



ACT
Government

Environment, Planning and
Sustainable Development

Gungahlin Strategic Assessment Annual Report 2020-2021

Annual report for the Gungahlin Strategic Assessment and Biodiversity Plan for the period
1 July 2020 to 30 June 2021

Environment, Planning and Sustainable Development Directorate, ACT Government

August 2021

Acknowledgements

The Plan Implementation Team would like to extend appreciation to the contributions made to the Annual Report by the Chief Minister, Treasury and Economic Development Directorate, the Suburban Land Agency and the Environment, Planning and Sustainable Development Directorate.

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Table 1 – List of Abbreviations

List of Abbreviations

ACT	Australian Capital Territory
BGW	Box Gum Woodland
CEMP	Construction Environment Management Plan
CMTEDD	Chief Minister, Treasury and Economic Development Directorate
DA	Development Application
DAWE	Department of Agriculture, Water and the Environment (Cwth) (formerly DoE)
DoE	Department of the Environment and Energy (Cwth) (superseded by DAWE)
ED	Economic Development (Part of CMTEDD)
EDP	Estate Development Plan
EOEG	Environmental Offsets Executive Group
EOWG	Environmental Offsets Working Group
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwth)
EPSDD	Environment, Planning and Sustainable Development Directorate (previously Environment and Planning Directorate and Environment and Sustainable Development Directorate)
FVS	Floristic Value Score
GSA	Gungahlin Strategic Assessment
GSM	Golden Sun Moth
HIP	Habitat Improvement Plan
LMA	Land Management Agreement
MNES	Matters of National Environmental Significance
NCA	National Capital Authority
OMP	Offset Management Plan
PCS	ACT Parks and Conservation Services
PIT	Plan Implementation Team
PTWL	Pink-tailed Worm Lizard
SLA	Suburban Land Agency
SLL	Striped Legless Lizard
TCCS	Transport Canberra and City Services (formerly Territory and Municipal Services Directorate)
the Plan	Gungahlin Strategic Assessment Biodiversity Plan

Note: References to government agency names in this report are accurate at 30 June 2021.

Executive summary

Plan Implementation Team chairperson statement

The Territory continued its commitment to implement the Gungahlin Strategic Assessment Biodiversity Plan (the Plan) during the 2020-21 reporting period, one that posed additional challenges and benefits from events such as the COVID-19 pandemic and the above average rainfall.

During 2020-21, the ACT Government released land to cater for 1,218 dwellings and 34,137m² of mixed-use and 20,597m² of commercial development in the Gungahlin Strategic Assessment area, including the final residential land release in Throsby.

The 2020-21 financial year also had work progress to establish the Nadjung Mada Nature Reserve, in Kenny. It is expected that the Territory Plan Variation to create the Nature Reserve will formally commence in 2021-22, thereby delivering the final new nature reserve that was committed to in the Plan.

The above average rainfall, throughout 2020-21, was welcomed by the land managers throughout the Gungahlin Strategic Assessment area and was a great benefit to matters of national environmental significance. This was a timely change in the weather pattern, resulting in relief and increased growth to much of the protected habitat and ecological communities throughout the area.

Research on the Golden Sun Moth, Superb Parrot and Box Gum Woodland habitat also continued. Positive observations were made in relation to the Super Parrot, with a marginal increase in Superb Parrot breeding output observed compared to 2015 baseline data. The birds continued to breed successfully which was comparable to pre-development levels.

Expenditure estimates were again impacted by the delay of the ACT Budget due to the COVID-19 pandemic. Despite this, it is expected that approximately \$900,000 in funding will be available for the management of the offset areas in the Gungahlin Strategic Assessment. These contributions and the employment of dedicated on-ground rangers reflect the Territory's commitment to and investment into the environment and biodiversity conservation outcomes of the Plan.

Brett Phillips

Chair – Plan Implementation Team
Executive Group Manager
Environment, Planning and Sustainable Development Directorate

27 August 2021

Background

In October 2012, the ACT and Commonwealth governments commenced a strategic assessment under Part 10 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (the EPBC Act). The focus of the strategic assessment was to assess the potential impacts from development of the remaining identified green-field sites in Gungahlin, the northern-most district in the ACT, on Matters of National Environmental Significance (MNES) protected under the EPBC Act.

The [Gungahlin Strategic Assessment Biodiversity Plan](#) (the Plan) was endorsed on 20 June 2013 and the actions associated with the development were approved on 17 July 2013. As a result of the approval, the Plan has streamlined the development process by removing the need for site-by-site assessment of MNES.

The Plan outlines the activities required to complete the urban development of the Gungahlin district. Accordingly, the Plan is defined by the establishment and implementation of measures to affect urban development and biodiversity conservation within Gungahlin. The Plan is relevant to the following areas as they appear in the Territory Plan:

- Urban development areas of Kenny, Throsby, Moncrieff, Jacka (north), Taylor;
- Urban development areas (currently zoned Commercial (CZ2) and Mixed Use (CZ5)) in the Gungahlin Town Centre (east precinct); and
- Conservation areas, including broad acre areas, being additions to Goorooyaroo and Mulligans Flat Nature Reserve, Kenny Nature Reserve, Horse Park north broad acre, Kenny broad acre and Kinlyside Nature Reserve.

The assessment area and Plan in summary is presented as **Figure 1**.

Annual Reporting under the Plan

This annual report is a comprehensive report on the activities related to the Gungahlin Strategic Assessment Biodiversity Plan (the Plan) throughout the preceding year, being 1 July 2020 to 30 June 2021. The annual report provides information about ACT Government activities and performance against the commitments of the endorsed Plan.

Commitments

The Plan identifies a range of commitments to be undertaken by the ACT Government targeting MNES affected by urban development in Gungahlin on the basis of analysis presented in the Gungahlin Strategic Assessment - Assessment Report. Commitments in the Plan build upon the long history of forward and strategic environmental planning in the ACT around the avoidance and mitigation of environmental impacts resulting from development.

In summary, the commitments include:

- Avoidance of areas that support habitat for MNES on land presently designated by the Territory Plan as developable (including RZ1 – Suburban and NUZ1 - broadacre);
- Increased investment in habitat enhancement beyond the minimum level required by ACT legislation; and
- Increased investment in research targeted at the affected MNES and guided by action planning objectives.

Direct impacts on MNES have either been avoided (Pink-Tailed Worm Lizard, Superb Parrot breeding sites, important migratory bird habitat) or minimised through protecting core, well connected endangered woodland or habitat (Box Gum Woodland, Golden Sun Moth or Striped Legless Lizard habitat).

Plan Implementation Team

The Plan Implementation Team (PIT) is responsible for both implementing the Plan and also ensuring that accurate records are maintained for all activities that are undertaken in relation to implementation of the Plan. PIT activities are described in the PIT Charter. Further information on the PIT is described in the relevant section of this report.

Corporate outcome: Organisational effectiveness

The strategic assessment approvals monitoring and implementation is the responsibility of the PIT, which was coordinated by the Impact Assessment team within the Environment, Planning and Sustainable Development Directorate (EPSDD) during the 2020-21 financial year.

To ensure the PIT members are informed on matters for consideration, members of each Directorate have formed an informal working group to discuss issues and make recommendation to the PIT. This model has been well received by the PIT and the working group members.

Plan Implementation Team (PIT)

Background

The PIT is responsible for all aspects of implementation of the Plan in addition to ensuring accurate records are maintained of all activities that are conducted in relation to implementation of the Plan. Commitment 6 of the Plan describes the requirement of the ACT Government in establishing a PIT.

The PIT was established in 2014 and was a multi-agency group drawn from executives within the former Environment and Planning Directorate (EPD), Chief Ministers, Treasury and Economic Development Directorate (CMTEDD) and coordinated by Economic Development (ED), CMTEDD. However, from 1 July 2016 the responsibility for compliance monitoring and reporting vests in Statutory Planning (previously Planning Delivery), EPSDD. The PIT membership was reviewed in response to the ACT Directorate restructure. The revised PIT membership and Charter was approved by the former Commonwealth Department of Environment on 13 January 2017.

The PIT team will continue to be guided by input from relevant ACT agencies to ensure consistency and efficiency in implementation and investment (for example, coordination of weed management activities across reserve and offset areas).

The PIT will operate for the 20-year life of the Plan. Upon conclusion of the Plan, ongoing management responsibility will divest in the appropriate ACT Government agencies. The PIT will ensure the appropriate transfer and accessibility of information gathered over the life of the Plan. The PIT will operate with a mandate to ensure a whole-of-government approach to implementation of the Plan.

Membership

PIT members include executive representation from the Environment, Planning and Sustainable Development Directorate (EPSDD) and CMTEDD. As at 30 June 2021 the PIT comprised:

- Statutory Planning, EPSDD (Lead Directorate);
- Environment Division, EPSDD;
- Suburban Land Agency, EPSDD;
- Policy and Cabinet, CMTEDD; and
- Treasury, CMTEDD.

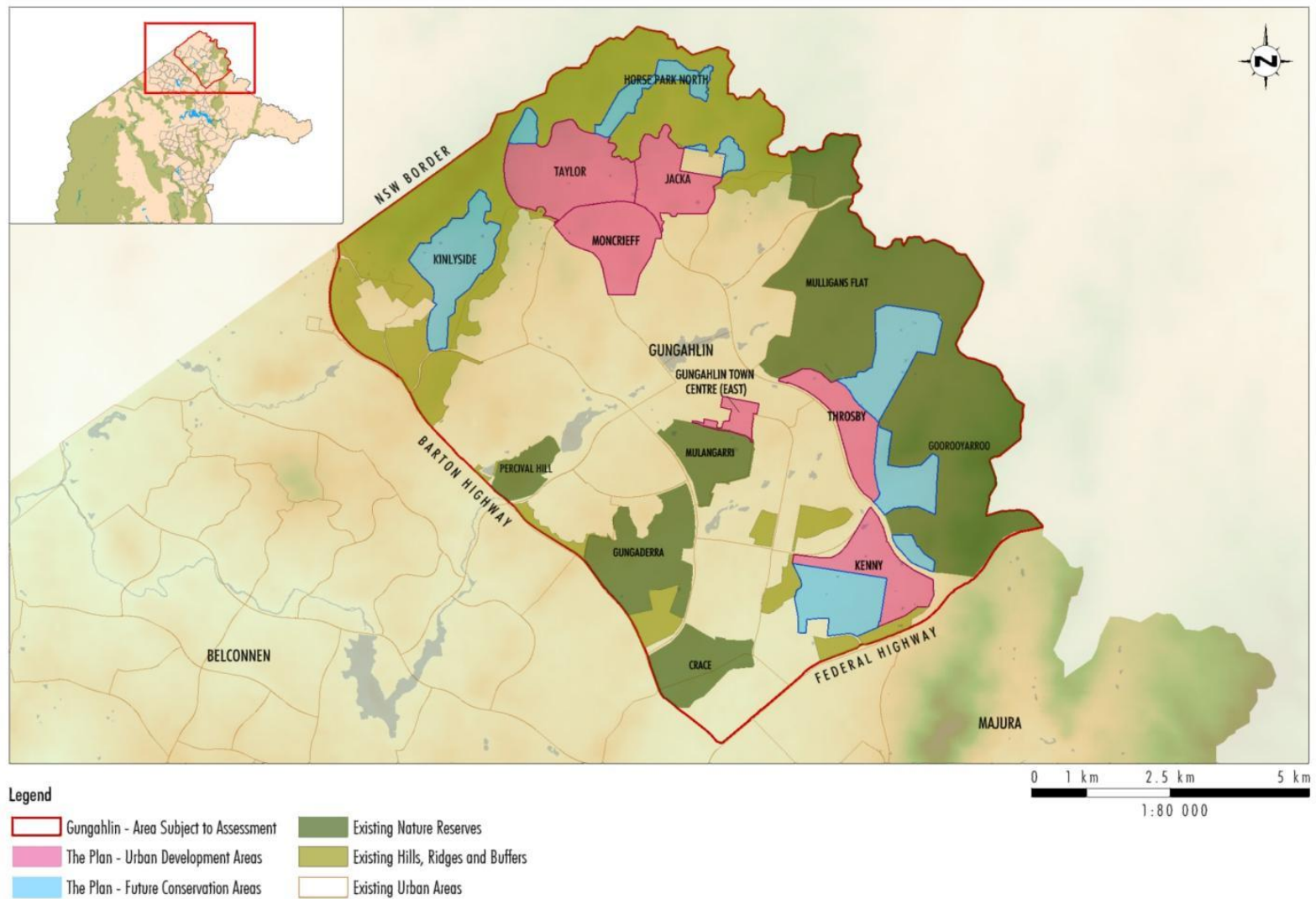


Figure 1: Overview of the Plan

Working groups

Internal working group

The Gungahlin Strategic Assessment Working Group and Environmental Offsets Working Group (EOWG) comprises members from multiple divisions within EPSDD. These working groups meet during the year to discuss implementation and delivery of the commitments under the Plan.

During 2020-21, the ACT Government also established the Environmental Offsets Executive Group (EOEG). The EOEG, with the support of the EOWG, provides cross directorate executive oversight of offsets within the ACT. This includes the provision of advice and recommendations on offset matters and making decisions where appropriate.

Consultation and engagement groups

The ACT Parks and Conservation Services (PCS) undertakes extensive stakeholder engagement across the management of its offset sites, throughout the planning, monitoring, research, and operational management processes.

Stakeholder engagement has been increasing in areas surrounding the Kinlyside Nature Reserve and Jacka, Taylor, and Horse Park North avoidance areas, where surrounding residential development continues. The development of new suburban estates adjacent to offset sites has provided an opportunity for PCS Rangers to engage with the new communities.

As the demographic of residents vary so some of PCS's public engagement for 2020-21 have focused on education on the natural areas surrounding the residents' homes, the opportunities to learn and discover more about these natural areas, and the types of behaviours that are appropriate when visiting them.

Engagement between the SLA Communications Team (Mingle) and PCS has enabled PCS to deliver and promote offset and conservation messaging via community events, online and newsletter articles.

To the east, the Throsby and Kenny broad acre offset areas are now protected within the Mulligans Flat Woodland Sanctuary predator proof fence. The Sanctuary is managed by a partnership including the ACT Government which manages the land and infrastructure and undertakes research, the Woodlands and Wetlands Trust which undertakes education and outreach, and the Australian National University which undertakes research and reintroduction of fauna species. The partnership developed a draft [strategy](#) for the Sanctuary that includes management of the offset areas.

PCS has worked closely with other key stakeholders which assists with the management of the Gungahlin Strategic Assessment offset sites, including:

- Non-Government Organisations such as [WaterWatch](#), [Friends of Grasslands](#), [ParkCare](#) and [Canberra Ornithologists Group](#).
- [Greening Australia](#).
- The [Dhawura Ngunnawal Caring for Country Committee](#).
- [Representative Aboriginal Organisations](#), as declared under Section 14 of the *Heritage Act 2004*, including:

- *Buru Ngunawal Aboriginal Corporation;*
- *King Brown Tribal Group;*
- *Mirrabee; and*
- *Ngarigu Currawong Clan.*
- Current lessees and agistment license holders (including at Kinlyside Nature Reserve and previously at the Kenny offset and development area).
- The [Woodlands and Wetlands Trust](#).
- Universities such as the [Australian National University](#), [University of Canberra](#) and [Canberra Institute of Technology](#).
- Utility providers with infrastructure located near or within reserves, such as [ActewAGL](#), and [ICON water](#).

Other ACT and Commonwealth Government agencies that are engaged through the management of the Gungahlin Strategic Assessment area include:

- The [ACT Heritage Council](#), for advice and approvals that are required for Aboriginal heritage management matters.
- [Australian National Herbarium](#). Voucher specimen submissions by the monitoring team to the herbarium, including a record of a new species for the ACT from Throsby North (*Gnaphalium indutum* – Tiny Cudweed), as well as collaboration for confirmation of flora species ID's.
- [Transport Canberra and City Services Directorate](#), regarding maintenance of grass, roads and tracks around suburbs and nature reserves, among other important city services.

During the 2020-21 financial year, PCS held the following public engagement activities:

- Operated a stall at the Taylor Community Picnic Day which included children's activities, Ranger engagement and educational material on PCS reserves.
- Engaged with a local Ngunawal man, which included a bush tucker walk in Box-Gum Woodland, during NAIDOC week.
- An English as a second language group walk-and-talk at Kinlyside Nature Reserve and local farm.
- Presented to a Nature Play Group.
- A Ngunawal community day at the Mulligans Flat Woodland Sanctuary. Over 25 Ngunawal community members attended the day to share knowledge on restoration activities being undertaken in the Sanctuary.
- Several Ngunawal knowledge sharing sessions with volunteers and members of the local community through the Woodlands and Wetlands Trust.
- Onsite walk-and-talks with high school and Conservation Management students.
- Other Government outreach events, including, EcoFocus, Grassy Woodland Forum, EPSDDScience Planning Day, ACT Tree Week.
- Media engagement with The Canberra Times, and ABC Canberra Radio, ABC News, and Australian Geographic (for Superb Parrot research).

Land Release Program

As reported in previous annual reports, each year the ACT Government prepares a four-year Indicative Land Release Program setting out the ACT Government's intended program of residential, commercial, industrial and community land releases. The Program is indicative and is subject to change as market conditions alter or as ACT Government priorities adjust. The Planning and Urban Policy Division (previously Planning, Land and Building Division) of EPSDD is responsible for preparing the program in conjunction with other relevant Territory directorates.

The ACT Government plans for the supply and release of land, taking account of factors such as forecast population changes, household changes, demand for land and the capacity to cost effectively deliver key infrastructure and services.

The four-year Indicative Land Release Program enables the ACT Government to deliver on its economic and social strategies for the Territory. However, due to the COVID-19 pandemic and the associated delay of the 2020-21 ACT Budget, a detailed Indicative Land Release Program was not released. Rather, the details were included in the ACT Government's [August 2020 Economic and Fiscal Update](#).

The [August 2020 Economic and Fiscal Update](#) included the following release targets for Gungahlin during 2020-21:

- 1,268 dwellings
- 32,204 m² of mixed-use site area
- 20,597 m² of commercial site area
- 6,837 m² of community facility site area

The actual 2020-21 land release for Gungahlin was:

- 1,218 dwellings
- 34,137 m² of mixed-use site area
- 20,597 m² of commercial site area
- 6,837 m² of community site area

More information about the Indicative Land Release Program is available on the following website: <https://www.planning.act.gov.au/planning-our-city/land-release>.

Gungahlin Town Centre

The Gungahlin East project approved in 2017 finished civil construction in 2018-19 with site releases to developers and occupiers commencing in February 2019. The remaining commercial, community and residential sites will be sold in line with the Indicative Land Release Program. [Draft Variation 364](#) applies to development applications lodged on or after 30 September 2019, allowing urban intensification in Gungahlin East.

Jacka

The development application for a new residential estate within Jacka (Jacka 2 Stage 1) has progressed based upon a yield of 500 dwellings, community facilities areas, local shops, playing fields and open spaces.

Taylor

The Taylor estate has continued to be developed as per its development approval including a new school, playing fields, single residential dwellings, multi-unit sites, open spaces, community uses and a local centre.

Throsby

The Throsby estate has continued to be developed as per its development approval including a proposed new school, future playing fields, single residential dwellings, multi-unit sites and open spaces. Final residential land release was completed in 2020-21.

Kenny

The proposed suburb of Kenny was managed under a rural lease during 2019-20. An initial localised release to facilitate delivery of the future Kenny High School is scheduled for 2020-21. EPSDD is continuing, with due diligence, to determine the most suitable outcomes and development options for this suburb. Preparation of an Estate Development Plan(s) is expected to commence in 2021-22.

The Territory Plan Variation ([379](#)) to rezone land within the future suburb to formally establish the Kenny Nature Reserve (now Nadjung Mada Nature Reserve) commenced during 2020-21 and was approved by the Minister for Planning and Land Management on 2 August 2021. The plan variation is currently being presented to the Legislative Assembly and is expected that the variation will formally commence in the second half of 2021. The Nadjung Mada Nature Reserve environmental offset site, as presented in the Plan Variation and adjacent indicative land uses is presented in Error! Reference source not found.2.

Kinlyside

The Kinlyside Nature Reserve was created and gazetted through a Territory Plan Variation on 6 November 2014. The Nature Reserve includes a large section of land adjacent to Casey. The primary objective of establishing the offset area was to permanently protect and enhance the extent and quality of the White Box - Yellow Box - Blakely's Red Gum Grassy Woodland community and the population and habitat of the Golden Sun Moth.

Kinlyside Nature Reserve includes some areas of land managed under rural lease for agricultural purposes. Existing leases are periodically monitored and reviewed in 2019-20 to ensure optimal conservation biodiversity outcomes in line with the Plan and the [Kinlyside Offset Management Plan](#).

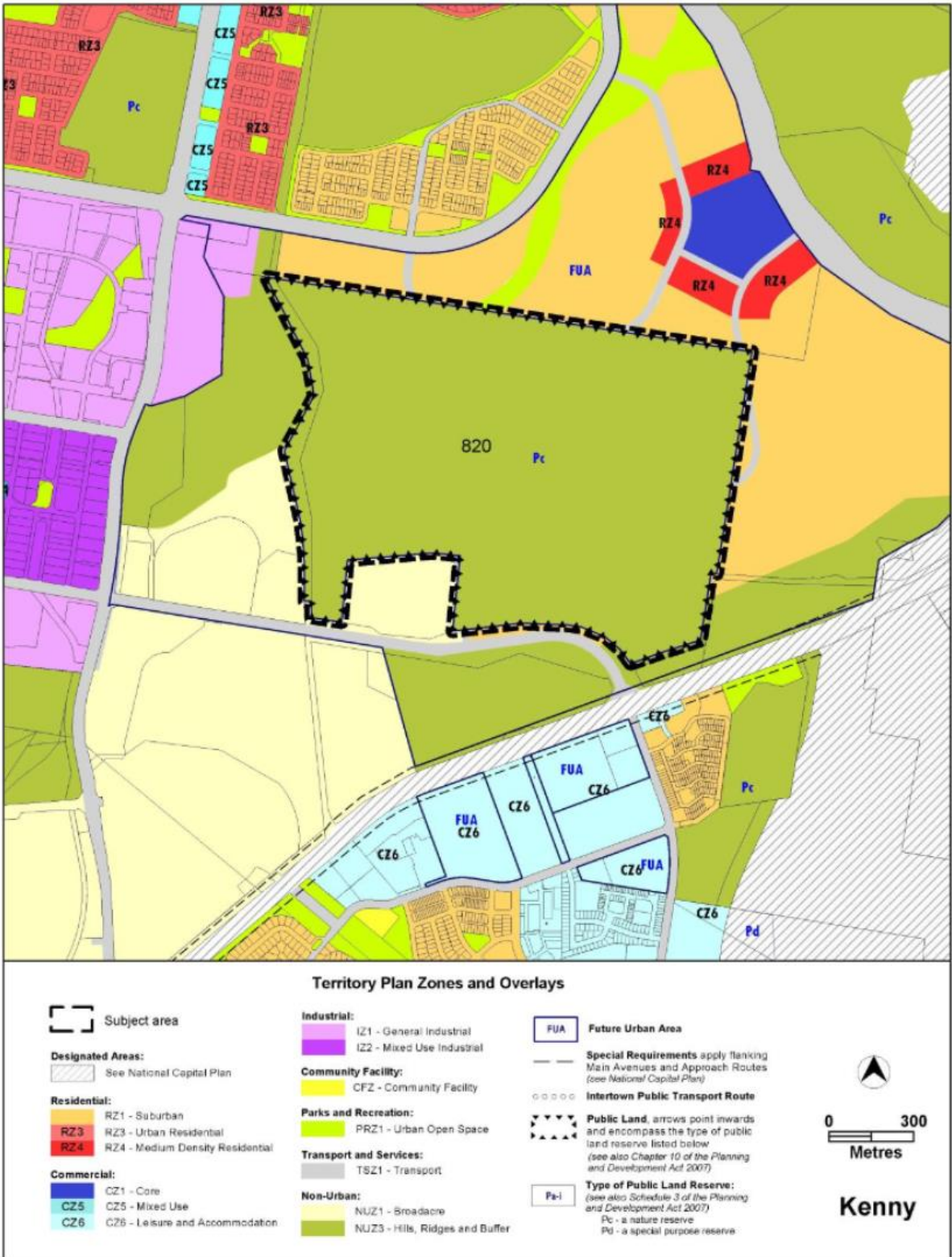


Figure 2: Kenny offset area and potential land use zones for Kenny

Environmental offsets

Environmental offsets are measures that compensate for residual adverse impacts of an action on the environment. Offsets provide environmental benefits to counterbalance the impacts that cannot be avoided once avoidance and mitigation measures have been considered. Offsets can take the form of direct offsets, indirect offsets or other compensatory measures.

Table 2 below highlights the condition of offset sites established through the GSA. The information presented in **table 2** below is based on monitoring data gathered by ACT Government ecologists and consultants. Further detail is also provided in **table 3** below where links to source data are also provided.

It should be noted that this does not include other offset areas located within the GSA that relate to development outside the scope of the Strategic Assessment, such as Franklin Grasslands which offsets the impacts from the Dudley Street upgrade in Yarralumla (EPBC 2017/8072).

All offset areas in the GSA, with the exception of Kenny, were formally established through [Territory Plan Variation 319](#) in November 2014. During 2020-21, the Nadjung Mada Nature Reserve was proposed through [Draft Variation 379](#) to be incorporated into the Territory Plan. On 2 August 2021, Draft Variation 379 was approved by the Minister for Planning and Land Management. The plan variation is now required to be presented to the ACT Legislative Assembly prior to formally commencing.

Table 2 – Gungahlin Strategic Assessment Offset Areas – Condition Status

Offset name	MNES	Condition status
Kinlyside	Box Gum Woodland (BGW) Golden Sun Moth (GSM) Pink-tailed Worm Lizard (PTWL)	<p>The BGW within Kinlyside represents the largest area of high quality BGW vegetation within any offset area in the ACT. Results from the spring 2020 survey season recorded that, on average, over 100 ha of BGW was above benchmark for the floristic value score – representing a very high diversity of native ground cover plant species across the site.</p> <p>In the past year, grass height has recovered dramatically with the increase in rainfall during 2020-21. The following weed species have been flagged with land managers as being above asset protection levels for 2020 in the BGW at Kinlyside: Patterson’s Curse, Saffron Thistle, Serrated Tussock, St John’s Wort. Land managers will manage these weed species through a variety of management activities, including spraying, grazing and controlled burns.</p> <p>A stable population and distribution of GSM has been recorded at Kinlyside annually since 2015. Since 2016, over 50% of transects have recorded occupancy by GSM and seasonal variation in population which may be explained by annual climatic influences. Kinlyside represents some of the best quality GSM habitat in northern ACT with very high cover of Wallaby Grass across the site, and grass tussock height and bare ground cover favourable to the species.</p> <p>As all impacts to PTWL were avoided through the GSA, there was no requirement to offset. Despite this, PTWL habitat is known to occur in Kinlyside and therefore was subject to early mapping and monitoring in 2016. However, as the offset commitments in the GSA do not apply to PTWL, ongoing monitoring of this MNES at Kinlyside is not occurring at this time.</p>
Taylor	BGW	<p>The Taylor offset site has recorded very high quality BGW since surveys began in 2018. In particular, the proportion of native ground cover is extremely high across the site, with the exception of the southern area adjacent to the new urban development.</p> <p>As a result of high grazing pressure from pest species, average grass height has stayed at a concerning low (below 5 cm leaf tussock height) for over three years. This has the potential to impact on the BGW understorey and regeneration. To address this, livestock grazing has been removed and other strategies such as erecting temporary kangaroo exclusion fencing are being explored.</p> <p>Saffron Thistle and St John’s Wort weed species have been flagged with land managers as being above asset protection levels for 2020 in the BGW at the Taylor offset site. Land managers will manage these weed species through a variety of management activities, including spraying, grazing and controlled burns.</p> <p>Opportunistic targeted surveys for GSM were undertaken in 2020 at the Taylor offset site. A small population was confirmed in the south of the offset, in the area bordering the new urban development. Further surveys for GSM are not currently scheduled as they are not a core commitment for the Taylor offset site. However, further opportunistic surveys may be undertaken should resourcing permit.</p>
Horse Park North	BGW	<p>The Horse Park North offset area demonstrates some of the highest quality BGW across all ACT offset areas. The BGW area hosts the highest number of native plant species of all ACT offset sites, and an above benchmark floristic value score.</p> <p>In 2020, St John’s Wort was recorded at an above asset protection level density. Land managers will manage these weed species through a variety of management activities, including spraying, grazing and controlled burns.</p> <p>Opportunistic targeted surveys for GSM were undertaken in 2020 at the Horse Park North site and a small population was confirmed in the centre of the offset. Further surveys for GSM are not currently scheduled as they are not a core commitment for the Horse Park North offset site. However, further opportunistic surveys may be undertaken should resourcing permit.</p>

Jacka		The GSA outlines that the Jacka offset site does not contain any MNES, but includes the area for strategic benefit primarily for habitat connectivity. Therefore, no monitoring surveys are conducted at this site.
Throsby North	BGW GSM Superb Parrot	<p>The BGW in the north of the site has increased in quality in 2020 following favourable rainfall conditions. There is however high variability across the BGW areas, with several sites recording floristic value scores below benchmark.</p> <p>In spring of 2020, a new species for the ACT was recorded in a floristics plot in the north of Throsby North, <i>Gnaphalium indutum</i> (Tiny Cudweed), which has been lodged with the herbarium.</p> <p>Patterson's Curse and St John's Wort weed species have been flagged with land managers as being above asset protection levels for 2020 in the BGW at Throsby North. Land managers will manage these weed species through a variety of management activities, including spraying, grazing and controlled burns.</p> <p>There was a reduction in the density and distribution of GSM at Throsby North in 2020, however, this is likely due to unfavourable conditions for the species caused by La Nina as a similar drop in numbers was recorded across the ACT.</p> <p>While there are some potential nesting trees, no Superb Parrot have been recorded nesting at Throsby North. This is likely due to their preference to nest in proximity to each other, and with more suitable nesting trees being located at Throsby East.</p>
Throsby East	BGW Superb Parrot	<p>Throsby East represents some of the lowest quality BGW found in ACT offset areas. This is a consistent result recorded annually, and reflects a poor diversity of native ground species, low percentage of native ground cover and few recorded important species.</p> <p>However, in the 2020 survey year, no high threat weeds were recorded as being over the asset protection level in the BGW at Throsby East.</p> <p>The abundance and distribution of GSM at Throsby East has remained consistently low across annual survey years.</p> <p>Throsby East supports one of only two known breeding colonies of Superb Parrot in the ACT, with 15 nests located in the offset area. There is a high density of quality nesting hollows in stands dominated by <i>E. rossii</i> and <i>E. blakeyli</i>. This allowed a total of 51 superb parrots to be raised in the offset site in 2020. These findings are very similar to previous years and represents a marginal increase in breeding output compared to the pre-development baseline (2015).</p> <p>Avian competition for nesting sites is significant, but the Superb Parrot breeds consistently and successfully at the offset site.</p>
Kenny broad acre	BGW Striped Legless Lizard (SLL)	<p>The Kenny broad acre BGW represents the highest number of mature trees, coarse woody debris and percentage of native overstorey cover of any offset area in the ACT.</p> <p>In the 2020 survey year, no high threat weeds were recorded as being over the asset protection level in the BGW at Kenny broad acre. However, the floristic value score at this site is consistently low.</p> <p>The population of SLL recorded at Kenny broad acre appeared to be declining in surveys from 2018 to 2020. During this time there was reduced grass height due to drought. We expect to see more individuals in 2021 surveys due to increased suitable habitat from rainfall and altered grazing regimes.</p>
Kenny	BGW SLL Superb Parrot	<p>During 2020-21, the Nadjung Mada Nature Reserve came under PCS management.</p> <p>It represents some of the lowest quality BGW found in offset areas. This is a consistent result recorded annually and reflects a poor diversity of native ground species and few recorded important species. The site however does demonstrate a higher percentage of native ground and mid-story cover than other offset woodland areas.</p> <p>Patterson's Curse and Serrated Tussock weed species have been flagged with land managers as being above asset protection levels for 2020 in the BGW at Kenny. Land managers will manage these weed species through a variety of management activities, including spraying, grazing and controlled burns.</p> <p>The population of SLL at this site is currently extremely low. Surveys from 2018 to 2020 recorded a significant decline in the population compared to previous surveys in 2012 and 2015. Altered/reduced grazing regimes, increased weed control, and increased rainfall is expected to result in increasing numbers of the species.</p> <p>Nadjung Mada Nature Reserve contains trees that are critical to Superb Parrot movement through the wider landscape. Superb Parrot movement through Kenny is particularly important to maintain as many of the individuals using these trees are active breeders (at Throsby East). They have been recording using the corridor multiple times daily during breeding season to source food for their young. Characteristics that make the trees on Kenny suitable for Superb Parrot movement include their height (> 10 m), species (<i>E. melliodora</i>), crown (healthy) and age (mature/large). At least 40 trees within the reserve contain these characteristics.</p>

Report on performance by outcome/commitment

Table 3 below describes the commitments from the Plan and the status of each commitment. Items reported as complete at the end of the 2019-20 reporting period are attached to this report (**Appendix A**) for reference.

Table 3 – Gungahlin Strategic Assessment Commitments – Status

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
1	Variation to the Territory Plan and amendment to the National Capital Plan for all proposed land use changes (including creation of Nature Reserves) in accordance with the Plan.	EPSDD/NCA	<p>Timing for the establishment of nature reserves is linked to relevant development activities.</p> <p>The Development Application for stage 1 of the Jacka 2 estate was publicly notified in June 2020. Subject to planning approvals, construction of the estate is scheduled to commence in 2021. The masterplan for this estate includes formalisation of the existing wetlands in the south and the future hills, ridges and buffer zones to the north.</p> <p>Approximately 95% of the proposed developable area within Taylor has been released with the remainder scheduled for release in 2021-22, in accordance with draft Indicative Land Release Program.</p>	<p>All nature reserves and offset areas, with the exception of Kenny, were established under Territory Plan Variation 319 in November 2014.</p> <p>The process to establish the Nadjung Mada Nature Reserve is currently underway. Please see commitment item 21 below for details</p> <p>Other land use changes have been and will continue to be uplifted after relevant estate development plans (EDP) are approved.</p>
3	Provide documented guidance on the development of concept plans to ensure appropriate land use planning for areas adjacent to MNES habitat and associated buffers for all urban development including specific consideration of the estate design/layout. This is inclusive of requirements for Asset Protection Zones (APZ) between the buffer zone and any residential development.	PIT	<p>Concept plans or similar planning documents (structure plans or planning and design frameworks) may not be required for all suburbs.</p> <p>Guidance documents have been prepared for Throsby, Taylor and Moncrieff. Due to the progress development lifecycle stage of these developments, there is limited need or scope for changes to the strategic plans and frameworks.</p> <p>Land release in Moncrieff and Taylor is very close to being finalised, with the final residential land released in Throsby during 2020-21.</p> <p>Guidance documents for Kenny will be prepared as required.</p>	<p>Ongoing.</p> <p>This will occur prior to lodgement of EDPs for each suburb. The specific timing will be determined as required by each development area.</p>
4	Review and update Land Management Agreements (LMA) or management plans for all avoided areas of NUZ3 – Hills, Ridges and Buffers to ensure consistency with, and application of commitments of the Plan. As a part of this action, baseline condition assessment of all avoided areas including NUZ3 will be undertaken and LMAs will include conditions for compliance and enforcement.	EPSDD	<p>Negotiations for review and update of LMAs occurs where necessary between EPSDD and rural lease holders. The LMA for the leased area of the Kenny offset site is no longer required as the lease was withdrawn during 2020-21. This land is now under the custodianship and management of PCS.</p> <p>One LMA that applies to Kinlyside Nature Reserve is up to date, the second is currently being reviewed and negotiated.</p> <p>Agistment licences for all areas where stock is required are managed by PCS.</p> <p>Licences have been prepared under section 273 of the <i>Nature Conservation Act 2014</i> to enable rural lease holders to undertake various land management activities in avoided hills, ridges and buffer zones (NUZ3).</p> <p>Baseline assessment of areas has been completed in accordance with commitment items 13 and 14.</p>	Ongoing.
5	Implement cat containment policy in all urban development areas.	TCCS	<p>The following GSA suburbs were declared cat containment areas under the <i>Domestic Animals Act 2000</i>: Bonner, Crace, Forde, Gungahlin Town Centre east, Jacka, Moncrief, Taylor and Throsby.</p> <p>In 2021, the Cat Plan 2021-2031 was released. The Cat Plan sets a number of strategies and actions to guide the management of cats in the ACT. Implementation of the plan and the associated strategies will be guided by the ACT Cat Plan Implementation Plan.</p>	<p>Complete for all suburbs except Kenny where development has not commenced.</p> <p>See DI2019-33</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
9	Develop a Reserve Management Plan for all new nature reserves in order to provide for adaptive management and condition improvement of the reserve in accordance with the objectives and commitments of the Plan.	EPSDD	<p>Completion of reserve management plans (or Offset Management Plans), and this commitment requires the creation of Nadjung Mada Nature Reserve, at Kenny. It is expected that the Territory Plan Variation to create the reserve will formally commence in the second half of 2021. See commitment item 21 below for details.</p> <p>Offset Management Plans (OMPs) and the supporting habitat improvement plans are published on the Environmental Offsets Register:</p> <ul style="list-style-type: none"> • Kinlyside OMP 2015 • Throsby and Kenny broad acre OMP 2015 • Box Gum Woodland and Derived Native Grassland Condition Improvement Plan 2015 • Golden Sun Moth Habitat Improvement Plan 2015 • Striped Legless Lizard Habitat Improvement Plan 2015 • Superb Parrot Habitat Improvement Plan 2015 <p>Please note that reserve management plans for existing nature reserves are expected to evolve over time and OMP reviews will be conducted when required.</p>	<p>Kinlyside: The OMP review process is likely to commence during 2021-22, with a draft submitted to the Commonwealth during 2022-23.</p> <p>Throsby: The OMP review process has commenced and is in its early stages. The draft OMP is expected to be submitted to the Commonwealth in 2021-22.</p> <p>Nadjung Mada Nature Reserve: The initial OMP is currently being drafted, with a draft expected to be submitted to the Commonwealth in 2021-22.</p>
11a	Review and approve (subject to compliance with the Plan) Construction Environment Management Plans (CEMP) submitted for all new construction projects within the area subject to the Plan.	PIT	<p>CEMPs are required to be submitted and approved prior to the commencement of construction in development and conservation areas in the Plan.</p> <p>In 2020-21, one CEMP was submitted (for the Taylor 2 Stage 2C development) and is currently still undergoing review to ensure compliance with the GSA biodiversity plan and the approved framework for CEMP's.</p>	Ongoing.
12	Coordinate with TaMS – Asset Acceptance to ensure all obligations of contractors with respect to management of MNES in accordance with the Plan have been implemented prior to hand-over of assets to the Territory.	PIT	<p>Prior to practical completion of each development contract. TCCS (formerly TaMS) will engage with the appropriate persons within their Directorate to ensure this requirement is achieved.</p> <p>All development applications (DA), including EDPs in the GSA are referred to the Impact Assessment team to ensure compliance with the Plan. Conditions are placed in DA and EDP approvals to ensure obligations with respect to management of MNES during construction are implemented.</p>	Ongoing.

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
14	Ongoing collection of key ecological information for monitoring and reporting requirements.	EPSDD	<p><u>Golden Sun Moth (GSM)</u></p> <p>GSM habitat condition monitoring was undertaken at all offset sites in 2018, 2019, and in 2020. GSM population monitoring was undertaken in 2018, 2019 and 2020 flying seasons (October-December) at Kinlyside, Throsby North and Throsby East. 2020 was the last year of baseline data collection for all monitoring sites. Future results will be compared to the baseline to determine any ecological changes brought on by management actions or variability in climatic conditions.</p> <p>Kinlyside and Throsby North have been monitored annually for GSM population since 2015, while Throsby East was monitored in 2016, 2018, 2019 and 2020. Preliminary results show that GSM at Throsby North has increased in distribution and abundance by 20% per year from 2015 to 2019, with the highest numbers recorded in 2019. There is no clear trend at Kinlyside, with fluctuations in numbers recorded each year since 2015. Kinlyside is the only site that showed a decrease from 2018 to 2019. Over the 2 years of GSM population monitoring at Throsby East, an increase in numbers was observed.</p> <p>All offset sites recorded a drop in GSM population and distribution in the 2020 survey year, likely due to the La Nina climate patterns causing conditions unsuitable for the emergence of adult moths.</p> <p>Although formal surveys of GSM are not a core requirement at Taylor and Horse Park North, they were conducted for the first time in October 2020. Small populations of GSM were confirmed in small areas of both offset areas. Future surveys are not currently scheduled for these sites.</p> <p>Comprehensive results are included in the Golden Sun Moth Monitoring and Mapping Reports published on the ACT Environmental Offsets Website:</p> <ul style="list-style-type: none"> • Throsby North GSM Population Monitoring and Habitat Mapping 2017 • Kinlyside GSM Population Monitoring and Habitat Mapping 2017 • Bonner, Throsby and Kinlyside - GSM Population Monitoring and Habitat Mapping 2016 • Bonner, Throsby and Kinlyside - GSM Population and Habitat Monitoring Program Report 2015 • Throsby East GSM Habitat Mapping 2017 (1.5 MB) • GSM population and habitat monitoring report 2015 <p>Results of the 2018-19 and 2019-20 GSM studies are expected to be published online on the ACT Environmental Offsets Register in the third quarter of 2021.</p>	<p>Ongoing.</p> <p>GSM population monitoring occurred during breeding season in 2018-19, 2019-20 and 2020-21 across all offset sites.</p> <p>Future GSM population monitoring is scheduled to be undertaken in the breeding season of 2023 and 2026. However, pending resourcing and availability, long-term monitoring sites (Kinlyside and Throsby North) may also be surveyed for GSM population between these years.</p> <p>GSM habitat condition monitoring for all offset sites was completed in 2018-19, 2019-20 and 2020-21.</p> <p>Future GSM habitat condition monitoring is scheduled to be undertaken in the breeding season of 2023 and 2026. Incidental habitat condition monitoring will also be undertaken during annual herbage mass surveys of these sites.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
			<p><u>Superb Parrot</u> Superb parrot breeding was monitored at the Throsby East and Throsby North offset sites in the spring and summer of 2020.</p> <p>Fifteen (15) superb parrot nests were located on the Throsby East offset site. In total, superb parrots raised 51 young on the Throsby offset site in 2020. These findings are very similar to previous years and represents a marginal increase in breeding output compared to the pre-development baseline (2015).</p> <p>Superb Parrot Monitoring Reports (technical and annual) are published on the ACT Environmental Offsets Website:</p> <ul style="list-style-type: none"> • Breeding ecology of the Superb Parrot (Polytelis swainsonii) in northern Canberra: Nest monitoring report 2016 • Breeding ecology of the Superb Parrot (Polytelis swainsonii) in northern Canberra: Nest monitoring report 2015 <p>The annual reports from 2017-2020 are expected to be published online on the ACT Environmental Offsets Register in the third quarter of 2021.</p>	<p>Ongoing.</p> <p>Superb parrot monitoring completed:</p> <p>Sep 2015 – Feb 2016 Sep 2016 – Feb 2017 Sep 2017 – Feb 2018 Sep 2018 – Feb 2019 Sep 2019 – Feb 2020 Sep 2020 – Feb 2021</p> <p>Superb parrot monitoring to continue in Spring 2021.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
			<p><u>Box Gum Woodland (BGW)</u></p> <p>BGW condition, floristics and understorey structure were monitored across the GSA offset sites (Horse Park North, Nadjung Mada, Kenny broad acre, Kinlyside, Taylor, Throsby East and Throsby North) during 2018-19, 2019-20 and 2020-21. 2020-21 is the last year of baseline data collection. Future results will be compared to the baseline to determine any ecological changes brought on by management actions or variability in climatic conditions.</p> <p>Preliminary results show that in 2018 and 2019, the native plant species richness on average fell below the benchmark of 35 and Floristic Value Score (FVS) was below benchmark of 37 for all sites. However, following favourable conditions in spring 2020, the BGW in Kinlyside, Taylor and Horse Park North was recorded above benchmark FVS.</p> <p>In both 2018 and 2019, BGW mapped areas met the benchmark of above 50% native ground cover, except for Throsby East, which was 45% native ground cover in 2019. However, in 2020, BGW areas fell below the benchmark of 50% native ground cover – most likely due to the wet seasonal conditions favouring exotic species.</p> <p>All GSA offset sites were below benchmark for coarse woody debris, with the exception of Kenny broad acre, Throsby East and Taylor. All GSA offset sites except for Kenny broad acre, were also below the benchmark for the number of mature trees. Kenny broad acre recorded the highest number of mature trees of all woodland offset sites and was well above benchmark.</p> <p>Across all three survey periods, weeds were deemed to be a threat at all offset sites. However, the density of weeds has fluctuated with ground management response and seasonal conditions. The most recent results of BGW areas (spring 2020) recorded high density of Serrated Tussock, at the Kinlyside and Nadjung Mada nature reserves, Patterson’s Curse at the Kinlyside and Nadjung Mada nature reserves and Throsby North, Saffron thistle at Kinlyside and Taylor, and St. John’s Wort at Kinlyside, Taylor and Throsby North.</p> <p>In terms of woodland condition overall, preliminary results show that across the GSA sites, Horse Park North appears to be the best quality site, followed by Taylor and Kinlyside. Comprehensive results will be published in the Environmental Offsets Ecological Monitoring Program Reports.</p> <p>Box-Gum Woodland Monitoring and Mapping Reports are published on the ACT Environmental Offsets Register and Website:</p> <ul style="list-style-type: none"> • ACT Box-Gum Woodland Offset Monitoring 2016 • Woodland Quality and Extent Mapping 2017 • Grassland Quality and Extent Mapping 2017 <p>Results of the BGW studies since 2018 are expected to be published online on the ACT Environmental Offsets Register in the third quarter of 2021.</p>	<p>Ongoing.</p> <p>BGW condition monitoring via floristic surveys and herbage mass analysis were undertaken in 2018-19, 2019-20 and 2020-21.</p> <p>Vegetation condition in the form of herbage mass and weed density surveys will continue annually across all GSA sites.</p>
			<p><u>Pink-tailed Worm-lizard (PTWL)</u></p> <p>The PTWL is not a MNES with commitment targets in the Plan. Notwithstanding this, data is being collected on the habitat of this species to inform land management planning and operations.</p> <p>The extent of potential low, moderate and high quality PTWL habitat was mapped within Kinlyside in November 2016. 25 ha of potential moderate and high quality PTWL habitat was described. Remapping of PTWL habitat will take place in 2024.</p> <p>Population monitoring will not take place until a less invasive method is established. Results of this study may be published on the EPSDD website.</p>	<p>N/A.</p> <p>Remapping for PTWL is scheduled for 2024.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
			<p><u>Woodland birds</u></p> <p>Woodland bird monitoring is not a core requirement of the GSA. However, woodland birds are monitored as part the woodland bird monitoring program at Horse Park North, Taylor, Throsby North, Throsby East and Kenny. Woodland bird monitoring is undertaken by Canberra Ornithologist Group at Kinlyside using the same methodology. This monitoring is consistently undertaken seasonally, including in 2018, 2019, 2020, the Autumn of 2021 (Horse Park North, Kenny, and Taylor), and will be completed in Winter of 2022 (Throsby North and Throsby East). The results will be published in the Environmental Offsets Ecological Monitoring Program Reports.</p> <p>Preliminary results of these surveys indicate that Horsepark North, Taylor and Throsby North host the highest number of native bird species richness, with Horse Park North recording over 51 native bird species. The density of the native pest species, Noisy Miner is considered to be above threshold at Kenny and Throsby North.</p>	<p>N/A.</p> <p>Woodland bird monitoring is scheduled to continue in the Winter of 2022.</p>
15	<p>Any action that results in a breach of commitments of the Plan and adversely affects MNES values will be investigated and reported to DoE with identified recommendations for rectification, remediation or additional compensation.</p> <p>Remedial actions or additional compensation will be undertaken for controllable or avoidable actions which lead to a decline in MNES values with respect to the stated outcomes of the Plan.</p>	PIT	<p>In response to the Audit Report (commitment 19) and internal review (commitment 17), a new procedure to report potential breaches of the GSA was implemented. In 2019-20 the procedure was updated to reflect lessons learnt and to ensure practical outcomes. It sets responsibilities and timeframes for reporting, investigations and communication with relevant GSA stakeholders and the Commonwealth.</p> <p>Monitoring in recent years at Kinlyside and Kenny indicates potential long-term decline of some MNES, including BGW, GSM habitat and SLL, resulting in a potential breach of the Plan. In August 2020, the ACT Government reported this to the Commonwealth to advise the factors contributing to potential long-term decline and the Territory's management strategy to address this issue. The Commonwealth supported the Territory's proposed management strategy.</p> <p>Further details are provided below.</p>	<p>Ongoing.</p> <p>Breaches will be investigated and GSA stakeholders (DAWE, PIT, EPSDD) will be notified according to agreed timeframes.</p> <p>Monitoring of Kenny and Kinlyside will continue with ongoing site management and planning activities expected to help reduce further decline in MNES at these sites.</p>
16	<p>Prepare and submit Annual Reports (n=20). Highlighting the implementation of the actions and relevant conservation outcomes for MNES. All reports, in addition to any research related to the Plan will be published on the internet in a central location.</p>	PIT	<p>The 2019-20 Annual Report was submitted to Commonwealth on 31 August 2020.</p> <p>This report represents the 2020-21 Annual Report.</p> <p>All Annual Reports are published on the Environmental Offsets Register:</p> <ul style="list-style-type: none"> • Gungahlin Strategic Assessment Annual Report 2019-20 • Gungahlin Strategic Assessment Annual Report 2018-19 • Gungahlin Strategic Assessment Annual Report 2017-18 • Gungahlin Strategic Assessment Annual Report 2016-17 • Gungahlin Strategic Assessment Annual Report 2015-16 • Gungahlin Strategic Assessment Annual Report 2014-15 • Gungahlin Strategic Assessment Annual Report 2013-14 	<p>Ongoing.</p> <p>Annual reports are due within 2 months of the end of the financial year (31 August) each year until 2033.</p>
17	<p>Prepare and submit Plan Review Report (n=5). The final Plan Review Report will include a summarised synthesis of all knowledge gained over the life of the Plan in order that it represent a complete description of actions taken under the Plan, requirements for ongoing management and opportunities for future enhancement beyond the life of the Plan.</p>	PIT	<p>Plan Review Reports are scheduled every fourth year from endorsement of the Plan (within 6 months of the end of financial year) until 30 August 2033.</p> <p>The Plan Review Report was last prepared September 2018.</p> <p>This commitment item is not applicable for 2020-21 period.</p>	<p>Ongoing.</p> <p>The next Plan Review Report is due in August 2022.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
18	Engage a third party (outside of the PIT membership or working group) to undertake an annual audit of financial management under the Plan. Findings of the audit are to be included in the annual report.	PIT	Financial audits are undertaken by EPSDD Strategic Finance. Findings of the 2020-21 audit are displayed in Table 4 below.	Ongoing. These details are Included in Annual Reports, due 31 August each year until 2033.
19	Engage a third party to undertake an Independent Audit of the Plan's implementation (n=4).	PIT	The Independent Audit is a recurring commitment item due every five years. The Independent Audit of the Gungahlin Strategic Assessment was last prepared by the Office of the Commissioner for Sustainability and the Environment in November 2017. The next Independent Audit is due in 2022.	Ongoing. The next audit is due August 2022, thereafter every five years until 2033.
21	Creation of nature reserve in Kenny.	EPSDD	The Territory Plan Variation (Plan Variation 379) to rezone the land and formally establish the Kenny Nature Reserve commenced during 2020-21 and was approved by the Minister for Planning and Land Management on 2 August 2021. The Plan Variation is currently being presented to Legislative Assembly, where it is able to be disallowed. It is expected that the Plan Variation will formally commence in the second half of 2021, prior to construction commencing in Kenny, in line with the Plan.	The Territory Plan Variation to establish the Nadjung Mada Nature Reserve was approved on 2 August 2021. It is expected the Territory Plan Variation will formally commence in the second half of 2021, thereby completing this commitment.
22	Commence management of a nature reserve in Kenny (160 hectares). Created by the excision of rural Block 775 Gungahlin from future development potential.	EPSDD	As highlighted in commitments 4 and 15, the rural lease over the Kenny offset site was withdrawn in 2020-21 and PCS resumed management from March 2021. Land management activities conducted during 2020-21 included weed control (focused on invasive grasses, Serrated Tussock and African Love grass), slashing for access and fire breaks, soil contamination testing surrounding the stock yards, site heritage assessment, increased reserve security measures (assessment of fence conditions and locks on gates), reviewing fire fuel management strategies with ecological burning proposed during 2021-22, and removing grazing. A grazing management plan will be prepared during 2021-22. As outlined in commitment 9 above, an offset management plan for the Nadjung Mada Nature Reserve is currently being prepared and is expected to be submitted to the Commonwealth in 2021-22.	Land management from PCS commenced March 2021. This commitment will be complete during 2021-22 following formal commencement of the Territory Plan Variation (see commitment 21) and submission of the OMP to the Commonwealth.

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
26	Improvement in the under-storey diversity of 104 hectares of box gum woodlands that presently do not meet the definition of the listed community. Areas subject to this action will include those that are presently in nature reserves in addition to areas that will become nature reserve as a result of implementing the Plan.	EPSDD in consultation with the PIT	<p>This is described in the relevant Habitat Improvement Plan and is required to be completed within 20 years of endorsement of the Plan.</p> <p>Updated BGW mapping undertaken across GSA offset sites in 2017 continues to inform MNES improvement planning and baseline for future activities. Restoration zone map and spatial tool with site specific attributes has been delivered by the offsets planning and monitoring teams. These tools have assisted in informing targeted operational planning and implementation to maintain or improve BGW under-storey towards meeting definition of listed community. This will help achieve restoration in BGW understorey diversity by more accurately reflecting the baseline from which habitat improvement and restoration plans can be established, implemented, and evaluated.</p> <p>Activities to improve understorey diversity in 2020-21 included:</p> <ul style="list-style-type: none"> • Placement of heavy-duty tree guards around individual naturally regenerating native eucalypt to protect from grazing pressure (guided by identified restoration zone map); • Managing macropod grazing pressure annually in line with the ACT herbage mass guidelines; • Intensive monitoring and eradication of rabbits (no rabbits have been detected in the offset areas in 2020-21); • Development of a fox eradication program; • Continuation of the invasive plant operational program, including the treatment of several weed species such as Serrated Tussock, African Love Grass, and St John's Wort; • Slashing and spraying Phalaris at strategic locations to encourage eucalyptus, native grass, and forb regeneration; • Closure of vehicle tracks using fallen timber and seed for regeneration and restoration; and • Removal of old stock fences to permit better landscape management. 	<p>Ongoing.</p> <p>Follow-up vegetation monitoring of offset sites was undertaken again in spring 2020. This information will be published online on the Offsets Register in the Environmental Offsets Monitoring reports for each offset area. Herbage mass and weed density monitoring will continue annually at all sites.</p> <p>Use of updated BGW mapping to inform improvement activities was undertaken in 2020-21 and will continue into 2021-22.</p>
28	<p>Fire hazard management strategies that include specific considerations for:</p> <ul style="list-style-type: none"> • box gum woodland • golden sun moth • striped legless lizard • superb parrot 	EPSDD	<p>These are being developed for each reserve as ecological considerations are provided in the Strategic Bushfire Management Plan (ACT Gov).</p> <p>Specific bushfire management and mitigation measures are also outlined in the Regional Fire Management Plan which is being revised in consideration of the impacts of the Orroral Valley Bushfire. The 2019-2028 Regional Fire Management Plan is in a draft format and is expected to be finalised in the second half of 2021. This includes a review of the Fire Management Zones in the Taylor 3 approval development process, which is determined by ACT Emergency Services Agency.</p> <p>Annual bushfire work programs are outlined in the yearly-prepared Bushfire Operations Plans (BOPs) and these are published online along with the Regional Fire Management Plan and Fire Management Zones on ACTMapi.</p>	<p>Ongoing.</p> <p>The Fire Management Strategy for Taylor 3 is the most recent submitted.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
31	<p>Commence planning for implementation of focused research on superb parrot habitat requirements:</p> <ul style="list-style-type: none"> • Research focusing on nest site selection, nest site fidelity, fecundity, population dynamics and methods of reducing or eliminating nest hollow competition from aggressive native species or exotic pests such as common myna and European honeybee. • Assisted natural regeneration to facilitate future hollow formation will be undertaken in areas likely to be suitable as future nesting sites. • Removal of stock leading to a reduction in localised compaction and concentration of nutrients, improving long term tree survival. 	EPSDD	<p>Superb parrot numbers, breeding behaviour, nesting attempts and productivity are monitored at Throsby East and central Molonglo Valley. Analysis has commenced to compare nest survival and reproductive success across the two superb parrot breeding colonies.</p> <p>High nesting success displayed by superb parrots suggests that nest competition from other hollow-using fauna is not a threat that requires management intervention at this time. Ground-based bird surveys have been undertaken at the breeding area since 2017, and results will be analysed to assess change in competitor abundances. Competitor abundances and superb parrot nesting success should continue to be monitored annually at Throsby East.</p> <p>Detailed tree hollow data have been collected at Throsby East offset site and central Molonglo Valley, and analysed to characterise superb parrot nest preferences, and assess local-scale nest hollow availability. Preliminary results indicate availability of suitable superb parrot nest hollows is very low.</p> <p>Images from camera traps located at active superb parrot nests are collected and analysed through the online citizen science platform Digivol, and this work is ongoing. Evidence of egg destruction by Starlings, and predation of chicks by Brown Goshawk and probably Kookaburra, were collected.</p> <p>Species Distribution Models have been built for the superb parrot based on research outcomes (monitoring and tracking data) and these models will be used for strategic planning of habitat improvement, including assisted natural regeneration, for the species.</p> <p>Grazing stock is being managed to prevent compaction and concentration of nutrients under nesting trees.</p> <p>Birds continue to breed successfully and raise chicks at pre-development levels.</p> <p>Research into superb parrot habitat selection, resource use and nest hollow competition continues.</p> <p>Further details are included in the Superb Parrot Habitat Improvement Plan. Superb Parrot Monitoring Reports (technical and annual) are also published on the Environmental Offsets Website:</p> <ul style="list-style-type: none"> • Breeding ecology of the Superb Parrot (Polytelis swainsonii) in northern Canberra: Nest monitoring report 2016 • Breeding ecology of the Superb Parrot (Polytelis swainsonii) in northern Canberra: Nest monitoring report 2015 	<p>Ongoing.</p> <p>2013-14: 20 June 2014 2014-15: Planning / Underway 2015-16: Research objectives met 2016-17: Research objectives met 2017-18: Research objectives met 2018-19: Research objectives met 2019-20: Research objectives met 2020-21: Research objectives met</p> <p>Research Evaluation Report to be drafted within the 2021-22 financial year.</p>
32	<p>Research golden sun moth habitat requirements:</p> <ul style="list-style-type: none"> • may include research into translocation of golden sun moths • fragmentation and proximity to urban areas 	EPSDD	<p>Addressed in the Habitat Improvement Plan for this MNES.</p> <p>A copy of the final report on research into Golden Sun Moth Translocation (Kinlyside Golden Sun Moth Translocation Monitoring 2018) based on research to date is published on the offsets register.</p> <p>Golden Sun Moth Monitoring and Mapping Reports are published on the Environmental Offsets Website:</p> <ul style="list-style-type: none"> • Throsby North GSM Population Monitoring and Habitat Mapping 2017 • Kinlyside GSM Population Monitoring and Habitat Mapping 2017 • Bonner, Throsby and Kinlyside - GSM Population Monitoring and Habitat Mapping 2016 • Bonner, Throsby and Kinlyside - GSM Population and Habitat Monitoring Program Report 2015 • Throsby East GSM Habitat Mapping 2017 • GSM population and habitat monitoring report 2015 	Complete.

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
33	Undertake control programs of ruderal species.	EPSDD	<p>PCS previously engaged the services of the Canberra Indian Myna Action Group in 2017 to assist with monitoring and management of Indian Myna's on the edge of Throsby, where they came into competition with superb parrots. This group is no longer engaged as this task has been deemed unnecessary by PCS ecologists.</p> <p>High nesting success displayed by Superb Parrots suggests that nest competition from other hollow-using fauna (including Indian Myna's and Common Starlings) is not a threat that requires management intervention at this time. Competitor abundances and Superb Parrot nesting success will continue to be monitored at GSA sites. Please refer to commitment item 31 for further details.</p>	Ongoing.
34	Undertake salvage and relocation of structural habitat elements such as rocks and logs.	Contractors	<p>Woody debris placement in BGW and tree snag relocation was completed in past years.</p> <p>Additional woody debris for Taylor was scheduled during the 2020-21 financial year, however the project was interrupted by rainfall. The project will continue pending suitable site conditions.</p> <p>Dam enhancement has been a focus for restoration partly due to retained soil moisture at some sites. Rocks and coarse woody debris have been placed in and at four dams to improve habitat, particularly for frogs.</p> <p>Woody debris is monitored in woodland plots and will be reported in the Environmental Offsets Monitoring Report which will be published on the ACT Offsets Register.</p>	Ongoing.
36	Undertake all bushfire management activities in line with ACT Government's Ecological Guidelines for Fuel and Fire Management Operations.	EPSDD	Perimeter and fire trail slashing is undertaken on an annual basis as required. Herbage mass is also managed in some locations using grazing. Plantings are maintained as required.	Ongoing.
37	The formula for funding set out in Table 5.3 over the 20-year life of the Plan will be implemented.	PIT	The formula for funding was implemented upon endorsement of the Plan and approval of the class of actions permitting urban development of Gungahlin.	Ongoing.
38	Review the funding arrangements to ensure the Plan commitments are being met in the event of total expenditure variations of more than 5 per cent over the 20-year period (+/- \$1.325million).	PIT	<p>This is reviewed as part of the Plan Review Process.</p> <p>The Plan Review Report is a reoccurring commitment item due every four years. The Plan Review Report was last prepared in 2018. This commitment item is not applicable for the 2020-21 reporting period.</p>	<p>Ongoing.</p> <p>Plan Review Reports are scheduled every fourth year from endorsement of the Plan (within 6 months of the end of financial year) until 30 August 2033.</p>

Independent Audit

The Commissioner for Sustainability and the Environment completed the first independent audit of the Gungahlin Strategic Assessment NES Plan in November 2017.

The audit found that the majority of the commitments, a total of 19 (five with observations), were compliant. A total of 13 commitments were not compliant, five of which were identified as high risk.

Areas of non-compliance resulted largely from delays in timely delivery and implementation of the commitments across government agencies. Five corrective actions were issued for high risk items to ensure commitments are met.

All of the corrective actions have been completed. EPSDD continues to work with relevant entities on improvements to the strategic assessment process and recording procedures as recommended by the independent audit and the Plan Review Report.

The next Independent Audit is due August 2022.

Plan Review Report

The Plan requires a Plan Review Report (the Report) to be prepared every four years from endorsement of the Plan. The Gungahlin Plan Review Report was completed in September 2018.

The Report provides findings on actions undertaken, improvements to MNES, legislation and policy changes, and knowledge gained from June 2013 to June 2018. The Report also considers issues and challenges that have arisen and opportunities for improvements to deliver the Plan.

This was the first Report over the 20-year timeframe of the GSA. There was limited information available to comment on all commitments when the first Report was prepared. It is anticipated that as the GSA progresses and more information on the delivery of commitments becomes available this information will be captured in future Plan Review Reports.

The Report concludes with a number of recommendations for improving the delivery of commitments in the future, and the ACT Government will continue to work with the Commonwealth Government to deliver these recommendations.

The next Plan Review Report is due December 2021.

Financial Reporting

The majority of work during the 2020-21 financial year has been undertaken by ACT Government employees as a direct allocation through three ACT Government budget initiatives:

- Enhancing the Protection of Endangered Species and Habitat (2015-16)
- Caring for our environment – Improving species and habitat protection (2016-17)
- Protecting grassland and conservation areas (2019-20; Capital investment only)

These initiatives have committed funding for the continued management of MNES in Throsby North, Throsby East, Kenny broad acre, Kinlyside Nature Reserve and the Nadjung Mada Nature Reserve. These initiatives also fund other offset sites in the ACT Government offset program, and funding is allocated between the sites as appropriate.

The ACT Government also provided 6 months' worth of funding through a fourth budget initiative – 'Delivering Environmental Offsets' (2020-21). This initiative was delivered mid-year to provide interim support for offset delivery through the creation of two additional ranger positions and the extension of a third, established ranger position. These positions contributed heavily to the management of GSA offset sites, including pre-establishment land management work for Nadjung Mada Nature Reserve.

Table 3 below compares the funding expenditure estimated in the Plan to the actual spend amount in 2020-21. Any differences between these figures are primarily due to changes in land management requirements and identified cost savings. Further, the increased rainfall in the 2020-21 financial year reduced the ability of PCS to conduct certain management activities, which altered spending patterns.

Funding amounts provided in Table 3 below includes capital and recurrent expenditure over the 2020-21 financial year. In previous years, capital expenditure was recorded by site while recurrent expenditure was not. This meant the expenditure reported included both site-specific costs and general costs such as vehicle running costs, machinery leases, equipment and uniforms. During 2020-21, EPSDD and PCS commenced discussions to improve the tracking of recurrent expenditure by offset site – these improvement activities are ongoing

Despite this initiative, it is noted that discrepancies remain between the Financial Reporting (see table 3) section and the Financial Audit (see table 4) section which was provided separately by EPSDD Strategic Finance. Improvement activities are ongoing and will continue into 2021-22 to address these discrepancies.

Table 3 Comparison of estimated expenditure between the Plan and 2019-20 expenditure

Offset Sites	Funding Secured (financial year)	Estimated expenditure in the Plan for 2020-21 (Table 5.3 of the Plan)	Estimated funding spent in 2020-21	Comments
Direct Offsets				
Mulligans/ Goorooyarroo offset sites (incorporating Kenny broad acre, Throsby North and Throsby East)	2015-16	\$296,850.91	\$72,437.84	<p>These sites are in the “ongoing management” phase.</p> <p>In 2020-21, there were some delays to contracts that saw reduced spending on this site. However, all obligations and management objectives were achieved.</p> <p>The original budget estimate also included costs to undertake works that are no longer required. This included large costs estimated for Throsby East to rehabilitate potentially contaminated land. Subsequent investigations determined that this was not needed.</p>
Kinlyside	2015-16	\$0	\$87,991.71	<p>This site is in the “ongoing management” phase.</p> <p>The original budget in the Plan assumed that land management costs for Kinlyside would be able to be met by the rural leaseholders. The ACT Government has recognised that additional funding and land management activities by PCS are required to aid rural leaseholders in maintaining the MNES values on the land to meet the Plan’s commitments. This includes activities required to deliver on the approved Habitat Improvement Plans, as well as other works to improve site condition (e.g. gully erosion abatement).</p> <p>This approach is consistent with the ACT Environmental Offsets Policy and the ACT Environmental Offsets Policy Delivery Framework.</p>
Jacka, Taylor and Horse Park North	2016-17	\$110,300.40	\$62,642.67	<p>These sites are now in the “ongoing management” phase.</p> <p>As with other GSA offset sites, the reduced spend during 2020-21 was generally due to reduced ability to achieve objectives due to wet weather.</p>

Offset Sites	Funding Secured (financial year)	Estimated expenditure in the Plan for 2020-21 (Table 5.3 of the Plan)	Estimated funding spent in 2020-21	Comments
Kenny	2019-20 2020-21	\$152,707.45 (based on 3 months management time)	\$48,635.39	This site has just begun its “reserve establishment” phase. This estimated amount does not reflect true costs The funding provided in 2020-21 was to support pre-establishment of the Nadjung Mada Nature Reserve. Funding was allocated to short term ranger contracts and a small amount of operational work. PCS have requested ongoing funding in 2021-22 to fully establish the reserve.
Staff	2015-16 2016-17 2019-20	\$451,246.18	\$ 1.1M	Estimated funding accounts is for both on-ground staff and additional staff required to enable effective management of avoided and offset areas, for example administration, coordination, planning, research, and monitoring of the offsets program. The estimated expenditure from the GSA plan only included an estimated cost for on-ground staff.
Indirect Offsets				
Research	2015-16 2016-17	\$99,999.24	\$57,078	Research funding for 2020-21 has been expended on intensive research into Superb Parrot breeding and habitat use to meet Plan commitments – see commitment items for details. Differences in amount spent and original estimates are due to no other research projects being active in this financial year and funds being spent only when necessary. Future research projects will be developed to meet relevant commitments as required.
Other Costs				
Non-site-specific costs	2015-16 2016-17	\$0	\$26,156.69	Non-site-specific costs that have been calculated across the GSA offset sites and are not attributable to one site. Includes equipment and training, office accommodation, fuel, uniforms and more.

Financial summary

Table 4 below is a financial summary was prepared by EPSDD Strategic Finance for expenditure spent in the Gungahlin Strategic Assessment offset areas for 2020-21.

Table 4: Financial Summary

Throsby	
Fencing	9,079.43
Consumables	102.84
Managing herbage mass	2,600.00
Weeds	570.00
Tools, Equipment	35.45
Restoration, Revegetation	2,100.12
Consultant, Contractors	57,950.00
Total	72,437.84

Kinlyside	
Managing herbage mass	1,320.00
Lessee payment	2,327.27
Weeds	12,912.53
Infrastructure	6,320.00
Consultant, Contractors	47,722.72
Consumables	8,039.81
Lessee Payments	9,349.38
Total	87,991.71

Jacka, Taylor, HPN	
Restoration, Revegetation	10,745.59
Weeds	19,481.66
Consumables	42,817.24
Total	73,044.49

Kenny	
Consumables	1,230.17
Consultant, Contractors	3,636.36
Tools, Equipment	12,127.08
Weeding	16,263.09
Restoration, Revegetation	5,300.00
Total	38,556.70

Projected 2021-22 Expenditure

Expenditure for 2021-22 will focus on continuing to deliver the relevant management actions previously identified in the individual offset management plans and delivering actions from the new Nadjung Mada Nature Reserve offset management plan, once approved.

Projected expenditure includes but is not limited to the following activities:

- Begin major establishment phase of the Nadjung Mada Nature Reserve, including conducting major invasive plant reduction programs, and planning for tracks, trails, reserve borders, and restoration (Commitments 21 and 22)
- Land management actions to be delivered in conjunction with leaseholders at Kinlyside (Commitments 9 and 23).
- Continued planning and work on targeted box gum woodlands restoration works (Commitment 26).
- Ongoing operational programs such as invasive weed and animal control across all offset sites (Commitments 24 and 25).
- Continue to deliver on the superb parrot research project (Commitment 31).
- Continue to deliver the relevant sections of the offsets monitoring program (Commitment 14).

It is expected (based on current budget allocations) that spend on GSA sites in the 2021-22 financial year will be approximately \$100,000 in capital funding, and \$800,000 in recurrent, non-employee funding. Employee costs, based on previous years, are expected to total approximately \$1-1.5M.

Future Funding

Due to the COVID-19 pandemic and associated economic impacts, the 2020-21 ACT Budget was delayed from the usual June release to February 2021. Similarly, the 2021-22 ACT Budget will not be released until 6 October 2021¹ (actual release may vary, pending revisions to the sitting schedule of the ACT Legislative Assembly in response to the COVID-19 lockdown).

As previous budgets were released in June greater certainty about future funding was able to be reported. Despite this, GSA funding includes a recurrent budget (ongoing), which provides on-going funding from year five (2017-18) and beyond.

Currently, the GSA offset sites are funded by multiple separate business cases, which also include funds to manage other PCS managed offset sites. The total amount of recurrent funds secured within these business cases is estimated at \$3.017M per annum. The total amount of capital funds secured within these business cases for 2021-22 is \$310,000, of which, it is estimated that \$100,000 will fund expenditure in GSA offset sites in 2021-22.

While the current level of on-going recurrent funding is expected to continue to be provided to manage GSA sites, further capital and recurrent funding is being sought to secure funds to manage the Kenny offset site. Although the details of this funding allocation won't be known until the 2021-22 ACT Budget is released at the end of August 2021, it is estimated that up to a further \$180,000 of capital and \$90,000 of recurrent funding will be injected for the establishment of the nature reserve in Kenny, with further capital and recurrent funding to follow in later years.

With the combination of these funds, the ACT Government is committed to fulfil commitments of the Plan.

¹ Andrew Barr MLA, ACT Chief Minister and Treasurer. Chief Minister and Treasurer's Message. <https://www.budgetconsultation.act.gov.au/chief-minister-and-treasurers-message>

Areas of Non-Compliance

There were no non-compliance events reported during 2020-21.

As reported in the 2019-20 Annual Report, potential long-term decline of MNES has been monitored for several years in Kenny and Kinlyside, this continued during the 2020-21 reporting period. **Table 5** below provides a detailed update on the activities undertaken during 2020-21.

Table 5: potential long-term decline

Item	Potential non-compliance matter	Comment
<p>Commitment 15</p> <p>Any action that results in a breach of commitments of the Plan and adversely affects MNES values will be investigated and reported to DAWE with identified recommendations for rectification, remediation or additional compensation.</p> <p>Remedial actions or additional compensation will be undertaken for controllable or avoidable actions which lead to a decline in MNES values with respect to the stated outcomes of the Plan.</p>	<p>Long term decline in MNES values</p> <ul style="list-style-type: none"> • Kinlyside Nature Reserve (box gum woodland and golden sun moth habitat) • Kenny future nature reserve (striped legless lizard and box gum woodland) 	<p>During 2020-21, the management strategies that were outlined in Kenny and Kinlyside Ecological Monitoring Reports were enacted.</p> <p>In particular, the rural lease over the Kenny offset site was withdrawn in March 2021 and the site has transitioned to PCS management. This has allowed grazing regimes to be better controlled and invasive plant control activities to be implemented. These measures, in addition to the above average rainfall, have assisted BGW and habitat quality for SLL. This has also resulted in a small increase in SLL captures in and around the site.</p> <p>Additionally, a SLL translocation plan is currently being prepared. This plan will aim to guide any translocation of individuals found in surrounding development areas into the Nadjung Mada Nature Reserve. Targeted SLL population and distribution surveys will continue in 2020-21 with small enclosures to be erected to house any translocated individuals.</p> <p>At Kinlyside, consultation was undertaken with the lease holder to reduce grazing pressure in sensitive and high-quality habitat areas. This measure, in combination with the above average rainfall, has resulted in the highest native plant richness recorded in the GSA. While the habitat structure in GSM areas is currently improving, it will take several years before recovery is apparent. Kangaroo management at the site is still under consideration, with careful deliberation given to the issues associated with the site's proximity to the suburban area.</p>



ACT
Government

Environment, Planning and
Sustainable Development

Gungahlin Strategic Assessment

Annual Report 2020-2021

Annual report for the Gungahlin Strategic Assessment and Biodiversity Plan for the period
1 July 2020 to 30 June 2021

Appendix A – completed commitments

Environment, Planning and Sustainable Development Directorate, ACT Government

August 2021

Completed commitments

Table 1 below describes completed commitments from the Plan.

Table 1 – Gungahlin Strategic Assessment Completed Commitments

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
2	Develop and submit to the Department of the Environment (DoE) for approval, the framework for investment in offsets, monitoring, reporting, adaptive management, compliance and enforcement. This will identify: <ul style="list-style-type: none"> a) indicative monitoring program for: <ul style="list-style-type: none"> i. all MNES affected by the Plan; ii. newly created nature reserves; iii. Land Management Agreements for avoidance areas on NUZ3 – Hills Ridges and Buffers; b) reporting requirements and frequency for: <ul style="list-style-type: none"> i. standard activities including monitoring, financial performance, measured outcomes; ii. reporting requirements for unanticipated or unapproved incidents. c) process for review, improvement, approval and incorporation of new procedures within an adaptive management framework; d) compliance and enforcement procedures associated with design, construction and operation phase activities. 	PIT	The framework for investment in offset management was approved by DoE on 2 November 2014. (DoE reference SA/20)	Complete.
6	Establishment of the 'Plan Implementation Team' (PIT); and Submission of initial / indicative team membership and charter to DoE for approval.	Whole of ACT Government	Establishment of PIT within 3 months of Plan endorsement Submission of Charter to DoE within 12 months of Plan endorsement.	Complete. PIT established on 17 January 2014. Charter submitted to DoE on 5 May 2014. Amended Charter was approved by DoE on 13 January 2017.
7	Establishment of a suitable mechanism to enable management of funds provided to the PIT for implementation of the Plan.	ACT Government	Funding to implement the actions as described in the Offset Management Plans was included in the 2016 ACT Government Budget.	Complete.
8	Develop and submit to DoE for approval a program of implementation of all of the commitments in the Plan.	PIT	The Program of Implementation was submitted on 11 May 2015.	Completed May 2015. The Program is reviewed and re-negotiated where necessary.
10	Develop amended Reserve Management Plans for existing reserves into which additional land is included as a result of the Plan in order to provide for adaptive management and condition improvement of the reserve in accordance with the objectives and commitments of the Plan.	EPSDD	The Mulligans Flat and Goorooyarroo Offset Management Plan is completed and was published on the ACT Environmental Offsets Register in May 2016.	Complete.

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
11	Develop and submit to DoE for approval, the framework for CEMPs for areas directly or indirectly affecting MNES. This shall include the monitoring, reporting and compliance requirements of: <ul style="list-style-type: none"> contractors undertaking physical works; and ACT Government officers or its representatives in auditing performance under the CEMP. 	PIT	Within 3 months of establishment of the PIT.	Completed on 20 December 2013
13	Collection of baseline ecological information for all new reserve areas.	PIT	Initial baseline information was collated and used to inform the Habitat/Condition Improvement Plans and Offset Management Plans. Full baseline ecological data for all GSA areas has been collected in 2018, 2019 and 2020 monitoring seasons, for all relevant MNES (excluding Superb Parrots) and associated metrics. Baselines will be established from these three-year, consecutive datasets and will be used for revised plans. Baselines for data for Superb Parrot include: a) Number of nest trees – data recorded in 2015, b) Abundance of competitors (post-Throsby development) for competitive pressure – data recorded in 2017, 2018 and 2019. Baseline data for all relevant MNES, including for Superb Parrots, will be published on the register in the ACT Environmental Offsets Register for each relevant offset area.	Complete. Superb Parrot baseline data collected 2015, and 2017-2019. All other MNES baseline data collected 2018-2020 (finalised in spring 2020).
20	Creation of new nature reserves in Kinlyside, Gorooyarroo and Mulligans Flat.	EPSDD	This has been completed through Territory Plan Variation No. 2014-501 , October 2014.	Completed October 2014 (TPV No. 2014-501).
23	Commence management of a nature reserve in Kinlyside (201 hectares) from the current extent of land in the RZ1 – Suburban zone under the Territory Plan in the location known as Kinlyside.	EPSDD	The nature reserve exceeds the stated 201 ha. The nature reserve is approximately 226 ha and the total area managed as an offset is 290 ha. The area is managed in accordance with the Kinlyside Offset Management Plan . This included negotiation of a services agreement with the existing leaseholder.	Complete. Management commenced in July 2015.
24	Commence management of additional 300 hectares to the Mulligan's Flat – Gorooyarroo nature reserve complex. Land to be excised from the future urban area of Throsby and the 'Kenny broad acre' area and managed for the protection of MNES.	EPSDD	Management of the extended Mulligans Flat and Gorooyarroo nature reserves commenced in July 2015. These areas are currently managed in accordance with the Canberra Nature Park Plan of Management 1999 (currently under review) and the Mulligans Flat and Gorooyarroo Reserves Offset Management Plan .	Complete. Management commenced in July 2015.
25	Commence management of additional 120 hectares to the north-western Hills, Ridges and Buffers zone from the urban areas of Taylor and Jacka in addition to the entire area of the north Horse Park broad acre area.	EPSDD	These sites have been under active PCS management since 2016-17 and will be the subject of ongoing management into the future.	Complete. Management commenced 2016-17.

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
27	Habitat improvement plans for: <ul style="list-style-type: none"> • box gum woodland (approx. 104 hectares of habitat) • golden sun moth (up to 140 hectares of habitat) • striped legless lizard (up to 111 hectares of habitat) • superb parrot 	EPSDD	<p>All habitat improvement plans are completed.</p> <p>The Striped legless lizard (SLL) habitat improvement plan (HIP) is currently under review. This includes updating the scientific and grey literature, translocation plans and processes, and updates for site improvement for SLL.</p> <p>The revised SLL HIP will be submitted to the Commonwealth with the Kenny (Nadjung Mada) Offset Management Plan 6 months from the start of construction in the Kenny region. The final SLL HIP will be published on the register.</p> <p>Other HIPs may be revised at a later date if deemed necessary.</p>	<p>Completed and published on the ACT Environmental Offsets Register March 2015.</p> <ul style="list-style-type: none"> • Box Gum Woodland and Derived Native Grassland Condition Improvement Plan 2015 • Golden Sun Moth Habitat Improvement Plan 2015 • Striped Legless Lizard Habitat Improvement Plan 2015 • Superb Parrot Habitat Improvement Plan 2015
29	Protect known superb parrot nesting trees including exclusion fencing of the interface between Throsby East Reserve and the future urban area to limit pedestrian access points.	EPSDD	<p>The Throsby EDP was approved in April 2016 including exclusion fencing to ensure that development activity did not impact on superb parrot nesting trees.</p> <p>A concept plan for the extended Mulligans Flat Sanctuary considers access, interpretation, education and recreation opportunities that are consistent with managing the values of MNES.</p> <p>The 12km predator proof fence for the Throsby boundary was constructed in 2018 with final completion of the fence in January 2019. All known superb parrot nest trees are protected within the Throsby East reserve.</p> <p>The Gorooyarroo section of the predator proof fence was constructed in 2018 and completed in 2019.</p> <p>The extended sanctuary predator proof fence design takes into consideration of restricted pedestrian access points on the urban interface.</p> <p>Construction of the Mulligans Flat Ecotourism Centre started June 2019 and continues (Commonwealth Government funded).</p>	<p>Complete (exclusion fence and predator proof fence).</p> <p>Ongoing monitoring of superb parrot nesting trees will be reported at Commitment Item 14 in future annual reports.</p> <p>Monitoring for the superb parrot was completed in this area. Superb parrots were first detected at Throsby East in September 2017 following the commencement of bird surveys (monitoring) earlier that month.</p> <p>There was no indication that the predator proof fence construction impacted superb parrot breeding.</p>
30	Establish educational resources including signage and guidelines for residents of east Throsby, including: <ul style="list-style-type: none"> • Description of ecological values and significance of the Mulligan's Flat – Gorooyarroo nature reserve complex; • No domestic animals in reserves; • Management of pest species along the urban edge. 	EPSDD	<p>Interpretation signs have been installed along the extended predator proof fence with educational information on the natural and cultural history, and ecological values of the area. Educational signage is located on three walking paths through the offset areas. There are also signs that advise the public not to enter the areas during the Superb Parrot breeding seasons</p>	<p>Complete.</p> <p>Educational signage and guidelines along the fence were installed in 2018-19. Interpretation signs for educational purposes were installed along walking paths within the reserve in 2018-19.</p>

Item	Commitment	Responsibility (from 1 July 2018)	Comment	Timing and Date
32	Research golden sun moth habitat requirements: <ul style="list-style-type: none"> may include research into translocation of golden sun moths fragmentation and proximity to urban areas 	EPSDD	Addressed in the Habitat Improvement Plan for this MNES. A copy of the final report on research into Golden Sun Moth Translocation (Kinlyside Golden Sun Moth Translocation Monitoring 2018) based on research to date is published on the offsets register. Golden Sun Moth Monitoring and Mapping Reports are published on the Environmental Offsets Website : <ul style="list-style-type: none"> Throsby North GSM Population Monitoring and Habitat Mapping 2017 Kinlyside GSM Population Monitoring and Habitat Mapping 2017 Bonner, Throsby and Kinlyside - GSM Population Monitoring and Habitat Mapping 2016 Bonner, Throsby and Kinlyside - GSM Population and Habitat Monitoring Program Report 2015 Throsby East GSM Habitat Mapping 2017 GSM population and habitat monitoring report 2015 	Complete
35	Undertake plantings to improve connectivity and wildlife movement along Gungaharra and Sullivan's creeks, targeting in particular superb parrot movement corridors.	EPSDD	Approximately 6000 plantings (tree, shrubs, and plants) were undertaken in 2017 to enhance connectivity and wildlife movement. Trees are growing well.	Complete. 6000 plantings were undertaken in 2017. These will be routinely monitored.