

Danny Kataieh  
HB&B Property  
M: 0434 367 611  
E: dkataieh@hbbproperty.com.au  
*Supplied by email*

27 September 2024

**Re: Wildlife Hazards Letter Version 1.0 – DA24/0654 – Alspec Industrial Business Park, 221-235 Luddenham Rd, Orchard Hills, NSW**

Dear Danny,

This letter aims to address comments from Western Sydney Airport (WSA) (agency reference Number A-89128) regarding DA24/0654, submitted to Penrith City Council (PCC) in relation to the Alspec Industrial Business Park (AIBP), located on Luddenham Road, Orchard Hills, NSW (Lot 1//DP1293805, Lot 2//DP1293805, and Lot 99//DP1282927).

The DA seeks approval for an on-site sewer management facility (OSSMF) for the AIBP (**Figure 1**). The proposed OSSMF includes 9 above and below ground tanks and plant shed, and an underground OSD and rainwater tank (**Figure 2** and **Figure 3**). It is understood that the two aboveground tanks will be enclosed and fitted with passive carbon filters to treat potential fugitive odour emissions. It is understood that treated water will be reused for toilet flushing and irrigation of landscaped areas (**Figure 4**).

*Legislative context*

The study area is located within land on the Land Application Map of Chapter 4 (Western Sydney Aerotropolis) of the Western Parkland City State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (SEPP) and is therefore subject to the development controls and permitted developments detailed under the SEPP (**Figure 5**).

Section 4.19 (Wildlife hazards) of the SEPP applies to development of land within the 13-kilometre wildlife buffer zone of the future Western Sydney International Airport. Relevant developments cannot be granted development consent within this area unless the consent authority:

- a) *has consulted the relevant Commonwealth body.*
- b) *has considered a written assessment of the wildlife that is likely to be present on the land and the risk of the wildlife to the operation of the Airport provided by the applicant, which includes—*
  - i. *species, size, quantity, flock behaviour and the particular times of day or year when the wildlife is likely to be present, and*
  - ii. *whether any of the wildlife is a threatened species, and*
  - iii. *a description of how the assessment was carried out, and*
- c) *is satisfied that the development will mitigate the risk of wildlife to the operation of the Airport, including, for example, measures relating to—*
  - i. *waste management, landscaping, grass, fencing, stormwater or water areas, or*
  - ii. *the dispersal of wildlife from the land by the removal of food or the use of spikes, wire or nets.*

Relevant development includes 'water storage facilities', which captures the proposed OSSMF, therefore Section 4.19 of the SEPP applies.

### Methods

The wildlife hazard assessment was conducted using a combination of targeted field surveys and literature reviews to identify species presence and evaluate associated risks. Surveys included searches for roosting habitats, species behaviour observations, and habitat use analysis across different times of the day and seasons.

Relevant reports and literature reviewed include:

- Ecoplaning (2023). Ecological Constraints Assessment. Version 1.2, Final. Dated 19 December 2023.
- Ecoplaning (2024a). Flora and Fauna Assessment. Version 3.1, Final. Dated 26 July 2024.
- Ecoplaning (2024b). Biodiversity Management Plan. Version 1.3, Final. Dated 8 July 2024.
- Avisure (2016). 'Preliminary Western Sydney Airport Bird and Bat Strike Risk Assessment'.
- Avisure (2020). Draft Wildlife Management Assessment Report.

The combined survey effort is tabulated below:

**Table 1: Combined, previous survey effort.**

Date(s)	Staff (role)	Summary of tasks undertaken
30 - 31 March 2020	Brian Towle (Senior Ecologist), Bret Stewart (Senior Ecologist) and Ben Brown (Ecologist)	Validation of native vegetation and habitat survey for potential fauna.
13 January - 1 February 2022	Nicholas Agostino (Field Ecologist), Simon Lee (Field Ecologist)	Microbat surveys: Anabat detectors deployed over 16 nights across three dams.
17 August 2023	Ailis Chapman (Consultant Ecologist) and Amy Mortell (Field Ecologist)	Vegetation mapping and survey of potential threatened species in the riparian area.
15 March 2024	Ailis Chapman (Consultant Ecologist)	Survey of site conditions, weed species, large trees, and habitat features.

The hazard assessment focused on identifying species likely to use the site, evaluating their potential to contribute to airstrikes, and applying mitigation measures to manage risks, and reassessing the risk.

### Results

The 'Preliminary Western Sydney Airport Bird and Bat Strike Risk Assessment' (Avisure 2016) identified several bird species as abundant and hazardous within the Aerotropolis area. These include the Galah, Straw-necked Ibis, Masked Lapwing, Australian Magpie, and various ducks like the Pacific-black, Grey Teal, Australian Wood Duck, and Hardhead. The Ibis species



---

(Straw-necked and Australian White) are especially concerning due to their flocking behaviour, significant weight (around 1.3 kg), and difficulty in managing them at airports.

Additionally, the Common Starling, Feral Pigeon, and Cattle Egret were noted as significant risks due to their flocking behaviours and history of causing strikes at airports globally. The 'Draft Wildlife Management Assessment Report' (Avisure 2020) further emphasised that water birds represent 44% of the species posing risks, highlighting the need to manage water sources to reduce the likelihood of strikes.

The study area, consisting mainly of cleared paddocks and scattered trees, with remnant native vegetation, and numerous farm dams, provides habitats that can support a variety of fauna, including threatened and non-threatened birds, microbats and flying foxes.

During field surveys, 25 fauna species were observed within or near the study area, including several threatened species.

The threatened Little Eagle (*Hieraaetus morphnoides*), listed as vulnerable under the BC Act, was observed flying above the study area during the 2023 survey. Additionally, the targeted microbat surveys conducted with Anabat recording devices revealed the presence of potentially 16 species in the subject lot (nine 'definite' and seven 'possible'), with the following threatened species among them:

- Eastern Coastal Free-tailed Bat (*Micronomus norfolkensis*) – Vulnerable under the BC Act.
- Greater Broad-nosed Bat (*Scoteanax rueppellii*) – Vulnerable under the BC Act.
- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*) – Endangered under the BC Act.
- Eastern Bent-winged Bat (*Miniopterus orianae oceanensis*) – Vulnerable under the BC Act.
- Eastern Cave Bat (*Vespadelus troughtoni*) – Vulnerable under the BC Act.
- Little Bent-winged Bat (*Miniopterus australis*) – Vulnerable under the BC Act.
- Southern Myotis (*Myotis macropus*) – Vulnerable under the BC Act.

The Ecoplanning surveys confirmed that the study area and adjacent land attract birds, including hazardous species, due to the availability of habitat, particularly open waterbodies. Common grassland-adapted birds, such as the Australian Raven and Australian Magpie, were recorded during the surveys, indicating that exotic grassland areas within the study area serve as foraging grounds.

The existing dams, though small in capacity, may attract a range of waterbirds. For example, Ecoplanning recorded the Little Egret—a flocking bird species that flies high and poses a potential risk to aeronautical operations. These waterbodies will be infilled or converted to three proposed engineered water storages, including two unvegetated and one vegetated bioretention basin, under a separate DA for bulk earthworks, for which a separate Wildlife Hazards Assessment has been prepared.

The fauna surveys also identified various habitat features within the study area that could support foraging, roosting, and breeding activities for both nocturnal and diurnal species. These features include hollow-bearing trees, winter-flowering eucalypts, and aquatic habitats, which are critical resources for local wildlife. The winter-flowering *Eucalyptus tereticornis*, for instance, serves as an essential feeding resource for the Grey-headed Flying-fox.



---

Additionally, review of the NSW BioNet Atlas (Ecoplanning 2024a) identified 28 threatened fauna species within 5 km of the study area. The EPBC Protected Matters Search Tool Report identified an additional 22 threatened fauna species previously recorded within a 5 km radius or potentially present in nearby habitats. Of these 50 threatened species, three were deemed to have a high to moderate likelihood of occurring on the study area:

**High**

- Grey-headed Flying-fox (*Pteropus poliocephalus*) – Vulnerable under the BC and EPBC Acts.

**Moderate**

- Dusky Woodswallow (*Artamus cyanopterus cyanopterus*) – Vulnerable under the BC Act
- Powerful Owl (*Ninox strenua*) - Vulnerable under the BC Act.

Ecoplanning did not detect any Grey-headed Flying-foxes or their roosts. However, the Commonwealth Interactive Flying-fox Web Viewer indicates the presence of large colonies of Grey-headed Flying-foxes to the north, east, and south of the Aerotropolis. Specifically, the colony at Ropes Creek, located 6.8 km northeast of the Subject Property, housed up to 10,000 Grey-headed Flying-foxes in 2022. Additionally, the colony at Emu Plains, 9.8 km northwest of the Subject Property, had up to 10,000 Grey-headed Flying-foxes in 2019. No large colonies of bats were identified closer to the area (Commonwealth of Australia 2024).

The actual and potential presence of these species, along with habitat features like hollow-bearing trees, winter-flowering eucalypts, and aquatic habitats, underscores the need for effective wildlife hazard assessment and mitigation strategies.

The study area contains habitat values which attract birds, microbats and flying boxes, which may constitute a risk to the aviation activities however, this baseline risk is prevalent across the aerotropolis and its buffer zones. The existing habitat in the study area poses a minor risk to aviation regardless of whether the proposal proceeds or not.

The development is not anticipated to attract wildlife to the extent that it would increase the safety hazard to airport operations compared to the current land use.

The proposed tanks in the OSSMF will be fully enclosed, significantly reducing the likelihood of attracting birdlife compared to the existing open waterbodies on-site. Unlike open dams or water sources, which are known to draw in waterbirds and other wildlife, the enclosed tanks eliminate exposed water surfaces, thereby removing a key attractant for bird species. The additional use of passive carbon filters to manage odour emissions further ensures that the development will not create conditions conducive to wildlife congregation. As a result, the enclosed design of the tanks presents a lower risk of attracting birds relative to the current open water habitats already present.

Furthermore, some vegetation within the study area will be removed under the proposal. While landscaping will mitigate some of the impacts, it is also not expected to attract wildlife that could create a safety hazard to the operations of the Airport. The selection of plant species for landscaping will be carefully considered, ensuring that flora chosen will not provide significant food or shelter that encourages wildlife, particularly bird species, to congregate near the site. This approach helps minimise the risk of attracting species that may pose a threat to aviation safety.



---

The proposed landscaping will use predominately native species. For example, the landscape plan for the OSSM includes species selected with references to the 'Western Sydney Aerotropolis Landscape Species List' (Geoscapes 2024).

Overall, the removal of some vegetation, the establishment of fully enclosed, unvegetated storage tanks, and the careful selection of landscaping species in accordance with PCC guidelines and relevant planning instruments will ensure that the development does not result in a net increase in wildlife-related risk. By minimising attractants such as open water and food sources, the proposed measures will maintain or reduce the baseline risk to aviation safety compared to the current land use.

### *Hazard and risk mitigation*

To further mitigate the potential risks posed by birds, microbats and flying foxes, the following strategies are proposed:

- Landscaping should be carefully designed to avoid plant species that could attract these animals. The 'Western Sydney Aerotropolis Landscape Species List' details flora species that are recommended for Landscaping in the Aerotropolis area. In particular, the two water storage basins will remain non-vegetated to prevent the establishment of habitats that could draw in large numbers of birds. By minimising standing water and avoiding the creation of suitable habitats, the risk of bird congregation in these areas will be reduced.
- Further measures, such as installing spikes, wire, or nets, may be employed where necessary to deter birds from roosting on structures. Additionally, the removal of food sources and potential nesting sites will be prioritised to reduce the attractiveness of the site to both birds and flying foxes.
- Waste disposal should include bins with fixed lids, and where possible, waste storage areas should be contained within enclosures that cannot be accessed by birds or flying foxes.

### *Conclusion and recommendations*

The proposal has been designed in a manner which avoids creating new habitat features that may attract birds, microbats and flying foxes, with management of existing attractants proposed to further reduce aviation safety risks.

In summary, the Wildlife Hazard Assessment for DA24/0654 within the Alspec Industrial Business Park has identified potential baseline risks to aviation operations posed by various bird, microbat and flying fox species in the area. The assessment confirms that while the current habitat supports a range of wildlife, the proposed development, including the removal of some vegetation and the installation of fully enclosed tanks, is not expected to increase the risk to the airport compared to the existing land use.

The planned landscaping, incorporating native species, is designed to mitigate potential hazards. These measures, combined with adaptive management strategies to minimise attractants, and waste management, aim to effectively manage the risk posed by wildlife.

Overall, the development meets with SEPP requirements and includes appropriate risk mitigation measures to ensure that the project will not exacerbate wildlife hazards to the future Western Sydney International Airport.



---

Should council require following review of this assessment, the relevant Commonwealth body will be consulted.

Yours sincerely,



Erin Leslie  
**Consultant Ecologist (BE, hon; GradCert EnvMgmt)**  
**M:** 0493 135 112  
**E:** [erin.leslie@ecoplanning.com.au](mailto:erin.leslie@ecoplanning.com.au)





## Figures



Figure 1: Study area, showing OSSMF.



© 2004 Blackwell Publishing Ltd



**Figure 3: OSSMF, showing closure (source Aquacell Water Recycling)**



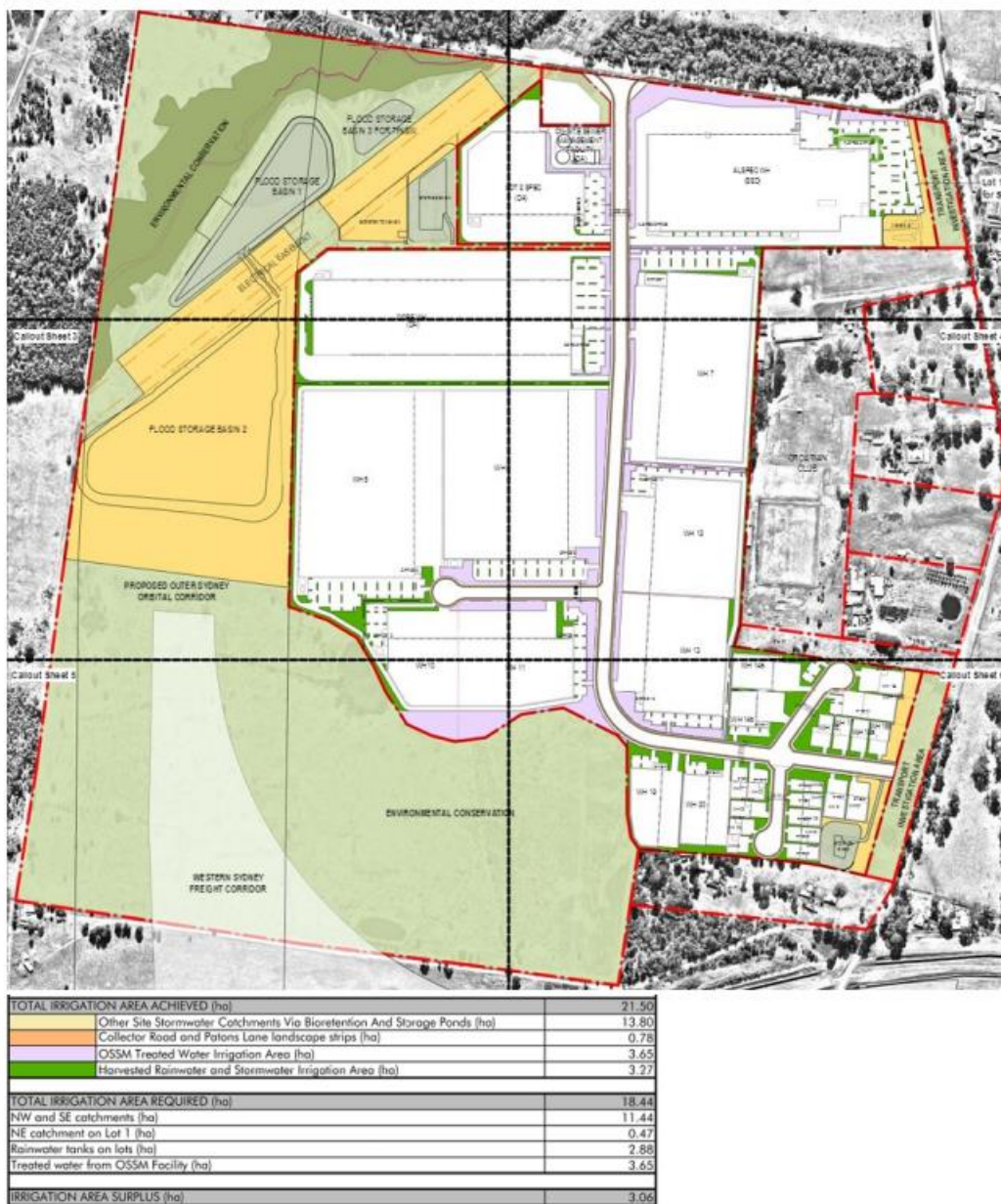


Figure 4: Study area, showing irrigation areas associated with the OSSMF (purple shading).

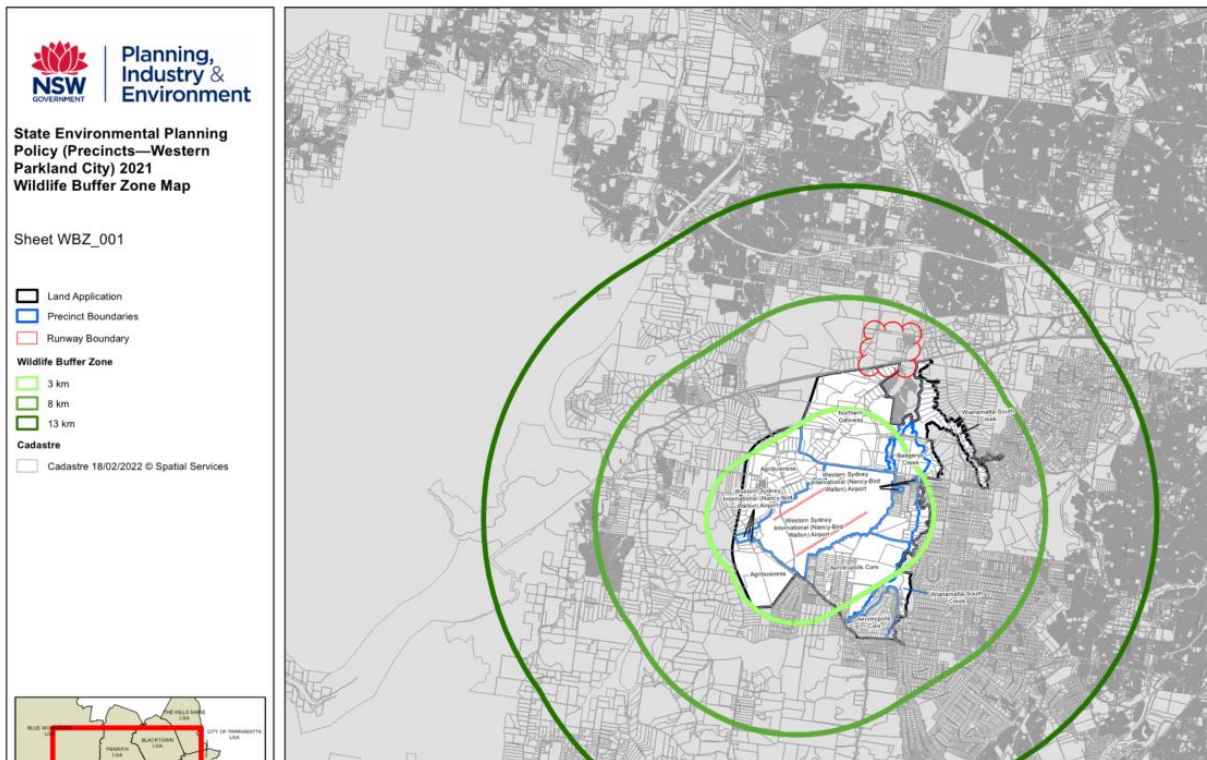


Figure 5: Land Application Map, showing study area in 8km wildlife buffer zone.

---

## References

Avisure (2016) Preliminary Western Sydney Airport Bird and Bat Strike Risk Assessment

Avisure (2020) Western Sydney Aerotropolis Draft Wildlife Management Assessment Report Western Sydney Planning Partnership May 2020.

Commonwealth of Australia (2024) National Flying-fox Monitoring Viewer <https://www.awe.gov.au/environment/biodiversity/threatened/species/flying-fox-monitoring>

Ecoplanning (2023a) Ecological Constraints Assessment. Alspec Industrial Business Park, Luddenham Rd.

Ecoplanning (2024a) Flora Fauna Assessment. Alspec Industrial Business Park Bulk Earth Works, Luddenham Rd.

Ecoplanning (2024b) Biodiversity Management Plan. Alspec Industrial Business Park, Luddenham Rd

Geoscapes (2024). Landscape Plans – OSSM, Orchard Hills. Landscape Documentation for Development Application. Job number 240612. Dated 24 July 2024.

NSW Department of Planning and Environment (DPE (2022) The Cumberland Plain Conservation Plan

NSW Land and Property Information (LPI) (2023). SIX Maps. Accessed at: <https://maps.six.nsw.gov.au/>

Penrith City Council (2020). WSUD Technical Guidelines, version 4. Accessed at: [https://www.penrithcity.nsw.gov.au/images/wsud\\_technical\\_guidelines\\_october\\_2020\\_version\\_4.pdf](https://www.penrithcity.nsw.gov.au/images/wsud_technical_guidelines_october_2020_version_4.pdf)

Urbis (2024). Environmental effects on-site sewer management system. Prepared for HB+B Property. Report Number: P0007737. 23 August.