Sydney Science Park Mixed Use Development.

Application Number: **03107** Commencement Date: **29/08/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Sydney Science Park Mixed Use Development.

1.1.2 Project industry type *

Commercial Development

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/10/2026

1.1.4 Estimated end date *

31/12/2046

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Celestino Developments SSP Pty Limited are seeking approval of the Sydney Science Park development (the action). The proposed action involves subdivision, development and operation of a fully integrated mixed-use development including a town centre, residential subdivision, employment and education uses, open space (active, passive and riparian corridors) and an onsite water treatment plant and all roads and associated infrastructure.

To facilitate the proposed action, bulk earthworks, vegetation clearing, decommissioning of riparian corridors and reshaping of riparian corridors is required. This will involve direct impacts to 3.27 ha of native vegetation. It has been assumed that 0.71 ha of native vegetation (PCT 4023) will be retained in a linear park across the action area. To facilitate the proposed action, the following is proposed:

- Subdivision of land for development
- Clearing of native vegetation
- Removal of weeds
- Civil and infrastructure works, including temporary works, roadworks
- Integrated Water Cycle Management Infrastructure (Appendix J)
- Realignment and restoration of riparian corridors (Appendix K) incorporating the central riparian corridor consistent with the Aerotropolis DCP requirements, including:
    - Network of creeks and dams
    - Bio-filtration basins
    - Wetlands
    - Revegetation.
- Dam dewatering
- Earthworks and retaining walls
- Landscaping and streetscape establishment
- Provision and augmentation of services and
- Associated ancillary works.

The development of the action area would be completed in stages (Appendix C, Figure 5, page 116).

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

The following pieces of legislation are relevant to the proposed action:

***Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)**

The EPBC Act aims to protect Matters of National Environmental Significance (MNES) including wetlands of international importance, threatened species and communities and listed migratory species. An action that may or is likely to have a significant impact on MNES should be referred to the Commonwealth to determine whether it is a Controlled Action that requires approval from the Commonwealth.

MNES have been identified on the site. This report has been prepared consistent with the requirements of the EPBC Act and assesses potential impacts to MNES in the action area.

***Environmental Planning and Assessment Act 1979* (EP&A Act) – state legislation**

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal planning legislation that relates to the action area. It provides a framework for the overall environmental planning and assessment of the proposed action. Various legislative instruments such as the NSW *Biodiversity Conservation Act 2016* (BC Act)), *Water Management Act 2000* (WM Act) and *Rural Fires Act 1997* are integrated with EP&A Act and have been reviewed separately in the BDAR (Appendix F).

The project will be assessed as part of a State Significant Development Application (SSDA) under Part 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The SSDA will be submitted to the NSW Department of Planning, Housing and Infrastructure (NSW PHI) and seeks Concept approval for the site-wide strategies and staged development of the proposed action area, as well as a detailed proposal for the first stage of development in accordance with Section 4.22 of the EP&A Act.

The SSDA will be submitted in September 2025, post submission of this referral. If the EPBC Act referral is determined as a controlled action by the Commonwealth, the SSDA seeks to use the Bilateral agreement pathway under section 45 of the EPBC Act relating to the environmental assessment between the NSW and Commonwealth governments.

To accompany the SSDA, the ecological impacts on biodiversity values has been assessed in accordance with NSW *Biodiversity Conservation Act 2016* (BC Act) through the application of the Biodiversity Assessment Method in the Biodiversity Development Assessment Report (BDAR) (ELA 2025a). The proposed action also involves extensive revegetation works to enhance biodiversity values of the action area in accordance with the Vegetation Management Plan (ELA 2025b).

Cumberland Plain Conservation Plan – strategic plan

The action area is mapped as excluded land and does not form land to which the Cumberland Plain Conservation Plan applies.

State Environmental Planning Policy (Precincts – Western Parkland City) 2021 – planning instrument

Chapter 4 of the Western Parkland City SEPP applies to the action area. The aims of the chapter are to facilitate development within the Western Sydney Aerotropolis and ensure that development is compatible with the long-term growth and development of the region. Part 4.3 of the SEPP contains numerous airport safeguard development controls, including:

- Aircraft noise
- Building wind shear and turbulence
- Wildlife hazards
- Lighting
- Airspace operations
- Public safety.

The proposed action has been specifically designed to meet the requirements of Part 4.3 of the SEPP.

Western Sydney Aerotropolis Precinct Plan 2024

The Precinct Plan is enforced under the provisions of the State Environmental Planning Policy (Precincts – Western Parkland City) 2020, Chapter 4 Western Sydney Aerotropolis and provides the place-based objectives and requirements to guide development in the Aerotropolis in a consistent and sustainable manner over time. This Plan sets out the detail to support the land use zoning and other provisions of the Aerotropolis SEPP. This Precinct Plan applies to five precincts within the Western Sydney Aerotropolis:

- Aerotropolis Core
- Badgerys Creek
- Wianamatta-South Creek
- Northern Gateway
- Agribusiness (excluding Luddenham Village as shown on Figure 1)

Sydney Science Park is in the Northern Gateway Precinct and is subject to the controls in the Precinct Plan. The proposed action has been developed consistent with the Precinct Plan and the vision and objectives for the Northern Gateway precinct.

Western Sydney Aerotropolis Development Control Plan 2022– planning instrument

The Aerotropolis DCP provides the planning, design and environmental objectives and controls which inform proposed development within the region. The planning controls and objectives are supplementary to the controls outlined in Chapter 4 of the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (Parkland City SEPP) and the Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan).

The objectives and controls of the DCP are:

1. Facilitate development which is appropriate to the unique natural characteristics and desired future outcomes for each precinct of the Aerotropolis;
2. Safeguard the airport operations of the Western Sydney International (Nancy-Bird Walton) Airport (the Airport);
3. Support high levels of local accessibility, quality place and amenity outcomes to drive business relocation and economic growth;
4. Encourage design that maintains and enhances the character and heritage significance of Aboriginal and European heritage items and heritage conservation areas;
5. Encourage ecologically sustainable development and reduce the impacts of development on the environment; and
6. Deliver development in accordance with the principles of Water Sensitive Urban Design (WSUD)

Specifically, the following sections of the DCP are applicable to the action:

- Section 2.4 – Vegetation and Biodiversity, Clause 2.4.2
- Section 2.5 – Flooding and Environmental Resilience Management, Clause 2.5.5 Erosion and Sediment Control
- Section 2.10 – Airport Safeguarding, Clause 2.10.3 Wildlife Hazards.

The proposed action has been specifically designed to meet the requirements of the DCP.

The proposed development footprint has responded to these requirements of the DCP, and proposed open space and waterbodies have been designed accordingly.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Celestino has engaged with local residents, businesses, and authorities that have the potential to be affected by the proposed action. A letter drop was undertaken in the specific engagement areas for Sydney Science Park (0):

- Twin Creeks
- Northern Gateway Precinct (as per the Aerotropolis DCP precinct boundaries; across the suburbs of Orchard Hills and Luddenham)
- North Luddenham Precinct (as per the Aerotropolis DCP precinct boundaries; across the suburb of Mulgoa)

The following agencies / authorities were issued with the newsletter during the engagement period: Potentially affected authorities were issued with the same newsletter and a corresponding email. The following agencies were contacted:

- Sydney Water
- Sydney Metro
- Transport for NSW
- Endeavour Energy
- Transgrid
- National Broadband Network
- Penrith City Council
- Aboriginal stakeholders
- NSW DCCEEW
- Commonwealth Department of Defence.

1. During the engagement period, a drop in session was held at Twin Creeks Golf Course which provided an opportunity for stakeholders to attend and raise any concerns. All parties notified during the 3 week engagement period were provided with an opportunity to give feedback on the proposed action. No submissions were received from the related agencies / authorities (Appendix M).

Engagement with the indigenous community was completed in 2022 and 2025. The following groups were consulted:

- Dharug Traditional Custodians
- Other Traditional Custodians
- Knowledge Holders
- The Broader Aboriginal and Torres Strait Islander community
- Registered Aboriginal Party (RAP)

Key engagement activities included:

- Walk on Country (reading and smoking ceremony)
- Community information sessions
- Provision of draft reports and plans for review and feedback
- Research into cultural values.

The outcomes of the key engagement activities are documented in the following:

- Connecting with Country Design report, including endorsement of the report by the indigenous community.

1.3.1 Identity: Referring party

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	87096512088
Organisation name	ECO LOGICAL AUSTRALIA PTY LTD
Organisation address	PO Box Q108. Sydney NSW 1230

Referring party details

Name	Alex Gorey
Job title	Senior Ecologist
Phone	02 9259 3800
Email	alexg@ecoaus.com.au
Address	Level 13, 420 George Street, Sydney NSW 2000

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	67607351842
Organisation name	CELESTINO DEVELOPMENTS SSP PTY LIMITED
Organisation address	642 Great Western Highway, Pendle Hill NSW 2145

Person proposing to take the action details

Name	Jude Adikari
Job title	Development Director
Phone	98421218
Email	info@celestino.net.au
Address	642 Great Western Highway, Pendle Hill NSW 2145

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The proponent has not previously had any proceedings under a Commonwealth, state or territory law for the protection of the environment, or the conservation and sustainable use of natural resources.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

Celestino does not have a formal policy. Celestino is an Australian-owned family business with high standards for their developments.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	67607351842
Organisation name	CELESTINO DEVELOPMENTS SSP PTY LIMITED
Organisation address	642 Great Western Highway, Pendle Hill NSW 2145

Proposed designated proponent details

Name	Jude Adikari
Job title	Development Director
Phone	98421218
Email	info@celestino.net.au
Address	642 Great Western Highway, Pendle Hill NSW 2145

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	87096512088
Organisation name	ECO LOGICAL AUSTRALIA PTY LTD
Organisation address	PO Box Q108. Sydney NSW 1230
Representative's name	Alex Gorey
Representative's job title	Senior Ecologist
Phone	02 9259 3800
Email	alexg@ecoaus.com.au
Address	Level 13, 420 George Street, Sydney NSW 2000

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	67607351842
Organisation name	CELESTINO DEVELOPMENTS SSP PTY LIMITED
Organisation address	642 Great Western Highway, Pendle Hill NSW 2145
Representative's name	Jude Adikari
Representative's job title	Development Director
Phone	98421218
Email	info@celestino.net.au
Address	642 Great Western Highway, Pendle Hill NSW 2145

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

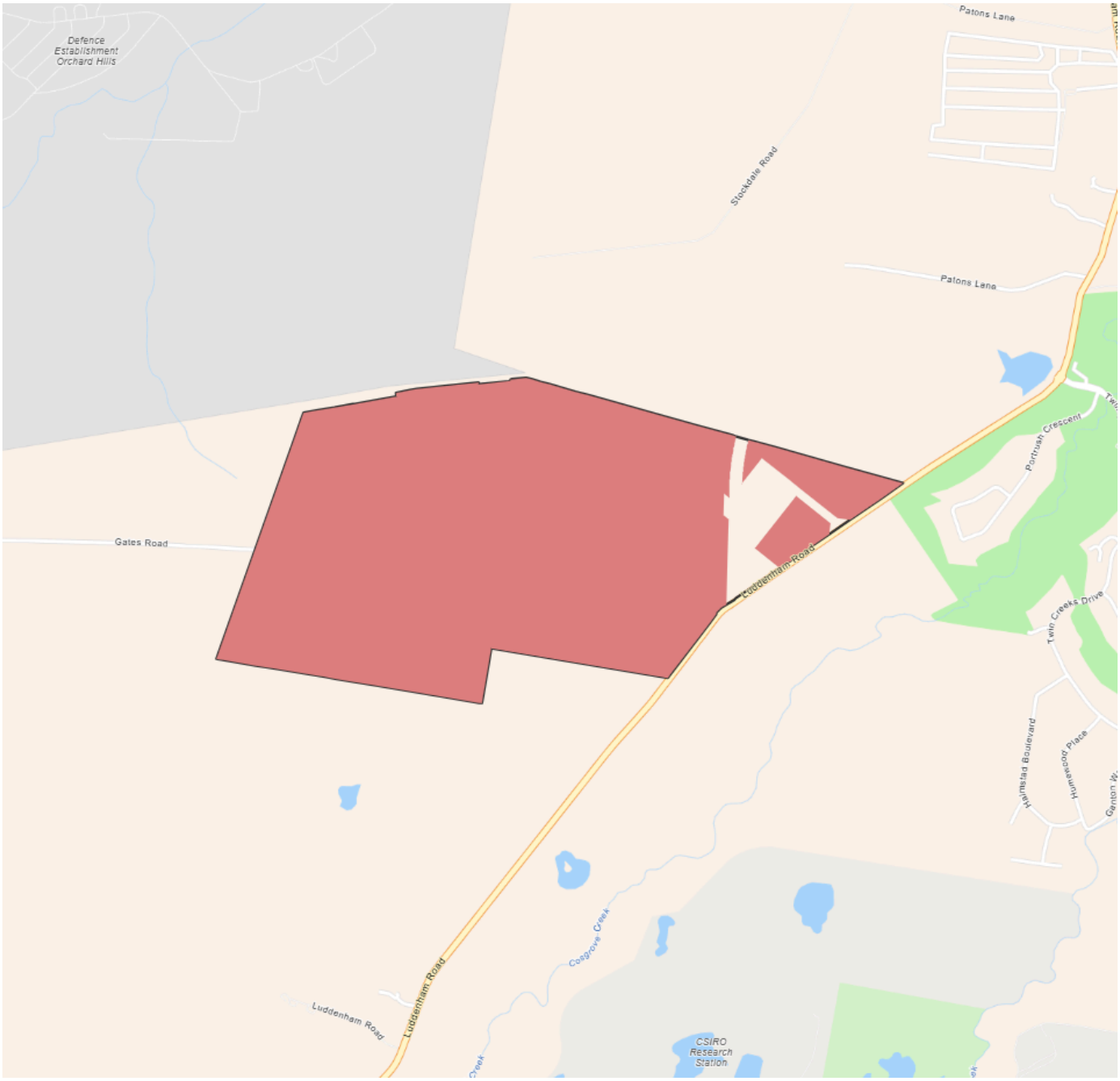
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 313.49 Ha **Disturbance Footprint:** 298.01 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

565-601 and 601a Luddenham Road, Luddenham NSW 2745 (Lot 1//DP1276320; Lot 2//DP127

2.2.2 Where is the primary jurisdiction of the proposed action? *

New South Wales

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The entire action area is private land currently in Celestino’s ownership.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The action area is located in the suburb of Luddenham within the Penrith Local Government Area (LGA). The action area is approximately 24 km west of Parramatta and 43 km northwest of the Sydney City Business District (CBD). The total size of the action area and development footprint is 296.89 ha. Approximately 260 ha of the development footprint is exotic grasslands, 7.17 ha is exotic vegetation, 0.46 ha is planted native vegetation, and 3.27 ha is remnant native vegetation.

The action area is in the Western Sydney Aerotropolis (Aerotropolis), which is a new precinct planned around the new Western Sydney International (Nancy-Bird Walton) Airport (the airport) which is currently under construction. Specifically, the action area is located approximately 3 km north of the airport. The action area is in a strategic location in the Northern Gateway Precinct, which will be a major interface for the airport and the specialised centre linking the airport with the metropolitan cluster.

The action area is currently zoned ENZ – Environmental Recreation, ENT - Enterprise and MU – Mixed Use under the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (Appendix C, Figure 4, page 98). No changes to the land zoning are proposed to facilitate the proposed action as the proposed action is permissible with consent.

The action area comprises exotic cover (grazing lands), cleared areas (such as internal access tracks), waterbodies and remnant native vegetation. The small, isolated patches of remnant native vegetation were present in poor condition, lacked structural complexity and were dominated by exotic species. The canopy, although native was generally of poor health and exhibited signs of dieback. Most of the action area has been previously cleared and pasture improved for cattle grazing.

Isolated patches of remnant native vegetation have been recorded across the development footprint. These remnants consisted of plant community type (PCT) 3320 *Cumberland Shale Plains Woodland*, PCT 4023 *Coastal Valley Riparian Forest* and PCT 3975 *Southern Lower Floodplain Freshwater Wetland*. The vegetation, where present, lacks structural complexity and was dominated by exotic species. The vegetation is highly fragmented and isolated from large patches of native vegetation by agricultural lands, major arterial roads such as Luddenham Road in the south, the Metro link in the east, an access track for the water pipeline adjacent to the northern boundary and The Northern Road which is located outside the western boundary of the action area.

The action area contains numerous streams and human made dams in varying conditions; however, a majority are in poor condition. The creeks are subject to erosion, invasion of weed species, contain a low native species cover and poor water quality. The exotic species, *Juncus acutus,* which is unpalatable to livestock, has spread along the riparian corridors.

Vehicle access points to the action area are located off Luddenham Road. Internal roads are present along the southern portion of the action area. Due to the construction works of the Metro link, the access points are subject to change. The proposed development footprint includes access points to Luddenham Road in the east of the action area and to the Integrated Water Treatment Facility. The proposed internal access roads include access in east-west and north-south directions.

3.1.2 Describe any existing or proposed uses for the project area.

The action area has an extensive history of use for agricultural purposes including ongoing cattle grazing, which has contributed to the overall poor ecological values present. The vegetation within the action area includes fragmented patches of native canopy species with limited or no native ground cover species and no native midstorey species.

The action area also includes the recent construction of a Integrated Water Recycling Hub by Sydney Water in the south-west. There are existing Transgrid electricity transmission lines which intersect the action area from north to south.

The Sydney Metro Western Sydney Airport corridor is currently under construction adjacent to the eastern boundary of the action area and has been excluded from the action area.

The development footprint which occupies cleared land, riparian corridors and dams, exotic vegetation and remnant native vegetation will be repurposed and used as mixed-use development including retail, commercial, residential and open space. The proposed action also includes the rehabilitation and reshaping of the central riparian corridor and the establishment of formal public recreation and outdoor spaces.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The development footprint is comprised of exotic grasses and scattered large dams, with small patches of remnant native vegetation. The land has largely been cleared of native vegetation and heavily utilised for ongoing grazing of cattle.

No outstanding natural features such as karst, caves, crevices, cliffs, rocks and other geological features of significance were recorded during field surveys.

Habitat connectivity is limited across the action area. The remnant vegetation contains small, isolated patches of canopy species. Native ground cover were very limited and mid storey species were absent. The canopy species provide some stepping-stone habitat for dispersive species.

The riparian corridors provide some connectivity across the action area; however, the streams were highly degraded, lacked native vegetation and contained dense weed infestations. The creeks have been dammed and, in many areas, did not contain permanent water flow. Evidence of active erosion was observed along many of the channel beds.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The action area is located between 48 m – 73 m ASL. The topography of the action area undulates with gentle rises throughout the action area. The lowest elevation point is 48 m ASL in the north-east of the action area. The highest elevation points are in the north-west corner and the south-west extent of the action area.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Summary of methods

Targeted surveys for MNES identified in Appendix B, Table 15, page 75 were undertaken across the action area on the dates outlined in Appendix A, Table 4, page 11. Targeted surveys for threatened fauna species were completed across the action area where habitat features (if relevant) were present and details are included Appendix A, Table 4, page 15. Targeted survey effort for threatened fauna identified from PMST and BAM-calculator were conducted in accordance with the BAM and EPBC guidelines, included:

- Spotlighting for amphibians and microbats
- Call playback for amphibians
- Diurnal migratory bird surveys
- Echolocation surveys for microbats
- Nest observations for raptors
- Parallel transects for threatened flora and watercourses (in 2016 only).

Targeted surveys were completed consistent with the following guidelines:

- Surveying threatened plants and their habitats (DPIE, 2020a)
- 'Species credit' threatened bats and their habitats (DPIE, 2021a)
- Survey Guidelines for Australia's Threatened Bats (DEWHA 2010b)
- Survey Guidelines for Australia's Threatened Birds (DEWHA 2010a)
- NSW Survey Guide for Threatened Frogs A guide for the survey of threatened frogs and their habitats for the Biodiversity Assessment Method (DPIE 2020b)
- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities (DEC 2004).

Targeted survey effort for threatened flora was limited to surveys in 2016 in vegetated areas including riparian corridors. No targeted surveys for threatened flora species were conducted in 2023-2024 as no suitable habitat was recorded during previous surveys. The vegetation within the action area was fragmented, highly degraded, mostly comprised exotic flora species and subject to ongoing disturbance from cattle grazing.

An updated PMST was conducted May 2025 to determine if new MNES were identified and require additional consideration (Appendix B, Table 15, page 75). No additional MNES was considered likely to occur within the action area and require assessment. It is noted that the action area is highly disturbed and contains poor habitat features.

Summary of results

Targeted fauna surveys across the action area confirmed the presence of the following MNES:

- *Calidris acuminata* (Sharp-tailed Sandpiper)
- *Gallinago hardwicki* (Latham's Snipe).

These species were identified during targeted surveys within the action area. The Latham's Snipe was flushed out of patches exotic *Juncus acutus* of during nocturnal surveys on several occasions in 2023-2024. The Sharp-tailed Sandpiper was recorded foraging during morning bird surveys along the mud substrate of the larger dams in the action area.

One BioNet record for *Tringa nebularia* (Common Greenshank) from 2006 was located within the action area (Appendix C, Figure 13, page 110). Although this species was not recorded during targeted surveys, there is potential that this species may utilise the action area as a non-breeding visitor.

Pteropus poliocephalus (Grey-headed Flying-fox), although not identified in the action area during survey, is likely to utilise the action area for foraging as part of a foraging network. No other MNES were identified during targeted survey or considered likely to utilise the action area.

Litoria aurea (Green and Golden Bell Frog) is listed as vulnerable under the EPBC Act. Targeted surveys were conducted for this species during the preparation of the BDAR (Appendix F, page 135) in accordance with the EPBC guidelines (DEWHA 2009). One day of habitat assessment was conducted 8 September 2023. Targeted nocturnal surveys were conducted over 4 nights between December 2023 – March 2024, with more than 14 days difference between the first and last survey night. No Green and Golden Bells Frogs or suitable habitat for this species were recorded during targeted surveys. However, it was noted surveys were not conducted after rainfall. Therefore, an expert report was prepared by Dr Frank Lemckert who is a listed expert for this species (Appendix E, page 134).

The expert report included an assessment of the action area plus a 200 m buffer around the action area to identify potential habitat for this species adjacent to the action area (Appendix E, page 134). The expert report determined that no Green and Golden Bell Frogs occur within the action area. The expert report concluded it is unlikely that recolonisation of the area will occur (Appendix E, page 41). Therefore, based on an absence of species and its habitat, no additional consideration under the BC Act or EPBC Act is required for this species.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

A literature review of the action area identified that the majority of the land is mapped on Blacktown Soil Landscapes. A small portion of the action area in the north-west was mapped as South Creek Soil Landscapes. Blacktown (residual) Soil Landscapes is associated with Wianamatta Group—Ashfield Shale. It consists of clay soils on gently undulating topography. The vegetation structure typically consists of open-forest or woodlands with *Eucalyptus tereticornis, E. crebra, E. moluccana* or *Corymbia maculata* the most common (Chapman and Murphy 1989). South Creek (alluvial) Soil Landscapes occur along drainage and active floodplains of the Cumberland Plain. The geology includes Quaternary alluvium derived from either Wianamatta Group shales or Hawkesbury Sandstone. South Creek Soil Landscapes occur at low elevations along alluvial plains. Vegetation usually includes canopy species such as *Casuarina glauca* and *Angophora subvelutina* (Chapman and Murphy 1989).

The total size of the action area and the development footprint is 296.89 ha. The action area comprises exotic grasses, planted native vegetation, cleared areas (gravel access tracks) and fragmented remnant native vegetation. Where remnant native vegetation was present, it was in poor condition and lacked structural complexity. The ground layer was dominated by exotic species with occasional unpalatable (to livestock) native species such as *Juncus usitatus* present in small patches. The native midstorey was absent from the vegetation present in the action area. The canopy, although native, was represented by a single species such as *Eucalyptus moluccana* in PCT 3320 and *Casuarina glauca* in PCT 4023. The canopy was generally of poor health and exhibited signs of dieback. The action area also contains numerous streams and dams.

A total of three (3) PCTs were identified in the development footprint (Appendix C, Figure 10, page 108). These PCTs were:

- PCT 3320 *Cumberland Shale Plains Woodland*
- PCT 4023 *Coastal Valley Riparian Forest*
- PCT 3975 *Southern Lower Floodplain Freshwater Wetland.*

The PCTs identified within the development footprint are presented in Appendix C, Figure 10, page 108.

The development footprint contains 0.46 ha of planted native vegetation which does not form part of a PCT. *Eucalyptus microcorys* (Tallowwood) was identified in rows along internal roads and along edge of a dam. The patches of *E. microcorys* lacked a midstorey. The groundcover consisted of patches of bare ground and exotic groundcover species, including *Cenchrus clandestinus* (Kikuyu Grass), *Sida rhombifolia* and *Senecio madagascariensis* (Fireweed).

Eucalyptus microcorys is not a locally indigenous species listed as part of the local PCTs. According to the PlantNET, this species occurs north of Cooranbong (i.e. west of Morisset) which is approximately 150 km north of the subject land. As such, *E. microcorys* does not represent part of a local PCT and has been established through planting.

The majority of the vegetation was entirely comprised of exotic species. The composition varied from exotic grassland to dense patches of the exotic sedge *Juncus acutus*. The areas of exotic vegetation do not form part of a PCT as they lack native species.

Appendix C, Figure 10 , page 108 shows the PCTs identified across the action area and their associated threatened ecological community listing under the EPBC Act. This is also summarised in Appendix A, Table 5, page 18. Due to the poor condition of the vegetation within the action area, none of the three PCTs meets the criteria for listing under the EPBC Act.

PCT 3320 can be associated with *Cumberland Shale Plains Woodland and Shale Gravel Transition Forest* under the EPBC Act. The EPBC Act Conservation Advice (DEWHA 2009) contains condition thresholds that a patch of the community must meet to be considered part of the EPBC Act listed TEC. PCT 3320 did not meet the criteria for listing under the EPBC Act for Cumberland Shale Plains Woodland and Shale Gravel Transition Forest for the following reasons:

- The groundcover contained <30% native perennial species (0% recorded within the 20 x 20 m plot)
- The patch size was <0.5 ha.

PCT 4023 Coastal Valley Riparian Forest can be associated with *Coastal Swamp Oak (Casuarina glauca) Forest of the New South Wales and South East Queensland* under the EPBC Act. The EPBC Act conservation advice for *Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland* ecological community (DEWA 2018) contains specific condition thresholds that must be met for a patch to be considered part of the EPBC Act community. All patches of PCT 4023 Coastal Valley Riparian Forest in the action area were small, isolated stands of single species (i.e. *Casuarina glauca*), less than 0.5 ha. The groundcover did not contain native species and the midstorey was absent. PCT 4023 Coastal Valley Riparian Forest in the action area did not meet the EPBC definition because:

- The patches of PCT 4023 were less than 0.5 ha in size.
- The native understorey comprises less than 20% of total understorey vegetation cover.
- The vegetation patch does not meet the key diagnostics for this TEC.
- The patches were < 2 ha, or where patches were ≥ 0.5 ha, they were not contiguous with a larger area of native vegetation > 5 ha in size.
- < 20% of the total understorey vegetation was comprised of native species (0.1% recorded within the 20 x 20 m plot).

Additionally, the key diagnostics for this TEC under the EBPC Act state that the vegetation occurs within 30 km of the coast unless along tidal rivers. The action area is not located on a tidal river. The coastline is >50 km from the action area. As such, the vegetation mapped within the action area as PCT 4023 did not satisfy the criteria for listing under the EBPC Act for the above reasons.

The BioNet Vegetation Information System (VIS) provides consistent and reliable information about NSW native vegetation. The VIS lists PCT 3975 Southern Lower Floodplain Freshwater Wetland as associated with *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and SE Corner bioregions*. PCT 3975 Southern Lower Floodplain Freshwater Wetland is not associated with a TEC listed under the EBPC Act.

As the TECs listed in the development footprint were poor in condition and small in size, they did not satisfy the criteria for listing under the EBPC Act. No further assessment of these TECs has been completed in this referral.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

There are no Commonwealth Heritage places that apply to the action area.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The action area has been subject to previous Aboriginal and non-Aboriginal heritage surveys (Appendix H). Community consultation with registered Aboriginal stakeholders and site excavation works have been completed as part of the assessment (Appendix H, Appendix N Parts 1 - 4).

There are five sites of Indigenous heritage values which have been identified in the action area:

- RPS LTPAS01 (AHIMS 45-5-4189) – within Sydney Science Park initial rezoning area
- SSP 1 (AHIMS 45-5-4707) – within Sydney Science Park initial rezoning area
- SSP 3 (AHIMS 45-5-4709)– within Sydney Science Park initial rezoning area
- SSP 4 (AHIMS 45-5-45-5-4922) – within Sydney Science Park initial rezoning area
- SSP 2 (AHIMS 45-5-4708) – within adjacent local water centre facility.

The action area does not contain any non-Aboriginal or European heritage items.

The land within the action area is included in the existing Aboriginal Heritage Impact Permits (AHIP) (Ref:C0003861 and 4663). It is noted that the AHIPs do not include the portion of the action area zoned ENT.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The action area contains human made dams of varying size and 1st, 2nd, 3rd and 4th order Strahler streams. The majority of the dams are in poor condition. The ground has been subject to regular drying and wetting periods, compaction of soils from cattle and clearing of native vegetation.

The proposed action would restore, realign and rehabilitate the current creeks and dams within the action area. The action aims to re-establish the function of the streams and improve the water quality. The action will be conducted in accordance with the proposed Vegetation Management Plan (VMP) prepared for the development footprint and include extensive revegetation works (ELA 2025b).

A separate Integrated Water Cycle Management strategy (Enspire 2025) has been prepared for the proposed action and is provided in Appendix C, Figure 12, page 123. The proposed stormwater management strategy will consist of:

- Recycled Wastewater. The Integrated Recycling Hub (IWRH) is assumed to provide recycled wastewater to the development for non-potable demands. This eliminates the need for on-lot rainwater tanks. In modelling the stormwater harvesting water balance, the recycled wastewater network has been assumed to supply for irrigation of street trees and on-lot non-potable water uses (given recycled wastewater will be reticulated throughout the development by default). The stormwater harvesting network has been assumed to provide irrigation for adjacent open space corridors only with the balance of harvested stormwater directed to Sydney Water's regional stormwater harvesting system to meet flow objectives. This separation between recycled wastewater reuse and harvested stormwater reuse has been adopted to simplify the modelling process only and does not preclude opportunities to combine the two systems in future detail design.
- Gross pollutant trap(s) at discharge locations. Typically designed to treat ~1EY storm events. Piped flows exceeding the adopted GPT treatment flow rates are to bypass directly to storage ponds and backflow across bio-filtration basins and wetlands in larger storm events achieving flood management controls while minimising scour potential.
- Permanent sediment collection basins. These basins are proposed to improve long term performance of bio-filtration basins and wetlands and provide a more robust mechanism to control the diversion of concentrated overland flow away from bio-filtration basins and wetlands in larger storm events.
- Bio-filtration basins. Bio-filtration basins are proposed to provide the majority of nutrient pollutant removal prior to discharge storage ponds for retention and reuse.
- Wetlands. Wetlands provide stormwater treatment and some stormwater retention for stormwater harvesting and reuse while also improving ecological diversity and amenity values.
- Storage ponds. Provide greater retention of stormwater for harvesting and reuse and allow for larger draw down with less impact on vegetation health than wetlands. The storage ponds have been designed to support stormwater reuse as well as improved amenity.

The Integrated Water Cycle Management strategy (Enspire 2025) states:

"The …stormwater management intent is to minimise degradation of creeks due to development by incorporating stormwater harvesting and reuse to reduce post development stormwater volumes discharging into creeks on an annual basis."

The plan aims to achieve higher than average stormwater quality and well above the Development Control Plan targets. Additionally, the proposed post-development stormwater quality targets will greatly improve the current stormwater quality. The stormwater management and water quality of the action area must abide to the strict controls outlined in the Western Sydney Aerotropolis Development Control Plan (DCP) (DPE 2022).

The plan aims to limit post-development stormwater flow rates to the current levels. This achievement is above the required standard. Typical development standards aims for a flow of 5-6 ML/ha/year; however, the current strategy aims for 2 ML/ha/year. This will greatly improve the water quality and protect downstream biodiversity values.

A summary of the Riparian Assessment (Appendix K, Table 10, page 39) impact assessment of the proposed action in accordance with the Biodiversity and Conservation SEPP 2021 is provided below:

- a) Stormwater discharge from development catchments are to conform with the water quality requirements of Section 2.3.2 of the Western Sydney Aerotropolis DCP. Adherence to these targets generally achieves neutral or beneficial development stormwater runoff quality.
- b) Stormwater flow behaviour from development catchments are to conform with the stormwater flow targets of Section 2.3.2 of the Western Sydney Aerotropolis DCP. Adherence to these targets ensures post-development flow impacts are minimised.
- a) Gross pollutants are to be contained within proprietary storage chambers that minimise the potential for gross pollutant release during large storm events. These chambers are generally emptied every 6-months. Wetland and bio-filtration systems are designed to break down pollutants over time and are not intended to store captured pollutants for extended periods. As such, whilst some stored pollutants may mobilise from these assets during a flood event, the concentrations are not likely to be relatively high due to years long accumulation.
- b) Proposed basin systems are generally located offline from flood conveyance pathways and designed with natural fall to ensure receding flood waters revert back to operating water levels suitable for the ecological system.

The Riparian Assessment (Appendix K, Section 5, page 31) provides a detailed assessment of the proposed future improved riparian health and water quality.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

World Heritage matters are not present within or adjoining the site.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no national heritage properties in the action area.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no Ramsar wetlands within or adjacent to the action area.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
Yes		Acacia bynoeana	Bynoe's Wattle, Tiny Wattle
Yes		Acacia pubescens	Downy Wattle, Hairy Stemmed Wattle
Yes		Allocasuarina glareicola	
Yes		Anthochaera phrygia	Regent Honeyeater
Yes		Aphelocephala leucopsis	Southern Whiteface
Yes		Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
Yes		Botaurus poiciloptilus	Australasian Bittern
Yes	No	Calidris acuminata	Sharp-tailed Sandpiper
Yes		Calidris ferruginea	Curlew Sandpiper
Yes		Callocephalon fimbriatum	Gang-gang Cockatoo
Yes		Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
Yes		Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
Yes		Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
Yes		Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
Yes		Erythrotriorchis radiatus	Red Goshawk
Yes		Eucalyptus benthamii	Camden White Gum, Nepean River Gum
Yes		Falco hypoleucos	Grey Falcon
Yes	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes		Genoplesium baueri	Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid
Yes		Grantiella picta	Painted Honeyeater

Direct impact	Indirect impact	Species	Common name
Yes		Haloragis exalata subsp. exalata	Wingless Raspwort, Square Raspwort
Yes		Heleioporus australiacus australiacus	Giant Burrowing Frog, Eastern Owl Frog
Yes		Hirundapus caudacutus	White-throated Needletail
Yes		Lathamus discolor	Swift Parrot
Yes		Litoria aurea	Green and Golden Bell Frog
Yes		Macquaria australasica	Macquarie Perch
Yes		Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
Yes		Neophema chrysostoma	Blue-winged Parrot
Yes		Persicaria elatior	Knotweed, Tall Knotweed
Yes		Persoonia nutans	Nodding Geebung
Yes		Petauroides volans	Greater Glider (southern and central)
Yes		Petaurus australis australis	Yellow-bellied Glider (south-eastern)
Yes		Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
Yes		Pimelea curviflora var. curviflora	
Yes		Pimelea spicata	Spiked Rice-flower
Yes		Pomaderris brunnea	Rufous Pomaderris, Brown Pomaderris
Yes		Prototroctes maraena	Australian Grayling
Yes		Pseudomys novaehollandiae	New Holland Mouse, Pookila
Yes	No	Pteropus poliocephalus	Grey-headed Flying-fox
Yes		Pterostylis saxicola	Sydney Plains Greenhood
Yes		Pultenaea parviflora	
Yes		Pycnoptilus floccosus	Pilotbird
Yes		Rhizanthella slateri	Eastern Underground Orchid
Yes		Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood

Direct impact	Indirect impact	Species	Common name
Yes		Rostratula australis	Australian Painted Snipe
Yes		Stagonopleura guttata	Diamond Firetail
Yes		Syzygium paniculatum	Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry
Yes		Thesium australe	Austral Toadflax, Toadflax
Yes	No	Tringa nebularia	Common Greenshank, Greenshank

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes		Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion
Yes		Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community
Yes		Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
Yes		Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion
Yes		Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest
Yes		River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
Yes		Western Sydney Dry Rainforest and Moist Woodland on Shale

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

No. The proposed action is considered unlikely to be a significant impact to any MNES either known or considered likely to occur in the action area.

***Calidris acuminata* (Sharp-tailed Sandpiper)**

This species was recorded within the action area during field surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy edge would be considered potential habitat for this species. This species was observed foraging along the muddy substrate around the large artificial dams.

The action will also result in the removal of 7.17 ha of exotic vegetation which comprises the invasive *Juncus acutus* and has potential to affect marginal sheltering habitat for this species. No breeding habitat will be affected as the Sharp-tailed Sandpiper is a non-breeding migratory species to Australia (DCCEEW 2024a). Considering that this species may intermittently forage within marginal habitat in the action area, the significant impact criteria was applied with respect to the Sharp-tailed Sandpiper and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 7, Page 24 to 24 for further information and assessment.

***Gallinago hardwicki* (Latham's Snipe)**

This species was recorded within the action area during field surveys in 2024 and previously in 2016 surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy substrate around the dams would be considered potential habitat for this species. This species was observed seeking shelter within the exotic vegetation. The action will result in 7.17 ha of exotic vegetation which represents invasive *Juncus acutus* will be removed and has potential to affect occasional sheltering habitat for this species.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024b). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Latham's Snipe and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 8, page 29 for further information and assessment.

***Pteropus poliocephalus* (Grey-headed Flying-fox)**

1. The proposed action would remove 1.35 ha of PCT 3320 and 0.46 ha of planted native vegetation which provides potential foraging habitat for this species. PCT 4023 mapped within the action area was present as *Casuarina glauca* which are not flowering species that produce significant nectar suitable for foraging for this species.
2. No breeding habitat (camps) would be affected. The significant impact criteria were applied with respect to the Grey-headed Flying-fox and concluded that the proposed action is unlikely to result in a significant impact to this species (Appendix A, Table 9, page 34).

***Tringa nebularia* (Common Greenshank)**

According to BioNet records, this species was recorded within the action area in 2006. This species was not observed during field survey. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy shoreline would be considered potential habitat for this species. The

action will result in 7.17 ha of exotic vegetation; the invasive *Juncus acutus* will be removed and has potential to affect occasional sheltering habitat for this species. The riparian corridor will be rehabilitated and planted with native flora species which will result in improvements to water quality and connectivity.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024d). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Common Greenshank and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 10, Page 39 for further information and assessment.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

No. The proposed action is considered unlikely to be a significant impact to any MNES either known or considered likely to occur in the action area. A summary of impact for each MNES is provided below.

***Calidris acuminata* (Sharp-tailed Sandpiper)**

This species was recorded within the action area during field surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy edge would be considered potential habitat for this species. This species was observed foraging along the muddy substrate around the large artificial dams.

The action will also result in the removal of 7.17 ha of exotic vegetation which comprises the invasive *Juncus acutus* and has potential to affect marginal sheltering habitat for this species. No breeding habitat will be affected as the Sharp-tailed Sandpiper is a non-breeding migratory species to Australia (DCCEEW 2024a). Considering that this species may intermittently forage within marginal habitat in the action area, the significant impact criteria was applied with respect to the Sharp-tailed Sandpiper and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 7, Page 24 to 24 for further information and assessment.

***Gallinago hardwicki* (Latham's Snipe)**

This species was recorded within the action area during field surveys in 2024 and previously in 2016 surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy substrate around the dams would be considered potential habitat for this species. This species was observed seeking shelter within the exotic vegetation. The action will result in 7.17 ha of exotic vegetation which represents invasive *Juncus acutus* will be removed and has potential to affect occasional sheltering habitat for this species.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024b). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Latham's Snipe and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 8, page 29 for further information and assessment.

***Pteropus poliocephalus* (Grey-headed Flying-fox)**

1. The proposed action would remove 1.35 ha of PCT 3320 and 0.46 ha of planted native vegetation which provides potential foraging habitat for this species. PCT 4023 mapped within the action area was present as *Casuarina glauca* which are not flowering species that produce significant nectar suitable for foraging for this species.
2. No breeding habitat (camps) would be affected. The significant impact criteria were applied with respect to the Grey-headed Flying-fox and concluded that the proposed action is unlikely to result in a significant impact to this species (Appendix A, Table 9, page 34).

***Tringa nebularia* (Common Greenshank)**

According to BioNet records, this species was recorded within the action area in 2006. This species was not observed during field survey. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy shoreline would be considered potential habitat for this species. The

action will result in 7.17 ha of exotic vegetation; the invasive *Juncus acutus* will be removed and has potential to affect occasional sheltering habitat for this species. The riparian corridor will be rehabilitated and planted with native flora species which will result in improvements to water quality and connectivity.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024d). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Common Greenshank and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 10, Page 39 for further information and assessment.

4.1.4.7 Do you think your proposed action is a controlled action? *

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

For the reasons outlined and discussed in Sections 4.1.4.6. The action area contains highly disturbed and fragmented patches of native vegetation and degraded dams. The proposed action will result in the removal of the majority of native vegetation for the proposed development of the action area. The proposed action also includes the realignment of riparian corridor with dams, wetlands, creeklines and extensive revegetation works which includes native PCTs. The proposed works will provide improvements to the current water quality through protection against peak water flow and improved water quality through revegetation works and bank stabilisation works. The proposed works will result in a short-term loss of foraging and sheltering habitat for three migratory species (Sharp-tailed Sandpiper, Latham's Snipe and Common Greenshank), also listed as threatened under the EPBC Act. The works may result in a minor loss of foraging habitat for the Grey-headed Flying-fox. However, future works will result in an improved biodiversity outcome of these species through re-establishment of habitat.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The proposed action has considered and incorporated measures to avoid and minimise impacts to biodiversity values. The location and design of the proposed development footprint has also responded to various planning instruments and associated requirements under the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 and the Aerotropolis DCP. The avoid and minimise measures include:

- Concentration of the development footprint in areas where biodiversity values are absent or in very low condition
- Retention of threatened ecological communities containing hollow bearing trees
- Reshaping and revegetation of riparian corridors throughout the action area.

These measures have responded to the following constraints:

- Stormwater and flooding management
- Biodiversity values
- Planning constraints associated with the SEPP and Aerotropolis DCP

Design history

In 2018 the action area was identified within the Aerotropolis precinct as part of the proposed new airport (Willow Planning 2024) as part of the State Environmental Planning Policy - Western Sydney Aerotropolis 2020. The action area was identified for future mixed-use development due to its 2016 rezoning and strategic location near the airport and the metro link. The Western Sydney Aerotropolis 2020 SEPP was repealed in 2022 and replaced with the Western Parklands City SEPP (herein referred to as 'the SEPP'). The action area is currently subject to the requirements of the Western Parklands City SEPP which also support the use of the land as a mixed-use development.

Initial designs were completed which responded to the requirements of the SEPP. Following the completion of specialist reports, including biodiversity, riparian and flooding, the proposed footprint underwent substantial rework to respond to these various constraints, whilst meeting the requirements of the SEPP. These various iterations resulted in the final design as assessed in this referral.

Stormwater management and flooding

A stormwater management strategy (Enspire 2025) has been prepared for the proposed action. The plan will manage peak flow, flood depths, and reduce post-development stormwater runoff volumes to minimise accelerated geomorphology of downstream waterways and impact on established vegetation. The stormwater management strategy aims at a higher-than-average stormwater quality. Additionally, the proposed post-development stormwater quality targets will greatly improve the current stormwater quality and remove potential downstream impacts.

The plan aims to limit post-development stormwater flow rates to the current levels. This achievement is above the required standard. Typical development standards aim for a flow of 5-6 ML/ha/year; however, the current strategy aims for 2 ML/ha/year. This will greatly improve the water quality and protect downstream biodiversity values, ensuring there are no downstream impacts.

Biodiversity values

<u>Terrestrial biodiversity values</u>

The action area is 297.44 ha and is mostly (278.04 ha) comprised of exotic pasture, exotic planted vegetation and cleared land. Where native vegetation was present it was in very low condition (with a VI score less than 15) with no native groundcover or midstorey and a native canopy that was deteriorating and slowly dying. These patches were considered highly unlikely to provide habitat for native species, except one patch that contained three (3) hollow bearing trees. The patches of native vegetation met the BC Act listed threatened ecological communities of Cumberland Shale Plains Woodland and River-flat Eucalypt Forest, however did not meet EPBC Act criteria.

The development footprint has been designed and located to retain 0.71 ha of PCT 4023 which meets the BC Act listed community River-flat Eucalypt Forest as part of a linear park. This patch also contains three hollow bearing trees. This patch was considered the best patch to retain due to it's size and presence of hollow bearing trees. The patch forms 22 % of mapped PCTs within the action area (Appendix C, Figure 3 page 114). The remaining native vegetation could not be retained due to land form modifications required to facilitate Mixed Use development, consistent with the land use zone.

Aquatic biodiversity values

The dams and waterbodies across the action area formed 15.67 ha and were in poor, degraded condition due to historical agricultural practices and cattle grazing. Although the dams contained limited native vegetation, they were confirmed to provide foraging habitat for some wader birds. Numerous design iterations were considered to try and retain some dams, however due to flooding constraints this was not achievable.

The proposed action would reshape and revegetate the central riparian corridor which is a 4th order Strahler stream. The reshaping was necessary to mitigate against potential future flooding events and to manage water quality (Northrop 2025). The reshaping and revegetation would result in the revegetation of approximately 38 ha of land and reforming waterbodies and creeklines throughout the action area. The reshaping would ultimately improve the quality of the creeklines and re-establish native vegetation. Although all waterbodies would be removed, the impacts are considered temporary with the final outcome being an overall improvement to the quality of the water resources across the action area.

The development footprint has been designed to incorporate open space adjacent to the riparian corridors which would also include some level of restoration. The strategic placement of open space adjacent to the riparian corridor would minimise potential impacts such as rubbish dumping and unauthorised access / use. The revegetation of the riparian corridors would also significantly improve connectivity across the landscape through the establishment of approximately 38 ha of vegetated, connected land.

Planning constraints

The design of the proposed development footprint has responded to the strict requirements in the Aerotropolis DCP, SEPP and Precinct Plan including but not limited to:

- the action area is within the Northern Gateway Precinct of the Aerotropolis Precinct Plan which includes a Land Use and Structure Plan that outlines areas to be developed and retained and associated land zoning
- stormwater management requirements to improve water quality, mitigate and manage flood risk and improve flows
- restrictions on revegetation to discourage establishment of avifauna populations in the action area to manage strike risk and hazards at the Nancy Bird-Walton airport (ELA 2025c).

Avoid and minimise summary

Avoidance and mitigation measures have been incorporated into the final development footprint which have resulted in the following avoidance of impacts to biodiversity values across the action area:

- retaining a patch of PCT 4023 (0.71 ha) which includes three hollow-bearing trees to be incorporated within a linear park within the action area
- concentration of 93 % of the development footprint in areas where there are no biodiversity values (cleared land or exotic cover)
- improving water quality by controlling flow rates and peak flows through a series of lakes, wetlands and basins
- retaining pre-development flow rates to minimise impact downstream

- re-establishing native vegetation through revegetation works along the riparian corridor in accordance with the VMP (ELA 2025b)
- improving connectivity through the action area through revegetation works
- retaining habitat for threatened species such as reshaping the large dam and the PCT 4023 0.71 ha patch of native vegetation with hollows

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The impact assessments provided in Section 4.1.4 of this referral have concluded that the proposed action is unlikely to constitute a significant impact to any MNES. No residual significant impact is expected. Although there is no anticipated residual significant impact, details on a proposed offset are presented below. The proposed offset strategy includes the purchase and retirement of credits consistent with the Biodiversity Assessment Method (BAM). The BDAR prepared by ELA (Appendix F, page 123) outlines the credit requirement for impacts to biodiversity values across the action area.

The occurrence of PCT 3320, PCT 4023 and PCT 3975 within the action area are consistent with the Threatened Ecological Community (TEC)listed as critically endangered under the BC Act. Due to the poor condition, the vegetation did not meet the criteria for listing under the Commonwealth EPBC Act. The vegetation integrity score for PCTs 3320 and PCT 4023 were below 15, therefore, no ecosystem credits were required to offset impacts to PCTs 3320 or PCT 4023. PCT 3975 required offsets, however, this vegetation is not listed under the EPBC Act. Therefore, there are no credits required to offset EPBC Act condition vegetation in the action area.

Four EPBC Act listed species were recorded during targeted surveys, from BioNet records or were assumed present. *Calidris acuminata* (Sharp-tailed Sandpiper) and *Gallinago hardwickii* (Latham's Snipe) were recorded during the field surveys and are likely to utilise the dams within the development footprint as foraging habitat. The literature review identified one BioNet record for *Tringa nebularia* (Common Greenshank) from 2006 within the development footprint. These three species are not listed under the BC Act. The BAMC does not provide an option to include these EPBC Act listed species, as candidate species, as they are not listed under the BC Act. Therefore, no Species Credits were generated for these species. No other threatened fauna species were recorded within the subject land. There is potential that highly mobile threatened species, Grey-headed Flying-fox may utilise the action area on occasion, but no breeding habitat was present. No species credits were required for non-breeding habitat for the Grey-headed Flying-fox.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
Yes		Actitis hypoleucos	Common Sandpiper
Yes		Apus pacificus	Fork-tailed Swift
Yes	No	Calidris acuminata	Sharp-tailed Sandpiper
Yes		Calidris ferruginea	Curlew Sandpiper
Yes		Calidris melanotos	Pectoral Sandpiper
Yes		Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
Yes		Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes		Hirundapus caudacutus	White-throated Needletail
Yes		Motacilla flava	Yellow Wagtail
Yes		Pandion haliaetus	Osprey
Yes		Tringa nebularia	Common Greenshank, Greenshank

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Migratory species were identified in the action area during survey. Latham's Snipe, Sharp-tailed Sandpiper and Common Greenshank are listed as vulnerable and migratory species under the EPBC Act. According to the EPBC MNES significant impact guidelines 1.1, an assessment of migratory species is done for species which are not listed as threatened. These species have been assessed as part of threatened species in Section 4.1.4 of this document and as migratory below.

Indirect impacts within the action area and on adjacent land were considered, however ruled out due to the substantial management measures required as part of the Aerotropolis DCP. These are discussed in detail in Section 4.1.10 of this referral.

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

No. The proposed action is considered unlikely to be a significant impact to any MNES either known or considered likely to occur in the action area. An impact summary for each MNES is provided below.

***Calidris acuminata* (Sharp-tailed Sandpiper)**

This species was recorded within the action area during field surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy shoreline would be considered potential habitat for this species. This species was observed foraging along the muddy shoreline around the large artificial dams. The action will also result in the removal of 7.17 ha of exotic vegetation representing invasive *Juncus acutus.* This has potential to affect marginal sheltering habitat for this species.

No breeding habitat will be affected as the Sharp-tailed Sandpiper is a non-breeding migratory species to Australia (DCCEEW 2024a). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Sharp-tailed Sandpiper and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 11, Page 52 for further information and assessment.

***Gallinago hardwicki* (Latham's Snipe)**

This species was recorded within the action area during field surveys in 2024 and previously in 2016 surveys. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy shoreline would be considered potential habitat for this species. This species was observed seeking shelter within the exotic vegetation. The action will result in 7.17 ha of exotic vegetation representing invasive *Juncus acutus* being removed and has potential to affect occasional sheltering habitat for this species.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024b). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Latham's Snipe and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 12, Page 56 for further information and assessment.

***Tringa nebularia* (Common Greenshank)**

According to BioNet records, this species was recorded within the action area in 2006. This species was not observed during field survey. Marginal habitat was present in PCT 3975 (0.53 ha) within the action area. Some disturbance due to realignment of the riparian corridor will result in impacts to 10.87 ha of waterbodies, of which, the muddy shoreline would be considered potential habitat for this species. The action will result in 7.17 ha of exotic vegetation representing invasive *Juncus acutus* will be removed and has potential to affect occasional sheltering habitat for this species. The riparian corridor will be rehabilitated and planted with native flora species which will result in improvements to water quality and connectivity.

No breeding habitat will be affected as this species does not breed in Australia (DCCEEW 2024d). Considering that this species may intermittently forage within marginal habitat on the action area, the significant impact criteria was applied with respect to the Common Greenshank and concluded that the proposed development is unlikely to result in a significance impact to this species. Please see Appendix A, Table 13, Page 24 for further information and assessment.

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

The action area contains highly disturbed and fragmented patches of native vegetation and degraded dams. The proposed action will result in the removal of the majority of native vegetation for the proposed development of the action area. The proposed action also includes the realignment and rehabilitation of riparian corridor with dams, wetlands, creeklines and extensive revegetation works which includes native PCTs. The proposed works will provide improvements to the current water quality through protection against peak water flow and improved water quality through revegetation works and bank stabilisation works. The proposed works will result in a short-term loss of habitat for three migratory species (Sharp-tailed Sandpiper, Latham's Snipe and Common Greenshank), also listed as threatened under the EPBC Act. The works may result in a minor loss of foraging habitat for the Grey-headed Flying-fox. However, future works will result in an improved biodiversity outcome of these species through re-establishment of habitat.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The avoid and minimise strategy can be found in Section 4.1.4.10 of this referral.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The impact assessment provided in Section 4.1.5 of this referral have concluded that the proposed action is unlikely to constitute a significant impact to any MNES. No residual significant impact is expected. Although there is no anticipated residual significant impact, details on a proposed offset are presented below. The proposed offset strategy includes the purchase and retirement of credits consistent with the Biodiversity Assessment Method (BAM). The BDAR prepared by ELA (Appendix F, page 123) outlines the credit requirement for impacts to biodiversity values across the action area.

Three migratory EPBC listed species were recorded during targeted surveys or from BioNet records or were assumed present. *Calidris acuminata* (Sharp-tailed Sandpiper) and *Gallinago hardwickii* (Latham's Snipe) were recorded during the field surveys and are likely to utilise the dams within the development footprint as foraging habitat. The literature review identified one BioNet record for *Tringa nebularia* (Common Greenshank) from 2006 within the development footprint. As these are not BC Act listed species. The BAMC does not provide an option to include these EPBC Act listed species as they are not listed under the BC Act. Therefore, no species credits were generated for these species.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The action is not a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The action is not in a Commonwealth Marine Area.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The action does not involve impacts to the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed action does not involve gas or large coal mining developments.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Commonwealth land area
No	No	Defence - 1CAD ORCHARD HILLS KINGSWOOD
No	No	Defence Establishment Orchard Hills

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No, the proposal will not have a direct or indirect impact to Commonwealth Land. There is no Commonwealth Land in the action area, however, there is Commonwealth land and a natural heritage area to the north of the action area in the Orchard Hills Defence site.

The Orchard Hills Defence site is on Commonwealth land and the patch of Cumberland Plain Woodland within the defence site is listed on the Commonwealth Heritage list as a natural heritage area (Appendix C, Figure 20 and page 131).

Proximity of the action area to the Commonwealth Land

The action area and the Orchard Hills Defence site do not share a common boundary and are separated by water infrastructure, cleared land and fencing. The Orchard Hills Defence site is located to the north of the Warragamba Prospect Water Supply pipeline corridor. A 1.07 km section of the northern boundary of the action area runs adjacent to the pipeline corridor. The pipeline buffers the action area and the Commonwealth land. The remaining section of the action areas' boundary do not adjoin Commonwealth land (Appendix C, Figure 20 and page 131).

The Warragamba Prospect Water Supply corridor includes an elevated water pipeline, vehicle access track and mown area and is approximately 75 m wide. The distance between the action area and the Commonwealth land is between 75 m to 300 m in broadest section (Appendix C, Figure 20 and page 131).

Connectivity of the action area to the Commonwealth Land

The connectivity between the action area and the Commonwealth land is marginal and limited to a stream. A 4th Strahler order stream flows downstream from the action area, into private land and enters the south-east corner of the Commonwealth Land via a culvert under the Warragamba pipeline corridor. The stream does not flow into the Cumberland Plain Woodland heritage item. The portion of the stream within the Defence Land has not been field validated.

The stream within the action area lacks native vegetation and is degraded due to cattle trampling and historic farming practices. The vegetation present is comprised of exotic species including *Juncus acutus, Cenchrus clandestinus* and *Cynodon dactylon* (Appendix K, Table 7, Page 36). The Riparian Assessment report (Appendix K, Page 67) contains current images of the stream.

In its current state, the stream would allow movement of water through the action area into the Commonwealth Land and could transport weed propagules or act as a corridor for amphibians or other aquatic species. The stream does not facilitate a direct connection to the Cumberland Plain Woodland within the Defence Land.

Aside from the 4th order stream, the connectivity is limited to mobile species (birds and bats) that could use the small patches of remnant vegetation in the action area and the Commonwealth Land. There is no connectivity between the action area and Commonwealth Land for terrestrial species due to the Defence Land fencing and Warragamba pipeline corridor.

Consideration of potential impacts to Commonwealth Land

This referral has considered the potential for direct and indirect impacts to the Commonwealth Land and mapped Cumberland Plain Woodland. Direct impacts were immediately ruled out as the action area does not include the Commonwealth Land and there is a distance of 75 m to 300 m between the two sites. The following indirect impacts were considered for this action:

- Noise production – during construction and post-construction (operational phase)
- Sedimentation and erosion – during bulk earthworks, riparian construction and post-construction
- Light spill - during construction and operational phase
- Dust mobilisation - – during construction
- Introduction of weeds - - during construction and operational phase
- Introduction of pest species – post construction

- Changes to hydrological flows - during construction and operation phase.

Noise production, light spill, dust mobilisation, sedimentation and erosion and introduction of pest species were ruled out as potential indirect impacts due to the following:

- Management of these potential impacts in accordance with the controls outlined in the Aerotropolis DCP, specifically sections 2.4, 2.5 and 2.10 and Part 4.3 of the Western Parkland City SEPP 2021
- Distance between the Commonwealth Land and the action area (75 m – 300 m)
- Physical barriers that would prevent movement of terrestrial pest species (fences, pipeline corridor)
- Degraded state of the action area and current presence of avifauna pest species such as the Common Myna that could already access the Commonwealth Land
- Creation of future riparian corridors along the northern boundary of the action area (approximately 40 m wide) which would provide an additional buffer between the action area during its operational phase and the Commonwealth Land
- Implementation of a Soil and Water management Plan prepared by a Certified Professional in Erosion and Sediment Control (CPESC). The plan will:
    - develop controls to minimise erosion of soil from the action area and,
    - sedimentation of drainage systems and waterways to achieve the Erosion and Sediment Control performance objectives
    - be prepared in accordance with Managing Urban Stormwater Soils and Construction
    - demonstrate how the construction phase targets are achieved; they will form part of the engineering design drawings and will be documented in the construction plans
    - include a set of plans drawn to scale which show the layout of appropriate sedimentation and erosion control and outline of appropriate sedimentation and erosion control measures.
- Lighting and noise requirements associated with the Aerotropolis DCP which include:
    - restrictions on lighting used during construction
    - requirements for all lighting to be designed to avoid light spill into biodiversity areas
    - warm coloured LED lighting to be installed within 100 m of microbat habitat
    - light and noise spill to be managed where there are potential impacts to wildlife in avoided land (this has been applied to any retained land in the action area and would be applicable to the adjacent Commonwealth Land)
- Implementation of a Construction Environment Management Plan (CEMP) to manage noise, vibration and air quality that also meets the Aerotropolis DCP requirements.

Therefore, the remaining indirect impact considered for the Commonwealth land was changes to hydrological flows. This is discussed further below.

Changes to hydrological flows – potential indirect impacts

The proposed action would not result in any downstream indirect impacts to the Commonwealth land or the natural heritage area. The riparian corridor is currently in poor condition, with irregular flow regimes, high infestation of exotic flora species, disturbance from cattle and is also entirely absent of native vegetation. Portions of the corridor have already been modified by the historic damming of the stream in the action area and piping of the stream under the Warragamba pipeline corridor.

In its current state, it is possible that weed propagules and movement of sediment are already entering the Commonwealth land. The proposed action would include reshaping the stream, removing all exotic flora species and replanting with native species (note these must be consistent with the Aerotropolis DCP requirements). The changes would improve the overall condition of the riparian corridor and current downstream impacts such as movement of sediment, poor water quality and movement of weed propagules would likely significantly decrease or cease.

Potential indirect impacts from the changes to the riparian corridor (such as sedimentation, erosion and changes to water flow) will be managed through implementation of the controls in accordance with Section 2.3.2 Western Sydney Aerotropolis DCP (DPE 2022). The Integrated Water Cycle Management Strategy

(Appendix J) and Riparian Assessment (Appendix K) state that the proposed action will result in no change in hydrological flow and result in improved water quality in accordance with the Aerotropolis DCP requirements (DPE 2022).

An assessment has been conducted in accordance with the DSEWPC 2013 *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies – significant impact guidelines 1.2.* The self assessment process has been applied to this proposed action. The assessment of impacts to Commonwealth land (i.e. the Orchard Hills defence site) and Commonwealth Heritage list area (i.e. the Cumberland Plain Woodland ecological community) is provided in Appendix A, Table 14, page 69.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no Commonwealth Heritage Places Overseas in the action area.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

The proposal has considered options to retain existing native vegetation within the action area. However, due to the poor condition of the vegetation and its location along the eroded banks of the riparian zone, the vegetation could not be retained. Due to the proposed Integrated Water Cycle Management Strategy (Enspire 2025), the existing vegetation along the riparian corridors could not be retained. The Integrated Water Cycle Management Strategy has been specifically designed to meet the Western Sydney Aerotropolis DCP planning framework. As a result of the design, one patch of native vegetation (0.71 ha), with some retention values (due to the presence of hollow-bearing trees) was identified to be retained within the proposed action area (Appendix C, Figure 3, page 114). This patch of vegetation will be retained as a park and subject to landscaping.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Appendices A B C D 5432_Luddenham Sydney Science Park EPBC Referral_v10.pdf EPBC referral	24/09/2025	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Appendix G Directory of Migratory Shorebirds -1.pdf Migratory shorebirds report	01/08/2020	No	High
#2.	Document	Appendix G Directory of Migratory Shorebirds -2.pdf Migratory shorebirds report pt 2	01/08/2020	No	High
#3.	Document	Appendix G Directory of Migratory Shorebirds -3.pdf Migratory shorebirds report pt 3	01/08/2020	No	High
#4.	Document	Appendix G Directory of Migratory Shorebirds -4.pdf Migratory shorebirds report pt 4	01/08/2020	No	High
#5.	Document	Appendix M 250326 CEL SSP SSDA Community Engagement Newsletter - FA.pdf Community engagement newsletter	01/06/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Appendix E SSP GGBF Expert Report_r2draft.pdf Green and golden bell frog expert report	30/07/2025	No	High
#2.	Document	Appendix F Sydney Science park Luddenham Rd BDAR SSD_v6.pdf Biodiversity Development Assessment Report	01/09/2025	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Appendix H Preliminary Heritage Advice.pdf Heritage assessment by Kelleher Nightingale Consulting	03/09/2024	No	High

#2.	Document	Appendix N Connection with Country Design Report-1.pdf Connecting with country report pt 1	30/11/2024	No	High
#3.	Document	Appendix N Connection with Country Design Report-2.pdf Connecting with country report pt 2	01/07/2025	No	High
#4.	Document	Appendix N Connection with Country Design Report-3.pdf Connecting with country report pt 3	01/07/2024	No	High
#5.	Document	Appendix N Connection with Country Design Report-4.pdf Connecting with country report pt 4	01/07/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Appendix I 5432 Sydney Science Park VMP_Final Draft v8.pdf Vegetation Management Plan for riparian corridor	05/09/2025	No	High
#2.	Document	Appendix J IWCMS.pdf Integrated Water Cycle Management Strategy prepared by Enspire and E2DesignLab	24/04/2025	No	High
#3.	Document	Appendix K Sydney Science Park Riparian Assessment_v4.pdf Riparian assessment by Eco Logical Australia	18/08/2025	No	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	87096512088
Organisation name	ECO LOGICAL AUSTRALIA PTY LTD
Organisation address	PO Box Q108. Sydney NSW 1230
Representative's name	Alex Gorey
Representative's job title	Senior Ecologist
Phone	02 9259 3800
Email	alexg@ecoaus.com.au
Address	Level 13, 420 George Street, Sydney NSW 2000

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ By checking this box, I, **Alex Gorey of ECO LOGICAL AUSTRALIA PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	67607351842
Organisation name	CELESTINO DEVELOPMENTS SSP PTY LIMITED
Organisation address	642 Great Western Highway, Pendle Hill NSW 2145
Representative's name	Jude Adikari

Representative's job title	Development Director
Phone	98421218
Email	info@celestino.net.au
Address	642 Great Western Highway, Pendle Hill NSW 2145

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **Jude Adikari of CELESTINO DEVELOPMENTS SSP PTY LIMITED**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **Jude Adikari of CELESTINO DEVELOPMENTS SSP PTY LIMITED**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.