

Introduction - The proposal and vision

This proposal is for a new Outdoor Recreational Facility, the Stromlo District Playing Fields (DPF) at Stromlo. The DPF, designed to provide a range of sporting and recreational facilities will include:

- a pavilion to provide changing rooms, amenities, and canteen facilities
- a synthetic playing field
- two natural grass sports fields
- car parking and associated internal roads
- a waste enclosure

The development of the proposal has been underway since the initial planning and design in 2020. Consultation with various stakeholders has been undertaken to determine the preferred range of facilities and layout since then and this proposal represents the desires of the community.

This proposal aims to provide much needed facilities for sporting groups and the local Molonglo community to support a diverse range of health and recreational activities.

Site description

This section provides an overview of what the site currently looks like. The purpose of this section is to set the scene, considering any potential constraints, and to describe the site in the context of the surrounding area.

	<i>Applicant response</i>
Block, Section, Suburb	Block 511, Section 0, Stromlo (part)
Block Area	14.5 Hectares
Zone (including overlays)	NUZ3 – Hills, Ridges and Buffer Zone
Current Use	<p>The proposed DPF is located at Stromlo Forest Park, adjacent the ACT Bushfire Memorial. In 2016, the Stromlo Forest Park Master Plan was approved – the Master Plan indicated that a portion of the Park was to be dedicated as a DPF.</p> <p>The site’s vegetation and habitat has been highly degraded by the land use history (bushfires) and associated vegetation modification.</p>
Proposed Use	<p>This proposal is for a new Outdoor Recreational Facility. The facility includes:</p> <ul style="list-style-type: none"> • A full sized turf AFL/cricket field • A twin synthetic combination sports field • A full sized rugby/soccer field • A sports pavilion <p>And the associated infrastructure.</p>

Access, Driveways and Parking

Access to the site is via the existing roundabout at the intersection of Swallowtail Road and Peter Cullen Way. This existing roundabout was tested for design vehicle turning paths and did not meet standard requirements. The roundabout design, being existing, was questioned with TCCS, who provided a design departure acceptance for this component of the project. The internal road extends from this intersection approximately 250m to the existing car park associated with the ACT Bushfire Memorial at the western extent of the site. The road is typically a two-way, two-lane access road with a 5m wide formation width. A footpath connecting to existing paths in the suburb of Wright to the east and Stromlo Park to the west is provided through the site. This path has been designed in accordance with TCCS requirements as a 'Main route' as indicated on the Transport Canberra 'CBR Cycle Routes' map.

A secondary access has been provided via the existing roundabout on Swallowtail Road and Banjo Patterson Avenue. This road also has a footpath on one side of the road increasing connectivity from the adjacent residential estate to the site.

Parking has been provided in line with TCCS requirements and in consultation with ACT Sport & Recreation to cater for the 'common' event and an overflow parking area has been nominated that would be suitable for a 'major event' that would take place in the 1% scenario. Disabled parking has been provided in line with the ACT Standard 3% (Non-urban zones technical specifications – paragraph 7.1).

The car park facilities for the Bushfire Memorial include 10 delineated car parks on the paved surface with additional space for approximately nine informal car parks on gravel. A car park that will augment this is also proposed. It is anticipated that major sporting events will be staggered from peak ACT Bushfire Memorial major event periods, so that the additional infrastructure can be taken benefit of.

Site constraints

Bushfire

The block has been identified as being within a bushfire affected area. A bushfire report and extensive consultation with ACT Fire & Rescue has taken place to ensure protection of the facility and the adjacent residential estate.

Heritage

At the Pre-Application Meeting held 15 October 2024 ACT Heritage provided advice on the proposal. Heritage were consulted previously and advised that they had provided advice on a number of occasions in relation the proposed DPF. They further advised that there were no outstanding heritage assessment requirements, subject to the development of an Unexpected Discovery Protocol (UDP) during construction.

Slope and drainage

There are varying grades across the site but generally between 5-10% and up to 25% in some locations. There is an ephemeral natural drainage

	<p>with a large upstream catchment, where its course through the site has changed directions over time, eroding its way to Holdens Creek. The current major channel that has formed through the centre of the site that conveys stormwater from the site towards Holdens Creek.</p> <p><i>Ecology</i></p> <p>An ecological study identified a few small patches that technically meet the criteria for EPBC Act and NC Act Box-Gum Woodland at the northern most end of the site, near Holdens Creek. These small patches have been exposed to significant historical modification, through grazing, pine plantation, clearing, native tree planting and invasion of weeds. Additionally, a riparian vegetation corridor 20 m wide, either side of the centreline of Holden Creek has also been allowed for, with a planting buffer.</p>
Environmental values	<p>This site, located within the south-east corner of the Stromlo Forest Park, has environmental and connectivity values and under this proposal, there will be more than 500m² of impervious surfaces across the site. As such, a detailed response to the Biodiversity Sensitive Urban Design Guide has been prepared for this DA, which has informed the design outcome.</p>
Surrounding Land Uses and Development	<p>The site is located within the south-east corner of the Stromlo Forest Park. It is bound by Cotter Road to the south, Swallowtail Road to the East and Holdens Creek, the Stromlo Leisure Centre and the Stromlo Bushfire Memorial to the north and west, respectively.</p> <p>The development of the proposed layout has been undertaken to ensure clear delineation of the different uses within Stromlo Forrest Park whilst also maintaining connections and interfacing with the existing aspects of the Park, including equestrian, cycling facilities, cross-country tracks and the Stromlo Leisure Centre. Under the proposal the existing Bushfire Memorial will be retained – and its interface with the playing fields has been incorporated into the design, with augmented parking.</p> <p>The existing roundabouts on Swallowtail Road that will be connected to will be retained, minimising disruption to adjacent residential properties.</p>
Additional Comments	<p>Click or tap here to provide any additional details about the site's context.</p>

Additional detail

Biodiversity Sensitivity Urban Design Guide

The proposed design has been developed to comply with the BSUD Guidelines in all its aspects. An ESO has been developed for the site, stormwater quality modelling and a tree assessment that informs the response. Refer response to the *Biodiversity Sensitivity Urban Design Guide*, the *Landscape Design Report*, and the *Civil Engineering Design Report*.

Heritage

At the Pre-Application meeting ACT Heritage provided advice on the proposal. In that advice reference was made to the inclusion of an Unexpected Discovery Protocol that would describe how any unexpected heritage discoveries during the works would be managed. In the cultural heritage survey and associated report '*Stromlo District Playing Fields: Aboriginal Cultural Heritage Assessment and Statement of Heritage Effects*' prepared by Past Traces in 2022 the Protocol was discussed and included at Appendix 2. All previous cultural heritage remnants on the site have been successfully removed and relocated in line with the ACT Heritage Council's requirements.

Urban Design Principles

The potential application of the Urban Design Guide was discussed at the Pre-Application meeting (15 October 2024). It was advised that while the proposal may not trigger the application of the Guide the applicant may consider supplying a response to the Guide. In this instance, while the allocation of public space is less than 1,000m², the relevant principles of the guide have been considered in the development of this proposal.

Noise Management

This proposal is for an outdoor recreation facility, however, not historically needed for district level playing field developments. Confirmation was received from the ACT EPA that a Noise Management Plan is not needed for the project and included within the submission.

Statutory considerations

The *Planning Act 2023* sets some mandatory considerations that need to be made during the DA process for certain or all development types.

While many of these will be considered by the Territory Planning Authority during the assessment and decision-making process, below are some key considerations that an applicant needs to also make during the design process.

If the site of the proposed development adjoins another zone—whether the development proposal achieves an appropriate transition between the zones.

Applicant response

This block is adjacent to a residential area – that is, across Swallowtail Road is residential. The subject block will offer a strong green, recreational area for the residents and will be clearly an asset to the Molonglo region.

The suitability of the proposed development in the context of the site and the site surrounds, including the permissible uses for those areas.

Applicant response

The Stromlo Forrest Master Plan, which included the District Playing Field, was approved by the ACT Government in 2016. The area nominated for the DPF, a large site, will allow for multiple playing fields, a sports pavilion and adequate parking/accessibility. The DPF will service the

surrounding community through the provision of much needed facilities for sporting groups and the local community.

The proposed DPF is suitable for this site and is permitted.

The interaction of the proposed development with any other adjoining or adjacent development proposals for which a development application has been submitted or development approval given.

Applicant response

Not Applicable

Non-Urban District Policy

Assessment Outcomes	There are no specific outcomes to consider.
Assessment Requirements	The proposal is in accordance with the Assessment Requirements for Stromlo: <ul data-bbox="834 661 1498 798" style="list-style-type: none">• The subject block is not Block 488.• The subject block is not within RC2.• the proposal does not include any agricultural use.• The proposal does not include tourist facility buildings.

Development Outcomes Report – Non-Urban Zones Policy

Non-Urban Zones Policy – Assessment Outcomes

Development proposals must demonstrate that they are consistent with the following assessment outcomes.

Theme- Urban Structure and Natural Systems

Assessment Outcomes	Outcomes Response
1. Biodiversity connectivity is maintained across the landscape.	<p>Attention has been paid to the maintenance of bio connectivity across the site – with current green corridors being retained across the site and extensive additional planting. Naturalisation of the proposed drainage channel, not only formalise the stormwater overland flow corridor and reduces erosion into Holdens Creek, but is of a geometry that can be adequately maintained. Additionally, the channel includes boulders and logs that will ensure habitat connectivity though the site, whilst reducing the stormwater velocity and erosion potential. Refer Landscape Management and Protection Plan and BSUD response for further details.</p> <p>The pervious area of the site is approximately 90%.</p>
2. Loss of native habitat and biodiversity is avoided and/or minimised.	<p>A Tree Assessment has been undertaken to highlight the value of individual trees and tree groups. A Landscape Management and Protection Plan has been developed. Together the documents give a clear picture of the trees on the site, the health and ecological value of the trees and the tree removal and replanting proposal. Refer also to the BSUD response for how loss of native habitat has been managed as part of the proposal.</p> <p>The proposal has been coordinated with the ACT Conservator of Flora and Fauna and ACT Sport & Recreation are currently negotiating offset plantings with the Conservator, in locations within Stromlo Park as outlined in the <i>Landscape Design Report</i>. The proposed outcome has also been coordinated with ACT Fire & Rescue and ACT Rural Fire Service. Relevant correspondence is included in this submission.</p>
3. The health and functionality of waterways and catchments is maintained, including through application of water sensitive urban design principles.	<p>The design has been developed to comply with the ACT Practice Guidelines for Water Sensitive Urban Design. In brief, it is proposed that stormwater is conveyed to appropriately sized at source bio-retention basins, before discharging into the main overland flow channel. Additionally, a natural basin is provided to improve water quality, adjacent the rectangular irrigated sports field. Gully pits and pipes within the roadways will collect runoff from the kerb and gutter, while swales will collect runoff from the sports fields and various landscaping areas. A main channel will convey runoff from the site towards the proposed detention basin at the northern end of the site via a diversion culvert. The diversion will be sized to capture the equivalent runoff from the Stromlo District Playing Fields site and detain it before discharging to Holdens Creek downstream. Stormwater modelling has been undertaken to determine the appropriate bio-retention and detention basins areas for the proposed development. Refer <i>Civil Engineering Design Report</i>.</p> <p>The Civil Engineers have undertaken a Hydraulic Impact Assessment to assess the hydraulic flood behaviour throughout the site, given the large upstream catchment, and potential impacts caused by the proposed development and demonstrate compliance with ACT-Municipal Infrastructure Standards 08-Stormwater (2021). Refer <i>Civil Engineering Hydraulic Impact Assessment Report</i>. The outcomes of this study has been coordinated with TCCS. Relevant correspondence is included in this submission.</p>

Theme- Site and Land Use

Assessment Outcomes	Outcomes Response
4. The functionality and usability of the development is appropriate for its intended purpose/use.	<p>This proposal is for an Outdoor Recreational Facility that consists of a number of playing fields and a pavilion. Care was taken during the development process to determine the preferred mix of sports through consultation with the relevant sporting groups and broader community. We are confident that we have accurately reflected their needs and design input in the proposal.</p>

5. The proposed use and scale of development are appropriate to the site and zone.	The District Playing Fields will service the surrounding community which has seen significant growth, including within the Molonglo region. The aim of the District Playing Fields will provide much needed facilities for local sporting groups and the local community to support a broad range of health and recreational activities.
6. Adverse impacts of development on surrounding uses (both within a site and on adjoining sites) is minimised.	This proposed development will not negatively impact on the surrounding residential areas. The Traffic Impact Assessment demonstrates that the minor increase in traffic and parking will not negatively impact on the surrounding area. Refer to the <i>Transport Impact Assessment Report</i> for further details.

Theme- Access and Movement

Assessment Outcomes	Outcomes Response
7. The functionality and layout of the development achieves appropriate connections with the surrounding area. This includes consideration of traffic flow, surveillance and active travel.	<p>The proposed development provides 208 car parking spaces, including 8 disabled car parking spaces. There is also an additional overflow parking area provided within the site to accommodate additional parking when required. The projected use of the DPF, the associated traffic implications of the proposal and the resulting parking needs is discussed in detail in the Transport Impact Assessment Report.</p> <p>The development will provide four secure staff bicycle parking spaces and 22 visitor parking spaces across the site.</p> <p>A pickup and drop off area has been provided for 12.5m coaches.</p> <p>All car parking spaces, and bicycle parking facilities will comply with relevant Australian Standards.</p> <p>The internal roadways will provide easy access to the majority of the key locations on the site, including the car parking areas, the existing Bushfire Memorial car park. The internal roadways will be two-way with 7m wide formation, with 3.5m wide lanes. Barrier kerb and gutter is proposed to capture runoff from the roadway and convey it to appropriate stormwater drainage infrastructure.</p> <p>Active travel will be supported through design. the site proposes high use of active transport with pathways connecting areas of interest throughout the site. A 3m wide path will connect the existing pathway and cycle network on Swallowtail Road to the western edge of the site and the Bushfire Memorial. This path has been designed in accordance with TCCS requirements as a 'Main route' as indicated on the Transport Canberra 'CBR Cycle Routes' map. A 1.5m wide path is also proposed for the along the northern internal roadway ensuring connection from the pavilion and larger car parking areas to the northern fields and onwards to the existing network at the Banjo Paterson Avenue intersection.</p> <p>For details refer <i>Transport Impact Assessment Report</i>.</p>
8. Access to, from and within the site permits safe and legible movement while catering for all users (including pedestrians). This includes consideration of vehicle manoeuvrability and access routes.	<p>Vehicle access to the site is proposed via two accesses on Swallowtail Road: one at the Swallowtail Road/ Peter Cullen Way roundabout and one at the Swallowtail Road/Banjo Paterson Avenue roundabout. The sight distances at both proposed access points have been assessed as in accordance with the relevant Australian Standard.</p> <p>As explained at Assessment Outcome 7, the development provides both internal and external active transport connections to cater for the expected pedestrian usage.</p> <p>The site is surrounded by high quality pedestrian and cycling infrastructure that will be adequately connected in this proposal, in line with the Transport Canberra 'CBR Cycle Routes' map.</p> <p>For details refer <i>Transport Impact Assessment Report</i>.</p>

Theme- Public Space and Amenity

Assessment Outcomes	Outcomes Response
9. The development achieves reasonable solar access and microclimate conditions to public areas and streets to support their use by the community.	This proposal will not detrimentally impact on solar access and microclimate conditions to the surrounding areas or to the areas within the site.
10. Any advertising or signs are suitable for their context and do not have a detrimental impact on the surrounding area (for instance, due to size or light emission).	<p>Signage on the site will be provided as follows:</p> <ol style="list-style-type: none"> 1. Warning signage of the Box-gum woodland areas at the northern extent of the site. 2. Warning signage (TCCS Standard) with regards to the proposed drainage channel and its high depth and velocity in major storm events. This was agreed in a Safety in Design workshop with TCCS. 3. Signage for parking in line with TCCS requirements. 4. Entry signage as indicated on the landscape drawings. <p>All of these proposed signs are non-obtrusive and for wayfinding and warnings, and not advertising.</p>

Theme- Built Form and Building Design

Assessment Outcomes	Outcomes Response
11. The height, bulk and scale of the development is appropriate for the desired zone policy outcomes.	<p>The majority of the proposed development is for a number of playing fields – these a low scale design.</p> <p>The proposal also includes a single storey, low scale sports pavilion – that has a central change room building with a bank of WCs and several showers. To one side of the change room is a separate food servery room with a change room for sporting officials. On the other side there will be a storage room for sporting and maintenance equipment. The total area of the development 310,98m².</p>

Theme- Sustainability and Environment

Assessment Outcomes	Outcomes Response
12. Roofed areas and hard surfaces aim to reduce urban heat island effects, minimise stormwater run-off and maintain ecosystem services. This includes consideration of water sensitive urban design measures.	<p>This proposal includes a roofed pavilion – this is the only roofed area on the large site. The roof has a significant eave to reduce heat around the buildings.</p> <p>Entry roads and car parking has been also provided at the most minimal extent. Landscaping with shrubs and trees to increase shading has been allowed for to reduce the heat island effect. The plantings were maximised, as advised by ACT Fire & Rescue and the <i>ACT Bushfire Standards (2023)</i>.</p> <p><i>A Hydraulic Impact Assessment</i> was undertaken in the development phase of this proposal. This resulted in the provision of bio-retention basins and a detention basin. Swales are provided, where possible to reduce piped networks and increase transpiration, whilst proposed and existing landscaped areas can take benefit of this infrastructure.</p> <p>Approximately 90% of the site is permeable.</p> <p>The proposal complies with WSUD Guidelines. Refer <i>Engineer's Hydraulic Impact Assessment Report</i>.</p>
13. Threats to biodiversity such as noise, light pollution, invasive species incursion or establishment, chemical pollution, or site disturbance are avoided or minimised through good design.	<p>This proposal will not have a detrimental impact on the biodiversity of the site as detailed in the BSUD response form. Lighting has been carefully designed where the proposed development, located near Stromlo Observatory is in a 'dark sky' area, which will follow strict light pollution restrictions to preserve natural darkness. Key measures include:</p> <ul style="list-style-type: none"> • Outdoor lighting will automatically turn off at 9:30pm to maximise natural darkness. • Adaptive lighting controls, such as dimmers, motion sensors, and timers, will reduce unnecessary light pollution. • Smart sensors and mode technology will be used for carpark and footpath lighting. • Outdoor fixtures will be strategically placed to minimize light spill into habitats while meeting sports lighting and security needs, with LED floodlights for playing fields shielded to prevent light spill. • Low-intensity, warm-coloured lighting (3000-4000K) will be used to minimise blue and UV wavelengths.

	<p>Noise will be managed during construction in accordance with EPA Requirements and management of the facility will be in accordance with ACT Sport & Recreation's Sportsground Conditions of Hire General Conditions of Hire - ACT Sport and Recreation (local ssr)</p> <p>Please note that ACT EPA has exempted this development from a Noise Impact Assessment. Refer to enclosed correspondence.</p>
<p>14. Minimise cut and fill to protect natural hydrological function and limit soil erosion and site disturbance.</p>	<p>This proposal minimises cut and fill. Refer Civil Earthworks and Erosion and Sediment Control plans. Endorsement from the ACT EPA will be sought during the DA process. Erosion control has been significantly improved by the proposal by design and incorporation of a naturalised channel with boulder and log elements that will encourage fauna habitat connectivity through the site.</p> <p>Offsite earthworks have been minimised as far as practicable, whilst appropriately conveying stormwater flows around the site.</p>
<p>15. The development considers and addresses site constraints, including heritage, natural features, topography, infrastructure and utilities.</p>	<p>Existing Telstra assets traverse the site. Engagement with Telstra is occurring in parallel to this DA process, using Telstra's process for the re-location of these assets.</p> <p>EPBC Box-gum woodland areas have been considered in the design.</p> <p>A 20m wide riparian buffer has been allowed for adjacent Holdens Creek, where no development is proposed.</p> <p>The requirements of the approved ESO have been incorporated in the design.</p> <p>Bushfire requirements have been incorporated in the design with the selection of trees and plants, and their spacing. This has been coordinated with ACT Fire & Rescue and ACT Rural Fire Service.</p> <p>Icon Water are being consulted with their standard process concurrently with this DA application.</p> <p>Topography has been carefully considered to minimise the need for retaining walls and earthworks, whilst meeting the needs of the proposed playing fields.</p> <p>Turning paths have been assessed and a design departure has been accepted by TCCS in relation to the non-conforming existing roundabout at Swallowtail Road and Peter Cullen Way.</p> <p>The velocity and depth of the operating proposed main drainage channel through the site has been carefully coordinated with TCCS, including a Safety in Design workshop, which resulted in the need for low fencing and signage to warn of high flood levels during major storm events.</p>
<p>16. Environmental risks, including topography, noise, bushfire, flooding, contamination, air quality or hazardous materials are appropriately considered for the development on the site.</p>	<p>Click here to enter response. Please refer to the instructional page for directions on what to include in an outcomes response.</p> <p>This block has been identified as within a bushfire affected area. Significant consultation has been held with both ACT Fire & Rescue and ACT Rural Fire Service to arrive at the proposed design outcome. This consultation is included in this submission.</p> <p>The ACT EPA has been consulted with regards to potential site contamination. Confirmation was received that the site is not on the Contaminated Sites Register, however an Unexpected Finds Protocol is to be in effect during construction.</p> <p>Likewise, the ACT Heritage Council requested that an Unexpected Finds Protocol is to be in effect during construction. All heritage artifacts have been assessed, removed and relocated off site, in coordination with ACT Heritage Council.</p>

Theme- Parking, Services and Utilities

Assessment Outcomes	Outcomes Response
17. Development provides appropriate end-of-trip facilities.	<p>The ability of coaches/buses has been incorporated in the design. Future bus routes can be accommodated by the proposed development.</p> <p>Vehicle and bicycle parking sufficiently caters for the development while minimising visual impacts from the street or public space. Parking has been provided in line with TCCS requirements and in consultation with ACT Sport & Recreation to cater for the 'common' event and an overflow parking area has been nominated that would be suitable for a 'major event' that would take place in the 1% scenario. Disabled parking has been provided in line with the ACT Standard 3% (Non-urban zones technical specifications – paragraph 7.1). Four bicycle parking spaces have also been provided, in excess of the requirements in the <i>Planning (Parks and Recreation Zones) Technical Specifications 2024</i>.</p> <p>Refer to the <i>Transport Impact Assessment</i> Report for details.</p> <p>A 3m wide path has been provided in accordance with MIS 05 'Active Travel Facilities Design' requirements for a 'Main route' and the Transport Canberra 'CBR Cycle Map'.</p>
18. Vehicle and bicycle parking sufficiently caters for the development while minimising visual impacts from the street or public space. This includes consideration of parking location, dimensions and number of spaces provided.	<p>The proposed development provides 208 car parking spaces, including 8 disabled car parking spaces. There is also an additional overflow parking area provided within the site to accommodate additional parking when required in an infrequent major event. The parking in the nominated overflow parking area will be managed by the major event organisers, similar to other facilities in the ACT. The projected use of the DPF, the associated traffic implications of the proposal and the resulting parking needs is discussed in detail in the <i>Transport Impact Assessment</i> Report.</p> <p>The development will provide 4 secure staff bicycle parking spaces and 22 visitor parking spaces across the site.</p> <p>A pickup and drop off area has been provided for 12.5m coaches with disabled accessibility from the pavilion.</p> <p>All car parking spaces and bicycle parking facilities will comply with relevant Australian Standards.</p>
19. Waste is appropriately managed on site without having a detrimental impact on the surrounding area.	<p>Waste will be stored in bulk bins and collected by a 12.5m front/rear-loading waste collection vehicles. The bin pad is located adjacent to the bus pick up / drop off zone. The waste collection truck will be able to enter and exit the site in a forward manner. The proposal is for a 3m³ waste hopper and 4 240L mobile garbage bins, enclosed in a 3.1m x 3.1m waste enclosure with a 1.8m high black chainmesh fence and gates. The design of the waste enclosure and the number of bins were advised by TCCS, based on similar facilities in the ACT. Additionally, the waste enclosure has been designed in accordance with TCCS MIS19a 'Sportsground Pavilions'.</p> <p>Endorsement for the post occupancy waste management facilities from TCCS will be sought as part of the DA process. Refer to enclosed completed <i>Waste & Recycling Management Plan Form</i> from the 'Development Control Code for Best Practice Waste Management in the ACT 2019' for details on the calculation of waste generation justifying the proposed waste provisions.</p>
20. The site is appropriately serviced in terms of infrastructure and utility services and any associated amenity impacts are minimised.	<p>Stormwater, potable water and sewer services have been designed with external provisions confirmed through TCCS and Icon Water, respectively. Electricity supply to the development has been confirmed by Evoenergy, with the provision of an on site substation at the site's entrance near the Swallowtail/Peter Cullen Way roundabout. Refer to enclosed relevant correspondence with TCCS, Icon Water and Evoenergy.</p> <p>The Telstra services within the site are currently being coordinated with Telstra for their relocation.</p>

Non-Urban Zones Policy – Assessment Requirements

Development proposals are required to meet all relevant assessment requirements – these are mandatory development controls.

Control	Assessment requirement	Is this control applicable?	For applicable controls, has it been met?	Outcomes response
Outdoor Recreation Facilities – NUZ2 and NUZ3	1. In NUZ2 and NUZ3 zones, outdoor recreation facility excludes motor sport facilities, racecourses, stadiums, showgrounds.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposal does not include motor sports facilities, racecourses, stadiums or showgrounds.
Gas connections	2. No new gas network connections are allowed to all new or existing Class 1-2 buildings as classified under the National Construction Code including redevelopments.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposal does not include any new gas connections.

Biodiversity Sensitive Urban Design (BSUD) Response – Version effective from 27/09/2024

Design Response – Biodiversity Sensitive Urban Design (BSUD) Guide

I confirm that I, Lucy Wenger of Capital Ecology was primarily responsible for designing the development proposal and/or completing the below **design response**.

I am an appropriately qualified person holding qualifications in Biology and Ecology (*ANU Bachelor of Philosophy (Science)(Hons)*) and can confirm that the development is consistent with the themes and design elements of the design guide(s)

Signature:



Date: 13 March 2025

❖ Note: a digital or wet signature will be accepted for the design response

How to apply BSUD

In considering BSUD, an applicant is required to complete the three steps of BSUD implementation. These are explained in detail within the [Advisory Note 13 – Biodiversity Sensitive Urban Design Methodology document](#). The three steps are:

- Step 1: Identify the biodiversity values that exist (or used to exist) on and surrounding the development site.
- Step 2: Identify the relevant biodiversity objectives you are required to achieve on the site.
- Step 3: Design the development to achieve site specific biodiversity objectives.

Steps two and three are supported by the **BSUD Guide**, and the **BSUD Implementation Advice Appendix**.

Steps	Design response
<p>Step 1: Identify biodiversity values Identify the biodiversity values that exist (or used to exist) on and surrounding the development site.</p>	
<p>Step A: Determine habitat and ecosystems</p> <p><u>Considerations in the response:</u></p> <ul style="list-style-type: none"> Describe and map the biodiversity values on and around the site, such as which habitat types or ecosystems (woodlands/grasslands, aquatic, riparian) or natural features (such as hollow bearing trees) are present and where. Describe the habitat condition, and identify areas that are in good / moderate / degraded condition (refer to BSUD Guide, or other methods such as PCT zone mapping) Outline the site's historical context. For example, whether it was previously developed, used for grazing, or relatively undisturbed and intact. Assess the site's future potential as habitat. It may include ecological corridors that currently have low biodiversity value but high connectivity significance and are suitable for future restoration. Consider the broader landscape context, for example the position of the site in the catchment. Indicate soil and topography properties. Describe any fauna surveys, or desk study records relevant to the development site. Describe the process you undertook and provide cross-reference to site analysis and relevant policies. 	<p>Based on surveys undertaken by Capital Ecology in 2022 and 2023, as well as online resources (e.g. ACTmapi, NSW BioNet, eBird, NatureMapr, Protected Matters Search Tool) and previous studies undertaken by Capital Ecology and others in the locality, the following biodiversity values were identified. For more detail, refer to the Ecological Values and Constraints Assessment (Capital Ecology, 2022¹) and supporting documentation (Capital Ecology, 2024²).</p> <p>VEGETATION CONDITION MAPPING AND HISTORICAL CONTEXT</p> <p>The climax (i.e. pre-1750) ecological community throughout the entirety of the study area would most likely have been ACT Plant Community Type (PCT) 'ACT16 – Yellow Box <i>E. melliodora</i> – Blakely's Red Gum <i>E. blakelyi</i> Tableland Grassy Woodland', based on the topography and the presence of remnant eucalypts in the surrounding landscape.</p> <p>The study area has been subject to significant vegetation clearance and modification associated with its former use as grazing land and then as part of the ACT Commercial Pine Plantation Estates. In addition, the entire study area was burnt during the 2003 Canberra bushfires. Following the bushfire, the remaining pine stems were pushed into windrows and burnt, and the cleared areas were then ripped along contours.</p> <p>The study area is now used for recreational purposes, hosting a section of the Bicentennial National Trail and Stromlo Forest Memorial Park. The vegetation is characterised by a planted canopy of Brittle Gums <i>Eucalyptus mannifera</i> and other planted local and non-local eucalypts, together with scattered naturalised pines in the northern portion of the study area, and a low-diversity derived grassland in the southern portion. The groundstorey across most of the study area is dominated by a low to moderate diversity of disturbance tolerant native grasses, forbs, and shrubs. The southwest corner of the study area is dominated by exotic pasture species such as <i>Phalaris aquatica</i>, <i>Paspalum dilatatum</i>, and Clover <i>Trifolium sp.</i>, and contains very low diversity. A few small patches of native dominant vegetation near Holden's Creek along the north-western boundary of the study area have a moderate to high diversity of native forbs and meet the listing criteria for EPBC Act/NC Act Box-Gum Woodland, present as derived native grassland.</p> <p>The vegetation across the study area, shown in Figure 1 and the Current Biodiversity Values Plan (Step 1A – Habitat), is characterised by:</p> <ul style="list-style-type: none"> Low/moderate diversity native groundstorey (6.11 ha; ACT16 Zone 3, part of which meets the definition of EPBC Act/NC Act Box-Gum Woodland – Derived Native Grassland). Low diversity exotic pasture (1.64 ha; ACT16 Zone 4). Planted native canopy with a low/moderate diversity native groundstorey (6.30 ha; ACT01 Zone 1, part of which meets the definition of EPBC Act/NC Act Box-Gum Woodland – Derived Native Grassland). Planted native canopy with an exotic groundstorey (0.15 ha; ACT01 Zone 2). <p>The study area therefore supports a total of 0.23 ha of EPBC Act/NC Act Box-Gum Woodland – Derived Native Grassland.</p>

¹ Capital Ecology (2022). *Ecological Values and Constraints Assessment of portions of Block 511, Stromlo, ACT*. Prepared for ACT Government, 17 May 2022. Authors: S. Thompson and R. Speirs. CE project no. 3104.

² Capital Ecology (2024). *Request for Further Information – Environmental Significance Opinion for the proposed Stromlo District Playing Fields, Block 511 Stromlo*. Prepared for CMTEDD, 8 February 2024. Authors: L. Wenger and R. Speirs. Project no. 3104.

Steps	Design response
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Figure 1. Vegetation condition and threatened ecological communities. Source: Capital Ecology (2024). Also refer to the Current Biodiversity Values Plan (Step 1A – Habitat).

THREATENED SPECIES

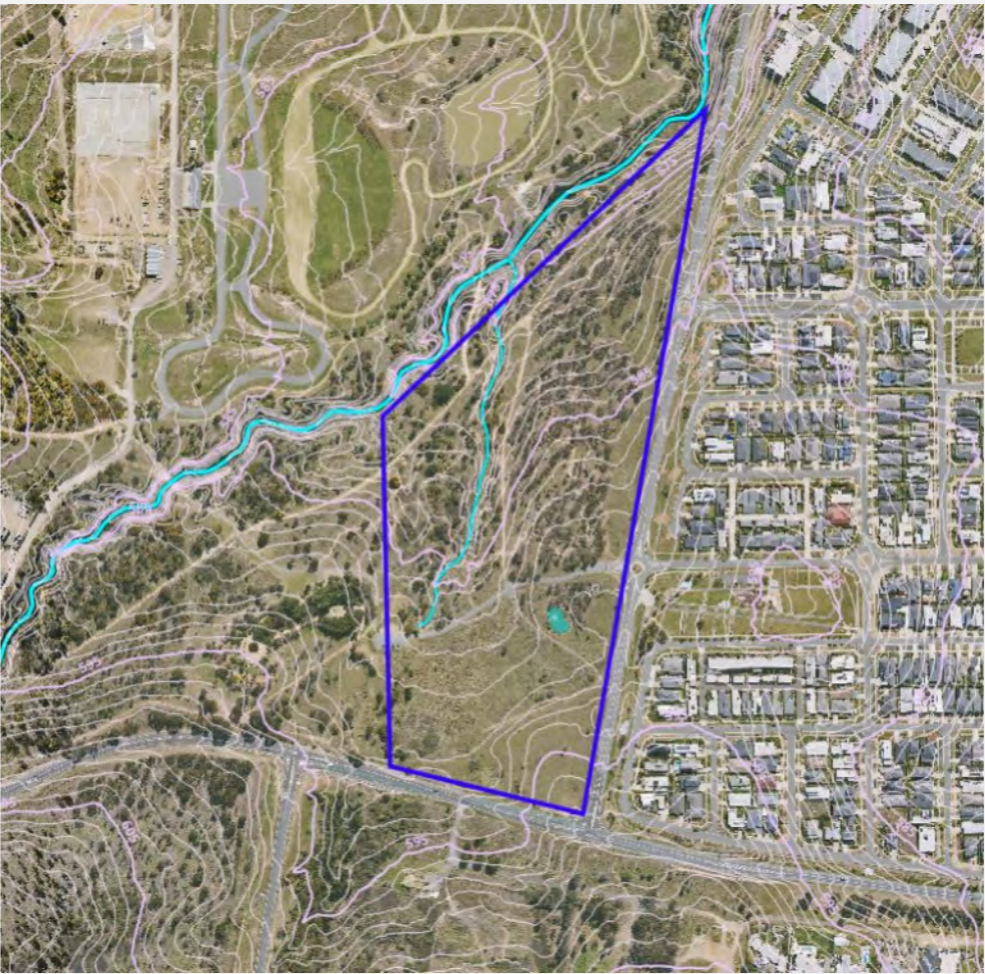
- **Flora:** No threatened flora species have been recorded in the study area or are considered likely to occur.
- **Birds:** **Scarlet Robin, White-winged Triller, Southern Whiteface, Diamond Firetail and Superb Parrot** have a moderate to high likelihood of occurrence in the study area, however given the high levels of disturbance in the study area and the simplicity of the vegetation structure, the habitat is likely to be of limited value to these species.
- **Reptiles / Mammals / Invertebrates:** No threatened reptiles, mammals and invertebrates have been recorded in the study area or are considered likely to occur.


HABITAT FEATURES



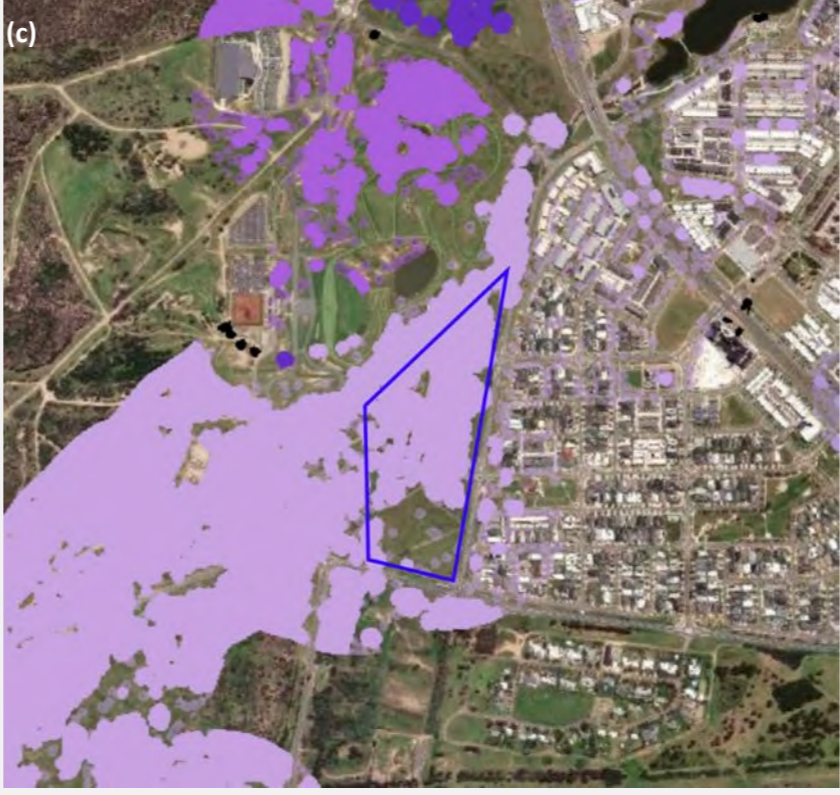

- **Planted exotic and native trees and shrubs** (Eucalypts, Wattles, Pines) provide limited foraging, connectivity, refuge, and nesting habitat for small woodland birds (including several threatened woodland birds) and other common fauna species. For tree size classes, refer to Table 2. No remnant trees or hollows are present.
- **Exotic and native groundstorey vegetation** provides foraging and refuge habitat for common reptiles, invertebrates, and birds, as well as Eastern Grey Kangaroos.
- **Dam and riparian areas** provide foraging, drinking, breeding and refuge habitat for common amphibians, reptiles, mammals, invertebrates, and birds.

TOPOGRAPHY, HYDROLOGY AND SOILS

The topography of the study area is gently sloping, with elevation ranging from 570 m Australian Height Datum (AHD) along the creek in the north-east of the study area, rising to 597 m in the south-eastern corner (Figure 2 and the Current Biodiversity Values Plan (Step 1A– Habitat)). An eroded ephemeral drainage line flows south to north into Holden’s Creek, located along the north-western boundary of the study area, which then flows into the Molonglo River. A small dam is also present in the south-eastern portion of the study area.

Steps	Design response
	<p>The study area falls within the Canberra Plains NSW (Mitchell) Landscape, characterised by Quaternary alluvium of loams and sandy clays with small areas of red-brown sands of source bordering dunes, over Silurian rhyolite and rhyodacite. No soil hazards have been identified, and no rocky habitat features are present.</p>  <p>Figure 2. 1m and 10m contours in light purple (ACT Government, 2004), with the dam, the ephemeral drainage line and Holdens Creek in light blue. The study area is indicated in dark blue.</p>
<p>Step B: Assess ecological connectivity</p> <p><u>Considerations in the response:</u></p> <ul style="list-style-type: none"> Based on the analysis on step 1a, describe an assessment of ecological connectivity of habitats on the site, with consideration of connectivity to adjacent sites and the wider landscape. This should include identification of core habitats (those which could enable a taxa group to persist within the habitat), and corridor habitats (those which allow a taxa group to travel through a site). Their size and general condition should be identified. Connectivity assessment should be carried out using field data collected in Step 1a, with additional connectivity barrier mapping undertaken on the ground. Known connectivity values can be supplemented and compared with the ACT Ecological Network Dashboard – This resource provides predicted habitat suitability and connectivity of habitats within urban Canberra. These are shown as potential core and connectivity habitat for 7 taxa 	<p>The Ecological Network Dashboard (END), aerial imagery, and the information gathered in step 1A, were used to assess the existing core habitats and ecological connectivity of the study area. Potential ecological connectivity areas are shown in Figures 3 and 4, as identified by the ACT Government’s Blue-green Network mapping and the Urban Habitat Connectivity Project (UHCP) layers found in the END. These are assessed in more detail below, with key connectivity areas summarised in the Current Biodiversity Values Plan (Step 1B – Connectivity).</p> <p>URBAN ECOLOGICAL NETWORK</p> <p>The ACT Government’s Blue-green network mapping (Figure 3) identifies almost the entire study area as being open space and reserve, and therefore has the potential to provide important habitat connectivity for native fauna.</p> <p>As illustrated in the Current Biodiversity Values Plan (Step 1B – Connectivity), the study area provides connectivity between:</p> <ul style="list-style-type: none"> Stromlo Forest Park to the north and west; Molonglo River Corridor to the north-east; vegetated gardens and parks in Holder to the south-east; and Narrabundah Hill and rural grazing land to the south-west. <p>Connectivity values for different species groups are addressed in further detail below.</p>

Steps	Design response
<p>groups.</p> <ul style="list-style-type: none"> The Ecological Network Dashboard also shows the Ecological Network, as presented in the Territory Plan. Describe the process used to establish these and provide cross-references to supporting material. 	<div data-bbox="1252 239 2448 1018" style="display: flex; align-items: center;">  <div data-bbox="2077 239 2448 1018" style="margin-left: 10px;"> <p>Legend</p> <p>ACT Blue-Green Network</p> <ul style="list-style-type: none"> Protected Conservation Areas Reserves - Pd and Pc <hr/> <p>Waterbodies</p> <ul style="list-style-type: none"> Waterbodies <hr/> <p>Urban Open Space</p> <ul style="list-style-type: none"> Urban Open Space <hr/> <p>Urban ACT Ecological Network</p> <ul style="list-style-type: none"> Urban ACT Ecological Network </div> </div> <p style="text-align: center;">Figure 3. Blue-green network mapping, including potential habitat areas and ecological corridors. The study area is outlined in dark blue.</p> <p>URBAN HABITAT CONNECTIVITY PROJECT (UHCP) – FRAGMENTATION MAPPING</p> <p>The UHCP Fragmentation Mapping layer provides more specific predictions of areas that could be structurally suitable either as core habitat or connecting corridor habitat for seven species groups that are present in urban Canberra. The most relevant species groups are discussed in more detail below and illustrated in Figure 4 and the Current Biodiversity Values Plan (Step 1B – Connectivity):</p> <ul style="list-style-type: none"> Small woodland birds: The UHCP mapping identifies all trees and shrubs in the study area as potential connectivity habitat for small woodland birds (Figure 4a). A diversity of native birds has been recorded in the study area (see EVCA), such as Superb Fairy-wren, Yellow-rumped Thornbill, Red Wattlebird and Black-faced Cuckoo-shrike, and several threatened species may also occur (see Step 1A). Given the simplicity of the vegetation structure, the study area is unlikely to provide significant habitat for woodland birds, however likely provides connectivity habitat. As such, native vegetation has been identified as priority to protect as part of a connected woodland network, and has been retained and/or restored where possible within the proposed design. Grassland reptiles: The UHCP mapping identifies the grassy open area to the south of the study area as core habitat for grassland reptiles (Figure 4b), however as detailed in the EVCA, the vegetation has a long history of modification and disturbance, with many Blackberry thickets present, and as such no longer represents suitable habitat for most grassland species. In addition, the patch is surrounded by significant barriers to movement, such as Cotter Road, Swallowtail Road, fire trails and access tracks, and is therefore isolated from other grassland habitat. No part of the study area is therefore considered core habitat or important connectivity habitat for grassland reptiles. Riparian fauna (amphibians, mammals and reptiles): The dam, ephemeral drainage line and Holdens Creek represent core habitat and connectivity habitat for amphibians and riparian reptiles such as Eastern Long-necked Turtle (Figure 4c and 4d). Other areas indicated in the UHCP mapping are unlikely to be core habitat for amphibians (Figure 4c), as amphibians require water for reproduction, and 'core habitat' is defined in the BSUD Implementation Advice as "an area which contains necessary structural elements of habitat (e.g. trees, water, grass) and which is of a sufficient size to effectively support an individual's survival and reproduction". These areas may however provide occasional connectivity habitat. Small to medium terrestrial mammals: No part of the study area is identified in the UHCP mapping as connectivity or core habitat for small to medium terrestrial mammals. The study area however provides foraging habitat for larger mammals such as Eastern Grey Kangaroos.

Steps	Design response
	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">  <p>(a)</p> </div> <div style="width: 50%;">  <p>(b)</p> </div> <div style="width: 50%;">  <p>(c)</p> </div> <div style="width: 50%;">  <p>(d)</p> </div> </div> <p>Figure 4. UHCP connectivity mapping of potential core habitat (opaque) and movement corridors (transparent) for (a) small woodland birds, (b) grassland reptiles, (c) amphibians, and (d) riparian mammals and reptiles. Separate, isolated patches are indicated by different shades of colour, with isolated remnant patches indicated in black. The study area is indicated in dark blue. Also refer to the Current Biodiversity Values Plan (Step 1B – Connectivity).</p>

Steps	Design response
	<p>SUMMARY – CONNECTED WOODLAND AND RIPARIAN NETWORKS</p> <p>Although the vegetation in the study area is relatively degraded with limited existing habitat value, the following areas and features have been assessed as being important in supporting connected woodland and riparian networks. These will be prioritised for protection and/or restoration where possible (see Step 3).</p> <ul style="list-style-type: none"> • small areas of moderate quality Box-Gum Woodland along the north-western boundary; • riparian area along the north-western boundary; • ephemeral drainage channel through the middle of the study area; and • patches of planted native trees, especially mature native trees (>50 cm diameter at breast height [DBH]).
<p>Step C: Assess threats to biodiversity</p> <p><u>Considerations in the response:</u></p> <ul style="list-style-type: none"> • Consider direct and indirect threats arising from your proposal. • Consider the proximity of your proposal to important values on and adjacent to your site. • Consider weed/pest incursions, light and noise pollution, as well as threats caused directly by humans such as increased disturbance by increased foot fall or vehicle traffic. 	<p>CURRENT THREATS</p> <ul style="list-style-type: none"> • <u>Weeds</u>: Seven plant species listed as ‘pest plants’ under the ACT <i>Pest Plants and Animals Act 2005</i> have been recorded within the study area, namely African Lovegrass, St John’s Wort, Paterson’s Curse, Blackberry, Briar Rose, Hawthorn, and Blue Periwinkle (refer to the EVCA). These and other common exotic pasture weeds have been progressively invading the areas of native groundcover and represent a threat to biodiversity values. • <u>Pest animals</u>: Indian Myna was recorded in the study area, and several other species are likely to be present, including European Rabbit, Red Fox, and Common Starling. • <u>Human disturbance</u>: Current disturbance by nearby residents, dog walkers, runners, cyclists, horse riders and vehicles likely impact the biodiversity values of the study area, such as the occurrence of fauna and the spread of weed species. • <u>Land management practices</u>: Past land management practices, notably its use as a pine plantation, have contributed to the degradation of biodiversity values in the study area. The inappropriate planting of Brittle Gum at high densities in an area of former Box-gum woodland has also resulted in a very simple vegetation structure that offers few habitat values. • <u>Bushfire</u>: The study area is in Bushfire Prone Land (ACTmapi), and therefore requires strict fuel standards, which may impact habitat values. • <u>Soils and erosion</u>: There are no soil risks or hazards known to occur in the study area that may impact biodiversity. <p>POTENTIAL FUTURE THREATS ASSOCIATED WITH THE PROPOSED DEVELOPMENT</p> <p>The proposed development involves the installation of synthetic and natural turf playing fields, access road, car park, pavilion and associated landscaping, creek rehabilitation, and bioretention basins.</p> <p>The following threats may arise or increase as a result of the proposed development:</p> <ul style="list-style-type: none"> • Direct loss of habitat associated with clearing and construction (see Table 1 for total areas of vegetation clearance and Table 2 for numbers of trees removed). • Additional impediments to fauna landscape movement during and following construction, such as roads, buildings, and tree removal. • Increased favourability of the study area to fauna species more tolerant of human disturbance. • Weed introduction and/or spread during construction and occupation. • Incidental damage or removal of retained native vegetation and habitat during construction. • Increased noise, vibration, light pollution, and dust during construction and occupation. • Potential risks of soil erosion, nutrient runoff and water quality decline. • Changed surface levels resulting in run-off that may flow into patches mapped as EPBC Act Box-Gum Woodland.
<p>Step 2: Identify biodiversity objectives</p> <p>Identify the relevant biodiversity objectives you are required to achieve on the site (from legislation, statutory environmental approvals and strategies including this guide).</p>	
<p>Step A: Identify biodiversity objectives</p> <p><u>Considerations in the response:</u></p> <ul style="list-style-type: none"> • Based on the information gathered in the previous steps, identify biodiversity objectives for the proposal site and the surrounding area. • Make reference to the Territory Plan Assessment Outcomes relevant to the BSUD guide. These are the overarching objectives of the proposal, and are supported by other objectives located throughout other action plans and strategies. • Reference key local policies and regulatory instruments (such as conservation strategies and action plans). These contain objectives and actions for species and ecosystems. These include, but are not limited to: 	<p>Site-specific biodiversity objectives have been developed reflecting the Territory Plan Assessment Outcomes, and with reference to the following policies and regulatory instruments:</p> <ul style="list-style-type: none"> • ACT Government (2024). <i>Planning and Development (Conditional Environmental Significance Opinion – Block 511, Stromlo – Stromlo District Playing Fields) Notice 2024</i>. Notifiable instrument NI2024-202, made under the Planning and Development Act 2007, s138AD. Craig Weller, delegate of the territory planning authority, 23 April 2024. • <i>Nature Conservation (Loss of Mature Native Trees) Conservation Advice 2018</i>. • ACT Government (2019). <i>ACT Woodland Conservation Strategy and Action Plans</i>. Environment, Planning and Sustainable Development Directorate, ACT Government Canberra. • ACT Government (2018). <i>ACT Aquatic and Riparian Conservation Strategy and Action Plans</i>. Environment, Planning and Sustainable Development Directorate, ACT Government Canberra. • ACT Government (2023). <i>ACT Biodiversity Sensitive Urban Design Guide</i>. Environment, Planning and Sustainable Development Directorate, ACT Government Canberra. <p>For each design element (e.g. <i>1.1 Urban waterways and catchments</i>), a site-specific target has been developed. These targets are listed below.</p> <p>OBJECTIVE 1: LOSS OF NATIVE HABITAT AND BIODIVERSITY IS AVOIDED AND/OR MINIMISED</p> <p>1.1 <u>Urban waterways and catchments:</u></p> <ul style="list-style-type: none"> • Minimise impacts to riparian habitat, implementing appropriate buffer zones. • Where impacts cannot be avoided, restore riparian habitat in areas where the creek channel is diverted. • Incorporate best-practice erosion and runoff control measures including WSUD principles.

Steps	Design response
<ul style="list-style-type: none"> - The ACT Native Grassland Conservation Strategy - The ACT Native Woodland Conservation Strategy - The ACT Aquatic and Riparian Conservation Strategy - ACT Threatened Species Conservation Action Plans • Summarise relevant conditions from statutory environmental approvals (such as granted Environmental Impact Statements). 	<p>1.2 Woodlands:</p> <ul style="list-style-type: none"> • Avoid loss of EPBC Act Box-Gum Woodland. • Establish buffer zones around patches of EPBC Act Box-Gum Woodland to minimise impacts from weeds, erosion and runoff. <p>1.3 Natural values and features: Minimise impacts to native fauna and threatened species habitat, and enhance habitat values through the landscaping design.</p> <ul style="list-style-type: none"> • Retain at least 50% of the mature native trees (>50 cm diameter at breast height [DBH]). • Retain at least 20% of non-mature native trees, ensuring a future supply of mature trees. • Incorporate a diversity of native tree, shrub, and groundstorey species in landscaping, providing habitat for native woodland birds and other fauna (including threatened species). • Incorporate habitat features such as logs and rocks in the landscape design of woodland and riparian areas to provide habitat for native fauna. <p>OBJECTIVE 2: BIODIVERSITY CONNECTIVITY IS MAINTAINED ACROSS THE LANDSCAPE</p> <p>2.1 Ecological connectivity: Protect core habitat and ecological corridors.</p> <ul style="list-style-type: none"> • Minimise impacts to core riparian habitat (i.e. Holdens Creek), and rehabilitate the eroded ephemeral creek to maintain connectivity and water flow. • Maintain ecological corridors between Stromlo Forest Park, Narrabundah Hill, Molonglo River and Holder. • Enhance connectivity values through landscaping and additional tree planting in the development area. <p>OBJECTIVE 3: THREATS TO BIODIVERSITY SUCH AS NOISE, LIGHT POLLUTION, INVASIVE SPECIES INCURSION OR ESTABLISHMENT, CHEMICAL POLLUTION OR SITE DISTURBANCE ARE AVOIDED OR MINIMISED THROUGH GOOD DESIGN</p> <p>3.1 Natural resilience:</p> <ul style="list-style-type: none"> • Manage and control weeds and pests in the study area, both during and after construction. • Select species for landscaping that are resilient to drought and climate change, and that are appropriate for the vegetation community where possible. <p>3.2 Protecting the ecological network: The design of the proposed development incorporates measures that minimise noise, light pollution and human disturbance, especially along the north-western boundary.</p>

Step 3: Integrate biodiversity objectives into design
 Based on the information gathered and analysed in steps 1 and 2 above, describe how the proposed design meets the Territory Plan Assessment Outcomes. This section is structured by the Design Themes and Design Elements, as found in the BSUD guide.

Theme and Territory Plan Assessment Outcome	Design elements	Design response
<p>Maintain and enhance nature <u>Territory Plan Assessment outcome:</u> → Loss of native habitat and biodiversity is avoided and/or minimised.</p>	<p>1.1 Urban waterways and catchments</p> <p><i>Describe how the proposed design protects and enhances the site's waterbodies, and their specific habitats and niches. Consider catchment scale impacts, water quality, habitats, and ecosystem function.</i></p> <p><i>Indicate mechanisms for achieving this element (this could include avoidance of higher value areas, employing buffer zones and other riparian / aquatic ecosystems protection mechanisms, and implementing WSUD elements etc).</i></p> <p><i>Provide cross-reference to site analysis and relevant conservation policies.</i></p> <p><i>Consider BSUD Guide sub-elements:</i> 1.1a Natural context 1.1b Water sensitive urban design 1.1c Topography and hydrology</p>	<p>1.1A NATURAL CONTEXT</p> <p>Holden's Creek (a first order stream) is located just outside the study area along the north-western boundary. The proposed design avoids direct impacts to the creek, with a minimum 30 m buffer from the proposed development to protect water quality, biodiversity and wildlife habitats of the waterbody and its surrounding landscape. As described in Section 5.5 of the BSUD Guide, first order streams should have a core protection area of >20m, which includes a riparian corridor of >20 m.</p> <p>The proposed design also includes the diversion and rehabilitation of an eroded ephemeral drainage line along the western boundary of the study area that flows into Holdens Creek. The rehabilitated drainage channel will incorporate plantings of a large diversity of native species such as <i>Carex appressa</i>, <i>Eleocharis acuta</i>, <i>Juncus usitatus</i> and <i>Lythrum salicaria</i>, as well as low native shrubs. The riparian vegetation corridor will be between 8 and 20 m wide, buffered by 10-30 m of dryland grass either side (i.e. the new riparian corridor plus the buffer is between 30 and 60m wide). The drainage channel will also be enhanced by habitat elements such as rocks and logs to provide fauna habitat.</p> <p>The dam will be removed, and its removal will follow fauna-sensitive dam dewatering procedures, relocating any fauna to a suitable waterbody nearby.</p> <p>1.1B WATER SENSITIVE URBAN DESIGN</p>

		<p>The proposed design incorporates several water sensitive urban design (WSUD) principles to avoid adverse impacts to Holden’s Creek and the Molonglo River. Measures include the following:</p> <ul style="list-style-type: none"> the placement of the buildings and hard surfaces away from Holdens Creek; predominantly permeable surfaces (approximately 90% of the proposed study area), allowing water infiltration; four bioretention basins and a sediment pond to slow water flow from the playing fields and car parking areas and to filter pollutants and sediment before discharge to Holden Creek; and a rehabilitated drainage channel (see above), which will help with surface runoff management, water infiltration and water quality, as well as providing riparian fauna habitat. <p>1.1c TOPOGRAPHY AND HYDROLOGY</p> <p>Changes to the topography and hydrology associated with the proposed development are unavoidable, as playing fields require large flat surfaces. Hydrological function will be maintained throughout the study area via a network of bioretention basins, sediment pond and drainage channel. A wide vegetated riparian buffer zone will minimise the visual impact on the landscape and enhance coexistence with ecological systems.</p>
	<p>1.2 Grasslands and woodlands</p> <p><i>Describe how the proposed design protects and enhances the site’s woodland and grasslands, and their specific habitats and niches, such as mature native trees or native dominant understorey.</i></p> <p><i>Provide cross-reference to site analysis and relevant conservation policies.</i></p> <p><i>Consider BSUD Guide sub-elements:</i></p> <p><i>1.2a Natural features</i></p> <p><i>1.2b Design enhancements</i></p>	<p>The proposed development design protects and/or restores the key ecosystem values in the study area, being the EPBC Act Box-Gum Woodland along the north-western boundary and the riparian habitat (see design element 1.1 above).</p> <p>Several patches of low-quality woodland, derived grassland and exotic pasture will not be retained. Refer to the EVCA, Table 1 and the Proposed Biodiversity Values Plan (Step 3A – Habitat) for more information.</p> <p>WOODLAND HABITAT</p> <p>The proposed design avoids all direct impacts to EPBC Act/NC Act Box-Gum Woodland (BGW), which is a key objective of the ACT Native Woodland Conservation Strategy.</p> <p>Two patches of BGW are located on the other side of the drainage channel from the playing fields, effectively creating a barrier which will help to limit human disturbance. As per the BSUD Guide, 20 m buffer zones have been established around these two patches of BGW to prevent indirect impacts to the patches, and these buffer zones will not be disturbed.</p> <p>Where the proposed development encroaches on the buffer zone of the third patch of BGW (i.e. the eastern patch near the irrigated field), a 5 to 10 m buffer zone will be planted around the patch with diverse native groundcover species to intercept water flow, sediment, nutrients and/or weed seed. Species to be planted include <i>Lomandra longifolia</i>, <i>Lomandra filiformis</i>, <i>Lomandra mutiliflora</i>, <i>Lomandra bracteata</i>, <i>Dianella longifolia</i>, <i>Dianella revoluta</i>, <i>Rytidosperma pallidum</i>, <i>Poa sieberiana</i>, and <i>Chrysocephalum semipapposum</i>. This will expand the patch of BGW and help to maintain the understorey floristic diversity of the patch, another key objective of the ACT Native Woodland Conservation Strategy.</p> <p>Other open space areas not used for playing fields will be restored and/or enhanced with plantings, to achieve a woodland vegetation structure. Due to bushfire constraints, only smooth barked trees will be planted, which will include Blakely’s Red Gum <i>E. blakelyi</i> (a characteristic species of Box-Gum Woodland) and Brittle Gum <i>E. mannifera</i>. The vegetation will be relatively open, enhancing existing planted eucalypts to obtain a diverse age structure where possible (e.g. in the northern triangle). There are no remnant trees in the study area, although there is one along Swallowtail Road that will be buffered and protected with an appropriate Tree Protection Zone as per the <i>Urban Forest Act 2023</i>.</p> <p>Due to bushfire considerations, large shrubs will largely not be included in the landscaping, however a diverse range of groundcovers and medium sized shrubs will be planted to create a more complex vegetation structure, which will favour a diversity of fauna species including small woodland birds.</p> <p>Woodland habitat will be enhanced by adding habitat features such as logs and rocks, as described above.</p>
	<p>1.3 Natural values and features</p> <p><i>Demonstrate how the design avoids or protects higher value areas and features (such as rocky outcrops, coarse woody debris, natural wetlands) not covered within 1.1 and 1.2.</i></p> <p><i>Include consideration for preserving natural processes such as pollination, tree maturation and seed dispersal.</i></p> <p><i>Outline the process used to establish these areas (if not done earlier). Provide cross-reference to site properties (hydrology,</i></p>	<p>The proposed design minimises impacts to native fauna and threatened species habitat and will enhance habitat values through the landscaping design. Please refer to the Proposed Biodiversity Values Plan (Step 3 – Habitat).</p> <p>MATURE AND NON-MATURE NATIVE TREE RETENTION</p> <ul style="list-style-type: none"> 50% of all mature native trees in the study area will be retained, with appropriate Tree Protection Zones established. 24% of all non-mature native trees will be retained, ensuring a future supply of mature trees. <p>Native trees will be retained and incorporated into the landscape design of the development as much as practicable. However, given the nature of the development (i.e. district playing fields), large treeless areas are required. As such, replacement trees will be planted across the study area in suitable locations, with replacement ratios being determined in consultation with the Conservator of Flora and Fauna (see Table 2). Given the limited available</p>

	<p>topography, soil quality) and their analysis in biodiversity context and relevant conservation policies.</p> <p>Consider BSUD Guide sub-elements: 1.3a Existing natural values 1.3b Natural processes</p>	<p>space, not all replacement trees will be planted within the study area, with additional locations for replacement plantings proposed within Stromlo Forest Park.</p> <p>ENHANCEMENT OF ECOLOGICAL VALUES</p> <p>Landscaping associated with the proposed development will apply the following principles:</p> <ul style="list-style-type: none"> Local native species will be planted to the fullest extent possible, as planting native species substantially increases the habitat value and landscape connectivity function, particularly for birds and other highly mobile fauna. Where appropriate, multiple vegetation strata will be planted (i.e. groundcover species, low to medium-sized shrubs, and trees) to increase structural complexity (refer to Section 6 of the BSUD Implementation Advice). This will provide shelter and foraging habitat for a diverse suite of native fauna (including small woodland birds) and discourage urban-adapted species and aggressive honeyeaters like Noisy Miners. Landscaping will incorporate habitat features such as bioretention basins, rocks and logs (see 1.2 above).
<p>Connect and extend nature. Territory Plan Assessment outcome:</p> <p>→ Biodiversity connectivity is maintained across the landscape.</p>	<p>2.1 Ecological connectivity</p> <p><i>Describe how the proposed design retains or enhances ecological connectivity. Consideration should include habitat in and adjacent to the site, and existing or potential corridors.</i></p> <p><i>The BSUD Guide provides guidance on what the likely minimum requirements are for habitat connectivity for key taxa groups and ecosystem types.</i></p> <p><i>Refer to the Table “Habitat requirements of common ACT ecosystems” in the BSUD Guide Implementation Advice, as well as the ACT Ecological Network Dashboard.</i></p> <p><i>The BSUD Guide also provides design guidance on specific features to avoid connectivity impacts or improve current connectivity. This includes waterbody crossing design, and guidance on road crossing structures.</i></p> <p><i>Outline the process used and provide cross-reference to site analysis and relevant conservation policies.</i></p> <p>Consider BSUD Guide sub-elements: 2.1a Habitats and corridors 2.1b Corridor features 2.1c Habitat features 2.1d Connectivity barriers</p>	<p>The proposed design maintains and enhances the ecological connectivity by retaining key habitat features and ecological corridors through the study area, as well as enhancing the existing areas through landscaping using diverse plant species. Refer to the Proposed Biodiversity Values Plan (Step 3 – Connectivity).</p> <p>PROTECTION OF KEY CONNECTIVITY HABITAT</p> <p>As summarised in Step 1B, several vegetation patches were identified as important for maintaining connectivity in the study area, notably areas adjacent to Holdens Creek and the rest of Stromlo Forest Park along the western boundary. These have all been prioritised for retention, with 100% retention of EPBC Act/NC Act Box-Gum Woodland, and 50% retention of mature native trees.</p> <p>As illustrated in the Proposed Biodiversity Values Plan (Step 3 – Connectivity), connectivity values for woodland birds and riparian species will be relatively unchanged as a result of the proposed development.</p> <p>MAINTAINING WOODLAND CONNECTIVITY</p> <p>As described in Step 1B, the study area potentially provides small woodland bird connectivity between Stromlo Forest Park, Molonglo River, Narrabundah Hill and vegetated gardens and parks in Holder. However, this connectivity is currently limited by the simplicity of the vegetation.</p> <p>A native vegetation corridor 20-50 m wide will be maintained along most of the western and northern boundaries of the study area, which will be enhanced with native tree plantings. This corridor has been strategically positioned to allow north-south movement of native fauna. The proposed design meets the parameters recommended by the BSUD Implementation Advice relating to the width of woodland ecological corridors (i.e. 40 m), especially when considered in the context of the broader landscape and adjacent vegetation in Stromlo Forest Park.</p> <p>Native trees will also be planted along Swallowtail Road, and although these will not meet the minimum requirements for an ecological corridor, will likely provide additional north-south connectivity for woodland birds. Limited east-west connectivity will be created through the study area via exotic tree plantings.</p> <p>MAINTAINING RIPARIAN CONNECTIVITY</p> <p>As described in design element 1.1 above, the riparian area along Holdens Creek will be avoided by the proposed development, retaining a riparian habitat corridor > 30 m wide. This will maintain riparian habitat connectivity for species such as Eastern Long-necked Turtles and frogs.</p> <p>Within the study area, the eroded ephemeral drainage channel will be diverted, formalised and rehabilitated, along with several bioretention ponds. The 8 to 30 m wide vegetated channel will provide core habitat for diverse reptiles and amphibians, and connect to Holdens Creek downstream. Rocks and logs will provide additional shelter for riparian fauna species, and facilitate their movement through the study area. This rehabilitated drainage channel incorporates corridor features as identified in Tables 2-5 in Section 6 of the BSUD Implementation Advice.</p>
<p>Minimise threats to protect nature Territory Plan Assessment outcome:</p> <p>→ Threats to biodiversity such as noise, light pollution, invasive species incursions or establishment, chemical pollution, or site disturbance are avoided or</p>	<p>3.1 Natural resilience</p> <p><i>Describe the design features that prevent weed and pest animal incursion and increase drought/ bushfire /climate change resilience (e.g., buffer zones, other physical landscaping features, plant species selection etc.).</i></p> <p><i>Consider if the design can introduce biodiversity, connectivity or permeability design features into bushfire and flood threat mitigation requirements.</i></p>	<p>WEEDS AND PEST ANIMALS</p> <p>As detailed in Step 1C, seven plant species listed as ‘pest plants’ under the ACT <i>Pest Plants and Animals Act 2005</i> were recorded within the study area. The construction works for the proposed development has the potential to temporarily increase the occurrence of the weed species already present, however appropriate vehicle hygiene and ongoing weed management measures will be implemented to minimise the risk of weed introduction and spread. The proposed development is unlikely to result in the introduction and establishment of additional invasive weeds. Blackberry patches in the study area will be controlled.</p> <p>Shrubs will be included in the landscaping to prevent any increased impacts of aggressive Noisy Miners on other native fauna species. Other pest species are unlikely to increase significantly.</p>

<p>minimised through good design/planning.</p>	<p>3.1a Weeds and pests 3.2b Natural threats</p>	<p>BUSHFIRE Given the high bushfire risk, the study area will be managed as an Inner Asset Protection Zone (IAPZ), and as described in the ACT Bushfire Management Standards, requires the overall fuel hazard to be maintained at low levels. This requires a tree canopy cover less than 15%, a 3–5 m separation between tree canopies and grass kept maintained at ≤200 mm height.</p> <p>Shrub plantings will be minimised, generally selecting smaller rather than larger shrubs, and do not form more than 10% of the ground cover. Where possible, shrubs will not be planted under trees.</p> <p>LANDSCAPING PLANT SPECIES SELECTION AND MANAGEMENT The proposal considers climate change (i.e. maximised tree coverage whilst keeping within Bushfire Management Standards, as well as maximised pervious area ~90% with soft landscaping), fire management and maintenance to provide a resilient landscape utilising a predominantly native landscape palette. The species selected will primarily consist of local and non-local natives that are known to grow well in the Canberra region and are resilient to drought. Exotic trees are restricted to areas directly adjacent the proposed roads and carparks, to provide shade for playing field users.</p> <p>Due to the bushfire management requirements, preference has been given to smooth-barked and evergreen trees in landscape plantings.</p> <p>Refer to the Landscape plan for more details.</p>
	<p>3.2 Protecting the ecological network <i>Describe how the proposed design establishes ongoing environment protection controls (such as erosion control, or zoning within the site) and addresses human and urban development impacts (such as increased disturbance, noise and light pollution).</i></p> <p>3.2a Human induced threats 3.2b Restored nature</p>	<p>As described previously, the positioning of the new buildings within the block (i.e. away from the western and northern edges) aims to minimise the ongoing impacts of human disturbance on the ecological values of the study area and nearby Stromlo Forest Park.</p> <p>Environmental protection controls, such as erosion control, run-off control, and invasive weed control, will be incorporated into the Construction Environmental Management Plan (CEMP) for the proposed development, to minimise possible detrimental impacts of human interaction with these areas.</p> <p>LIGHT POLLUTION Due to its proximity to Stromlo Observatory, the proposed development is within a “dark sky” area and is subject to strict light pollution restrictions. The design will include the following best practice light design principles, in accordance with the National Light Pollution Guidelines for Wildlife.</p> <ul style="list-style-type: none"> • Natural darkness will be maximised, with outdoor lighting automatically switched off at 9:30pm. • Adaptive light controls will reduce unnecessary light pollution, such as using dimmers, motion sensors and timers. • Proximity sensors and smart mode technology will be incorporated in external lighting facing the carpark and footpath. • Outdoor lighting fixtures will be strategically positioned and designed to minimise light spill into habitat areas, while still achieving the required sports lighting and security requirements. The LED floodlights for the playing fields will be shrouded to prevent light spill. • The lowest intensity lighting appropriate will be used, and with natural to warm colour temperatures (3000-4000K) to minimise blue and UV wavelengths. <p>NOISE Given the nature of the proposed development, it is expected that noise will only be significant while the playing fields are in use, which will only be intermittent. It is not expected that noise will be a significant threat to biodiversity, and as such no specific noise controls are proposed for the operational phase of the proposal.</p> <p>During the construction phase noise and vibration will be managed in accordance with the Construction Noise Management Plan which has been drafted, and once approved, will be implemented.</p> <p>HUMAN DISTURBANCE AND TRAFFIC As previously described, human disturbance will likely only be high when the fields are used for events. Human disturbance to the EPBC Act / NC Act BGW patches will be limited by the barriers created by the rehabilitated channel and the buffer plantings. Vehicle traffic will remain within the designated carpark areas.</p>
<p>Connect people to nature. <u>This Theme has no associated Territory Plan Assessment Outcome:</u> → This Theme assists in achieving the ACT Urban Design Guide’s aspirations relating to urban trees, landscaping, active travel, recreation,</p>	<p>4.1 Community stewardship <i>Describe how the proposed design features encourage people to care for their surrounding natural shared spaces.</i></p> <p><i>Consider BSUD Guide sub-elements:</i> 4.1a Co-design 4.1b Stewardship</p>	<p>N/A - the site will be managed by Sports and Recreation and Stromlo Forest Park. However, it is noted that hiring for the proposal will occur in accordance with ACT Sport and Recreation’s General Conditions of Hire.</p>

<p>public amenity and natural features as well as creating positive engagement with nature.</p>	<p>4.2 Interacting with nature</p> <p><i>Describe how the proposed design provides appropriate access to, and opportunities for interactions with the natural environment and cultural heritage, and balances this with the need to protect priority areas from disturbance.</i></p> <p><i>Consider BSUD Guide sub-elements:</i> 4.2a Respectful connections 4.2b Interactive infrastructure</p>	<p>The proposed design will provide opportunities for interactions with the natural environment via a network of paths connecting the car parking areas to the playing fields and cricket nets. The path network also includes a new connection to near the Eucumbene Drive / Cotter Road intersection.</p> <p>Paved areas for social gatherings have been incorporated into the area around the Pavilion. These areas will be attractive and be designed to promote interactions with nature, with seating and landscaping. Landscaping will enhance the sport field experience by surrounding it with trees, offering refreshing shade and an enjoyable environment for exercise and recreation.</p> <p>Priority conservation areas (i.e. EPBC Act Box-Gum Woodland) will have limited pedestrian access, with no new tracks going near or through this area.</p>
	<p>4.3 Environmental education</p> <p><i>Describe how the design provides opportunities for the residents to learn about natural environment and cultural heritage.</i></p> <p><i>Consider BSUD Guide sub-elements:</i> 4.3a Engagement and learning 4.3b Instilling natural values</p>	<p>The proposal showcases the natural values and features of the site with a predominantly native planting palette complimenting the adjacent native opens space areas.</p> <p>It is proposed to develop educational signage and install it at suitable locations on the edge of the EPBC Act Box-Gum Woodland areas. This signage will educate the community on the significant conservation values of these areas, why and how they are being protected, and how the community can assist in their long-term protection and conservation.</p> <p>The importance of the ephemeral creek in maintaining water quality and ecological values has been highlighted through the design, with strategic landscaping incorporating native sedges and groundcovers, as well as rocks and logs that provide habitat connectivity across the site.</p>

Table 1 - Habitat Impact Summary Data

Please use the below table to provide a summary of the Baseline and Proposed changes to habitat communities on the development site. Specify habitat type using ACT Plant Community Type (PCT) codes. Use PCT zone (condition) codes where possible, noting that not all PCTs have zones. This provides a concise habitat summary to aid assessment.






Baseline	Proposed					Notes
Habitat Community (Plant Community Type, or Plant Community Type Zone where applicable)	Total Ha present on site	Ha retained in existing condition	Ha retained and restored	Ha created	Ha lost	
ACT16 Zone 1 – Planted native vegetation – native dominant groundstorey – low/mod diversity	6.3	1.1		0.2	5.2	5.2 ha lost to construction area. 1.1 ha retained in existing condition in the northern triangle and EPBC Box-Gum Woodland patches 0.2 ha created in patches connected to drainage channel and bioretention basins (native canopy and groundcover plantings)
ACT16 Zone 2 - Planted native vegetation – exotic dominant groundstorey – low diversity	0.2	0.1		0.7	0.1	0.1 ha lost to construction area. 0.1 ha retained in existing condition in the south-western corner. 0.7 ha created along the southern and western boundaries adjacent to the ovals, consisting of native tree planting over dryland grass.
ACT16 Zone 3 – No canopy – native dominant groundstorey – low/mod diversity	6.1	0.5	1.1	0.8	4.5	4.5 ha lost to construction area. 0.5 ha retained along the western boundary. 1.1 ha restored in the northern triangle, consisting of planting of native trees into native-dominant groundstorey (therefore becoming equivalent of Zone 1). 0.8 ha created in scattered locations across the study area, consisting of planting of native groundcovers and low shrubs within the ephemeral drainage channel, bioretention basins, and EPBC Act Box-Gum Woodland buffer area. Coarse woody debris and rocks will also be added.
ACT16 Zone 4 - No canopy – exotic dominant groundstorey – low diversity	1.6	0	0.2	6.2	1.4	1.4 ha lost to construction area. 0.2 ha restored in the south-western corner, consisting of planting of native trees into exotic-dominant groundstorey (and therefore becoming equivalent of Zone 2). 6.2 ha created, consisting of irrigated ovals and dryland grass areas.
Buildings and hard/synthetic surfaces	0.3	0	0	3.8	0.3	Roads, buildings, paths, carparks, synthetic grass
Totals	14.5	1.7	1.3	11.6	11.5	

Table 2 - Native Tree and Shrub Impact Summary Data








Please use the below table to provide a summary of the proposed impacts to shrubs and trees on the development site.

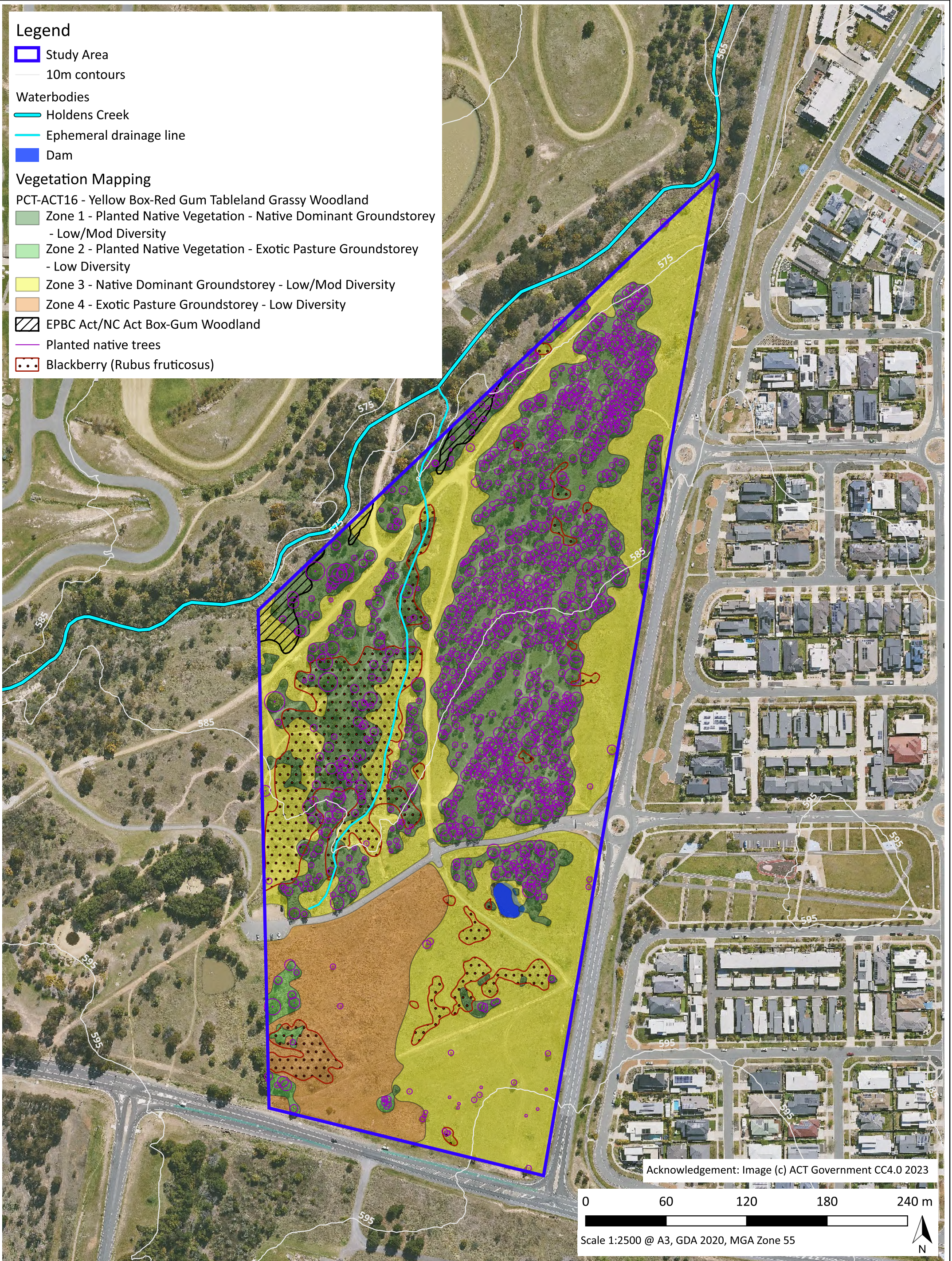
Class	DBH class (cm)	Total number present on site	Total number proposed for retention	Total % proposed for retention	Total number proposed for removal	Total % proposed for removal	Replacement ratios	Number of replacement plants required	Number of replacement plants proposed (Totals only)	Deficit of plants required (Totals Only)
Shrubs	<5	0	-	-	0	-	1:1	-	-	-
Trees	<5	1	1	100%	0	0%	1:1	-	-	-
Trees	5 - 20	553	120	22%	433	78%	1:3 + relocate as native mulch or at Conservator discretion	1,299	-	-
Trees	21 - 30	485	118	24%	367	76%	1:8 + relocate as coarse woody debris or at Conservator discretion	2,936	-	-
Trees	31 - 40	175	49	28%	126	72%	1:13 + relocate as coarse woody debris or at Conservator discretion	1,638	-	-
Trees	41 - 50	33	6	18%	27	82%	1:40 + relocate as coarse woody debris or at Conservator discretion	1,080	-	-
Trees	51+	10	4	40%	6	60%	1:90 + reinstate as vertical habitat structure or at Conservator discretion	540	-	-
Trees	100+	2	2	100%	0	0%	1:180 + reinstate as vertical habitat structure or at Conservator discretion	-	-	-
	Totals	1259	299	24%	959	76%	-	7,493	165 Native trees 3,309 Native Low/Medium Shrubs 4,607 Native groundcovers and grasses 3,408 Native Bioretention plants (sedges/macrophytes) 14,224 Native Creek/Swale Planting 7,337 Native Ephemeral/Creek Edge Planting 5,108 Native 'Buffer Planting' planted adjacent EPBC area.	

Legend

-  Study Area
-  10m contours
- Waterbodies**
-  Holdens Creek
-  Ephemeral drainage line
-  Dam

Vegetation Mapping

- PCT-ACT16 - Yellow Box-Red Gum Tableland Grassy Woodland
-  Zone 1 - Planted Native Vegetation - Native Dominant Groundstorey - Low/Mod Diversity
-  Zone 2 - Planted Native Vegetation - Exotic Pasture Groundstorey - Low Diversity
-  Zone 3 - Native Dominant Groundstorey - Low/Mod Diversity
-  Zone 4 - Exotic Pasture Groundstorey - Low Diversity
-  EPBC Act/NC Act Box-Gum Woodland
-  Planted native trees
-  Blackberry (*Rubus fruticosus*)



Acknowledgement: Image (c) ACT Government CC4.0 2023

0 60 120 180 240 m

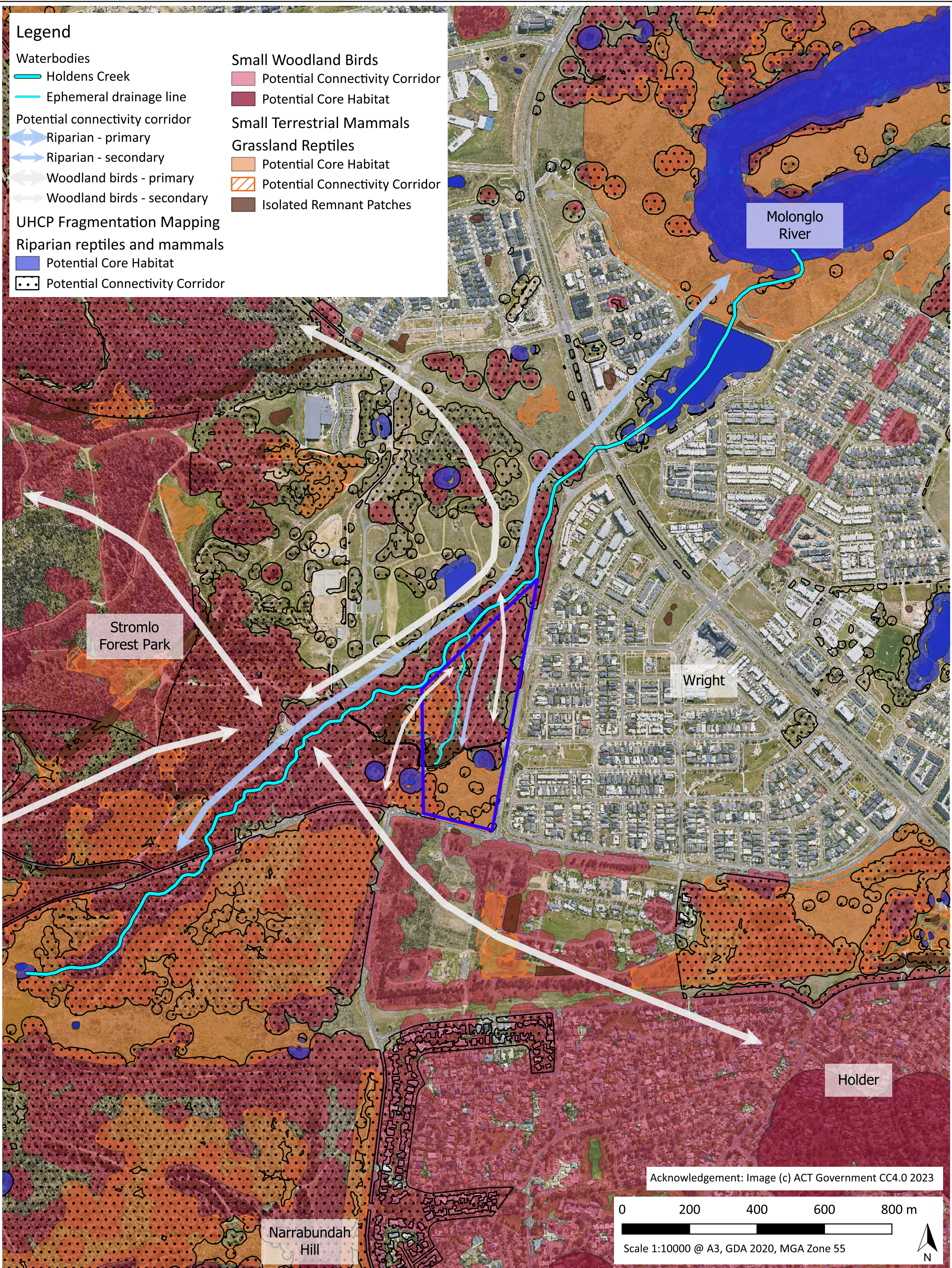
Scale 1:2500 @ A3, GDA 2020, MGA Zone 55



Current Biodiversity Values Plan (Step 1A - Habitat)

Capital Ecology Project No: 3400
Drawn by: Lucy Wenger
Date: 04/03/2025





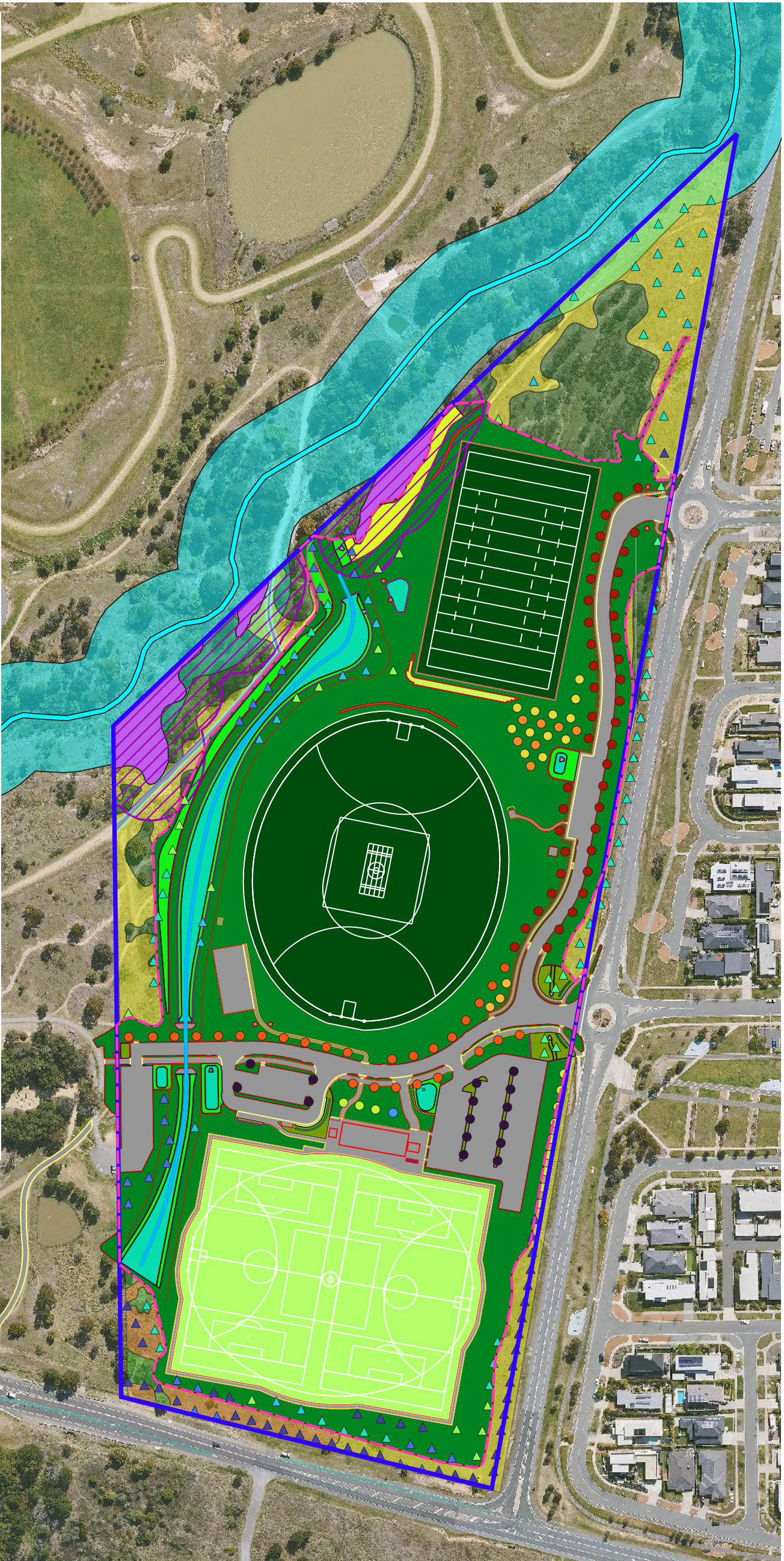
Current Biodiversity Values Plan (Step 1B - Connectivity)

Capital Ecology Project No: 3400
 Drawn by: Lucy Wenger
 Date: 07/03/2025

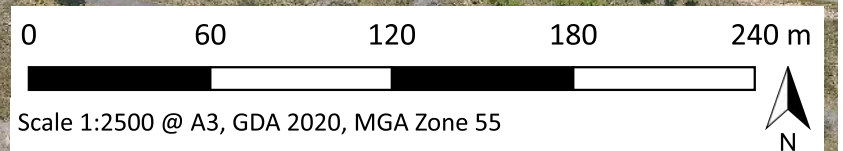


Legend

- Study area
- Disturbance area
- Waterbodies**
- Holdens Creek
- Diverted creek channel
- Holdens Creek_30m buffer
- Proposed native and exotic tree planting**
- Acer 'Autumn Blaze'
- ▲ Brachychiton populneus
- ▲ Casuarina cunninghamiana
- Davidia involucrata
- ▲ Eucalyptus blakelyi
- ▲ Eucalyptus mannifera
- ▲ Eucalyptus pauciflora
- ▲ Eucalyptus rossii
- Fraxinus excelsior
- Gleditsia triacanthos
- Lagerstroemia 'Natchez'
- Prunus serrulata
- Quercus palustris
- Zelkova serrata
- Proposed landscaping**
- Hard surfaces
- EPBC Act BGW buffer planting
- Native shrubs
- Native groundcover
- Native groundcover (swale/creek/bioretention)
- Dryland grass
- Irrigated turf
- Synthetic grass
- Existing Vegetation - protected or enhanced**
- PCT-ACT16 - Yellow Box-Red Gum Tableland**
- Grassy Woodland**
- Zone 1 - Planted Native Vegetation - Native Dominant Groundstorey - Low Diversity
- Zone 2 - Planted Native Vegetation - Exotic Pasture Groundstorey - Low Diversity
- Zone 3 - Native Dominant Groundstorey - Low Diversity
- Zone 4 - Exotic Pasture Groundstorey - Low Diversity
- EPBC Act/NC Act Box-Gum Woodland
- 20m buffer



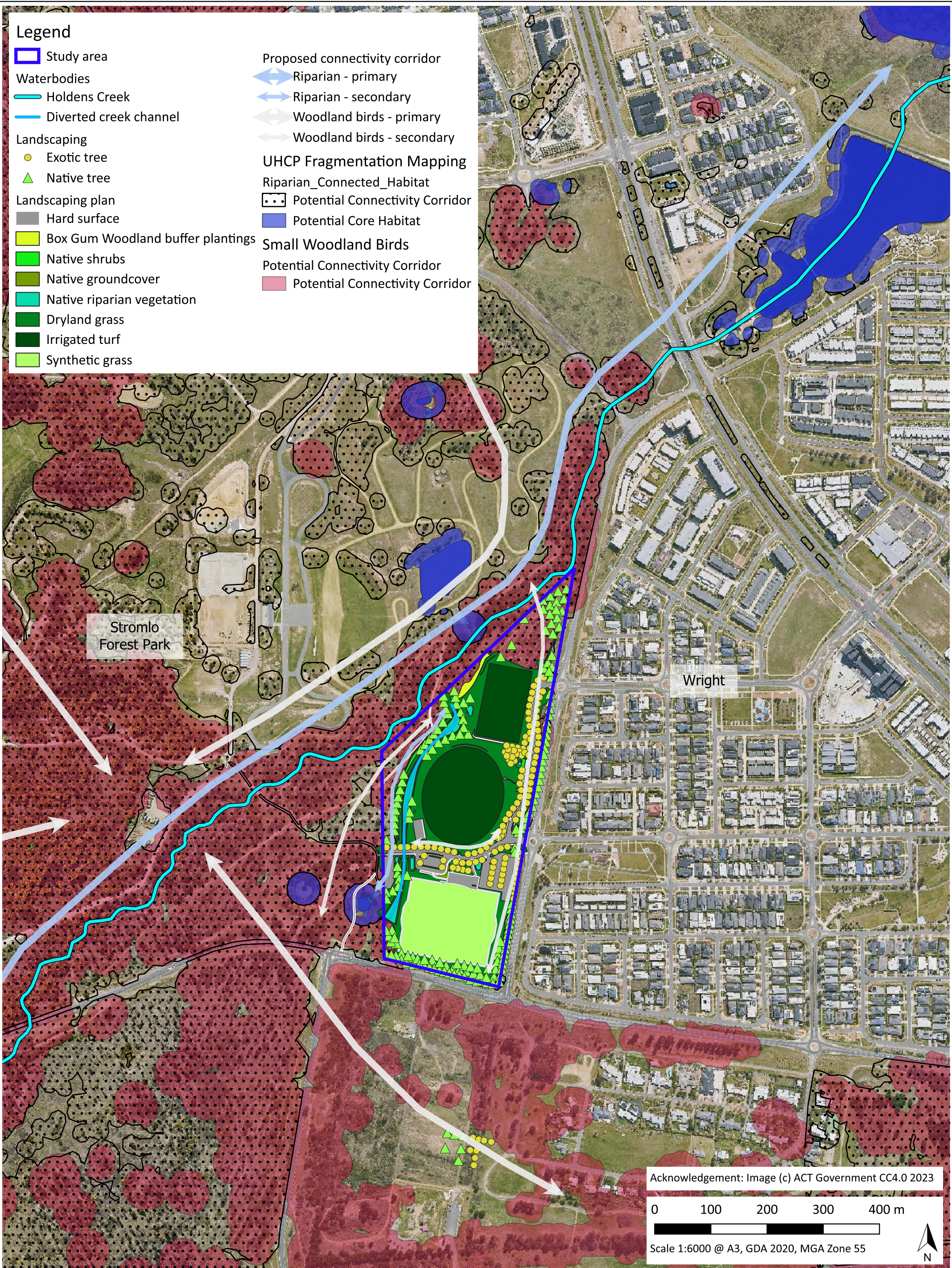
Acknowledgement: Image (c) ACT Government CC4.0 2023



Proposed Biodiversity Values Plan (Step 1A - Habitat)

Capital Ecology Project No: 3400
 Drawn by: Lucy Wenger
 Date: 06/03/2025



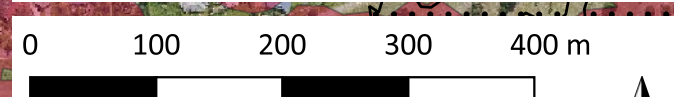


- Legend**
- Study area
 - Waterbodies**
 - Holdens Creek
 - Diverted creek channel
 - Landscaping**
 - Exotic tree
 - ▲ Native tree
 - Landscaping plan**
 - Hard surface
 - Box Gum Woodland buffer plantings
 - Native shrubs
 - Native groundcover
 - Native riparian vegetation
 - Dryland grass
 - Irrigated turf
 - Synthetic grass
 - Proposed connectivity corridor**
 - Riparian - primary
 - Riparian - secondary
 - Woodland birds - primary
 - Woodland birds - secondary
 - UHCP Fragmentation Mapping**
 - Riparian_Connected_Habitat
 - Potential Connectivity Corridor
 - Potential Core Habitat
 - Small Woodland Birds**
 - Potential Connectivity Corridor
 - Potential Connectivity Corridor

Stromlo Forest Park

Wright

Acknowledgement: Image (c) ACT Government CC4.0 2023



Scale 1:6000 @ A3, GDA 2020, MGA Zone 55



Proposed Biodiversity Values Plan (Step 1B - Connectivity)

Capital Ecology Project No: 3400
 Drawn by: Lucy Wenger
 Date: 07/03/2025

