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(Eastern Grey Kangaroo)
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Front cover: Female Buru 'Small Blue Small Red' tagged and treated with GonaCon contraceptive vaccine at Mulligans Flat Woodland Sanctuary in 2022. Photo credit: Caroline Sternberg.

Table of Contents

1. Executive Summary

Native grassy ecosystems in the ACT are impacted by various threats including invasive plant and animal species, urbanisation, inappropriate disturbance regimes (such as grazing and fire), and climate change. A suite of management programs is implemented across ACT's urban nature reserves to mitigate these impacts and promote grassy ecosystem health and biodiversity. This includes control of invasive species, grassy layer biomass interventions (e.g., ecological burns, Buru management, slashing, strategic livestock grazing, fencing) and restoration activities.

Disturbance in the form of Buru (the Ngunnawal name for Eastern Grey Kangaroos - *Macropus giganteus*; Winanggaay Ngunnawal language group) grazing is an important part of maintaining functioning grassy ecosystems in the ACT. However, populations of Buru can reach unsustainable densities in the urban and peri-urban areas, due to a lack of natural predation and heavily fragmented habitat. As a result, excessive grazing pressure from Buru can deplete the grassy layer required to sustain grassy ecosystem function and biodiversity, including threatened species populations. Conversely, too little grazing, which may occur in wet years when grass growth is high or in areas dominated by exotic grasses not preferred by Buru, can result in a build-up of dense grasses that can also negatively impact biodiversity.

Buru are managed in priority nature reserves within Canberra Nature Park, Molonglo River Reserve and Googong Foreshores to achieve a balance between grassy layer productivity (i.e., how quickly grass is growing) and grazing pressure (i.e., how quickly grass is consumed by Buru). The desired conservation outcome is native grass heights between 5 and 12 cm tall, within the 'grass height threshold', which has been demonstrated by local scientific studies to provide the greatest benefits to biodiversity (including several threatened species) and ecosystem processes. Achieving this management goal involves the use of culling and fertility control to maintain sustainable Buru densities relative to the current vegetation conditions, as well as physical exclusion measures such as fencing, logs and rocks to protect sensitive areas from grazing on a smaller scale. In response to high grass growth conditions, additional biomass removal tools such as ecological burns, strategic livestock grazing and slashing may be required to return above threshold grass heights to appropriate levels. These complementary tools will continue to be used as required in 2026.

The Buru management context in 2026 is similar to 2025. Rainfall throughout 2025 was comparable to 2024 and below the long-term average. The dry Spring 2025 conditions limited growth of the ground layer vegetation. Monitoring of the ground layer vegetation undertaken from Spring to early Summer 2025 showed 24% of monitoring polygons to be 'within' threshold levels for average

grass height, 72% of polygons 'below' threshold levels and 4% of monitoring polygons being 'above' threshold levels for average native grass height. This is an increase in the number of polygons below threshold compared to the same time in the previous year, when 45%, 44% and 11% of management polygons demonstrated within, below and above threshold average native grass heights respectively. Rainfall between December 2025 and April 2026 has been variable with average and above average rainfall in February and March and below average in all other months. International climate modelling is indicating that El Nino-Southern Oscillation (ENSO) neutral conditions are expected to remain until the end of Autumn 2026, with a possible shift to El Nino in winter.

This season's sustainable target Buru densities have remained low or are reduced compared to last year for most Buru Management Units (BMUs, formerly Kangaroo Management Units or KMUs) based on vegetation monitoring findings. The reduction in Buru population targets has been influenced by the dry spring conditions. In some cases, the recommended Buru target density calculated using the vegetation monitoring data fell below the minimum density considered necessary for maintaining a resilient Buru population. The target density at these sites has been increased accordingly as noted in Table 3 and the individual site descriptions. This year, Buru management is recommended at 14 sites (Table 1), compared to 15 in 2025. The 2026 management requirements are similar in scale to 2025 and are relatively large compared to other annual recommendations throughout the history of the program.

This year, a very large reduction in the Buru population is recommended as a high priority at Ainslie Majura BMU (2013 individuals). This level of management was expected due to the adoption of a multi-year approach to density management at this site following a steep increase in Buru density last year. The high Buru density and operational challenges meant that it was not feasible to attempt to reduce Buru population density to sustainable levels in a single year in 2025 (and in some previous years), with this instead being done gradually over time. As such, the cull recommendation for Ainslie Majura BMU last year was reduced to fit within the operational capacity of the program, with the expectation that additional culling would be required this year. Management at this site has been assigned high priority because of the presence of high conservation values and a decrease in average native grass height to below threshold in the woodland as well as grassland sections of the BMU.

A large reduction in the Buru population (over 200 individuals) is recommended as a high priority at four sites – Crace, East Jerrabomberra, Mulligans Flat and West Jerrabomberra Valley BMUs. The

target Buru density at these sites has decreased this year in response to the average native grass heights across these BMUs dropping below, or further below, threshold. The conservation values within these sites were factored into them being identified as high priority for Buru management.

A high priority Buru cull is also recommended this year at Goorooyarroo BMU. The target Buru population at Goorooyarroo has reduced from 2025 due to vegetation conditions dropping below threshold. However, the observed Buru density is lower than expected this year, so only a small reduction in density is recommended.

Buru culling is also recommended this year as a medium priority at Farrer Ridge, Googong West, Gungaderra, Mulanggari, Red Hill and The Pinnacle BMUs and as a lower priority in Aranda Painter and Mt Taylor BMUs. Buru have not been previously managed at Mt Taylor and their density has therefore remained well above the target for maintaining suitable vegetation conditions for supporting biodiversity.

The fertility control agent GonaCon Immunocontraceptive Vaccine was used for the first time in the Buru management program in 2022, with the aim of limiting population growth and reducing the dependency on lethal Buru management into the future. Treatment of adult females commenced at Mulligans Flat and Farrer Ridge BMUs in 2022, at Mulanggari BMU in 2024, and Red Hill BMU in 2025. Further GonaCon treatments are recommended as a high priority at Red Hill, Mulanggari and Farrer Ridge BMUs this year to maintain the desired proportion of treated females in each population.

Table 1. Summary of Buru management recommendations for the conservation land within each Buru Management Unit (BMU) in 2026. *See Table 3 for more details. Management of the remainder of the Buru population, within the BMU but outside of the conservation estate, is undertaken separately by the relevant land manager and is not summarised in this report.*

Site	PCS Responsible Conservation Area (ha)	Adjusted TARGET Buru Population Size	CURRENT Buru Population Size	Recommended NUMBER TO CULL in 2026	Approximate Recommended NUMBER TO CONTRACEPT in 2026	Priority
Ainslie Majura BMU	1438	367	2344	2013		High
Aranda Painter BMU	265	246	400	175		Low
Crace BMU	173	119	325	219		High
Dunlop BMU	116	130	320	NA		
East Jerrabomberra BMU	392	281	502	247		High
Farrer Ridge BMU	202	168	329	178	6 to 13	Cull - Medium, GonaCon - High
Googong West BMU	1747	978	1450	577		Medium
Goorooyarroo BMU	796	425	453	79		High
Gungaderra BMU	345	383	553	204		Medium
Kama Extended BMU	155	102	110	NA		
Mt Taylor BMU	334	160	578	438		Low - New site
Mulanggari BMU	155	191	230	53	14 to 21	Cull - Medium; GonaCon - High
Mulligans Flat BMU	484	136	511	375	0	Cull - High
Red Hill BMU	303	118	293	190	76	Cull - Medium; GonaCon - High
The Pinnacle BMU	283	263	1084	843		Medium
West Jerrabomberra BMU	1010	505	1040	411		High
TOTAL				**6002**	**96 to 110**	

2. Introduction

Grassy ecosystems are under threat worldwide (Eddy, 2002; Prober & Thiele, 2005). In south-eastern Australia, Natural Temperate Grasslands and Yellow Box – Red Gum Grassy Woodlands are two examples of such communities now listed as critically endangered following a significant contraction in their former distribution. Where remnant patches of these communities persist, the cessation of indigenous burning practices, altered herbivore dynamics, supplementation of soil nutrients (through the addition of fertilisers) and encroaching urbanisation represent some of the major shifts away from natural disturbance practices and the natural state of these ecosystems. These changes have significantly altered the diversity and composition of grassy ecosystems, primarily through the introduction of invasive species, the loss of grazing-sensitive species, and the loss or decline of species that rely on regular biomass removal or fire (Moxham *et al.*, 2016; Williams *et al.*, 2006). Inappropriate disturbance regimes associated with this shift away from traditional indigenous land management is now considered one of the greatest threats to the ongoing function and resilience of these native grassy ecosystems (Dorrough *et al.*, 2007; Eddy, 2002; Williams & Morgan, 2015). Reinstating appropriate disturbance regimes and managing other threats is critical for the conservation of native grassy ecosystems in the ACT.

To promote biodiversity and address threats across the ACT lowland nature reserves, the ACT Parks and Conservation Service conducts a broad range of ongoing land management programs that are guided by extensive monitoring and research (ACT Government 2021). This includes control programs for invasive plants and animals (such as rabbits, foxes, deer and pigs) that utilise various management techniques to maximise effectiveness. In 2024-25, over 100 invasive plant species were controlled across approximately 8,300 ha within the urban and peri-urban reserves and open space areas of Canberra (ACT Government 2025a). The ongoing use of thermal assisted shooting as a primary control method for rabbits (instead of poisoning with Pindone), combined with burrow destruction and fumigation has successfully maintained rabbit numbers to below target thresholds in most reserves where numbers had remained high for several years. Follow-up rabbit management is planned across 14 reserves throughout 2026. Restoration projects also play an important role in the conservation of grassy ecosystems in the ACT by improving the condition and connectivity of these landscapes. Over the past three years the ACT Government has invested in an ecological restoration program that involves building partnerships with the Ngunnawal community to improve the condition of key protected areas. In addition, dedicated volunteers support the Parks and Conservation Service through the ParkCare program. In 2024-25, volunteers contributed over 35,655 hours to weeding, planting, seeding and other rehabilitation work, as well

as monitoring, research and educational activities mostly within the Canberra Nature Park reserves (ACT Government 2025b). Managing or applying disturbance factors to the grassy layer, through grazing management, fire and other physical removal methods, are also crucial conservation activities in ACT's lowland nature reserves.

As a result of their adaptation to frequent disturbance from grazing and fire, the application of appropriate levels of disturbance is considered critical in maintaining native plant and animal diversity within native grassy ecosystems (Howland *et al.*, 2014; Howland *et al.*, 2016; Keen, 2021; Lunt *et al.*, 2012). In a peri-urban ecosystem, this often involves managing the impacts of habitat fragmentation and urban edge effects on these underlying natural processes, as well as the implications of issues such as an absence of natural herbivore predation (e.g., by Waragul – Ngunnawal name for Dingo). To ensure the correct balance is achieved to protect ecological functionality of lowland grassy ecosystems, and to enable their restoration and ongoing conservation, active adaptive management, including the application of appropriate and context-specific grassy layer disturbance interventions, is a key land management objective in ACT nature reserves.

Alongside the use of ecological burns, grazing by native herbivores and particularly that of Buru is recognised as the preferred disturbance mechanism for maintaining grassy ecosystem health and function in the ACT conservation estate (ACT Government, 2017a, 2019). The Eastern Grey Kangaroo (*Macropus giganteus*) is the dominant native mammalian herbivore in most grassy ecosystems of the south-eastern bioregion, although the Red-necked Wallaby (*Notamacropus rufogriseus*) and Common Wombat (*Vombatus ursinus*) also play a role in some locations. Recorded in densities up to almost 700 animals per square kilometre in grasslands of the Jerrabomberra Valley (Gordon *et al.*, 2021), Buru are well recognised as ecosystem engineers in grassy ecosystems of the ACT due to their role in influencing grassy habitat structure and productivity through direct grazing (Howland *et al.*, 2014; Howland *et al.*, 2016; Snape *et al.*, 2021) and nutrient cycling (Morris & Letnic, 2017). Non-uniform impacts of Buru grazing, for example in response to the perceived risk of predation (Banks, 2001), support the role of sustainable native herbivore grazing as a mechanism for promoting beneficial habitat heterogeneity at both the patch and landscape scales (Gordon *et al.*, 2004).

Regardless of whether populations are regulated by natural predation or other means, maintaining a balance between native herbivore grazing pressure and rates of grass productivity (or growth) is key to ensuring ongoing health and resilience of grassy ecosystems (Gordon *et al.*, 2021; Morris &

Letnic, 2017). Multiple scientific studies have investigated the two-way relationships between Buru populations and grassland structure within the Australian Capital Territory (Fletcher, 2006; Howland *et al.*, 2014; Portas & Snape, 2018; M. Snape *et al.*, 2021), as well as the relationships between grassy layer structure and the biodiversity of other native species including beetles (Barton *et al.*, 2011), birds (Howland *et al.*, 2016; Neave & Tanton, 1989), plants (Driscoll, 2017; McIntyre *et al.*, 2015; Snape *et al.*, 2018) and reptiles (Howland *et al.*, 2014; Howland *et al.*, 2016; Manning *et al.*, 2013; Snape *et al.*, 2018). Grass heights of around 5 – 12 cm have consistently been associated with providing the maximum biodiversity benefits for both native plant and animal species (Gordon *et al.*, 2021; Howland *et al.*, 2016; Sato *et al.*, *in prep;* Snape *et al.*, 2018), and hence this is set as the preferred management target for grassy ecosystems within the ACT.

Despite these clear management targets for grass height, setting specific Buru population target densities to achieve this outcome is a complex undertaking. The relationship between Buru population size, associated grazing pressure and the outcomes in terms of grass structure has been shown to vary according to the composition, current condition, and the productivity (or growth rate) of the grassy layer (Snape *et al.*, 2021). As such, assessments of grassy layer composition and condition are recognised as an important component of managing native herbivore impacts in these systems (Gordon *et al.*, 2021; Snape *et al.*, 2021), despite grass productivity (which is based on future climatic conditions) being largely impossible to predict at operationally relevant temporal scales. Where 'average' climatic conditions are assumed, as is the approach adopted for Buru management within the ACT, abundant grass growth resulting from above average rainfall will trigger the integrated use of alternative management tools such as ecological burns or physical removal, to restore grass palatability to local Buru populations and encourage targeted grazing in priority landscapes (McIntyre *et al.*, 2015). Conversely, where hotter and drier than average climatic conditions prevail, exclusion devices such as non-vegetative habitat structures (logs, rocks) or temporary fencing may be required to protect the grassy layer as associated conservation values on a fine scale (Manning *et al.*, 2013; McDougall *et al.*, 2016).

Buru (Eastern Grey Kangaroos) were declared a controlled native species under the *Nature Conservation Act* (2014) in 2017 in recognition of the importance of maintaining sustainable Buru population densities as part of the conservation of our critically endangered lowland grassy ecosystems. Since this time, Buru populations and their associated impacts have been carefully managed across the ACT in accordance with the *Eastern Grey Kangaroo: Controlled Native Species Management Plan* (ACT Government, 2017b) and associated instruments. Buru populations were managed previously in accordance with the ACT Kangaroo Management Plan (ACT Government,

2010) and this plan still guides the management of Buru at the ACT managed Googong Foreshores in NSW.

Maintaining wild populations of Buru in the grassy ecosystems of the ACT is central to the *Eastern Grey Kangaroo: Controlled Native Species Management Plan*, with tenure specific management goals guiding the management of relevant Buru impacts on different land in the ACT. Buru populations are currently managed for conservation purposes within the lowland reserves of the ACT, encompassing Canberra Nature Park and the Molonglo River Reserve. Buru population management is also permitted on rural lands to address the economic impacts of the species on rural enterprise. In contrast, Buru management is currently not undertaken within Namadgi National Park, Tidbinbilla or the Lower Cotter Catchment, representing approximately 50% of the total land area of the ACT. Compared to the lowland reserves, these areas are more intact and connected, Waragul are still present, and ecological impacts of excessive Buru grazing are not evident in these landscapes. The management policy states that unless undesirable impacts or specific ecological or other objectives require management interventions, Buru within these conservation areas will remain unmanaged and instead subject to natural population regulation processes such as predation and food limitation (starvation) (ACT Government 2017b).

Management of Buru grazing within the lowland nature reserves is prioritised based on conservation values (Section 7, Table 4), operational capacity, and expected effectiveness of management. The need for Buru management within each priority reserve is assessed each year and only implemented if Buru density is above levels determined to be sustainable for the current vegetation conditions. Of the 39 reserves that make up Canberra Nature Park, plus the Molonglo River Nature Reserve and Googong Foreshores, Buru have been managed in a total of 20 reserves at least once since the program commenced in 2009. This year, the need for Buru management has been considered in 21 reserves (across 16 BMUs), with culling recommended in 17 reserves (14 BMUs) and fertility control recommended in three reserves.

3. Survey Methods

Buru Management Units

A Buru Management Unit (BMU, formerly Kangaroo Management Unit or KMU) is defined as a parcel of land which comprises one or more nature reserves and any adjoining areas of habitat which are potentially used by a single, shared Buru population. In the urban matrix, BMUs are usually separated from other areas of potential Buru habitat by a barrier to Buru movement such as a significant water body, main road, Buru-proof fence, or suburb boundary. Boundaries to Buru movements have been identified based on the results of local Buru movement studies, which utilised GPS collars or repeated population surveys to determine home-ranges and movement behaviour of Buru in the urban space (ACT Government, unpublished data; Pulsford & Snape, 2019; Viggers & Hearn, 2005).

Following the outcomes of an expert workshop on Buru management for conservation in 2018 (Gordon *et al.*, 2021), objectives for Buru management to achieve biodiversity conservation outcomes are set explicitly at the scale of the BMU. This includes setting management targets around both grass height (nominally 5 – 12 cm to indicate broad suitability of grassy layer habitat) and Buru population size (where long-term targets are based on vegetation structure and are adjusted annually according to current ground layer vegetation conditions). Accordingly, surveys of both ground layer vegetation (herbage mass) and Buru populations are also undertaken at the BMU scale annually to inform additional modelling and the basis for the Buru management advice presented throughout this report. However, due to legal requirements relating to the authorisation and implementation of Buru management across different land tenures, the specific management recommendations contained within this report relate only to conservation land managed by the ACT Parks and Conservation Service.

Herbage mass surveys

Herbage mass surveys are undertaken annually during Spring and early Summer within each BMU to collect data on the current composition and condition of the grassy layer. This data is used to inform and evaluate annual Buru management advice. To capture the variability in grass condition across the landscape, the grassy ecosystems within the conservation area of each BMU are divided up into survey polygons classified into one of four communities according to their dominant perennial grass type ('Native *Themeda'*, 'Native Tussock', 'Exotic perennial with *Themeda'* or 'Exotic perennial with Tussock'). Each survey polygon contains two permanent survey plots which are positioned to be representative of the heterogeneity at the polygon scale. Each of the two

survey plots within the survey polygon is a 400m^2 circle with an 11.3 m radius from a central point. Herbage mass surveys within each plot involve both a step point and a quadrat-based survey approach.

The step point survey involves the surveyor taking 75 random steps within the survey plot. At each step, the dominant vegetation type at point of the observer's shoe is recorded (native C4 grass, native C3 grass, native forb, cryptogram, rock, leaf litter, thatch, dead forb, bare ground, exotic forb, annual grass, or exotic perennial grass). This information provides current compositional data for the survey plot and also enables changes in composition to be detected over time. For the quadrat-based survey, a 55cm diameter circular quadrat is randomly positioned within the plot area to enable an average grass height and the percentage of grass which is green (an indicator of both palatability and productivity) to be assessed. The dominant grass species present within each quadrat is also recorded. This process is repeated to achieve ten quadrat surveys per plot. Quadrat data provides data on the amount of grass currently available within each survey polygon, and an indication of its current palatability and productivity, enabling Buru population targets to be set and evaluated over time according to the method described by Snape *et al* (2021).

For both survey types, data is collected in an ESRI ArcGIS Survey 123 app and is analysed in R. Outcomes of the herbage mass surveys undertaken to inform the 2026 Buru management advice are shown for each BMU later in this report.

For evaluating management outcomes, the average grass height threshold across a BMU is set to 5 to 12cm. However, at the polygon scale, 'Native Tussock Community' and 'Exotic Perennial with Tussock Community' polygons are deemed to be within the desirable threshold if grass heights are between 5 and 10 cm whereas the threshold for 'Native *Themeda'* and 'Exotic Perennial with *Themeda* Community' polygons is set at 5 to 12cm. The average grass height threshold has been revised from 5 – 15cm to 5 – 12cm this year based on monitoring data and research. This does not change how management recommendations are calculated but does change the evaluation threshold for the program.

Buru population surveys

Assessing current Buru population size is an important part of informing Buru management decisions within individual BMUs. A number of methods are available to assess macropod densities on a small scale (Coulson *et al.*, 2021) which are selected based on site specific factors such as topography, vegetation type, the boundary of the survey area and BMU size. Common survey

techniques adopted for this purpose in BMUs include direct and sweep count techniques, where the number of Buru in a landscape is counted directly by a coordinated team of surveyors, and walked line transect 'Distance' counts, where Buru density is estimated based on sampling Buru numbers from along fixed transect lines. Maps showing these transect lines are provided in the Section 6. To ensure robust population estimates, a total of approximately 44km of transects are walked per BMU over approximately 11 mornings, with the aim of achieving a coefficient of variation around the average abundance estimate of approximately 15% or less. Direct and sweep counts are repeated at least once and the average of these counts is taken as the population estimate. Individual sweep or direct counts are deemed valid if they fall within 10% of the count average. Density estimates derived from the surveyed density of faecal pellets are no longer routinely used for informing Buru management decisions in the ACT. Further information on each of these methods is provided by Coulson et al. (2021), including reference to their application in the ACT.

All Buru surveys undertaken to inform Buru management advice provided in this report consider only 'independently mobile' Buru. No attempt is made to count young in the pouch due to their difficulty to detect at young ages, and highly variable recruitment rate into the adult population. Annual Buru population estimates are undertaken under the approval of an animal ethics committee.

The results of Buru population surveys undertaken to inform the 2026 Buru management advice are shown in Table 2. These surveys were completed from December 2025 to February 2026.

Table 2. Buru population survey results for BMUs used to inform conservation culling advice for 2026.

Count methods include 'WLT', walked line transect count; 'Sweep', sweep count; 'Direct', direct count. The calculated 95% confidence interval and coefficient of variation (CV) are shown for WLT counts, while the range (minimum and maximum count) and number of repeat counts is shown in brackets for sweep and direct counts. Maps of transects surveyed for walked line transect counts are provided in Section 6. The Buru populations and densities presented for conservation areas in Table 1 and Table 3 are calculated by applying the BMU densities in this table to the area of conservation land within the BMU.

Site	Count Year	Count Type	Population Density in BMU	Number of Buru in BMU		
Ainslie Majura BMU	2026	WLT	1.63	3427	2444 - 4807	17.0%
Aranda Painter BMU	2026	WLT	1.51	572	396 - 826	18.0%
Crace BMU	2026	Direct	1.80	325	*(310 - 339)*	*(2)*
Dunlop BMU	2026	Sweep	2.76	321	*(309 - 332)*	*(2)*
East Jerrabomberra BMU	2026	WLT	1.28	1753	1339 - 2295	14.0%
Farrer Ridge BMU	2026	WLT	1.63	329	226 - 478	19.0%
Googong West BMU	2026	WLT	0.83	1453	1104 - 1913	14.0%
Goorooyarroo BMU	2026	WLT	0.57	453	386 - 532	12.5%
Gungaderra BMU	2026	Sweep	1.52	553	*(532 - 573)*	*(2)*
Kama Extended BMU	2026	WLT	0.71	1070	725 - 1577	19.0%
Mt Taylor BMU	2026	WLT	1.73	660	507 - 858	13.0%
Mulanggari BMU	2026	Direct	1.45	230	*(206 - 262)*	*(3)*
Mulligans Flat BMU	2026	WLT	1.05	511	443 - 557	7.7%
Red Hill BMU	2026	WLT	1.44	586	476 - 735	11.0%
The Pinnacle BMU	2026	WLT	3.83	1400	1066 - 1838	13.0%
West Jerrabomberra BMU	2026	WLT	1.03	2038	1578 - 2632	13.0%

4. Informing management advice

Estimating herbage mass productivity

Herbage mass productivity, more simply referred to as grass growth, is an important element of estimating the sustainable level of grazing by native herbivores in native grassy ecosystems as it is the major driving factor influencing the structure of grassy habitat in lowland ecosystems. Temperature, rainfall and the relative timing of these two climatic variables have demonstrated a strong influence in herbage mass growth models, in both dry (Bayliss & Choquenot, 2003; Caughley, 1987; Owen-Smith, 2002) and temperate (Clark *et al.*, 2000; Cullen *et al.*, 2008; Fletcher, 2006) environments. The rate of pasture growth is additionally influenced by soil characteristics (Cullen *et al.*, 2008), which in itself can be dependent on a range of ecological and anthropogenic processes; and by the composition, cover and condition of existing pasture (Brougham, 1956).

To facilitate the practical estimation of herbage mass growth rates within BMUs in the absence of detailed climatic and environmental information (e.g., soil chemistry and future weather patterns), a simple model of herbage mass productivity has been developed based on field measurements collected across Canberra Nature Park between 2014 and 2019. These data were subsequently used to construct models of herbage mass productivity for eleven different dominant grass species found within the ACT as per the methods described by Snape et al (2021). Models were optimised for each different species, but considered current grass height, the percentage of grass cover, the percentage of grass that was green, and season (spring or autumn) as variables in a generalised additive mixed modelling approach. As the survey period included a mix of both historically wet and dry years, the results of these models were taken to indicate an 'average' herbage mass productivity rate for each species based on variables readily measured in the field. Data from the annual herbage mass surveys (described in the Survey Methods section) and these grass growth models are used to estimate herbage mass productivity over the coming 12 months and inform the calculation of the target number of Buru to remain within each BMU (see Table 3). To estimate herbage mass productivity in polygons with monitoring plots dominated by a grass species for which a specific growth model has not been developed, a surrogate grass species model that best matches the life history and growth form of the dominant grass is used for analysis.

In addition to this modelling approach, three monthly climate outlooks published by the Bureau of Meteorology are also considered as part of informing Buru management advice for the year ahead. International climate modelling is indicating that El Nino-Southern Oscillation (ENSO) neutral conditions are expected to remain until the end of Autumn 2026. Models are suggesting a possible

shift to El Nino in winter. The current long-range climate outlooks published 23rd April 2026 for the period from May to July indicate a 32% chance of above median rainfall (Figure 1) and a low likelihood of unusually wet (8%) or unusually dry (27%) conditions for the ACT. This is associated with a very likely chance of above average maximum temperatures for the ACT during the same period (82%; Figure 1). These climate outlooks indicate the continuation similar conditions as experienced over the last 12 months with close to but below average rainfall conditions, and higher than average temperatures, at least in the three months ahead. The ACT experienced below average monthly rainfall each month since October 2025 except February and March 2026 during which rainfall was average and above average respectively. Given the recent rainfall patterns and if the above forecast predictions are realised and continue beyond the forecast period, below average to average vegetation growth rates can be expected this year. Noting that the models used to calculate Buru management recommendations are based on average vegetation growth, the ground layer vegetation should be monitored closely following the Buru management program this year. If grass growth is below average, other grazing management methods such as temporary fencing or placing rocks or course woody debris should be considered to protect key areas from Buru grazing if required.

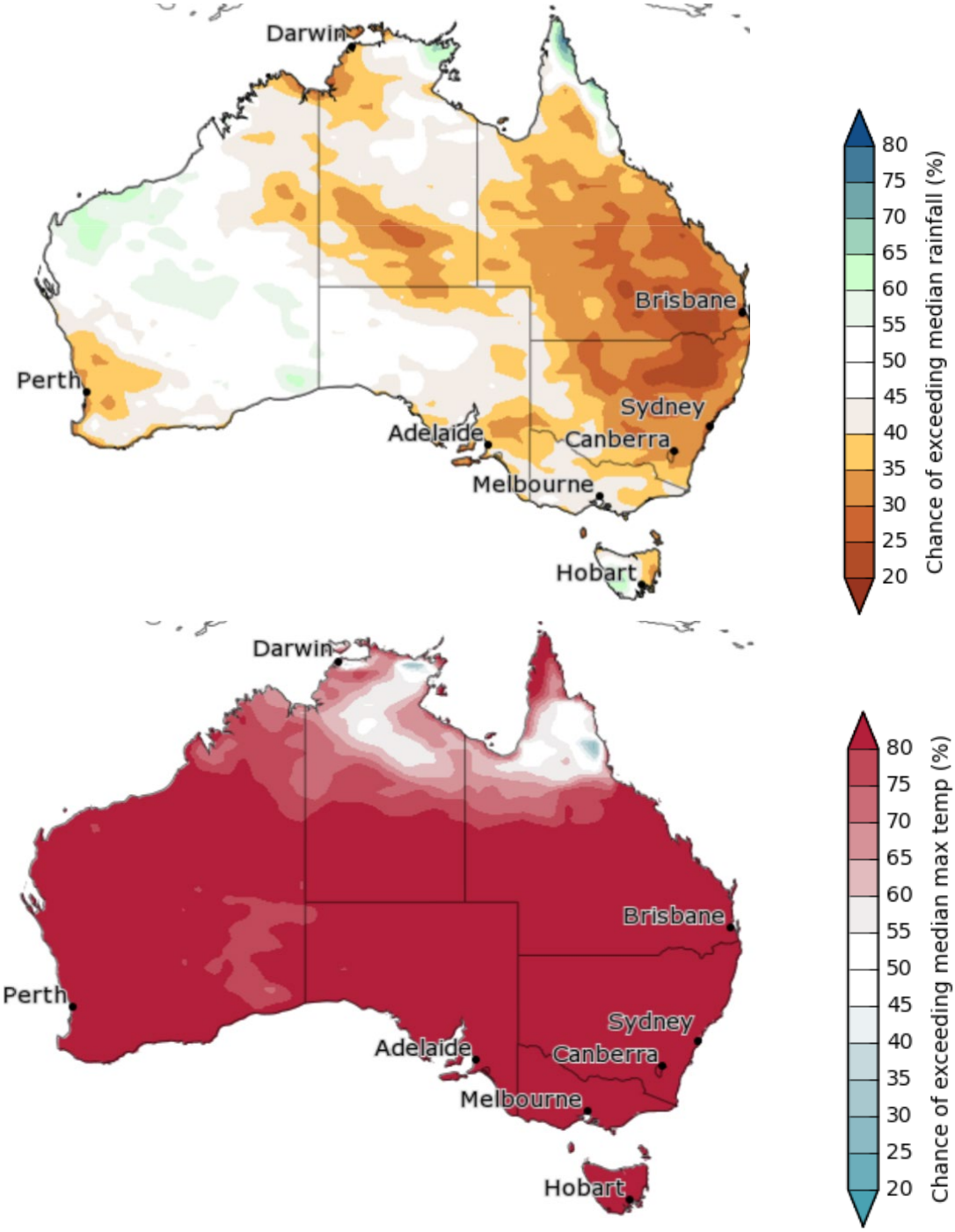

Figure 1. Rainfall (top) and maximum temperature (bottom) forecasts for May to July 2026. *Sourced from* ***www.bom.gov.au/climate/outlooks*** *on 29th April 2026.*

Estimating Buru population growth

In any wildlife species, population dynamics are determined based on the relative rates of birth, death, immigration, and emigration. Often these rates are strongly influenced by population density through a process known as density dependence. In the ACT, female Buru can breed year-round. However, in practice there is a strong seasonal peak in pouch emergence that coincides with the flush of green grass available in spring (Fletcher, 2006; Lucas *et al.*, 2021). Except for under extreme conditions, juveniles rather than adults succumb to starvation when food is limited (Fletcher, 2006; Portas & Snape, 2018) and are also more susceptible to predation (Banks, 2001; Banks *et al.*, 2000).

Most BMUs in the ACT are designed to be largely 'closed' to the effects of immigration or emigration due to habitat fragmentation by urban features such as major roads, suburb boundaries, or waterways. As such, the overall population dynamics within each BMU are generally consistent where birth and death rates are stable and can thus be predicted over time with reasonable accuracy. This assumption was recently tested by Hone and Snape (2024) using ACT Government Buru population data. An analysis of this count data showed a significant effect of density dependence in peri-urban Buru populations (Figure 2). This equated to an annual population growth rate (r) described by the equation:

$$r_p = 0.317 - 0.151 \times N_t$$

where N_t is the starting density (Caughley, 1980; Hone & Snape, 2024; Hone, 2022; Sibly & Hone, 2002). This equation was then used to estimate future population density according to a logistic population growth curve described by the equation:

$$N_{t+1} = N_t e^{rp}$$

where N_{t+1} is the Buru population density following one year of logistic growth (Figure 3; Deyle *et al.*, 2013; May, 1981). This equation was found to have strong predictive capacity when applied to an independent set of Buru population estimates collected as part of the ACT Buru management program (Figure 4), with no significant difference between observed and predicted density in 9 of 11 test cases (Hone & Snape, 2024; Hone, 2022). The outcome of this review provides increased confidence in the validity of the Buru population dynamics predictions that contribute to informing Buru management advice.

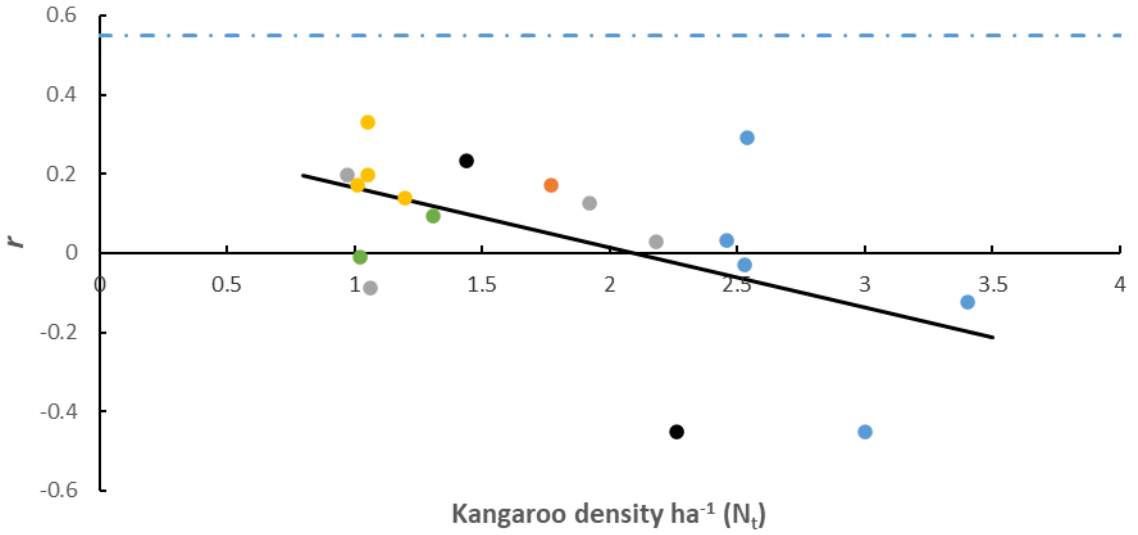

Figure 2. The relationship between Buru density (N_t) and annual population growth rate (r) between N_t and N_{t+1} in the absence of Buru management intervention. *Colours indicate different BMUs used in this analysis: Black = Mt Painter, Blue = Farrer Ridge, Grey = Gungaderra, Orange = The Pinnacle, Yellow = Crace and Green = Mulanggari. Dashed line indicates the maximum rate of increase for Buru populations (r_{max}). Reproduced from Hone (2022).*

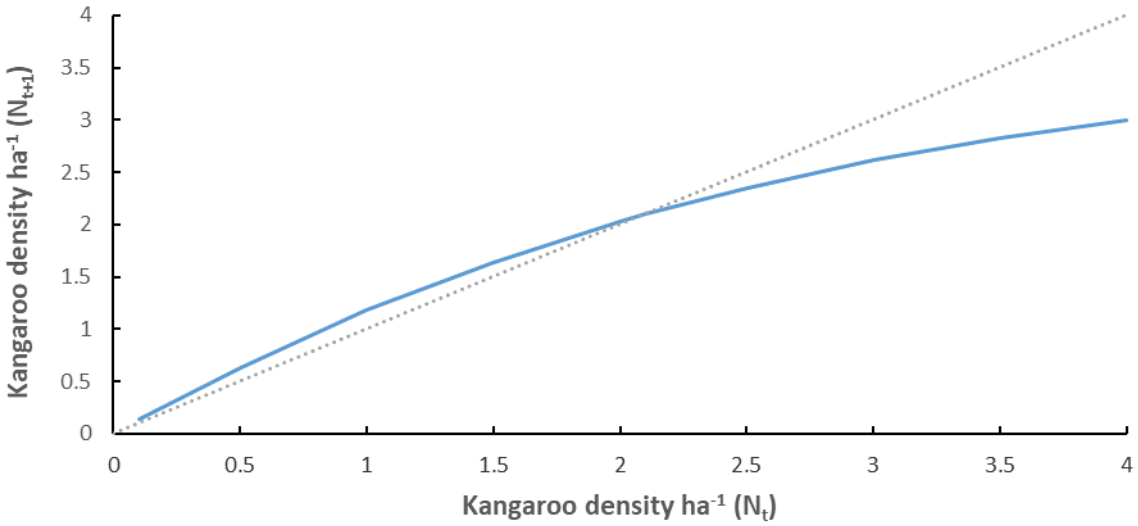

Figure 3. The relationship between initial Buru density (N_t) and that after 12 months of logistic population growth (N_{t+1}) based on application of the value of r derived from population data from the ACT. *Reproduced from Hone (2022).*

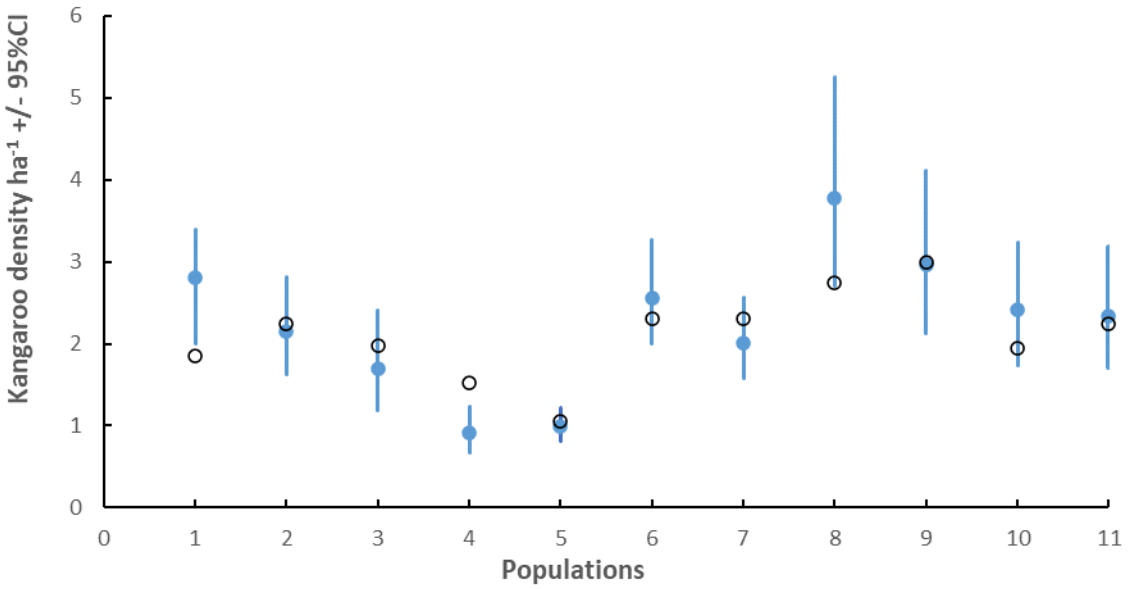

Figure 4. A comparison of predicted (open circles) and observed (solid circles and 95% CI) Buru density for eleven Buru population estimates in unmanaged reserves shows estimated Buru density falls within the 95% CI of the observed population density in nine of eleven cases. *Predicted population growth is based on values of r and logistic growth rate equations described above. Of the two predictions which did not fall within the 95% CI of the observed value, one was an overestimate and the other an underestimate. Reproduced from Hone and Snape (2024).*

The above dynamics are considered to reflect the effects of density dependent recruitment (i.e., whether juveniles enter the surveyed population) rather than density dependent fecundity (i.e., whether pouch young are born at all). As the number of juveniles entering the surveyed population is likely influenced by a combination of food availability and predation pressure during weaning and early independence (spring through to late winter), the amount of grass present in the environment is likely to play a significant role in determining density dependent recruitment rates as it may influence both factors. To date, no direct association between grass height and juvenile recruitment has been explored for ACT Buru populations. However, successive years of above average grass growth coupled with high levels of habitat cover observed throughout the early 2020's may have facilitated increased survival and recruitment of juvenile Buru into the surveyed populations, as a result of both ample food availability and improved opportunities to escape predation.

Vehicle strike is also a significant cause of mortality in urban Buru populations, and is, on average, a greater source of mortality than culling in nature reserves in the ACT. From 2016 to 2025, rangers attended an average of 2940 injured or dead Buru involved in collisions annually in the ACT (range:

1221 – 5077) (ACT Parks and Conservation Service, unpublished data). This figure is likely to be an underestimate of the true number of Buru killed on ACT roads because it only includes accidents that rangers were notified about. By comparison, an average of 1936 Buru have been culled each year in ACT nature reserves during the same period (range: 1041 – 4035).

Buru roadkill is known to be biased towards males in the ACT (Dunne & Doran, 2021) and studies elsewhere in Australia indicate the greatest proportion of these are likely to be dispersing juveniles (Coulson, 1997). The incidence of Buru vehicle strikes in the ACT, based on ranger call outs, varies between years and seasons (Figure 5). High numbers of collisions occurred during the peak of hot and dry conditions in the summer of 2019-20. Significant rainfall in early 2020 coinciding with a reduction in road use in the early stages of the Covid-19 pandemic saw this number drop significantly. Buru-vehicle incidents remained at historically quite low levels throughout 2021 and 2022 but increased in Winter and Spring 2023. In 2024, incidents occurred at similar rates to 2023 although at slightly higher rates in Autumn and Winter. The drier conditions in 2025 resulted in the highest number of Buru vehicle collisions on record in the ACT. Rangers attended 5077 incidents throughout the year, with particularly high numbers from April to August inclusive.

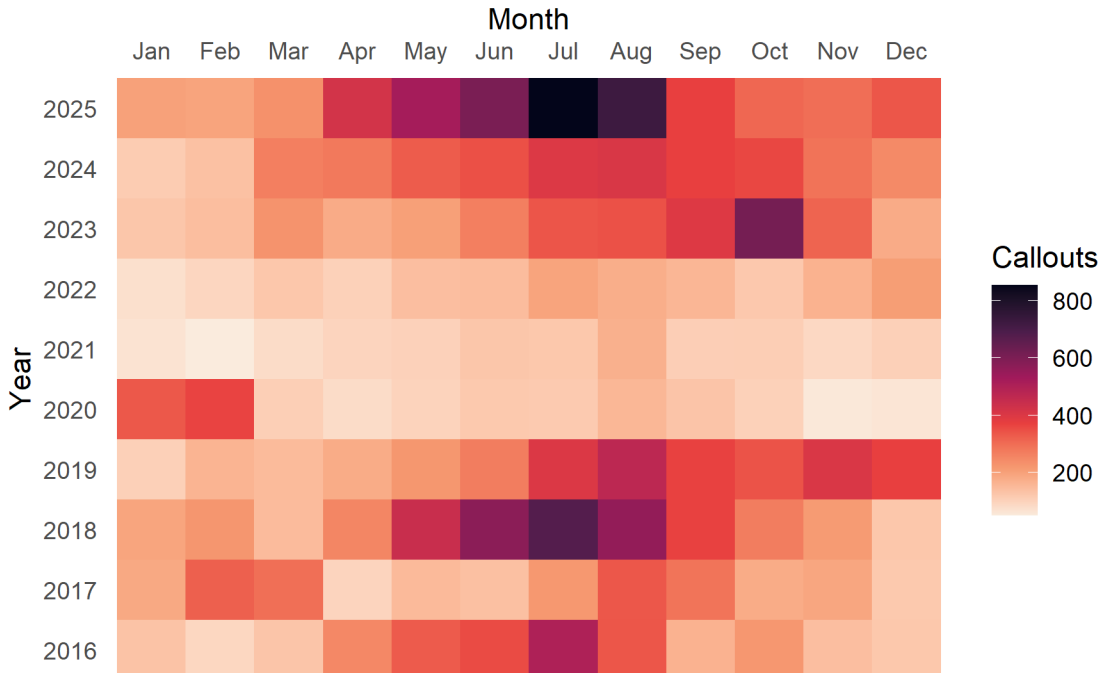

Figure 5. Monthly totals for Buru injuries or mortalities requiring attendance by the ACT Parks and Conservation Service on ACT roads (i.e., for euthanasia or carcass removal). *Note particularly high rates of reported macropod-vehicle collisions during winter 2018, and a prolonged high number of incidents throughout spring and summer of 2019. The number of incidents was low for the three years from 2020 to 2022, likely a result of improved food availability and a reduction in the number of vehicles on the road due to the COVID-19*

pandemic. Collisions increased throughout Winter and Spring 2023, peaking in October when conditions were hot and dry, showing a similar pattern in 2024 but with a less strong peak in August. 2025 had the highest callout rates yet recorded for the months April to August inclusive and for the whole year.

Calculating target Buru numbers to remain

The overall goal of the Buru management program on conservation land is to achieve a healthy equilibrium between Buru grazing pressure and the productivity of the grassy layer, such that a healthy grass layer is maintained overall. To achieve this, calculations of the target number of Buru to remain in any given nature reserve are undertaken according to the *Nature Conservation (Eastern Grey Kangaroo) Conservation Culling Calculator Determination* (ACT Government, 2018). This involves calculating the number of Buru to remain based on assessments of the total area of various vegetation types within a reserve, i.e., grassland, open woodland, woodland and forest classifications, based on percentage canopy cover (Wimpenny et al. 2015). Following work by Fletcher (2006), an average target density of 1 Buru per hectare in grasslands was identified as being appropriate for achieving grassy layer outcomes consistent with maintaining conservation values in the long term. The density to remain in other vegetation types (with higher percentage cover of canopy and thus less cover of grass) is reduced as canopy cover increases. Specifically, the target densities applied to other vegetation types are 0.9 Buru per hectare in Open Woodland, 0.5 Buru per hectare in Woodland and 0.1 Buru per hectare in Open Forest and Forest. Throughout this document, unadjusted target densities calculated according to the *Nature Conservation (Eastern Grey Kangaroo) Conservation Culling Calculator Determination* are referred to as 'calculator outputs'.

The calculator approach is effective in identifying long-term target densities for a given area of land but fails to account for variability in grass productivity or food availability in the short term (e.g., annually) based on recent rainfall or the impacts of recent or historic grazing regimes. As such, the Conservation Culling Calculator allows for an adjustment to the calculator outputs based on expert ecological judgement. Currently these adjustments are largely based on the outcomes of herbage mass surveys and predictions of herbage mass productivity described above that tailor the management recommendations to current conditions (Snape *et al.*, 2021). It is these adjusted target densities that are shown in Table 1 and form the basis for advice in Section 5, Table 3 (below).

Adjustments to target Buru densities based on annual vegetation assessments allow smaller Buru populations to be retained within a BMU in response to conditions such as historic over-grazing or prolonged hot and dry spells, where limited herbage mass productivity has resulted in depleted ground layer vegetation structure. Such adjustments enable new grass growth to be retained in the system (rather than consumed by the Buru population) hence allowing the grassy layer and associated biodiversity values to recover to a state of improved condition in a shorter time. Similarly, under conditions associated with increased herbage mass productivity and longer grass, larger numbers of Buru can be sustainably maintained within a BMU reducing the need for active Buru management in some years.

Allowances for population growth between one year and the next is the final step of estimating Buru 'numbers to remain' and is considered to account for the natural increase in Buru population size between one year and the next based on natural breeding and recruitment of young into the surveyed population. This adjustment is made with the intent of achieving the target density of Buru on average throughout the year. In practice, this means the population will start slightly below the target number immediately following the cull and end up slightly above the target number before subsequent Buru management activities in the following year. Allowances for population growth are currently made using the population growth formula developed by Hone & Snape (2024) described in the previous section.

This adaptive and evidence-based approach, integrated with the use of other herbage mass management tools such as fences, burning, slashing and the strategic use of livestock, ensures Buru management approaches can remain adaptable to constantly fluctuating climatic conditions. Annual reassessments of both grassy layer vegetation condition and Buru population size also enable the detection of any changes in Buru population dynamics. Finally, such an approach enables program effectiveness to be evaluated and monitored over time both in regard to specific target thresholds for Buru population size and the average height of the grassy layer which acts as a surrogate for benefits to native biodiversity.

Selecting a management approach

Each year, a variety of information sources are used to determine the most appropriate options for managing Buru as part of the broader approach to integrated management of endangered grassy ecosystems. These include the current condition of the grassy layer (based on herbage mass

assessments), the current Buru population size (based on Buru population surveys), the distribution of Buru across the landscape (based on GPS-ed Buru positions or local landholder knowledge), evidence of immigration or emigration from the site (based on Buru-vehicle collision data and Buru population surveys), information around the population demographics (age, sex based on population survey) and other factors relevant to Buru management (e.g. the impacts of other herbivore species present in the area). Importantly, the 'permeability' of the Buru Management Unit itself, in terms of the likelihood of movement of Buru from neighbouring areas into or out of the priority landscape, is also considered in adopting a management approach.

Where management is undertaken by culling, the goal is to retain, on average, the adjusted target density for the BMU over the 12-month period ahead. This means that the number remaining after management takes place will be slightly fewer Buru than the adjusted target number, to account for population growth throughout the year (see above).

The fertility control vaccine, GonaCon, was incorporated into the Buru management program for the first time in 2022 at selected sites, and its continuation is recommended in 2026. As the application of fertility control is unlikely to reduce Buru grazing impacts in the short term (Wimpenny *et al.*, 2021; Woodward *et al.*, 2006), this technique is best applied to populations which are already maintained at their adjusted target density. The number of females to treat with fertility control in any given BMU will thereafter be dependent on site-specific population dynamics, particularly the birth and survival rate of young.

Initial recommendations are that approximately 70% of the adult females need to be infertile at each of the selected sites, with site specific treatment numbers being determined based on the model by Hone (2004). This level of contraception is expected to reduce population growth, and thus reduce the need for culling, but still retain sufficient breeding animals in the population to offset natural mortality and allow appropriate target densities to be achieved in response to the annual variation in climate and vegetation condition. Higher numbers of contraceptive treatments may be required to account for mortality or emigration of treated individuals, failure of treatments and immigration of fertile females. These factors are considered on a site-by-site basis and incorporated into recommendations. Recommended numbers to contracept contained in this report are approximate and may be adjusted based on field observations to ensure the desired percentage of treated females is achieved. Most females will have a young in the pouch at the time of treatment that will be unaffected by the GonaCon. Therefore, the effect of the vaccine and any

impact on population growth will not be evident until after the subsequent breeding season. The administration of additional fertility control treatments and the level of culling required each year will be informed by ongoing monitoring of Buru density, population level fecundity (observations of the proportion of adult females carrying pouch young) and vegetation condition.

Using this information, recommendations produced by the various data-based mathematical formulas is reviewed by expert ecologists, operational program coordinators and local land managers to collectively agree on the most appropriate approach to achieve site-specific conservation outcomes. In 2026 these discussions have included consideration of the role of ecological burns, surface rocks and coarse woody debris, slashing and strategic livestock grazing, temporary fencing, invasive herbivore management, Buru culling and the use of GonaCon Immunocontraceptive Vaccine as tools to manage the impacts of Buru on achieving priority conservation outcomes across Canberra Nature Park and select areas of the broader conservation estate.

A summary of the Buru population management recommendations for 2026 for each BMU is provided in Tables 1 and 3.

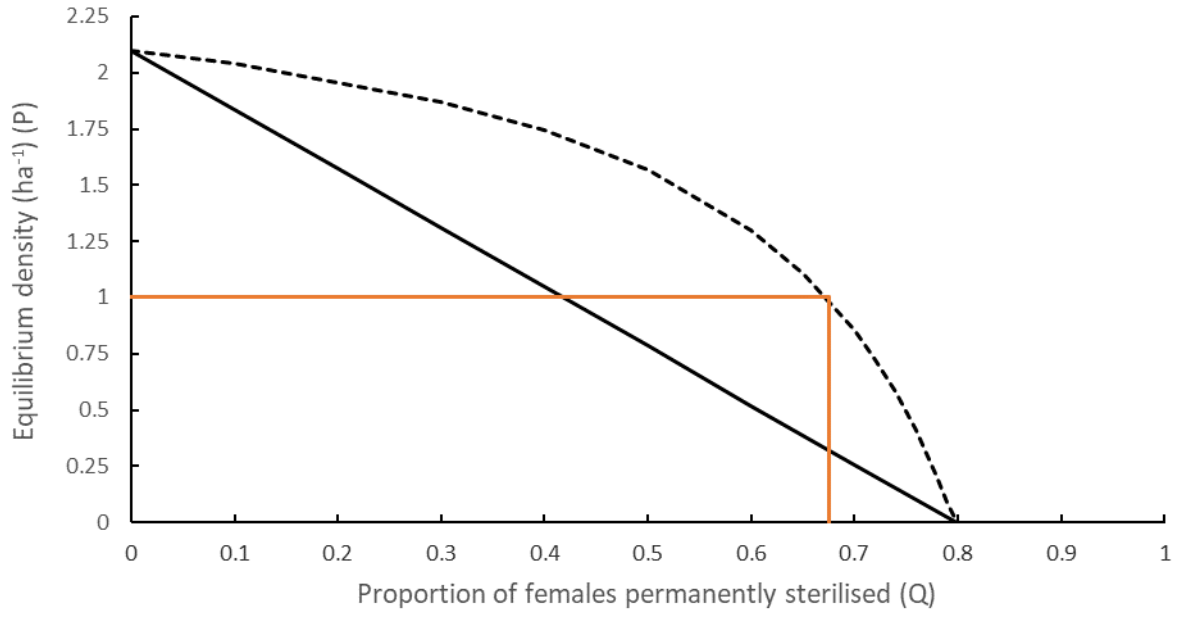

Figure 6. Predicted effects of fertility control on Buru density (ha^{-1}), assuming density dependent effects on mortality (solid line) or recruitment (dashed line). *Example (in orange) indicates the proportion of females which need to be permanently sterilised (Q) to be 0.673 in order to maintain an equilibrium Buru population density of 1 Buru per hectare (P). Equation assumes K = 2.1 Buru per ha, r_{max} = 0.55 per year, and birth rate (a) = 0.69 young per female per year. J Hone, unpublished data based on Hone (2004).*

5. Summary of 2026 Buru Management Advice

The number of Buru to cull from a Buru Management Unit is calculated according to (a) the adjusted target density (derived from herbage mass assessments), (b) the current population density, and (c) predictions of population growth in accordance with the *Controlled Native Species (Eastern Grey Kangaroo) Conservation Culling Calculator* (2018). The number of adult female Buru to treat with GonaCon is calculated using the model by Hone (Figure 6), the adjusted Buru density, the current population density and field observations of sex and age class ratios within Buru populations. A summary of the key elements informing the calculation of Buru management advice for ACT Government managed conservation land within BMUs for 2026 are provided in Table 3.

Table 3. Management areas, calculator output and adjusted target Buru densities, recent Buru counts, and predicted population growth information used to determine Buru management requirements within the ACT Government managed conservation areas for each Buru Management Unit (BMU).

*Columns marked (a) to (c) refer to the components of the Buru management formula referred to in the Nature Conservation (Eastern Grey Kangaroo) Conservation Culling Calculator. Areas managed by ACT Government for conservation include nature reserve, areas managed as nature reserve (including environmental offset sites) and road verges adjacent to nature reserves. Population estimates for the conservation estate within each BMU are calculated using the BMU population densities provided in Table 2, except for Jerrabomberra East BMU where a higher density is applied to the conservation land in accordance with the observed distribution of Buru across the BMU. Buru densities are number of Buru per hectare. Approximate recommended numbers to contracept are based on Hone (2004, Figure 6) and observed sex ratios and consider the number of females treated in previous years. The numbers to contracept are approximate and may be adjusted based on field observations to achieve the desired percentage of treated females. *Management recommendations are based on the whole BMU area due to the small area of non-conservation land within these BMUs. #The conservation area and management recommendations for Kama BMU are for the Kama Nature Reserve component of the conservation land only. †Adjusted target density capped at lower limit to allow recovery to density determined by calculator output within 1-2 years; NA = Culling not recommended despite the calculator result; specific details are provided in relevant site descriptions in Section 6. Small discrepancies in numbers may result from rounding.*

Site	Total Area of BMU (ha)	Area Managed by ACT Government for Conservation (ha)	CALCULATOR OUTPUT Number (and Density) for Conservation Area	(a) ADJUSTED TARGET Number (and Density) for Conservation Area 2026	(b) Population (and Density) in Conservation Area at 2026 Count	(c) Expected PGR based on ADJUSTED TARGET Density	Number to remain in Conservation Area, allowing for population growth in the interim to the next cull	Recommended Number to Cull in Conservation Area in 2026	Approximate Recommended Number to Contracept in Conservation Area in 2026	Operational Priority
Ainslie Majura BMU	2099	1438	465 (0.32)	367 (0.26)	2344 (1.63)	0.28	331	2013		High
Aranda Painter BMU	378	265	141 (0.53)	246 (0.93)	400 (1.51)	0.19	225	175		Low
Crace BMU	180	173	158 (0.91)	119 (0.66)*†	325 (1.80)	0.23	106	219		High
Dunlop BMU	116	116	113 (0.97)	130 (1.12)	321 (2.76)	0.16	119	*NA*		
East Jerrabomberra BMU	1373	392	399 (1.02)	281 (0.72)	502 (1.28)	0.22	255	247		High
Farrer Ridge BMU	202	202	141 (0.70)	168 (0.83)	329 (1.63)	0.20	152	178	6 to 13	Cull - Medium, GonaCon - High
Googong West BMU	1747	1747	1405 (0.80)	978 (0.56)†	1450 (0.83)	0.24	874	577		Medium
Goorooyarroo BMU	796	796	561 (0.70)	425 (0.53)	453 (0.57)	0.25	374	79		High
Gungaderra BMU	364	345	310 (0.90)	383 (1.05)*	553 (1.52)	0.17	349	204		Medium
Kama Extended BMU	1502	155#	141 (0.91)	102 (0.66)†	110 (0.71)	0.23	91	*NA*		
Mt Taylor BMU	380	334	228 (0.68)	160 (0.48)†	578 (1.73)	0.25	140	438		Low - New site
Mulanggari BMU	158	155	149 (0.96)	191 (1.21)*	230 (1.45)	0.15	177	53	14 to 21	Cull - Medium; GonaCon - High
Mulligans Flat BMU	484	484	201 (0.42)	136 (0.28)†	511 (1.05)	0.00	136	375	0	Cull - High
Red Hill BMU	407	303	171 (0.56)	118 (0.39)†	293 (0.97)	0.27	103	190	~76	Cull - Medium; GonaCon - High
The Pinnacle BMU	365	283	215 (0.76)	263 (0.93)	1084 (3.83)	0.19	241	843		Medium
West Jerrabomberra BMU	1970	1010	722 (0.71)	505 (0.50)†	1040 (1.03)	0.25	444	411		High
TOTAL								**6002**	**96 to 110**	

6. Site specific considerations

Ainslie Majura BMU

Background

The Ainslie-Majura BMU is situated in northern Canberra, surrounded by the suburbs of Ainslie and Hackett to the west, the Federal Highway to the north, Majura Parkway to the west, and Fairburn Avenue to the south. It is comprised of the Mt Ainslie and Mt Majura Nature Reserves (and adjoining environmental offsets), government horse paddocks, several private rural leases, and an area of Commonwealth land. The area is predominantly dry forest with open grassy areas at the base of the western slopes. The BMU is expected to have little immigration/emigration, although Buru are known to move into the suburbs to graze during the night (resulting in high rates of Buru-vehicle collisions in this area). Buru have also been recorded moving across road-bridges over the Majura Parkway.

Site-specific considerations

The Ainslie Majura BMU contains significant areas of critically endangered Yellow Box - Red Gum Grassy Woodland, as well as populations of the Golden Sun Moth, Rosenberg's Goanna, Canberra Spider Orchid and Hoary Sunray. The rare Yellow Hyacinth Orchid was recorded at Mt Ainslie for the first time in 2024. This is only the second recorded location in the ACT for this species. The Friends of Mount Majura and Mount Ainslie Weeders, in collaboration with the ACT Parks and Conservation Service, have invested significant effort over many years in mapping and treating rabbit warrens, undertaking weeding and erosion control and planting tube stock and seeding nodes. Following on from extensive rabbit control work within this BMU in the previous three years, rabbit shooting and warren fumigation will continue this year. Over 330ha of this BMU has been searched and treated for over 50 weed species so far this financial year, the most common being Serrated Tussock, African Lovegrass, St John's Wort, Chilean Needle Grass, and Cootamundra Wattle. Other conservation management and restoration work will continue at this site in 2026, particularly installing rocks and logs to increase habitat complexity, tree planting and a habitat restoration initiative in partnership with the Ngunnawal community which is focusing on Mt Ainslie, Mt Majura and two other nature reserves. In 2026, a Ngunnawal led burn may be undertaken within this BMU as part of the "Re-emergence of First Nations burning in contemporary grassy woodlands" ARC Linkage Project.

Over-grazing of the understorey vegetation at this site by Buru (and to a lesser extent rabbits) has been an issue at this site for over a decade. However, collaborative efforts to decrease the density of Buru across both government and non-government managed land have been underway since 2016 and have achieved significant reductions in overall Buru density at this site, with the Buru population approaching the target density between 2020 and 2024 and average native grass height within the threshold range for the five years prior to 2026. The Buru density estimate was unexpectedly well above target density last year (Fig 7) and for operational reasons, a multi-year approach was adopted to reduce the population to the target.

Temporary fencing has previously been installed in the West Majura Grasslands environmental offset area to protect key threatened species habitat from the impacts of overgrazing by Buru. The temporary fencing is opened to allow Buru grazing during times of increased grass growth. For example, the fencing was open from 2022 to 2024 following a reduction in Buru density in the grassland area and above-average rainfall conditions. Additional herbage mass disturbance measures (e.g., slashing) were also used to increase heterogeneity in grass structure and improve palatability for Buru during this time. The fence has been closed since December 2025 in response to the dry spring conditions and an increase in Buru in the grassland area.

Buru management recommendations

The results of the 2026 counts for the Ainslie Majura BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 7. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 8 and 9 showing within and below threshold grass heights across the management polygons. Changes to herbage mass monitoring polygons and plots within the Ainslie-Majura BMU were made prior to the survey season to reflect recently updated vegetation mapping. Based on the adjusted target density and the recent Buru population estimate, a cull of 2013 Buru is recommended for the conservation land in the Ainslie Majura BMU in 2026 as a high priority (Table 3). A multi-year approach may be required to return the Buru population to the target density, as has been undertaken at this site in previous years. The use of fertility control is not being considered for Ainslie Majura BMU at this time.

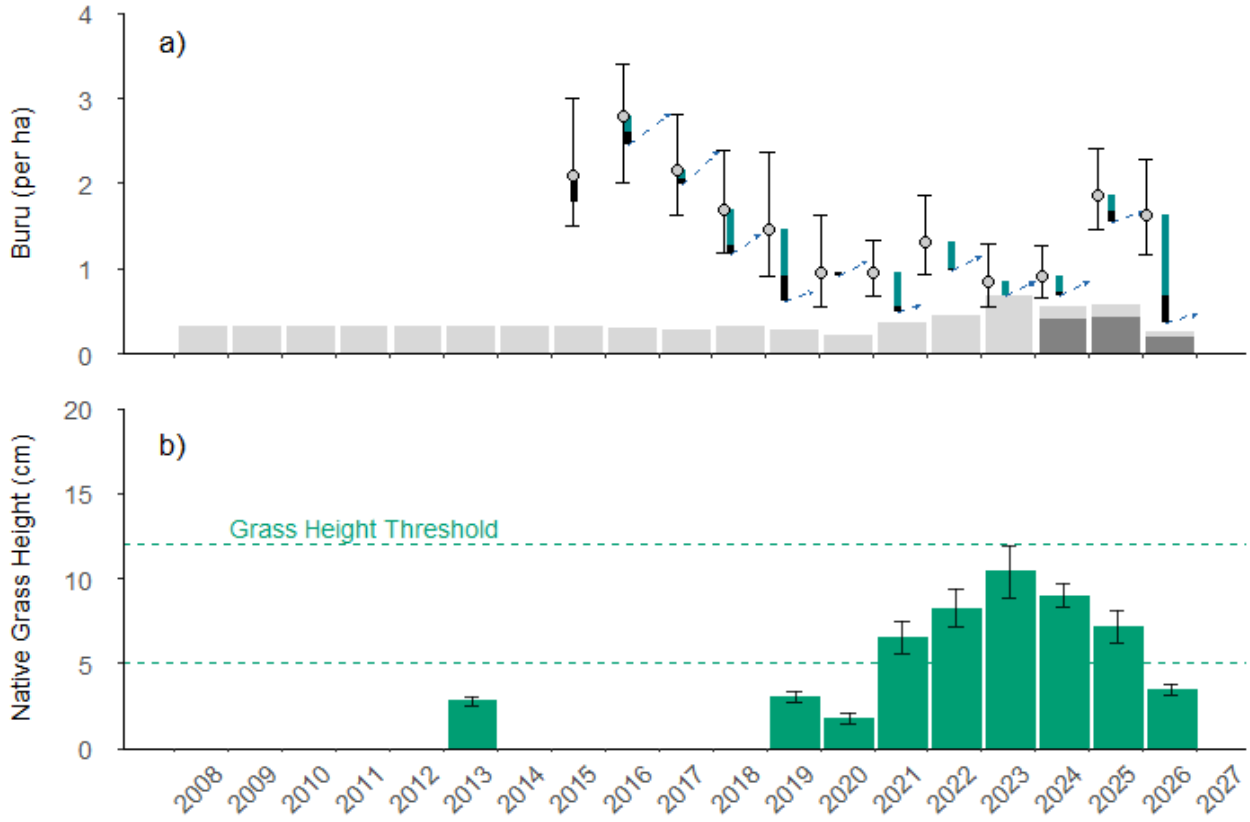

Figure 7. Changes in Buru density and native grass heights for Ainslie Majura BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect count method. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program and black bars representing management outside of ACT Parks and Conservation Service managed lands. The vertical line shown for 2026 is the recommended cull density for the conservation land and an approximate cull density expected for the other land within the BMU. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time in the conservation land within the BMU, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

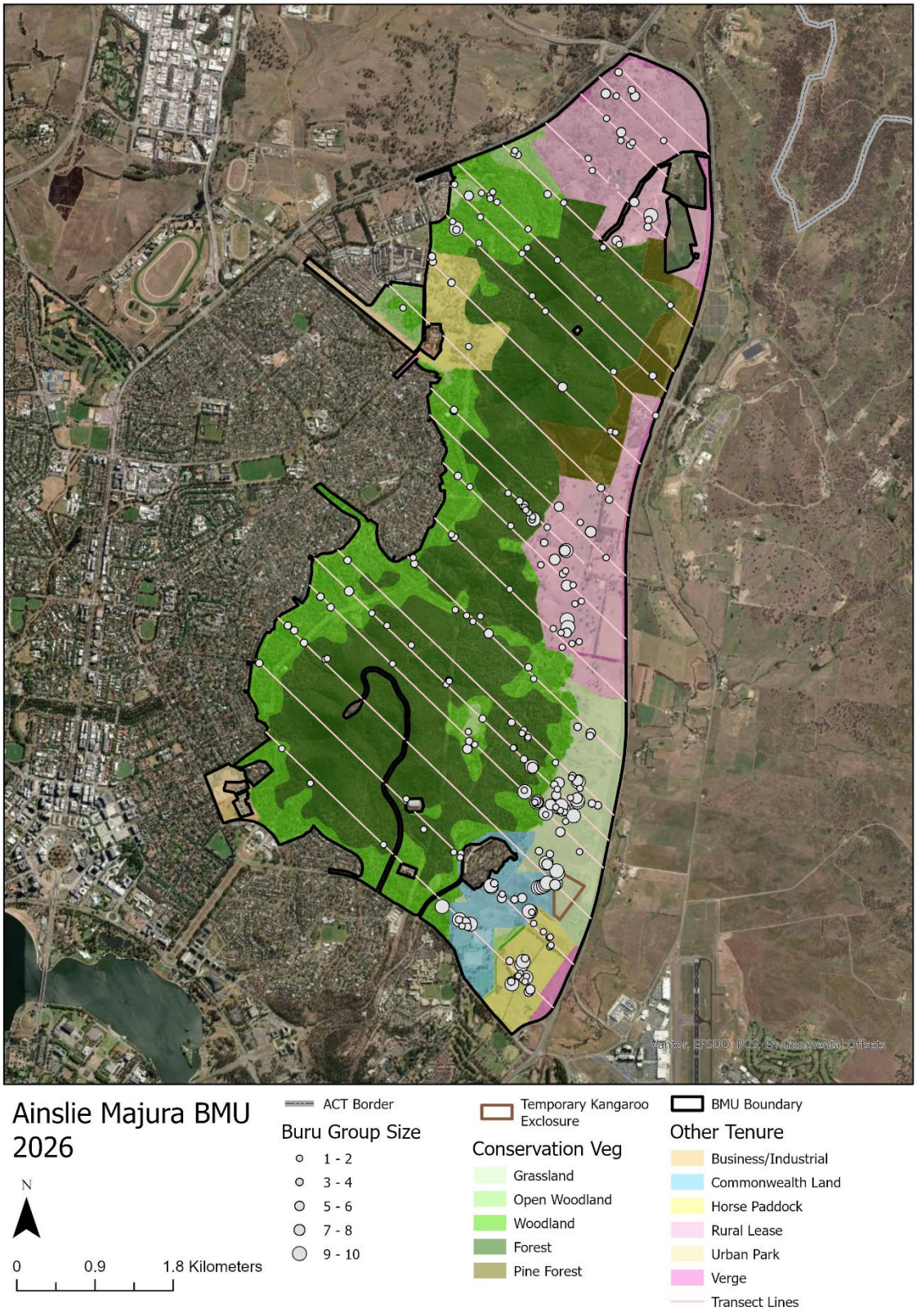

Figure 8. Map of Ainslie Majura BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru and wallabies across the landscape. *Five observations of Red-necked Wallabies and three observations of Swamp Wallabies were recorded during the surveys. The number of Baray (wallaby) sightings recorded is too few to allow calculation of total population size for these species.*

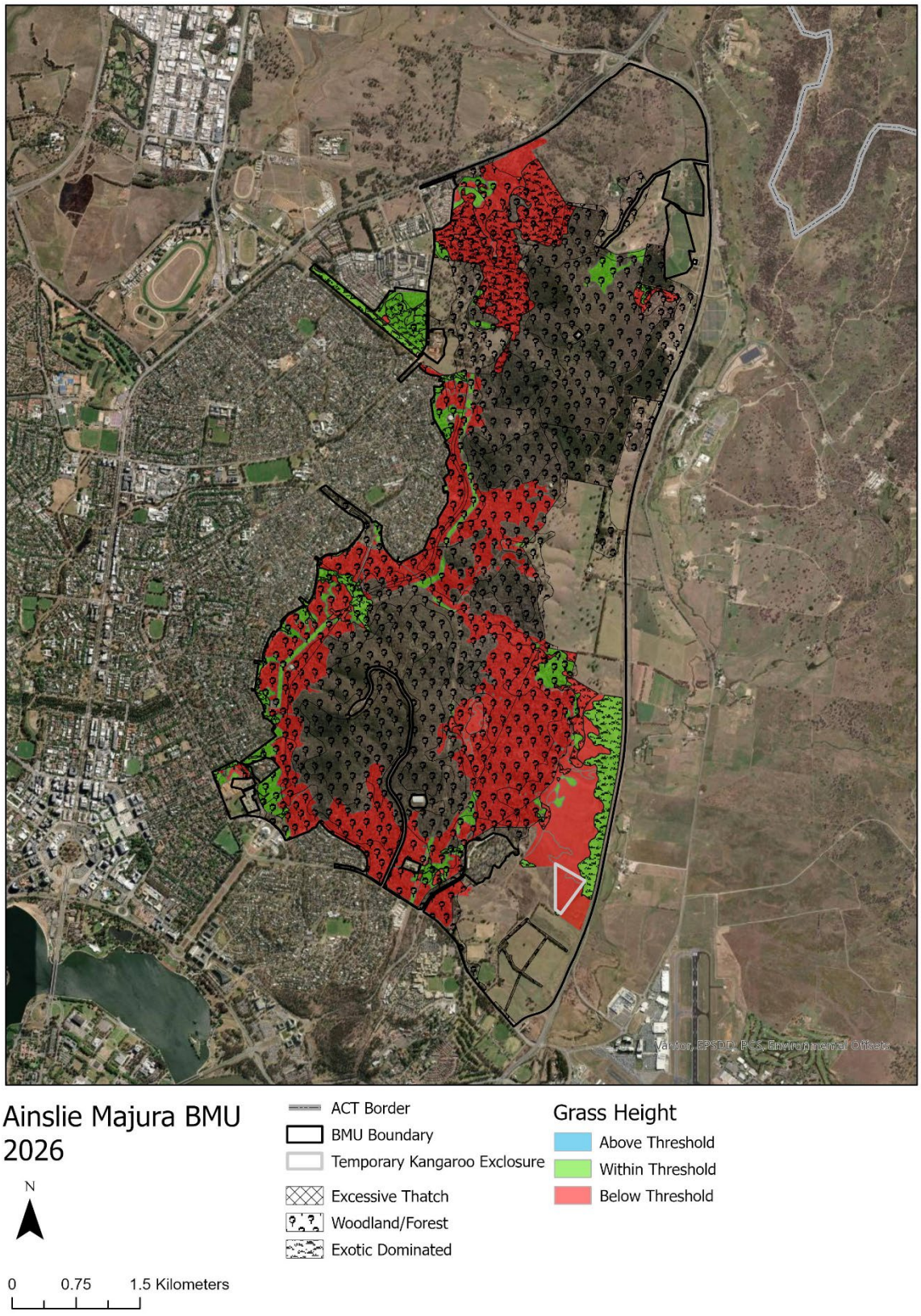

Figure 9. Map of Ainslie Majura BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Aranda Painter BMU

Background

The Aranda Painter BMU makes up part of the Belconnen hills reserve network. The two reserves of Aranda Bushland and Mt Painter and their adjoining horse paddock and areas of rural lease, community garden and areas earmarked for future urban development are divided by Bindubi Street, with Gungahlin Drive to the east, Coulter Drive to the west, William Hovell Drive the south, and the suburbs of Cook and Aranda to the north. A new substation has been constructed in the rural land in the south-west of the BMU. Vegetation in and around Mt Painter Nature Reserve is predominantly open woodland and land historically cleared for grazing, whilst the Aranda Bushlands and Snow Gums component of the BMU is comprised of dense forest and open grassland respectively. Mt Painter and Aranda Bushland BMUs were initially considered separately in terms of Buru management, but evidence of high animal movement between these two areas (including high rates of Buru-vehicle collisions on Bindubi Street) led to them being considered as a single management unit since 2019.

Site specific considerations

Aranda Bushland and Mt Painter Nature Reserves each contain areas of critically endangered Yellow Box - Red Gum Grassy Woodland and are important for the protection of several rare plant species and declining woodland birds. The Aranda Snow Gums area, in the southeast of the BMU, is heritage listed whilst the Wildflower Triangle within the Mt Painter Nature Reserve is managed to protect a range of rare plants, Erosion control, weeding and revegetation efforts are undertaken across the BMU by the Friends of Mt Painter and the Friends of Aranda Bushland. Rabbit populations and invasive plant species will continue to be managed at this site as resourcing allows. Over 160ha of various invasive plants have been managed across the BMU so far this year, particularly woody weeds, St John's Wort and Blackberry. A hazard reduction burn was undertaken in the Aranda component of the KMU in 2026 to manage fire fuel loads.

Buru management has been undertaken within the former Mt Painter BMU since 2010, achieving a Buru density consistent with the conservation objectives of that site. However as higher than anticipated Buru population growth rates indicated a significant risk of immigration on achieving management outcomes, the Aranda Bushland was added to the BMU in 2019. Operational constraints limited capacity to manage Buru populations to achieve the target density since this

modification to the BMU and as a result, populations have remained well above the target density in most recent years (Figure 10).

Buru management recommendations

The results of the 2026 counts for the Aranda Painter BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 10. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 11 and 12, showing within and below threshold native grass heights across the management polygons. Based on the recent population estimate and adjusted target density, a conservation cull of 175 Buru is recommended with low priority for Aranda Painter BMU in 2026 (Table 3). This management should focus on removing Buru from both the Aranda Bushland and Mt Painter components of the BMU. The use of fertility control is not being considered within Aranda Painter BMU at this time, but it has been identified as a potential site for inclusion in the program in future.

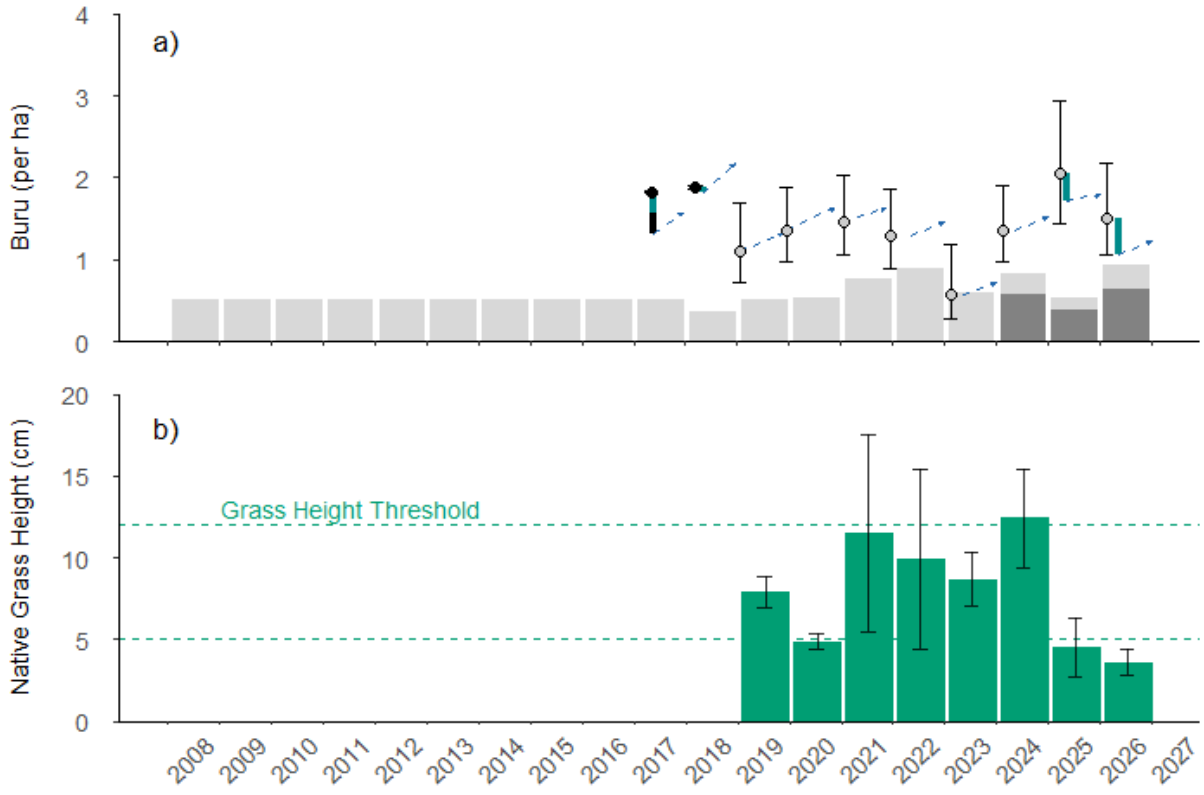

Figure 10. Changes in Buru density and average native grass heights for Aranda Painter BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect count method (grey circles). Earlier sweep counts are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey (black circles). Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program and black bars representing management outside of ACT Parks and Conservation Service managed lands. The line shown for 2026 is the recommended density to be removed from the conservation estate only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time in the conservation land within the BMU, based on ecological adjustments. The dark grey portion of the bars in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

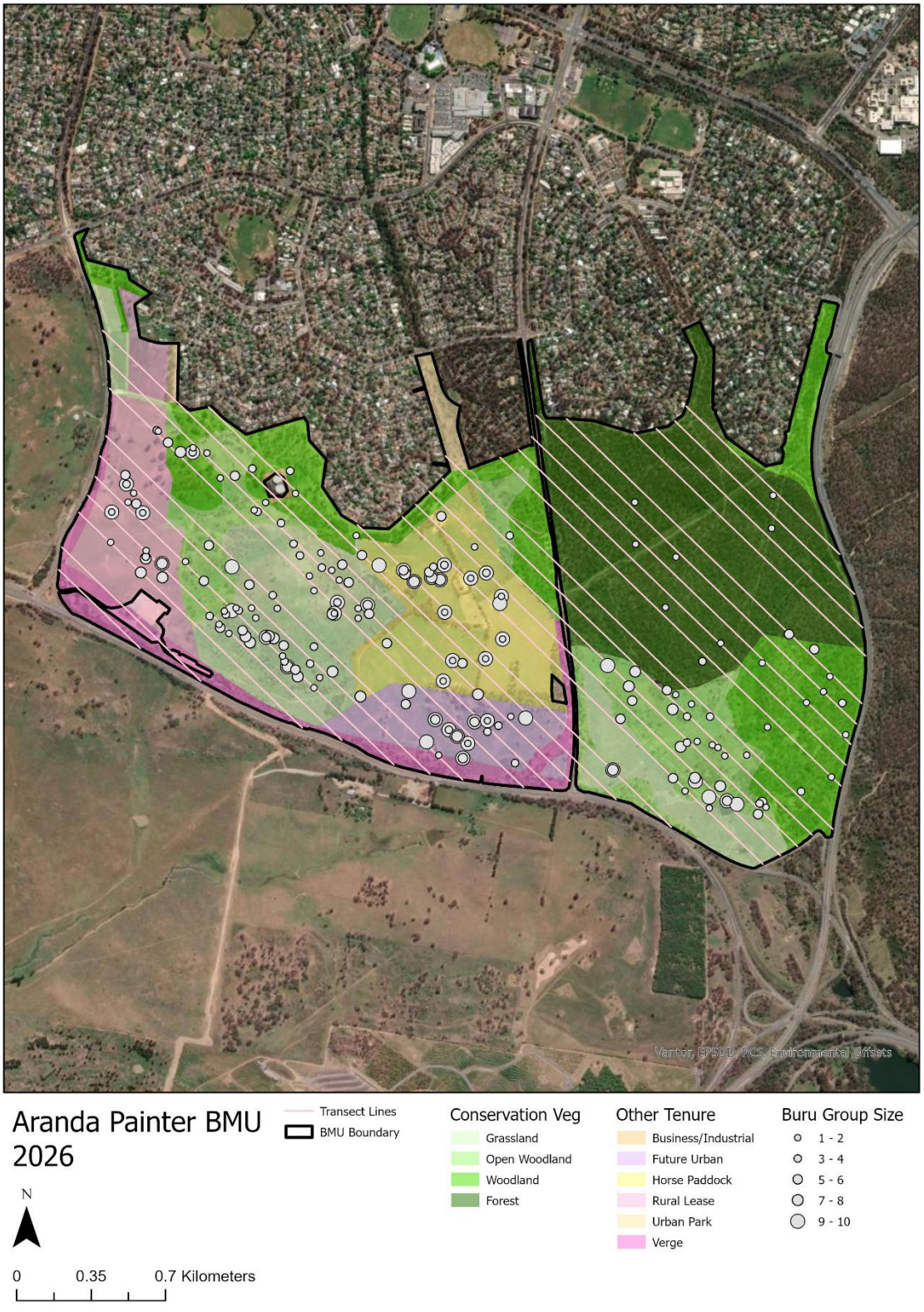

Figure 11. Map of Aranda Painter BMU, showing canopy strata, land tenure, survey transects and position of surveyed macropods across the landscape*. Three observations of Red-necked Wallabies, five observations of Swamp Wallabies and one observation of a Common Wallaroo was recorded during the surveys. The number of Baray (wallaby) and Wallaroo sightings recorded is too few to allow calculation of total population size for these species.*

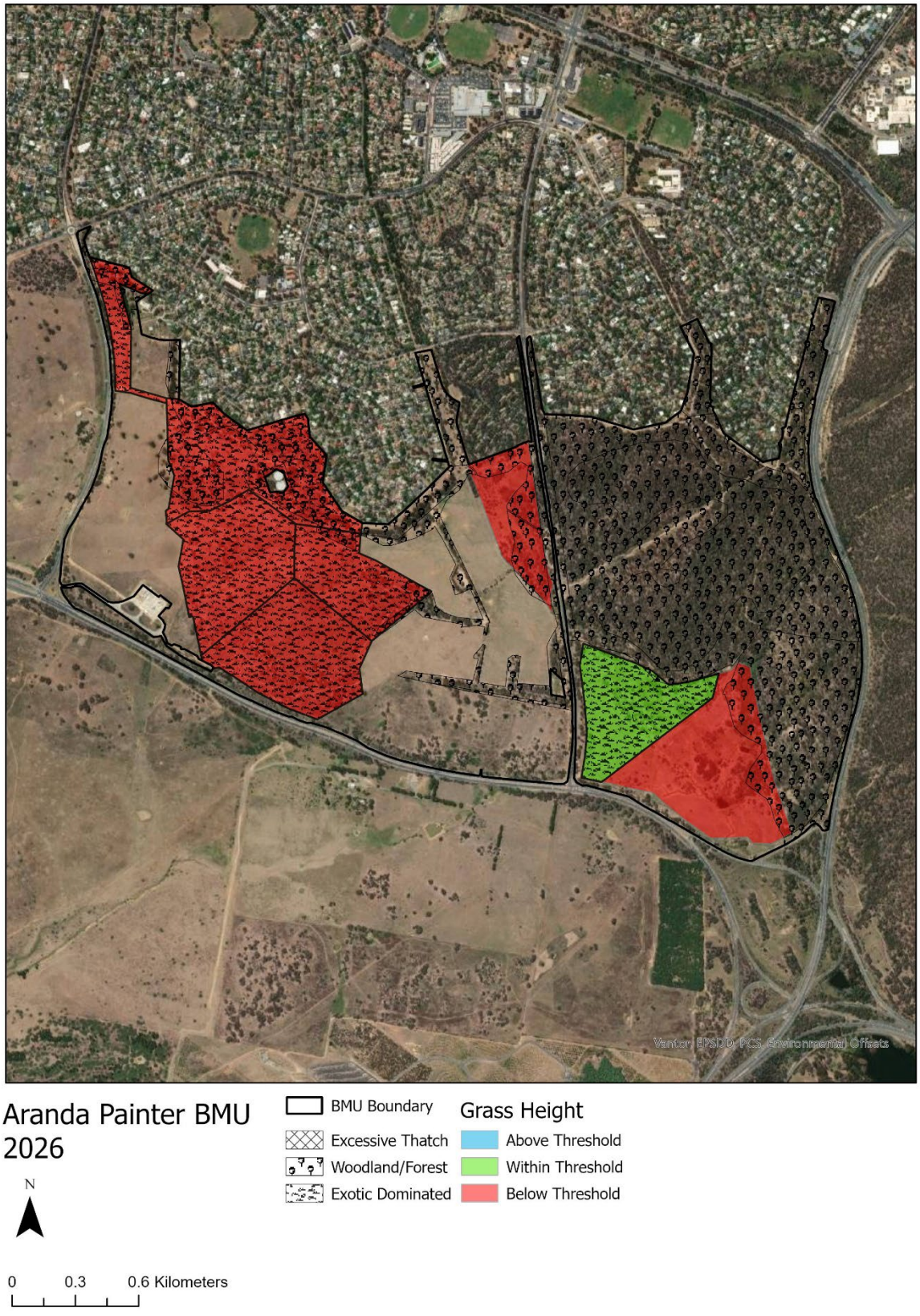

Figure 12. Map of Aranda Painter BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Crace BMU

Background

Crace BMU is located in the south of the Gungahlin Valley and is bounded by Gungahlin Drive in the west, the Barton Highway in the south, Randwick and Flemington Roads to the east and the suburb of Mitchell to the north. The BMU includes Crace Grasslands Nature Reserve as well as areas of public rural land, which is treated as conservation for the purposes of Buru management, and land used for commercial purposes. The area is predominantly grassland with some woodland plantations. Rates of immigration and emigration are likely to be low, although some passage of animals through the Barton Highway underpass from the Kaleen Horse Paddocks and beyond is possible.

Site specific considerations

Crace BMU contains large areas of critically endangered Natural Temperate Grassland and is key habitat for threatened species such as the Striped Legless Lizard, Golden Sun Moth, Button Wrinklewort and Perunga Grasshopper. Pink-tailed Worm-lizards were translocated into Crace Grasslands in 2022. Experimental rock plots have been installed to reduce fine-scale grazing impacts by Buru and improve habitat structure for native plants and animals. Restoration activities such as plantings are being undertaken at the site. Invasive plants are managed in this landscape as part of an integrated land management program. To date this financial year, invasive plant control in this BMU has focussed on Phalaris, St John's Wort and Serrated Tussock. Strategic cattle grazing is currently being used to manage areas of tall exotic *Phalaris* in the site. Additional fencing is being added this year to further facilitate strategic livestock grazing while protecting high quality native grassland areas. Cattle grazing may also be used this year in asset protection zones to keep herbage mass below the set fuel load to manage the risk of wildfire to life and property. Ecological burns have been completed in recent years to reduce thatch and improve cover of native plants.

For over a decade, Buru density has been effectively managed at this site to maintain a variable grassy layer structure consistent with the protection of biodiversity values. Buru management has only been required intermittently, particularly during extremely hot and dry years, to achieve conservation objectives (Figure 13).

Buru management recommendations

The 2026 count for Crace BMU is shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 13. The vegetation structure used for calculating Buru management recommendations is shown in Figures 14 and 15, showing most polygons to be below the grass height threshold and two polygons within threshold. The average native grass height this year at Crace BMU dropped below threshold and the corresponding recommended target Buru density was 0.54 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.66 Buru/ha this year. A conservation cull of 219 Buru is recommended for Crace BMU as a high priority in 2026 (Table 3). Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to protect key areas from Buru grazing if required. The use of fertility control is not being considered for Crace BMU at this time, but it has been identified as a potential site for inclusion in the program in future.

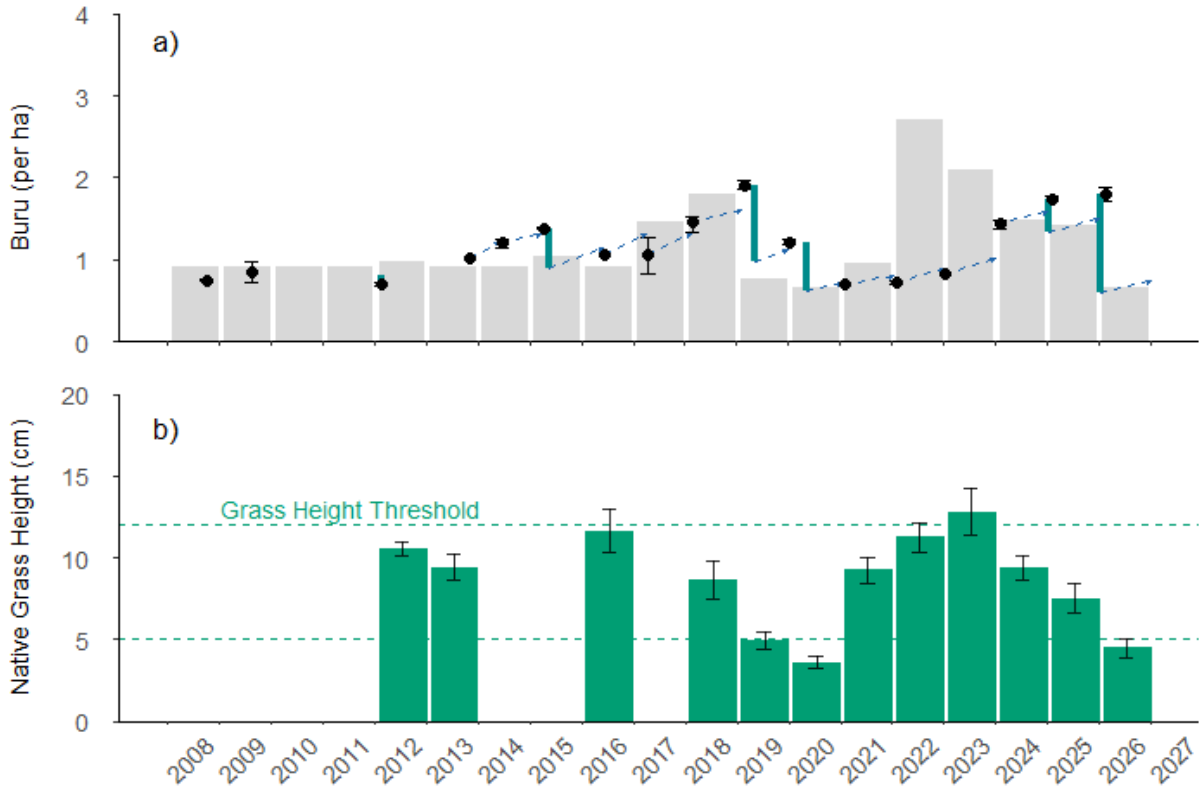

Figure 13. Changes in Buru density and average native grass heights for Crace BMU.

a) Changes in Buru density. *Buru density assessed via direct counts are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The line shown for 2026 is the recommended density to be removed from the conservation estate only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

Figure 14. Map of Crace BMU showing canopy strata and land tenure.

Figure 15. Map of Crace BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Dunlop BMU

Background

Dunlop BMU is located in the north-west of Canberra, between the suburbs of Dunlop and Fraser and the ACT – NSW border. The area is comprised predominantly of grassland and open woodland and is contiguous with adjoining areas managed for conservation to the southwest, and rural lease to the northeast. Given this connectivity, there is expected to be high Buru immigration and emigration into and out of this site, including across the creek to adjoining rural land in NSW.

Site specific considerations

Dunlop BMU contains areas of critically endangered Natural Temperate Grassland and Box-Gum Woodland, is key habitat for threatened species such as the Golden Sun Moth, Canberra Raspy Cricket and the Shining Coconut Ant which is necessary for colonies of the rare Small Ant-blue Butterfly.

Ongoing weed management is undertaken within the Dunlop Nature Reserve and surrounding areas. To date this financial year, African Lovegrass, Serrated Tussock, and St John's Wort are the main weeds treated within Dunlop BMU.

In 2017, a livestock grazing management plan was developed for this site with the aim of providing additional grazing pressure to maintain a variable grassy layer structure and to reduce the prevalence of annual grasses. Buru numbers have now been above the target density for nine consecutive years at this site and while average native grass heights have remained within threshold until 2024, they have been below threshold for two years (Figure 16). The Buru population observed within the BMU during surveys probably grazes across a broader area, which may have allowed average grass heights to remain within threshold despite above target Buru populations in previous years. In response to the decrease in grass heights observed over the last two years, sheep grazing within this BMU reduced in 2025 and should continue to be monitored and managed closely by Parks and Conservation Service staff into the future (Figure 18). Buru management on neighbouring lands, in addition to Buru populations sitting at or above ecological carrying capacity, is likely preventing further growth of the Buru population in this landscape at this time.

Buru management recommendations

The results of the 2026 Buru count for the Dunlop BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 16. The vegetation structure used for calculating Buru management recommendations is shown in Figures 17 and 18, showing three polygons within threshold for native grass heights and five below threshold. As livestock grazing continues to be used to manage herbage mass at this site and the high connectivity with surrounding lands, no conservation cull is recommended for Dunlop BMU at this time (Table 3). Buru density is above the target number however (the culling calculation recommended a cull of 202 Buru) and the impacts of total grazing pressure (including the ongoing requirement for sheep grazing) should continue to be monitored and managed closely. The use of fertility control is not currently being considered for Dunlop BMU.

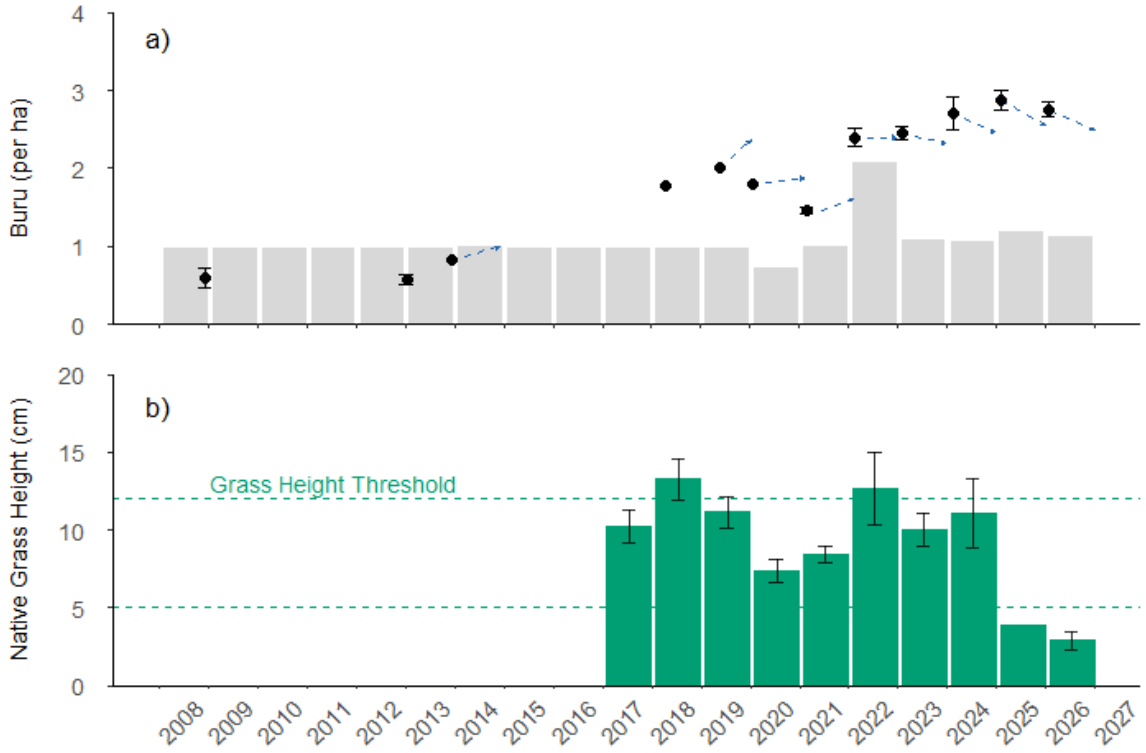

Figure 16. Changes in Buru density and average native grass heights for Dunlop BMU.

a) Changes in Buru density. *Buru density assessed using sweep counts are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey (where performed). Blue dotted arrows indicate the predicted population growth for the site in each year (not accounting for any Buru management on adjoining land in most years). The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

***b) Average native grass height**. Native grass heights are depicted as the mean height of native grass ± standard error of the mean (SE). Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. In 2025, native grass only dominated one polygon therefore no SE is shown. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 - 12cm) associated with maximised biodiversity outcomes.*

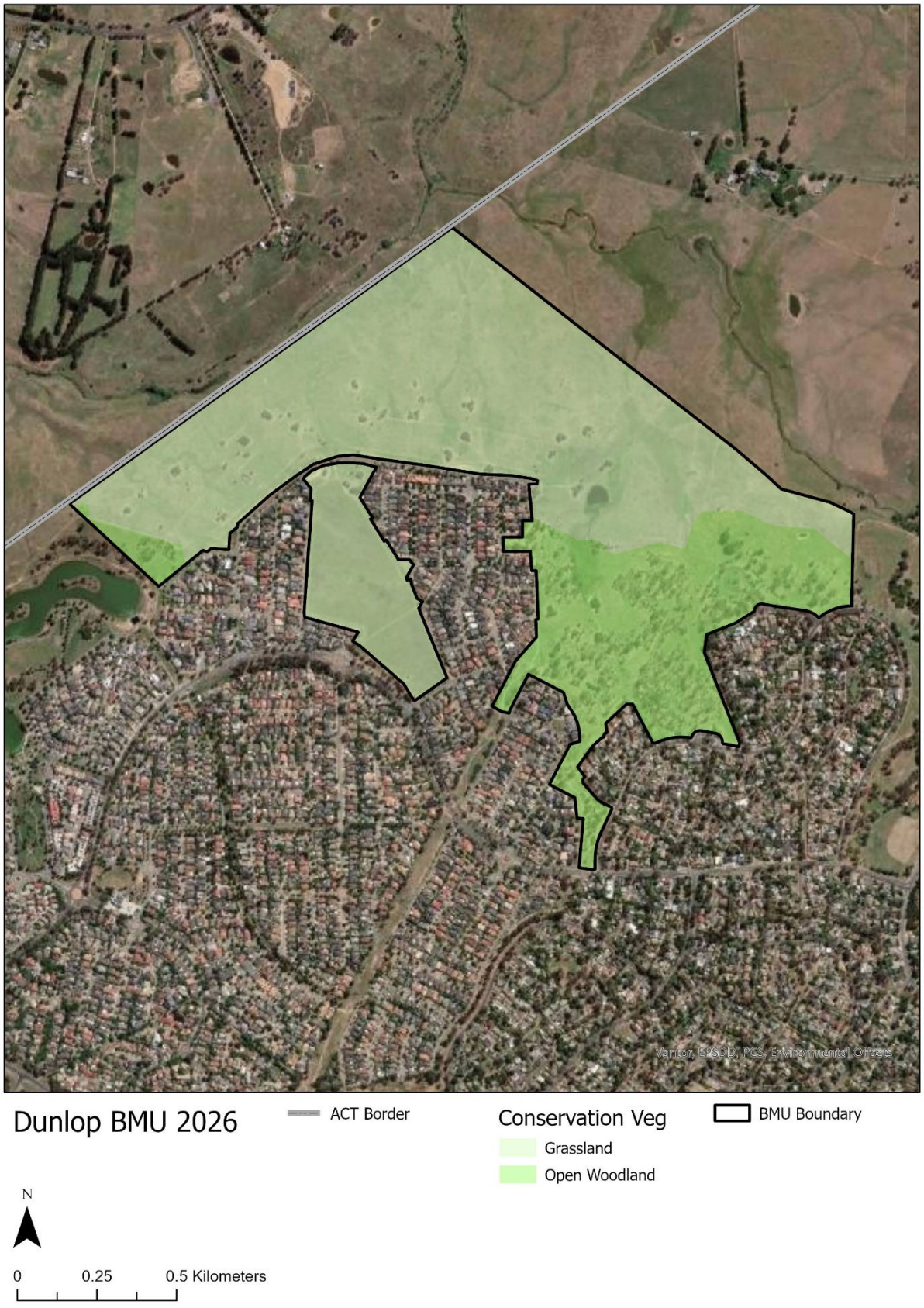

Figure 17. Map of Dunlop BMU showing canopy strata on conservation land.

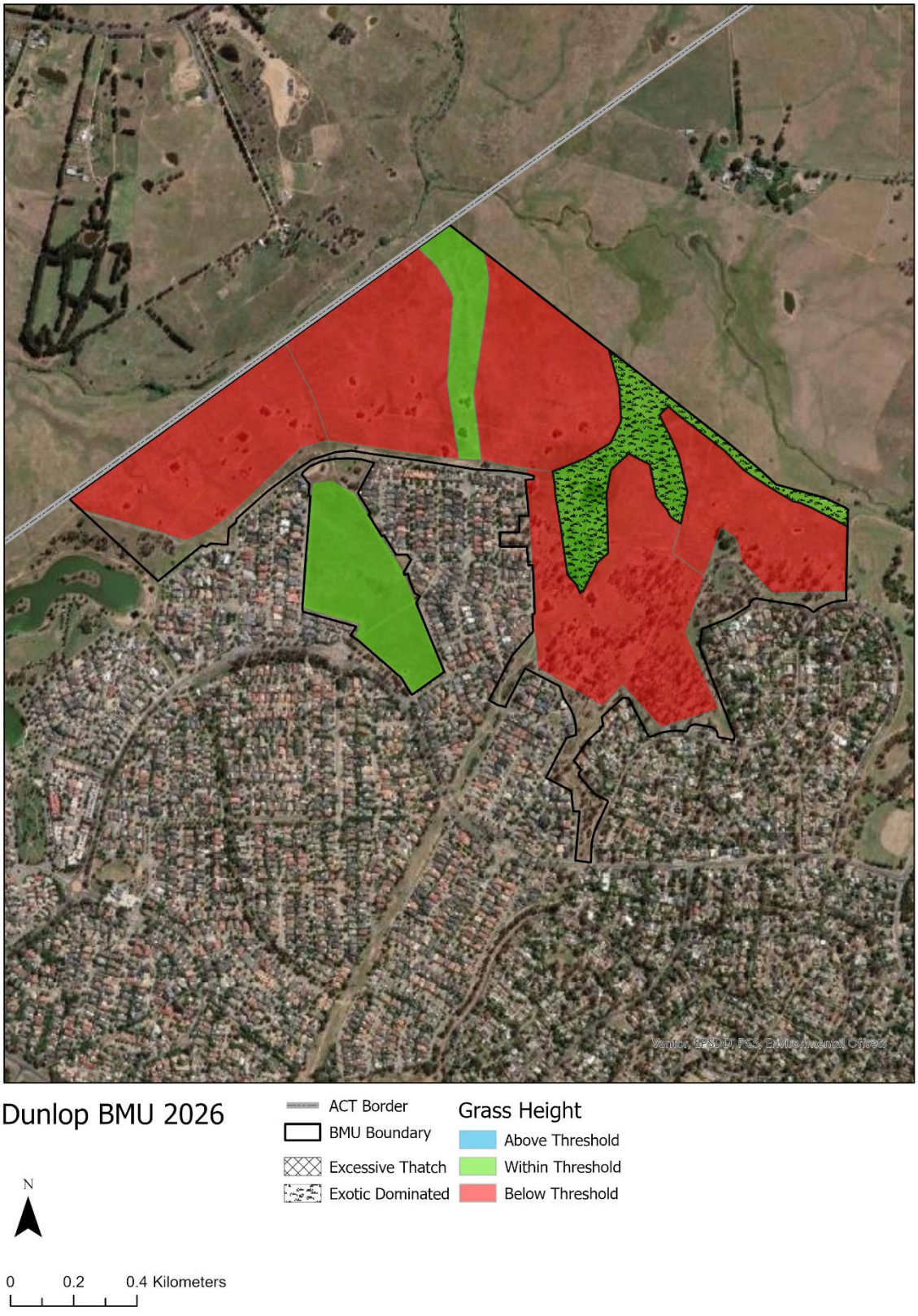

Figure 18. Map of Dunlop BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

East Jerrabomberra BMU

Background

The East Jerrabomberra BMU is in the east of the ACT, bordered by the Monaro Highway to the south-west, the suburb of Jerrabomberra (and development area for South Jerrabomberra) to the south and east, and the suburb of Symonston and Canberra Avenue to the north. East Jerrabomberra BMU is almost exclusively grassland and includes the Jerrabomberra East Grassland Reserve, Bonshaw and AMTECH environmental offset sites, in addition to a number of ACT and NSW rural leases, and NSW government and privately managed conservation land.

The AMTECH environmental offsets site (to the north) was added to this BMU in 2022, after the land between Lanyon Drive and the South Jerrabomberra development area was added in 2021 to reflect apparently high immigration rates from adjoining populations. Upgrades to the Monaro Highway at the Lanyon Drive intersection and construction in NSW may impact this BMU through 2026.

Site specific considerations

The Jerrabomberra East BMU contains areas of Natural Temperate Grassland, as well as populations of Golden Sun Moth, Perunga Grasshopper, Button Wrinklewort, Striped Legless Lizard, and the critically endangered Canberra Grassland Earless Dragon and Ginninderra Peppercress. Temporary fencing was installed within Jerrabomberra East Grasslands in 2019 to protect critical habitat areas, adding to the existing Buru grazing management infrastructure. The temporary fencing is open to allow Buru grazing during high rainfall times when grass growth is increased. It has been closed since December 2025 in response to the dry conditions.

Historically, the majority of Buru in this landscape resided on the East Jerrabomberra Grassland Reserve component of the BMU. Management interventions, particularly the use of fire to promote palatable green pick, have been used successfully to encourage grazing by Buru in the adjacent Bonshaw environmental offset and reduce direct grazing pressure on Jerrabomberra East reserve. The 2026 Buru survey shows that the density of Buru grazing in the early mornings is greater on the ACT conservation lands compared to the ACT rural land components of the BMU (Figure 20).

Ongoing management of invasive plants (particularly, African Lovegrass, Serrated Tussock, St John's Wort and Chilean Needle Grass this year) and rabbits will continue this year. In addition to weed spraying, slashing has been undertaken recently to control St John's Wort. Restoration

activities such as ecological burns and seeding of recently burnt areas will be undertaken in future as required. The designated native seed collection area established within this BMU is continuing to be used to source material for direct seeding following ecological burns. Common Wombats also contribute to total grazing pressure within conservation areas of this BMU.

Buru management recommendations

The results of the 2026 count in the Jerrabomberra East BMU is shown in Table 2. Changes in Buru density and ground layer vegetation condition within the Jerrabomberra East BMU over recent years are shown in Figure 19. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 20 and 21, showing polygons to be below, within or above threshold in terms of grass height. Based on the current Buru density, grassy layer condition and proposed management on neighbouring lands, a conservation cull of 247 Buru is recommended as a high priority for the Jerrabomberra East BMU in 2026 (Table 3). If operationally feasible, some culling should be undertaken in the AMTECH area in the north of the BMU. Management efforts within this BMU should be undertaken as part of a collaborative approach with neighbouring landholders, with the aim of reducing Buru density in the broader landscape while ensuring sustainable levels of Buru grazing within the conservation estate. The use of fertility control is not being considered for East Jerrabomberra BMU at this time.

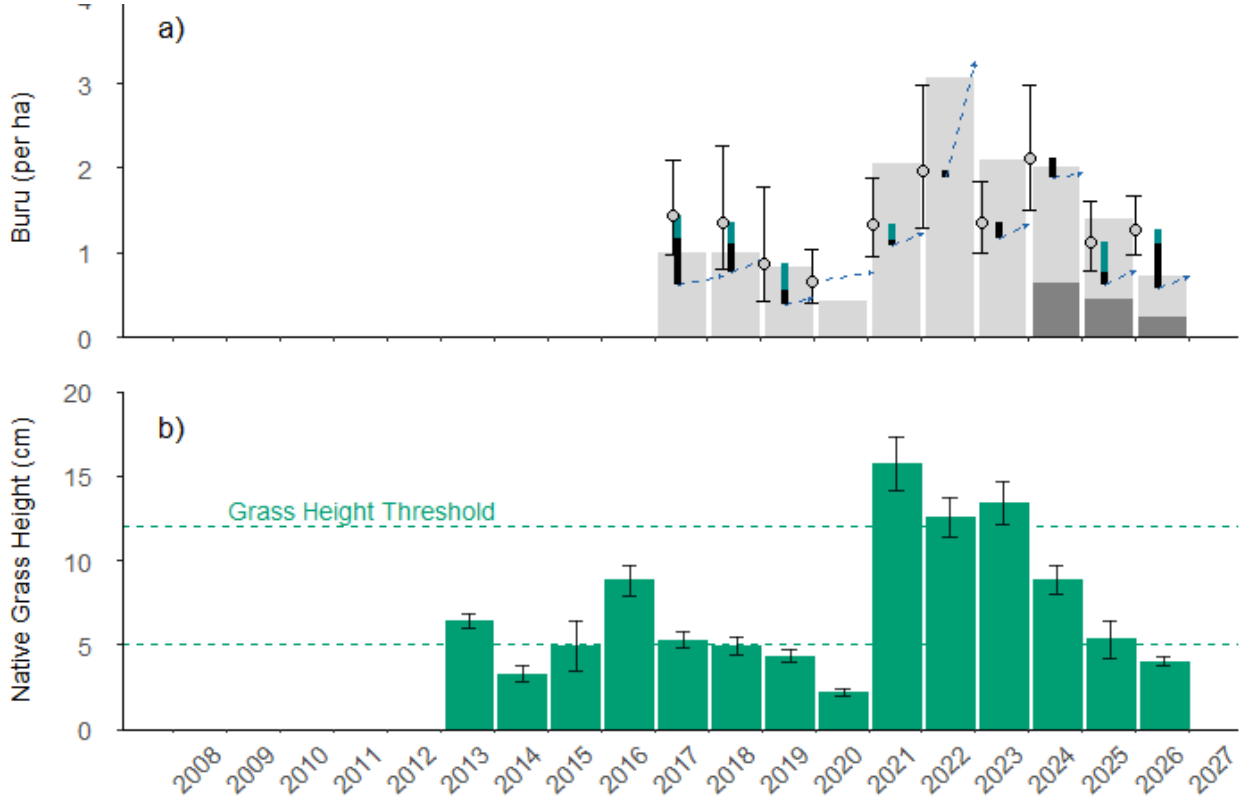

Figure 19. Changes in Buru density and average native grass heights within the East Jerrabomberra BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect count method. Buru culls are indicated by vertical lines, with green lines showing the density removed during the conservation culling program and black lines showing the density removed from other components of the BMU. The vertical line shown for 2026 is the recommended cull density for the conservation land and an approximate cull density expected for the rural land within the BMU. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time in the conservation land within the BMU, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

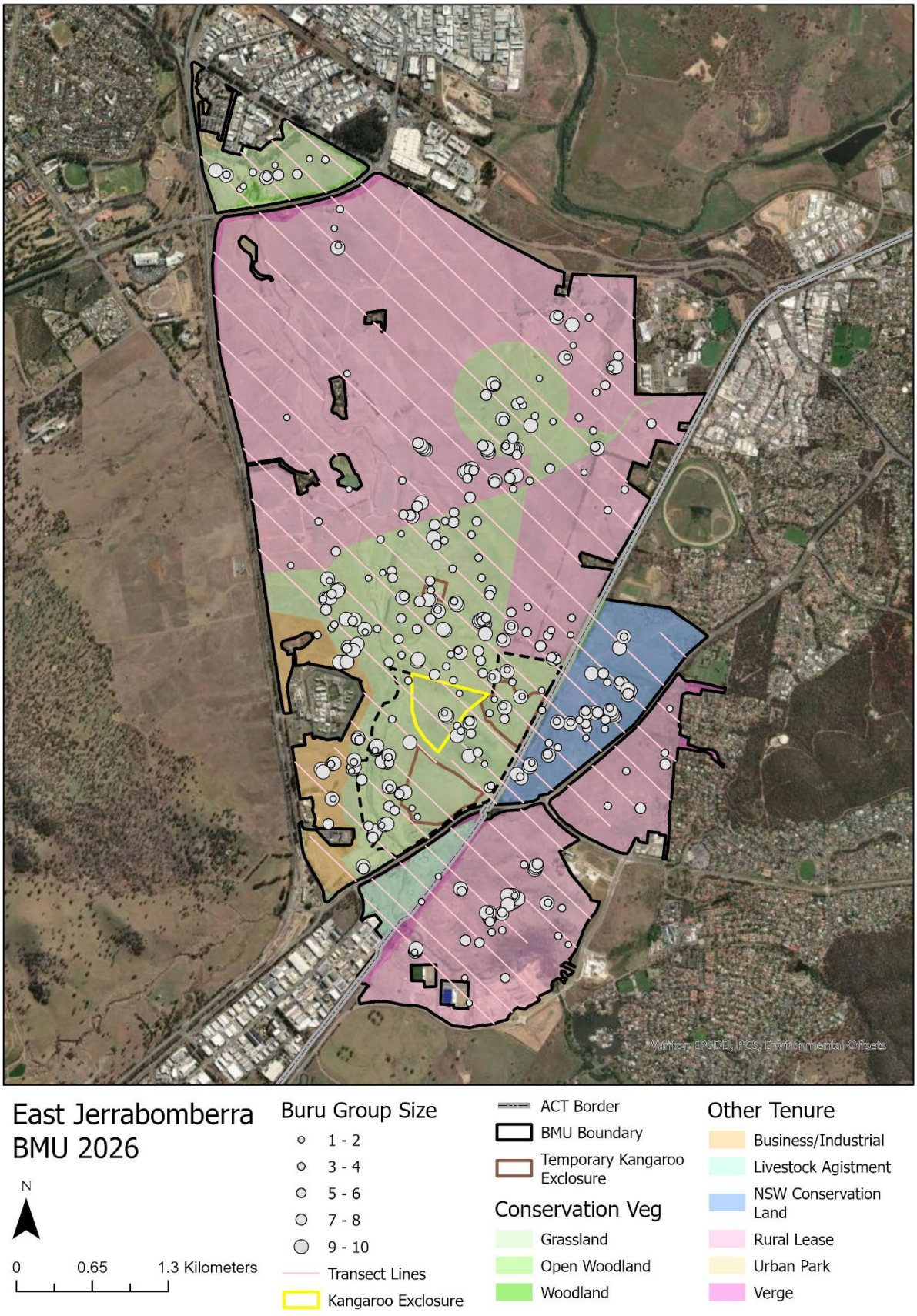

Figure 20. Map of East Jerrabomberra BMU (and Jerrabomberra East Grassland Reserve therein), showing canopy strata, land tenure, survey transects and position of surveyed Buru across the landscape.

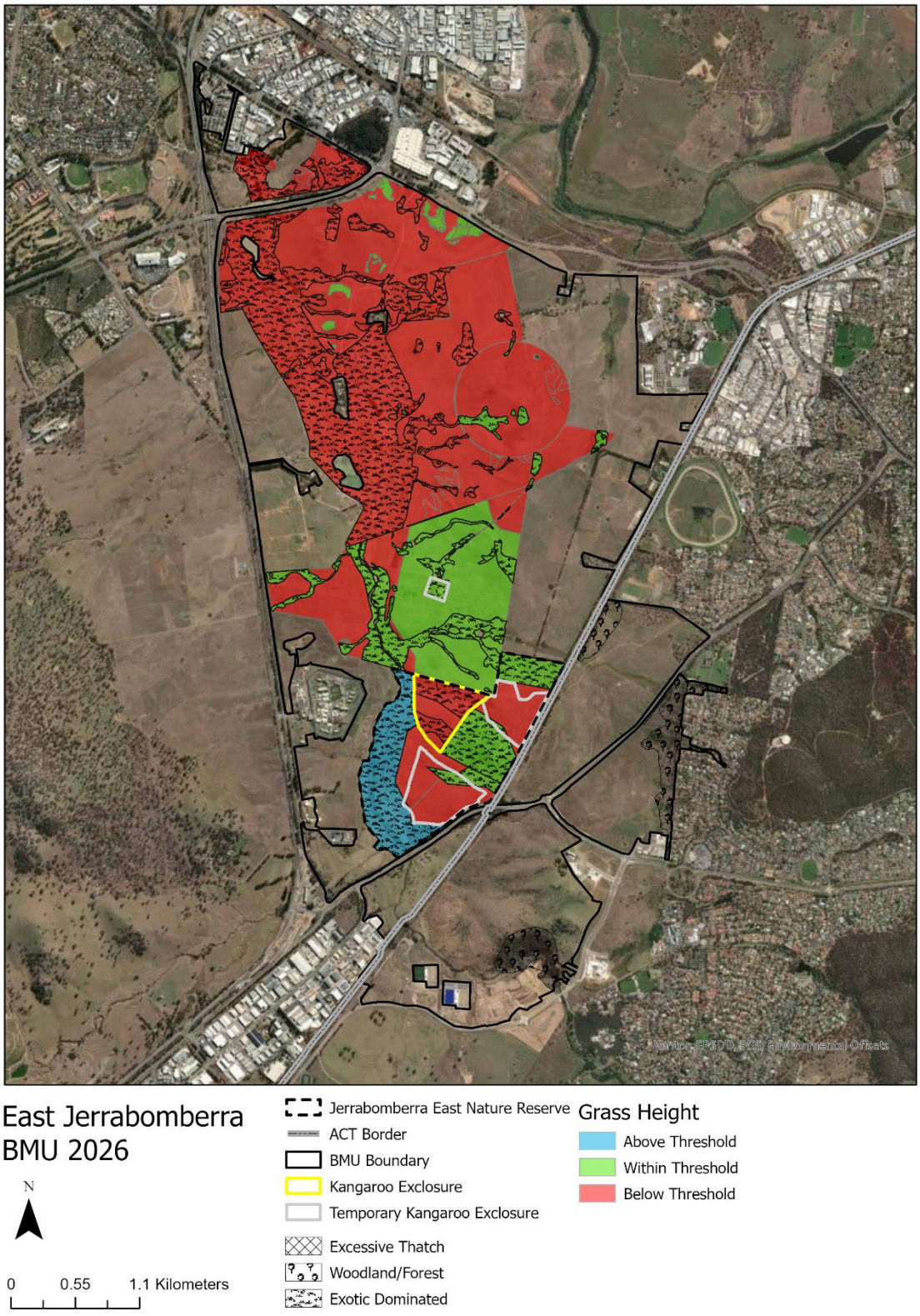

Figure 21. Map of East Jerrabomberra BMU (and Jerrabomberra East Grassland Reserve therein), showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Farrer Ridge BMU

Background

The Farrer Ridge BMU is in Canberra's south, separated from the Mt Taylor BMU by Athllon Drive and from Wanniassa Hills BMU by Erindale Drive. To the north it is bordered by the suburb of Farrer and to the south it is bordered by Sulwood Drive and the suburb of Wanniassa. Farrer Ridge BMU consists fully of areas managed for conservation (the sub-station and PCS depot are behind Buru-proof fences) and is predominantly a woodland ecosystem. The particularly high rates of Buru-vehicle collisions on roads surrounding this BMU is likely a major mortality source for individuals within this population and indicates some level of animal movement between adjacent BMUs.

Site specific considerations

The vegetation within Farrer Ridge Nature Reserve includes critically endangered Yellow Box – Red Gum Grassy Woodlands, as well as populations of the Small Purple Pea and Hoary Sunray. It is likely also part of an important movement corridor for declining woodland birds. The Farrer Ridge ParkCare group has been undertaking management of woody weeds for many years, assisting the Parks and Conservation Service with erosion control, and undertaking plantings to restore vegetation diversity. Weed control is ongoing in Farrer Ridge BMU, with woody weeds, St John's Wort and African Lovegrass managed so far this financial year. When required, slashing is undertaken along the boundary with Farrer suburb and along management trails in accordance with the Bushfire Operational Plan.

Buru management was undertaken for the first time at this site in 2021. Previously the Buru population remained well above the target density consistent with achieving conservation objectives (Figure 22). Limited food availability coupled with high rates of vehicle strike on surrounding roads and a population at or above ecological carrying capacity likely prevented further increases in population density at this site in the past. With population density now reduced, increased rates of immigration from surrounding unmanaged Buru populations (Wanniassa Hills BMU and Mt Taylor BMU) may be observed in drier years, with 2026 perhaps being a good example of this process with the Buru population at Farrer Ridge increasing more than expected.

In 2022, the use of fertility control commenced at Farrer Ridge BMU to help maintain the population at or near the long-term target density and reduce the need for future culling. From

2022 to 2025, a total of 66 female Buru were treated with GonaCon. Of these, 9 are known to have died and others have not been seen at the site for some time. Approximately 46 GonaCon treated females are estimated to still be present at the site. Based on observations in September 2025, 41% of adult females in the population were treated and 41% of all adult females (treated and untreated) in the population were observed with pouch young. Further GonaCon treatments will be undertaken as required in future to maintain the desired percentage of treated females in the population (approximately 70% this year). Increasing the percentage of treated females above what is recommended by modelling (up to approximately 80%) will be considered for this site to account for continued attrition of treated individuals, immigration of fertile females, treatment failures and declining vaccine efficacy over time. An annual population growth rate of zero has been assumed for the previous two years in this population due to the use of fertility control, however, greater than expected growth occurred between the 2025 and 2026 population estimates. Monitoring of the number of tagged vs untagged females in the population indicated that this increase was likely due to immigration. The normal population growth formula has been applied this year to account for potential ongoing immigration and the current level of fertility control.

Buru management recommendations

The results of the 2026 Buru count for the Farrer Ridge BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 22. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 23 and 24, showing grass heights below threshold across all but two management polygons. The target Buru density at Farrer Ridge BMU has remained similar to last year but Buru density has increased more than expected. Therefore, a cull of 178 Buru is recommended in 2026 with medium priority (Table 3). Continuation of the use of GonaCon contraceptive vaccine is recommended as a high priority for this site in 2026 to aid in reducing the need for culling to maintain a sustainable population of Buru in the long term. Approximately 6 to 13 additional female Buru are recommended to be treated with GonaCon this year (Table 3), however, this number may be modified based on field observations.

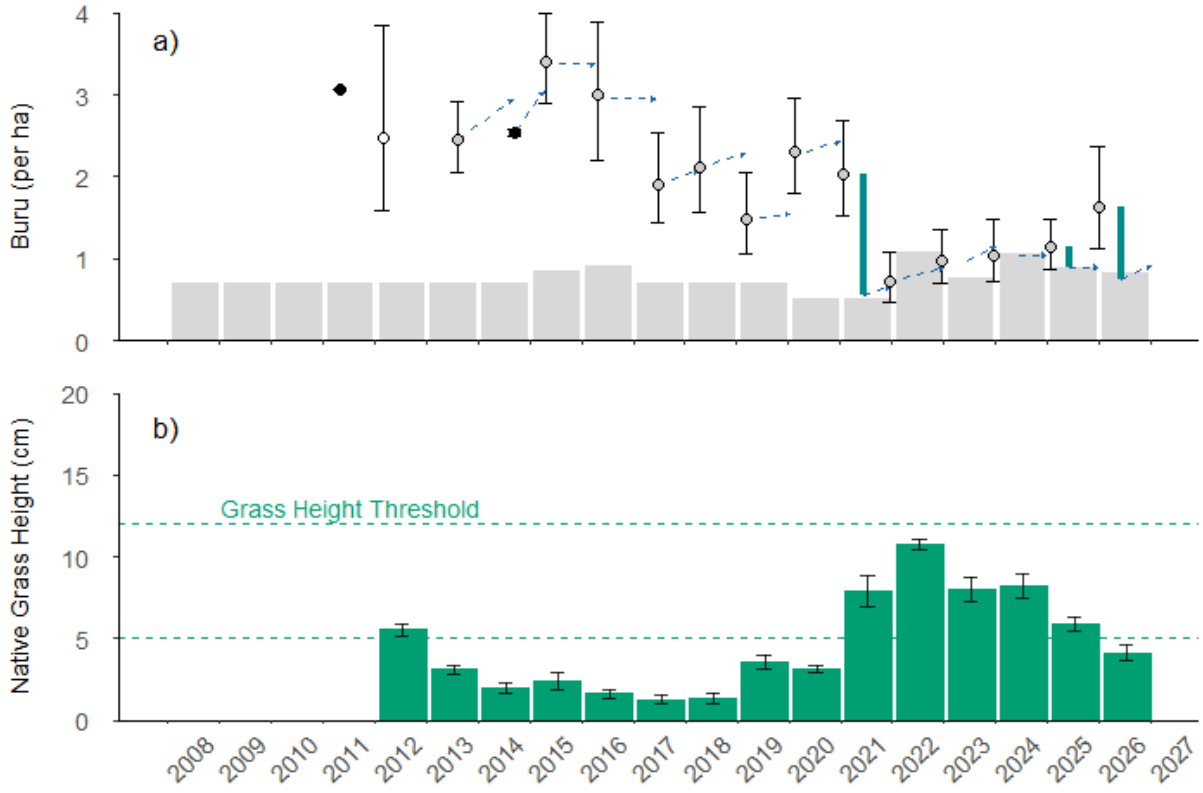

Figure 22. Changes in Buru density and average native grass heights for Farrer Ridge BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals where the walked line transect count (grey circles) and driven line transect (white circle) methods were used. Sweep counts (black circles) are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The vertical line shown for 2026 is the recommended cull density. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

Figure 23. Map of Farrer Ridge BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru and wallabies across the landscape. *Four observations of Red-necked Wallabies and two observations of Swamp Wallabies were recorded during the surveys. The number of Wallaby sightings recorded is too few to allow calculation of total population size for this species.*

Figure 24. Map of Farrer Ridge BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Googong West BMU

Background

Googong West BMU comprises the western part of the Googong Nature Reserve, an ACT managed area of Commonwealth land within New South Wales. It consists largely of open woodland and woodland communities, all of which is managed for conservation and as an important water catchment area for the ACT. Immigration and emigration at this site have the potential to be very high, given the BMU is adjoining rural lease on all sides which provides continuous Buru habitat. However, studies involving fitting Buru with tracking collars at this site in the past (ACT Government, unpublished) have shown individuals historically exhibit strong site fidelity and avoid moving onto rural properties.

The management of Buru at Googong is undertaken in accordance with the ACT Kangaroo Management Plan (2010) as sites in NSW are outside of the legislative scope of the more recent *Eastern Grey Kangaroo: Controlled Native Species Management Plan* (2017). As such, whilst the approach taken is consistent with Buru management for conservation within nature reserves in the ACT, it is not formally considered a component of the ACT's conservation culling program.

Site specific considerations

Googong West BMU contains significant areas of Yellow Box - Red Gum Grassy Woodland as well as several rare or threatened plant and animal species including the Pink-tailed Worm-lizard, Hooded Robin, Brown Treecreeper, Southern Whiteface, White-Winged Triller, Diamond Firetail, Perunga Grasshopper, Button Wrinklewort and Hoary Sunray. As part of the environmental offsetting process for the development for the Googong township, areas adjoining Googong Nature Reserve have undergone environmental restoration programs, including the addition of surface rock to extend and connect habitat for the Pink-tailed Worm-lizard. Within the reserve, active management programs are ongoing to control the density and impacts of rabbits, hares, deer, pigs and invasive plants. The main weeds treated this year include St John's Wort, Serrated Tussock, Blackberry and African Lovegrass. Restoration of erosion gullies and addition of coarse woody debris has previously been undertaken to prevent unauthorised visitor access and provide habitat enhancement within this BMU. In addition, maintenance of management trails and walking tracks has recently been undertaken to repair damage and localise visitor impacts.

Buru management for conservation has been undertaken within the Googong BMU since 2017. As might be expected based on the positioning of the site within the broader landscape, high levels of immigration are likely responsible for annual rates of increase equivalent to a *r* of 0.55 at this site in previous years. Despite this challenge, average native grass height across the BMU has remained within threshold for several years prior to 2026. Population growth was lower over the two years prior to 2025 with a sharp increase in growth last year (Figure 25). The Buru density remains over target in 2026 because the target density decreased due to average native grass heights falling below threshold this year.

Buru management recommendations

The results of the 2026 Buru count at Googong West BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 25. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 26 and 27, showing a majority of polygons below grass height threshold associated with achieving conservation outcomes but also polygons within threshold. The target Buru density calculated using the herbage mass monitoring results for this year was 0.41 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.56 Buru/ha this year. The current Buru density is above this target density and average native grass heights are below the lower threshold, so a conservation cull of 577 Buru is recommended at Googong BMU in 2026 with medium priority (Table 3). Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to protect key areas from Buru grazing if required. The use of fertility control is not being considered for Googong BMU at this time.

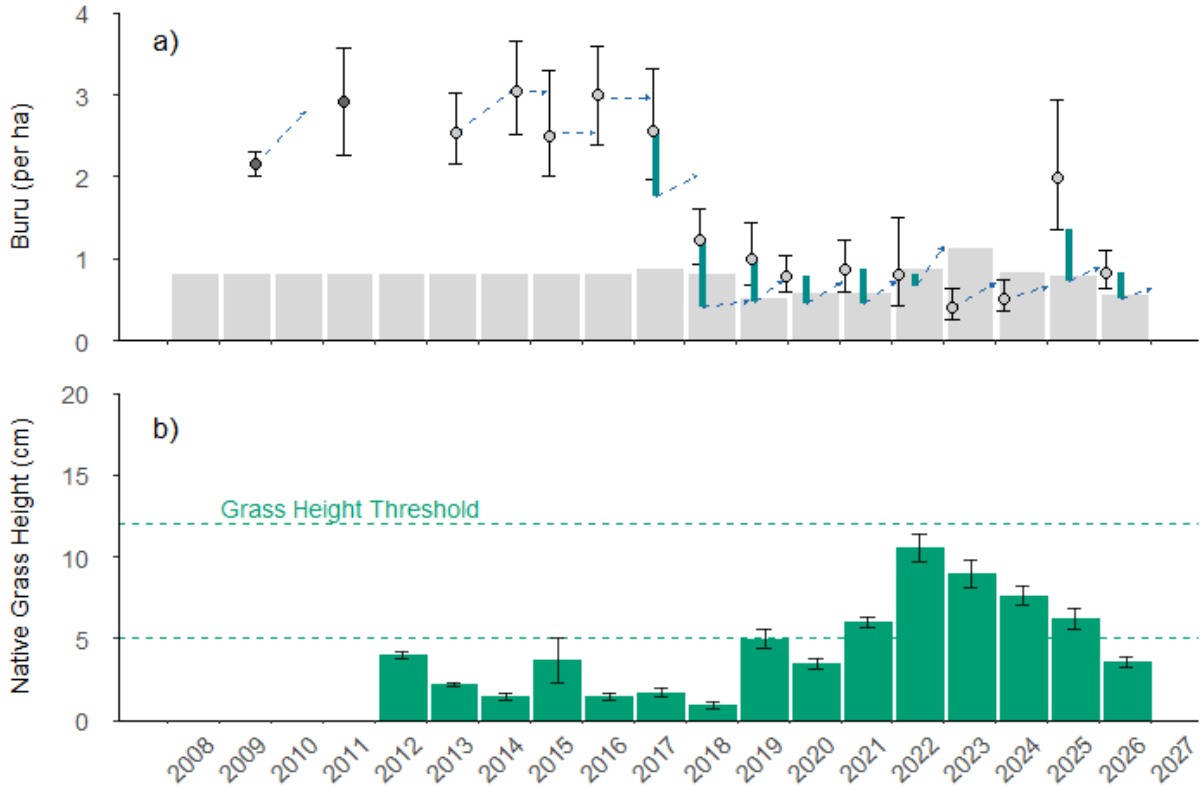

Figure 25. Changes in Buru density and average native grass height for Googong West BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals where the pellet count (dark grey circles) or walked line transect count (light grey circles) methods were used. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The vertical line shown for 2026 is the recommended cull density. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

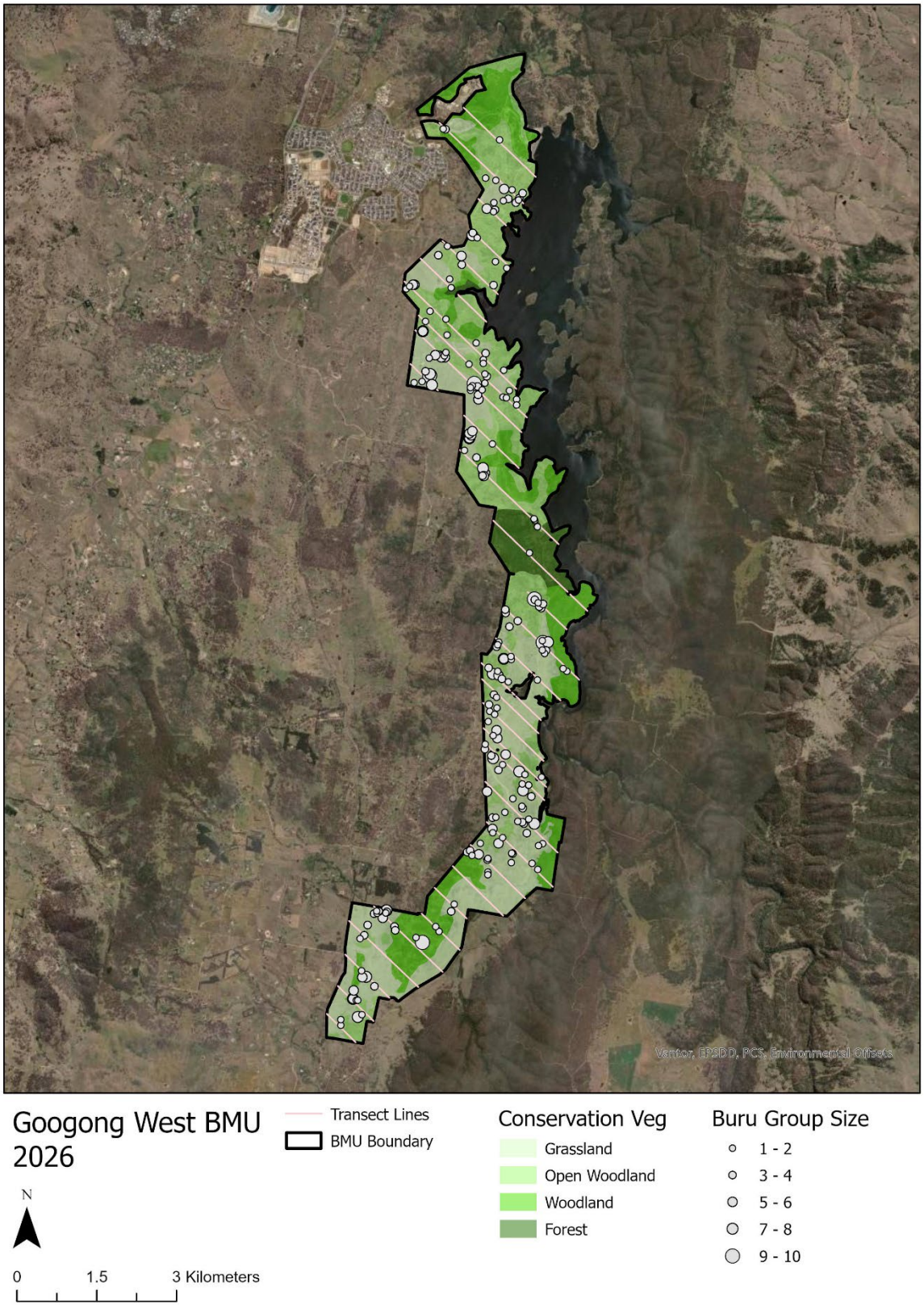

Figure 26. Map of Googong West BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru and wallabies across the landscape*. Fifteen observations of Red-necked Wallabies and four observations of a Swamp Wallaby were recorded during the surveys. The number of Baray (wallaby) sightings is too few to allow calculation of total population size for these species.*

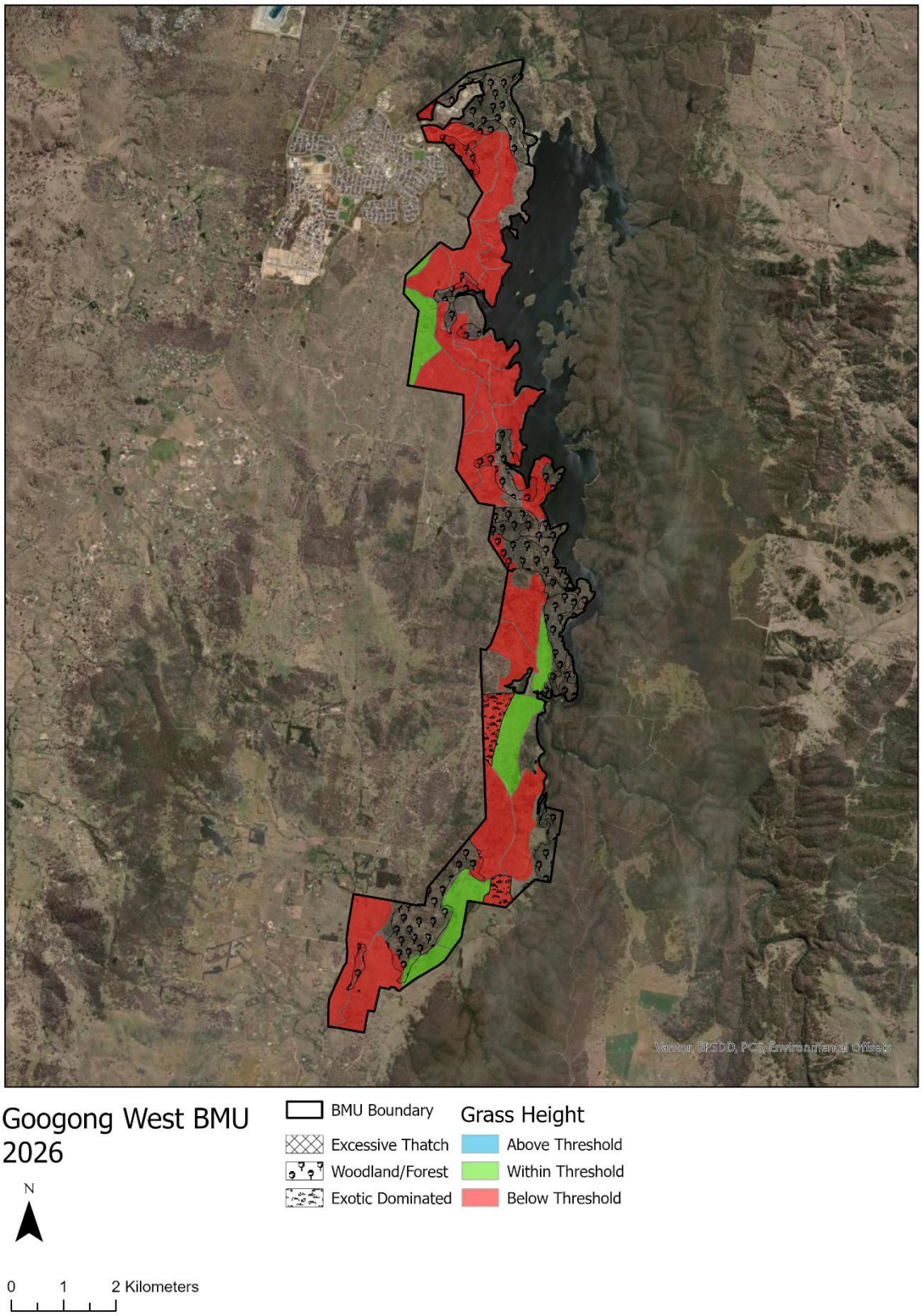

Figure 27. Map of Googong West BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Goorooyarroo BMU

Background

Goorooyarroo BMU is situated in the north-eastern area of the ACT and is comprised predominantly of open woodland, with smaller areas of grassland towards the suburb of Throsby. It contains areas of Goorooyarroo Nature Reserve and the Throsby East, Throsby North and Kenny Broadacre Environmental Offsets areas. The BMU has been fully enclosed by a predator (and Buru) proof fence since early 2019 and hence there is no immigration, and natural mortality is likely to be reduced, resulting in observed population growth rates in the vicinity of the maximum rate of increase for Buru ($r = 0.55$) in some years.

Site specific considerations

Goorooyarroo BMU contains critically endangered Yellow Box - Red Gum Grassy Woodland as well as populations of the Golden Sun Moth, Hoary Sunray, Superb Parrot and Striped Legless Lizard. It is also a research site for the ongoing Mulligans Flat – Goorooyarroo Woodland Experiment, which includes the use of experimental Buru grazing exclosures which aim to maintain Buru densities at approximately 10% of those set from the remainder of the Sanctuary. Rabbits, foxes, cats and hares have now been eradicated from this site and Eastern Bettongs, Bush-stone Curlews and Eastern Quolls have been reintroduced. Slashing, strategic livestock grazing and plantings will continue to be employed within the Sanctuary in 2026 to ensure variable grassy layer habitat structure is maintained, to reduce the incidence of exotic annual grasses, and to promote improved floristic diversity in the ground layer vegetation. In April 2026, 500 Drooping She-oaks were planted on Sammy's Hill to suppress weeds and provide food and habitat for the critically endangered Glossy Black-Cockatoo. Management of various invasive plants such as St John's Wort, Serrated Tussock, Woody Weeds, Patterson's Curse, Scotch Thistle and Spear Thistle is ongoing.

Buru density has been managed within the Goorooyarroo BMU since 2010. High population growth rates observed before the predator proof fence was installed were likely due to high immigration from adjoining habitat in NSW. High annual rates of increase observed since the completion of the fence are most likely due to the loss of predation and mortality pressure in this enclosed environment. Based on this, the maximum growth rate allowance has been applied to cull calculations at this site in previous years. However, population growth in the last four years has been closer to that expected in an unfenced population so the standard growth rate allowance has

been applied this year. Following the successful eradication of foxes, Swamp and Red-necked Wallaby numbers were expected to increase within this BMU in future, therefore both species are recorded during the Buru surveys. The current wallaby populations within Goorooyarroo are estimated to be 159 (123 – 207 95% CI) Red Necked Wallabies and 11 (4 - 32 95% CI) Swamp Wallabies, although the precision of the Swamp Wallaby estimate is poor due to low observations during the surveys. Anecdotal sightings indicate there are also approximately eight Common Wallaroos within Goorooyarroo. Monitoring of wallabies and wallaroos will continue and their contribution to total grazing pressure will be incorporated into management recommendations. A trial of GonaCon contraceptive vaccine in Red-Necked Wallabies species commenced in 2025.

Buru management recommendations

The results of the 2026 count at Goorooyarroo BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 28. The distribution of surveyed Buru and Baray (Ngunnawal name for wallabies) across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 29 and 30, showing polygons below, within or above threshold grass heights across the landscape. Based on the recent population estimate and the current vegetation condition, a small conservation cull of 79 Buru is recommended as a high priority for Goorooyarroo BMU in 2026 (Table 3). The use of fertility control is not being considered for Buru in Goorooyarroo BMU at this time, but it has been identified as a potential site for inclusion in the program in future.

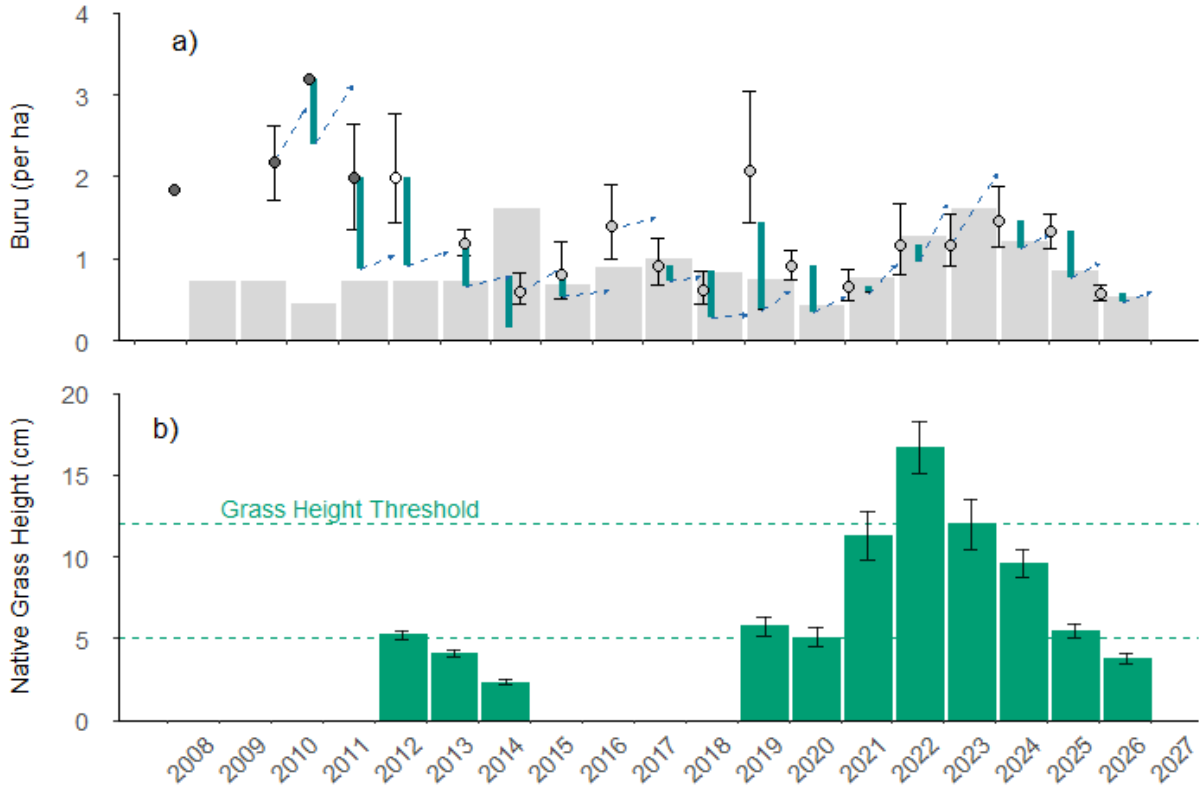

Figure 28. Changes in Buru density and average native grass height for Goorooyarroo BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals where the pellet count (dark grey circles), walked line transect count (light grey circles) or driven line transect count (white circle) methods were used. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The vertical line shown for 2026 is the recommended cull density. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean for herbage mass polygons outside of the Buru exclosures. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

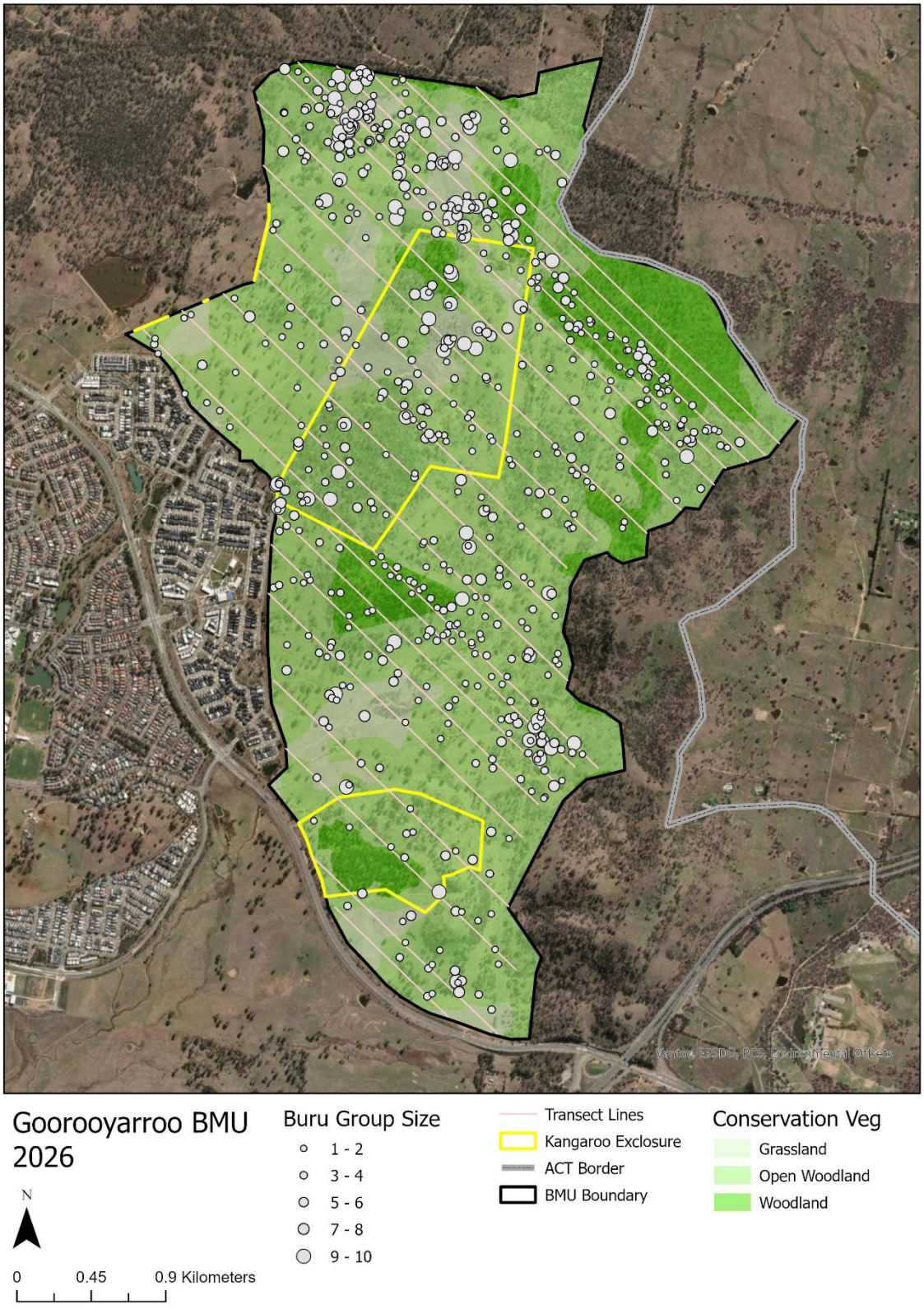

Figure 29. Map of Goorooyarroo BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru (Eastern Grey Kangaroo) and Baray (wallabies) across the landscape.

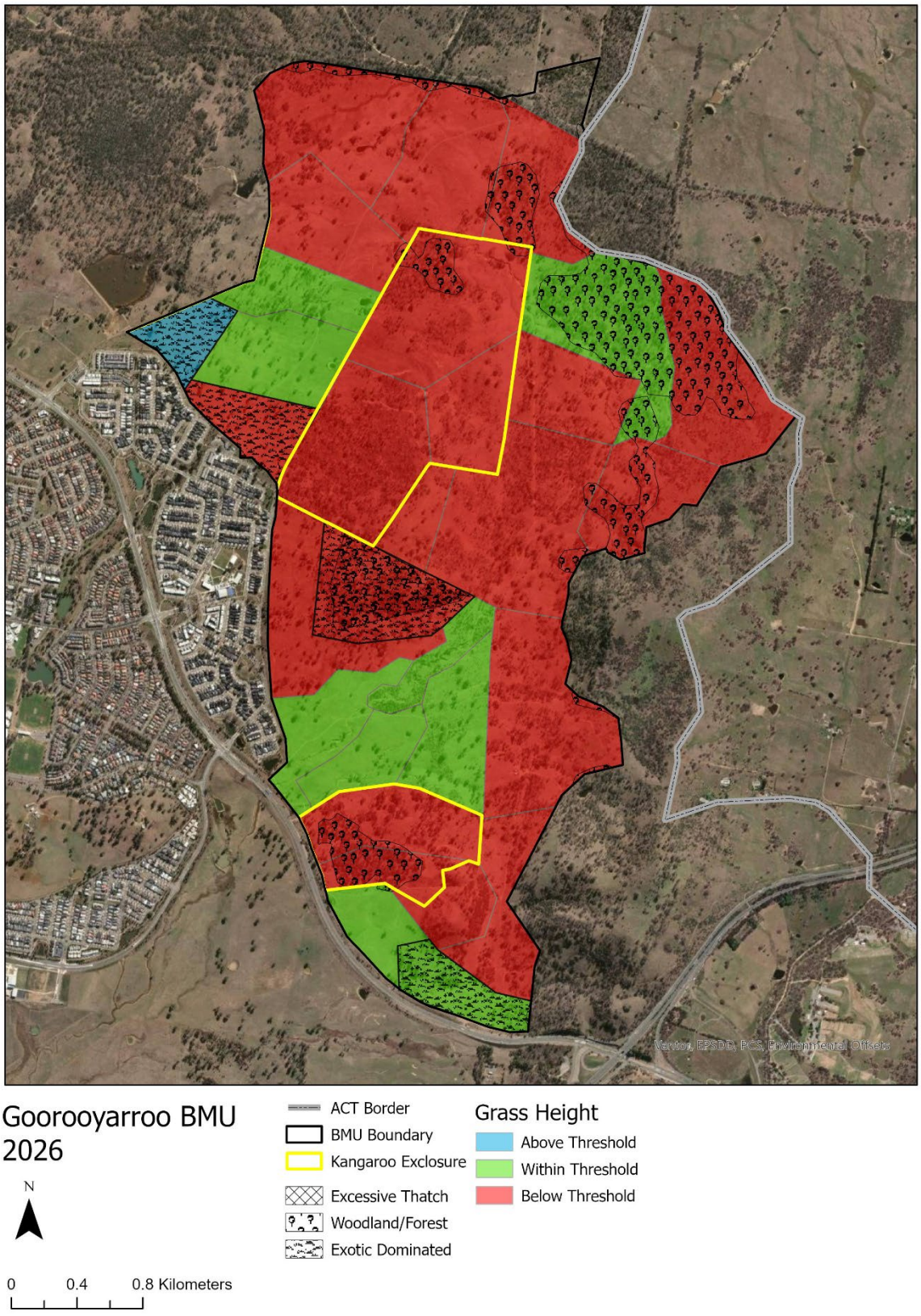

Figure 30. Map of Goorooyarroo BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Gungaderra BMU

Background

Gungaderra BMU is located in the Gungahlin Valley and is bounded by Gungahlin Drive in the east, the Barton Highway in the south, the suburb of Crace in the west and the suburb of Palmerston to the north. The BMU includes Gungaderra Grasslands Nature Reserve, as well as an area of rural lease, land used for commercial purposes (radio station), and the woodland of Gungahlin Hill. Immigration and emigration are considered likely to be low, although there is evidence (in the form of a Buru-vehicle collision hot-spot) of Buru occasionally crossing to or from Mulanggari BMU on the opposite side of Gungahlin Drive.

Site specific considerations

Gungaderra BMU contains large areas of Natural Temperate Grassland as well as Yellow Box - Red Gum Grassy Woodland. It is key habitat for threatened species such as the Striped Legless Lizard, Golden Sun Moth and Perunga Grasshopper. It also contains Key's Matchstick Grasshopper, several rare and threatened plant species and provides habitat for woodland birds. Gungaderra BMU includes areas identified as asset protection zones, in which herbage mass is kept below set fuel standards (often through livestock grazing) to manage the risk of wildfire to life and property. Ongoing management of invasive plants will continue throughout 2026, with treatment so far this financial year focussing on St John's Wort and Serrated Tussock. Ecological burns will continue to be applied in key areas in future to ensure variable grassy layer habitat structure is maintained, to reduce the incidence of exotic annual grasses, and to promote improved floristic diversity in the ground layer vegetation.

Buru have been managed within Gungaderra BMU since 2015, when a large initial cull was undertaken to reduce population density to a level considered to be consistent with maintaining conservation values at the site. Relatively small amounts of active Buru management have been required since, apart from in particularly hot and dry years such as those observed in 2019 and 2020 where a decline in the condition of the grassy layer was observed (Figure 31).

Buru management recommendations

The results of the 2026 count at Gungaderra BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 31. The vegetation structure used for calculating Buru management recommendations is shown in Figures

32 and 33, showing polygons which have either within, below or above threshold grass heights. As was the case in 2025, the Buru density has again increased above the level deemed appropriate for achieving conservation outcomes. Based on the current adjusted target Buru density and the condition of the grassy layer which shows average native grass height just under the lower threshold, a conservation cull of 204 Buru is recommended as a medium priority for the Gungaderra BMU in 2026 (Table 3). The use of fertility control is not being considered for Gungaderra BMU at this time, but it has been identified as a potential site for inclusion in the program in future.

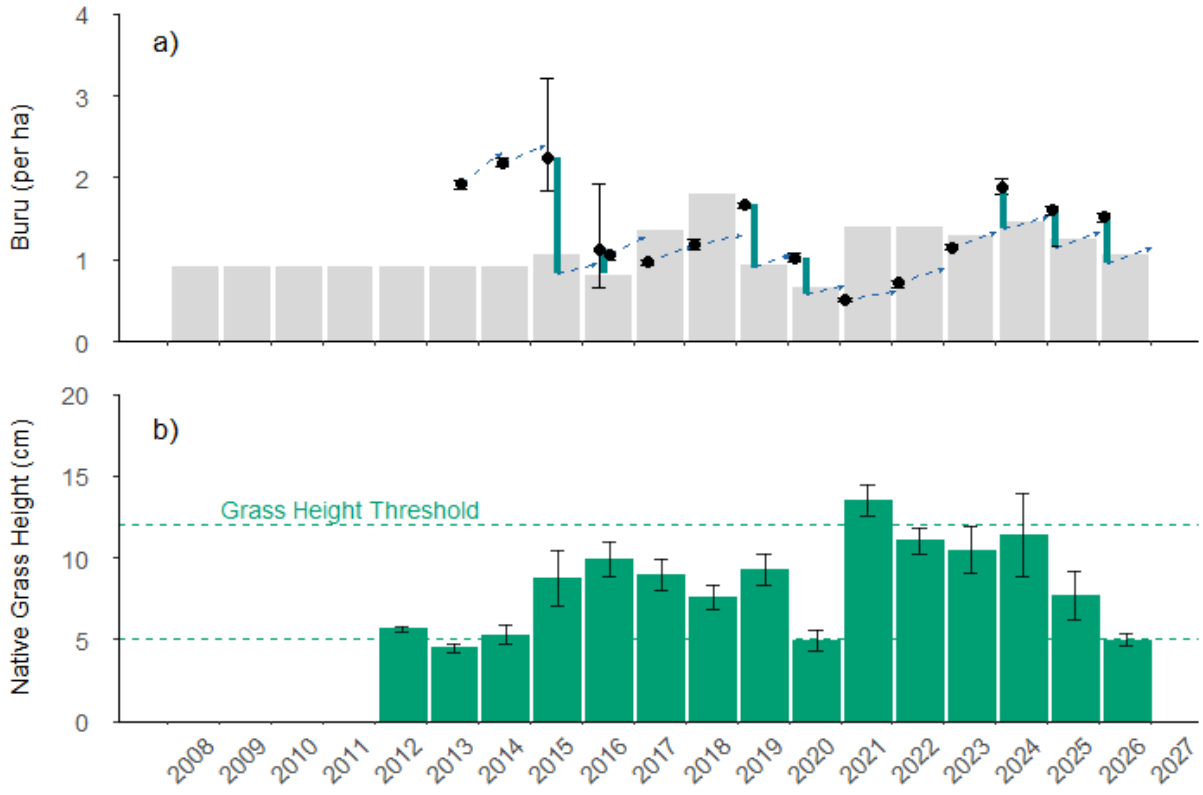

Figure 31. Changes in Buru density and average native grass height for Gungaderra BMU.

a) Changes in Buru density. *Buru density from sweep counts are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The vertical line shown for 2026 is the recommended cull density. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

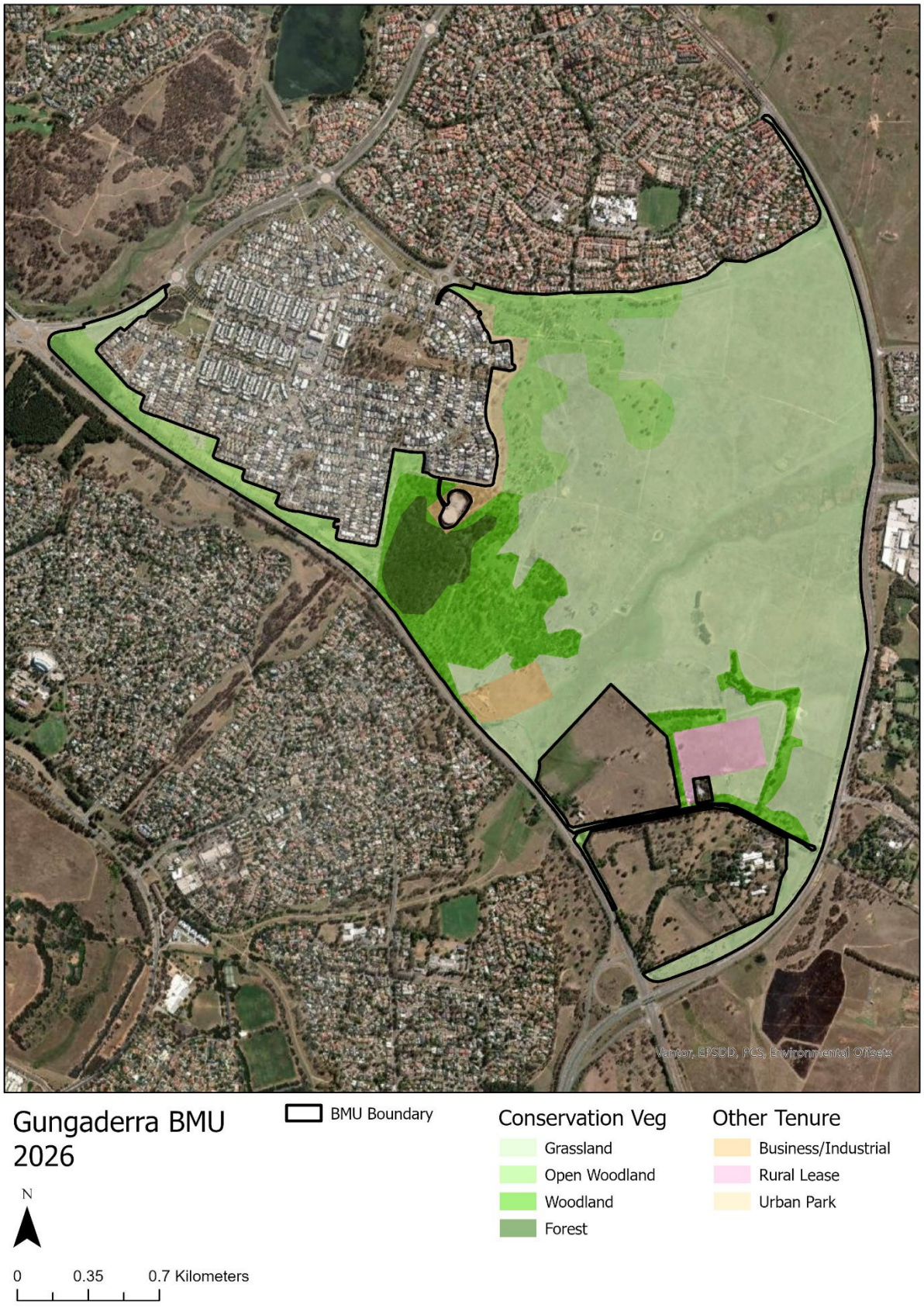

Figure 32. Map of Gungaderra BMU showing canopy strata and land tenure.

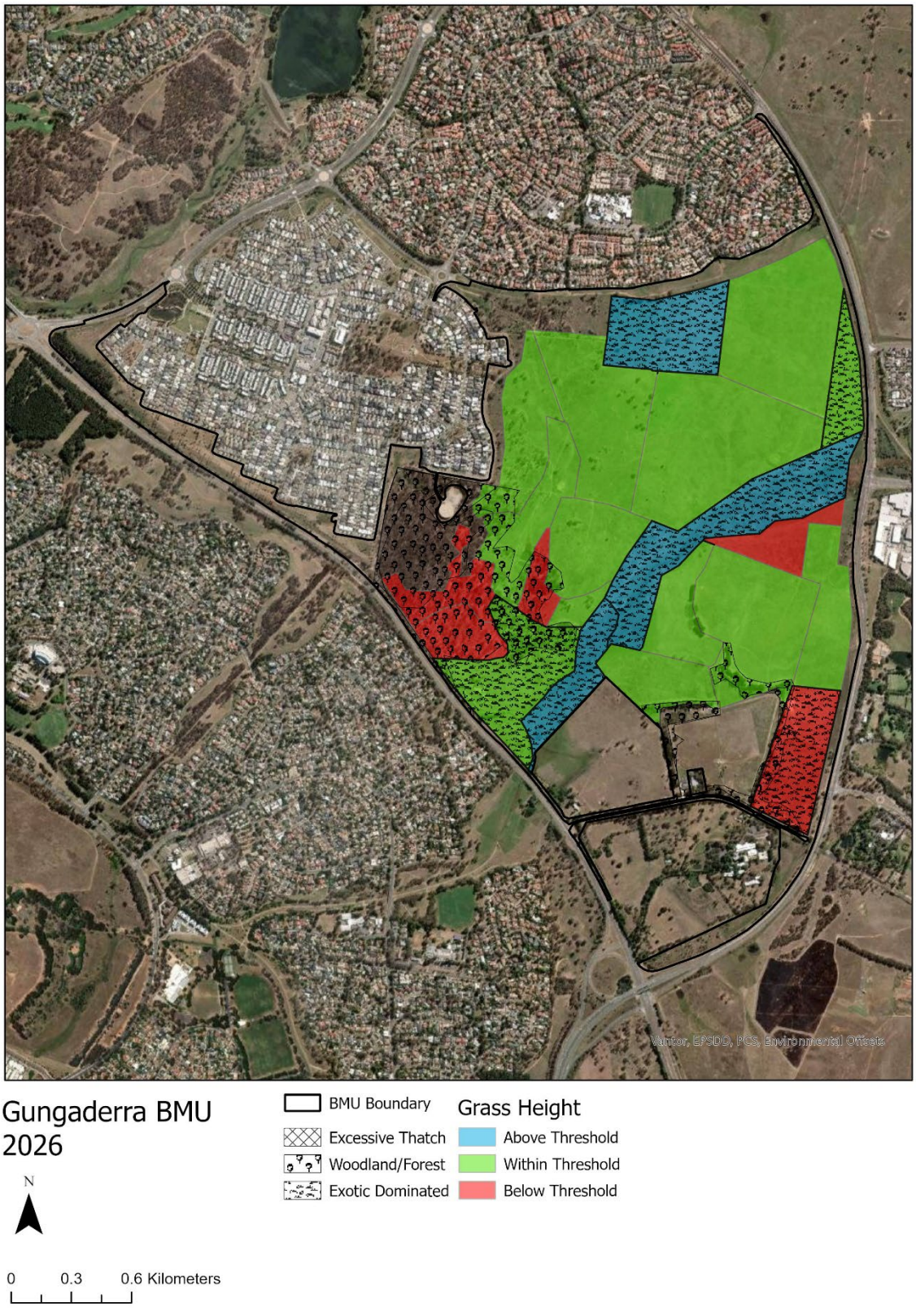

Figure 33. Map of Gungaderra BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Kama Extended BMU

Background

The Kama Extended BMU is found in the west of the ACT between William Hovell Drive and Drake Brockman Drive to the north and the Molonglo River to the south. It is bounded to the east by the new suburb of Whitlam and Stockdill Drive in the west. The area is comprised of the Kama section of the Molonglo River Reserve, flanked by land currently grazed by livestock under the management of the Suburban Land Agency and rural leases. It is comprised of a mix of grassland and open woodland vegetation. The boundary of this BMU was modified in 2021 to encompass additional rural leases to the east out to Stockdill Drive and again in 2025 due to the suburb of Whitlam expanding into its Eastern boundary.

Site specific considerations

The Kama Extended BMU contains critically endangered Yellow Box – Red Gum Grassy Woodland and Natural Temperate Grassland and is an important site for the protection of declining woodland birds. Habitat restoration involving the addition of surface rocks, reintroduction of threatened reptile species and reseeding of scraped landscapes has been undertaken within conservation areas. Further addition of rocks and course woody debris is planned for this year, as well as plantings, an additional 1.5 ha scrape and reseed and gully erosion control works. Ecological burns have also been undertaken in recent years within the Kama conservation area to reduce exotic annual grasses, and to promote native grass cover and native floristic diversity. In 2026, a Ngunnawal led burn may be undertaken within Kama as part of the “Re-emergence of First Nations burning in contemporary grassy woodlands” ARC Linkage Project. Invasive plant control is ongoing at the site, with Blackberry, African Lovegrass, Sweet Briar, Serrated Tussock, St John's Wort the main species subject to control so far this year. Deer and pig monitoring and control forms part of the management of total grazing pressure within this BMU. Strategic livestock grazing and slashing may be considered later in the year to reduce exotic weeds and manage biomass in key areas.

Buru have been managed at this site since 2009 to protect the largely *Themeda* (kangaroo grass) dominated grassy layer within the Kama conservation area. Since 2012, the population density within Kama Extended BMU has largely remained within sustainable numbers, likely due to active Buru management on neighbouring properties. As such, monitoring and management by ACT Government has been intermittent in response to a functionally intact grassy layer (Figure 34). The

Buru population estimate for Kama Extended BMU was lower than expected this year, this may be due to animals moving to nearby BMUs (see The Pinnacle BMU).

Buru management recommendations

The results of the 2026 counts for the Kama Extended BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 34. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 35 and 36, showing that polygons are below or within threshold grass heights across surveyed areas of this site. Buru management recommendations are calculated for the Kama Nature Reserve component of the conservation land within Kama Extended BMU only. The target Buru density for Kama Nature Reserve calculated from the herbage mass monitoring results was 0.32 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.66 Buru/ha this year. Based on the recent Buru population estimate and the adjusted target density and proposed management in neighbouring lands, no conservation cull is recommended for Kama Extended BMU in 2026 (Table 3), despite the culling calculator recommending a cull of 19 Buru. Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to protect key areas from Buru grazing if required. The use of fertility control is not being considered for Kama Extended BMU at this time.

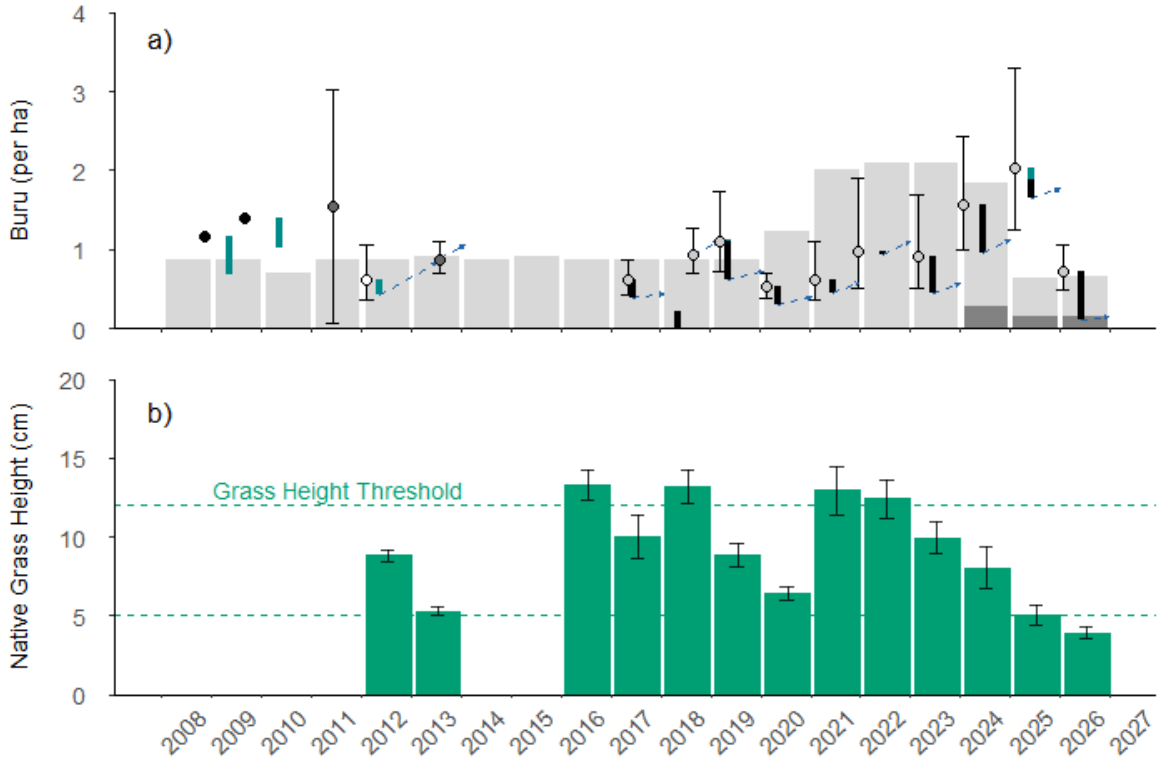

Figure 34. Changes in Buru density and average native grass height for Kama Extended BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals where the pellet count (dark grey circles), walked line transect count (light grey circles) or driven line transect count (white circle) methods were used. Total counts (either direct or sweep counts, black circles) are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program and black bars representing management outside of ACT Parks and Conservation Service managed lands. The vertical line shown for 2026 is the recommended cull density for the conservation land and an approximate cull density expected for the rural land within the BMU. The density of damage mitigation culls within the BMU in years where no density estimation was completed are shown along the x axis. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time in the conservation land within the BMU, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

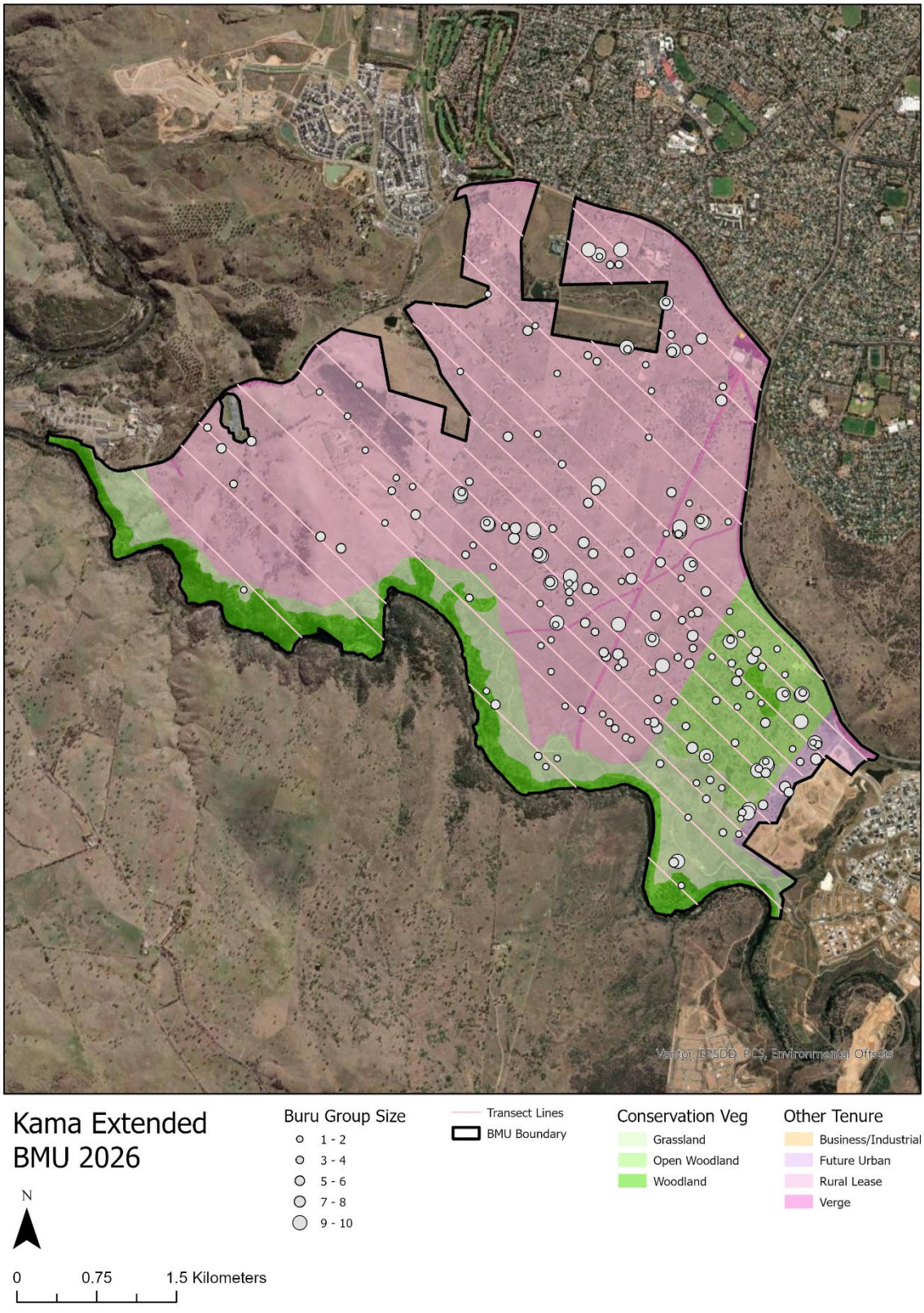

Figure 35. Map of Kama Extended BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru across the landscape.

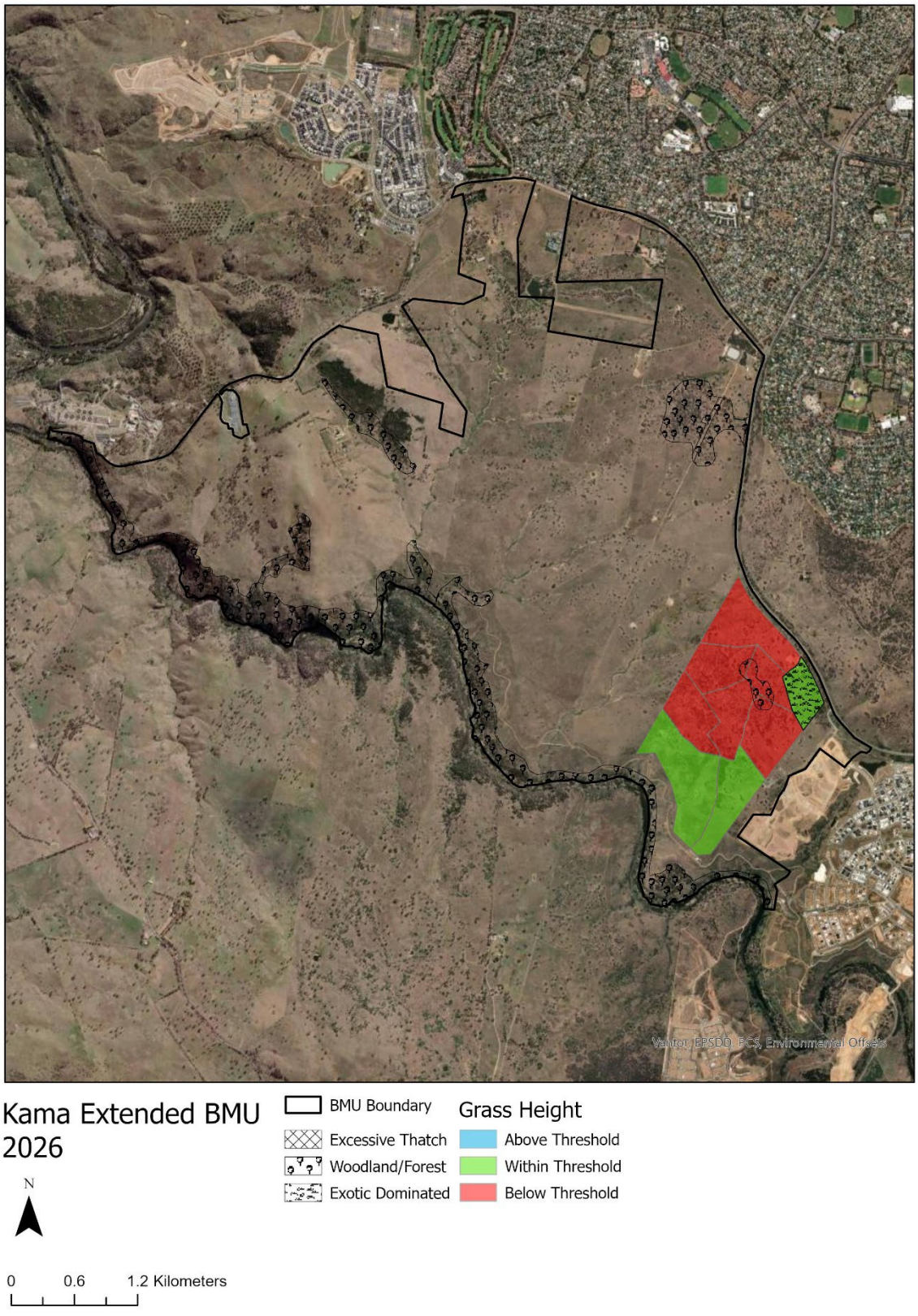

Figure 36. Map of Kama Extended BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Mt Taylor BMU

Background

The Mt Taylor BMU is situated in the south of Canberra, and forms part of the corridor of nature reserves between Woden and Tuggeranong including Cooleman Ridge, Farrer Ridge and Wanniassa Hills. It is comprised predominantly of woodland vegetation spanning the Mt Taylor Nature Reserve and the adjoining horse paddock. It is bordered to the west by a Buru-proof fence running along the Tuggeranong Parkway, to the south by Sulwood Drive and the suburb of Kambah, to the northeast by the suburbs of Chifley, Pearce and Torrens and to the east by Athllon Drive. The particularly high level of Buru-vehicle collisions which occur along both Sulwood and Athllon Drives is likely a major mortality source for individuals within this population and indicates some level of animal movement between adjacent BMUs.

Site specific considerations

The Mt Taylor Nature Reserve contains areas of Box-Gum Grassy Woodland as well as populations of Small Purple Pea and Pink-tailed Worm-lizard. The Friends of Mount Taylor ParkCare group regularly undertake management of weeds and erosion on this site, in partnership with the ACT Parks and Conservation Service. Weed control to date this financial year has focussed on Sweet Briar, St John's Wort, Serrated Tussock and Hawthorn. A small prescribed burn was undertaken in 2026 to reduce fire fuel loads.

Buru management has not been undertaken at this site to date, despite significant evidence of depleted ground layer structure leading to erosion issues and the incursion of weeds across the area. The consistently high Buru density observed at this site from intermittent surveys since 2010 indicate that this population is likely limited by food, in addition to road-based mortality (Figure 39).

Buru management recommendations

The results of the 2026 counts for the Mt Taylor BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 39. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 40 and 41, showing that all three polygons are now below threshold with regards to grass heights. As such, a conservation cull of 438 Buru is considered necessary in the Mt Taylor BMU in 2026 (Table 3) subject to operational

feasibility, to enable restoration of the grassy layer. This cull number uses the minimum target density for the site of 0.48 Buru/ha. The use of fertility control is not being considered for Mt Taylor BMU at this time.

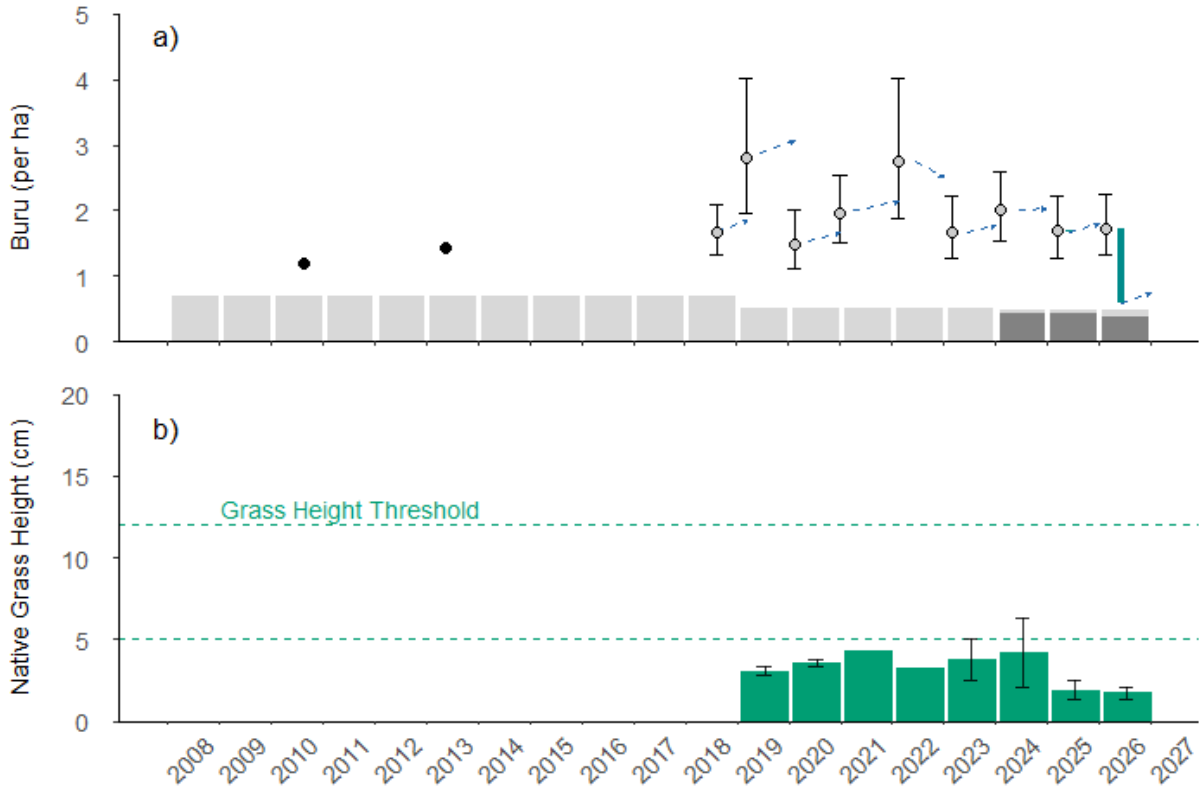

Figure 39. Changes in Buru density and average native grass height for Mt Taylor BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect method (grey circles). Earlier direct counts by the Mt Taylor ParkCare group are also shown (black circles). Buru culls are indicated by vertical lines, noting no conservation culls have been undertaken to date at this site. The line shown for 2026 is the recommended cull density only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time in the conservation land within the BMU, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bars in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

Figure 40. Map of Mt Taylor BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru and wallabies across the landscape*. Eleven observations of Red-necked wallabies were recorded during the survey which is too few to allow calculation of a total population size for these species.*

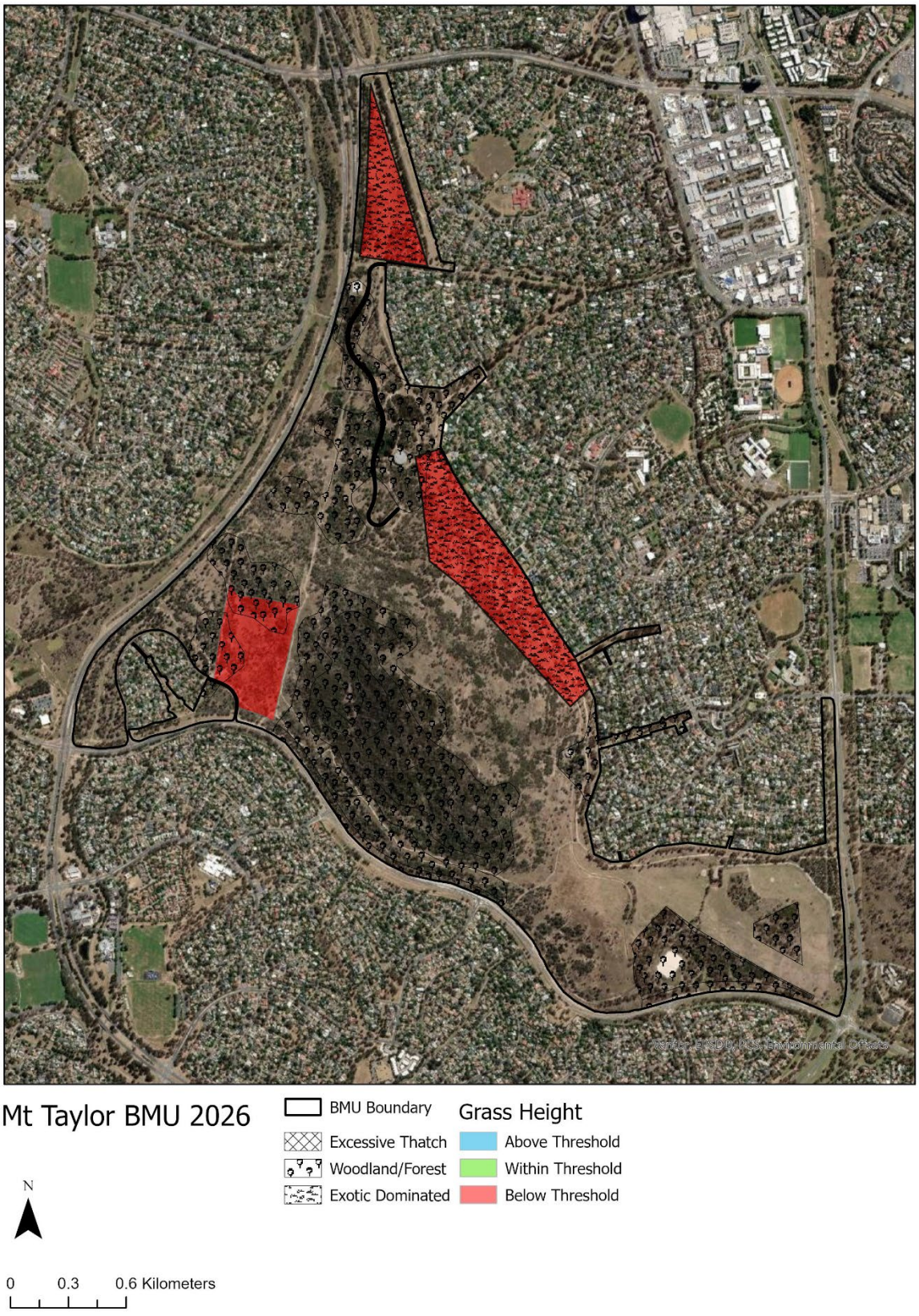

Figure 41. Map of Mt Taylor BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas*. Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Mulanggari BMU

Background

Mulanggari BMU is a grassy woodland ecosystem located in the north of the Gungahlin Valley. It is bounded by Gungahlin Drive to the south-west, Gungahlin Town Centre to the north and the suburb of Franklin to the south-east. It is comprised almost entirely of nature reserve. Immigration and emigration are considered likely to be low, although there is evidence (in the form of a Buru-vehicle collision hot-spot) of Buru occasionally crossing to or from Gungaderra BMU over Gungahlin Drive.

Site specific considerations

Mulanggari BMU contains areas of Natural Temperate Grassland as well a Yellow Box – Red Gum Grassy Woodland. It is key habitat for threatened species such as the Striped Legless Lizard, Golden Sun Moth, Perunga Grasshopper and Hoary Sunray. The Pink-tailed Worm Lizard was introduced to this site in 2022. Addition of surface rock to provide habitat for reptiles occurred in early 2025. The site also includes areas identified as asset protection zones, in which herbage mass is kept below the fuel standards (often through livestock grazing) to manage the risk of wildfire to life and property. Additional strategic livestock grazing may be used in future in other areas of the BMU to reduce weed species and to help maintain grass heights within the desired threshold. Ecological burns have been undertaken in this BMU in previous years. Management of invasive plants will continue at this site throughout 2026, with control of Serrated Tussock and African Lovegrass already carried out across the site this year.

Buru management has been undertaken at Mulanggari since 2014, although monitoring at this site was initiated in 2008 (Figure 42). Culling has been limited and intermittent in response to varying condition of the grassy layer at this site. In some years it has been constrained by operational factors related to topography and the proximity of the site to the urban edge.

In 2024, the use of fertility control commenced at Mulanggari BMU to help maintain the population at or near the target density and reduce the need for future culling. Sixty-one female Buru were treated with GonaCon in 2024 and 2025. Based on observations undertaken in September 2025, approximately 45% of the adult females in the population had been treated with GonaCon and 36% of all females (treated and untreated) were observed with a pouch young. Eleven treated females are known to have died, and others have not been seen at the site for some time.

Approximately 41 GonaCon treated females are estimated to still be present at the site. Additional GonaCon treatments are required to increase the percentage of treated individuals to the level recommended by population modelling (approximately 62%) this year. Increasing the percentage of treated females above what is recommended by modelling (up to approximately 70%) will be considered for this site to account for continued attrition of treated individuals, immigration of fertile females, treatment failures and declining vaccine efficacy over time. Some growth in the population is expected over the next 12 months with the current level of fertility control, so the normal population growth formula has been applied this year.

Buru management recommendations

The results of the 2026 counts at Mulanggari BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 42. The vegetation structure used for calculating Buru management recommendations is shown in Figures 43 and 44, showing all polygons with grass heights within, above or below threshold levels. Based on the Buru population estimate and the adjusted target density this year, a small conservation cull of 53 Buru is recommended as a medium priority for Mulanggari BMU in 2026 to maintain grass heights within the desired threshold for maximising biodiversity (Table 3). Continuation of the use of GonaCon contraceptive vaccine is recommended as a high priority for this site in 2026 to aid in reducing the need for culling to maintain a sustainable population of Buru in the long term. Approximately 14 to 21 additional female Buru are recommended to be treated with GonaCon this year (Table 3), however, this number may be modified based on field observations.

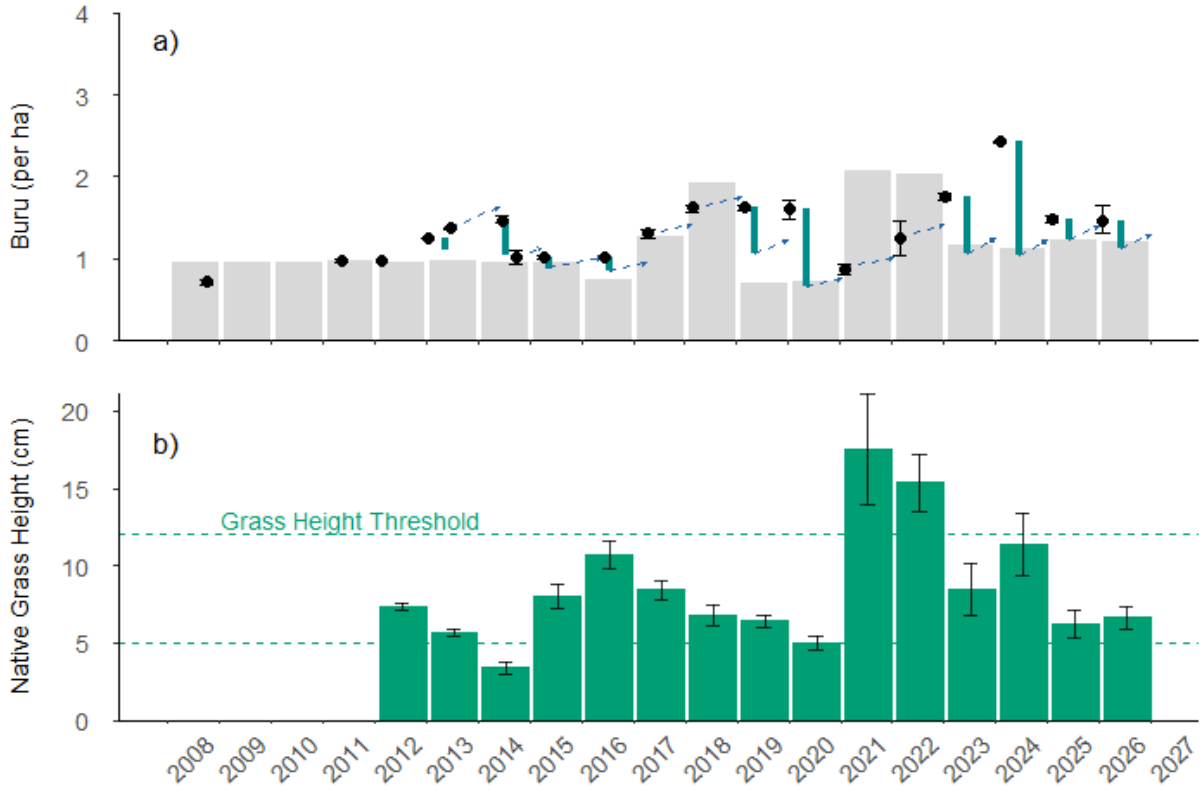

Figure 42. Changes in Buru density and average native grass heights for Mulanggari BMU.

a) Changes in Buru density. *Buru density based on direct counts are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The bar for 2026 is the recommended density to remove. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

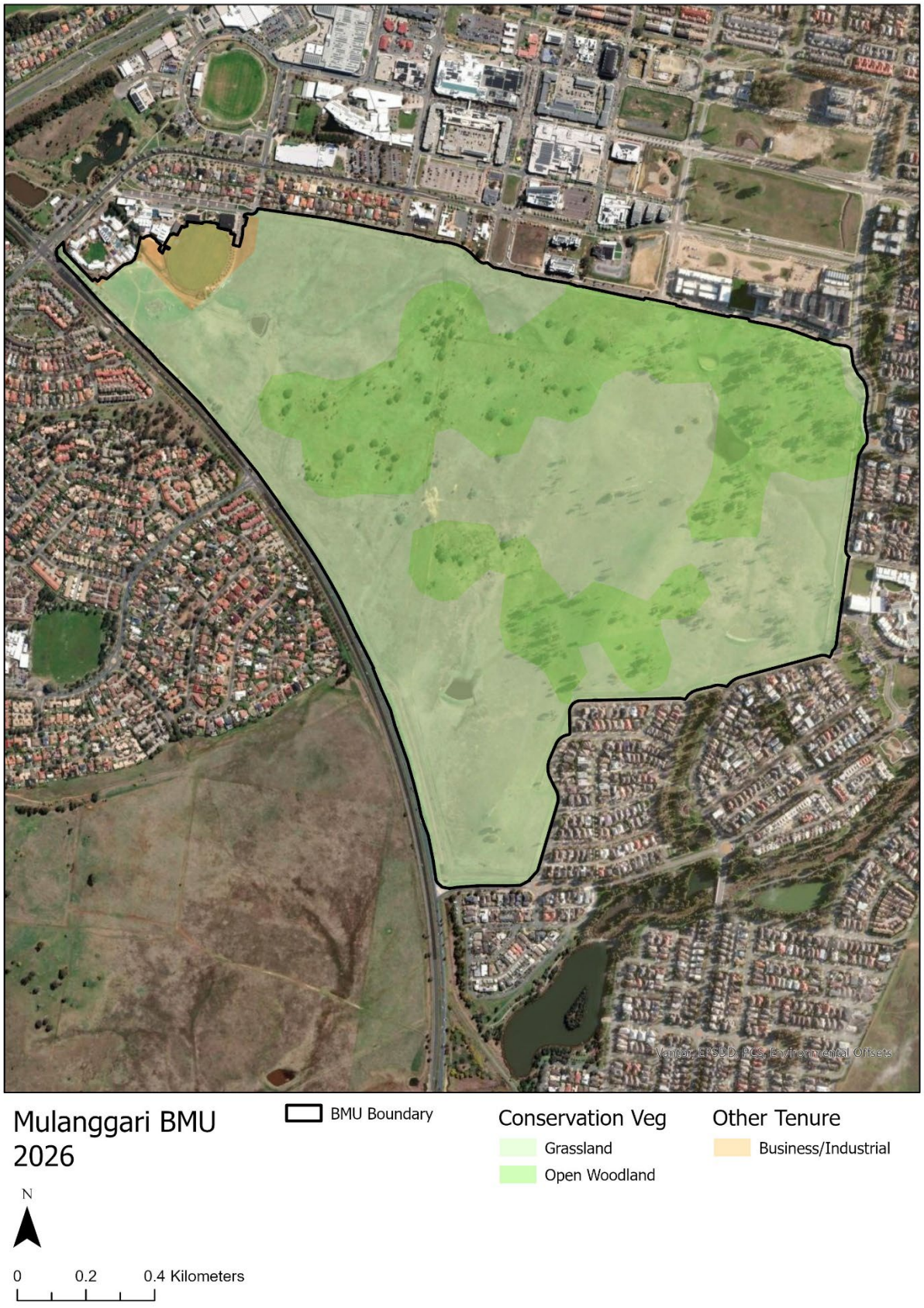

Figure 43. Map of Mulanggari BMU, showing canopy strata and land tenure.

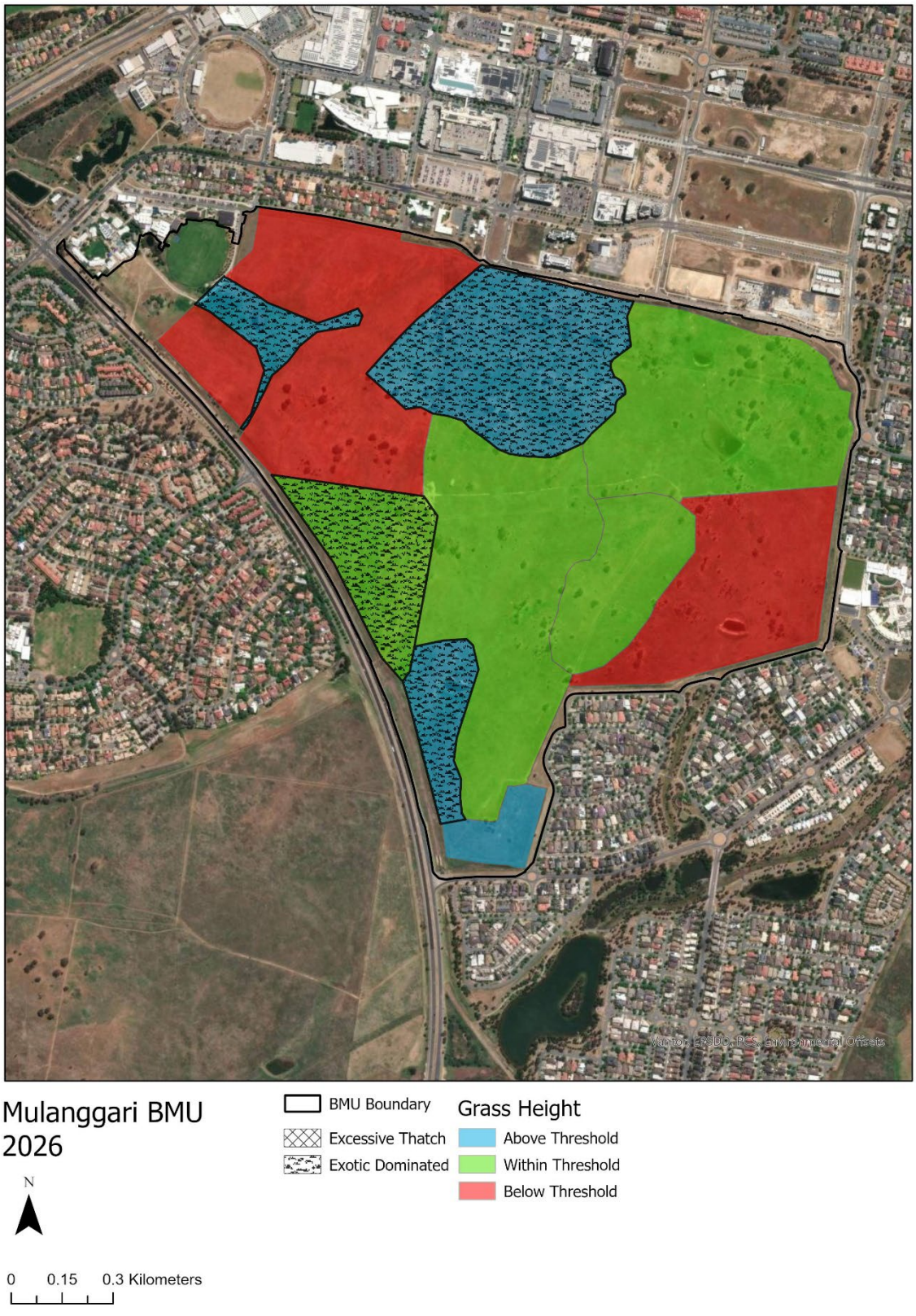

Figure 44. Map of Mulanggari BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Mulligans Flat BMU

Background

Mulligans Flat BMU is situated in north-east ACT and is comprised predominantly of woodland vegetation. The BMU is synonymous with the Mulligans Flat Woodland Sanctuary, in that it is surrounded on all sides by a predator (and Buru) proof fence. As such, the population is not subject to fluctuations through immigration or emigration, and survival and recruitment have generally been high.

Site specific considerations

Mulligans Flat BMU is comprised largely of critically endangered Yellow Box – Red Gum Grassy Woodland and is home to populations of Hoary Sunray and Austral Toadflax. It also contains reintroduced populations of Eastern Bettongs, Eastern Quolls, Bush Stone-curlews, New Holland Mice and Eastern Chestnut Mice that are part of the Mulligans Flat – Goorooyarroo Woodland Experiment. Buru exclosures are included as part of this experiment which aim to maintain Buru densities at approximately 10% of those set from the remainder of the Sanctuary.

Rabbits and hares, along with introduced predator species, have been eradicated from the sanctuary. An invasive plant management program and slashing of management trails will continue in 2026. Management of Serrated Tussock has been the priority within the Sanctuary so far, this financial year.

The absence of predators in the sanctuary has enabled an increase in the abundance of Swamp and Red Necked Wallabies, adding significantly to total grazing pressure. A trial of GonaCon contraceptive vaccine has so far demonstrated mixed effectiveness as a tool for managing these wallaby species, with ongoing management and monitoring required. The current wallaby populations (surveyed at the same time as Buru) within Mulligans Flat are estimated to be 176 (136 - 229 95% CI) Red-necked Wallabies and 116 (88 – 154 95% CI) Swamp Wallabies.

The absence of predators has also contributed to significantly higher population growth rates for Buru equivalent to a maximum rate of increase (*r)* of around 0.55 in some years. This observation indicated that use of contraception in the Buru population may also be a cost-effective means of managing abundance at this site longer term. The use of GonaCon contraceptive in Buru commenced at Mulligans Flat in 2022 and over the last four years 83 females have been treated. Two of these are known to have died. Based on observations in September 2025, 35% of the

females in the population were treated and 44% of all adult females (treated and untreated) in the population were observed with pouch young. Further GonaCon treatments will be undertaken as required in future to maintain the desired percentage of treated females in the population (approximately 70 to 80%).

Buru management recommendations

The results of the 2026 Buru count at Mulligans Flat BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 45. The distribution of surveyed Buru and wallabies across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 46 and 47, showing grass heights in the majority of polygons being below grass height thresholds, and one polygon above threshold. The target Buru density calculated using the herbage mass monitoring results for this year and accounting for the lower density in the exclosures was 0.17 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.28 Buru/ha this year. Based on the current vegetation conditions, the adjusted target density and the recent population estimate, a conservation cull of 375 Buru is recommended as a high priority for Mulligans Flat BMU in 2026 (Table 3). Culling activities should include the three largest Buru exclosures to reduce Buru density in these areas as required for the Mulligans Flat – Goorooyarroo Woodland Experiment. Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to protect key areas from Buru grazing if required. No additional GonaCon treatments are recommended for Mulligans Flat this year because the desired ratio of treated females vs untreated females will be achieved if the recommended cull of is undertaken (avoiding the treated individuals). The population growth rate has been set to zero for this year as there will be few untreated females remaining after the cull.

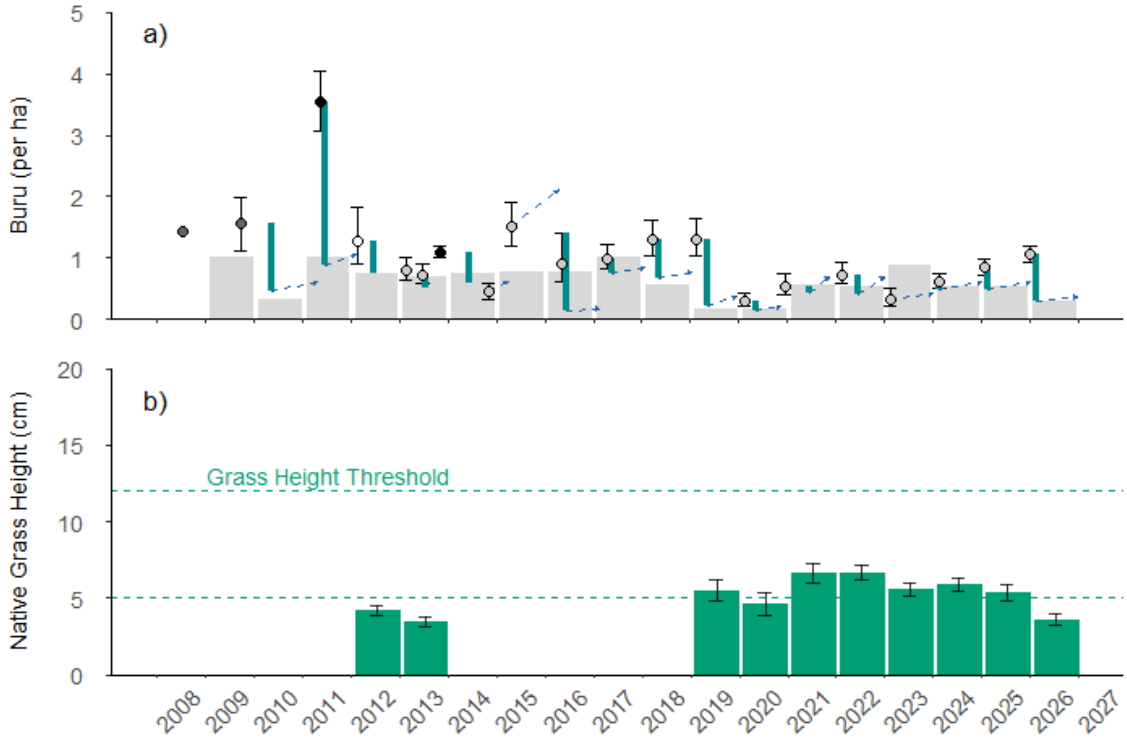

Figure 45. Changes in Buru density and average native grass height for Mulligans Flat BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals where the pellet count (dark grey circle), walked line transect count (light grey circles) or driven line transect count (white circle) methods were used. A sweep count (black circle) is depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The vertical line shown for 2026 is the recommended cull density. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean for herbage mass polygons. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. Previous data showing average grass heights is also shown where available but may not be representative of the whole site. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

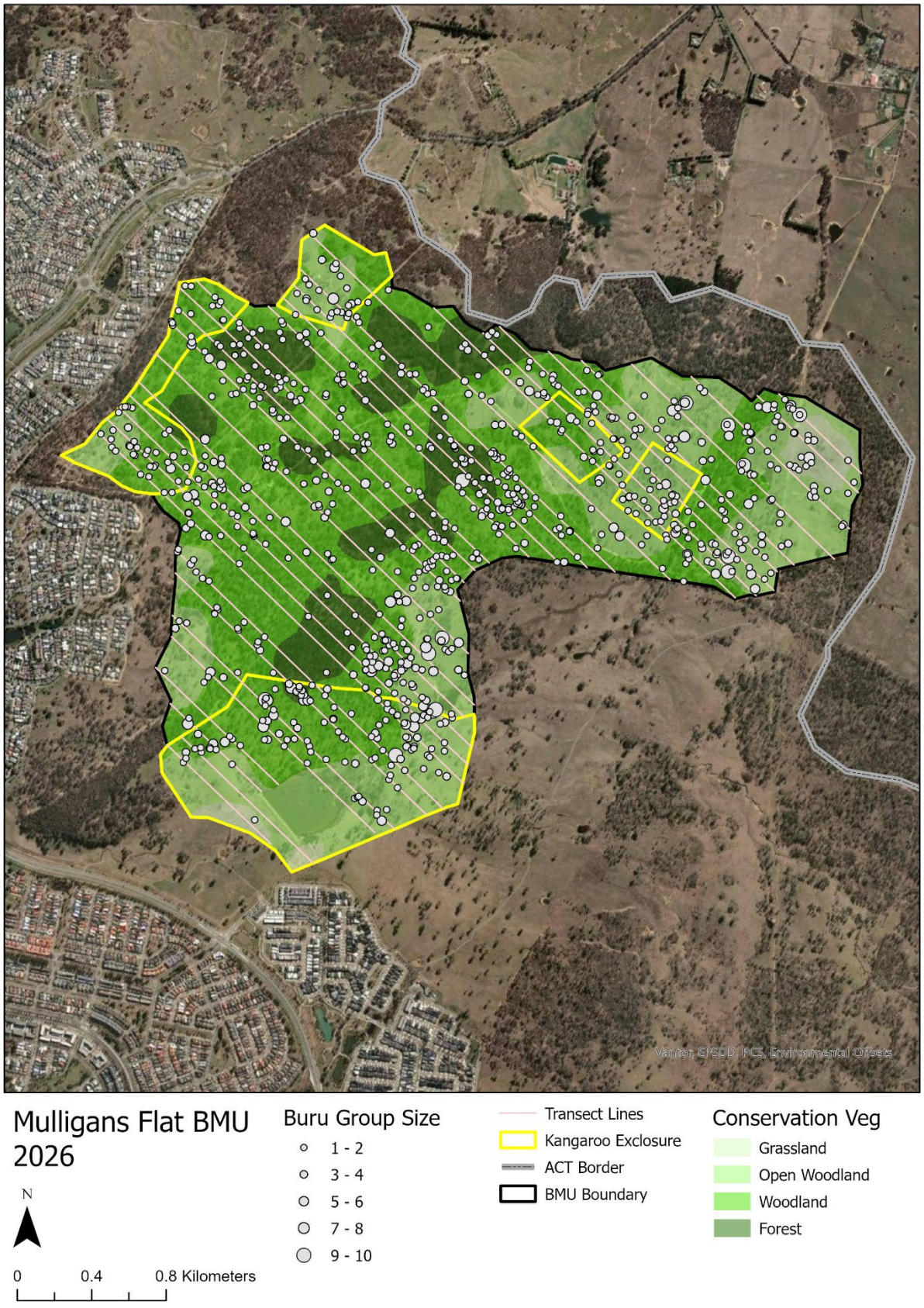

Figure 46. Map of Mulligans Flat BMU, showing canopy strata, land tenure, and position of surveyed Buru (Eastern Grey Kangaroo) and Baray (wallabies) across the landscape.

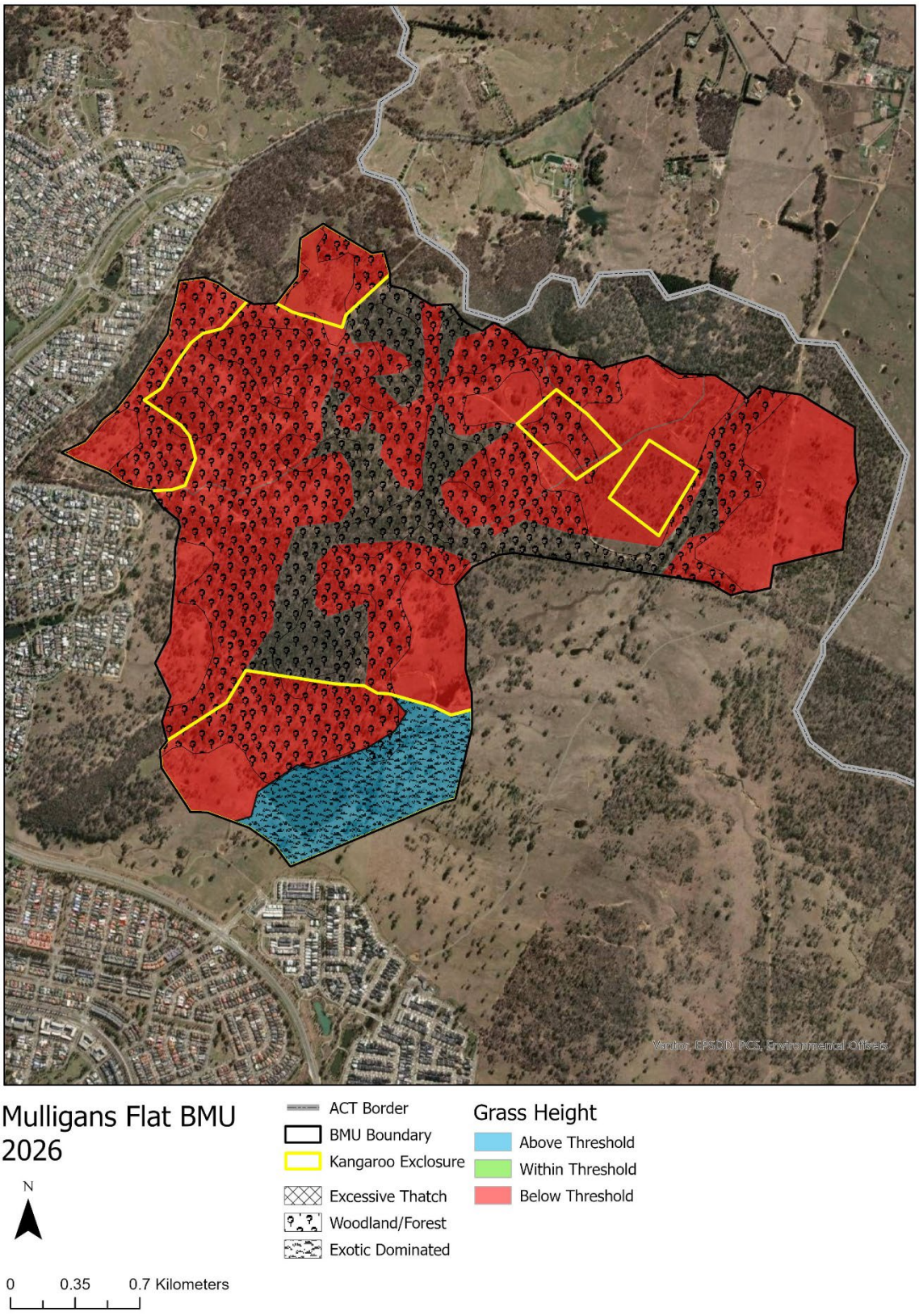

Figure 47. Map of Mulligans Flat BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

Red Hill BMU

Background

The Red Hill BMU is situated in the inner south of Canberra, bordered by the suburbs of Deakin and Forrest to the north, Red Hill to the east, Garran to the south, and Hughes to the west. It is separated from the adjacent Mount Mugga Mugga Reserve (and the rest of the West Jerrabomberra BMU) to the south by Hindmarsh Drive. The BMU is comprised of the Red Hill Nature Reserve and the Federal Golf Club and is made up predominantly of woodland vegetation. The high incidence of Buru-vehicle collisions on Hindmarsh Drive and Kent Street (which separates the Red Hill BMU from the irrigated lawns of the Royal Australian Mint) is likely a major source of mortality for this population and also indicates some movement of animals between Red Hill BMU and adjacent areas of suitable habitat. A development is proposed within Federal Golf Club in the coming years and may change the distribution of Buru within the BMU.

Site specific considerations

The Red Hill BMU contains significant areas of Yellow Box – Red Gum Grassy Woodland as well as populations of the Button Wrinklewort and other rare plants. The Red Hill Regenerators contribute significant time and expertise to the conservation of this woodland ecosystem and have recently undertaken tree and shrub plantings in the southern area of the BMU. Rabbit management is ongoing within Red Hill Nature Reserve, with an extensive program of shooting, warren fumigation and warren ripping currently underway. Management of invasive plants is also ongoing. Control of weeds including herbaceous weeds, St Johns Wort and English Ivy, African Lovegrass and Serrated Tussock has been undertaken so far this year.

Buru management was undertaken at Red Hill BMU for the first time in 2022. Prior to this, Red Hill had consistently high densities of Buru over time, indicating that the population was likely limited by food availability, as well as road-based mortality (Figure 48). Due to the high excess of Buru at this site, and the close proximity of suburbs and other areas frequented by the public (e.g., the Federal Golf Club and the lookout), a staged approach to Buru management was adopted at Red Hill, with the expectation that a reduction in numbers to levels consistent with conservation objectives would need to be undertaken over multiple years. Annual Buru management has been effective in reducing Buru population density at Red Hill Nature Reserve and it is expected that smaller, maintenance culls will now be required to keep the population at a sustainable level subject to changes in vegetation condition. While many Buru are known to move between the golf

course and reserve areas, the density on the golf course is generally higher (Figure 49) and this is accounted for in management recommendations. This year, half of the estimated BMU population has been assigned to the reserve area for the purpose of calculating management recommendations.

The use of GonaCon contraceptive in Buru commenced at Red Hill BMU in 2025 to help maintain the population at or near the target density and reduce the need for future culling. One hundred and thirty-three female Buru were treated with GonaCon in 2025, with the majority of these being within Federal Golf Club. Since then, five of the treated Buru are known to have died and 11 have not been seen in recent surveys. Approximately 117 GonaCon treated females are estimated to still be present at the site. Based on observations in September 2025, approximately 57% of adult females in the population had been treated with GonaCon. Additional GonaCon treatments are required to increase the percentage of treated individuals. This year, based on population modelling the percentage of treated females in the population should be approximately 67%. However, this will be increased to approximately 80% to account for continued attrition of treated individuals, immigration of fertile females, treatment failures, declining vaccine efficacy over time and the higher Buru density on the golf course. Some growth in the population is expected over the next 12 months with the current level of fertility control, so the normal population growth formula has been applied this year.

Buru management recommendations

The results of the 2026 counts for the Red Hill are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 48. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating numbers to cull is shown in Figures 49 and 50, showing polygons to be below threshold in terms of grass heights. The target Buru density based on the herbage mass monitoring has decreased this year, recommending fewer Buru be retained. The target Buru density calculated using the herbage mass monitoring results for this year was 0.33 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.39 Buru/ha this year. Based on the Buru population estimate and the current vegetation conditions, a conservation cull of 190 Buru is recommended within the conservation land at Red Hill BMU in 2026 with medium priority (Table 3). Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to

protect key areas from Buru grazing if required. Continuation of the use of GonaCon contraceptive vaccine is recommended as a high priority for this site in 2026 to aid in reducing the need for culling to maintain a sustainable population of kangaroos in the long term. Approximately 76 additional female kangaroos are recommended to be treated with GonaCon this year (Table 3), with approximately 45 of these to be from within Red Hill Nature Reserve to ensure the GonaCon treated females are spread throughout the BMU. This number may be modified based on field observations.

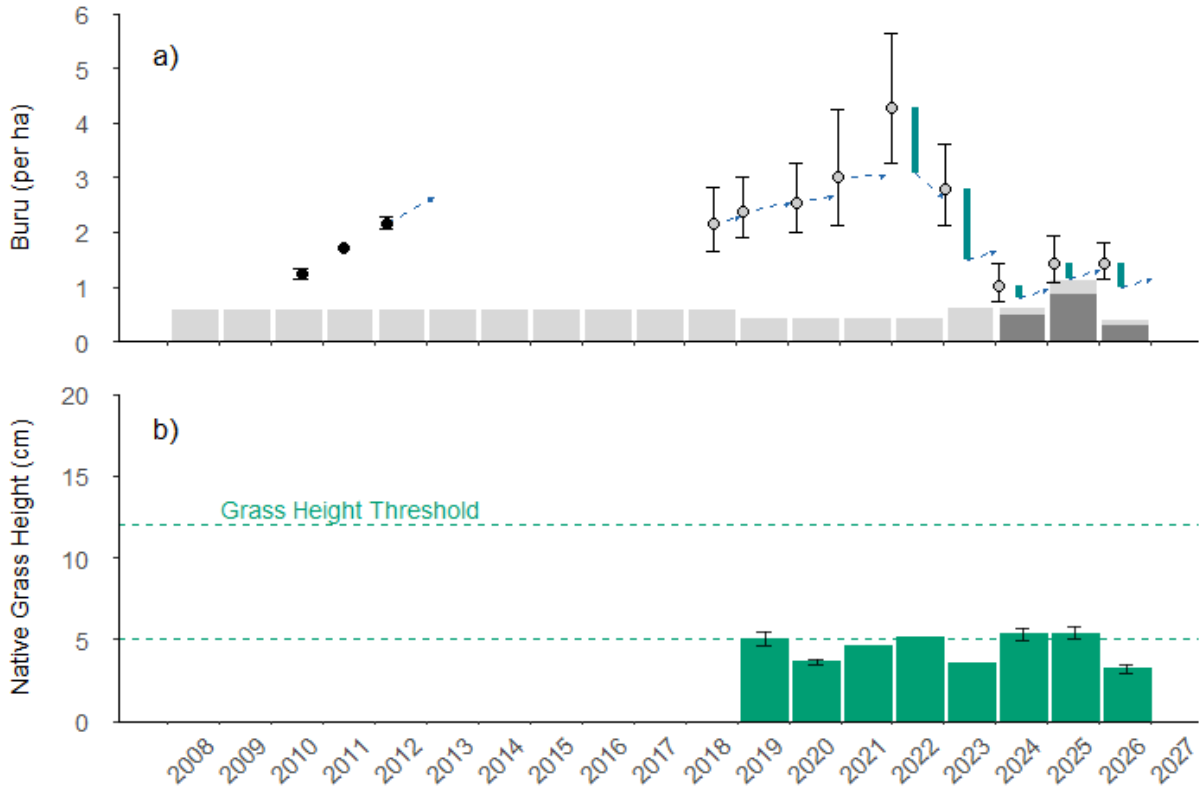

Figure 48. Changes in Buru density (a) and average native grass heights (b) for Red Hill BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect count method (grey circles). Total counts (either direct or sweep counts, black circles) are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines. The line shown for 2026 is the recommended cull density on the conservation estate only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in*

2019. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.

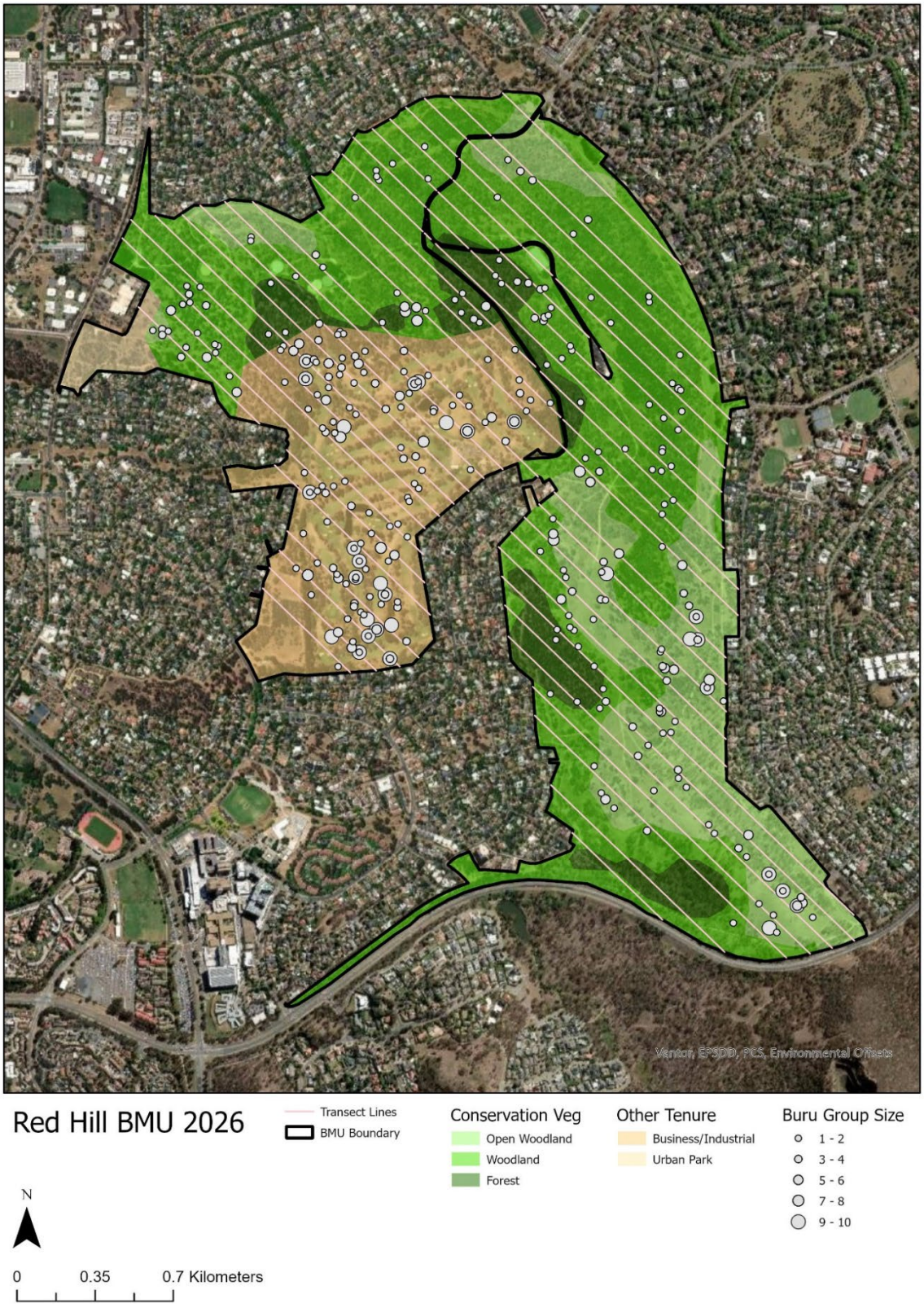

Figure 49. Map of Red Hill BMU, showing canopy strata, land tenure, survey transects and position of surveyed macropods across the landscape. *Five observations of Red-necked Wallabies and eight observations of Swamp Wallabies were recorded during the survey which is too few to allow calculation of total population size.*

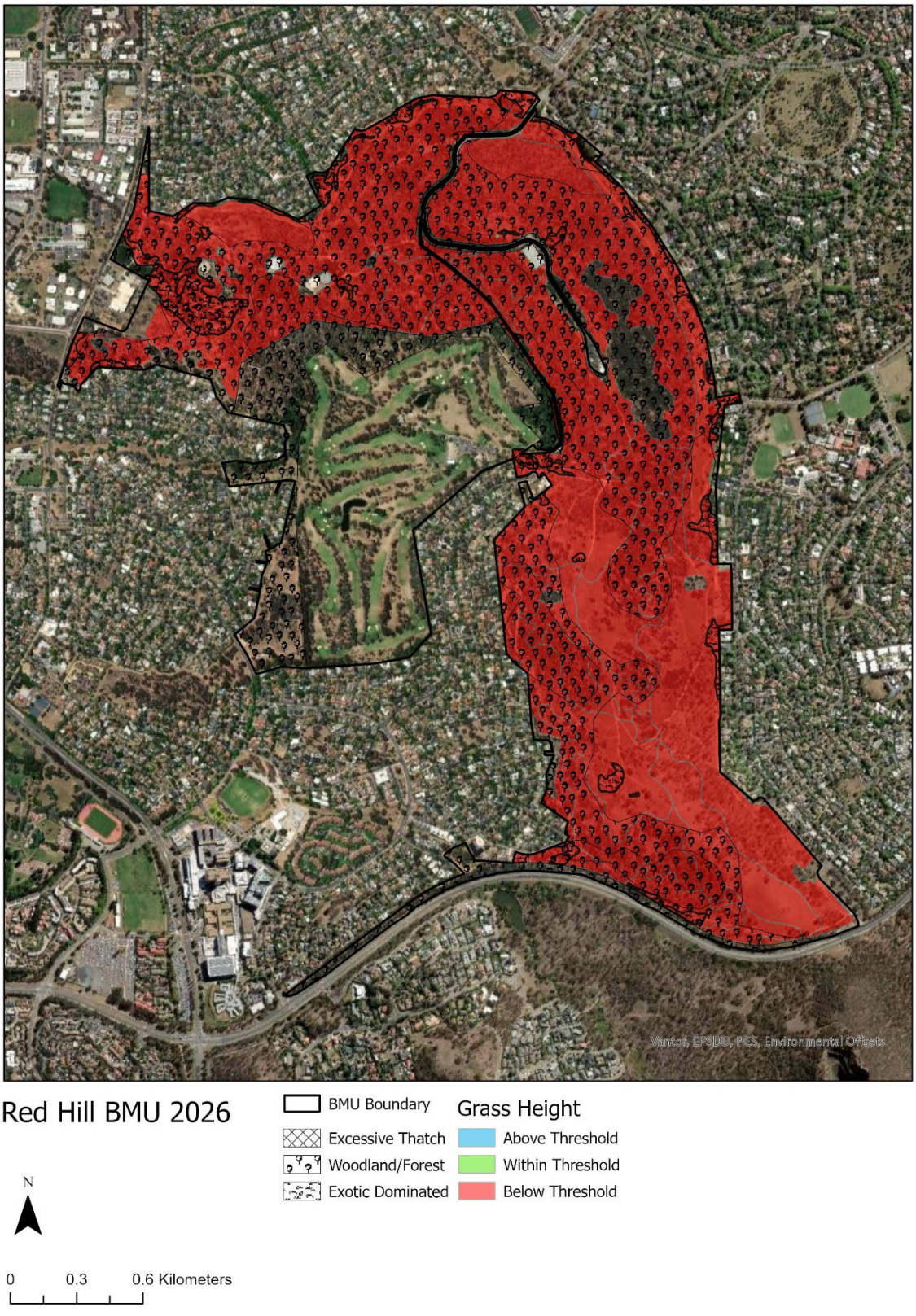

Figure 50. Map of Red Hill BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

The Pinnacle BMU

Background

The Pinnacle BMU is situated in the Belconnen hills network of reserves, bordered by William Hovell Drive to the south and west, Coulter Drive to the east, and Springvale Drive and the suburb of Hawker to the north. The area is predominantly open woodland. The BMU is comprised of The Pinnacle Nature Reserve (including an area of environmental offset), territory land, and rural lease. The conservation area increased by 55 hectares in 2025 through addition of a new environmental offset area. The territory land adjacent to the nature reserve is treated as part of the conservation land for the purposes of Buru management in 2026 to aid in achieving a sustainable Buru density across the whole BMU. Immigration to the area is generally expected to be low due to significant human-built barriers to Buru movement, although occasional passage of animals from the Aranda Painter BMU and the Kama Extended BMU is likely (see discussion about this year below).

Site specific considerations

The Pinnacle BMU contains areas of Yellow Box – Red Gum Grassy Woodland as well as populations of the Pink-tailed Worm-lizard, Perunga Grasshopper, several rare plants and foraging habitat for Superb Parrots. The Friends of The Pinnacle contribute significant time and expertise to the conservation of this woodland ecosystem. Fire fuel management is undertaken within asset protect zones of The Pinnacle BMU to protect life and property in accordance with the annual Bushfire Operational Plan and in 2025 a prescribed burn was undertaken. Ecological burns have also been employed to manage weeds and open up the grassy layer structure when required. Ongoing rabbit and invasive plant management are also undertaken at the site. Various weed species including St John's Wort, African Lovegrass, Patterson's Curse and Saffron Thistle have been managed across the BMU to date this financial year.

Buru management has been undertaken in The Pinnacle BMU since 2012, with conservation culling over a number of years eventually achieving the desired Buru density which has been maintained with little or no annual culling since 2015 (Figure 51). In 2026, the Buru population density has increased dramatically within this BMU, likely resulting from immigration from adjacent BMUs. The Buru population density at the neighbouring Kama Extended BMU was less than predicted this year.

Buru management recommendations

The results of the 2026 counts for The Pinnacle BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 51. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating Buru management recommendations is shown in Figures 52 and 53, showing polygons to be below or within threshold for native grass heights. Based on the recent Buru population estimate and the adjusted target density, a large conservation cull of 843 Buru is recommended with medium priority in The Pinnacle BMU in 2026 (Table 3). The use of fertility control is not being considered for The Pinnacle BMU at this time, but it has been identified as a potential site for inclusion in the program in future.

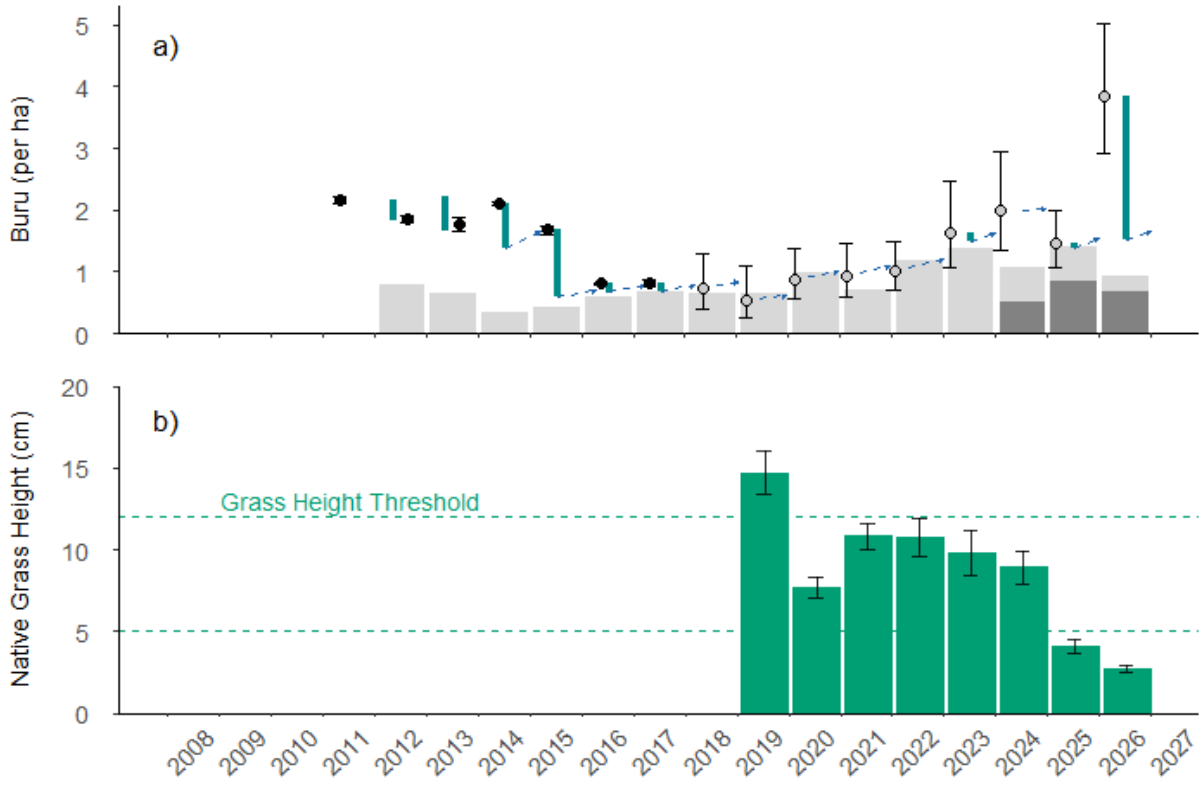

Figure 51. Changes in Buru density and average native grass height for The Pinnacle BMU.

a) Changes in Buru density*. Buru density is shown as the mean ± 95% confidence intervals where the walked line transect count method was used (grey circles). Sweep counts (black circles) are depicted as the mean ± the maximum and minimum number counted across repeat counts in one survey. Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program. The bar for 2026is the recommended density to be removed on the conservation estate only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU applying a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

Figure 52. Map of The Pinnacle BMU, showing canopy strata, land tenure, survey transects and position of surveyed Buru across the landscape. *Four observations of Red-necked Wallabies and one observation of a Swamp Wallaby was recorded during the survey which is too few to allow calculation of total population size.*

Figure 53. Map of The Pinnacle BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

West Jerrabomberra BMU

Background

The West Jerrabomberra BMU is in the south-eastern section of Canberra Nature Park and includes a mix of woodland and grassland habitat. The BMU is comprised of the Callum Brae, West Jerrabomberra, Mount Mugga Mugga and Isaacs Ridge Nature Reserves, as well as multiple rural leases, commercial pine forest, and the quarry. It is bordered by the Monaro Highway to the east, Hindmarsh Drive to the north, Long Gully Lane to the south and the suburbs of O'Malley and Isaacs to the west. The previous attempt to manage this broader area as two separate BMUs divided by Mugga Lane proved ineffective due to significant immigration between sites, and hence they have been effectively managed as one continuous management unit since 2019.

Site specific considerations

The West Jerrabomberra BMU contains significant areas of both critically endangered Natural Temperate Grassland and Yellow Box – Red Gum Grassy Woodlands, as well as populations of the listed Perunga Grasshopper, Pink-tailed Worm Lizard, the endangered Golden Sun Moth, the critically endangered Canberra Grassland Earless Dragon and several rare plants. It also provides habitat for declining woodland bird species, including the Glossy Black-Cockatoo, Brown Treecreeper and Scarlet Robin.

A feral pig control program using baiting was implemented in 2025 and rabbit warren mapping and control is planned for 2026. Invasive plants are being actively managed within component reserves. To date this financial year, weed species such as African Lovegrass, St John's Wort, Blackberry and Serrated Tussock have been managed. In particular, the Jerrabomberra West Nature Reserve has been subject to recent intensive weed management. Small ecological burns took place in 2025 and further restoration activities, such as planting, mulching around trees and adding rocks and logs are planned for 2026. Ngunnawal led burns may be undertaken in this BMU in 2026 as part of the "Re-emergence of First Nations burning in contemporary grassy woodlands" ARC Linkage Project.

The impacts of Buru grazing in the wooded areas of the BMU have been significant for over a decade, however high immigration rates between component reserves have previously confounded efforts to manage Buru impacts at a localised scale (i.e., within Callum Brae Nature Reserve). A collaborative effort to manage Buru in this landscape by component land managers

has been effective in reducing population densities and improving the condition of the grassy layer overall (Figure 54). However, the Buru density was unusually high last year and for operational reasons the full 2025 culling recommendation was not undertaken. The Buru population remains above target in 2026, and average native grass heights have dropped further below the lower threshold value from last year.

Buru management recommendations

The results of the 2026 counts for the West Jerrabomberra BMU are shown in Table 2. Changes in Buru density and ground layer vegetation condition at this site over recent years are shown in Figure 54. The distribution of surveyed Buru across the landscape and the vegetation structure used for calculating numbers to cull is shown in Figures 55 and 56, showing primarily polygons below, within and above the grass height threshold. The target Buru density calculated using the herbage mass monitoring results for this year was 0.44 Buru/ha. However, this is lower than the minimum Buru density set for this site, so the target density has been increased to 0.50 Buru/ha this year. Based on the current Buru density, grassy layer condition and proposed management on neighbouring lands, a conservation cull of 411 Buru is recommended with high priority within West Jerrabomberra BMU in 2026 (Table 3) to encourage recovery of the grassy habitat layer. Given the target density was increased this year, thus increasing the number of Buru retained in the area, the ground layer vegetation should be monitored closely and other grazing management methods such as temporary fencing used to protect key areas from Buru grazing if required. Management efforts within this BMU should be undertaken as part of a collaborative approach with neighbouring landholders, with the aim of reducing Buru density in the broader landscape while ensuring sustainable levels of Buru grazing within the conservation estate. The use of fertility control is not being considered for West Jerrabomberra BMU at this time.

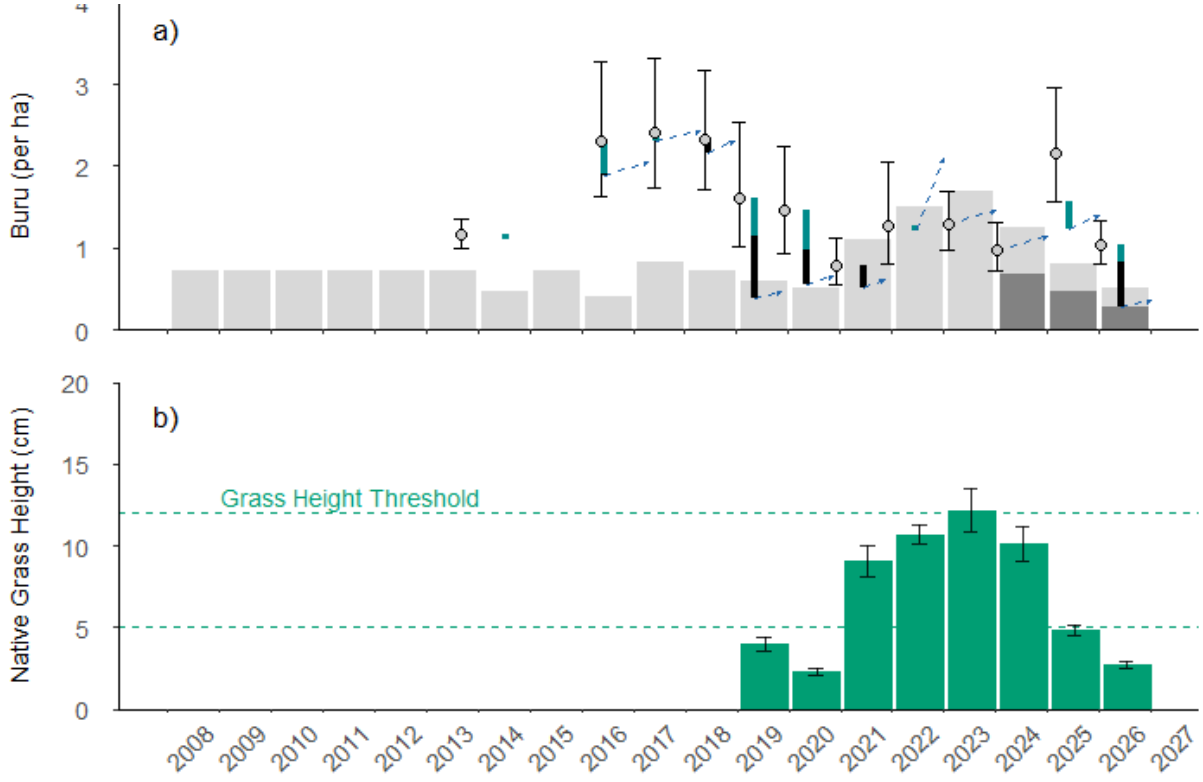

Figure 54. Changes in Buru density and average native grass height for West Jerrabomberra BMU.

a) Changes in Buru density. *Buru density is shown as the mean ± 95% confidence intervals based on the walked line transect count method (grey circles). Buru culls are indicated by vertical lines, with green bars showing the density removed during the conservation culling program and black bars representing management by non-Government entities. The vertical line shown for 2026 is the recommended cull density for the conservation land only. Blue dotted arrows indicate the predicted population growth for the site in each year. The grey shaded bars demonstrate the changing target density of Buru over time, based on ecological adjustments related to grassy layer condition and other relevant factors. The dark grey portion of the bar in recent years reflects the minimum target density for the whole BMU which applies a nominal density of 0.1EGK/ha for land outside the conservation area.*

b) Average native grass height. *Native grass heights are depicted as the mean height of native grass ± standard error of the mean. Systematic monitoring of standardised herbage mass polygons was initiated in 2019. The dashed green lines indicate the upper and lower bounds of the grass height threshold (5 – 12cm) associated with maximised biodiversity outcomes.*

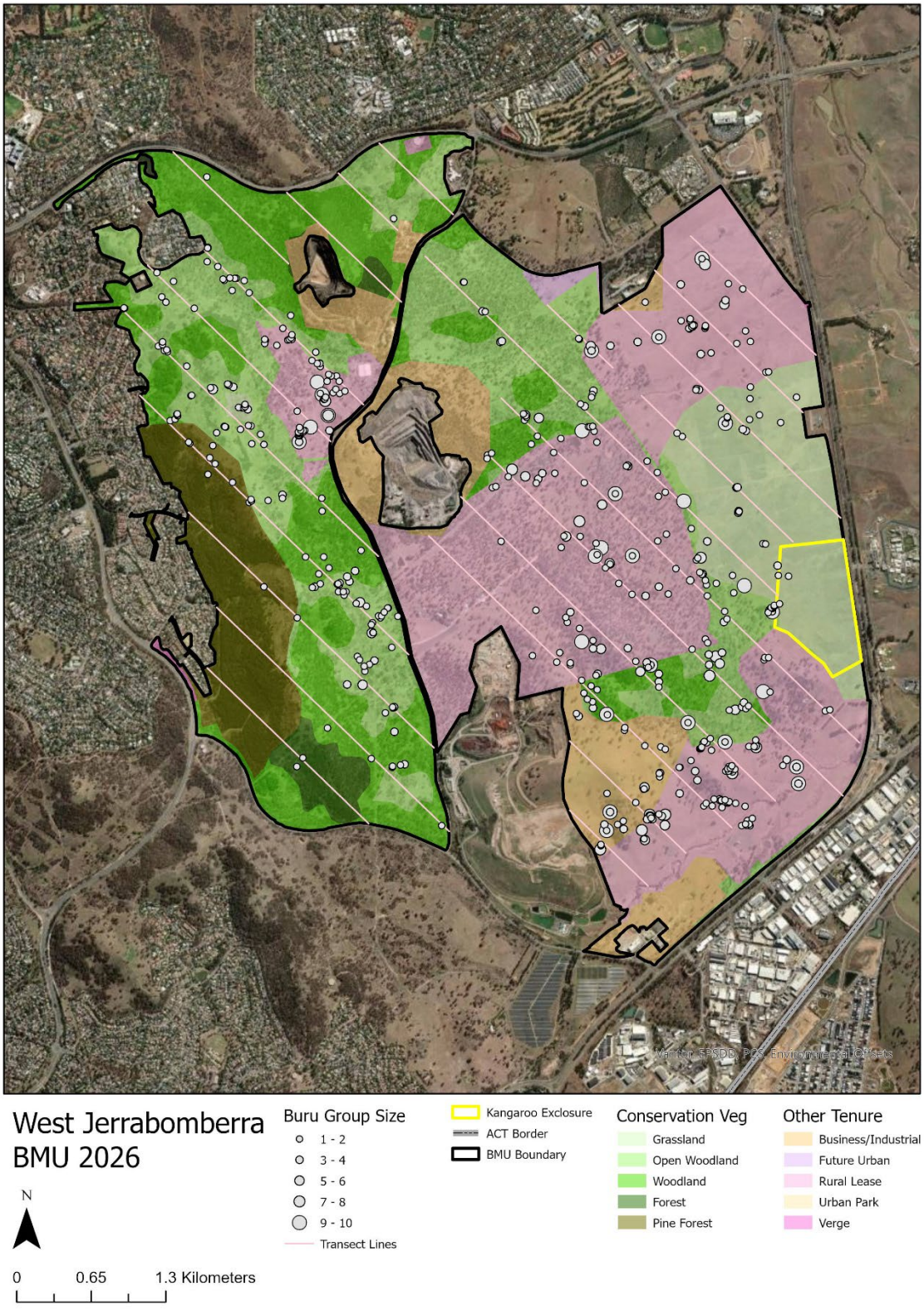

Figure 55. Map of West Jerrabomberra BMU, showing canopy strata, land tenure, survey transects and position of surveyed macropods across the landscape. *Three observations of Red-necked Wallabies, five observations of Swamp Wallabies and seven observations of Wallaroos were recorded during the survey. The number of wallaby and wallaroo sightings is too few to allow calculation of total population size for these species.*

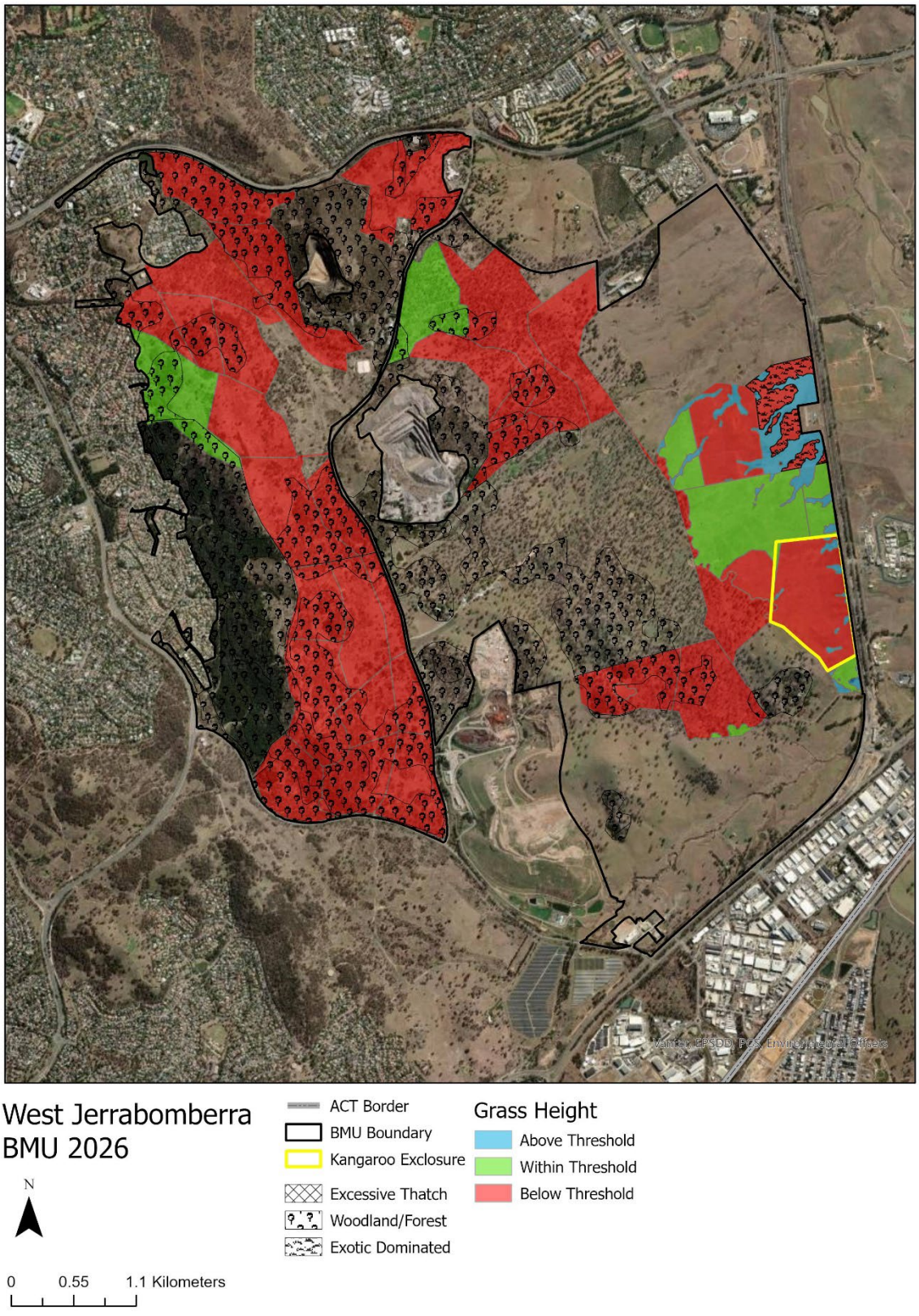

Figure 56. Map of West Jerrabomberra BMU, showing current grassy layer condition relative to threshold grass height targets within conservation areas. *Within threshold grass heights are 5 – 10cm for Native Tussock Community and Exotic Perennial with Tussock Community polygons and 5 – 12cm for Native Themeda Community and Exotic Perennial with Themeda Community polygons.*

7. Reserve Herbage Mass Management Prioritisation Framework

A Reserve Prioritisation Framework has been developed to assist the ACT Parks and Conservation Service in the prioritisation of herbage mass management activities, particularly Buru management, across the conservation estate. The framework firstly considers the extent of endangered ecological community (combined areas of Yellow Box – Red Gum Grassy Woodland and Natural Temperate Grassland, log transformed to give an extent score) and the threatened species known to be present at the site (with species being allocated a score between 1-3 based on their conservation status and dependence on appropriate grassy layer structure). The scores from these two factors are summed to give an overall 'Biodiversity Score' for the site. Secondly, a 'Strategic Conservation Importance' score was assigned for each site to reflect the importance of the area in terms of factors such as landscape connectivity, or as key habitat for an endangered species (e.g., Canberra Grassland Earless Dragon). Thirdly, a 'Relative Risk' score was given to reflect the perceived resilience of the area to inappropriate grassy layer structure, with smaller, more isolated sites being given a higher score in this category due to the risk of permanent localised extinction of species resulting from loss of habitat without potential for recolonization. Finally, a score for 'Prior and Ongoing investment' was assigned in recognition of the value added by complementary land management activities, including previous investment in revegetation works, Buru management, erosion or pest plant and animal control, as well as the ongoing contribution of community volunteers through ParkCare activities. This prioritisation framework will be continually refined as more information (especially around the presence of particular grassy layer dependent species) becomes available, however the current version can be found in Table 4. The use of such a framework aims to provide transparency in the decision-making process around herbage mass management activities and enable strategic use of limited available resources.

Table 4. Reserve Herbage Mass Management Prioritisation Framework *considering a range of conservation related factors which contribute to strategic decision making around herbage mass management activities within the ACTs conservation estate. Areas for adjacent environmental offset areas have been added to reserve totals where appropriate. *Values for some reserves are combined to reflect their contribution to one Buru Management Unit (BMU). The following updates were made in the 2026 advice report: EEC areas and species occurrence records < 10 years old; Button Wrinklewort score change from 3 to 2 better reflecting grazing sensitivity; Bettong and Eastern Quoll added to biodiversity values due to reintroductions as well as Diamond Firetail and Southern Whiteface due to vulnerable status and overgrazing sensitivity.*

Site Name	Yellow Box - Red Gum Grassy Woodland (ha)	Natural Temperate Grassland (ha)	Total Endangered Ecological Community (ha)	Extent of Endangered Ecological Community (Log transformation of EEC	Bettong (score 1)	Brown Treecreeper (score 1)	Button Wrinklewort (score 2)	Canberra Raspy Cricket (score 2)	Diamond firetail (score 1)	Eastern Quoll (score 1)	Ginninderra Peppercress (score 2)	Golden Sun Moth (score 2)	Grassland Earless Dragon (score 3)	Hooded Robin (score 1)	Hoary Sunray (score 1)	Key's Matchstick Grasshopper (score 2)	Perunga Grasshopper (score 2)	Pink-tailed Worm-lizard (score 2)	Scarlet Robin (score 1)	Small Purple Pea (score 2)	Southern whiteface (score 1)	Striped Legless Lizard (score 3)	Superb Parrot (score 1)	Threatened Orchids (score 1)	White-winged Triller (score 1)	Varied sitella (score 1)	Biodiversity Values (0-34)	Strategic Conservation Importance (0-3)	Relative Risk (0-3)	Prior and Ongoing Investment (0-3)	TOTAL SCORE
*West Jerrabomberra BMU	359	103	462	6	0	1	0	2	1	0	0	2	3	0	1	0	2	2	1	2	1	3	0	0	1	1	29	3	3	3	**38**
Mulligans Flat Nature Reserve	544	1	545	6	1	0	0	0	1	1	0	2	0	1	1	2	2	0	1	0	1	3	1	1	1	1	26	3	2	3	**34**
*East Jerrabomberra BMU	0	58	58	4	0	0	2	2	0	0	2	2	3	0	0	2	2	0	0	0	0	3	0	0	1	0	23	3	3	3	**32**
Goorooyarroo Nature Reserve	697	0	697	7	1	0	0	0	1	1	0	2	0	0	1	0	2	0	1	0	1	3	1	1	1	1	24	3	2	3	**32**
*Ainslie Majura BMU	558	88	646	6	0	0	2	0	1	0	0	2	3	1	1	0	0	0	1	0	0	3	1	1	1	1	24	2	2	3	**31**
Crace Nature Reserve	2	70	72	4	0	0	2	2	0	0	2	2	0	0	0	2	2	2	0	0	0	3	1	0	1	0	23	2	3	2	**30**
Kama Nature Reserve	76	6	82	4	0	1	2	0	1	0	0	0	0	0	1	0	2	2	1	2	0	3	1	0	1	1	22	2	1	2	**27**
Molonglo River Reserve (excl. Kama)	157	4	161	5	0	0	0	0	1	0	0	0	0	0	1	0	2	2	1	0	1	3	1	0	1	1	19	3	1	3	**26**
Mulanggari Nature Reserve	52	25	77	4	0	0	0	2	0	0	0	2	0	0	1	0	2	2	0	0	0	3	1	0	1	0	18	2	3	3	**26**
Nadjung Mada Nature Reserve	55	0	55	4	0	0	2	0	1	0	0	2	0	0	1	0	2	0	1	0	1	3	1	0	1	0	19	2	2	2	**25**
Gungaderra Nature Reserve	26	109	135	5	0	0	0	0	0	0	0	2	0	0	0	2	2	0	1	2	0	3	1	0	0	0	18	2	3	2	**25**
Red Hill Nature Reserve	185	0	185	5	0	0	2	0	0	0	0	0	0	0	1	0	2	2	1	0	0	0	1	0	1	1	16	3	1	3	**23**
North Gungahlin BMU	59	1	60	4	0	1	0	0	0	0	0	2	0	1	0	2	0	0	1	0	1	0	1	1	1	1	16	3	1	2	**22**
Budjan Galindji	0	3	3	1	0	0	0	2	0	0	2	2	0	0	1	0	2	0	0	0	0	3	1	0	0	0	14	1	3	3	**21**
The Pinnacle Nature Reserve	43	0	43	4	0	0	0	0	1	0	0	0	0	0	1	0	2	2	1	0	0	0	1	0	1	1	14	1	2	2	**19**
Tuggeranong Hill Nature Reserve	141	0	141	5	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	1	0	14	3	1	1	**19**
Farrer Ridge Nature Reserve	73	0	73	4	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	2	0	0	1	0	0	0	10	3	1	3	**17**
Dunlop Nature Reserve	14	41	55	4	0	0	0	2	0	0	0	2	0	0	0	2	2	0	0	0	0	0	1	0	0	0	13	1	1	1	**16**
Cooleman Ridge Nature Reserve	48	0	48	4	0	0	0	0	1	0	0	0	0	0	1	0	0	2	1	0	1	0	1	0	1	0	12	2	1	1	**16**
*Aranda Painter BMU	32	0	32	3	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	2	0	0	1	1	0	0	11	1	1	2	**15**
* Kinlyside BMU	182	26	208	5	0	1	0	0	0	0	0	2	0	0	0	2	0	2	1	0	1	0	0	0	0	0	9	3	1	2	**15**
Rob Roy Nature Reserve	364	89	453	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	1	10	2	1	1	**14**
Black Mountain Nature Reserve	7	0	7	2	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	1	0	0	1	8	2	2	2	**14**
Urambi Hills Nature Reserve	69	0	69	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	1	0	9	2	1	1	**13**
Mount Taylor Nature Reserve	59	5	63	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	9	2	1	1	**13**
McQuoids Hill Nature Reserve	22	0	22	3	0	0	0	0	1	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	0	1	9	2	1	1	**13**
Jarramlee Nature Reserve	4	7	11	2	0	0	0	2	1	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	1	0	10	1	1	0	**12**
Kowen Escarpment Nature Reserve	29	2	31	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	6	3	2	1	**12**
Melrose Nature Reserve	121	0	121	5	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	8	1	1	1	**11**
Wanniassa Hills Nature Reserve	37	0	37	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	6	2	2	1	**11**
Oakey Hill Nature Reserve	12	1	13	3	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	7	2	1	1	**11**
Mount Pleasant Nature Reserve	36	0	36	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	7	1	2	0	**10**
Molonglo Gorge Reserve	87	11	98	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	7	2	1	0	**10**
Gossan Hill Nature Reserve	12	0	12	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	6	1	2	0	**9**
Percival Hill Nature Reserve	13	2	15	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	7	1	1	0	**9**
O'Connor Ridge Nature Reserve	10	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	5	1	2	0	**8**
Jerrabomberra Wetlands Nature Reserve	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	1	1	3	**7**
Bruce Ridge Nature Reserve	7	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	1	2	0	**6**
Googong Foreshores	327	0	327	6	0	1	2	0	1	0	0	0	0	1	1	0	2	2	1	0	1	0	0	0	1	1	20	3	2	2	**27**

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