09 February 2026 Doc no: HBT0204_DAMod

Attention:	Jane Bai and Henry King Sicad
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Title:	Proposed development application modification to the Yanco Battery Energy Storage System - SSD-67478479, located at Lot 516 and Lot 521 DP 751745 - 120 Houghton Road, Yanco, NSW 2703

Introduction

Habitat Environmental Services Pty Ltd (Habitat) have been engaged by ACEnergy to prepare a development application (DA) modification to the Biodiversity Development Assessment Report (BDAR) prepared by Habitat (2025) for the state significant development (SSD) - Yanco Battery Energy Storage System (BESS) (SSD-67478479), located at Lot 516 and Lot 521 DP 751745 - 120 Houghton Road, Yanco, NSW 2703. The Yanco BESS (SSD-67478479) was approved by the Minister for Planning on 02 October 2025.

The proposed DA modification is required to accommodate minor amendments to the approved project boundary and lies within the investigation area surveyed during the preparation of the BDAR (2025). The proposed modification consists of four small areas totalling 0.34 hectares and includes:

- The installation of a nominated access point to the Yanco substation
- Upgrade of the Irrigation Way intersection in accordance with Austroads standards
- Adjustments to the site access of the Hume Road / Houghton Road intersection.

The proposed DA modification areas and the approved Yanco BESS project boundary are shown on **Figure 1**.

Scope

To quantify potential impacts of the proposed modification on biodiversity values within the modification areas and the surrounding environment. The results of field surveys completed in November 2023 and January 2024 for the Yanco BESS BDAR (2025) were used to inform this assessment. Field surveys were undertaken in accordance with the NSW Biodiversity Assessment Method (BAM) (DPIE 2020a) under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the *Biodiversity Conservation Regulation 2017* (BC Regulation).

The biodiversity accredited assessor system (BAAS) case number for the Yanco BESS (SSD-67478479) project is: 00050848/BAAS18041/24/00053444 and the assessor is Dr. Gilbert Whyte (BAAS18041).

Site Description

The Yanco BESS project is located directly southwest of the Yanco township within the Leeton Local Government Area (LGA). The investigation area is zoned RU1 primary production, and the road easement is zoned SP2 road and traffic facilities under the Leeton Local Environmental Plan (LEP) 2014. The local topography is relatively flat and contains several constructed irrigation channels, with the closest occurring north of Houghton Road and east along Hume Road. Surrounding land use is predominantly agricultural, native vegetation is limited to isolated trees and small patches of woodland vegetation (refer to **Figure 2**).

Project Background - Yanco BESS (SSD-67478479) Impact Summary

Habitat prepared the BDAR (2025) submitted with Environmental Impact Statement (EIS) for the Yanco BESS (SSD-67478479). The Yanco BESS (SSD-67478479) was approved by the Minister for Planning on 02 October 2025. Key project infrastructure included the construction of a 250 megawatt AC (MWAC) and 1,100 MW-hour BESS and upgrades to the intersection at Houghton/Hume Road and Houghton Road/Irrigation Way (refer to **Figure 1**).

Impacts from the construction and operation of the project incurred an ecosystem and species credit obligation for residual impacts to identified threatened ecological communities, entities and /or habitat listed under the BC Act. The Yanco BESS (SSD-67478479) ecosystem credit and species credit obligations are summarised in **Table 1** and **Table 2** below**.**

Table 1 Yanco BESS (SSD-67478479) ecosystem credit obligation

Zone	PCT/ condition class	BC Act	EPBC Act	Impact (ha)	Credit obligation
02	74 - Planted Roadside	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, NE Tableland, Nandewar, Brigalow Belt South, Sydney Basin, SE Highlands, NSW SW Slopes, SE Corner and Riverina Bioregions – critically endangered ecological community (CEEC) and an entity at risk of Serious and Irreversible Impacts (SAII)	no	0.50	8
03	26 - Woodland Regrowth	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South western Slopes bioregions – endangered ecological community (EEC)	no	0.01	1

Table 2 Yanco BESS (SSD-67478479) species credit obligation

Species	BC Act	EPBC Act	Impact (ha)	Credit obligation
Koala (Phascolarctos cinerea)	endangered	endangered	0.50	8
Southern Myotis (*Myotis Macropus)*	vulnerable	no	0.01	1

The Superb Parrot (*Polytelis swainsonii*), a listed vulnerable species under the NSW BC Act and the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act), was identified foraging outside of the impact footprint. An assessment of significance for potential impacts to the species was undertaken in accordance with the EPBC Act Significance Significant Impact Guidelines 1.1 (DotE 2013). The assessment determined that the significant impacts to the species from the action were unlikely due to the lack of direct impacts to suitable habitat for the species. A referral to the Commonwealth Minister for the Environment was not required.

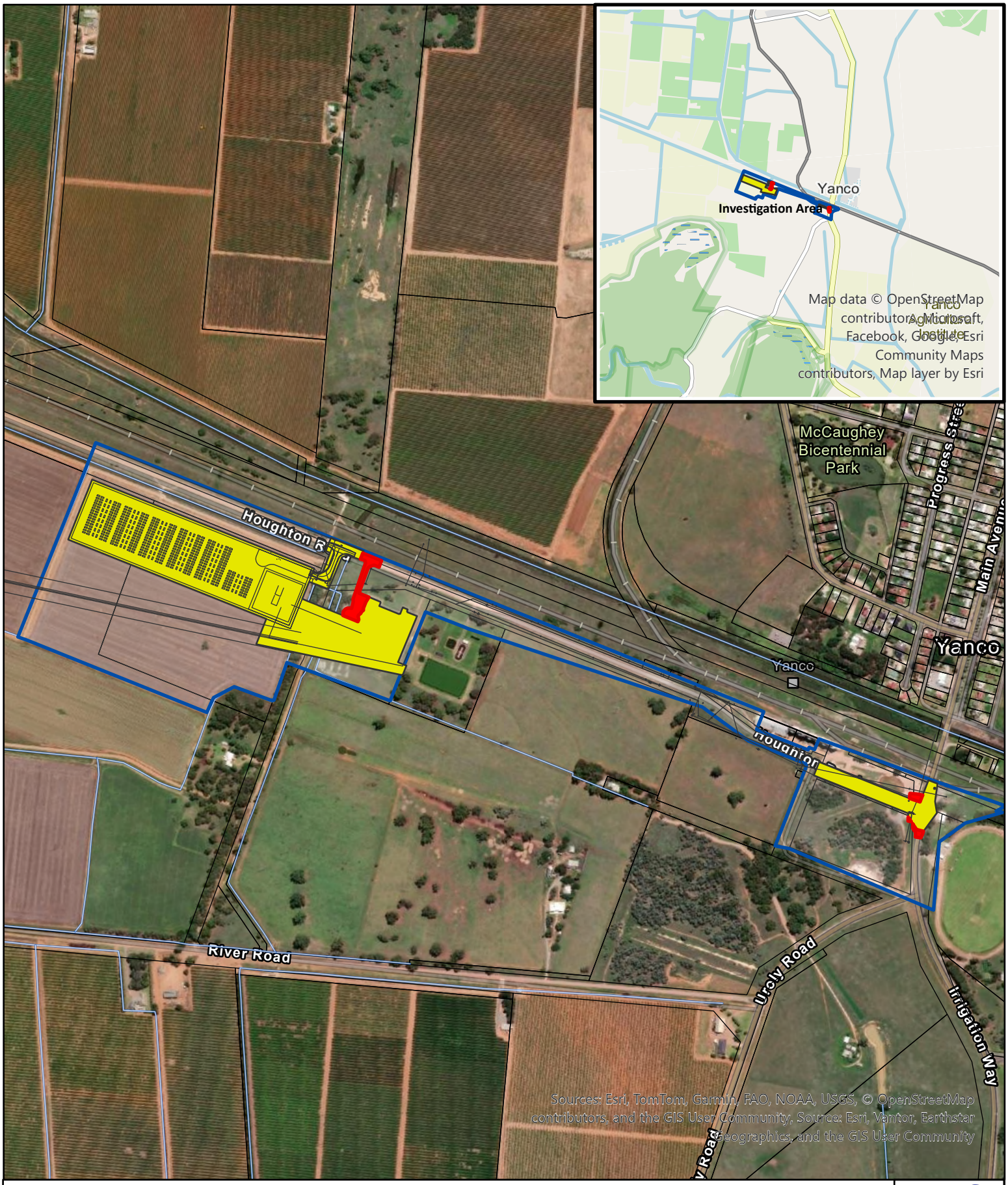

Figure 1 - DA Modification - Yanco BESS (SSD-67478479)

Legend

- Study Area (Investigation Area)
- Subject Land (DA Modification)
- Existing Approval (SSD-67478479)
- Cadastral Boundary
- Mapped Waterway (SixMaps 2024)

0 0.2 0.4 0.6 Kilometers

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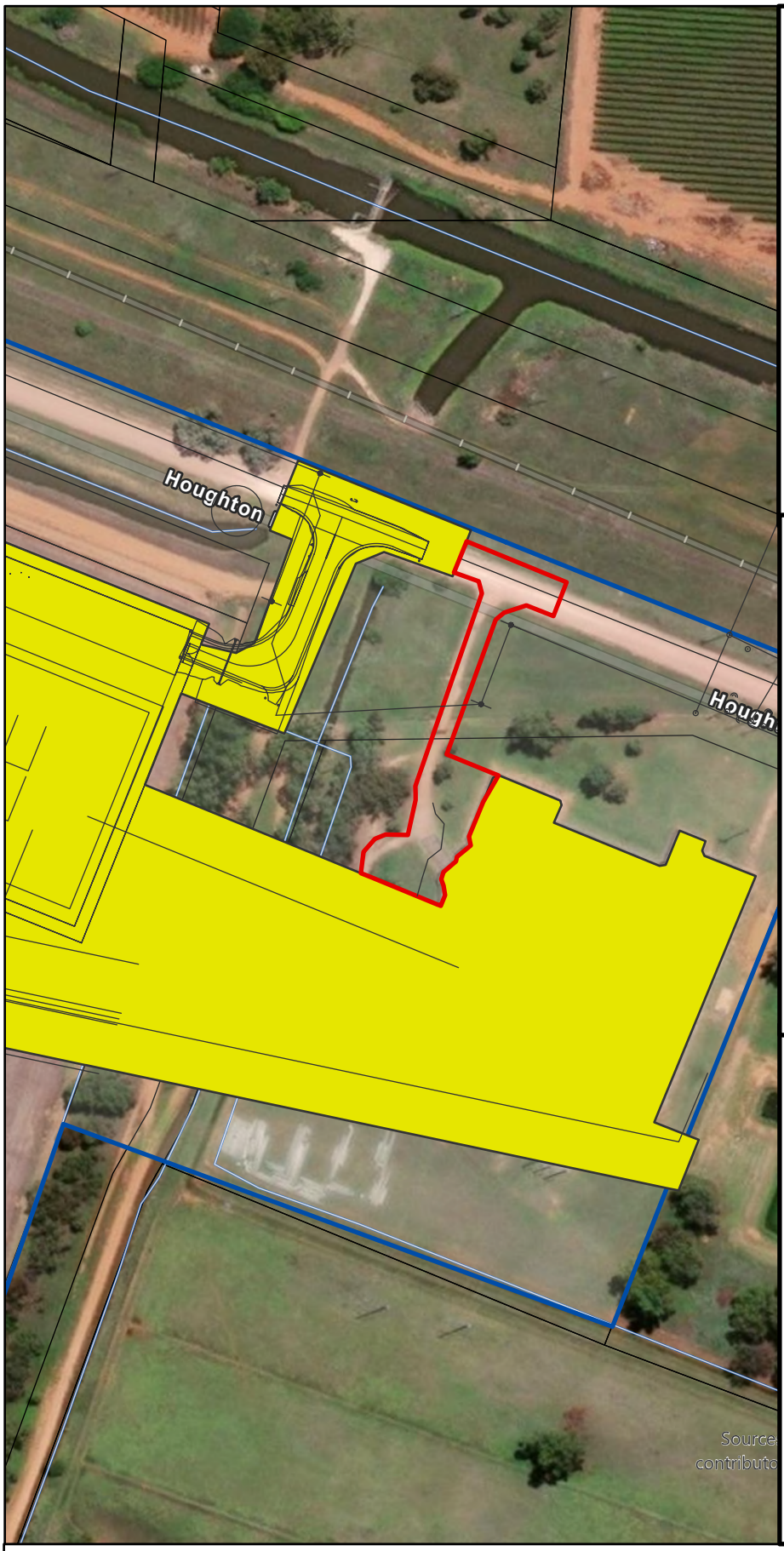

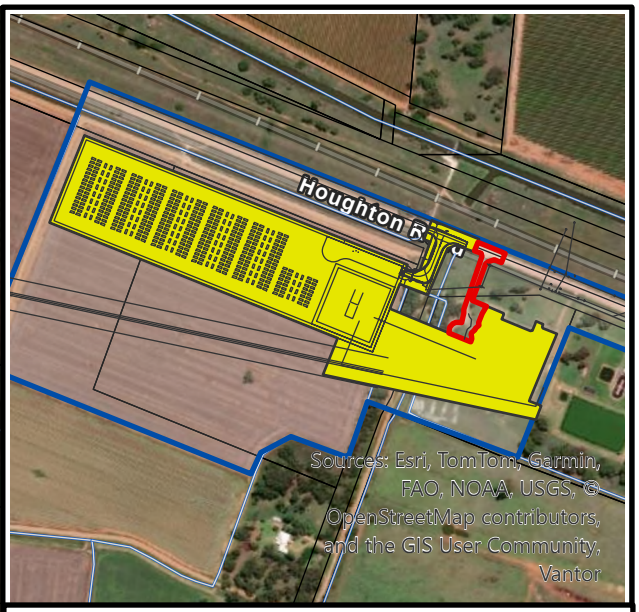

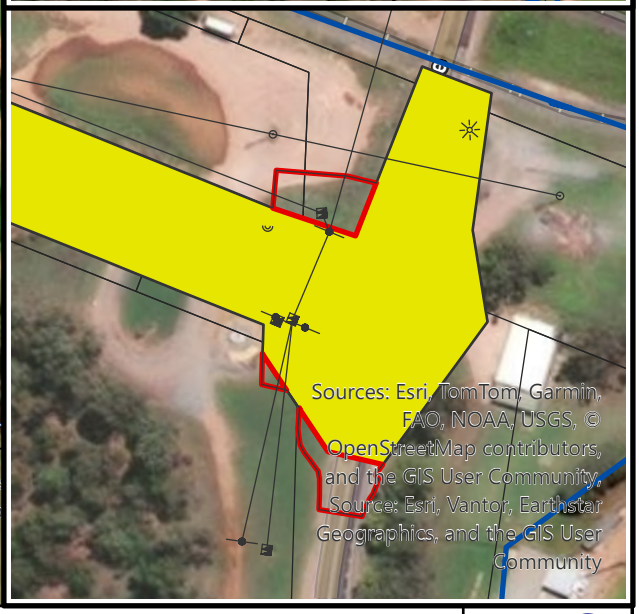

Figure 2 - DA Modification Areas - Yanco BESS (SSD-67478479)

Habitat

Legend

- Study Area (Investigation Area)
- Subject Land (DA Modification)
- Existing Approval (SSD-67478479)
- Cadastral Boundary
- Mapped Waterway (SixMaps 2024)

0 0.1 0.1 0.2 Kilometers

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Landscape Features

The investigation area occurs within the Riverina IBRA Region within the Murrumbidgee IBRA Sub Region. The extent of Mitchells Landscapes within the locality is mapped as Murrumbidgee Scalded Plains. Murrumbidgee Scalded Plains is known for having quaternary alluvial plains with extensive scalding interpreted as relic floodplains or terraces. No areas within the investigation area contain mapped natural aquatic habitat features such as rivers, streams or wetlands. Connectivity to other areas of native vegetation is limited to isolated remnants. No areas of geological significance or areas of outstanding biodiversity value occur within the investigation area.

Vegetation Mapping

Floristic Diversity

Detailed vegetation surveys, in accordance with Section 4 of the BAM (DPIE 2020a), were conducted across the investigation area on 09/11/23, 10/11/23, 07/01/24, and 08/01/24. The Yanco BESS project footprint was not defined at the time of the surveys, so areas outside the footprint were also assessed and therefore included the DA modification area.

A relatively low diversity of native plant species were recorded during the assessment. Native plant species were limited to roadside woodland remnants containing trees, shrubs, and a range of introduced grasses and forbs occur in cleared areas of the road verges. No threatened flora species were identified during field surveys. A complete list of the flora species identified during the assessment is provided in **Attachment A**. Plot data for Q05 and Q06 are applicable to the modification.

Plant Community Type

Floristic analysis identified two PCTs within the investigation area and three vegetation zones:

- Vegetation zone 01 - PCT 74 - Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion (woodland regrowth)
- Vegetation zone 02 - PCT 74 - Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion (planted roadside vegetation)
- Vegetation zone 03 - PCT 26 - Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion (woodland regrowth).

The DA modification areas are comprised of non-native vegetation (exotic grassland) (0.17 ha) and areas that have been already cleared for development (0.17 ha) (refer to **Figure 3**). Areas of non-native vegetation (exotic grassland) occur largely within the road verge. The dominant species in these areas include: *Avena barbata, Lolium perenne, Vulpia myuros, Bromus hordeaceus, Bromus catharticus,* and *Plantago lanceolata*. The total coverage of exotic plant species in these areas is approximately 99 per cent (refer to **Plate 1** and **Plate 2**).

Plate 1 **Non- native vegetation (exotic grassland) near Houghton Road modification area**

Plate 2 **Non- native vegetation (exotic grassland) adjacent to Houghton Road/Irrigation Way intersection**

Vegetation Zones

Information pertaining to the vegetation integrity scores (VI score) for each vegetation zone are detailed in **Table 3**. Note that VI scores for vegetation zones 01, 02 and 03 have been provided, however, no impacts to these zones would occur.

Table 3 Vegetation Integrity

Zone	PCT	Condition class	DA modification (ha)	HBT	Condition Attributes			VI
					Composition	Structure	Function	
01	74	Woodland Regrowth	0.00	No	23.3	25.9	44.3	29.9
02	74	Planted Roadside	0.00	No	25.6	19.6	35.0	26.0
03	26	Woodland Regrowth	0.00	No	25.4	27.0	46.2	31.6
N/A	74	Exotic Grassland	0.17	No	10.7	0.6	0.0	0.30

Threatened Ecological Communities

A summary of the conservation status of the native vegetation within the investigation area includes:

- Vegetation zones 01 and 02 - PCT 74 meet the listing criteria for the BC Act listed CEEC White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions
- Vegetation zone 03 - PCT 26 meets the listing criteria for the BC Act listed Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South western Slopes bioregions.
- All vegetation zones do not meet the listing criteria for the Commonwealth EPBC Act for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and/or Derived Native Grassland or Weeping Myall Woodlands.

No areas of native vegetation commensurate with a threatened ecological community occur within the proposed DA modification areas. The potential for indirect impacts such as edge effects and sedimentation would be managed via the implementation mitigation measures such as best-practice erosion and sediment control during construction and operation.

Threatened Species Habitat

Threatened Flora

The proposed DA modification areas are predominantly exotic vegetation and/or cleared areas that have been subjected to long-term intensive land management practices (vegetation clearing, mowing, slashing pruning). Threatened plant species that are known or predicted to occur within the locality are unlikely to occur within the DA modification areas due to their degraded state and the lack of suitable habitat.

Threatened Fauna

Key habitat features for threatened fauna species (hollow-bearing trees, habitat logs, refugia, native vegetation with a complex structure -canopy, shrub and groundcover) are absent within the proposed DA modification areas. Note that although several mapped waterways occur within the locality, these are mainly comprised of constructed irrigation channels that lack riparian vegetation and aquatic emergent vegetation.

Koala Habitat

Under Chapter 3 Koala Habitat Protection 2020 of the SEPP Biodiversity and Conservation 2021 the definition of potential Koala habitat refers to areas of native vegetation where species of trees listed under Schedule 1 of the SEPP constitute at least 15% of the total number of trees in the upper or lower strata. The definition of core Koala habitat under the SEPP refers to an area of land with a resident population of Koalas, evidenced by attributes (breeding females, being females with young), recent sightings and historical records of a population.

Two listed preferred Koala feed trees (*Eucalyptus camaldulensis* River Red Gum, and *Eucalyptus populnea* Bimble Box) were recorded in vegetation zones 02 and 03 of the investigation area. No targeted Koala surveys were undertaken, and presence was assumed for impacts to potential Koala habitat for the Yanco BESS (SSD-67478479). No Koala use tree species, as listed under Schedule 1 of the SEPP, occur within the DA modification areas. The DA modification areas do not meet the definition of potential Koala habitat under the Koala SEPP 2020.

Identified Threatened Species

A small group of Superb Parrots (*Polytelis swainsonii*), a listed vulnerable species under the NSW BC Act and Commonwealth EPBC Act, was observed foraging within a woodland patch of vegetation zone 01, approximately 85 to 100 meters west of the Irrigation Way proposed modification areas (refer to **Figure 4**). The DA modification areas do not contain suitable foraging or breeding habitat for the species. Superb Parrot potential habitat would be impacted by the modification.

Targeted surveys for the Southern Myotis (*Myotis Macropus),* a listed vulnerable species under the BC Act, were not undertaken during the assessment. Given that native vegetation within vegetation zones 02 and 03 occur within 200 meters of suitable foraging habitat (constructed irrigation channels) both zones were considered suitable potential foraging habitat for the species for the Yanco BESS (SSD-67478479). The DA modification areas do not provide potential foraging or breeding habitat for the species. No Southern Myotis potential foraging habitat would be impacted by the modification.

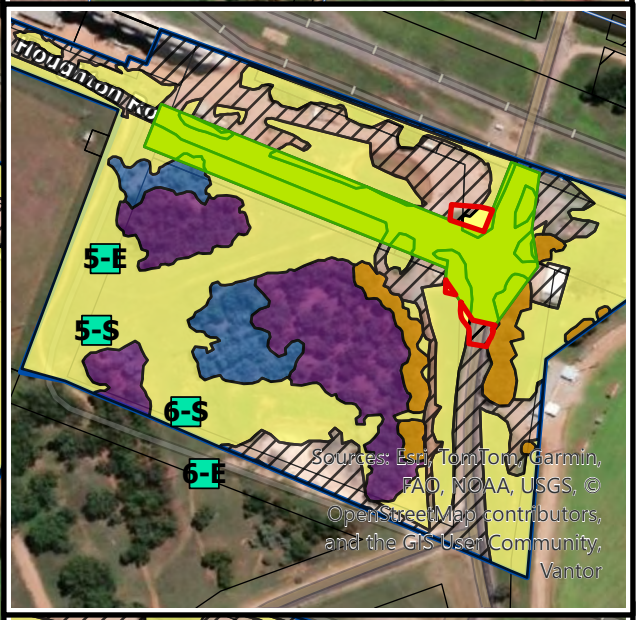

Figure 3 - DA Modification Areas - Vegetation Mapping

Legend

- Study Area (Investigation Area)
- Subject Land (DA Modification)
- Cadastral Boundary
- Mapped Waterway (SixMaps 2024)
- BAM Plot
- Non-native Vegetation (Agricultral Crops)
- VZ 01 - PCT 74 - Woodland Regrowth
- VZ 02 - PCT 74 - Planted Roadside Native Vegetation
- VZ 03 - PCT 26 - Woodland Regrowth
- Non-native Vegetation (Exotic Grassland)
- Cleared/ Developed
- Impacted vegetation under exisitng approval (SSD-67478479)

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Figure 4 - DA Modification - Habitat Features

Legend

- Study Area (Investigation Area)
- Subject Land (DA Modification)
- Impacted vegetation under exisitng approval (SSD-67478479)
- Cadastral Boundary
- Mapped Waterway (SixMaps 2024)
- Superb Parrot Detection
- VZ 01 - PCT 74 - Woodland Regrowth
- VZ 02 - PCT 74 - Planted Roadside Native Vegetation
- VZ 03 - PCT 26 - Woodland Regrowth
- Non-native Vegetation (Exotic Grassland)
- Cleared/ Developed

0 0 0.1 0.1 Kilometers

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Assessment of Impacts

Clearing of Vegetation

The proposed DA modification would impact on 0.17 ha of non-native vegetation (exotic grassland) and 0.17 ha of areas already cleared for development. No native vegetation would be impacted by the proposal.

Habitat Removal

The proposed DA modification would impact on 0.17 ha of non-native vegetation (exotic grassland) and 0.17 ha of areas already cleared for development. No key fauna habitat features are present.

Indirect Impacts

Potential indirect impacts to biodiversity and surrounding environments during construction and operation include:

- Increased edge effects following vegetation clearing may change abiotic conditions and facilitate the spread of weeds
- Increased noise and vibration during the construction phase may disturb and adversely affect the natural behaviors of resident fauna species
- Light-spill from artificial lighting during the operational phase of the project may adversely affect the natural behaviors of nocturnal fauna species, such as microbats, arboreal mammals, and large forest owls
- Changes in topography following the construction of roads and other infrastructure may cause changes in hydrology that may indirectly impact downstream aquatic environments.

Mitigation measures

Mitigation measures to reduce the potential for direct and indirect impacts to biodiversity values are presented in **Attachment B**.

Impact Summary

Serious and Irreversible Impacts

The DA modification would not directly impact on an entity at risk of serious and irreversible impacts (SAIIs).

Impacts Requiring Offset

The DA modification would not incur an ecosystem obligation and/or a species credit obligation.

Impacts Not Requiring Offset

The proposed modification would impact 0.17 ha of non- native vegetation (exotic grassland) and 0.17 ha of already cleared land. Under the BAM impacts to non-native vegetation do not require biodiversity offsets. Additionally, no offsets have been generated for any potential indirect impacts to retained areas of native vegetation.

Closing

Please feel free to contact me with any queries regarding the impact assessment for the DA modification at Yanco BESS (SSD-67478479).

Kind regards,

Dr Gilbert Whyte

Director - Botanist
Accredited BAM Assessor- BAAS18041
E: gilbert@hbtenvironment.com

References

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Attachment A

BAM Plot Data - Cover Abundance (Q05-Q06)

Form	Plant Species	Q01	Q02	Q03	Q04	Q05	Q06	Q07	RM
Shrub	*Acacia dawsonii*		0.5		2				
Shrub	*Acacia deanei*			2					
Tree	*Acacia decurrens*			1	5				
Tree	*Acacia pendula*		20	0.5					
Tree	*Acacia salicina*			5	10				
Exotic	*Arctotheca capensis*								1
Tussock Grass	*Aristida ramosa*								1
Chenopod	*Atriplex semibaccata*						0.1	0.1	
Tussock Grass	*Austrostipa aristiglumis*								1
Tussock Grass	*Austrostipa scabra*		1			1	2		
Exotic	*Avena barbata*	1	10			90	80	70	
Forb	*Boerhavia dominii*							0.2	
Tree	*Brachychiton populneus*		0.2		1				
Exotic	*Bromus catharticus*		20						
Exotic	*Bromus hordeaceus*		20	2			2		
Exotic	*Bromus sterilis*							2	
Tussock Grass	*Chloris truncata*	0.1		0.1			1	1	
Tussock Grass	*Chloris ventricosa*								1
Exotic	*Chloris virgata*								1
Exotic	*Cichorium intybus*						1		
Exotic	*Cirsium vulgare*								1
Forb	*Crassula sieberiana*								1
Exotic	*Cupressus sp.*	5							
Other Grass	*Cynodon dactylon*	5							
Epiphyte	*Dendrophthoe vitellina*		0.1						
Exotic	*Echium plantagineum*		0.2						
Forb	*Einadia nutans*	0.1	20					0.5	
Forb	*Einadia trigonos subsp. stellulata*								1
Chenopod	*Enchylaena tomentosa*	0.1	2	0.2			0.1		
Tree	*Eucalyptus camaldulensis*							10	
Tree	*Eucalyptus crebra*	10							
Tree	*Eucalyptus melliodora*			20	20				
Tree	*Eucalyptus populnea*		5	1					
Exotic	*Foeniculum vulgare*								1
Exotic	*Hirshfieldia incana*							0.1	
Exotic	*Hordeum leporinum*							0.2	
Exotic	*Hypochaeris radicata*								1
Rush	*Juncus continuus*								1
Exotic	*Lactuca serriola*	0.1					0.1		
Exotic	*Lepidium africanum*		0.1						
Exotic	*Lolium perenne*	60				0.5	5	2	
Exotic	*Lycium ferocissimum*		0.1						
Exotic	*Marrubium vulgare*								1
Exotic	*Medicago sativa*	5							
Exotic	*Nassella neesiana*		5			0.5			

Form	Plant Species	Q01	Q02	Q03	Q04	Q05	Q06	Q07	RM
Exotic	*Oxalis latifolia*			2					
Exotic	*Oxalis pes-caprae*								1
Exotic	*Panicum capillare*						2		
Tussock Grass	*Panicum effusum*								1
HTW	*Phoenix canariensis*			0.1					
Exotic	*Plantago lanceolata*	5					1	10	
Exotic	*Rapistrum rugosum*								1
Exotic	*Rumex conglomeratus*						0.1		
Tussock Grass	*Rytidosperma erianthum*								1
Chenopod	*Salsola australis*								1
Exotic	*Salvia verbenaca*				0.1	0.2			
Chenopod	*Sclerolaena muricata*	0.1		0.1					
Chenopod	*Sclerolaena muricata*								1
Shrub	*Senna artemisioides*				2				
Forb	*Sida corrugata*	0.1	0.2	0.2				0.2	
Exotic	*Solanum elaeagnifolium*								1
Forb	*Solanum esuriale*		2	0.2	0.1	1	0.2	0.1	
Exotic	*Sonchus aspera*	0.1							
Exotic	*Sonchus oleraceus*		0.2						
Exotic	*Sorghum halepense*								1
Exotic	*Tribulus terrestris*							0.1	
Exotic	*Trifolium arvense*						0.2		
Exotic	*Trifolium campestre*								1
Exotic	*Trifolium cernuum*								1
Exotic	*Trifolium dubium*								1
Exotic	*Verbascum thapsus*								1
Forb	*Vittadinia cuneata*		0.2			0.1	0.1		
Exotic	*Vulpia bromoides*					0.5			
Exotic	*Vulpia myuros*	5	20	20	0.1		0.5		

BAM Plot Data Summary (Q05-Q06)

Plot	Q01	Q02	Q03	Q04	Q05	Q06	Q07
PCT	74	26	74	74	74	74	74
area	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Patch size	15	15	15	15	101	101	15
Condition class	VZ01_Planted	VZ02_Regrowth	VZ01_Planted	VZ01_Planted	VZ03_Grass	VZ03_Grass	VZ01_Planted
zone	55	55	55	55	55	55	55
easting	445776	445592	445686	445540	445503	445621	444516
northing	6170382	6170390	6170372	6170454	6170395	6170456	6170966
bearing	201	114	266	63	357	106	214
Comp Tree	1	3	5	4	0	0	1
Comp Shrub	0	1	1	2	0	0	0
Comp Grass	2	1	1	0	1	2	1
Comp Forbs	2	4	2	1	2	2	4
Comp Ferns	0	0	0	0	0	0	0
Comp Other	2	2	2	0	0	2	1
Struc Tree	10	25.2	27.5	36	0	0	10
strucS hrub	0	0.5	2	4	0	0	0
Struc Grass	5.1	1	0.1	0	1	3	1
Struc Forbs	0.2	22.4	0.4	0.1	1.1	0.3	1
Struc Ferns	0	0	0	0	0	0	0
Struc Other	0.2	2.1	0.3	0	0	0.2	0.1
Fun Large Trees	3	0	0	0	0	0	5
Fun Hollow trees	0	0	0	0	0	0	0
Fun Litter Cover	1	9	40	64	1	1	2
Fun Fallen Logs	0	6	0	0	0	0	0
Fun Tree Stem 5to9	0	1	0	1	0	0	0
Fun Tree Stem 10to19	0	1	1	1	0	0	0
Fun Tree Stem 20to29	0	1	1	1	0	0	0
Fun Tree Stem 30to49	0	0	1	1	0	0	0
Fun Tree Stem 50to79	1	0	0	0	0	0	1
Fun Tree Regen	0	1	1	1	0	0	0
Fun High Threatt Exotic	0	0	0.1	0	0	0	0

Attribute	Q01	Q02	Q03	Q04	Q05	Q06	Q07
Total Groundcover	86.5	78.7	24.4	0.2	92.7	95.1	85.5
Total Exotic Groundcover	81.2	75.6	24	0.2	91.7	91.9	84.4
Total Native Groundcover	5.3	3.1	0.4	0	1	3.2	1.1

Attachment B

Table 4 Mitigation Measures

Impact	Actions/ Measures	Responsibility	Timing/ Frequency	Performance Targets
Direct impacts				
Clearing adjacent to native vegetation	Avoid and minimise clearing impacts to retained native vegetation, particularly habitat trees. Clearly delineate the boundaries of the project footprint to prevent any unnecessary clearing beyond its extent. This includes the installation of appropriate fencing along the extent of the DA Modification. Fencing should prohibit entry into the retained vegetation area and minimise indirect impacts during construction such as the movement of dust and rubbish into the woodland. Ensure vehicle and equipment parking areas and stockpile areas are identified and positioned to avoid areas containing ecological value. Stockpiling must not occur within, or in proximity (5m) to, areas of native vegetation retained under the proposed development. Appropriate signage such as 'no go zone' or 'environmental protection area' should be installed surrounding the area of retained native vegetation. Clearly identify and communicate the location of any 'no go zones' in site inductions. Tree protection measures will be implemented to protect retained trees surrounding the modification. Tree protection measures should consider allowances for Tree Protection Zones in accordance with AS4970 (Standards Australia, 2009).	Construction site manager	Prior to and during vegetation clearing	Boundaries of the project footprint are delineated prior to vegetation clearing activities. Parking areas and stockpile areas are located at least 5m from native vegetation to be retained. Appropriate signage is installed surrounding the area of retained native vegetation prior to construction. No direct damage to native vegetation or habitat outside the development footprint.
Removal of Fauna Habitat	Pre-clearance surveys should be conducted prior to clearing to prevent accidental injury/mortality to species moving into the area between pre-clearance surveys and clearing activities. Pre-clearance surveys will be undertaken by a suitably qualified personnel and should be communicated to the Construction Site Manager prior to commencing vegetation clearing works, any fauna will	Construction site manager / Ecologist	Prior to and during vegetation clearing	Pre-clearance surveys are undertaken at least 24 hours prior to clearing. All vegetation clearing is undertaken in accordance with best practice vegetation clearing methods via a staged approach.

Impact	Actions/ Measures	Responsibility	Timing/ Frequency	Performance Targets
	have an opportunity to vacate the areas and relocate naturally. Ensure a licensed wildlife carer and/or suitably qualified Ecologist is present if vegetation clearing/habitat removal is required.			
Impacts to surface and groundwater quality and quantity due to sediment run-off and/or contaminant runoff into adjacent watercourses	Source controls such as sediment fences, mulching and jute matting will be utilized where appropriate, especially along the eastern boundary of the proposed development area that runs adjacent to a first-order stream. Site-based vehicles will carry spill kits. Erosion and sediment control will be required for the development in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) prior to commencement of construction. Limit the use of pesticides in the project footprint where possible to avoid contamination of nearby watercourses/wetland areas.	Construction site manager	During vegetation clearing, construction and operation	All source controls are installed prior to the construction phase. All source controls are maintained throughout the construction phase. All site-based vehicles carry spill kits.
Vehicle collision with fauna	Speed limits within the construction area should be limited to 40 km/hr. This limit should be clearly signed at all entry points to site. The impact area should be separated from vegetated areas throughout the construction and operational phases of the development. This separation should be achieved through physical barriers including fencing and appropriate signage.	Construction site manager	During construction and operation	Appropriate speed limit signage installed at site entrance prior to construction.
Indirect Impacts				
Transfer of weeds and pathogens to and from site	The fungal pathogens *Phytophora cinnamomi* and Myrtle Rust (Puccinia psidii) are likely to occur within the LGA, however, it is unknown if they occur within the Da modification. These pathogens can have devastating impacts on native plant communities and inhabiting fauna if not properly managed. Appropriate washdown facilities will be available to clean vehicles and equipment prior to arrival on-site and prior to departure.	Construction site manager	During vegetation clearing, construction, and operation	Designated washdown facilities installed prior to construction phase.

Impact	Actions/ Measures	Responsibility	Timing/ Frequency	Performance Targets
	Ensure soil and seed material is not transferred			
Noise, vibration, lighting, waste and air pollution impacts to adjacent sensitive habitat areas	Increased human activity (from workers and traffic levels) directly adjacent to sensitive habitat areas may cause disturbance to flora and fauna species in adjoining habitat. Impacts from construction and operational activities, such as disturbance to an animal's normal behavior patterns due to noise, vibration, lighting or dust may cause areas of previously suitable habitat to become sub-optimal and may cause fauna species to vacate areas of previously suitable habitat. Measures to mitigate impacts on flora and fauna from noise, vibration, waste, light and air pollution such as: Restriction of public access and associated impacts from domestic pets, waste dumping and damage to adjoining vegetation must be enforced pre, during and post construction. Fence sensitive areas to delineate 'no go' zones. Levels of lighting associated with the proposed development (during construction and operation) will be reduced to a minimal level and directed away from retained vegetation areas to reduce any adverse effects upon the essential behavioral patterns of light-sensitive fauna. Lighting design and utilization during construction and operational phases of the development should be based on principles detailed in Appendix A of the National Light Pollution Guidelines for Wildlife (DEE 2020). This includes consideration of adaptive controls, and measures to reduce light intensity and inappropriate light spill into retained vegetation and fauna habitat. Lighting should also comply with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting. Noise minimization practices in accordance with standard practices. Dust control measures such as covering loads	Construction site manager	During construction and operation	Onsite lighting during the construction and operational phases of the project is compliant with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting. All Noise minimization practices are followed in accordance with standard practices. All dust control measures are implanted during the construction and operational phases of the project.

Impact	Actions/ Measures	Responsibility	Timing/ Frequency	Performance Targets
	where required; amending operations under excessive wind conditions including ceasing operations if required; use of water tankers as required, to control dust; rehabilitation through vegetation of surfaces to be left unsealed; and truck wheel washes or other dust removal measures.			