

Environmental Assessment and Management Strategy, Edith Cowan University Mount Lawley Campus



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10 December 2025

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EXECUTIVE SUMMARY

Aurora Environmental was commissioned by DevelopmentWA to prepare this Environmental Assessment and Management Strategy (EAMS) for the proposed redevelopment of Edith Cowan University (ECU) Mount Lawley Campus, located at 2 Bradford Street, Mount Lawley, Western Australia (WA) (herein referred to as the Site).

The university services at the Site are intended to be vacated between by the end of 2026 and relocated to the new ECU Perth City campus (anticipated to be operational semester one 2026) and ECU Joondalup campus. DevelopmentWA is leading the redevelopment and rezoning of the Site, with proposed rezoning to accommodate a range of residential densities and typologies, public open space (POS), supporting amenities, a potential 1.6 hectare (ha) primary school and the re-purposing of the Western Australian Academy of Performing Arts (WAAPA) facilities.

A draft Master Plan for the redevelopment of the Site was released for public comment in June 2025. Community feedback informed the development of the final Master Plan, which has guided the preparation of a Precinct Structure Plan (PSP) which details land use and development within the Site.

This EAMS has been prepared to address the requirements of the Western Australian Planning Commission's (WAPC) Structure Plan Framework (WAPC, 2023) and support the preparation, assessment and ultimate implementation of the PSP.

The Site comprises a total area of 18.6 ha and is currently reserved for 'Public Purposes – University' under the Metropolitan Region Scheme (MRS). A MRS amendment has been initiated to reclassify the Site to 'Urban' and the WAAPA facilities to 'Public Purposes – Special Use'. Under the City of Stirling Local Planning Scheme (LPS) No. 3 the Site is reserved for 'Public Purposes – University'. Amendment to LPS No. 3 (or draft LPS4) is proposed for the 'Urban' portion of the Site to be rezoned to 'Development'.

This assessment has identified a number of environmental attributes and values relevant to the development of the Site. The environmental attributes and values can be appropriately managed through future subdivision and development phases of the Site in accordance with relevant state and local government legislation, policies and guidelines and best management practices.

The environmental attributes and values relevant to development of the Site are summarised as follows:

- The Site comprises 0.03 ha native vegetation in 'Completely Degraded' condition located in the north-east portion of the Site comprising the canopy of two *Eucalyptus rudis* trees (Tree IDs 1188 and 1191).
- No threatened or priority ecological communities, or conservation significant flora, were recorded within the Site, nor are any likely to be present. The Site has a long history of disturbances and as a consequence, most of the native vegetation originally present within the Site has been cleared and has since been replaced with planted vegetation comprising a mix of native and non-native species.
- Due to the limited extent of habitat and degraded condition of the Site, it is expected that a reduced diversity and abundance of fauna species will be present. Only species that are mobile and use degraded habitats in an urban environment will persist.

- The Site comprises 2.27 ha low value foraging habitat for Carnaby's Cockatoo and 0.82 ha low value foraging habitat for Forest Red-tailed Black Cockatoo. The habitat is predominantly non-native plant species (mostly secondary foraging plants) with occasional native species (primary foraging plants). The foraging habitat within the Site is not considered necessary for the maintenance of black cockatoo species but may provide opportunistic foraging sources for the species. The only foraging evidence recorded at the Site was in the form of old chewed Marri nuts near the corner of Bradford Street and Alexander Drive, and an observation of Forest Red-tailed Black Cockatoos foraging in a Kaffir Plum tree near this location.
- Based on typical breeding patterns, the Site is not within an area that is recognised as a breeding location for black cockatoos. Although the Site is not recognised as a black cockatoo breeding location, the breeding potential of the Site was investigated by Aurora Environmental. None of the trees recorded across the Site with a diameter breast height (DBH) greater than 500 mm contained hollows suitable for black cockatoo breeding. This was not unexpected given the Site has historically been extensively cleared and the majority of the trees are less than 60 years of age. Given that black cockatoos typically nest in trees that are older than 200 years, the Site is outside of the typical breeding areas for black cockatoos, and no trees assessed across the Site contained hollows suitable for black cockatoo breeding, it is considered the Site does not contain any suitable breeding habitat.
- Although the Site comprises individual trees that meet the potential roosting tree criteria, the Site does not intersect a known black cockatoo night roosting site, and no black cockatoo roosting activity was recorded at the Site.
- Urbaqua has prepared a Water Management Report (WMR; Urbaqua 2025) to support amendment of the MRS and LPS No. 3, and development of the PSP. Surface water and groundwater values of the Site have been investigated and considered in the WMR. No significant water related constraints to the redevelopment of the Site have been identified in the WMR. However, the maximum groundwater elevation across the Site is shallowest in the northern portion of the Site, where groundwater levels are less than 3 m below ground level (BGL). This may have implications for lot elevations, construction of basements and any drainage features such as soakwells and stormwater detention areas.
- The Site (or portions thereof) has been the subject of multiple investigations dating back to 2004 to assess the potential presence and extent of contamination as a result of historical activities within the Site, including an old sanitary landfill. The majority of the contamination issues within the Site relate to historic landfilling that occurred prior to 1932 and extend across a significant proportion of the Site. Between 2008-2009 remediation works were conducted within the north-eastern portion of the Site in the Student Housing Village and adjoining School of Contemporary Arts. A Site Management Plan was prepared for the north-eastern portion of the Site to guide management and mitigate risks relating to residual contamination. Portions of the north-eastern portion of the Site, where landfill material and redundant infrastructure was removed, was recommended by an Auditor to be classified as 'Decontaminated' and the remainder of the north-east portion of the Site was recommended to be classified as 'Remediated for restricted use' with management to be conducted in accordance with the Site Management Plan.

- Due to the historical contamination issues and the proposed redevelopment of the Site, DevelopmentWA commissioned Aurora Environmental to investigate potential contamination risks, focusing on areas where intrusive investigations could be completed without demolition or destruction of existing buildings and infrastructure. The Aurora Environmental investigations completed to date have been conducted in accordance with the Department of Water and Environmental Regulation (DWER) guidelines and are being independently reviewed by an accredited Contaminated Sites Auditor (CSA). As a result of these investigations, a revised Site Management Plan has been developed by Aurora Environmental (2024a) for the entirety of the Site, recognising that the full extent of historical landfill material has not been fully delineated and further investigations are required. Preliminary remedial works have been completed within portions of the Site to reinstate appropriate ground levels across areas identified as having insufficient capping depth above landfill materials. On review of the work completed to date, the DWER considers the Site is suitable for its current land use subject to implementation of the revised Site Management Plan.
- Due to the presence of landfill materials beneath portions of the Site, the entirety of the Site was classified by the DWER as 'Remediated for restricted use' and a memorial stating this classification has been placed on the certificate of title. Prior to redevelopment of the Site, further investigation and assessment is required to inform potential risks from residual contamination during construction and / or under future land uses.
- Contaminated sites investigations are well progressed but will remain on-going to ensure risks are thoroughly investigated and managed in accordance with the requirements of the *Contaminated Sites Act 2003*. A CSA has been appointed on a voluntary basis and has reviewed all site investigations to date, and will continue to be involved in future site investigations, to ensure that the assessment works (and any future remediation works) are completed in accordance with the *Contaminated Sites Act 2003*.
- The DWER's Basic Summary of Records for the Site indicates that the Department of Health (DoH) advised that if groundwater is proposed to be abstracted, the appropriate analytical testing should be carried out to determine whether the groundwater is fit for purpose. Based on the findings from the groundwater assessments completed to date, there is no indication that groundwater has been contaminated as a result of historical landfill activities at the Site.
- Groundwater licence no. 89379 is registered to ECU with an allocation of 67,500 kilolitres (kL). It may be possible to acquire and transfer this allocation to the DWER for irrigating future open space areas.
- The Site is mapped within a Class II acid sulfate soils (ASS) risk area. The results from groundwater assessments for ASS indicators indicate there is limited buffering capacity for any potential acidification that may result from potential ASS disturbance. The potential presence and disturbance of ASS requires further consideration once detailed engineering design has been completed.
- An acoustic assessment and noise management plan has been prepared by Herring Storer Acoustics (2025) which indicates that vehicles travelling along Alexander Drive in the future (2044) would exceed the WAPC (2019) *State Planning Policy 5.4 Road and Rail Noise (SPP 5.4)*

“day-time limits” for the northern most portion of the Site. Future management to mitigate noise impacts will be required in noise affected areas within the Site.

The PSP has accommodated site-specific environmental attributes and values where necessary, including the provision of wide road reserves and open space to support tree retention. The PSP will be supported by landscaping with street trees (native and non-native species) and other treatments that incorporate new plantings in line with a guiding Landscape Master Plan. The retention of large trees across the Site will retain habitat value for black cockatoos and other fauna species, while planting with appropriate plant species will provide an opportunity to enhance local biodiversity values within the Site, including black cockatoo habitat.

Based on the key environmental attributes and values identified in this assessment, a recommended environmental management framework for investigations and management strategies is summarised as follows:

- Approval to clear up to 0.03 ha native vegetation will be required unless the proposed clearing is for an exempt purpose (covered under Schedule 6 or Regulation 5 exemptions), e.g. subdivision approval. Authorisation to clear may be obtained via a native vegetation clearing referral for low impact clearing, or a native vegetation clearing permit under Part V *Environmental Protection Act 1986*.
- Proposed development of the Site will not impact any TECs or threatened flora and therefore a section 40 permit under the *WA Biodiversity Conservation Act 2016* (BC Act) is not required for removal of significant flora species or significant ecological communities.
- Assessment of potential impacts to black cockatoo habitat was undertaken in accordance with the Commonwealth referral guidelines (DAWE, 2022), the *Significant Impact Guidelines 1.1* (DoE, 2013), and a worst-case scenario assuming removal of all potential habitat within the Site. The assessment concluded that potential impacts to Carnaby’s Cockatoo and Forest Red-tailed Black Cockatoo foraging habitat, as well as potential breeding and roosting habitat, are not significant. The thresholds for referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) will not be triggered; therefore, a referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) is not recommended.
- Although the proposed development of the Site will clear some potential habitat for black cockatoos, clearing of vegetation within the Site is unlikely to ‘take’ or ‘disturb’ any individuals of black cockatoo, subject to fauna management controls being implemented during construction. On this basis, a section 40 BC Act permit is not likely to be required.
- As recommended in the environmental reports prepared by Aurora Environmental (lodged with the MRS Amendment and under preparation for the PSP), the potential impacts of future development on black cockatoo habitat will be carefully considered as the Site layout and landscaping design are refined. The mitigation hierarchy will be followed, prioritising habitat retention and, where appropriate, providing additional planting with native plant species that provide high value black cockatoo foraging resources. The indicative concept plan submitted with the MRS Amendment (reflected by the draft Master Plan, which is being finalised) presents a Site layout that aims to maximise retention of mature trees where feasible to do so, and

promotes the incorporation of native plant species to enhance foraging habitat for black cockatoos.

- Implementation of the WMR will ensure that future planning and development of the Site will be consistent with the requirements of the *Draft State Planning Policy 2.9 Planning for Water* (WAPC 2021a) and the *Draft Planning for Water Guidelines* (WAPC 2021b).
- Contamination investigations will continue to be undertaken. The information derived from completed and on-going contamination investigations will be used to develop a strategy to manage risks during the redevelopment of the Site, and will include remediation and validation to ensure the Site is suitable for its intended end use. The implementation of the strategy shall be guided by a Remediation Action Plan or similar with independent review by the CSA to ensure future remediation is undertaken in accordance with the requirements of the *Contaminated Sites Act 2003*.
- Approval requirements under the *Rights in Water and Irrigation Act 1914* (RIWI Act) should be considered once dewatering or groundwater abstraction details at the Site are known.
- Investigate the acquisition or transfer of ECU's groundwater license (Licence No. 89379) for irrigation of landscaping in POS areas and streetscapes.
- It is recommended that the need for an ASS investigation is considered when further information about the civil design is available (i.e. the maximum depth of disturbance) and confirmation of whether dewatering to temporarily lower groundwater is proposed. If an ASS investigation is required, the results will determine if an ASS and Dewatering Management is needed. If necessary, any disturbance of ASS should be managed by treatment with lime to neutralise potential acidity.
- An intrusive pre-demolition survey should be carried out for each building and structure proposed to be demolished to investigate the presence of hazardous materials and to inform management of demolition or refurbishment works.
- In accordance with advice from the Herring Storer Acoustics (2025) noise management plan, any residential or mixed-use development that falls within noise affected areas will require "Quiet House" design packages and any commercial development will require investigation dependent on specific use in line with AS2017:2016.
- It is recommended that a Construction Environment Management Plan (CEMP) is prepared prior to any ground disturbing activities to adequately manage and mitigate impacts to the environment during construction.

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ABBREVIATIONS AND ACRONYMS

ACH	Aboriginal Cultural Heritage
ACHIS	Aboriginal Cultural Heritage Inquiry System
ACM	Asbestos containing material
AH Act	<i>Aboriginal Heritage Act 1972 (WA)</i>
AHD	Australian Height Datum
ANEF	Australian Noise Exposure Forecast
ASS	Acid sulfate Soils
BAL	Bushfire Attack Level
BC Act	<i>Biodiversity Conservation Act 2016 (WA)</i>
BMP	Bushfire Management Plan
BUWM	Better Urban Water Management
COPC	Contaminants of potential concern
COT	Certificate of Title
CS Act	<i>Contaminated Sites Act 2003 (WA)</i>
CSA	Contaminated Sites Auditor
DBCA	Department of Biodiversity, Conservation and Attractions (WA)
DBH	Diameter breast height
DCCEEW	Department of Climate Change, Energy, Environment and Water (Cwth)
DSI	Detailed Site Investigation
DPLH	Department of Planning, Lands and Heritage (WA)
DWER	Department of Water and Environmental Regulation (WA)
DWMS	District Water Management Strategy
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EPA	Environmental Protection Authority (WA)
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</i>
ESA	Environmentally Sensitive Area
GoWA	Government of Western Australia
ha	hectare
IBRA	Interim Biogeographic Regionalisation for Australia
KL	kilolitre
km	kilometre

LPS	Local Planning Scheme
LSP	Local Structure Plan
LWMS	Local Water Management Strategy
m	metre
MAR	Mandatory auditor review
m BGL	Metres below ground level
MGL	Maximum groundwater level
MNES	Matters of National Environmental Significance
mm	millimetre
MOU	Memorandum of Understanding
MRS	Metropolitan Region Scheme
OCPs	organochlorine pesticide
NT Act	<i>Native Title Act 1993 (Cwth)</i>
PMST	Protected Matters Search Tool
PDWSA	Public Drinking Water Source Area
PSI	Preliminary Site Investigation
RIWI Act	<i>Rights in Water and Irrigation Act 1914 (WA)</i>
PEC	Priority Ecological Community
SHV	Student Housing Village
SPP	State Planning Policy
SWALSC	South West Aboriginal Land and Sea Council
TEC	Threatened Ecological Community
TPFA	Threatened and Priority Fauna
TPS	Town Planning Scheme
UFI	Unique Feature Identifier
UST	Underground storage tanks
WAPC	Western Australian Planning Commission (WA)

1 INTRODUCTION

1.1 PROJECT OVERVIEW

DevelopmentWA has engaged Aurora Environmental to prepare an Environmental Assessment and Management Strategy (EAMS) for the proposed redevelopment of Edith Cowan University (ECU) Mount Lawley Campus (herein referred to as the 'Site'). The Site is 18.6 hectares (ha), located at 2 Bradford Street, Mount Lawley, Western Australia (WA), within the City of Stirling (the City), approximately 4 kilometres (km) north of the Perth central business district (CBD), refer to **Figure 1**.

Proposed redevelopment of the Site will require the existing ECU Mount Lawley campus to be vacated by the end of 2026 with university services relocated to the new ECU Perth City campus (anticipated to be operational semester one 2026) and ECU Joondalup campus. DevelopmentWA is leading the redevelopment and rezoning of the Site, with proposed rezoning to accommodate a range of residential densities and typologies, public open space (POS), supporting amenities, a potential 1.6 ha primary school and the planned repurposing of the Western Australian Academy of Performing Arts (WAAPA) facilities.

A draft Master Plan for the Site was available for public comment between 18 June and 3 August 2025. Feedback received during the public consultation period informed the development of the final Master Plan. The Master Plan (**Appendix 1**) provides a non-statutory conceptual overview of land use, infrastructure and community amenities. It includes considerations for residential, commercial, and recreational spaces, along with transportation, environmental impacts, and community services. This Master Plan has subsequently guided the preparation of a Precinct Structure Plan (PSP), which provides a detailed planning and development framework for the Site (**Appendix 2**). The PSP has been prepared with consideration of various technical inputs and supporting documentation, including this EAMS.

1.2 PURPOSE AND SCOPE OF WORK

1.2.1 Purpose of this Assessment

The purpose of this assessment is to address the requirements of the Western Australian Planning Commission's (WAPC) WA Planning Manual - Guidance for Structure Plans (WAPC, 2023) to support the preparation, assessment and ultimate implementation of the PSP. This assessment outlines the current understanding of the Site's environmental conditions and identifies environmental opportunities and constraints that may influence development potential.

The assessment has consolidated information and data derived from technical studies previously completed for the Site (**Table 1**) combined with up-to-date government datasets and relevant literature to assess the environmental values and constraints that could influence the scale and nature of development within the Site.

1.2.2 Scope of this Assessment

The key aspects which are addressed in the EAMS include:

- Physical characteristics such as:
 - Geology, geomorphology/landform, soils and risk of acid sulfate soils (ASS);

- Groundwater information (levels, direction of flow, water quality and bore licence information); and
- Wetlands and other surface water features.
- Biological values and other sensitive areas including:
 - Potential conservation significant flora, fauna and ecological communities from the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (PMST) and the Department of Biodiversity, Conservation and Attractions' (DBCA's) database for threatened and priority fauna (TPFA); and
 - A likelihood of occurrence assessment for conservation significant flora, fauna and ecological communities; and
 - Environmentally sensitive areas (ESAs).
- Bushfire risk.
- A review of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Cultural Heritage Inquiry System (ACHIS) to ascertain Aboriginal Cultural Heritage (ACH) values within the Site.
- Other non-Aboriginal heritage values via review of government managed databases and the Heritage Council's inHerit database.
- Site contamination risks arising from past activities within and near the Site based on the work completed for the Environmental Due Diligence Investigation (EDDI; Aurora Environmental, 2022), the Sampling and Analysis Quality Plan (SAQP; Aurora Environmental, 2023a), the Landfill Capping and Surface Water Quality Review (Aurora Environmental, 2023b), the preliminary Hazardous Materials (Hazmat) Survey (Aurora Environmental, 2023c), the Stage 1 Detailed Site Investigation (DSI) (Aurora Environmental, 2024b) and the Stage 1A DSI Addendum (Aurora Environmental, 2025a).
- An overview of the key environmental and heritage legislative requirements applicable to the Site including:
 - The land use planning framework in context of the PSP; and
 - Regulator feedback and interest in relation to the Site that has informed and guided the PSP.
- A proposed environmental management framework linking recommendations to future planning stages for the redevelopment of the Site. This includes policy considerations, management objectives to avoid and minimise risk to the environment, recommended management plans and measures, and optimal timing for implementation.

A Site inspection was undertaken by Dr Catherine Hall (Aurora Environmental Senior Ecologist) on Friday 12 September 2025 to:

- Assess trees with a diameter at breast height (DBH) of at least 450 mm for the presence of hollows that may have a dimension and orientation conducive for Black Cockatoo nesting;
- Review habitat within the Site to assess its potential roosting value; and

- Assess Black Cockatoo foraging habitat.

A track log is provided in **Appendix 3** demonstrating survey coverage during the Site inspection. The results of the Site inspection are detailed primarily in Section 3.10.2.

1.2.3 Previous Assessments

Numerous technical studies have been completed for the Site by Aurora Environmental and other consultants (**Table 1**). These reports have been reviewed to inform the preparation of this EAMS.

TABLE 1: PREVIOUS ENVIRONMENTAL ASSESSMENTS COMPLETED FOR THE SITE

SURVEYS AND ASSESSMENTS
<p>Aurora Environmental is aware of the following previous environmental investigations completed at the Site by other consultants:</p> <ul style="list-style-type: none"> • ATA Environmental (2004) Preliminary Soil Contamination Assessment Buildings 22 and 23 Mount Lawley Campus Edith Cowan University. 2004/70. V1 • ATA Environmental (2006) Detailed Site Investigation. Edith Cowan University Mount Lawley Campus. 2005/224. V1. • 360 Environmental (2008a) Site Contamination Status and Remediation Approach. ECU Mount Lawley Future Student Housing Development. 492-AV. V2. • 360 Environmental (2008b) Remediation Action Plan. ECU Mount Lawley Future Student Housing Development. 492-AP. V1. • 360 Environmental (2009a) Site Management Plan. ECU Mount Lawley Campus. 492-BF. V1. • 360 Environmental (2009b) Remediation and Validation Report. ECU Mount Lawley Remainder of Student Housing Village. 492-BE. V0. • 360 Environmental (2009c) Remediation and Validation Report. ECU Mount Lawley Future Student Housing Development. 492-BB. V0. • 360 Environmental (2009d) Additional Site Investigation Report ECU Mount Lawley Remainder of Student Housing Village. 492-AY. V0. • ENVIRON Australia (2009) Voluntary Auditors Report. Student Housing Facility and Surrounds. Mount Lawley Campus Edith Cowan University. • 360 Environmental (2012) Monitoring Program Annual Report. ECU Mount Lawley. SWA465-AA. V1. • Paperbark Technologies Arboricultural Consultants (2022). Tree Summary Report – Edith Cowan University Mount Lawley. Report prepared for DevelopmentWA, Perth, Western Australia. Tree data was updated in 2025 to account for tree deaths and tree removals since the 2022 assessment.
<p>The following environmental investigations have been undertaken by Aurora Environmental:</p> <ul style="list-style-type: none"> • Aurora Environmental (2022). Environmental Due Diligence Investigation ECU Mount Lawley Campus 2 Bradford Street, Mount Lawley. Report prepared for DevelopmentWA. • Aurora Environmental (2023a) Sampling and Analysis Quality Plan ECU Mount Lawley Campus. Report prepared for DevelopmentWA. • Aurora Environmental (2023b) Landfill Capping and Surface Water Quality Review, ECU Mount Lawley Campus. Report prepared for DevelopmentWA. • Aurora Environmental (2023c). Hazmat Gap Analysis ECU Mount Lawley Campus. Report prepared for DevelopmentWA. • Aurora Environmental (2023d). Native Vegetation and Black Cockatoo Habitat Assessment, Edith Cowan University Mount Lawley Campus. Preliminary letter advice prepared for DevelopmentWA. • Aurora Environmental (2024a). Revised Site Management Plan, Historic Landfill, ECU Mount Lawley Campus, 2 Bradford Street, Mount Lawley. Report prepared for DevelopmentWA.

TABLE 1: PREVIOUS ENVIRONMENTAL ASSESSMENTS COMPLETED FOR THE SITE

SURVEYS AND ASSESSMENTS	
•	Aurora Environmental (2024b). Stage 1 Detailed Site Investigation: Edith Cowan University Mount Lawley Campus. Report prepared for DevelopmentWA.
•	Aurora Environmental (2024c). Remediation Option Assessment, Mount Lawley Childcare Centre, 2 Bradford Street, ECU. Report prepared for DevelopmentWA.
•	Aurora Environmental (2025a). Stage 1A Detailed Site Investigation, Edith Cowan University Mount Lawley Campus. Report prepared for DevelopmentWA.
•	Aurora Environmental (2025b). Additional Soil Investigation, Mount Lawley Childcare Centre, 2 Bradford Street, Mount Lawley Campus. Report prepared for DevelopmentWA.
•	Aurora Environmental (2025c). Stage 1A Detailed Site Investigation Addendum, Edith Cowan University Mount Lawley Campus. Report prepared for DevelopmentWA. DRAFT.

2 SITE DETAILS

2.1 SITE IDENTIFICATION DETAILS

The Site is located within the suburb of Mount Lawley, approximately 4 km north of the Perth CBD, within the City of Stirling (**Figure 1**). Site identification details are summarised in **Table 2**.

TABLE 2: SITE DETAILS

IDENTIFICATION FEATURES	DETAILS
Site Address	2 Bradford Street, Mount Lawley; refer to Figure 1 .
Land Tenure	Crown
Current Site Owner	State Government
Local Government Authority	City of Stirling
Current Zoning	<p><u>Lot 11328 on Deposited Plan 217690</u></p> <ul style="list-style-type: none"> Metropolitan Region Scheme (MRS) zoned 'Public purposes – University'; No Local Planning Scheme (LPS) zoning. <p><u>Lot 11922 on Deposited Plan 191705</u></p> <ul style="list-style-type: none"> MRS zoned 'Public purposes – University'; No LPS zoning.

2.2 PLANNING CONTEXT

The Site is currently 'Public Purposes – University' under the Metropolitan Region Scheme (MRS). A MRS amendment has been initiated to reclassify the Site to 'Urban' and the WAAPA facilities to 'Public Purposes – Special Use'.

Under the City of Stirling Local Planning Scheme (LPS) No. 3, the Site is reserved for 'Public Purposes – University'. Amendment to LPS No.3 (or draft LPS4) is proposed for the 'Urban' portion of the Site to be rezoned to 'Development'.

2.3 LAND USE

2.3.1 Current Land Use

The Site is occupied with the ECU Mount Lawley Campus, university supporting facilities and road.

2.3.2 Historic Land Use

Periodic aerial photographs (every 3-5 years), or photographs that show major changes to the Site, with a description of these changes, are included in **Table 3** below. Aerial photographs showing significant changes to the Site (1942, 1961, 1970, 1979, 1985, 2000, 2008 and 2015) are provided in **Appendix 4**.

TABLE 3: SUMMARY OF HISTORICAL AERIAL PHOTOGRAPHS

YEAR	THE SITE ¹	SURROUNDING AREA
1942 (Black and White)	The Site has been disturbed and reworked. The north-eastern portion does not appear vegetated and has multiple access tracks running north-east to south-west. The remainder of the Site is densely vegetated with rows of inferred planted pine trees. A visible access track intersects the two densely vegetated areas. It is noted that there are several patches within the plantation area that do not have vegetation. It is unclear what the purpose of these barren areas was and whether they are indicative of any other disturbances.	The surrounding area has already been heavily developed. The Mount Lawley golf course is present to the north. Majority of the areas to the north and north-west also appear to be in use for pine plantation. It is noted that the pine plantations further north-west do not feature the same patches of bare ground that can be seen in the rows of pine in the Site boundary.
27 November 1953 (Black and White)	The Site appears to have already been cleared with a majority of the vegetation in the central portion removed. A track is present running northeast to south-east across the central portion of the Site, as well as north to south through the north-eastern portion of the Site. No structures can be seen in the photograph however the north-eastern portion of the Site appears to be used for the storage of materials, with white rectangles visible in the photo.	The surrounding areas to the south, east and north have been largely cleared of natural vegetation and developed. The northern-western portions surrounding the Site appear to be undisturbed with only minimal clearing in patches.
13 March 1961 (Black and White)	The Site is now mostly cleared of native vegetation and appears to have been reworked. Structures are visible in the north-eastern corner of the Site with one building and the storage of parts. Two excavations are visible in the north-eastern portion of the Site. These two excavations are the locations of the current basins at the Site.	Large scale development has occurred to the north-west with the vegetation largely cleared. To the south-east large buildings have been constructed. The wetland and vegetation immediately south of the Site (now John Stone Park), has been cleared in this photograph.
11 March 1965 (Black and White)	The Site is largely unchanged, a slightly clearer photograph than the previous shows that a small narrow line of vegetation remains along the south-eastern boundary. This vegetation is inferred to be remnants from the planted vegetation as part of the pine plantation usage of the Site.	Additional development with residential premises to the west and land clearing to the northeast, north, and south.

¹ The Site boundary presented on the Appendix 4 aerial images is derived from the EDDI (Aurora Environmental, 2022) which is slightly different than the Site assessed in this document i.e., Appendix 4 images do not include Lot 11922 on Deposited Plan 191705.

TABLE 3: SUMMARY OF HISTORICAL AERIAL PHOTOGRAPHS

YEAR	THE SITE ¹	SURROUNDING AREA
20 July 1970	<p>A large building has been constructed on the south-western corner of the Site inferred to be related to the teachers college usage that commenced approximately at this time. Material appears to have been imported and reworked throughout this area. Access tracks can be seen entering the Site from the south-eastern boundary towards this new building. Machinery and laydown of materials appear extensive surrounding the building.</p> <p>Standcliffe Crescent appears to have been asphalted and can be seen traversing the northern portions of the Site east to west.</p> <p>New buildings have been constructed in the north-eastern corner of the Site with reworking of ground surface evident. This area of the Site is inferred to now be in use as a driver training facility which includes driving tracks and courses.</p>	<p>Continued residential development to the west of the Site, with additional vegetation clearing and construction of buildings.</p> <p>To the south Rob Stone Park now appears visible with standing water. Minor scale residential development has continued to the south.</p> <p>Mount Lawley High School has been partially expanded with additional buildings to the west.</p>
29 June 1977 (Black and White)	<p>The south-eastern corner of the Site has been heavily developed since the previous aerial with multiple large buildings constructed across the Site. Some of the buildings in the photo are still present in the current layout.</p> <p>Two large open spaces are visible on the north-western and eastern boundary of the Site, appearing to be grassed areas.</p> <p>On the northern portion of the Site the driver training facility tracks are still visible.</p>	<p>Site surrounds are broadly unchanged with only minor additional development to the north-west.</p>
30 August 1981 (Coloured)	<p>Site conditions are largely unchanged with minor development to the buildings on the southern portion of the Site.</p>	<p>Site surrounds are broadly unchanged with only minor additional development to the east.</p>
19 June 1985 (Coloured)	<p>Site conditions are largely unchanged; however, some additional buildings have been constructed. Large scale alterations and extensions have also occurred to some of the buildings.</p>	<p>Site surrounds are broadly unchanged with only minor additional development to the east.</p>
31 December 1989	<p>The Site has been heavily reworked with multiple new buildings constructed as part of the ECU campus portion of Site usage. The original buildings from the 1977 aerial are still present however have been altered / expanded at several locations.</p>	<p>The Site surrounds appear generally unchanged from the previous aerial. Some additional minor scale development has occurred to the east and south-east.</p>

TABLE 3: SUMMARY OF HISTORICAL AERIAL PHOTOGRAPHS

YEAR	THE SITE ¹	SURROUNDING AREA
	The drivers training facility, including the associated track and the small building next to it, are no longer present on the Site and has been replaced with hardstand as part of the parking bays that are now visible on the northern portion of the Site.	
6 February 1995	<p>Additional development has occurred on the Site. Alterations have been made to many of the pre-existing structures in the ECU Campus however a majority of the original 1977 buildings appear to still be present.</p> <p>New buildings have been constructed on the northern portion of the ECU Campus as well as throughout the north-eastern portions of the Site. Approximately twelve new buildings have been constructed in the north-eastern corner, inferred to be related to student housing village (SHV).</p> <p>A small, shed structure is now present on the western side of the concrete hardstand of the carpark on the northern portion of the Site.</p>	The Site surrounds appear largely unchanged with only minor scale development of residential housings and the commercial districts to the west.
24 February 2000	<p>Additional development has occurred on the ECU campus portions of the Site to the south-west. Minor alterations appear to have also occurred to pre-existing buildings.</p> <p>Further development has occurred in the north-eastern corner of the Site.</p>	The Site surrounds are relatively unchanged. The Mount Lawley High School to the immediate south-east appears to have undergone minor alterations to the buildings. The residential precinct immediately west of the Site boundary also appears to have been altered with additional buildings constructed. No other changes are noted with the exception of minor alterations to residential housings.
24 December 2006	<p>The Site is largely unchanged from the 2000 aerial.</p> <p>The caretaker's residence in the furthest north-eastern corner of the Site has been demolished with only grassed surfaces now visible. Additional extensions at the SHV have also been undertaken with further buildings developed.</p>	The Mount Lawley Senior High School has been further developed in the time between the 2000 aerial. The northern oval of the high school now features large buildings, as do the former open space areas to the south and east. In 2002 and 2003 the northern area of the High School is visibly reworked, with this disturbance known from historical reports to be related to the remediation of the landfill.
24 January 2009	The ECU Campus is largely unchanged with the exception of some minor scale developments to existing buildings. Several new buildings are evident on the northern portion of the campus.	The Site surrounds are largely undisturbed with the exception of some minor scale developments to the north-west in the commercial district.

TABLE 3: SUMMARY OF HISTORICAL AERIAL PHOTOGRAPHS

YEAR	THE SITE ¹	SURROUNDING AREA
	<p>In the northern carpark areas two of the smaller buildings that were first visible in the 1977 aerials are no longer present and are instead covered by concrete hardstand.</p> <p>The most notable changes to the Site are visible in the SHV. The southern portion is heavily disturbed, understood to be in process of remediation.</p> <p>Several additional buildings have been constructed in the north-eastern boundary of the Site.</p>	
28 November 2016	<p>The Site has been developed as part of the ECU operations. The campus is largely unchanged with the exception of minor alterations to the existing buildings and the expansion of parking bays in the north.</p> <p>The SHV has been heavily developed since the previous aerial photograph with the remediated surfaces now with multiple large high-rise buildings.</p> <p>The buildings previously located along the north-eastern boundary of the Site are no longer present, with the surfaces now with a grassed area.</p> <p>The Waste Compound currently present at the Site is now first visible in the north-eastern corner.</p> <p>The buildings on the south-eastern portion of the Site have been demolished and in 2016 the foundations appear to have been prepared for construction works.</p>	<p>The Site surrounds are mostly unchanged with the exception of the Mount Lawley High School, which has been further developed to the south-east where additional buildings have been constructed. Minor scale development has also occurred to the north-east adjacent to the golf course with new buildings visible.</p>
3 May 2020	<p>The construction works on the south-eastern portion of the Site have been completed with the buildings in this area of the Site consistent with current aerial imagery.</p>	<p>Minor additional developments are visible on the Mount Lawley high school to the south-east with additional buildings constructed. No other notable changes are evident in the surrounding areas.</p>
16 February 2025	<p>The Site is largely unchanged.</p>	<p>No notable changes are evident in the surrounding areas.</p>

The key findings of the aerial photograph review are discussed below.

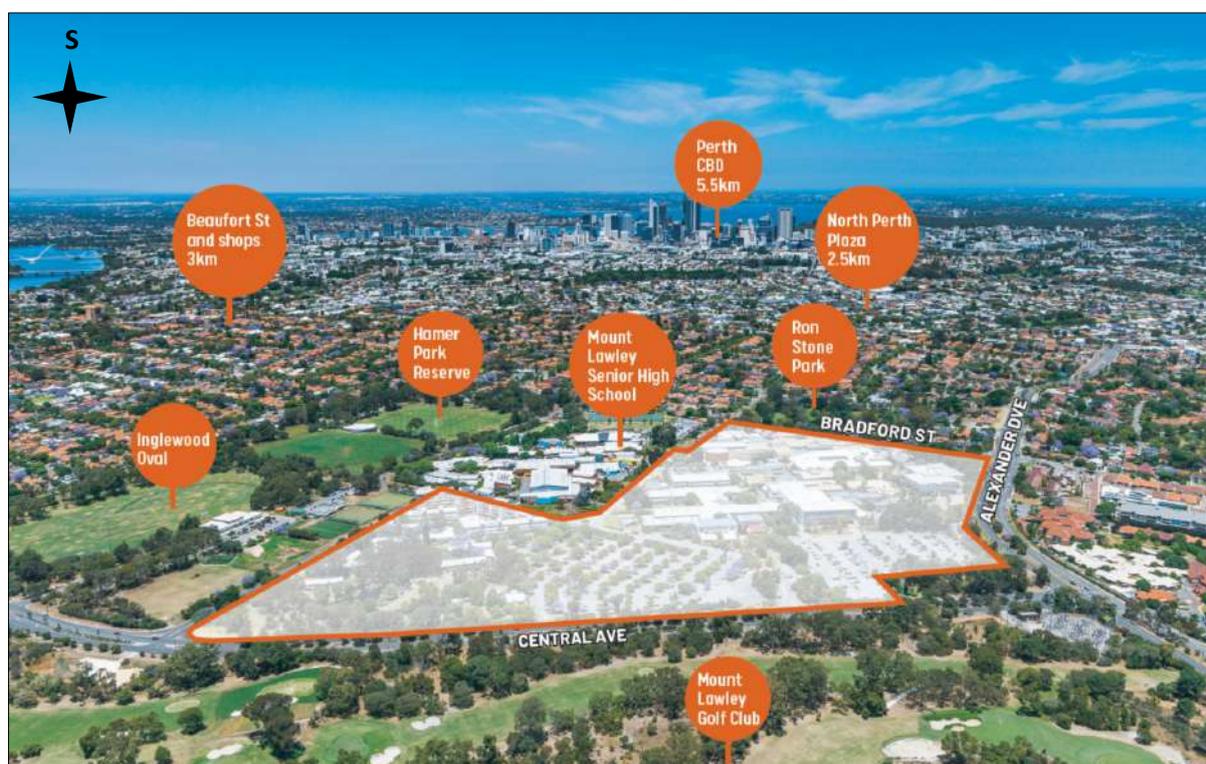
- The Site was disturbed and cleared of native vegetation prior to the earliest available photograph (1942). Ordered rows of vegetation suggest that the inferred pine plantation covered much of the Site until sometime prior to the 1961 aerial photograph, when majority of the Site was cleared.

- The first large scale building development at the Site is visible in the 1970 aerial photograph. Most buildings were constructed between 1970 to 2010. It is noted that a large proportion of the early buildings are still present. The majority of the Site is covered either by hardstand or by grassed and landscaped surfaces.
- A driver training facility which was present at the Site between 1965 to 1989. This included driving tracks and several small buildings. The facility was demolished in approximately 1989 and covered by hardstand for car parking.
- Aerial photographs from 1970 shows a narrow linear patch of trees being retained along the south-eastern boundary of the Site and retention of intermittent trees east of the Site surrounding the two artificial compensation basins and intermittent trees located north-west of the Site also being retained. The two compensation basins appear to have been constructed circa 1961 and are still present within the Site.
- Remedial works occurred in the north-east portion of the Site in 2009 where the current SHV is located. The remedial works are associated with a historic landfill that pre-dated available historical aerial photography (i.e., pre-1942). Certificate of Title (COT) records indicate that the landfill operated between approximately 1896 and 1932.

2.3.3 Surrounding Land Use

Plate 1 provides an overview of the predominant land uses surrounding the Site. The dominant land uses to the south and west are residential developments, education facilities, with parks and recreational land uses to the north and east.

PLATE 1. SITE SURROUNDINGS



(source: DevelopmentWA 2025)

3 EXISTING ENVIRONMENT

3.1 CLIMATE

The Site is located in the Perth region that has a typically Mediterranean climate with cold, wet winters and hot dry summers. Climate data has been sourced from the Bureau of Meteorology (BoM) averages for Perth Metro weather station (station number 9225) for the period 1993 to 2025 (BoM, 2025).

Rainfall in the area is seasonal, with majority occurring during the winter months (June to August). The mean monthly rainfall is highest in July at 147 millimetres (mm) and lowest in December at 9.4 mm, with an average annual rainfall of 717.4 mm and an average of 80.4 rain days with ≥ 1 mm of rain (BoM, 2025).

The mean annual maximum and minimum temperatures for the Perth Metro weather station are 24.9°C and 13°C respectively. The highest temperatures are usually experienced in February when the mean monthly maximum temperature is 31.7°C. Minimum temperatures occur in July when the mean monthly minimum temperature is 8.1°C (BoM, 2025).

The least windy time of the year is typically during the mornings between June and August, with the calmest month being July, with 9 am wind speeds recorded at 11.9 km per hour (BoM, 2025).

3.2 TOPOGRAPHY

The topography at the Site ranges from approximately 23 m to 24 m Australian Height Datum (m AHD) across the northern and central part of the Site, falling to between approximately 21 m and 22 m AHD across the southern and eastern parts of the Site (Douglas Partners, 2022). During the EDDI Site inspection (Aurora Environmental, 2022) it was observed that the south-western portion of the Site had been raised, where imported fill has been documented during geotechnical investigations.

3.3 LANDFORM AND SOILS

3.3.1 Geomorphology, Geology and Soils

The Site is situated on the Swan Coastal Plain, which is generally a flat, low-lying belt approximately 23 km wide in the south and 34 km wide in the north. The Swan Coastal Plain comprises a series of distinct landforms, aligning roughly parallel to the coast. The Site is situated on the central portion of the Swan Coastal Plain, near the interface between the eastern extent of the Spearwood Dunes and the western extent of the Bassendean Dunes system.

The 1:50k environmental geology series (Gozzard, 1986) describes the general geological features of geological code 'S8' as follows:

- Sand, which is very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted of eolian origin.

A geotechnical investigation has been undertaken across the Site by Douglas Partners (2022). **Appendix 5** shows the test locations for the Douglas Partners (2022) investigation. The composition of soils across the Site generally comprise:

- TOPSOIL / SAND SP-SM: Dark grey-brown sandy topsoil, with silt, 0.1 m thick at Test Location 33.

- FILL (SAND, Organic SAND, Gravelly SAND and Sandy GRAVEL) SP, SP-SM and GP-GM: Generally sandy fill (or gravelly materials associated with pavement layers) which appears to generally be uncontrolled (apart from the pavement layers) from surface to depths between 0.3 m and 3.6 m, encountered at most test locations. A limited amount of foreign inclusions such as glass and brick fragments were observed at several locations, generally within the north-eastern area shown as 'Classified Site' (Test Locations 41, 42, 43, 46, 49, 50A, 52), but also elsewhere (Test Locations 26, 32, 53). An organic sandy fill layer was encountered from 0.15 m depth to 1.2 m depth at Test Location 41.
- SAND SP: Fine to medium grained sand, generally medium dense, increasing in density with depth.
- Some zones of loose to medium dense sand was encountered along the soil profile at some locations (Test Locations 2, 8, 10, 17, 18, 20), from depths of between ground surface and 2.7 m, extending to depths of between 1.8 m and 6.1 m. Layers of weakly cemented coffee rock were encountered or interpreted at some Test Locations (1, 21, 44).
- Silty SAND SM, Clayey SAND SC and Sandy CLAY CL-CH: Various layers of Silty Sand, Clayey Sand and Sandy Clay often interbedded within layers of sand, and generally either medium dense or very stiff to hard, encountered from depths between 10.2 m and 15 m, at most locations excluding 2, 3 and 19.

3.3.2 Acid Sulfate Soils

The common name given to soils and sediments containing iron sulfides is ASS. When exposed to air due to drainage or disturbance, these soils produce sulfuric acid, often releasing toxic quantities of iron, aluminium and heavy metals.

The Site is mapped as a Class II ASS risk area indicating there is a moderate to low risk of ASS occurring within 3 m of the natural soil surface, but high to moderate risk of ASS beyond 3 m of the natural soil surface (Department of Water and Environmental Regulation [DWER], 2017; DWER-055). Subsurface acidification risk was not mapped across the Site (Department of Primary Industries and Regional Development [DPIRD], 2025a; DPIRD-011).

The DWER (formerly the Department of Environment and Regulation [DER]) guidance *Identification and Investigation of ASS and Acidic Landscapes* (DER, 2015a) indicates that excavation beyond 3 m of natural soil surface, or temporary lowering of groundwater (e.g. dewatering) in areas mapped as Class II require intrusive site investigations to evaluate the presence of ASS materials at depths greater than 3 m of the natural soil surface. Note that Bassendean soils contain high amounts of quartz sand, with negligible amounts of acid-buffering clays or carbonates and therefore have a high risk of acidification when exposed to air through oxidation.

The results from groundwater assessments for ASS indicators have indicated there is limited buffering capacity for any potential acidification that may result from disturbance of potential ASS. However, a site-specific ASS investigation has not been completed. An ASS investigation is best conducted when further information about the civil design is available (i.e. the maximum depth of disturbance in relation to groundwater levels) and confirmation of whether dewatering to temporarily lower groundwater is proposed. The results of the assessment will determine if an ASS and Dewatering

Management will be required and if necessary, any disturbance of ASS should be managed by treatment with lime to neutralise potential acidity (DER, 2015b).

3.4 CONTAMINATION

The Site (or portions thereof) has been the subject of multiple investigations that date back to 2004. These investigations have assessed the presence of contamination caused by previous activities at the Site. The majority of the contamination issues within the Site relate to historic landfilling that occurred prior to 1932 and extended across a significant proportion of the Site. Previous investigations found the thickness of the buried landfill material was variable, ranging from 0.1 m to 2.5 m thick. In most areas, the landfilled material had been covered with a 0.3 m thick capping layer, except for some areas where landfill materials were identified at the surface (ATA Environmental, 2006). In addition to landfilling, unexpected finds were also encountered during remediation and validation works conducted by 360 Environmental (2009a) within the southern portion of the Student Housing Village. This included redundant sub-surface infrastructure that comprised asbestos containing materials (ACM) and an undetected diesel underground storage tank (UST) with associated hydrocarbon impacted soils. Contamination in this area was remediated during 2008-2009 by excavating and disposing of landfill materials and removing redundant infrastructure with validation testing to confirm the area had been remediated (Aurora Environmental, 2023a).

Additional remediation and validation works conducted in 2009 (360 Environmental, 2009b) targeted the remainder of the Student Housing Village area and adjoining School of Contemporary Arts. It was also noted majority of the residual landfill materials within the area were encapsulated by site buildings, pavements, sealed car parking or a minimum of 0.3 m of fill and grassed areas (360 Environmental, 2009b). Due to erosion at some locations, exposed landfill materials were identified. Remediation work included the removal of 281 tonnes of former landfill material (to a depth of 0.5 m) that had been exposed and then backfilling these areas with imported fill (360 Environmental, 2009b).

A Site Management Plan was prepared by 360 Environmental (2009c) for the north-eastern portion of the Site to guide management and mitigate risks relating to residual contamination. This includes strategies such as regular inspections of surfaces to ensure no exposed landfill material, monitoring of surface water quality, controlled planning for sub-surface excavation work and controls relating to importation of fill material (Aurora Environmental, 2023a).

360 Environmental (2009b) concluded that the area was suitable for on-going use as student accommodation and teaching facilities under the guidance of the Site Management Plan. A Voluntary Auditor's Report (VAR) (ENVIRON Australia, 2009) confirmed that the north-eastern portion of the Site was considered suitable for use as a tertiary campus and student accommodation. It was also noted that residual contamination risks remained in areas outside where remediation had occurred, but was mostly in locations that were sealed beneath buildings, paths or car parks with minimal risk of exposure to humans. The southern portion of the Student Housing Village where landfill material and redundant infrastructure was removed was recommended by the Auditor to be classified as 'Decontaminated' and the remainder of the north-east portion of the Site be classified as 'Remediated for restricted use' with management to be conducted in accordance with the Site Management Plan.

Aurora Environmental has been appointed by DevelopmentWA to investigate potential contamination risks within the Site, focusing on areas where intrusive investigations can be completed without demolition or destruction of existing buildings and infrastructure. The site investigations have been

conducted in accordance DWER guidelines and are being independently reviewed by an accredited Contaminated Sites Auditor (CSA).

The key findings to date from the investigations include:

- Contamination risks at the Site are predominantly related to soils associated with a historic landfill. Impacted soils have elevated concentrations of heavy metals (lead, copper and zinc), polycyclic aromatic hydrocarbons (PAHs), ACM and localised asbestos fines / fibrous asbestos (AF/FA). The detected concentrations of these contaminants of potential concern (COPC) within the soils need to be managed to prevent risks to workers during construction and future occupiers / users of the Site post redevelopment.
- Groundwater assessments indicate that no contamination of groundwater appears to have occurred as a result of activities at the Site. Minor exceedances of freshwater water quality guidelines for dissolved copper and zinc, as well as phosphate and total nitrogen have been recorded. These minor exceedances are not considered to pose a potentially unacceptable risk to ecological receptors as they are consistent with the quality of the groundwater flowing onto the Site. Minor concentrations of total recoverable hydrocarbons (TRH F3) below groundwater assessment criteria were recorded downstream of decommissioned USTs. Based on the assessment completed to date, no specific management measures are required for dewatering effluent with respect to COPC.
- Surface water in the ponds at the Site do not show elevated concentrations of COPC. The data indicates that the historic landfill has not impacted surface water quality in these ponds, and that stormwater inflows are a primary influence on water quality.
- The full extent of contamination at the Site has not yet been determined with residual data gaps in some areas, e.g. beneath existing buildings and infrastructure. The current known extent of contaminated soils at the Site (i.e., soils with concentrations of COPC above residential [HIL-A] land use criteria) is shown on **Figure 2**. Data gaps will be investigated in a staged manner as access to areas become possible, i.e., once existing buildings and infrastructure have been demolished. These investigations will continue to be conducted in accordance with DWER guidelines and reviewed by the CSA.
- Intrusive pre-demolition surveys for each building and structure will be required to provide information on the composition of building materials, including the presence of hazardous materials such as asbestos. The findings of this assessment will inform the scope and management of future works related to either demolition or adaptive reuse of the buildings.

A revised Site Management Plan has been developed by Aurora Environmental (2024a) for the entirety of the Site, reflecting the additional information from the investigations completed by Aurora Environmental recognising that the full extent of historical landfill material has not been fully delineated and further investigations are required. Remedial works have been completed, reinstating appropriate ground levels across areas identified as having insufficient capping depth. On review of the work completed to date, the DWER considers the Site is suitable for its current land use subject to implementation of the revised Site Management Plan.

Due to the presence of landfill materials beneath portions of the Site, the Site is classified under the *Contaminated Sites Act 2003* as 'Remediated for restricted use' and a memorial stating this

classification has been placed on the certificate of title. Prior to redevelopment of the Site, further investigation and assessment is required to inform potential risks from residual contamination during construction and / or under future land uses.

It is also noted in the DWER's Basic Summary of Records for the Site, that in accordance with Department of Health (DoH) advice, if groundwater is being, or is proposed to be, abstracted that the Department recommends analytical testing should be carried out to determine whether the groundwater is suitable for its intended use. The findings from groundwater assessments by Aurora Environmental indicate that no contamination of groundwater appears to have occurred as a result of historical activities at the Site, and that no specific management measures are required for the management of dewatering (Aurora Environmental, 2024c).

The data derived from completed and on-going investigations will be used to develop a strategy to manage risks during the redevelopment of the Site, and will include remediation and validation to ensure the Site is suitable for its intended end use. The implementation of the strategy will be guided by a Remediation Action Plan or similar, and independently reviewed by the CSA, ensuring compliance with the *Contaminated Sites Act 2003*.

3.5 HYDROLOGY

3.5.1 Waterways

The Site is located within the Swan-Coastal Catchment which extends 8,464 km². The Swan-Coastal Catchment includes two major rivers; the Swan-Avon River (72 km in length) and the Canning River (110 km in length). The Swan-Canning River is located approximately 2.4 km south/south-east of the Site.

The Site is located within the Swan River and Tributaries surface water area, proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) (DWER, 2025a; DWER-082), and within the Swan/Canning Estuary sub-catchment area (DWER, 2025b; DWER-080) (**Figure 3**).

There are no natural waterways within the Site, however there is an existing network of local urban drainage consisting of mainly piped drainage as outlined in a Water Management Report (WMR) prepared by Urbaqua (2025). Two connected constructed drainage basins are present within the north-east corner of the Site, which appear to take runoff from surrounding roads and roof runoff from nearby buildings (Urbaqua 2025). Runoff from the northern carparks within the Site appear to discharge to a drainage basin present near the north-west of the Site (Urbaqua 2025). Drainage from the rest of the Site is directed to a Water Corporation compensation basin to the south within Ron Stone Park, which ultimately drains to the Swan River via the Maylands-Inglewood Main Drain (Urbaqua, 2025).

3.5.2 Flood Risk

Floodplain mapping provides guidance about land potentially impacted by major flooding events (DWER, 2024; DWER-020). Floodplain risk mapping identifies areas which may be within the floodway (i.e., at risk of moving floodwaters) and floodplain areas (i.e., at risk of inundation in flood events). The Site is not within any mapped floodway or floodplain areas.

3.5.3 Wetlands

The Site does not intersect any Wetlands of International Importance (Ramsar) (Department of Climate Change, Energy, the Environment and Water [DCCEEW], 2025a). The Commonwealth PMST identified one Nationally Important Wetland (the Swan-Canning River) located approximately 2.3 km south/south-east of the Site (DBCA, 2018; DBCA-045).

No geomorphic wetlands of the Swan Coastal Plain intersect the Site (DBCA, 2025a; DBCA-019). A Multiple Use Wetland (MUW; Unique Feature Identifier (UFI) 8139; name unknown) is located approximately 40 m south-west of the Site, associated with the drainage compensation basin at Ron Stone Park (**Figure 3**).

Two artificially constructed basins containing surface water are present in the north-east corner of the Site, mapped by Urbaqua (2025). Urbaqua (2025) noted that groundwater levels at a nearby bore recorded a maximum groundwater level (MGL) of 20.11 m AHD, which is approximately 0.7 m below the basin water level (recorded by survey) suggesting that the basin receives water from another source, or it may alternatively be lined or perched. Urbaqua (2025) note that these waterbodies appear to receive runoff from surrounding roads and roof runoff from nearby buildings. The southern basin was observed to be dry throughout the summer months (Urbaqua, 2025). Surface water monitoring by Urbaqua (2025) has found:

- pH ranged from neutral to slightly acidic;
- Total Nitrogen (TN) concentrations were significantly lower than those recorded in groundwater from nearby bores;
- Total Phosphorus (TP) concentrations in two samples were lower than those recorded in groundwater from nearby bores, and a third sample was higher than recorded in groundwater; and
- Dissolved oxygen is generally low (below the Australian and New Zealand Guidelines (2018) default guideline value (DGV) ranges in slightly modified ecosystems for lakes, reservoirs and or wetlands.

The southern basin is proposed for retention and will be fed via a linear swale system through the central POS area. The linear swale system and retained basin will be vegetated with nutrient retentive native vegetation to provide in stream biofiltration for stormwater flows and will be designed to avoid creation of stagnant pools. The swale and basin will be maintained as an ephemeral system and are expected to be empty during typical mosquito and nuisance insect breeding seasons.

3.6 HYDROGEOLOGY

3.6.1 Groundwater

The Site is located within the proclaimed Perth Groundwater area (DWER, 2018; DWER-034) and the Perth North Confined Groundwater Subarea (DWER, 2025c; DWER-083).

According to the Perth Groundwater Map (DWER, 2025d), groundwater is present at approximately 9-15 m below ground level (m BGL), translating to 12-13 m AHD. Generally, salinity in groundwater beneath the Site is 250-500 mg/L and has a low iron staining risk.

Groundwater monitoring undertaken by Urbaqua (2025) since August 2023 indicates:

- Groundwater flows in a south-westerly direction beneath the Site;
- The maximum groundwater elevation recorded was 20.111 m AHD in September 2023 in the north-eastern corner of the Site, corresponding to approximately 3 m BGL; and
- The greatest depth to groundwater was recorded at 5.17 m AHD and 4.005 m AHD, centrally within the Site.

Urbaqua (2025) identified three DWER bores with long-term groundwater level data (commencing prior to 1978) for the Superficial Aquifer. The three DWER bore have been used as a reference source to derive an inferred Average Annual Maximum Groundwater Level (AAMGL) and a Maximum Groundwater Level (MGL) for the Site by applying a correction factor. The inferred AAGML and MGL for the Site are shown in **Figure 4**. Groundwater is shallowest in the northern portion of the Site. This may have implications for lot elevations, construction of basements and any drainage features (such as soakwells and stormwater detention areas). The engineering design for the future development of the Site will need to consider the depth to groundwater, and determine if dewatering to temporarily lower groundwater will be required for construction.

Monitoring of groundwater quality from six monitoring bores within the Site also conducted by Urbaqua (2025) indicates:

- pH ranges from neutral to slightly acidic, with most samples at most bores lower than the ANZG (2018) DGVs for slightly modified ecosystems and lowland rivers;
- Dissolved oxygen is generally low, below the ANZG (2018) DGV range; and
- TN and TP concentrations regularly exceed the ANZG (2018) DGVs at all bores.

3.6.2 Groundwater Licences

The DWER Water Register (DWER, 2025e) shows one groundwater abstraction licence (Licence No. 89379) has been granted for the Site. Licence No. 89379 is registered to Edith Cowan University with an allocation of 67,500 kilolitres (kL) with abstraction permitted from the Perth – Superficial Swan aquifer. In addition to the on-site licence, the search identified an additional six licenses within a 1 km radius of the Site, refer to **Table 4** and **Plate 2** below for details.

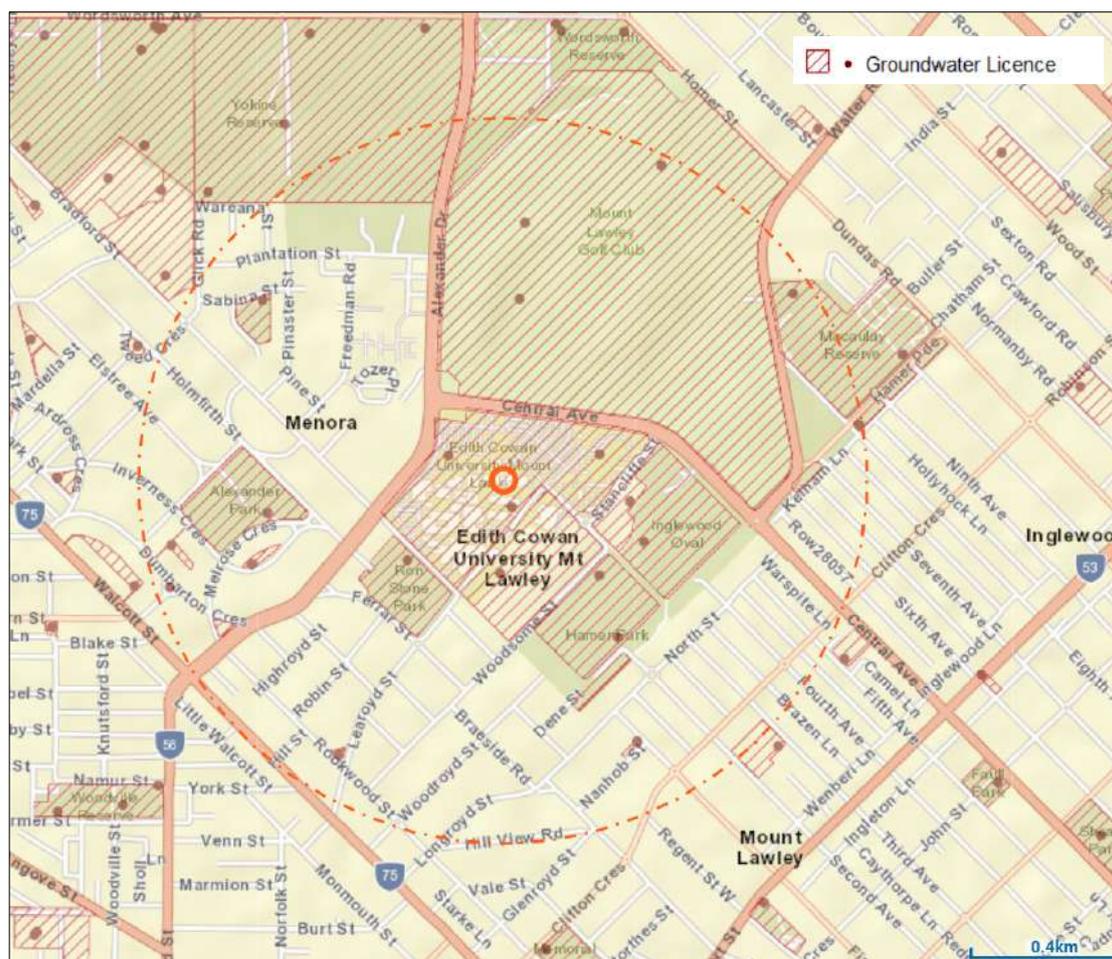
TABLE 4: GROUNDWATER LICENCE INFORMATION

LOT/PLAN	LICENCE NO.	ISSUE & EXPIRY DATE	LICENCE ALLOCATION	PARTY	GROUNDWATER AREA / SUBAREA / AQUIFER
Lot 14684 On Plan 34335 Volume/Folio LR3129/733. Lot 14684 Homer St Inglewood.	65482	21/07/2021-20/07/2031	372,500 kL	Mount Lawley Golf Club	Perth / City of Stirling / Perth-Superficial Swan
Reserve 26132 Swan Location	152626	29/11/2023-28/11/2033	8,650 kL	Inglewood Bowling & Sports Club Inc	

LOT/PLAN	LICENCE NO.	ISSUE & EXPIRY DATE	LICENCE ALLOCATION	PARTY	GROUNDWATER AREA / SUBAREA / AQUIFER
7366 on Plan 168265. Crown Reserve 26132 Stancliffe Street Mount Lawley.					
Various	155338	11/10/2021-10/10/2031	756,750 kL	Department of Education	
Crown Reserve 31062. Lot 8671 Light St Dianella.	156715	27/06/2024-26/06/2034	2,326,350 kL	City of Stirling	
Various	161084	7/05/2024-30/06/2028	1,323,180 kL	City of Bayswater	

Licence information sourced from DWER (2025e)

PLATE 2. GROUNDWATER LICENCES LOCATED WITHIN PROXIMITY TO THE SITE



(Source: DWER, 2025e)

3.6.3 Public Drinking Water Source Areas

Public drinking water source areas (PDWSAs) are surface water catchments and groundwater resources that provide drinking water to cities, towns and communities throughout WA. They are declared and protected under the *Metropolitan Water Supply, Sewerage, and Drainage Act 1909* or the *Country Areas Water Supply Act 1947* (WAPC, 2021b).

The Site is not located within a PDWSA (DWER, 2025f; DWER-033). The closest PDWSA is approximately 4.5 km north-west of the Site (Priority 3 PDWSA; Perth Coastal and Gwelup Underground Water Pollution Control Area).

The Site does not intersect any wellhead protection zones (WHPZ), the closest being 1.3 km north-west of the Site (Bore / Borefield) (Water Corporation, 2025a; WCORP-244).

3.6.4 Water Management Report

The Urbaqua (2025) WMR was prepared to support the PSP and addresses the requirements of a District Water Management Report (District WMR) in full and partially addresses the requirements of a Local Water Management Report (Local WMR). The principles and strategies contained within the WMR will be implemented as part of detailed land use planning and development requirements and

are consistent with the framework and requirements in *Draft State Planning Policy 2.9 Planning for Water* (WAPC, 2021a) and the *Draft Planning for Water Guidelines* (WAPC, 2021b).

3.7 VEGETATION AND FLORA

3.7.1 Regional Context

The Site is located in the Swan Coastal Plain region (SWA), one of 89 bioregions recognised under the Interim Biogeographic Regionalisation for Australia (IBRA). There are two sub-regions in the SWA, namely Dandaragan Plateau (SWA1) and Perth (SWA2). The Site is located at the transition of SW01 and SW02 sub-regions. SWA1 sub-region is characterised by Banksia low woodland, Jarrah - Marri woodland, Marri woodland, and by scrub-heaths on laterite pavement and on gravelly sandplains (Mitchell et al., 2002). SWA2 is dominated by Banksia or Tuart on sandy soils, *Casuarina obesa* on outwash plains, and paperbark in swampy areas. In the east, the plain rises to duricrusted Mesozoic sediments dominated by Jarrah woodland (Mitchell et al., 2002).

Broadscale (1:3,000,000) pre-European vegetation mapping of WA, completed by Beard et al. (2013) and published by DPIRD (2019; DPIRD-006) confirms that two Vegetation Associations (VAs) are mapped across the Site:

- Jarrah, Marri and Wandoo *Eucalyptus marginata*, *Corymbia calophylla*, *E. wandoo*. (VA 3); and
- Jarrah, Banksia or Casuarina *E. marginata*, *Banksia* spp., *Allocasuarina* spp. (VA 7).

The national objectives and targets for biodiversity conservation in Australia have been set to prevent clearance of VAs with less than 30% of their pre-European extent, below which species loss appears to accelerate exponentially (Commonwealth of Australia, 2001). Given that the Site is located within the constrained metropolitan region on the Swan Coastal Plain, the retention objective of 10% applies (Environmental Protection Authority [EPA], 2016).

Table 5 summarises the extent of VA 3 and VA 7 at the State-wide, IBRA region and sub-region scales. No pre-European vegetation extents at the local government authority (LGA) scale (City of Stirling) for VA 3 and VA 7 were available. The absence of VA 3 and VA 7 from large parts of the City of Stirling is due to the area's location on the Swan Coastal Plain and inner sandy plains, rather than the more coastal Quindalup dune systems where VA 3 occurred and the inner sandy plains and laterite systems where VA 7 occurred.

TABLE 5: PRE-EUROPEAN VEGETATION REPRESENTATION

VA	SCALE	PRE-EUROPEAN EXTENT	CURRENT EXTENT	CURRENT EXTENT IN DBCA RESERVES
3	State-wide (WA)	2,661,405 ha	1,803,437 ha (67.76%)	55.23%
	IBRA Bioregion (SWA)	17,365 ha	3,151 ha (18.14%)	2.11%
	IBRA Sub-region (SWA02)	17,365 ha	2,789 ha (16.65%)	2.18%
	LGA (City of Stirling)	NA	NA	NA
7	State-wide (WA)	179,725 ha	22,885 ha (12.73%)	0.68%
	IBRA Bioregion (SWA)	56.14 ha	11.93 ha (21.26%)	Nil

VA	SCALE	PRE-EUROPEAN EXTENT	CURRENT EXTENT	CURRENT EXTENT IN DBCA RESERVES
	IBRA Sub-region (SWA01)	56.14 ha	11.93 ha (21.26%)	Nil
	LGA (City of Stirling)	NA	NA	NA

The current extents of VA 3 and VA 7 are higher than 10% for pre-European extent at a State-wide, IBRA region and sub-region scales.

Regional vegetation has also been mapped by Heddle et al. (1980) with updates from Webb et al. (2016) based on major geomorphic units on the Swan Coastal Plain. The Heddle et al. (1980) and Webb et al. (2016) spatial data maps two vegetation complexes, the Bassendean Complex – Central and South and Karrakatta Complex – Central and South, within the Site:

- Bassendean Complex – Central and South: Described as ‘*Eucalyptus marginata* (Jarrah) - *Allocasuarina fraseriana* (Sheoak) - Banksia species to low woodland of Melaleuca species, and sedgeland on the moister sites. This area includes the transition of *Eucalyptus marginata* (Jarrah) to *Eucalyptus todtiana* (Pricklybark) in the vicinity of Perth’; and
- Karrakatta Complex – Central and South: Described as ‘Predominantly open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri) and woodland of *Eucalyptus marginata* (Jarrah) - Banksia species. *Agonis flexuosa* (Peppermint) is co-dominant south of the Capel River.’

The vegetation complexes mapped by Heddle et al. (1980) have been assessed against presumed pre-European extents within the Swan Coastal Plain (**Table 6**) (Government of Western Australia [GoWA], 2025a). Both vegetation complexes have greater than 10% of their pre-European extent remaining on the Swan Coastal Plain and less than 10% of their pre-European extent at the LGA (City of Stirling) scale.

TABLE 6: EXTENT OF VEGETATION COMPLEXES RELEVANT TO THE SITE

VEGETATION COMPLEX	SCALE	PRE-EUROPEAN EXTENT	CURRENT EXTENT
Bassendean Complex – Central and South	IBRA Bioregion: Swan Coastal Plain	87,476 ha	23,509 ha (26.87 %)
	LGA: City of Stirling	1,268 ha	45.98 ha (3.63 %)
Karrakatta Complex – Central and South	IBRA Bioregion: Swan Coastal Plain	53,081 ha	12,467 ha (23.49 %)
	LGA: City of Stirling	5,458 ha	210.28 ha (3.85 %)

The Site does not intersect any mapped native vegetation (DWER, 2025g; DWER-141). The closest occurrences of mapped native vegetation are within the Mount Lawley Golf Course, located north of the Site.

Historical aerial imagery (Landgate, 2025a) shows a large portion of the Site as densely vegetated with what has been inferred to be pine trees during 1942, with the north-eastern portion of the Site predominantly clear of vegetation. Large scale clearing of the Site occurred between 1942 and 1961 with the 1961 aerial photograph showing the Site as predominantly devoid of vegetation. The 1970 aerial photograph shows a narrow linear patch of trees along the south-eastern boundary of the Site, retention of intermittent trees east of the Site surrounding the two man-made water basins and intermittent trees located north-west of the Site.

Based on review of historical aerial imagery and the extent of the canopy of potential native trees, in conjunction with a review of all vegetation across the Site at the September 2025 inspection it has been determined that the Site comprises approximately 0.03 ha native vegetation (estimated canopy area; **Figure 5**) being two *Eucalyptus rudis* trees (Tree IDs 1188 and 1191).

3.7.2 Significant Vegetation Communities

Database results from the Commonwealth PMST (DCCEEW, 2025a; **Appendix 6**) and the DBCA restricted dataset for significant ecological communities (DBCA, 2024a; DBCA-038) (2 km radius) identified three significant vegetation communities listed under the EPBC Act, the WA *Biodiversity Conservation Act 2016* (BC Act) and / or listed by DBCA:

- Banksia Woodlands of the Swan Coastal Plain ecological community (EPBC Act listed Endangered Threatened Ecological Community (TEC) and DBCA listed Priority Ecological Community (PEC) Priority 3);
- *Empodisma* peatlands of southwestern Australia (EPBC Act listed Endangered). The *Empodisma* peatlands are closely associated with the presence of peat-forming species such as *Empodisma gracillimum* and DBCA listed Priority 1 PEC '*Reedia spathacea - Empodisma gracillimum – Sporadanthus rivularis* dominated floodplains and paluslopes of the Blackwood Plateau'; and
- Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community) (EPBC Act listed Critically Endangered TEC and DBCA listed Priority 3 PEC).

The locations of nearest TECs/PECs (buffered extents) in relation to the Site are presented in **Figure 5**. Although the north-west portion of the Site intersects the buffered extent of TECs, the Site does not support TECs/PECs due the Site being historically cleared and the absence of areas of intact native vegetation.

3.7.3 Significant Flora Species

The DBCA restricted dataset for threatened and priority flora (DBCA, 2025b; DBCA-036) did not identify any conservation significant flora species within 2 km of the Site. A search of the Commonwealth PMST identified the following EPBC Act listed flora which may occur or are likely to occur within 2 km of the Site (DCCEEW, 2025a), that are protected under the EPBC Act and / or the BC Act, are:

May occur:

- Selena's Synaphea (*Synaphea sp.* Fairbridge Farm (D. Papenfus 696)'; EPBC Act and BC Act listed Critically Endangered;
- Star Sun-orchid (*Thelymitra stellata*); EPBC Act and BC Act listed Endangered;

- Keighery's Macarthuria (*Eleocharis keigheryi*); EPBC Act and BC Act listed Vulnerable;
- King Spider-orchid (*Caldenia huegelii*); EPBC Act listed Endangered and BC Act listed Critically Endangered;
- Summer Honeypot (*Banksia mimica*); EPBC Act listed Endangered and BC Act listed Vulnerable;
- Keighery's Eleocharis (*Eleocharis keigheryi*); EPBC Act and BC Act listed Vulnerable;
- Dwarf Green Kangaroo (*Anigozanthos viridis* subsp. *Terraspectans*); EPBC Act and BC Act listed Vulnerable; and
- Wavy-leaved Smokebush (*Conospermum undulatum*); EPBC Act and BC Act listed Vulnerable.

Likely to occur:

- Glossy-leafed Hammer Orchid (*Drakaea elastica*); EPBC Act listed Endangered and BC Act listed Critically Endangered;
- Purdie's Donkey-orchid (*Diuris purdiei*); EPBC Act and BC Act listed Endangered;
- Slender Andersonia (*Andersonia gracilis*); EPBC Act listed Endangered and BC Act listed Vulnerable;
- Dwarf Hammer-orchid (*Drakaea micrantha*); EPBC Act listed Vulnerable and BC Act listed Endangered;
- Dwarf Bee-orchid (*Diuris micrantha*); EPBC Act listed Vulnerable BC Act listed Endangered; and
- Tall Donkey Orchid (*Diuris drummondii*); EPBC Act listed Vulnerable and BC Act listed Endangered.

The September 2025 site assessment confirmed that the has a long history of disturbances with significant clearing and no longer contains areas of intact native vegetation that provide habitat for the support and maintenance of the above flora species.

3.7.4 Dieback

A review of the Dieback Public Map (Project Dieback, 2025) did not identify any disease points or dieback occurrences within and in the vicinity of the Site.

3.8 CONSERVATION AREAS

3.8.1 Bush Forever

State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region adopted in 2010 recognises the protection and management of significant bushland areas such as Bush Forever in the planning process, as well as integrating environmental, social and economic considerations. Bush Forever identifies regionally significant bushland to be retained and protected wherever possible. There are no Bush Forever sites within a 2 km radius of the Site. The Site does not intersect any Bush Forever areas (DPLH, 2025a; DPLH-022). The closest Bush Forever site is approximately 2.1 km south-east of the Site (Bush Forever site no. 314; Swan River Foreshore, Mount Lawley / Maylands).

3.8.2 Reserves

The MRS provides a statutory mechanism to assist strategic planning, the coordination of major infrastructure and sets aside areas for regional open space and other community purposes. The Site is currently zoned 'Public Purposes – University' under the MRS.

No DBCA Legislated Lands and Water conservation reserves (DBCA, 2025c; DBCA-011) intersect the Site; the closest DBCA managed reserve is approximately 2.3 km south/south-east of the Site (name unknown; Reserve no. 48325; related to the Swan-Canning River for the purpose of Landscape Protection).

A review of the Collaborative Australian Protected Areas Database (CAPAD) (DCCEEW, 2025b) identified the Swan-Canning River is a nationally protected area, located approximately 2.3 km south/south-east of the Site.

3.8.3 Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) are areas declared by the Minister for Environment under section 51B of the *Environmental Protection Act 1986* (EP Act) and are typically associated with environmental values such as important wetlands, TECs, threatened flora and Bush Forever sites.

There are no mapped ESAs within 2 km of the Site.

3.8.4 Ecological Links

Regional ecological linkages broadly represent a link between patches of remnant vegetation judged to be of regional significance in the Perth MRS area. The Site does not intersect any regional ecological linkages however one linkage is located approximately 90 m east of the Site (Link ID 23) (**Figure 6**). Link ID 23, within a 2 km radius of the Site, only includes intermittent patches of mapped native vegetation (DWER, 2025g; DWER-141). Due to the historical disturbed nature of the Site and lack of environmental values it is not considered the Site provides any significant ecological linkage functionality.

3.9 BUSH FIRE RISK

The Bush Fire Prone Areas 2024 dataset (Department of Fire and Emergency Services [DFES], 2024; OBRM-021) identifies bush fire prone areas of WA, as designated by the Fire and Emergency Services Commissioner.

The Site is not mapped within a bush fire prone area.

3.10 TERRESTRIAL FAUNA

The Site does not include any areas of intact naturally occurring native fauna habitat. The limited habitat within the Site comprises mixed plantings of native and introduced plant species. The artificial water bodies present may provide some refuge for water birds and other fauna. One artificial water body will be retained following development of the Site, thereby maintain this habitat value.

Due to the limited extent of habitat available and the degraded condition of the Site, it is expected that the Site has a reduced diversity and abundance of fauna species and supporting fauna habitat. The available habitat would most likely be utilised by mobile fauna species that are mostly common (i.e., generally not conservation significant) that can persist in degraded habitats within an urban environment.

3.10.1 Significant Fauna Species

According to the DBCA TPFA dataset significant fauna records within 2 km of the Site comprised:

- 68 bird species;
- One invertebrates; and
- Five reptiles.

Of the above classes of fauna, the following conservation status has been nominated:

- 55 species listed Endangered under the EPBC Act and BC Act;
- Eight species listed Vulnerable under the EPBC Act and BC Act;
- Four species listed Specially Protected – Migratory;
- Six species listed as DBCA Priority 3; and
- One species listed as DBCA Priority 4.

Figure 7 shows the location of conservation significant fauna species records from the TPFA dataset.

The Site offers very limited and degraded habitat due to past clearing. It is unlikely that many of the conservation significant fauna species identified from the DBCA TPFA dataset (excluding black cockatoos – refer to Section 3.10.2) would occur within the Site due to an absence of intact habitat or insufficient habitat size. Some species may occasionally visit the Site (seeking refuge or foraging), or as over-fly species. However, it is unlikely these species would be solely reliant on the habitat within the Site for survival.

3.10.2 Black Cockatoo Habitat

The Site is located within the modelled distribution range for Carnaby's Cockatoo (non-breeding range) and Forest Red-tailed Black Cockatoo (likely to occur). The Site is located outside of the modelled distribution for Baudin's Cockatoo.

Paperbark Technologies (2022) recorded 1,288 trees across the Site. A follow-up assessment by Paperbark Technologies completed in 2025 found 45 trees had been removed since the 2022 inventory, leaving 1,243 trees remaining.

The Site inspection undertaken by Aurora Environmental 12 September 2025 assessed which of the trees recorded across the Site were considered potentially suitable habitat for black cockatoo foraging, breeding and roosting with results provided in the following sections.

Foraging Habitat

Carnaby's Cockatoo are known to forage on a wide range of myrtaceous and proteaceous species, as well as feed on the seeds of introduced species including *Pinus* spp., *Erodium* spp., wild radish, canola, almonds, macadamia and pecan nuts; insects and insect larvae; occasionally apples and persimmons and liquidambar (Department of Agriculture, Water and the Environment [DAWE], 2022).

The diet of Forest Red-tailed Black Cockatoo consists primarily of Jarrah (*Eucalyptus marginata*) fruit, Marri (*Corymbia calophylla*) seeds (which make up approximately 90% of the species diet), as well as Karri (*Eucalyptus diversicolor*), Blackbutt (*Eucalyptus patens*), Sheoak (*Allocasuarina fraseriana*),

Snottygobble (*Personia longifolia*), Hakea species, some introduced eucalypts and the exotic Cape Lilac (*Melia azedarach*) on the Swan Coastal Plain (DAWE, 2022).

The Site does not include any areas of intact naturally occurring native vegetation communities due to historic clearing activities. Almost all of the vegetation within the Site has been planted with locally native species, non-local Australian native species, and exotic species.

The foraging resources for Carnaby's Cockatoo and Forest Red-tailed Black Cockatoo recorded by Paperbark Technologies Arboricultural Consultants (2022) or observed by Aurora Environmental are listed in **Table 7**.

TABLE 7: RECORDED FORAGING PLANT SPECIES

SPECIES NAME	COMMON NAME	STATUS	CARNABY'S COCKATOO	FOREST RED-TAILED BLACK COCKATOO
<i>Acacia saligna</i>	Orange Wattle		Secondary	-
<i>Agonis flexuosa</i>	Peppermint Tree		Secondary	-
<i>Banksia attenuata</i>	Candle Banksia		Primary	-
<i>Banksia grandis</i>	Bull Banksia		Primary	-
<i>Callistemon citrinus</i>	Crimson Bottlebrush	AN	Secondary	-
<i>Callistemon</i> Kings Park Special	Kings Park Special	Cultivar	Secondary	-
<i>Callistemon viminalis</i>	Weeping Bottlebrush	AN	Secondary	-
<i>Callitris preissii</i>	Rottneest Island Pine		Secondary	-
<i>Casuarina cunninghamiana</i>	River Sheoak	AN	Secondary	Primary
<i>Corymbia calophylla</i>	Marri		Primary	Primary
<i>Corymbia calophylla rosea</i>	Pink Flowering Marri	Cultivar	Primary	Primary
<i>Corymbia citriodora</i>	Lemon Scented Gum	AN	Secondary	Secondary
<i>Corymbia ficifolia</i>	Red Flowering Gum		Secondary	-
<i>Corymbia maculata</i>	Spotted Gum		Secondary	-
<i>Eucalyptus caesia</i>	Silver Princess, Gungurru		Secondary	Secondary
<i>Eucalyptus camaldulensis</i> var. <i>obtusa</i>	Northern River Red Gum		-	Secondary
<i>Eucalyptus camaldulensis</i> var. <i>camaldulensis</i>	River Red Gum	AN	-	Secondary
<i>Eucalyptus erythrocorys</i>	Red Cap Gum		Secondary	Secondary

SPECIES NAME	COMMON NAME	STATUS	CARNABY'S COCKATOO	FOREST RED-TAILED BLACK COCKATOO
<i>Eucalyptus gomphocephala</i>	Tuart		Secondary	Secondary
<i>Eucalyptus grandis</i>	Flooded Gum		-	Secondary
<i>Eucalyptus leucoxydon</i>	Yellow Gum	AN	Secondary	-
<i>Eucalyptus leucoxydon rosea</i>	Pink Flowering Gum	Cultivar	Secondary	-
<i>Eucalyptus robusta</i>	Swamp Mahogany		Secondary	-
<i>Ficus hillii</i>	Hill's Fig	AN	Secondary	-
<i>Ficus macrophylla</i>	Moreton Bay Fig	AN	Secondary	-
<i>Ficus rubiginosa</i>	Port Jackson Fig	AN	Secondary	-
<i>Grevillea</i> spp.	Grevillea		Primary	-
<i>Hakea</i> spp.	Hakea		Primary	-
<i>Harpephyllum caffrum</i>	Kaffir Plum	E	-	Secondary
<i>Hibiscus tiliaceus</i>	Ruby leaved Cottonwood	E	Secondary	-
<i>Jacaranda mimosifolia</i>	Jacaranda	E	Secondary	-
<i>Liquidambar formosa</i>	Liquidambar	E	Primary	Secondary
<i>Liquidambar styraciflua</i>	Liquidambar	E	Primary	Secondary
<i>Pinus radiata</i>	Monterey Pine	E	Primary	Secondary
<i>Prunus dulcis</i>	Almond	E	Secondary	-
<i>Schefflera actinophylla</i>	Umbrella Tree	E	Secondary	-
<i>Tipuana tipu</i>	Pride of Bolivia	E	Secondary	-
<i>Xanthorrhoea preissii</i>	Balga		Secondary	

Codes:

Blank = WA Native

Primary = Primary foraging resource

AN = Australian Native (but not naturally occurring in WA)

Secondary = Secondary foraging resource

E = Exotic

The Site contains very limited primary food sources (e.g. Marri) for both species of black cockatoo. Many of the plant species within the Site are considered secondary food sources that may be used on occasions. Furthermore, some areas mapped as foraging resources are unlikely to be used, or rarely used given the very low height and location of these plants, such as low hedges of *Callistemon* spp. within car parks.

Native proteaceous species (*Grevillea* spp. *Banksia* spp.) as well as *Callistemon* spp., Marri, Pine, Jacaranda and Liquidambar are present within the Site, providing foraging habitat for Carnaby's Cockatoo. Numerous small proteaceous and *Callistemon* plants were also recorded throughout the Site that provide additional foraging habitat. In total, the Site provides 2.27 ha low value foraging

habitat for Carnaby's Cockatoo. This comprises approximately 0.25 ha of primary and 2.02 ha of secondary foraging resource (**Figure 8a**).

Less foraging habitat for Forest Red-tailed Black Cockatoo is present within the Site, with plant species such as Marri and *Casuarina* spp. forming the main portion of primary foraging plant species. In total, the Site provides 0.82 ha of low value foraging for Forest Red-tailed Black Cockatoos. This comprises 0.13 ha of primary and 0.69 ha of secondary foraging resource (**Figure 8b**). Three Forest Red-tailed Black Cockatoos were observed during the site inspection chasing another species of bird and then stopping to forage in a Kaffir Plum tree (Tree no. 74); **Figure 8b**).

The only other foraging evidence noted were some very old, chewed Marri nuts that were recorded on the grass and road along Bradford Street near the intersection with Alexander Drive indicating previous, but not recent, foraging by black cockatoos). No other foraging evidence was recorded at the Site.

When considering the value or quality of foraging habitat, a recognised scoring method developed by Bamford Consulting Ecologists² assesses three core elements to determine habitat value, these being:

- Site condition – presence and type of foraging plants, condition, foliage cover, etc;
- Site context – proportion of foraging habitat that the Site represents within approximately 15 km; and
- Site occupation – evidence of use by black cockatoos.

Using the above scoring method, for both Carnaby's Cockatoo and Forest Red-tailed Black Cockatoo the following scores have been applied:

- Site condition = 2 out of 6 (i.e. scattered specimens of known food plants with a projected foliage cover of < 10%);
- Site context = 0 out of 3 (the proportion of available foraging habitat within the Site is very small (i.e., < 1% of remaining native vegetation within 15 km of the Site, noting that this calculation excludes non-native vegetation); and
- Occupation – 1 out of 1 (foraging Forest Red-tailed Black Cockatoo was observed during the site inspection and chewed Marri nuts were recorded).

A total score of 3 out of 10 would apply to the habitat within the Site, indicating the available foraging habitat for both black cockatoo species is low value.

Breeding Habitat

On average, Carnaby's Cockatoo are known to nest in hollows with an entrance diameter greater than 20 - 30 cm (Johnstone and Storr, 1998; Groom, 2011) while the Forest Red-tailed Black Cockatoo is known to nest in hollows with an entrance of greater than 12 cm (Johnstone and Storr, 1998). Review of historical aerial imagery determined the Site was predominantly cleared of vegetation circa 1942, and trees that were planted at the Site appear to have persisted since the 1970s. Black cockatoos typically nest in trees older than 200 years (Department of Sustainability, the Environment, Water,

² <https://ecologists.bamford.id.au/ecological-consulting/black-cockatoos>

Population and Communities [DSEWPac], 2012) and therefore the trees present on Site are unlikely to have hollows that support black cockatoo nesting.

Based on typical breeding patterns, the Site is not within an area that is recognised as a breeding location for black cockatoos. According to the DBCA TPFA dataset potential breeding hollows occur within 5 km of the Site. These records are identified as two natural nesting hollows within Kings Park and one further west within Bold Park. The data identifies these as potential breeding hollows but does not suggest that these have been used for nesting.

For the purposes of this assessment, potential black cockatoo breeding habitat has been defined as any trees with a DBH greater than 45 cm³, and be of a suitable tree species that may form hollows (i.e. native and introduced *Eucalyptus/Corymbia* spp.).

A total of 72 individual trees were identified from the desktop review as meeting this criteria (**Figure 9**). All 72 trees were inspected to confirm the presence of hollows, and to assess if any identified hollows exhibited signs of use by black cockatoos, or may be suitable for nesting.

Five trees were found to contain hollows (**Figure 9**), with four of these beginning to show signs of developing larger hollows (**Table 8**). None of the hollows recorded were deemed suitable for use by black cockatoos as they were too small to accommodate black cockatoo nesting, or too close to ground level. The small number of hollows recorded was not unexpected given the vast majority of trees on the Site are less than 60 years old and therefore generally not mature enough to develop suitable nesting hollows.

TABLE 8: TREES DEVELOPING HOLLOWES

TREE NO.	TREE SPECIES	COMMENT
333	Flooded Gum (<i>Eucalyptus rudis</i>)	Beehive in small hollow. Termites
334	Flooded Gum (<i>Eucalyptus rudis</i>)	Two large hollows low to ground, one hollow contained duck eggs.
525	Flooded Gum (<i>Eucalyptus rudis</i>)	Small hollows present. Large hollows likely in future.
526	Flooded Gum (<i>Eucalyptus rudis</i>)	Small hollows present. Large hollows likely in future.
1116	Northern River Red Gum (<i>Eucalyptus camaldulensis</i> var. <i>obtusa</i>)	Small hollows present. Large hollows developing.

Night Roosting Habitat

Carnaby's Cockatoo roost in tall, large trees over 8 m in height, typically within close proximity to a water source and within 6 km of potential feeding habitat. Generally, any tall trees may be suitable roosting, but particularly Flat-Topped Yate, Salmon Gum, Wandoo, Marri, Karri, Blackbutt, Tuart, introduced Eucalypts and introduced Pines (DAWE, 2022). Any tall trees may provide suitable roosting

³ A DBH of > 45 cm was conservatively adopted to account for potential margins of error that may occur during measurement and compensating for tree growth since the original arborist assessment.

for Forest Red-tailed Black Cockatoo, but particularly tall Jarrah, Marri, Blackbutt, Tuart and introduced Eucalypt trees or large trees on the edges of forests (DAWE, 2022).

A study completed by Le Roux (2017) assessed several known roost sites in the Perth metropolitan region and found the average tree height used at the roost sites was 26.6 m +/- 0.7 m in height, with an average DBH of 0.98 m +/- 0.1 m. Generally, night roosts have a nearby drinking water source e.g., natural waterways, lakes, farm dams or stock water troughs (DAWE, 2022). A Carnaby’s Cockatoo roost study on the Swan Coastal Plain noted the species utilised a wide range of native and non-native trees as roosts and found that roost trees were typically tall (average of > 25 m) and had thick trunks (average DBH of 1 m) (Le Roux, 2017).

According to the DBCA TPFA dataset the closest recorded roosting activity to the Site is 240 m, with additional roosting activity recorded 1.1 km, 2 km and 4.3 km from the Site. According to this dataset, the Site has not been previously recorded as a known black cockatoo roosting site.

For the purposes of this assessment, any suitable tree species (native or introduced) with a DBH greater than 45 cm and a tree height of at least 8 m or taller was considered potential roosting habitat. The review identified 176 individual trees (**Figure 10**) that meet this criteria for potential night roosting habitat, including 29 trees that are more than 20 m in height.

The Site assessment did not identify any evidence of black cockatoo roosting occurring within the Site. Bird scats were present on and around the trunks of *Ficus hillii* trees (Tree no. 5, 6 and 10) in the south-western carpark (**Figure 10**). However, there was no evidence that these scats were from black cockatoos. It is noted that Bamford Consulting Ecologists (2023) has not identified *Ficus* sp. as a potential roosting tree but does include the genus as a potential foraging plant species for Carnaby’s Cockatoo.

Four areas (comprising 0.79 ha in total) were considered as being the most suitable potential roosting habitat (though no evidence of actual black cockatoo roosting) within the Site (**Figure 10**). These areas were mapped because they comprise a cluster of trees with a height greater than 20 m (which is closer to the average height preferred by black cockatoos on the Swan Coastal Plain for roosting) and have an interconnected canopy.

Table 9 summarises the extent of potentially suitable black cockatoo foraging, breeding and roosting habitat within the Site.

TABLE 9: SUMMARY OF BLACK COCKATOO POTENTIALLY SUITABLE HABITAT WITHIN THE SITE

BLACK COCKATOO HABITAT TYPE	CARNABY’S COCKATOO	FOREST RED-TAILED BLACK COCKATOO
Foraging habitat	2.27 ha low quality foraging habitat.	0.82 ha low quality foraging habitat.
Potential breeding	A total of 72 individual trees that meet the criteria for potential breeding habitat were identified at the Site inspection. No hollows suitable for black cockatoo breeding were recorded. Hollows large enough for nesting black cockatoos are usually only found in trees that are more than 200 years old (DSEWPac, 2012). The Site has historically been extensively cleared and the majority of the planted trees are less than 60 years of age. The Site is not within an area that is recognised as a typical breeding location for black cockatoos which	

BLACK COCKATOO HABITAT TYPE	CARNABY'S COCKATOO	FOREST RED-TAILED BLACK COCKATOO
	is consistent with the records obtained from the DBCA. It is therefore considered the Site does not contain any suitable breeding habitat.	
Potential roosting	The Site does not intersect a known black cockatoo night roosting site. A total of 0.79 ha across four patches within the Site considered potential roosting habitat due to tree height and connectedness of the canopy, although no evidence of actual black cockatoo roosting was found.	

3.11 HERITAGE

3.11.1 Aboriginal Cultural Heritage

A review of the DPLH ACHIS (GoWA, 2025b) indicates the Site does not intersect any registered, lodged or historic Aboriginal cultural heritage (ACH) sites. One registered ACH site (Place ID 3738: 'Dog Swamp' registered as a Mythological, Quarry, Camp and Water Source) is mapped approximately 50 m west of the Site, refer to **Figure 11**.

Numerous archaeological and ethnographic surveys have been undertaken across the Site, refer to **Appendix 7** for further details.

3.11.2 Other Heritage

No World Heritage Properties occur within the Site (DCCEEW, 2025a). The Commonwealth PMST identified the buffer of 33 Commonwealth Lands within 2 km of the Site and the buffer of one Commonwealth Heritage Place within 2 km of the Site (Inglewood Post Office) (DCCEEW, 2025a).

The Site does not intersect any State heritage places (DPLH, 2025b; DPLH-006). Three State heritage places are located approximately 1 km south/south-east of the Site:

- Mount Lawley Tennis Club; Place no. 4252; Rockwood Street, Mount Lawley; located 980 m south of the Site;
- Annesley; Place no. 8035; 49-51 Lawley Crescent, Mount Lawley; located 1 km south of the Site; and
- Inglewood Police Station; Place no. 6655; 867 Beaufort Street, Inglewood; located 1.1 km south-east of the Site.

The Site does not intersect any Municipal heritage places (DPLH, 2025c; DPLH-008) but is surrounded by heritage sites. Municipal Heritage Place No. 9415 (Bushland Conservation (49 Homer Street, Inglewood) is located north of the Site across from Central Avenue. **Figure 11** illustrates heritage values relevant to the Site.

InHerit (GoWA, 2025c) contains information about cultural heritage places listed in the State Register of Heritage Places, local government inventories, the Australian Government's heritage list and other non-government lists and surveys. No sites registered on InHerit intersect the Site.

3.12 TRANSPORT NOISE

The Site is located adjacent to Alexander Drive which is identified as an 'Other significant freight/traffic route' under *State Planning Policy 5.4 Road and Rail Noise* (SPP 5.4; WAPC, 2019). An acoustic assessment and noise management plan prepared by Herring Storer Acoustics (2025) indicates that vehicles travelling along Alexander Drive in the future (2044) would exceed SPP 5.4 "day-time limits" for the northern most portion of the Site. Any residential or mixed-use development that falls within noise affected areas would require "Quiet House" design package and any commercial development would require investigation dependent on specific use in line with AS2017:2016 (Herring Storer Acoustics, 2025).

4 ENVIRONMENTAL ASPECTS AND IMPACTS

4.1 IDENTIFICATION OF RELEVANT ENVIRONMENTAL AND HERITAGE ASPECTS

Amendment to rezone the Site (MRS Amendment 1443) was referred to the EPA in July 2025 with a decision made by the EPA Chair 18 August 2025 to not formally assess the scheme amendment. The EPA's review of MRS Amendment 1443 identified flora and vegetation, terrestrial fauna and terrestrial environmental quality as preliminary environmental factors relevant to the scheme amendment.

The preparation of the final Master Plan (**Appendix 1**) and proposed PSP layout (**Appendix 2**) have considered the preliminary environmental factors identified by the EPA, in conjunction with various technical inputs and supporting documentation. The PSP includes wide road reserves, vegetated streetscapes, substantial open space to support tree retention, and retention and maintenance of the southern basin as an ephemeral water feature. The Hassell (2025) Landscape Master Plan, a technical document to the PSP, proposes landscaping with street trees and other treatments that incorporate new plantings, including species selection that will enhance local biodiversity values.

Using the information collated in Section 3.0 of this report it has been determined that flora and vegetation, terrestrial fauna, terrestrial environmental quality, inland waters and social surroundings are relevant considerations to future development of the Site. The key considerations and recommendations relevant to each of the environmental factors are discussed in Sections 4.2 to 4.6.

4.2 FLORA AND VEGETATION

4.2.1 Key Considerations

Based on the outcomes of the assessment the following key considerations have been identified for flora and vegetation:

- The Site contains no areas of intact native vegetation communities. Two small areas represented by two *Eucalyptus rudis* trees (Tree IDs 1188 and 1191) that have a combined canopy area of 0.03 ha and are in Completely Degraded condition, were identified as native vegetation by reviewing historical aerial imagery.
- Due to historical clearing no TECs or PECs, or conservation significant flora, occur within the Site.
- Future development of the Site may result in the minor loss (up to approximately 0.03 ha) of native vegetation in 'Completely Degraded' condition.
- Future development of the Site will result in the removal of some existing vegetation (planted native and non-native species) including mature trees.

4.2.2 Recommendations

The following recommendations are made in relation to vegetation and flora:

- Obtain clearing approval for the removal of 0.03 ha native vegetation where an exemption is not applicable. Clearing approval may be obtained via a clearing referral for low impact clearing, or via a clearing permit granted under Part V of the EP Act from DWER.
- Development of the Site shall be consistent with the PSP which includes provision of wide road reserves and open space that will support tree retention, and provide opportunities for new

plantings with street trees and other treatments in line with the Hassell (2025) Landscape Master Plan which is a technical document to the PSP. New plantings and landscaping will incorporate native plant species suited to the local environment which will enhance biodiversity.

- Landscaping within future open space and road reserves to incorporate native species.
- Prepare and implement a Construction Environmental Management Plan (CEMP) outlining strategies for the management of vegetation, weeds and dust during clearing.

4.3 TERRESTRIAL FAUNA

4.3.1 Key Considerations

Based on the outcomes of the assessment the following key considerations have been identified for terrestrial fauna:

- The Site does not contain any areas of intact native fauna habitat. Available fauna habitat is primarily limited to mixed plantings of native and introduced plant species. Two artificially constructed basins may provide some refuge for water birds.
- Due to the limited extent of habitat and degraded condition of the Site, it is expected that a reduced diversity and abundance of fauna species will be present. Only species that are mobile and able to persist in degraded habitats in an urban environment will persist.
- The PSP and guiding Landscape Master Plan have endeavoured to retain large trees that provide habitat value for black cockatoos and other fauna species; however, some clearing within the Site will be necessary for remediation of contamination and to construct the development.
- The Site comprises up to 2.27 ha Carnaby's Cockatoo low quality foraging habitat and 0.82 ha Forest Red-tailed Black Cockatoo low quality foraging habitat.
- The Site comprises 72 trees with a DBH greater than 500 mm. No hollows suitable for black cockatoo breeding were recorded. The 72 trees are not considered suitable black cockatoo nesting trees due to the absence of hollows that can support black cockatoo breeding, and the Site's location being outside of the typical breeding range for black cockatoo.
- The Site does not intersect a known black cockatoo roosting site, and no black cockatoo roosting activity was recorded during the Site inspection. The Site comprises 176 individual trees that meet the potential roosting tree DBH criteria, including 29 trees which were taller than 20 m. The Site inspection identified four patches covering a combined area of 0.79 ha that were identified as potentially suitable areas for roosting.
- Clearing of vegetation during construction has the potential for mortality, injury and/or displacement of fauna.

4.3.2 Recommendations

The following recommendations are made in relation to terrestrial fauna:

- Develop the Site in accordance with the PSP and guiding Landscape Master Plan to retain large trees that provide habitat value for black cockatoos and other fauna species. Clearing of large

trees should be avoided or minimised to the extent required to remediate contamination and for infrastructure servicing.

- Tree retention strategies should continue to be developed in consultation with stakeholders.
- Mitigate clearing within the Site by undertaking planting with native plant species to enhance local biodiversity values, including suitable plant species that provide high value foraging resources for black cockatoos. However, black cockatoo foraging plants should not be planted in areas adjacent to busy roads to discourage foraging in locations where there is a higher risk of vehicle strike. As a guide, foraging plants should be planted within 10 m of busy roads.
- Prepare a CEMP outlining strategies on how impacts to fauna will be managed during construction with the aim of avoiding mortality, injury and/or displacement to fauna.

4.4 INLAND WATERS

4.4.1 Key Considerations

Based on the outcomes of the assessment the following key considerations have been identified for inland waters:

- Surface water and groundwater values of the Site have been investigated and considered in the Urbaqua (2025) WMR. No significant water related constraints to the redevelopment of the Site have been identified in the WMR.
- The maximum groundwater elevation across the Site is shallowest in the northern portion of the Site, where groundwater levels are less than 3 m BGL. This may have implications for lot elevations, construction of basements and any drainage features such as soakwells and stormwater detention areas.
- There are two man-made waterbodies present in the north-east corner of the Site. The existing southern basin is proposed for retention and will be fed via a linear swale system through the central POS area. The swale and basin will be maintained as ephemeral water features and are expected to be empty during typical mosquito and nuisance insect breeding seasons.
- A groundwater licence has been granted to Edith Cowan University, expiring in August 2029. This licence, or a portion of it, may be transferrable to DevelopmentWA to irrigate landscaped areas within future open space.

4.4.2 Recommendations

The following recommendations are made regarding inland waters:

- Implement the water management strategies described in the Urbaqua (2025) WMR as part of future planning and development of the Site.
- Review the engineering design for the future development to determine dewatering requirements during construction and whether a dewatering licence under the RIWI Act is needed.
- Investigate the acquisition or transfer of Edith Cowan University's groundwater license (License No. 89379) for irrigation of landscaping in POS areas and streetscapes.

4.5 TERRESTRIAL ENVIRONMENTAL QUALITY

4.5.1 Key Considerations

Based on the outcomes of the assessment the following key considerations have been identified for terrestrial environmental quality:

- The Site (or portions thereof) has been the subject of a number of investigations to assess the presence and extent of contamination as a result of historical landfill activities.
- Remediation works were conducted within the north-eastern portion of the Site between 2008-2009 and a Site Management Plan was prepared for this portion of the Site to guide management and mitigate risks relating to residual contamination. A VAR (ENVIRON Australia, 2009) confirmed that the north-eastern portion of the Site was considered suitable for use as a tertiary campus and student accommodation. The southern portion of the Student Housing Village (within the north-eastern portion of the Site), where landfill material and redundant infrastructure was removed, was recommended by the Auditor to be classified as 'Decontaminated' and the remainder of the north-east portion of the Site be classified as 'Remediated for restricted use' with management to be conducted in accordance with the Site Management Plan.
- Due to proposed development of the Site and historical contamination issues, DevelopmentWA has appointed Aurora Environmental to investigate potential contamination risks, focusing on areas where intrusive investigations can be completed without demolition or destruction of existing buildings and infrastructure. A revised Site Management Plan has been developed by Aurora Environmental (2024a) for the entirety of the Site, recognising that the full extent of historical landfill material has not been fully delineated and further investigations are required. Remedial works have been completed, reinstating appropriate ground levels across areas identified as having insufficient capping depth. On review of the work completed to date, the DWER considers the Site is suitable for its current land use subject to implementation of the revised Site Management Plan.
- In February 2025 the entirety of the Campus was classified by the DWER as 'Remediated for restricted use' due to the presence of landfill waste beneath portions of the Site. Contaminated sites investigations are well progressed but will remain on-going to ensure risks are thoroughly investigated and managed in accordance with the requirements of the *Contaminated Sites Act 2003*. A CSA has been appointed on a voluntary basis and has reviewed all site investigations to date, and will continue to be involved in future site investigations, to ensure that the assessment works (and any future remediation works) are completed in accordance with the *Contaminated Sites Act 2003*.
- The DWER's Basic Summary of Records for the Site indicates that the DoH advised that if groundwater is proposed to be abstracted, the appropriate analytical testing should be carried out to determine whether the groundwater is fit for purpose. Based on the findings from the groundwater assessments completed to date, there is no indication that groundwater has been contaminated as a result of historical landfill activities at the Site. Therefore, no specific controls are required for the management of dewatering effluent with respect to COPC.

- The Site is mapped within a Class II ASS risk area. The results from groundwater assessments for ASS indicators have indicated limited existing buffering capacity for any potential acidification that may result from potential ASS disturbance. It is unknown whether construction will require excavation below the water table, or if dewatering will be required.
- Site development has the potential to encounter hazardous materials during the demolition or refurbishment of existing buildings and structures.

4.5.2 Recommendations

The following recommendations are made in relation to terrestrial environmental quality:

- Continue the contaminated sites investigations and undertake remedial works (as required) in accordance with the *Contaminated Sites Act 2003* to ensure identified risks are mitigated and the Site is suitable for its proposed end land use(s).
- Review the engineering design for the proposed development to determine the extent of excavation and the assess the potential for disturbing potential ASS and confirm whether dewatering will be required. If excavation is likely to reach depths of more than 3 m below natural soil surface, or if dewatering is required, an ASS investigation in accordance with DER (2015a) guidelines should be undertaken. The results of this assessment will inform whether an ASS and Dewatering Management Plan will be needed, outlining treatment and management with lime to neutralise potential acidity in accordance with DER (2015b) guidelines.
- Conduct intrusive pre-demolition surveys to investigate the presence of hazardous materials within existing buildings and structures to inform management of future demolition or refurbishment works.
- Prepare and implement a CEMP during predevelopment works which includes:
 - how impacts to potential ASS will be managed;
 - how soil contamination and hazardous materials will be managed during demolition and refurbishment of buildings and construction; and
 - how wastes and pollution risks will be managed.

4.6 SOCIAL SURROUNDINGS

4.6.1 Key Considerations

Based on the outcomes of the assessment and site inspection the following key considerations have been identified for social surroundings:

- The Site does not intersect any ACH sites (registered, lodged or historic). One registered ACH site (Place ID 3738) is mapped approximately 50 m west of the Site.
- Vehicles travelling along Alexander Drive in the future (2044) will exceed SPP 5.4 “day-time limits” for the northern most portion of the Site (Herring Storer Acoustics, 2025).

4.6.2 Recommendations

The following recommendations are made in relation to social surroundings:

- Implement the noise mitigation measures recommended in the Herring Storer Acoustics (2025) acoustic assessment and noise management plan.
- Prepare and implement a CEMP to manage dust emissions, noise, vibration and any unexpected finds (i.e., heritage) during construction.

5 ENVIRONMENTAL APPROVALS

5.1 STATE APPROVALS

5.1.1 Part IV *Environmental Protection Act 1986*

5.1.1.1 Scheme Amendment

Under the EP Act, the EPA can formally assess scheme amendments that may have a significant impact on the environment. MRS Amendment 1443 for the rezoning of the Site was referred to the EPA in July 2025 with a decision made by the EPA Chair 18 August 2025 to not formally assess the Amendment. In the EPA's preliminary review, three environmental factors were identified as potentially relevant, these being:

- Flora and vegetation;
- Terrestrial fauna; and
- Terrestrial environmental quality.

In advice provided on the amendment, the EPA Chair supported the potential retention of black cockatoo habitat in open space and landscaped areas, and that the assessment and remediation of contaminated sites can be adequately addressed through the *Contaminated Sites Act 2003*.

The EPA's advice has been appropriately considered, noting:

- The Master Plan and PSP design have allowed for the retention of trees within road reserves and future open spaces. Future landscaping will utilise plant species which provide black cockatoo habitat.
- Contamination investigations are substantially progressed and being conducted in accordance with the requirements of the *Contaminated Sites Act 2003* with independent review by an accredited CSA.

5.1.1.2 Section 38

A proponent or a decision-making authority may refer a proposal to the EPA under Section 38 of the EP Act, if the proposal has environmental issues not considered in the assessment of the Scheme Amendment, or the proposal does not comply with an assessed Scheme. Referral under Section 38 of the EP Act can be made by:

- The proponent;
- A decision-making authority; or
- A third party.

Referral to the EPA is generally undertaken where a project or proposal is deemed to have a high risk of a significant environmental impact.

Based on the results of this assessment and a worst-case development scenario of all vegetation and black cockatoo habitat within the Site being removed, it is Aurora Environmental's view that development of the Site and the likely impacts to environmental factors are not considered of a significant scale to warrant referral to the EPA under Part IV of the EP Act, particularly given the

potential environmental impacts can be managed under other legislative mechanisms or approval processes throughout the various planning phases.

5.1.2 Native Vegetation Clearing Permits

This assessment has determined that two *Eucalyptus rudis* trees in the north-eastern portion of the Site, with a combined canopy area of approximately 0.03 ha, may be native vegetation and assessed as being in 'Completely Degraded' condition. In WA, the clearing of native vegetation requires authorisation from the DWER, unless the clearing is being conducted for an exempt purpose. The potential exemptions are contained in Schedule 6 of the EP Act and Regulation 5 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, noting that Regulation 5 exemptions do not apply to areas mapped as ESAs.

Development approval (e.g. subdivision approval) under the *Planning and Development Act 2005* provides a pathway for clearing of native vegetation without requiring a permit. This pathway falls into the Schedule 6 exemptions (Clause 9). However, if clearing is required in advance of subdivision approval (e.g. to conduct earthworks or construct servicing infrastructure), approval via a native vegetation clearing referral or a clearing permit will be required to clear remnant native vegetation.

The DWER's Clearing Permit System map viewer does not identify any previous clearing permits or clearing referrals intersecting the Site.

5.1.3 Biodiversity Conservation Act 2016

The BC Act provides a framework for the protection of biodiversity in WA. The objectives of the Act are to provide for:

- The conservation and protection of biodiversity and biodiversity components in WA; and
- The ecologically sustainable use of biodiversity components in WA.

The scope of the BC Act and its associated regulations protects flora, fauna, ecological communities, and critical habitats⁴. Approvals under the BC Act (section 40 permit) are required for activities that take or disturb listed threatened species or TECs.

Based on the results of this assessment and potential removal of all vegetation within the Site, proposed development will not impact any TECs or threatened flora species and therefore a section 40 permit will not be required for these aspects.

Although the proposed development of the Site will clear black cockatoo habitat, the clearing is unlikely to take or disturb any individuals of black cockatoo, subject to the preparation and implementation of a CEMP and fauna management controls being implemented during construction. On this basis, a section 40 permit is not likely to be required for clearing of black cockatoo habitat.

5.1.4 Rights in Water and Irrigation Act 1914

The RIWI Act governs the regulation and rights associated with water resources in WA. The Act is administered by the DWER which issues licences and permits to:

- Take water (for groundwater abstraction or for dewatering);

⁴ Critical habitats are habitats listed under the BC Act as being critical to the survival of a threatened species or a threatened ecological community.

- Construct wells (including bores and soaks); and
- Interfere with the bed and banks of a watercourse.

In accordance with Schedule 1, Division 2, clause 7(2) of the RIWI Act, the DWER ensures the proposed taking and using of water are ecologically sustainable and environmentally acceptable. Approvals to construct a groundwater bore and to abstract groundwater for dewatering (except for minor dewatering below threshold levels) or irrigation purposes will need to be obtained prior to abstraction commencing. Approval requirements under the RIWI Act should be considered once dewatering or groundwater abstraction details at the Site are known. It is recommended that DevelopmentWA investigates the transfer of the Edith Cowan University groundwater licence so that the allocation may be used for irrigating future open space areas.

5.1.5 Aboriginal Heritage Act 1972

The *Aboriginal Heritage Act 1972* Guidelines outline that before embarking on any activities on land, landowners should undertake the following steps to determine whether those activities will affect Aboriginal sites or Aboriginal objects (as defined in the Guidelines):

- Assess whether there is any Aboriginal heritage on the land. This may include searching the ACHIS or undertaking consultation with Aboriginal people;
- Consider any potential for harm to any Aboriginal sites that are discovered; and
- Determine the nature and level of potential harm and whether a Section 18 consent will be required.

It is recommended an Aboriginal Heritage Management Protocol is included as part of the CEMP to manage unexpected finds encountered during construction.

5.1.6 Contaminated Sites Act 2003

The *Contaminated Sites Act 2003* provides the legal framework for:

- Identifying, reporting, classifying, and remediating contaminated land in WA;
- Managing risks to human health, the environment, and land use viability; and
- Complementing the *Environmental Protection Act 1986* by addressing contamination and legacy issues not covered under that Act.

Under the Act, owners, occupiers, polluters, and auditors must report known or suspected contamination to the DWER. After reporting, the DWER may classify sites as:

- Possibly Contaminated – Investigation Required;
- Contaminated – Remediation Required;
- Contaminated – Restricted Use; and
- Remediated for Restricted Use.

These classifications guide the actions needed before redevelopment or proposed changes in land use.

As discussed in previous sections of this report, contaminated sites investigations have substantially progressed and are on-going. Remediation of the Site will be undertaken where required with all works being completed in accordance with the requirements of the *Contaminated Sites Act 2003* with review by a CSA to ensure the Site is fit for its intended uses.

5.2 COMMONWEALTH APPROVALS

5.2.1 *Environment Protection and Biodiversity Conservation Act 1999*

Actions that have, or are likely to have, a significant impact on a matter of national environmental significance (MNES) require referral to the Commonwealth DCCEEW under the EPBC Act. A significant impact is defined as an impact which is important, notable, or of consequence, having regard to its context or intensity (DoE 2013).

There are nine MNES protected under the EPBC Act as follows:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (listed under the Ramsar Convention);
- Listed threatened species and ecological communities;
- Migratory species protected under international agreements;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mines); and
- A water resource, in relation to coal seam gas development and large coal mining development.

The EPBC Act applies to 'actions' which:

- Have a 'significant impact' on MNES;
- Are undertaken by Commonwealth government agencies and have a significant impact on the environment anywhere in the world; or
- Are undertaken by any person and have a significant impact on Commonwealth land (even if the activity is not actually carried out on the Commonwealth land).

If a proposal fits one of these descriptions, it will be required to be referred to the DCCEEW. If the proposal is not consistent with any of the above descriptions, the Environmental Impact Assessment provisions of the EPBC Act will not apply and there is no need to obtain the approval of the Commonwealth Minister for the Environment (Environmental Defenders Office [EDO], 2024).

The majority of the MNES identified in this report are not relevant to the development of the Site due to the absence of suitable habitat, or insufficient habitat size. However, of the MNES identified, Carnaby's Cockatoo (Endangered) and Forest Red-tailed Black Cockatoo (Vulnerable) are relevant to the Site due to the presence of suitable habitat.

The DAWE (2022) referral guidelines contain trigger thresholds for impacts to black cockatoo habitat values which relate to foraging, roosting and breeding habitat. DAWE (2022) indicates referral for impacts to black cockatoos is likely in the following scenarios:

- Any loss of or impact upon known, suitable or potential nesting trees, and the habitat around these trees.
- Loss of greater than or equal to 1 ha of high-quality foraging habitat.
- Loss of greater than or equal to 10 ha of lower-quality foraging habitat.
- Loss of greater than or equal to 1 ha of predominantly exotic habitat (e.g., Cape Lilac trees and pine trees) known to be utilised by black cockatoos.
- Removal of any part of a known night roosting site.

An assessment of potential impacts against referral criteria is provided in **Table 10**. Based on this assessment, a referral to DCCEEW is not expected to be required for the proposed redevelopment.

TABLE 10: BLACK COCKATOO REFERRAL TRIGGER THRESHOLDS

REFERRAL TRIGGER THRESHOLDS	COMMENT
Any loss of or impact upon known, suitable or potential nesting trees, and the habitat around these trees.	<p>Trigger threshold does not apply.</p> <p>No tree hollows of a suitable size, orientation or height above ground level were observed during the site inspection.</p> <p>Hollows large enough for nesting black cockatoos are usually only found in trees that are more than 200 years old (DSEWPaC, 2012). The Site has historically been extensively cleared and the majority of the planted trees are less than 60 years of age. The Site is not within an area that is recognised as a typical breeding location for black cockatoos which is consistent with the records obtained from the DBCA. It is therefore considered the Site does not contain any suitable breeding habitat.</p>
Loss of greater than or equal to one hectare of high-quality foraging habitat.	<p>Trigger threshold does not apply.</p> <p>The Site does not comprise any high-quality black cockatoo foraging habitat.</p>
Loss of greater than or equal to ten hectares of lower-quality foraging habitat.	<p>Trigger threshold does not apply.</p> <p>The Site comprises 2.27 ha of low value foraging habitat for Carnaby's Cockatoo and 0.82 ha of low value foraging habitat for Forest Red-tailed Black Cockatoo.</p>
Loss of greater than or equal to one hectare of predominantly exotic habitat (e.g., Cape Lilac trees and pine trees) known to be utilised by Black Cockatoos.	<p>Trigger threshold does not apply.</p> <p>The Site contains less than 1 ha of exotic habitat such as Cape Lilac and Pine trees which have become an important food resource for black cockatoos. The habitat within the Site comprises 2.27 ha of low value foraging habitat for Carnaby's Cockatoo and 0.82 ha of low value foraging habitat for Forest Red-tailed Black Cockatoo. This habitat is a mix of native (some primary foraging plants) and non-native species (mostly secondary foraging plants). Further, the only foraging evidence recorded was in the form of old chewed marri nuts near the corner of Bradford Street and Alexander Drive, and an observation of</p>

REFERRAL TRIGGER THRESHOLDS	COMMENT
	Forest Red-tailed Black Cockatoo foraging in a Kaffir Plum tree near this location.
Removal of any part of a known night roosting site.	<p>Trigger threshold does not apply.</p> <p>The Site has not been identified as a known night roosting site. Evidence of roosting within the Site was not recorded or observed during the inspection. The potential roosting habitat mapped was determined to be the most suitable areas to support roosting. However, no actual roosting was recorded.</p>

In determining the potential significance of Site impacts to Carnaby’s Cockatoo and Forest Red-tailed Black Cockatoo, an assessment against the *Significant Impact Guidelines 1.1* (DoE, 2013) was undertaken to consider the need to refer clearing of black cockatoo habitat to DCCEEW. Based on a worst-case development scenario of all black cockatoo habitat within the Site being removed the results of the assessment (**Table 11**) determined that impacts to black cockatoo habitat are not significant and therefore referral to DCCEEW under the EPBC Act is not required.

TABLE 11: ASSESSMENT AGAINST THE SIGNIFICANT IMPACT GUIDELINES 1.1

SIGNIFICANT IMPACT CRITERIA	ASSESSMENT
Lead to a long-term decrease in the size of a population (or important population for Forest Red-tailed Black Cockatoo).	<p>Unlikely to be significant.</p> <p>The term ‘populations’ and ‘important populations’ have not been defined for black cockatoos, due to the mobile and widely distributed nature of these species, and the variation in flock compositions.</p> <p><u>Foraging:</u></p> <p>The Site comprises 2.27 ha low value foraging habitat for Carnaby’s Cockatoo and 0.82 ha low value foraging habitat for Forest Red-tailed Black Cockatoo. Black cockatoos are highly mobile and expected to forage outside of the Site.</p> <p>The estimated extent of native vegetation available within a 12 km radius of the Site is approximately 3,568 ha not considering non-native vegetation. The removal of up to 2.27 ha low value foraging habitat for Carnaby’s Cockatoo and 0.82 ha low value foraging habitat for Forest Red-tailed Black Cockatoo represents a respective 0.06% and 0.02% reduction in foraging habitat for both species within a 12 km radius.</p> <p>The removal of low value foraging habitat is not expected to lead to a decrease in a population (Carnaby’s Cockatoo) or important population (Forest Red-tailed Black Cockatoo).</p> <p><u>Breeding:</u></p> <p>The Site comprises 72 individual trees that meet the criteria for potential breeding habitat. No hollows suitable for black cockatoo breeding were recorded. The Site is not within an area that is recognised as a breeding location for black cockatoos and it is considered the Site does not contain any suitable breeding habitat. The removal of DBH trees is not expected to lead to a decrease in a population (Carnaby’s Cockatoo) or important population (Forest Red-tailed Black Cockatoo).</p>

SIGNIFICANT IMPACT CRITERIA	ASSESSMENT
	<p><u>Roosting:</u></p> <p>No confirmed roosting habitat exists within the Site. Although the Site comprises individual trees that meet the potential roosting tree criteria, the Site does not intersect a known black cockatoo night roosting site, and no black cockatoo roosting activity was recorded at the Site. The clearing of potential roosting habitat is not expected to lead to a decrease in a Carnaby's Cockatoo population or important population (Forest Red-tailed Black Cockatoo).</p>
<p>Reduce the area of occupancy of the species.</p>	<p>Unlikely to be significant.</p> <p>Black cockatoos are highly mobile and are expected to forage outside of the Site amongst resources available within the vicinity (approximately 3,568 ha of native vegetation within 12 km). The area of occupancy for black cockatoos will not be reduced as a result of Site development and impact to black cockatoo habitat. Vegetation retention, where feasible while allowing future development of the Site, in addition to landscaping of future POS areas and streetscapes with native plant species that provide high value foraging resources for black cockatoos will enhance habitat for black cockatoos.</p>
<p>Fragment an existing population (or important population for Forest Red-tailed Black Cockatoo) into two or more populations.</p>	<p>Unlikely to be significant.</p> <p>Black cockatoos are highly mobile species, with an estimated range of up to 12 km during roosting and breeding activities. Clearing of trees within the Site will not create a gap of greater than 4 km between patches of habitat. Site development and impact to black cockatoo habitat will not fragment an existing Carnaby's Cockatoo population or important population (Forest Red-tailed Black Cockatoo).</p>
<p>Adversely affect habitat critical to the survival of a species.</p>	<p>Unlikely to be significant.</p> <p>No declarations have been made under the EPBC Act and BC Act for areas of critical black cockatoo habitat in WA. Recovery plans identify any foraging or breeding habitat within the listed black cockatoo species range as critical habitat (DPAW 2013). The potential habitat for black cockatoos within the Site is limited to small, scattered patches of low value foraging habitat that may be used opportunistically on occasions. No evidence of roosting was noted, nor is there any suitable breeding habitat present. Vegetation clearing within the Site is unlikely to adversely affect habitat that supports the long-term survival and maintenance of Carnaby's Cockatoo and Forest Red-tailed Black Cockatoo.</p>
<p>Disrupt the breeding cycle of a population (or important population for Forest Red-tailed Black Cockatoo).</p>	<p>Unlikely to be significant.</p> <p>Based on typical breeding patterns, the Site is not within an area that is recognised as a breeding location for black cockatoos. There has been very few black cockatoo breeding records from the Perth metropolitan region. According to the DBCA TPFA dataset potential breeding hollows are present within 5 km of the Site. These records are identified as two natural nesting hollows within Kings Park and one further west within Bold Park. The data does not indicate whether these hollows have actually been used in the past by black cockatoos for nesting, or if these hollows may be capable of supporting nesting.</p> <p>No known nesting trees are located within the Site. The Site comprises 72 potential breeding trees (suitable DBH, none of which support suitable nesting hollows). As the Site does not contain breeding habitat, future development will not disrupt the breeding cycle of a Carnaby's Cockatoo population (or important population for Forest Red-tailed Black Cockatoo).</p>

SIGNIFICANT IMPACT CRITERIA	ASSESSMENT
<p>Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline</p>	<p>Unlikely to be significant.</p> <p>Site development will not result in the clearing of known roosting or breeding habitat.</p> <p>The Site comprises 2.27 ha low value foraging habitat for Carnaby’s Cockatoo and 0.82 ha low value foraging habitat for Forest Red-tailed Black Cockatoo, which represents a respective 0.06% and 0.02% reduction in potential foraging habitat for the species within a 12 km radius (excluding potential habitat comprised of non-native vegetation). The Site is a highly modified environment and represents only a small portion of black cockatoo habitat. The removal of low value foraging habitat is unlikely to decrease black cockatoo habitat to the extent that the species is likely to decline. Tree retention and the use of native plants, including high value foraging plants, within future POS areas and streetscapes will enhance black cockatoo habitat values within the Site.</p>
<p>Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species’ habitat.</p>	<p>Unlikely to be significant.</p> <p>The Site is highly modified and degraded and any clearing of trees within the Site is not expected to introduce or spread invasive species into black cockatoo habitat.</p> <p>Clearing within the Site does not involve any actions which could potentially introduce the European honeybee into the Site or surrounds.</p> <p>Site clearing is not expected to result in the introduction or spread of weeds that will result in significant impacts to black cockatoo habitat, as proposed clearing will implement management measures to mitigate and reduced the spread of the weeds within the Site and the surrounding area.</p> <p>Site clearing is not expected to introduce any predator species (e.g., foxes, feral cats or rabbits).</p>
<p>Introduce disease that may cause the species to decline.</p>	<p>Unlikely to be significant.</p> <p>Site clearing is unlikely to involve any actions which could potentially introduce infectious diseases within black cockatoo populations which could cause the species to decline.</p>
<p>Interfere with the recovery of the species.</p>	<p>Unlikely to be significant.</p> <p>Removal of the trees within the Site is unlikely to significantly interfere with the recovery of Carnaby’s Cockatoo Forest Red-tailed Black Cockatoo.</p>

The Referral Guidelines (DAWE 2022) state:

The Swan Coastal Plain is used by black cockatoos primarily for foraging resources, with some small patches of breeding habitat. Vegetation used by black cockatoos is dominated by Banksia spp. and Tuart (Eucalyptus gomphocephala) woodlands, as well as Marri (Corymbia calophylla), with Jarrah (E. marginata) in the east. A key focus for this region is the ongoing viability of foraging resources for black cockatoos, particularly Carnaby’s Cockatoo.

Recent WA referrals under the EPBC Act that have had a referral decision determined ‘Not a Controlled Action’, involving potential impact to black cockatoo habitat, are a useful comparison to decide whether referral under the EPBC Act is warranted:

- Peel Health Campus Expansion (EPBC no. 2024/10053: Clearing of approximately 3 ha of high-quality Carnaby’s Cockatoo foraging habitat, 2.99 ha high-quality Forest Red-tailed Black

Cockatoo foraging habitat, 2.96 ha high-quality Baudin’s Cockatoo foraging habitat and removal of 34 potential black cockatoo nesting trees (none of which support suitable nesting hollows).

- Graylands Reconfiguration Program (EPBC no. 2025/10271): Removal of 1.19 ha Carnaby’s Cockatoo and Forest Red-tailed Black Cockatoo foraging habitat and impact to 73 black cockatoo potential nesting trees, none of which support suitable nesting hollows.

The PSP and guiding Landscape Master Plan have strategically located POS to avoid and minimise clearing of fauna habitat where feasible, including habitat that may be used by black cockatoos. Although development of the Site will retain portions of black cockatoo habitat, based on a worst-case development scenario of all black cockatoo habitat within the Site being removed, Aurora Environmental has determined that impacts to Carnaby’s Cockatoo and Forest Red-tailed Black Cockatoo foraging habitat and potential breeding and roosting habitat are not considered significant. The thresholds for referral under the Commonwealth EPBC Act have not been triggered and therefore a referral to the DCCEEW is not required.

5.3 STATE PLANNING POLICIES

Table 12 provides a summary of key considerations for relevant state planning policies that may be relevant to environmental management within the Site. Note that the *Draft State Planning Policy 2.9 Planning for Water* (WAPC 2021a) and the *Draft Planning for Water Guidelines* (WAPC 2021b), once gazetted, are intended to replace:

- State Planning Policy 2.2 Gngara Groundwater Protection; and
- State Planning Policy 2.7 Public Drinking Water Source Policy.

TABLE 12: STATE PLANNING POLICY CONSIDERATIONS

STATE PLANNING POLICY	RELEVANT ASPECT	CONSIDERATION
1.6 Development Control Policy	Integrated land use with public transport	The Site has frontage to Alexander Drive which supports high-frequency bus routes. It is recommended future development supports integration with public transport.
2.0 Environment and Natural Resources Policy	Avoid development that may result in unacceptable environmental damage. Protect significant natural and cultural features. Consider potential on-site and off-site impacts.	The Site comprises approximately 0.03 ha native vegetation in ‘Completely Degraded’ condition. The PSP and guiding Landscape Master Plan include opportunities to retain mature trees within wide road reserves and future open space, and will include extensive landscaping using plant species which will enhance local biodiversity values, including the enhancement of black cockatoo habitat values. Clearing impacts are recommended to be managed via a CEMP.
	Water resources	Groundwater and surface water constraints have been identified. Application of the water management measures described in the Urbaqua (2025) WMR to be applied at future stages of the planning process.

STATE PLANNING POLICY	RELEVANT ASPECT	CONSIDERATION
	Air Quality	Surrounding land uses have been reviewed. Potential dust emissions during construction can be managed via a CEMP.
	Soil and land quality	<p>Investigations and management of contamination issues are on-going in accordance with the requirements of the <i>Contaminated Sites Act 2003</i> and with review by an accredited CSA.</p> <p>Depending on the engineering design, ASS investigations in accordance with DER (2015a) guidelines may be required to assess the potential presence of ASS.</p> <p>If ASS are identified and will be disturbed via excavation or dewatering, an ASS and Dewatering Management Plan will be prepared, outlining the treatment and management of ASS in accordance with DER (2015b) guidelines.</p>
	Biodiversity	<p>The Site has been extensively cleared and developed.</p> <p>No significant flora or vegetation communities occur within the Site.</p> <p>The Site contains low value Carnaby's Cockatoo and Forest Red-tailed Black Cockatoo foraging habitat.</p> <p>Biodiversity values can be improved through new planting opportunities, the retention of mature trees and extensive landscaping detailed in the PSP and guiding Landscape Master Plan.</p>
2.8 Bushland Policy	Bushland protection	The Site is not a designated Bush Forever area. Since SPP 2.8 promotes general retention of bushland with conservation value, mature trees (native and non-native) will be retained where feasible.
2.9 Water Resources	Surface and groundwater resources	Groundwater and surface water constraints have been identified. Implementation of the water management strategies described in the Urbaqua (2025) WMR will be applied at future stages of the planning process.
	Total water cycle management	Impacts to the water cycle can be managed via the Urbaqua (2025) WMR.
2.10 Swan-Canning River System Policy	Surface and groundwater resources	Groundwater and surface water constraints have been identified. Application of the water management strategies described in the Urbaqua (2025) WMR to be applied at future stages of the planning process.
5.4 Road and Rail Noise	Noise	Noise impacts have been considered (Herring Storer Acoustics, 2025). Any residential or mixed-use development that falls within noise affected areas will require "Quiet House" design package and any commercial development will require investigation dependent on specific use in line with AS2017:2016.

6 ENVIRONMENTAL ASSESSMENT AND MANAGEMENT FRAMEWORK

Based on the key environmental attributes and values identified in this assessment, a recommended environmental management framework for investigations and management strategies is summarised in **Table 13**.

TABLE 13: ENVIRONMENTAL MANAGEMENT FRAMEWORK

ASPECT	RECOMMENDED ACTIVITY	TIMING
Flora and vegetation	Approval to clear up to 0.03 ha native vegetation will be required unless the proposed clearing is for an exempt purpose (covered under Schedule 6 or Regulation 5 exemptions), e.g. subdivision approval. Authorisation to clear may be obtained via a native vegetation clearing referral for low impact clearing, or a native vegetation clearing permit.	Prior to subdivision approval.
	Opportunities for the retention of mature trees and the incorporation of native plant species in landscaping have been captured in the PSP and guiding Landscape Master Plan.	The PSP has considered this. Further refinement will occur during subsequent planning stages and detailed design.
Terrestrial Fauna – Black Cockatoos	The PSP and guiding Landscape Master Plan have strategically located POS to avoid and minimise clearing of fauna habitat where feasible, including habitat that may be used by black cockatoos.	The PSP has considered this. Further refinement may occur during subsequent planning stages and detailed design.
	The PSP and guiding Landscape Master Plan have incorporated native plant species in POS areas and streetscapes to enhance local biodiversity values, including the use of plant species that provide foraging resources for black cockatoos.	The PSP has considered this. Further refinement will occur during subsequent planning stages and detailed design.
Inland waters - surface water and groundwater	A WMR has been prepared for development of the Site (Urbaqua, 2025) in accordance with the <i>Draft State Planning Policy 2.9 Planning for Water</i> (WAPC, 2021a) and <i>Draft Planning for Water Guidelines</i> (WAPC 2021b).	Implement the WMR as part of future planning and development stages. Detailed engineering design for stormwater and groundwater management to be provided at subdivision stage.
	Determine if a dewatering licence under the RIWI Act is required.	Development Application or Construction
	Investigate the acquisition or transfer of Edith Cowan University's groundwater license (Licence No. 89379) for irrigation of landscaping in POS areas and streetscapes.	Structure Planning
Terrestrial environmental quality	Continue the contaminated sites investigations and undertake remedial works (as required) in accordance with the <i>Contaminated Sites Act 2003</i> to ensure identified risks are mitigated and the Site is suitable for its proposed end land use(s).	Structure Planning, Subdivision and Construction

ASPECT	RECOMMENDED ACTIVITY	TIMING
	<p>Conduct intrusive pre-demolition surveys to investigate the presence of hazardous materials within existing buildings and structures to inform management of future demolition or refurbishment works.</p>	<p>Prior to demolition or refurbishment of buildings and structures</p>
	<p>If excavation will occur below the water table or dewatering is required, investigate sub-surface soil conditions to determine if ASS are present.</p>	<p>Subdivision</p>
	<p>Depending on final development design and the results of the ASS investigation, an ASS and Dewatering Management Plan may need to be prepared. Any disturbance of ASS should be managed in accordance with DER (2015b) guidelines.</p>	<p>Subdivision and construction</p>
<p>Social Surroundings – Aboriginal cultural heritage</p>	<p>Include and implement an Aboriginal Heritage Management Protocol within the CEMP to manage unexpected finds encountered during construction.</p>	<p>Construction</p>
<p>Social Surroundings – construction noise</p>	<p>Implement the noise mitigation measures recommended in the Herring Storer Acoustics (2025) noise management plan.</p>	<p>Subdivision and Construction</p>
<p>Construction Management</p>	<p>Prepare and implement a CEMP that addresses how the following will be managed:</p> <ul style="list-style-type: none"> • Vegetation clearing; • Fauna management; • Weeds; • Dust; • Noise and vibration; • Construction waste management; • Contamination / pollution; and • Unexpected finds including heritage. 	<p>Construction</p>

7 SUMMARY AND RECOMMENDATIONS

Aurora Environmental was commissioned DevelopmentWA to undertake an environmental assessment of the ECU Mount Lawley Campus. The findings and recommendations of the environmental assessment support the PSP and provide a framework for redevelopment of the Site.

The following key environmental attributes and values are relevant to development of the Site:

- The Site comprises 0.03 ha native vegetation in 'Completely Degraded' condition located in the north-east portion of the Site comprising the canopy of two *Eucalyptus rudis* trees (Tree IDs 1188 and 1191).
- No significant vegetation communities or conservation significant flora were identified across the Site, nor are any likely to be present.
- Due to the limited extent of habitat and degraded condition of the Site, it is expected that a reduced diversity and abundance of fauna species will be present. Only species that are mobile and able to persist in degraded habitats in an urban environment will persist.
- The Site comprises 2.27 ha low value foraging habitat for Carnaby's Cockatoo and 0.82 ha low value foraging habitat for Forest Red-tailed Black Cockatoo. The foraging habitat within the Site is not considered necessary for the maintenance of black cockatoo species but may provide opportunistic foraging sources for the species. The only foraging evidence recorded at the Site was in the form of old chewed Marri nuts near the corner of Bradford Street and Alexander Drive, and an observation of Forest Red-tailed Black Cockatoo foraging in a Kaffir Plum tree near this location
- Based on typical breeding patterns, the Site is not within an area that is recognised as a breeding location for black cockatoos. The Site assessment completed by Aurora Environmental recorded 72 individual trees with a DBH greater than 500 mm, with none of these trees supporting hollows suitable for black cockatoo breeding. The absence of suitable black cockatoo hollows was not unexpected given the Site has historically been extensively cleared and the majority of the trees are less than 60 years of age. Given that black cockatoos typically nest in trees that are older than 200 years, the Site is outside of the typical breeding areas for black cockatoos, and no trees assessed across the Site contained hollows suitable for black cockatoo breeding, it is considered the Site does not contain any suitable breeding habitat.
- Although the Site comprises individual trees that meet the potential roosting tree criteria, the Site does not intersect a known black cockatoo night roosting site, and no black cockatoo roosting activity was recorded at the Site.
- Urbaqua (2025) has prepared a WMR to support amendment of the MRS and LPS No. 3, and development of the PSP. Surface water and groundwater values of the Site have been investigated and considered in the WMR. No significant water related constraints to the redevelopment of the Site have been identified in the WMR. However, the maximum groundwater elevation across the Site is shallowest in the northern portion of the Site, where groundwater levels are less than 3 m BGL. This may have implications for lot elevations, construction of basements and any drainage features such as soakwells and stormwater detention areas.

- The Site (or portions thereof) has been the subject of multiple investigations dating back to 2004 to assess the potential presence and extent of contamination as a result of historical activities within the Site, including an old sanitary landfill. Between 2008-2009 remediation works were conducted within the north-eastern portion of the Site in the Student Housing Village and adjoining School of Contemporary Arts. A Site Management Plan was prepared for the north-eastern portion of the Site to guide management and mitigate risks relating to residual contamination. Portions of the north-eastern portion of the Site, where landfill material and redundant infrastructure was removed, was recommended by an Auditor to be classified as 'Decontaminated' and the remainder of the north-east portion of the Site was recommended to be classified as 'Remediated for restricted use' with management to be conducted in accordance with the Site Management Plan.
- Due to proposed development of the Site and historical contamination issues, DevelopmentWA commissioned Aurora Environmental to investigate potential contamination risks, focusing on areas where intrusive investigations can be completed without demolition or destruction of existing buildings and infrastructure. The Aurora Environmental investigations have been conducted in accordance with the DWER guidelines and are being independently reviewed by an accredited CSA. A revised Site Management Plan has been developed by Aurora Environmental (2024a) for the entirety of the Site, recognising that the full extent of historical landfill material has not been fully delineated and further investigations are required. Preliminary remedial works have been completed within portions of the Site to reinstate appropriate ground levels across areas identified as having insufficient capping depth above landfill materials. On review of the work completed to date, the DWER considers the Site is suitable for its current land use subject to implementation of the revised Site Management Plan.
- Due to the presence of landfill materials beneath portions of the Site, the Site is classified under the *Contaminated Sites Act 2003* as 'Remediated for restricted use' and a memorial stating this classification has been placed on the certificate of title. Prior to redevelopment of the Site, further investigation and assessment is required to inform potential risks from residual contamination during construction and / or under future land uses.
- Contaminated sites investigations are well progressed but will remain on-going to ensure risks are thoroughly investigated and managed in accordance with the requirements of the *Contaminated Sites Act 2003*. A CSA has been appointed on a voluntary basis and has reviewed all site investigations to date, and will continue to be involved in future site investigations, to ensure that the assessment works (and any future remediation works) are completed in accordance with the *Contaminated Sites Act 2003*.
- The DWER's Basic Summary of Records for the Site indicates that the DoH advised that if groundwater is proposed to be abstracted, the appropriate analytical testing should be carried out to determine whether the groundwater is fit for purpose. Based on the findings from the groundwater assessments completed to date, there is no indication that groundwater has been contaminated as a result of historical landfill activities at the Site.
- Groundwater licence no. 89379 is registered to Edith Cowan University with an allocation of 67,500 kL. It may be possible to acquire and transfer this allocation to the DWER for irrigating future open space areas.

- The Site is mapped within a Class II ASS risk area. The results from groundwater assessments for ASS indicators have indicated limited existing buffering capacity for any potential acidification that may result from potential ASS disturbance. The potential presence and disturbance of ASS requires further consideration once detailed engineering design has been completed.
- An acoustic assessment and noise management plan has been prepared by Herring Storer Acoustics (2025) which indicates that vehicles travelling along Alexander Drive in the future (2044) would exceed the SPP 5.4 “day-time limits” for the northern most portion of the Site. Future management to mitigate noise impacts will be required in noise affected areas within the Site.

The PSP has accommodated site-specific environmental attributes and values where necessary, including the provision of wide road reserves and open space to support tree retention. The PSP will be supported by landscaping with street trees (native and non-native species) and other treatments that incorporate new plantings in line with a guiding Landscape Master Plan. The retention of large trees across the Site will retain habitat value for black cockatoos and other fauna species, while planting with appropriate plant species will provide an opportunity to enhance local biodiversity values within the Site, including black cockatoo habitat.

Based on the key environmental attributes and values identified in this assessment, a recommended environmental management framework for investigations and management strategies is summarised as follows:

- Approval to clear up to 0.03 ha native vegetation will be required unless the proposed clearing is for an exempt purpose (covered under Schedule 6 or Regulation 5 exemptions), e.g. subdivision approval. Authorisation to clear may be obtained via a native vegetation clearing referral for low impact clearing, or a native vegetation clearing permit under Part V EP Act.
- Proposed development of the Site will not impact any TECs or threatened flora and therefore a section 40 permit under the BC Act is not required for removal of significant flora species or significant ecological communities.
- Based on a worst-case development scenario of all black cockatoo habitat within the Site being removed and assessment of impacts to black cockatoo habitat against the Commonwealth referral guidelines and the *Significant Impact Guidelines 1.1*, Aurora Environmental has determined that impacts to Carnaby’s Cockatoo and Forest Red-tailed Black Cockatoo foraging habitat and potential breeding and roosting habitat are not significant. The thresholds for referral under the EPBC Act have not been triggered and therefore a referral to the Commonwealth DCCEE is not recommended.
- Although the proposed development of the Site will clear black cockatoo habitat, the clearing is unlikely to take or disturb any individuals of black cockatoo, subject to fauna management controls being implemented during construction. On this basis, a section 40 BC Act permit is not likely to be required for clearing of black cockatoo habitat.
- As recommended in the environmental reports prepared by Aurora Environmental (lodged with the MRS Amendment and under preparation for the PSP), the potential impacts of future development on black cockatoo habitat will be carefully considered as the Site layout and

landscaping design are refined. The mitigation hierarchy will be followed, prioritising habitat retention and, where appropriate, providing additional planting with native plant species that provide high value black cockatoo foraging resources. The indicative concept plan submitted with the MRS Amendment (reflected by the draft Master Plan, which is being finalised) presents a Site layout that aims to maximise retention of mature trees where feasible to do so, and promotes the incorporation of native plant species to enhance foraging habitat for black cockatoos.

- Implementation of the WMR will ensure that future planning and development of the Site will be consistent with the requirements of the *Draft State Planning Policy 2.9 Planning for Water* (WAPC 2021a) and the *Draft Planning for Water Guidelines* (WAPC 2021b).
- Contamination investigations will continue to be undertaken. The information derived from completed and on-going contamination investigations will be used to develop a strategy to manage risks during the redevelopment of the Site, and will include remediation and validation to ensure the Site is suitable for its intended end use. The implementation of the strategy shall be guided by a Remediation Action Plan or similar with independent review by the CSA to ensure future remediation is undertaken in accordance with the requirements of the *Contaminated Sites Act 2003*.
- Approval requirements under the RIWI Act should be considered once dewatering or groundwater abstraction details at the Site are known.
- Investigate the acquisition or transfer of ECU's groundwater license (Licence No. 89379) for irrigation of landscaping in POS areas and streetscapes.
- It is recommended that the need for an ASS investigation is considered when further information about the civil design is available (i.e. the maximum depth of disturbance) and confirmation of whether dewatering to temporarily lower groundwater is proposed. If an ASS investigation is required, the results will determine if an ASS and Dewatering Management is needed. If necessary, any disturbance of ASS should be managed by treatment with lime to neutralise potential acidity.
- An intrusive pre-demolition survey should be carried out for each building and structure proposed to be demolished to investigate the presence of hazardous materials and to inform management of demolition or refurbishment works.
- In accordance with advice from the Herring Storer Acoustics (2025) noise management plan, any residential or mixed-use development that falls within noise affected areas will require "Quiet House" design packages and any commercial development will require investigation dependent on specific use in line with AS2017:2016.
- It is recommended that a CEMP is prepared prior to any ground disturbing activities to adequately manage and mitigate impacts to the environment during construction.

The preparation of Master Plan and proposed PSP layout have adequately considered the environmental attributes and values identified in this assessment. The environmental attributes and values can be appropriately managed through future subdivision and development phases of the Site in accordance with relevant state and local government legislation, policies and guidelines and best management practices.

8 REFERENCES

360 Environmental (2009a). Remediation and Validation Report. ECU Mt Lawley Future Student Housing Development. 492-BB. V0.

360 Environmental (2009b). Additional Site Investigation Report ECU Mt Lawley Remainder of Student Housing Village. 492-AY. V0.

360 Environmental (2009c). Site Management Plan. ECU Mt Lawley Campus. 492-BF. V1.

ATA Environmental (2004). Preliminary Soil Contamination Assessment Buildings 22 and 23 Mount Lawley Campus Edith Cowan University. 2004/70. V1

ATA Environmental (2006). Detailed Site Investigation. Edith Cowan University Mount Lawley Campus. 2005/224. V1.

Aurora Environmental (2022). Environmental Due Diligence Investigation ECU Mount Lawley Campus 2 Bradford Street, Mount Lawley. Report prepared for DevelopmentWA.

Aurora Environmental (2023a). Sampling and Analysis Quality Plan (SAQP) ECU Mount Lawley Campus. Report prepared for DevelopmentWA. V3.

Aurora Environmental (2023b). Landfill Capping and Surface Water Quality Review, ECU Mount Lawley Campus. Report prepared for DevelopmentWA. V2.

Aurora Environmental (2023c). Hazmat Gap Analysis ECU Mount Lawley Campus. Report prepared for DevelopmentWA. V1.

Aurora Environmental (2023d). Native Vegetation and Back Cockatoo Habitat Assessment, Edith Cowan University Mount Lawley Campus. Unpublished report prepared for DevelopmentWA, Perth, Western Australia.

Aurora Environmental (2024a). Revised Site Management Plan, Historic Landfill, ECU Mount Lawley Campus, 2 Bradford Street, Mount Lawley. Report prepared for Edith Cowan University. Report no. AP2024-116.

Aurora Environmental (2024b). Stage 1 Detailed Site Investigation Report, ECU Mount Lawley Campus, 2 Bradford Street, Mount Lawley. Report prepared for DevelopmentWA. Report no. AP2024-013, Version 2.

Aurora Environmental (2024c). Remediation Option Assessment, Mount Lawley Childcare Centre, 2 Bradford Street, ECU. Report prepared for DevelopmentWA. V1

Aurora Environmental (2025a). Stage 1A Detailed Site Investigation, Edith Cowan University Mount Lawley Campus. Report prepared for DevelopmentWA. V3.

Aurora Environmental (2025b). Additional Soil Investigation, Mount Lawley Childcare Centre, 2 Bradford Street, Mount Lawley Campus. Report prepared for DevelopmentWA. V1.

Aurora Environmental (2025c). Stage 1A Detailed Site Investigation Addendum, Edith Cowan University Mount Lawley Campus. Report prepared for DevelopmentWA. DRAFT.

Australian and New Zealand Guidelines (ANZG) (2018). Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra.

Bamford Consulting Ecologists (2023). South32 Collie Offset Areas – Threatened Fauna Assessment. Unpublished report prepared for South 32. Kingsley, WA.

Beard, J.S., Beeston, G.R., Harvey, J.M., Hopkins, A.J.M., Shepherd, D.P. (2013). The vegetation of Western Australia at the 1:3,000,000 scale. Explanatory memoir. Second edition. Midland, WA.

Bureau of Meteorology (BoM) (2025). Climate statistics for Australian locations. Available at: [Climate statistics for Australian locations \(bom.gov.au\)](https://www.bom.gov.au/climate/statistics/australian-locations/)

Commonwealth of Australia (2001). National Objectives and Targets for Biodiversity Conservation 2001-2005. Environment Australia, Department of Environment and Heritage, Canberra, Australian Capital Territory.

Department of Agriculture, Water and the Environment (DAWE) (2022). Referral guideline for 3 WA threatened Black Cockatoo species Carnaby's Cockatoo (*Zanda latirostris*), Baudin's Cockatoo (*Zanda baudinii*) and the Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*). Commonwealth of Australia, ACT.

Department of Biodiversity, Conservation and Attractions (DBCA) (2018). Directory of Important Wetlands in Australia - Western Australia (DBCA-045). Available at [Directory of Important Wetlands in Australia - Western Australia \(DBCA-045\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/directory-of-important-wetlands-in-australia-western-australia-dbca-045)

Department of Biodiversity, Conservation and Attractions (DBCA) (2024a). Threatened Ecological Communities (DBCA-038). [Threatened Ecological Communities \(DBCA-038\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/threatened-ecological-communities-dbca-038)

Department of Biodiversity, Conservation and Attractions (DBCA) (2024b). Threatened and Priority Fauna (DBCA-037). Available at [Threatened and Priority Fauna \(DBCA-037\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/threatened-and-priority-fauna-dbca-037)

Department of Biodiversity, Conservation and Attractions (DBCA) (2025a). Geomorphic Wetlands, Swan Coastal Plain (DBCA-019). Available at [Geomorphic Wetlands, Swan Coastal Plain \(DBCA-019\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/geomorphic-wetlands-swan-coastal-plain-dbca-019)

Department of Biodiversity, Conservation and Attractions (DBCA) (2025b). Threatened and Priority Flora (DBCA-036). Available at [Threatened and Priority Flora \(DBCA-036\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/threatened-and-priority-flora-dbca-036)

Department of Biodiversity, Conservation and Attractions (DBCA) (2025c). DBCA - Legislated Lands and Waters (DBCA-011). Available at [DBCA - Legislated Lands and Waters \(DBCA-011\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/dbca-legislated-lands-and-waters-dbca-011)

Department of Biodiversity, Conservation and Attractions (DBCA) (2025d). Carnaby's Cockatoo Areas requiring investigation as feeding habitat in the Swan Coastal Plain (SCP) IBRA Region (DBCA-057). Available at [Carnabys Cockatoo Areas requiring investigation as feeding habitat in the Swan Coastal Plain \(SCP\) IBRA Region \(DBCA-057\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/carnabys-cockatoo-areas-requiring-investigation-as-feeding-habitat-in-the-swan-coastal-plain-scp-ibra-region-dbca-057)

Department of the Environment (DoE) (2013). Matters of National Environmental Significance Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. Australian Government, Canberra.

Department of Parks and Wildlife (2013). Carnaby's Cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2025a). Environment Protection and Biodiversity Conservation Act 1999 Protected Matters Search Tool results. Accessed from: [Protected Matters Search Tool: Interactive Map \(awe.gov.au\)](#)

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2025b). Collaborative Australian Protected Database (CAPAD): protected area database. Accessed from [Collaborative Australian Protected Areas Database \(CAPAD\): protected area data - DCCEEW](#)

Department of Environment and Regulation (DER) (2015a). *Identification and investigation of Acid Sulfate Soils and Acidic Landscapes.* Department of Environment Regulation, Perth, Western Australia.

Department of Environment and Regulation (DER) (2015b). *Treatment and management of soil and water in acid sulfate soil landscapes.* Department of Environment Regulation, Perth, Western Australia.

Department of Fire and Emergency Services (DFES) (2024). Bush Fire Prone Areas 2024 (OBRM-021). Available at [Bush Fire Prone Areas 2024 \(OBRM-021\) - Datasets - data.wa.gov.au](#)

Department of Planning, Lands and Heritage (DPLH) (2025a). Region Scheme - Special Areas (DPLH-022). [Region Scheme - Special Areas \(DPLH-022\) - Datasets - data.wa.gov.au](#)

Department of Planning, Lands and Heritage (DPLH) (2025b). Heritage Council WA - State Register (DPLH-006). Available at [Heritage Council WA - State Register \(DPLH-006\) - Datasets - data.wa.gov.au](#)

Department of Planning, Lands and Heritage (DPLH) (2025c). Heritage Council WA - Local Heritage Survey (DPLH-008). Available at [Heritage Council WA - Local Heritage Survey \(DPLH-008\) - Datasets - data.wa.gov.au](#)

Department of Primary Industries and Regional Development (DPIRD) (2019). Pre-European Vegetation (DPIRD-006). Available at [Pre-European Vegetation \(DPIRD-006\) - Datasets - data.wa.gov.au](#)

Department of Primary Industries and Regional Development (DPIRD) (2025a). Soil landscape land quality - Subsurface Acidification Risk (DPIRD-011). Available at [Soil landscape land quality - Subsurface Acidification Risk \(DPIRD-011\) - Datasets - data.wa.gov.au](#)

Department of Environment and Regulation (DER) (2015a). *Identification and investigation of Acid Sulfate Soils and Acidic Landscapes.* Department of Environment Regulation, Perth, Western Australia.

Department of Environment and Regulation (DER) (2015b). *Treatment and Management of Soil and Water in Acid Sulfate Soil Landscapes.* Department of Environment Regulation, Perth, Western Australia.

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) (2012). EPBC Act Referral Guidelines for the Three Threatened Black Cockatoo Species. Commonwealth of Australia, Canberra.

Department of Water and Environmental Regulation (DWER) (2017). Acid Sulfate Soil Risk Map, Swan Coastal Plain (DWER-055). Available at [Acid Sulfate Soil Risk Map, Swan Coastal Plain \(DWER-055\) - Datasets - data.wa.gov.au](#)

Department of Water and Environmental Regulation (DWER) (2018). RIWI Act, Groundwater Areas (DWER-034). Available at [RIWI Act, Groundwater Areas \(DWER-034\) - Datasets - data.wa.gov.au](#)

Department of Water and Environmental Regulation (DWER) (2024). FPM Floodplain Area (DWER-020). Available at [FPM Floodplain Area \(DWER-020\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/fpm-floodplain-area-dwer-020)

Department of Water and Environmental Regulation (2025a). WRIMS - Surface Water Areas (DWER-082). Available at [WRIMS - Surface Water Areas \(DWER-082\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/wrims-surface-water-areas-dwer-082)

Department of Water and Environmental Regulation (2025b). WRIMS - Surface Water Subareas (DWER-080). Available at [WRIMS - Surface Water Subareas \(DWER-080\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/wrims-surface-water-subareas-dwer-080)

Department of Water and Environmental Regulation (2025c). WRIMS - Groundwater Subareas (DWER-083). Available at [WRIMS - Groundwater Subareas \(DWER-083\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/wrims-groundwater-subareas-dwer-083)

Department of Water and Environmental Regulation (2025d) Perth Groundwater Map. Accessed from: [Perth Groundwater Map](https://www.water.wa.gov.au/perth-groundwater-map)

Department of Water and Environmental Regulation (DWER) (2025e). Water Register. Available at [Water Register](https://www.water.wa.gov.au/water-register).

Department of Water and Environmental Regulation (DWER) (2025f). Public Drinking Water Source Areas (DWER-033). Available at [Public Drinking Water Source Areas \(DWER-033\) - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/public-drinking-water-source-areas-dwer-033)

Department of Water and Environmental Regulation (DWER) (2025g). Swan Coastal Plain and Perth-Peel Remnant Native Vegetation Extent Mapping in 2000-2020 (5 yearly interval) and the year 2024. (DWER-141). Available at [Swan-coastal-plain-and-perth-peel-native-vegetation-extent-2024 \(DWER-141\)](https://data.wa.gov.au/datasets/swan-coastal-plain-and-perth-peel-native-vegetation-extent-2024-dwer-141)

DevelopmentWA (2025). ECU Mount Lawley Redevelopment A vibrant destination to live, learn and connect. Available at [ECU Mount Lawley Redevelopment - Overview - DevelopmentWA - Shaping our State's future](https://www.development.wa.gov.au/ecu-mount-lawley-redevelopment-overview)

Douglas Partners (2022). Report on Preliminary Geotechnical Investigations, Proposed Multi-Residential Development. Central Avenue, Mount Lawley, Report prepared for DevelopmentWA. 216618.

ENVIRON Australia (2009). Voluntary Auditors Report. Student Housing Facility and Surrounds. Mt Lawley Campus Edith Cowan University.

Environmental Defenders Office (EDA) (2024). Writing a Good Submission on a Referral under the EPBC Act. Accessed from [Writing a Good Submission on a Referral under the EPBC Act - Environmental Defenders Office \(edo.org.au\)](https://www.edo.org.au/writing-a-good-submission-on-a-referral-under-the-epbc-act)

Environmental Protection Authority (EPA) (2016). Technical guidance flora and vegetation surveys for environmental impact assessment. EPA, WA.

Government of Western Australia (GoWA) (2025a). 2018 South West Vegetation Complex Statistics. Current as of March 2018, Perth, Australia, Department of Biodiversity, Conservation and Attractions Available at [DBCA South West Vegetation Complex Statistics - Datasets - data.wa.gov.au](https://data.wa.gov.au/datasets/dbca-south-west-vegetation-complex-statistics).

Government of Western Australia (GoWA) (2025b). Aboriginal Cultural Heritage Inquiry System (ACHIS). Available at [Aboriginal Cultural Heritage Inquiry System \(dplh.wa.gov.au\)](https://dplh.wa.gov.au/aboriginal-cultural-heritage-inquiry-system)

Government of Western Australia (GoWA) (2025c). InHerit. Available at [inHerit - State Heritage Office \(dplh.wa.gov.au\)](https://dplh.wa.gov.au/inherit)

Gozzard, J. R. (1986). Perth, Sheet 2034 II and part 2034 III and 2134 III. Perth Metropolitan Region Environmental Geology Servies, Geological Survey of Western Australia.

Groom, C. (2011). Plants used by Carnaby's Black Cockatoo. Department of Environment and Conservation, Perth, WA.

Hassell (2025). Mount Lawley ECU Redevelopment Landscape Master Plan. Draft plan prepared for DevelopmentWA.

Heddle, EM, Lonergan. OW and Havel JJ (1980). Vegetation Complexes of the Darling System, WA, in Atlas of Natural Resources, Darling System WA. Department of Conservation and Environment.

Herring Storer Acoustics (2025). Edith Cowan University Mt Lawley SPP 5.4 Noise Management Plan Precinct Structure Plan. Report prepared for DevelopmentWA.

Johnstone, R.E. and Storr, G.M. (1998). Handbook of Western Australian Birds. Volume 1 – Non-passerines (Emu to Dollarbird). Western Australian Museum pp. 278–280.

Landgate (2025a). Landgate Map Viewer Plus. Available at [Landgate Map Viewer Plus](#)

Le Roux, C. (2017). Nocturnal roost tree, roost site and landscape characteristics of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) on the Swan Coastal Plain. Accessed September 2025, available at [Nocturnal roost tree, roost site and landscape characteristics of Carnaby's Black-Cockatoo \(Calyptorhynchus latirostris\) on the Swan Coastal Plain \(ecu.edu.au\)](#)

Mitchell, D., Williams, K. and Desmond, A. (2002). A Biodiversity Audit of Western Australia's 63 Biogeographical Subregions in 2002. Department of Conservation and Land Management, WA.

Paperbark Technologies Arboricultural Consultants (2022). Tree Summary Report – Edith Cowan University Mount Lawley. Unpublished report prepared for DevelopmentWA, Perth, Western Australia.

Project Dieback (2025). Dieback Public Map. Available at [Dieback Public Map - Project Dieback](#)

Urbaqua (2025). ECU Mount Lawley Redevelopment Precinct Structure Plan Water Management Report. Report prepared for DevelopmentWA.

Water Corporation (2025a). Water Buffer Areas (WCORP-244). Available at [Water Buffer Areas \(WCORP-244\) - Datasets - data.wa.gov.au](#)

Webb, A., Kinloch, J., Keighery, G., Pitt, G. (2016). The extension of vegetation complex mapping to landform boundaries within the Swan Coastal Plain Landform and forested region of south-west Western Australia. Available at [072149.pdf \(dbca.wa.gov.au\)](#)

Western Australian Planning Commission (WAPC) (2019). State Planning Policy 5.4 Road and Rail Noise. Western Australian Planning Commission, WA.

Western Australian Planning Commission (WAPC) (2021a). Draft State Planning Policy 2.9 Planning for Water. Western Australian Planning Commission, WA.

Western Australian Planning Commission (WAPC) (2021b). Draft Planning for Water Guidelines Western Australian Planning Commission, WA.

Western Australian Planning Commission (WAPC) (2023). WA Planning Manual – Guidance for Structure Plans. Perth, WA.

FIGURES

392750.00E

393000.00E

393250.00E

393500.00E

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6468000.00N

6467750.00N



LEGEND

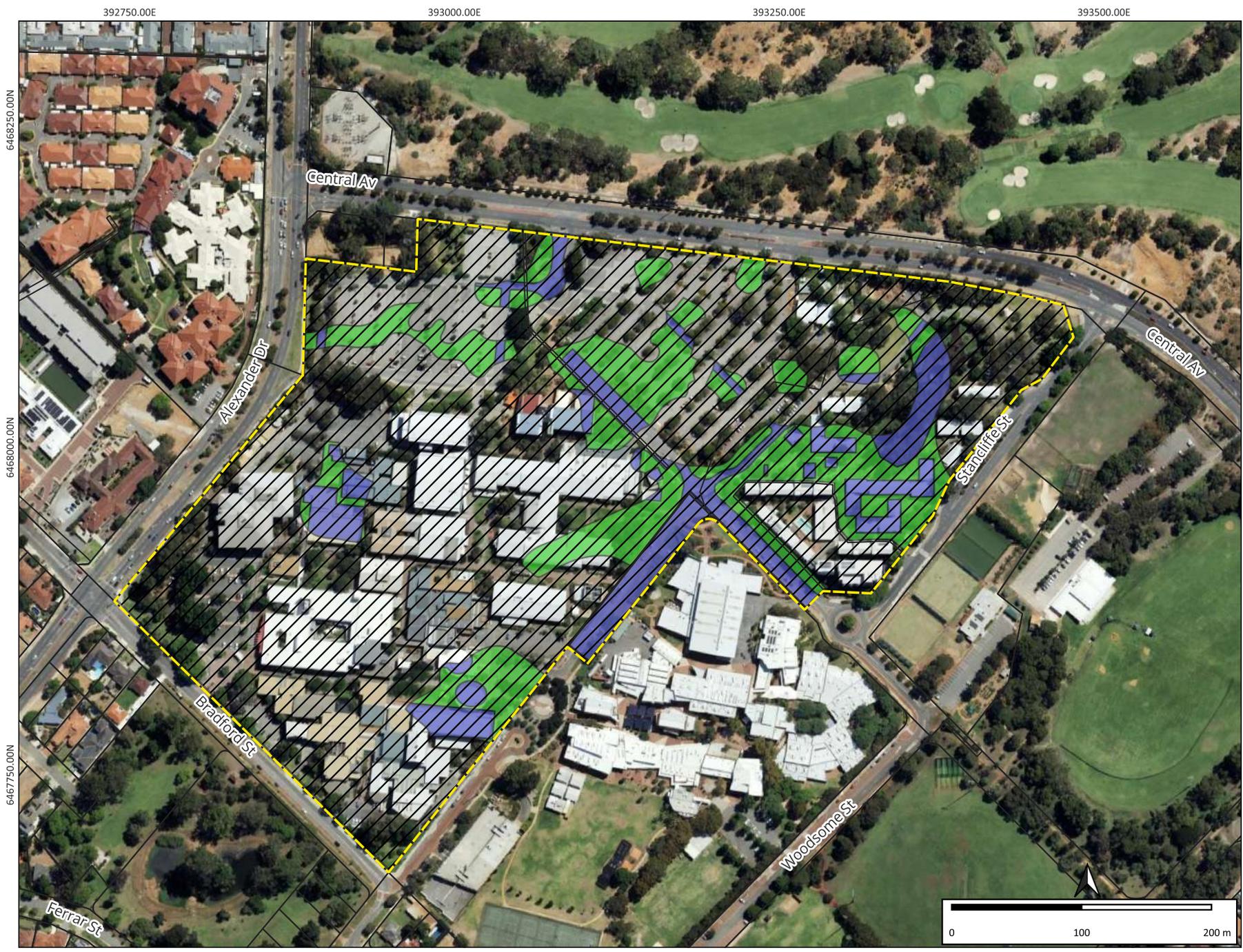
- Centre Point
- ▭ Site Boundary
- ▭ Cadastre

FIGURE 1

Location

Project: DVW-PP04005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP04005-EAMS_001_mb
 Scale: 1:4000 @A4
 CRS: GDA2020 / MGA zone 50





LEGEND

- Site Boundary
- Cadastre
- DWER Contaminated Sites Database

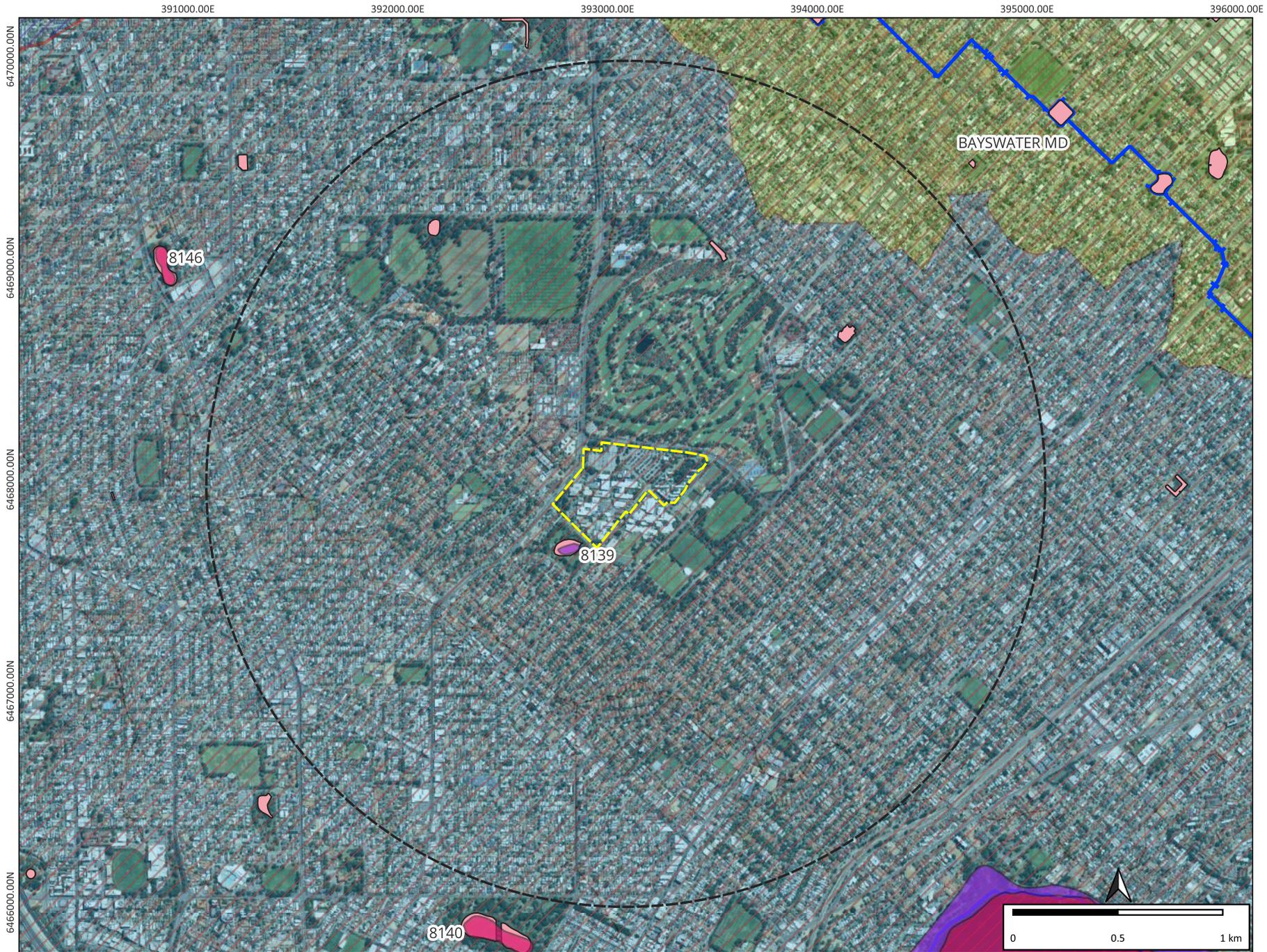
Contamination Extent

- Confirmed Presence of Impacted Soils Above HIL-A
- Suspected Impacted Soils Above HIL-A Yet to be Investigated

FIGURE 2

Contaminated Sites

Project: DVW-PP4005
 Author: PZ
 Date: 08/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:4000 @A4
 CRS: GDA2020 / MGA zone 50



LEGEND

- Site Boundary
- 2 km buffer
- Linear Hydrography
- Drainage Compensation Basins
- Geomorphic Wetlands Swan Coastal Plain**
- Conservation
- Multiple Use
- Surface Water Subareas**
- Swan Coastal
- Swan River and Tributaries
- Sub-Catchment**
- Swan Canning Estuary
- Bayswater Main Drain

FIGURE 3

Hydrology

Project: DVW-PP4005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:25000 @A4
 CRS: GDA2020 / MGA zone 50

392750.00E

393000.00E

393250.00E

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LEGEND

- ▭ Site Boundary
- Average Annual Maximum Groundwater Level (AAMGL)
- Maximum Groundwater Level (MGL)

FIGURE 4
Groundwater
Contours

Project: DVW-PP4005
 Author: PZ
 Date: 08/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:5000 @A4
 CRS: GDA2020 / MGA zone 50

392750.00E 393000.00E 393250.00E 393500.00E 393750.00E

6468250.00N

6468000.00N

6467750.00N



LEGEND

- Site Boundary
- Native Vegetation - Swan Coastal Plain 2024
- DBCA Threatened Ecological Communities (Buffered)
- Potential Native Vegetation Extent Within the Site

FIGURE 5
Vegetation

Project: DVW-PP4005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:5000 @A4
 CRS: GDA2020 / MGA zone 50



Image source: Google Earth Satellite (2025)
 Data sources: TEC (DBCA-038), Native Vegetation SCP (DWER-141), Potential Native Vegetation (Aurora Environmental), Cadastre (LGATE-002), Roads (LGATE-195)

391000.00E 392000.00E 393000.00E 394000.00E 395000.00E 396000.00E

6470000.00N
6469000.00N
6468000.00N
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6466000.00N



LEGEND

-  Site Boundary
-  2 km buffer
-  MRS Special Areas
-  Regional Ecological Linkages
-  DBCA Legislated Lands and Waters
-  Environmentally Sensitive Areas

FIGURE 6
Conservation
Areas

Project: DVW-PP4005
 Author: PZ
 Date: 08/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:25000 @A4
 CRS: GDA2020 / MGA zone 50

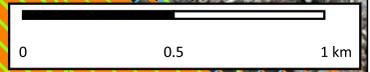
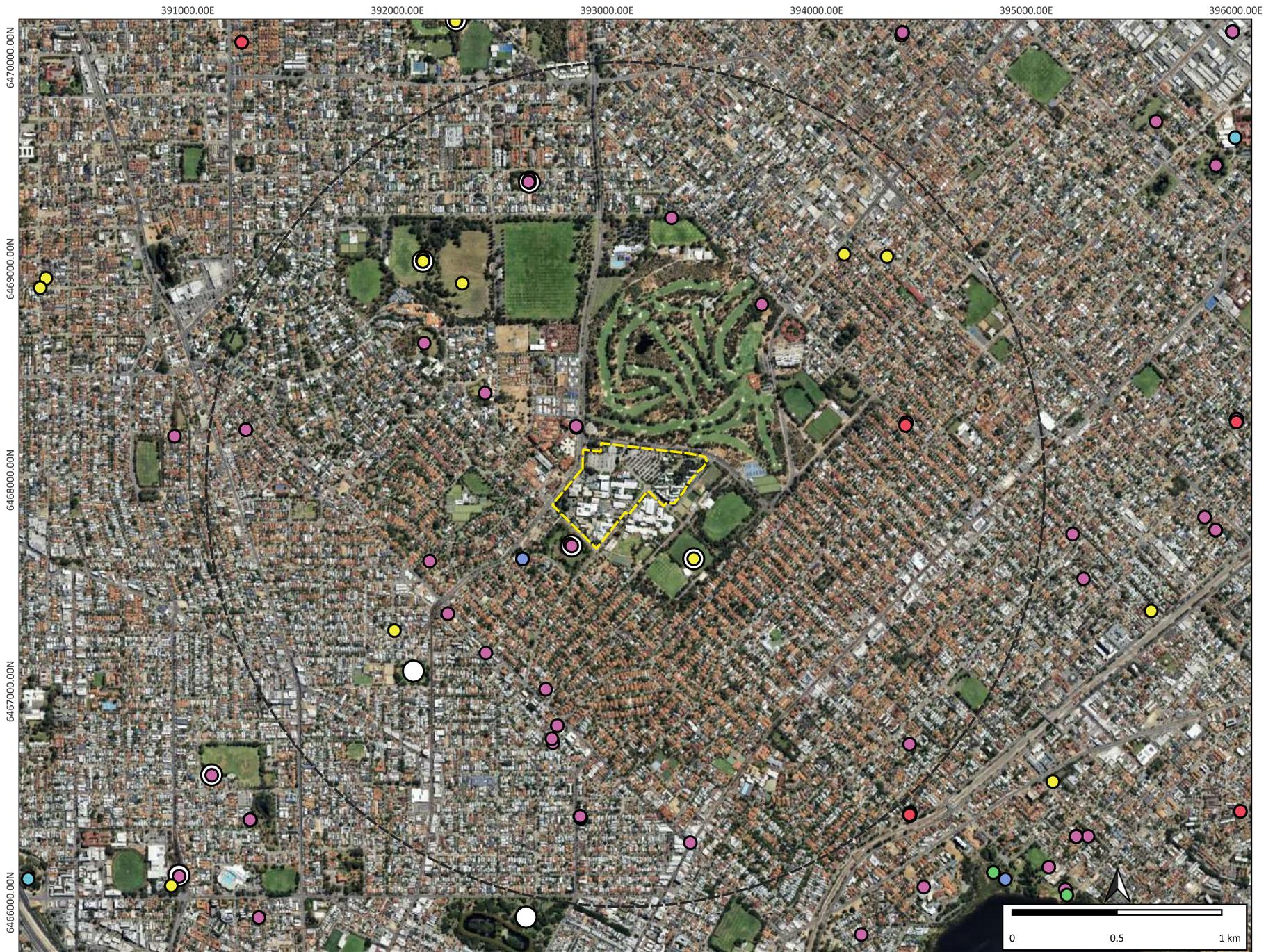


Image source: Google Earth Satellite (2025)
 Data sources: MRS Special Areas (DPLH-022), Regional Ecological Linkages (WALGA), DBCA Lands & Waters (DBCA-011), Environmentally Sensitive Areas (DWER-046)



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LEGEND

-  Site Boundary
-  2 km buffer

DBCA Threatened and Priority Fauna Database Records

-  Endangered
-  Vulnerable
-  Priority 3
-  Priority 4
-  Migratory Species
-  Conservation Dependent
-  Other Specially Protected Fauna
-  Black Cockatoo Roost

FIGURE 7

Fauna

Project: DVW-PP4005
 Author: PZ
 Date: 08/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:25000 @A4
 CRS: GDA2020 / MGA zone 50

Image source: Google Earth Satellite (2025)
 Data sources: Black Cockatoo Roosts (DBCA, 2022 Black Cockatoo Database Search), Fauna Records (DBCA, 2022 TPFA Database Search)

392800.00E

393000.00E

393200.00E

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6468000.00N

6467800.00N



LEGEND

- Site Boundary
- Carnaby's Cockatoo Potential Foraging Habitat**
- Low Value
- Chewed Marri Nuts

FIGURE 8a
 Carnaby's Cockatoo Foraging Habitat

Project: DVW-PP04005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:2500 @A3
 CRS: GDA2020 / MGA zone 50

392800.00E

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6468000.00N

6467800.00N



LEGEND

Site Boundary

Forest Red-tailed Black Cockatoo
Potential Foraging Habitat

Low Value

Chewed Marri Nuts

Forest Red-tailed Black Cockatoo
Sightings

FIGURE 8b
 Forest Red-tailed
 Black Cockatoo
 Foraging Habitat

Project: DVW-PP04005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:2500 @A3
 CRS: GDA2020 / MGA zone 50

392800.00E

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6467800.00N



LEGEND

Site Boundary

Trees with DBH > 500 mm
(Tree No.)

● Hollow Present

● No Hollows

Observation

● Boobook Owl in Hollow

FIGURE 9
 Corymbia & Eucalypt
 Trees with DBH
 > 500 mm

Project: DVW-PP04005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:2500 @A3
 CRS: GDA2020 / MGA zone 50

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LEGEND

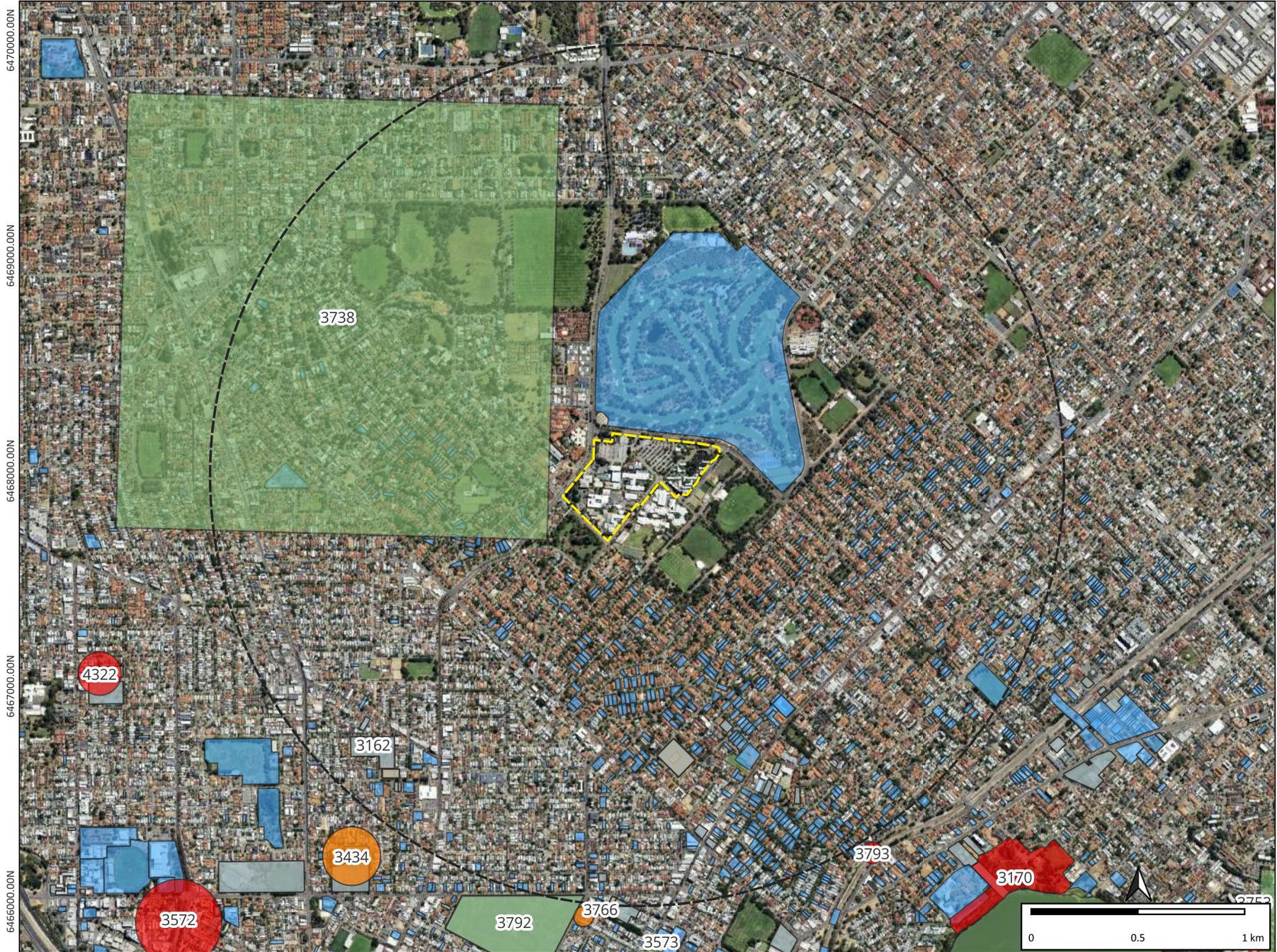
- Site Boundary
- Trees that meet Roosting Criteria (inc. Tree No.)
- Areas Considered Most Suitable for Potential Roosting

FIGURE 10
Potential Roosting
Habitat

Project: DVW-PP04005
 Author: PZ
 Date: 09/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:2500 @A3
 CRS: GDA2020 / MGA zone 50

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LEGEND

- Site Boundary
- 2 km buffer
- Aboriginal Cultural Heritage**
 - Registered Sites
 - Lodged Sites
 - Historic Sites
- Other Heritage**
 - State Heritage Places
 - Local Heritage Places

FIGURE 11

Heritage

Project: DVW-PP4005
 Author: PZ
 Date: 08/12/2025
 Ver: 3
 Doc.: DVW-PP4005-EAMS_001_mb
 Scale: 1:25000 @A4
 CRS: GDA2020 / MGA zone 50

Image source: Google Earth Satellite (2025)
 Data sources: Aboriginal Cultural Heritage (DPLH-098, DPLH-099, DPLH-100), State Heritage Places (DPLH-006), Local Heritage Places (DPLH-008)

APPENDIX 1

Master Plan





LEGEND

- 1 **Creative Hub Plaza:** A park and flexible plaza space for events situated under existing fig trees
- 2 **Retained canopy:** Significant and mature trees along Alexander Drive
- 3 **Retained campus buildings:** Adaptive re-use of the Library, Administration and WAAPA
- 4 **Shared street:** A slow street connection which reflects the plaza feel of the campus and prioritises pedestrian movement
- 5 **Pedestrian link:** A secondary pedestrian link retained from the existing campus movement network
- 6 **School forecourt and bus stop:** An open space landing with a new bus stop for both primary and high school students
- 7 **Urban primary school:** A new multi storey urban primary school situated alongside Mount Lawley Senior High School
- 8 **Central boulevard:** A tree lined boulevard and primary north-south connection through the site
- 9 **Central apartments:** Apartment sites connected directly to open spaces and urban activity
- 10 **Local business:** Small cafe or commercial opportunity on the ground floor of apartment buildings
- 11 **Linear park connection:** Open space and green entry from Alexander Drive with tree retention
- 12 **Alexander Drive:** Left-in left-out vehicle connection
- 13 **Mixed use development:** Prominent development on the northern corner with apartments and opportunities for small-scale retail and convenience uses
- 14 **Cultural Garden:** A central gathering space with strong viewlines and links throughout the site
- 15 **Parkside residential:** Townhouses and terraces amongst parks, green links and slow residential streets
- 16 **Linear park and playscapes:** A strong east-west green connection with a variety of amenities and experiences for walking, play, gathering and discovery
- 17 **Student Village:** Partially retained Student Village
- 18 **Lake Park:** A tranquil and nature play park for local residents centred around a waterbody and gum trees
- 19 **Central Avenue interface upgrades:** A new continuous footpath to Central Avenue and development setbacks to allow for tree retention
- 20 **Re-located bus stop:** Proposed relocation of the existing bus stop to the school forecourt location

APPENDIX 2

Precinct Structure Plan

LEGEND

Precinct Structure Plan Area

REGIONAL RESERVES

Other Regional Road

Public Purposes - Special Uses

LOCAL RESERVES

Public Open Space

Public Purpose - Education

District Distributor Road

ZONES

Mixed Use

Residential

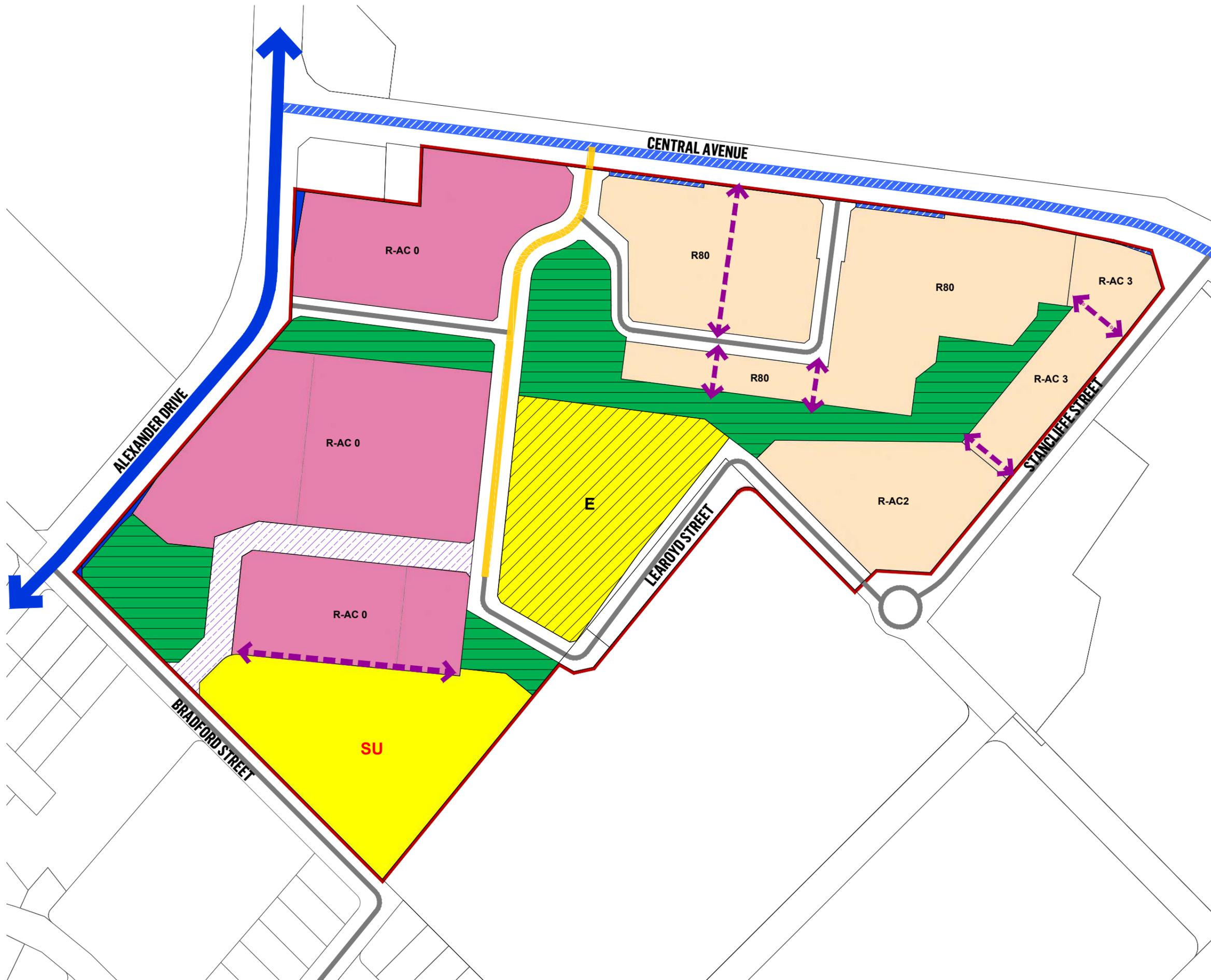
OTHER

Neighbourhood Connector Road

Access Street

Pedestrian Priority Street

Key Pedestrian Link



Precinct Structure Plan Map - Part 1

ECU Mount Lawley Precinct Structure Plan

Level 8, 1 William Street | Perth WA 6000 Australia | +61 8 9346 0500 | URBIS Ltd | ABN 50 105 256 228

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CLIENT

DevelopmentWA

1:2,500 @ A3
0 10 20 50m



PROJECT NO.
P0048633
DRAWING NO.
17.1

DATE
20.11.2025
REVISION
C

APPENDIX 3

Survey Effort



LEGEND

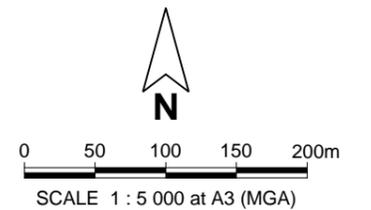
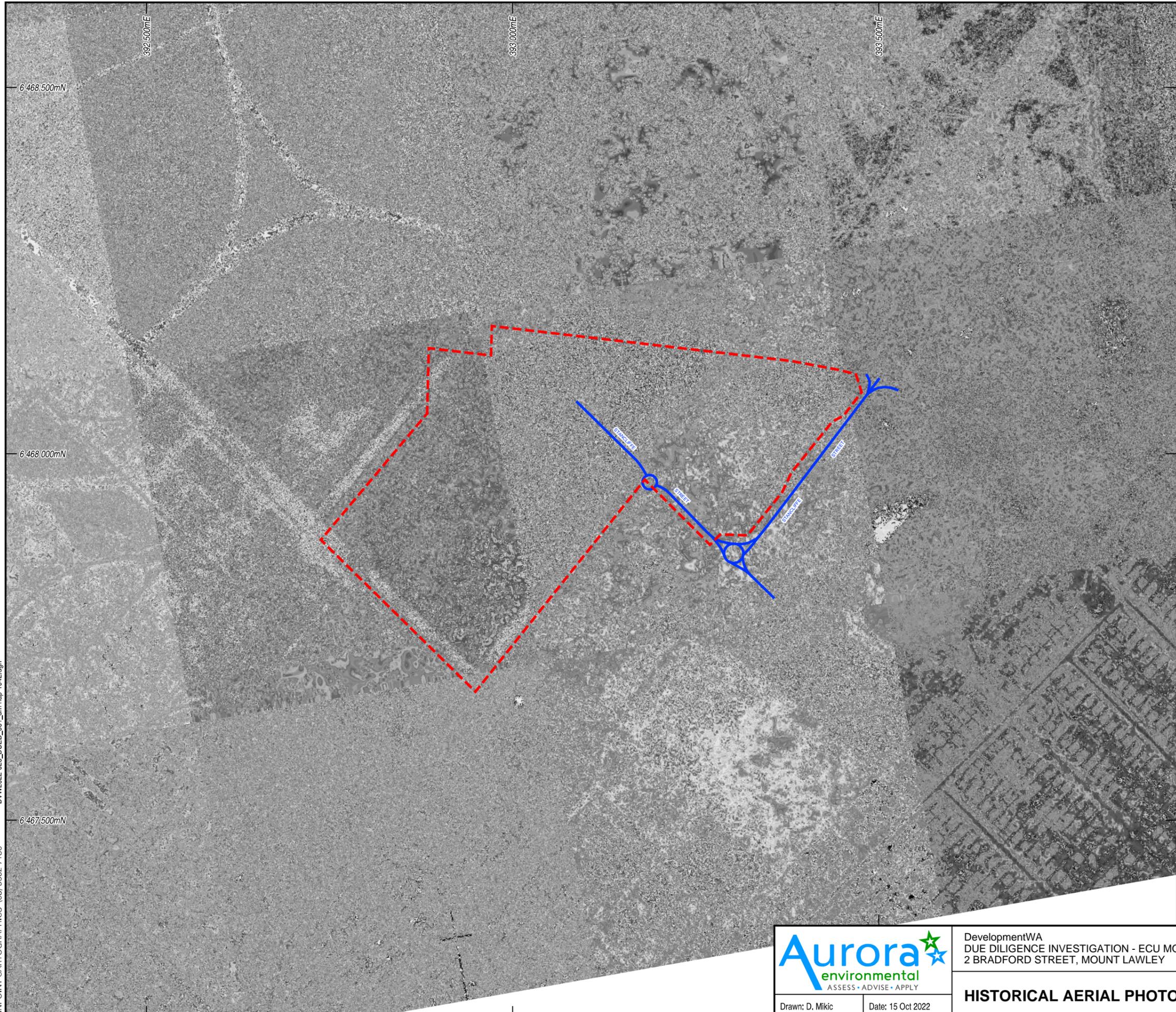
- Survey Area
- Track Log

ATTACHMENT 1
Survey Effort

Project #: DVW-PP04005
 Author: PZ
 Date: 02/10/2025
 Ver: 01
 Doc. #: DVW-PP04005-BCADV-001_ch_V1
 Scale: 1:2500 @A3
 CRS: GDA2020 / MGA zone 50

APPENDIX 4

Aerial Photographs



- Legend**
- - - Site Boundary
 - Current Road Alignment

PINPOINT CARTOGRAPHICS (08) 9562 7136 DWV2022-028_DUED_001_dmr-Hap-1942.dgn

6 468 500mN

392 500mE

6 468 000mN

393 000mE

393 500mE

6 467 500mN

AERIAL PHOTOGRAPH SOURCE: Landgate, flown 1942.

Aurora
 environmental
 ASSESS • ADVISE • APPLY

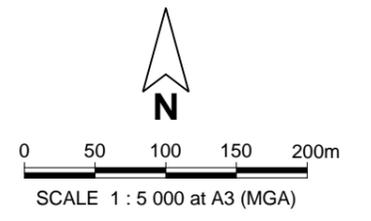
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
 DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
 2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 1942

Appendix

Job: DVW2022-028



Legend
 - - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: Landgate, flown March 1961.

PINPOINT CARTOGRAPHICS (08) 9562 7136
 D:\2022-028_DUED_001_dmr-Hap-1961.dgn

Aurora environmental
 ASSESS • ADVISE • APPLY

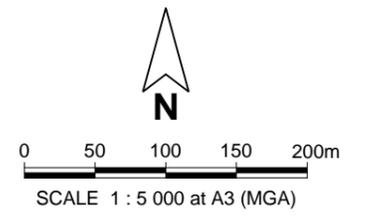
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
 DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
 2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 1961

Appendix

Job: DVW2022-028



Legend
- - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: Landgate, flown July 1970.

PINPOINT CARTOGRAPHICS (08) 9562 7136 DWV2022-028_DUED_001_dmr-Hap-1970.dgn

Aurora 
 environmental
 ASSESS • ADVISE • APPLY

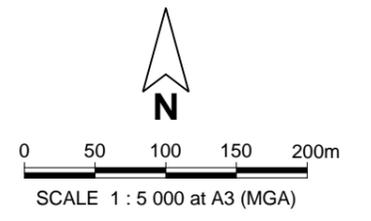
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 1970

Appendix

Job: DVW2022-028



Legend
- - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: Landgate, flown September 1979.

PINPOINT CARTOGRAPHICS (08) 9562 7136
D:\2022-028_DUED_001_dmr-Hap-1979.dgn

Aurora 
 environmental
 ASSESS • ADVISE • APPLY

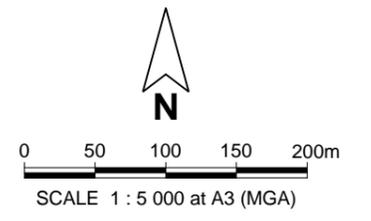
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 1979

Appendix

Job: DVW2022-028



Legend
- - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: Landgate, flown June 1985.

PINPOINT CARTOGRAPHICS (08) 9562 7136 DWV2022-028_DUED_001_dmr-Hap-1985.dgn

Aurora 
 environmental
 ASSESS • ADVISE • APPLY

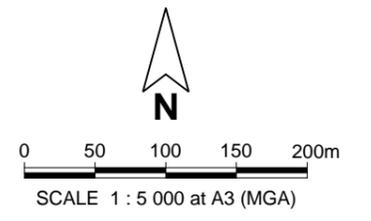
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 1985

Appendix

Job: DVW2022-028



Legend
- - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: Landgate, flown February 2000.

PINPOINT CARTOGRAPHICS (08) 9562 7136 DWV2022-028_DUED_001_dmr-Hap-2000.dgn

Aurora 
 environmental
 ASSESS • ADVISE • APPLY

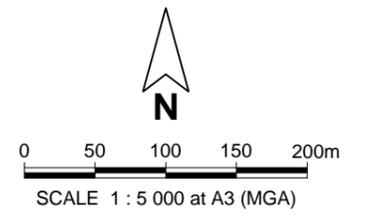
Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 2000

Appendix

Job: DWV2022-028



Legend
 --- Site Boundary

AERIAL PHOTOGRAPH SOURCE: NearMap, flown December 2008.

PINPOINT CARTOGRAPHICS (08) 9562 7136 DWV2022-028_DUED_001_dmr-Hap-2008.dgn

Aurora environmental
 ASSESS • ADVISE • APPLY

Drawn: D. Mikic Date: 15 Oct 2022

DevelopmentWA
 DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
 2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 2008

Appendix
 Job: DWV2022-028



0 50 100 150 200m
SCALE 1 : 5 000 at A3 (MGA)

Legend
- - - Site Boundary

AERIAL PHOTOGRAPH SOURCE: NearMap, flown February 2015.

D:\2022\028_DUED_001_dmr\Map-2015.dgn
PINPOINT CARTOGRAPHICS (08) 9562 7136



Drawn: D. Mikic Date: 15 Oct 2022

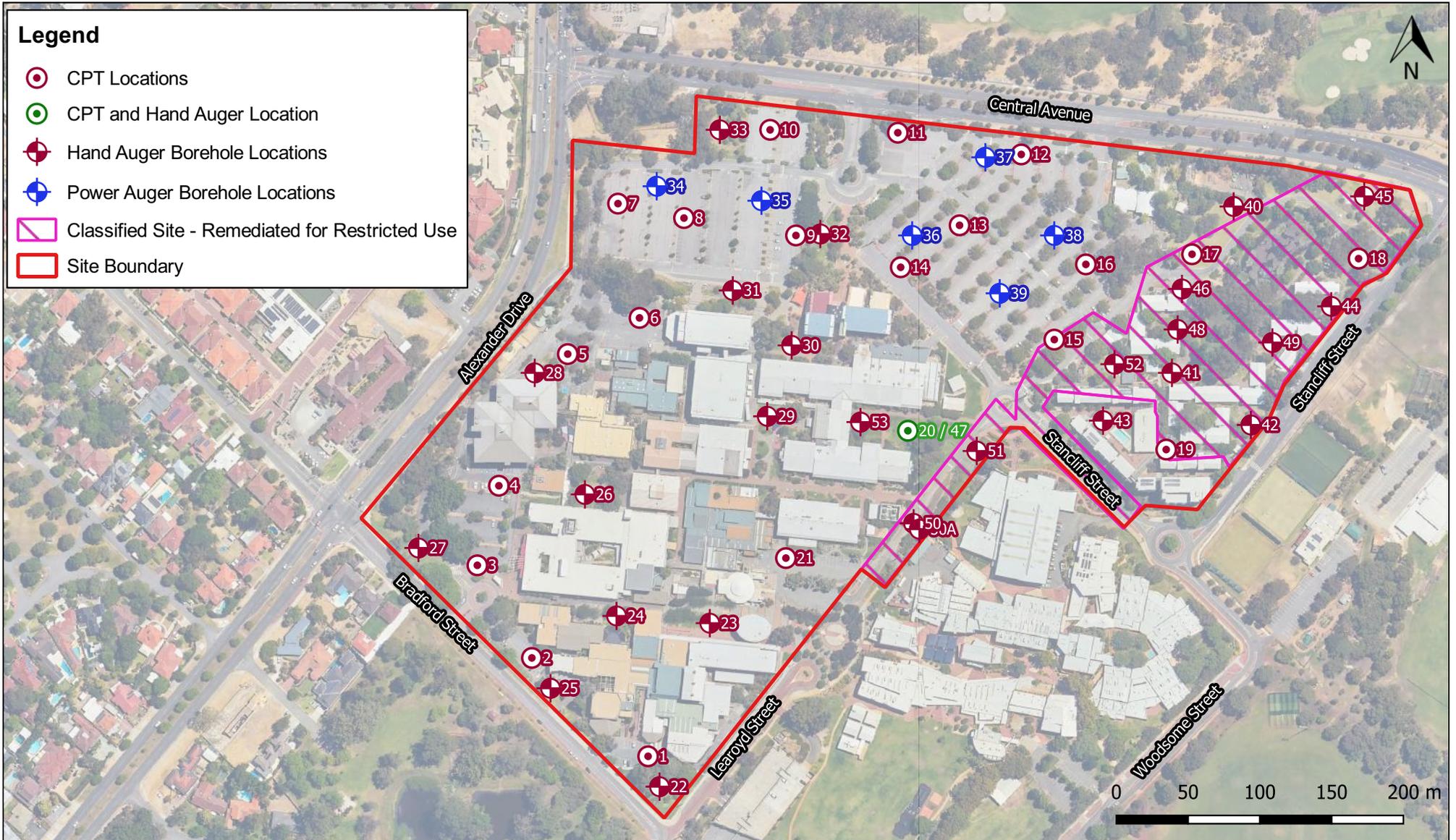
DevelopmentWA
DUE DILIGENCE INVESTIGATION - ECU MOUNT LAWLEY CAMPUS
2 BRADFORD STREET, MOUNT LAWLEY

HISTORICAL AERIAL PHOTOGRAPH - 2015

Appendix
Job: DVW2022-028

APPENDIX 5

Douglas Partners (2022) Core Penetration Test Locations



Test Locations
Proposed Multi-Residential Development
Central Avenue, Mount Lawley, WA

CLIENT: DevelopmentWA

PROJECT: 216618.00
 Drawing No: 1
 REV: 0
 DATE: 14/11/2022

APPENDIX 6

Desktop Search



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 01-Sep-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	47
Listed Migratory Species:	28

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	33
Commonwealth Heritage Places:	1
Listed Marine Species:	31
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area	In feature area
Empodisma peatlands of southwestern Australia	Endangered	Community may occur within area	In buffer area only
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species

[\[Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding known to occur within area	In feature area
MAMMAL			
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus geoffroi Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
PLANT			
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat likely to occur within area	In feature area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat may occur within area	In feature area
Banksia mimica Summer Honey-pot [82765]	Endangered	Species or species habitat may occur within area	In feature area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat may occur within area	In feature area
Conospermum undulatum Wavy-leaved Smokebush [24435]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diuris drummondii Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area	In feature area
Drakaea elastica Glossy-leaved Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area	In feature area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Macarthuria keigheryi Keighery's Macarthuria [64930]	Endangered	Species or species habitat may occur within area	In feature area
Synaphea sp. Fairbridge Farm (D.Papenfus 696) Selena's Synaphea [82881]	Critically Endangered	Species or species habitat may occur within area	In feature area
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat may occur within area	In feature area
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
SHARK			
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area	In feature area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
Listed Migratory Species			
			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Migratory Marine Species

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area	In feature area
Migratory Terrestrial Species			
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Defence		
Defence - SWAN BARRACKS [50171]	WA	In buffer area only
Unknown		
Commonwealth Land - [50757]	WA	In buffer area only
Commonwealth Land - [51510]	WA	In buffer area only
Commonwealth Land - [50746]	WA	In buffer area only
Commonwealth Land - [51903]	WA	In buffer area only
Commonwealth Land - [51902]	WA	In buffer area only
Commonwealth Land - [51422]	WA	In buffer area only

Commonwealth Land Name	State	Buffer Status
Commonwealth Land - [50768]	WA	In buffer area only
Commonwealth Land - [51503]	WA	In buffer area only
Commonwealth Land - [50769]	WA	In buffer area only
Commonwealth Land - [50812]	WA	In buffer area only
Commonwealth Land - [51423]	WA	In buffer area only
Commonwealth Land - [51424]	WA	In buffer area only
Commonwealth Land - [50783]	WA	In buffer area only
Commonwealth Land - [51133]	WA	In buffer area only
Commonwealth Land - [50765]	WA	In buffer area only
Commonwealth Land - [51157]	WA	In buffer area only
Commonwealth Land - [50808]	WA	In buffer area only
Commonwealth Land - [50804]	WA	In buffer area only
Commonwealth Land - [50770]	WA	In buffer area only
Commonwealth Land - [50771]	WA	In buffer area only
Commonwealth Land - [51138]	WA	In buffer area only
Commonwealth Land - [51509]	WA	In buffer area only
Commonwealth Land - [51508]	WA	In buffer area only
Commonwealth Land - [51507]	WA	In buffer area only
Commonwealth Land - [51506]	WA	In buffer area only
Commonwealth Land - [51505]	WA	In buffer area only
Commonwealth Land - [51504]	WA	In buffer area only
Commonwealth Land - [50776]	WA	In buffer area only
Commonwealth Land - [50803]	WA	In buffer area only
Commonwealth Land - [50807]	WA	In buffer area only
Commonwealth Land - [50806]	WA	In buffer area only
Commonwealth Land - [50772]	WA	In buffer area only

Name	State	Status	Buffer Status
Historic			
Inglewood Post Office	WA	Listed place	In buffer area only

Listed Marine Species	[Resource Information]		
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Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat likely to occur within area overfly marine area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Protected Area Name	Reserve Type	State	Buffer Status
Swan River	Management Area	WA	In buffer area only

Nationally Important Wetlands [\[Resource Information \]](#)

Wetland Name	State	Buffer Status
Swan-Canning Estuary	WA	In buffer area only

EPBC Act Referrals [\[Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Nava-1 Cable System	2001/510	Controlled Action	Completed	In buffer area only
Shenton Park Subdivision	2004/1479	Controlled Action	Completed	In feature area
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
South West Metropolitan Railway Project	2003/1175	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

APPENDIX 7

Aboriginal Cultural Heritage Inquiry System Search

Search Criteria

No Aboriginal Cultural Heritage (ACH) Register in Shapefile - Site Boundary

Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the *Aboriginal Heritage Act 1972*.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via <https://achknowledge.dplh.wa.gov.au/ach-enquiry-form> and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

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The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

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Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Register

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List of Aboriginal Cultural Heritage (ACH) Lodged

Search Criteria

No Aboriginal Cultural Heritage (ACH) Lodged in Shapefile - Site Boundary

Disclaimer

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Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Lodged

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List of Aboriginal Cultural Heritage (ACH) Historic

Search Criteria

No Aboriginal Cultural Heritage (ACH) Historic in Shapefile - Site Boundary

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Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Historic

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List of Heritage Surveys

Search Criteria

9 Heritage Surveys containing 9 Survey Areas in Shapefile - Site Boundary

Disclaimer

Heritage Surveys have been mapped using information from the reports and / or other relevant data sources. Heritage Surveys consisting of small discrete areas may not be visible except at large scales. Reports shown may not be held at the Department of Planning, Lands and Heritage (DPLH). Please consult report holder for more information. Refer to <https://www.wa.gov.au/organisation/department-of-planning-lands-and-heritage/aboriginal-heritage> for information on requesting reports held by DPLH.

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Access

Some reports are restricted.

Spatial Accuracy

The following legend strictly applies to the spatial accuracy of heritage survey boundaries as captured by DPLH.

Very Good	Boundaries captured from surveyed titles, GPS (2001 onwards) submitted maps georeferenced to within 20m accuracy.
Good / Moderate	Boundaries captured from GPS (pre 2001) submitted maps georeferenced to within 250m accuracy.
Unreliable	Boundaries captured from submitted maps georeferenced to an accuracy exceeding 250m.
Indeterminate	Surveys submitted with insufficient information to allow boundary capture.

List of Heritage Surveys

Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
21088	14106	A Socio-economic Anthropological Survey of People of Aboriginal Descent in the Metropolitan Region of Perth, Western Australia	Makin, C F	1969		Ethnographic	Metropolitan Region of Perth as shown in Figs. 1 and 2.	Very Good	Field and Desktop
21817	16317	Ballaruk (traditional owners) Aboriginal site recording project	Machin, Barrie	1994		Ethnographic	Whadjuk territorial boundaries the lands of the Ballaruk Peoples as shown in Figure 10.	Unreliable	Field and Desktop
21818	16458	Ballaruk (traditional owners of Whadjuk territorial boundaries the lands of the Ballaruk Peoples) Aboriginal site recording project : additional material	Machin, Barrie	1994		Ethnographic	Whadjuk territorial boundaries the lands of the Ballaruk Peoples as shown in Figure 10.	Unreliable	Field and Desktop
21909	16527	Study of groundwater - related Aboriginal Cultural Values on the Gngangara Mound, Western Australia	McDonald Edward	2005		Ethnographic	The Gngangara Mound area as shown in Figure 2 of the Fisher report attached as appendix 3 to the Estill report.	Very Good	Field and Desktop
21910	19401	Study of groundwater - related Aboriginal Cultural Values on the Gngangara Mound, Western Australia : Volume 1 restricted report	McDonald Edward	2005		Archaeological/ Ethnographic	Study of groundwater - related Aboriginal Cultural Values on the Gngangara Mound, Western Australia : Volume 1 restricted report	Moderate	Field and Desktop
21911	19406	Study of groundwater - related Aboriginal Cultural Values on the Gngangara Mound, Western Australia : Volume 2 inventory of registered sites restricted report for Department of Environment	McDonald Edward	2005		Archaeological/ Ethnographic	Study of groundwater - related Aboriginal Cultural Values on the Gngangara Mound	Moderate	Field and Desktop
102670	16126	Preliminary Report on the Survey of Aboriginal Areas of Significance in the Perth Metropolitan & Murray River Regions July 1985.	O'Connor, R	1985		Ethnographic	Perth Metropolitan & Murray River Regions. A roughly triangular region, with Yanchep National Park as the Northern point, Gidgegannup as the Eastern point and Pinjarra as the Southern point.	Indeterminate	Field and Desktop
103564	14104	An Archaeological Survey Project: The Perth Area, Western Australia. Apr 1972.	The University of Western Australia.	1971		Archaeological	The Perth Area. 103 site locations in 67 site groups were investigated.	Indeterminate	Field and Desktop



Aboriginal Cultural Heritage Inquiry System

List of Heritage Surveys

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Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
104379	13980	Australian Research Grants Scheme: Final Report on the Project the Swan Coastal Plain, Western Australia.	Hallam, S.	1986		Archaeological	The survey area comprises 396 DIA sites/heritage locations listed in Appendix, and distributed throughout the Coastal Plain and Darling Ranges and Darling Plateau, from Lancelin south past Mandurah, as shown in Figure 1. The survey area location and exten	Unreliable	Field and Desktop