologist

BA, MPublishing, Grad. Cert. EnvSc, MEScM

Emily has completed a Graduate Certificate in Environmental Science and a Masters of Environmental Science and Management. During her degree, Emily also completed the Volunteer Botanical Training Program at the Australian National Herbarium, Centre for Australian National Biodiversity Research and CSIRO. The Program included both botanical and general herbarium tasks, such as archiving plant specimens, plant identification, and assistance with taxonomic research projects. Emily has previously worked as a Bush Regenerator and has been volunteering with Bushcare for Blue Mountains City Council for the last three years. She is passionate about continuing to learn more about her local Blue Mountains flora and fauna.

Emma Colless

Junior Ecologist

BSc (Enviro.)

Emma holds a Bachelor of Science in Environmental Science from the University of Technology Sydney, where she developed skills in plant identification, field surveys and environmental management strategies. As a graduate ecologist, Emma is committed to expanding her hands-on experience in plant identification and field survey techniques. She has a genuine passion for native flora and urban environmental management, is enthusiastic about applying her scientific knowledge in practical settings and delivering innovative and sustainable project outcomes.



Erin Parker

Ecologist

B Biodiversity and Conservation, Macquarie University.

Erin has completed a Bachelor of Biodiversity and Conservation at Macquarie University. Erin has previously worked as a bush regeneration team member while completing her degree. There she was able to develop plant ID skills and understanding of the procedures of weed management and restoration. Erin has also taken part in a casual position assisting with threatened species surveys in the Central West of NSW. This involved various tasks including tree hollow surveys for Glossy Black Cockatoos, preparation for reptile surveys, spotlighting, harp trapping surveys of microbats, and Koala SAT plot surveys. Erin is passionate about furthering her knowledge on native Australian flora and fauna, their ecology and impacts.



Callista Harris

Technical Officer

BPlan (Hons)

First Aid Cert., White Card, Work Safely at Heights, Chainsaw Licence, Operate Elevating Work Platform (scissor lift), High Risk Work Licence - Boom-Type Elevating Work Platform (WP) (over 11 metres), Cert. Venomous Snake Handling, Damage Mitigation Permit - Protected Animals.

Callista has 9 years' experience as an urban planner. She has a strong knowledge of NSW environmental legislation and has secured approvals for a wide range of developments, including housing developments, industrial developments, solar farms, and infrastructure. She has recently changed careers and has gained valuable on the ground experience working as a fauna spotter catcher, ecologist, and botanist on various projects.

Dr Stephanie Clark

Specialist Consultant

B Sc (Hons), PhD

Stephanie has over 30 years' experience in the collection, identification and taxonomy of marine, estuarine, freshwater and terrestrial molluscs. She has conducted numerous targeted surveys for endangered and threatened species (particularly land and freshwater molluscs) in both Australia and the United States. She is particularly interested in the systematics, taxonomy, morphology (external and internal), population and conservation genetics and conservation of molluscs particularly terrestrial (especially the *Helicoidea*) and freshwater (especially the *Hydrobiidae* and related families) groups.