



Annual Compliance Report

Lawson South Residential Development (Jarramlee Offset Area) EPBC 2010/5549

01 July 2022 – 30 June 2023

August 2023

**Prepared by the Environment, Planning and Sustainable Development Directorate, on
behalf of the ACT Government**

This report demonstrates how the Suburban Land Agency (SLA, the proponent, previously known as the Land Development Agency), Transport Canberra and City Services (TCCS), and the ACT Parks and Conservation Service (PCS) have complied with the conditions in the approval decision for the Lawson South Residential Development (EPBC 2010/5549). This covers the 2022-2023 reporting period, from 01 July 2022 to 30 June 2023.

Overall responsibility for the approval conditions sits with the proponent. Specifically, for delivering each condition:

- SLA had responsibility for complying with conditions 1-12, 14, 15 and 21. Conditions 2-4, 12, 15 and 21 have been met. Responsibility for the remaining conditions was transferred to TCCS, as part of the transfer of management responsibility from SLA to TCCS for Reservoir Hill and the OAPZ on Commonwealth land, which commenced on 15 December 2017.
- TCCS is responsible for complying with conditions 7 and 10. In addition, TCCS has assumed responsibility for conditions 1, 5-11 and 14.
- PCS is responsible for complying with conditions 12 and 13.
- The SLA, TCCS, and PCS are jointly responsible for complying with conditions 16-20 and 22 in the approval decision.

In addition, this report also demonstrates how PCS has implemented the management plan for the Jarramlee environmental offset site on behalf of the SLA.

Declaration of Accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed:



Full Name: Daniel Iglesias

Position: Executive Branch Manager, City Presentation

Organisation: Transport Canberra and City Services Directorate

Date:

Signed:



Full Name: Irena Sharp

Position: Program Director, Urban Development

Organisation: Suburban Land Agency

Date: 17/08/2023



Full Name: Stephen Alegria

Position: Executive Branch Manager, ACT Parks and Conservation Service

Organisation: Environment, Planning and Sustainable Development Directorate







Date: 21/8/2023

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1. Location of the Jarramlee offset area



<p>EPBC 2010/5549</p> <ul style="list-style-type: none">  Offset Site  Associated Development  Nature Reserve  Avoidance Area  ACT Border 	<p>0.1 0.05 0 0.1 Km</p> <p>1:10,150 When printed at A4</p> <p>Coordinate System: GDA 1994 MGA Zone 55</p> <p>Prepared by: Environmental Offsets Team ACT Parks and Conservation Service Environmental Offsets PO Box 158 Canberra ACT 2601</p> <p>Printed: 14/07/2021</p>	 <p>© COPYRIGHT ACT Government 2021 All Rights Reserved</p> <p>Disclaimer: While all care is taken to ensure accuracy, the ACT Government does not warrant that the map is free from errors.</p> <p>Aerial Photography 2020</p>
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2. Compliance with conditions in EPBC Approval Decision 2010/5549 during the 2022-23 reporting period

Condition Number	Condition	Responsibility	Compliant / Non-compliant / Not applicable	Description
1	<p>All ground disturbed as a result of construction within the Inner Asset Protection Zone (IAPZ) and Golden Sun Moth (GSM) habitat within Reservoir Hill must be rehabilitated, by re-establishment of native grass species, no later than 30 days after completion of construction within the IAPZ and GSM habitat within Reservoir Hill. The reestablishment of native grass species must use at least three of the species <i>Austrodanthonia carphoides</i>, <i>Austrodanthonia eriantha</i>, <i>Bothriochola macra</i>, <i>Austrostipa bigeniculata</i>, <i>Themada Australia</i> and <i>Chrysocephalum apiculatum</i>, with no species seed forming more than 70% or less than 5% of the broadcasting seed mix and include retention of no less than 20% open ground cover.</p>	SLA and TCCS	Compliant	<p>The landscape construction works in Reservoir Hill are complete and the native grasses have been planted where disturbance has occurred. All ground within the IAPZ has been rehabilitated with native grass species nominated in the EPBC approval as part of the Stage 1 civil construction works.</p> <p>Stage 1 construction commenced 28 October 2015 and was completed 7 December 2017.</p> <p>Grass seeding began in April 2016 by Greening Australia following on from construction of pathways through Reservoir Hill.</p> <p>An investigation by the Department in 21-22 found that there was a breach to condition 1 with regards to “Total grams used for the re-seeding was 50,700g. However, 2000 grams of <i>Chloris truncata</i> and 1000 grams of <i>Austrostipa bigeniculata</i> were used, which is less than 5% of the total seed mix”. Due to the nature of the contravention and circumstances surrounding the breach, the Department decided to take no further compliance action regarding this. The seed mix used was established after soil testing by Greening Australia.</p> <p>Stage 2 civil construction works commenced on 8 November 2022.</p> <p>All civil construction works will be covered by an approved Construction Environmental Management Plan which will detail appropriate processes and practices.</p>

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2	The person taking the action must not plant trees where they could shade GSM habitat within Reservoir Hill and GSM and Natural Temperate Grassland (NTG).	SLA	Compliant	No trees are proposed in the habitat area, nor along its boundary. Trees along the southern edge do not shade GSM habitat.
3	The person taking the action must ensure that GSM habitat within Reservoir Hill and Belconnen Naval Transmitting Station are separated from residential development by vehicular roads.	SLA	Compliant	The open space that the GSM habitat and NTG are located in are separated by either edge roads (Wanderlight Avenue and Dawn Crescent) or fire roads.
4	The person taking the action must prevent sediment, eroded material, untreated and uncontrolled stormwater from entering the Belconnen Naval Transmitting Station and the GSM habitat within Reservoir Hill.	SLA	Compliant	Appropriate sediment and erosion control measures were in place during the civil construction of Stage 1 to ensure sediment, eroded material, untreated and uncontrolled stormwater did not enter the former Belconnen Naval Transmitting Station. No measures were required during Stage 1 civil works to protect GSM habitat within Reservoir Hill as these works were downslope of the hill. The landscape construction works in Reservoir Hill were completed 7 December 2017. Stage 2 civil construction commenced on 8 November 2022. It will be covered by a Construction Environmental Management Plan approved by the ACT Government. More information is provided under Condition 1.
5	The person taking the action must engage a suitably qualified expert to prepare an Environmental Management Plan (EMP) to maintain or improve the GSM habitat within Reservoir Hill. The EMP must be submitted to the Minister for approval by 1 July 2013. The approved EMP must	SLA and then TCCS from 15 December 2017	Non-Compliant (Rectified)	Submitted 14 June 2013 and approved 11 December 2013. Published on the ACT Environmental Offsets Register : <ul style="list-style-type: none"> Environment Management Plan for Golden Sun Moth habitat on Reservoir Hill, Lawson South The baseline survey data were included in the Environmental Management Plan (EMP), and have been

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	<p>be implemented within 12 months of the date of this approval. The EMP must address, but not necessarily be limited to:</p> <ol style="list-style-type: none"> a. Measures to maintain or improve the quality and condition of the GSM habitat within Reservoir Hill through appropriate management actions, including, and not limited to, weed control and biomass management as informed by a suitably qualified expert; b. Measures to prevent the access of unauthorised vehicles into the GSM habitat on Reservoir Hill, prior to, during and post construction. Measures must include, but not necessarily be limited to: <ol style="list-style-type: none"> i. Temporary fences to prevent access by unauthorised vehicles; ii. Replacement of the temporary fences required in Condition 5) b) i) with permanent structures, such as bollards, that will prevent access by unauthorised vehicles; and iii. Maintenance of the permanent structures required in Condition 5) b) ii) so that the area remains inaccessible by unauthorised vehicles, with structures to be repaired or replaced as required. c. Details of a baseline survey of the quality and condition of the GSM habitat within Reservoir 			<p>used to inform monitoring and maintenance, but these data were not published within 30 days of completion (5-c-i).</p> <p>The 2021-22 GSM monitoring Report is latest published report on the Offsets Register. The reporting on conditions within this report are taken as reporting on implementation of the EMP.</p> <p>TCCS released a Request for Quote in July 2022 to seek expertise for ecological work relating to this site. TCCS contracted a sole contractor in August 2022 to progress the following:</p> <ul style="list-style-type: none"> • Undertake a Golden Sun Moth assessment including four surveys of flying males under suitable conditions and incidental and additional searches for laying females and pupal cases, • Update the existing 2012 Environmental Management Plan (EMP) for the Reservoir Hill, Lawson South offset site, and • Prepare a Restoration Plan (RP) to restore the site to an acceptable level. <p>Due to unforeseen personal circumstances, the contractor has had delays in reaching milestones. Consequently, this has affected the delivery and submission of draft EMP and RP to the Commonwealth for approval. TCCS are liaising with the contractor on an appropriate means forward. Notification of revaluated timelines and status update will be provided to the Commonwealth following the submission of this Annual Compliance Report.</p>

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	<p>Hill to be conducted by a suitably qualified expert during an optimal ecological time prior to the commencement of construction within GSM habitat within Reservoir Hill. The survey information, specifically the baseline data, must:</p> <ul style="list-style-type: none"> i. Be published and maintained on the person taking the action's website within 30 days of the surveys being completed. The baseline data must be sufficient to enable the active monitoring and maintenance of the GSM values; and ii. Be used to ensure that the GSM habitat quality and condition are maintained or improved as required by Condition 5) a) <p>d. Details of an annual monitoring survey to determine the quality and condition of the GSM habitat within Reservoir Hill to be conducted by a suitably qualified expert during an optimal ecological time. The first annual survey must be undertaken within one year of commencement of construction within GSM habitat within Reservoir Hill. Annual monitoring surveys must continue to be undertaken unless cessation is agreed to in writing by the Minister;</p> <p>e. Details of corrective actions to be undertaken should the monitoring required in Condition 5) d) indicate a decline, as determined by a</p>			

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	<p>suitably qualified expert, in the quality or condition of the GSM habitat within Reservoir Hill; and</p> <p>f. Details of the administration arrangements for the measures referred to in Conditions 5) a) to 5) e).</p>			
6	<p>The person taking the action must install interpretive educational signage at no less than five locations along the boundary of GSM habitat within Reservoir Hill.</p> <p>The signage must:</p> <ol style="list-style-type: none"> contain information on the ecological values being retained and the threats to these values; and be maintained so that the information remains accessible, with signs to be replaced or updated as required. 	SLA and TCCS from 15 December 2017	Compliant	<p>The original signage included information on the GSM but did not include information on threats to the GSM and ecological values of the sites.</p> <p>New signage was installed 01st July in 2021 to address compliance. There are 5 signs located around Reservoir Hill on entrance paths. The signs include information on the GSM life cycle, threats, and ecological values based of professional advice, including how the reserve is being managed to look after these values and manage these threats.</p> <p>Information on the new signs was sent to the Department's environment compliance team on 24th August 2021.</p>
7	<p>The person taking the action must ensure that, during the management of the Outer Asset Protection Zone (OAPZ):</p> <ol style="list-style-type: none"> Grass and other flora is not slashed to a height less than 300mm above the ground The removal or movement of rocks to facilitate the slashing of grass and other flora is prevented The slashing of grass and other flora be restricted to occurring within the OAPZ All grass clippings and biomass removed must be mulched and spread or caught and 	SLA and TCCS from 15 December 2017	Not applicable	<p>This commitment has not been activated. Due to complexities with the OAPZ being located on land inaccessible to ACT Government employees, and also subject to a separate EPBC referral, this commitment is in the process of being varied with the post approvals section of the Department.</p> <p>In 2015-16 the site was assessed by the ACT PCS Fire Management Unit (FMU) and deemed unnecessary for it to become a OAPZ and require management as an OAPZ at the time. The FMU and Emergency Services Agency</p>

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	<p>removed to prevent windrows or clumps of slashed biomass forming on top of grassland flora</p> <p>e. All machinery and equipment involved in the slashing of grass and flora are free from flora reproductive matter (for example seeds) prior to entering the OAPZ</p> <p>f. A log book is maintained that records all management actions including date, time and details of machinery, equipment and personnel as well as details of hygiene measures undertaken to demonstrate compliance with this condition</p> <p>g. Slashing or any other biomass management must not be undertaken:</p> <ul style="list-style-type: none"> i. When the use of vehicles or machinery could result in the churn or compaction of soil due to high levels of soil moisture ii. During peak times of significant weed seeding as determined by a suitably qualified expert iii. When GSM are flying or within two days of when GSM have been flying, as determined by as suitably qualified expert. 			<p>conduct inspections and audits as required to assess whether Asset Protection Zones are necessary.</p>
8	<p>Prior to the commencement of actions to manage or reduce biomass within the OAPZ, a detailed baseline ecological survey must be undertaken by a suitably qualified expert at an optimal ecological time within the OAPZ to gain sufficient baseline</p>	<p>SLA and TCCS from 15 December 2017</p>	<p>Not applicable</p>	<p>As above, Condition 7.</p>

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	<p>ecological information to identify and map the extent and condition of all listed threatened species and ecological communities or their habitat and any weed species.</p> <p>This information must be published and maintained on the person taking the action's website within 30 days after the completion of surveys.</p>			
9	<p>The person taking the action must control weed species detected in the baseline ecological survey required by Conditions 5) c) and 8) to ensure that the abundance and cover of weed species does not increase. Weed control must be informed by a suitably qualified expert and be undertaken in a manner that does not impact non-target flora or listed threatened species and ecological communities.</p>	<p>SLA then TCCS from 15 December 2017</p>	<p>Compliant</p>	<p>The following actions took place at Reservoir Hill in the 2022/23 reporting year:</p> <ul style="list-style-type: none"> • An ecological burn was conducted 13th April 2022 over the whole site to reduce thatch and exotic annual cover, open inter-tussock spaces, promote native grass cover and promote floristic diversity. • Mowing around open mulch areas and paths, and whipper snip around green pine trees at the top of the hill. Machinery was cleaned prior to being taken on site • Whipper snip and spray around rock walls • Blow and tidy site including site paths • Spot spraying for selected weeds. <p>Volunteer groups with Landcare also undertook 12 hrs of manual weed control on the site.</p> <p>Overall, weed removal activities included Chilean needle grass, African love grass, St. John's wort, serrated tussock, Paterson's curse, capeweed, saffron thistle and other flat weeds.</p>

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10	Should biomass management within the OAPZ be undertaken three or more times in any two year period, the person taking the action must conduct an ecological assessment using a suitably qualified expert. The ecological assessment must be undertaken at an optimal ecological time no earlier than six months following the last biomass management activity, and be sufficient to detect any changes in ecological condition from the baseline survey required by Condition 8.	SLA then TCCS from 15 December 2017	Not applicable	Not applicable. See Condition 7.
11	<p>Within 30 days of the surveys required by Condition 5d) and 10, a suitably qualified expert must assess whether there has been a decline in the ecological condition of habitat for the GSM and NTG within the OAPZ and or GSM habitat within Reservoir Hill, if a decline is detected, the person taking the action must prepare, within 30 days for the approval of the Minister, a Restoration Plan for the restoration of the ecological condition of the OAPZ and of the GSM habitat within Reservoir Hill. The Restoration Plan must include, but not necessarily be limited to:</p> <ol style="list-style-type: none"> Required or adaptive changes to existing management activities; Active management actions to restore the ecological condition to the baseline and the extent identified within the baselines surveys, including, objectives, performance criteria and management responsibilities; and 	SLA then TCCS from 15 December 2017	Non-Compliant	<p>Due to complexities with the OAPZ being located on land inaccessible to ACT Government employees, and also subject to a separate EPBC referral, this commitment is in the process of being varied with the post approvals section.</p> <p>The department investigated this commitment in 2021-22 and established that there was a decline overall in the condition of this site in relation to the targets in the EMP. The Department's Monitoring and Compliance team requested a restoration plan to be submitted with this report in August 2022. The restoration plan is still in the process of being produced and will coincide with the annual GSM monitoring report and the review of the Environmental Management Plan. Due to unforeseen personal circumstances of the engaged contractor this project is delayed. Once a draft is produced, these reports will be submitted to the Department for approval.</p> <p>The 2019 report indicated that original ranges suggested in the EMP were not achievable at Reservoir Hill due to the</p>

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	c. Protocols for ongoing monitoring and reporting.			<p>physical characteristics of the site and that these targets should be revised. The EMP is currently being revised.</p> <p>Adjustments to the mowing regime are made each year in line with suggestions by suitably qualified professionals who undertake the monitoring reports.</p> <p>Monitoring reports are published on the ACT Environmental Offsets Register:</p> <ul style="list-style-type: none"> • Monitoring of Golden Sun Moth (<i>Synemon plana</i>) and its habitat at Reservoir Hill 2021-22 • Monitoring of Golden Sun Moth (<i>Synemon plana</i>) and its habitat at Reservoir Hill 2020-21 • Monitoring of Golden Sun Moth (<i>Synemon plana</i>) and its habitat at Reservoir Hill 2019-20 • Monitoring of Golden Sun Moth (<i>Synemon plana</i>) and its habitat at Reservoir Hill 2017-18 • Monitoring of Golden Sun moth (<i>Synemon plana</i>) and its habitat at Reservoir Hill 2016-17 <p>The 2022-23 monitoring report is currently being finalised and will be published upon finalisation.</p>
12	<p>To compensate for the impacts from the action to the GSM and NTG, the person taking the action must develop an Offset Strategy. The Offset Strategy must be submitted to the Minister for approval within six months of the commencement of construction.</p> <p>The Offset Strategy must include, but not necessarily be limited to:</p> <p>Administration arrangements to conserve, in perpetuity, the Macgregor West offset area;</p>	SLA	Compliant	<p>The Lawson Offset Strategy was submitted on 14 June 2013 and approved on 11 December 2013.</p> <p>All details are included in the Offset Strategy.</p> <p>Funding has been secured to manage the offset site in perpetuity. Prior to 2019, over the life of the approval decision this amount was \$1.9M. Ongoing funding to manage the site in perpetuity was \$69,000.</p> <p>A further capital investment of approximately \$200,000 over two years (2020-21 and 2022-23) was approved by</p>

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	<p>Provision of not less than \$972, 000 (GST exclusive) to facilitate management of the Macgregor West offset area including estimated timeframes, budgets and ongoing operational costs;</p> <p>The process and timing for incorporating the Macgregor West offset area within the ACT Nature Reserve System;</p> <p>Results of surveys undertaken by a suitably qualified expert at an optimal ecological time to demonstrate the extent of GSM habitat in the Macgregor West offset area; and</p> <p>A map that defines the extent of NTG and habitat for the GSM habitat in the Macgregor West offset area as a result of Condition 12d).</p> <p>The approved offset strategy must be implemented and be published and maintained on the person taking the action's website.</p>			<p>Treasury as part of a larger investment in offsets in the region.</p> <p>Further funding was sought in a 2021-22 business case for continued long term management of the site and to meet Offset Management Plan objectives for Jarramlee and West Macgregor Nature Reserves in the 2021-22 budget. This funding from 2021 to 2025 equates to: \$63,630 in capital and \$124,425 in recurrent expense, with an ongoing allocation of \$18,900 from 2024-25 onwards.</p>
13	<p>To manage the Macgregor West Offset area, the person taking the action must develop an Offset Management Plan (OMP), for approval by the Minister.</p> <p>The OMP must include but not necessarily be limited to:</p> <ul style="list-style-type: none"> · A map that clearly defined the locating and boundaries of the offset area including offset attributes and shapefiles; · Measures to conserve, in perpetuity, the Macgregor West offset area as habitat for the GSM and NTG; · Details of administrative arrangements; 	PCS	Compliant	<p>The Jarramlee Offset Management Plan was submitted on 14 June 2013 and approved on 11 December 2013.</p> <p>Jarramlee is now part of the Gooromon Grasslands Reserve area that comprises Jarramlee and West Macgregor nature reserves and the adjacent offset area known as Lot 2 Wallaroo Rd in NSW. These areas form part of the offset requirements for the approved West Belconnen Strategic Assessment. Due to this, a new OMP plan for The Gooromon Grasslands was produced and approved at the end of 2018. This supersedes the 2013 Jarramlee Offset Management Plan.</p>

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	<p>Details of an appropriate monitoring program to be undertaken by a suitably qualified expert, including aims, methodology and reporting, to determine whether the GSM and NTG values have degraded at the Macgregor West offset area.</p> <p>Details of contingency measures should the monitoring required by Condition 13d) determine that the GSM and NTG values have degraded at the Macgregor West offset area.</p> <p>The OMP must be submitted to the Minister for approval by 1 July 2013. The approved OMP must be implemented.</p>			<p>Gooromon Grasslands Offset Management Plan 2018-2023 version 2 was submitted to the Commonwealth in May 2021. This version is not a revision of the OMP but includes additional information regarding a subsidence area and associated remediation. These were included so that the remediation of this area could be undertaken within the reserve. This has been done in consultation with various partners and stakeholders. This document was published online 14 February 2022 and is available on the offsets register or at the above link.</p> <p>Implementation of actions described within the OMP include:</p> <ul style="list-style-type: none"> • Restoration works toward committed NTG and GSM habitat improvement targets, including planting and seeding of groundcover species tubestock (grasses and forbs). A further 1.8ha were seeded in this reporting period. • Slashing for biomass control and GSM habitat improvement. • Continuation of GSM research project (maintenance and monitoring). • Weed and pest monitoring and control. • Commencement of subsidence zone remediation and rehabilitation works. • Rehabilitation plan for Ginninderra Creek and part of Gooromon Ponds Creek (PCS managed section in Jarramlee and West Macgregor) as well as a

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				restoration plan for improvements to NTG, habitat for GSM at Gooromon Grasslands have been completed.
14	<p>If, after two years, the monitoring required by Condition 11c) identifies that the actions outlined in the Restoration Plan for restoration of the ecological condition of the OAPZ and/or the GSM habitat within Reservoir Hill have been unsuccessful as determined by a suitably qualified expert, then the person taking the action must develop an Additional Offset Strategy (AOS). The AOS must be submitted to the Minister for approval within six months of determining that actions were unsuccessful.</p> <p>The AOS must include, but not necessarily be limited to:</p> <p>(The AOS must be implemented within 12 months of the date of the approval of the AOS).</p> <p>a.</p> <ul style="list-style-type: none"> i. Details of the proposed additional offset including acquisition and management of land containing an unsecured population of GSM; and/or ii. Details of the proposed additional offset including funding arrangements and proposed measures that demonstrably improve GSM habitat at another site; and iii. Details of the proposed additional offset including details of an 	SLA then TCCS from 15 December 2017	Not applicable	No restoration plan has been produced. Once the restoration plan is produced and approved, then the following monitoring reports will help establish whether an AOS is required. It is estimated that a decision about an AOS will be required in 2025 or 2026, depending on approval times of the restoration plan.

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	<p>administrative arrangements including timeframes, responsibilities, and accountabilities.</p> <p>b. Details of an appropriate monitoring program to be undertaken by a suitably qualified expert including aims, methodology, reporting, to determine whether the values at the proposed sit(s) in Condition 14a) are improved;</p> <p>c. Contingency measures should the monitoring determine that the values are not improved by the management measures; and</p> <p>d. Details how the proposed funding and management aligns with (and does not duplicate) the existing Offset Strategy as required by Condition 12).</p>			
15	Within 30 days after the commencement of the action, the person taking the action must advise the department in writing of the actual date of commencement.	SLA	Compliant	The Commonwealth Government were advised on 24 September 2013 that construction commenced on 12 September 2013.
16	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the offset, OMP and, if required the Restoration Plan and any other report, strategies, agreements however described required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of	SLA, PCS and TCCS	Compliant	Records are being maintained on the appropriate government file systems.

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	approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.			
17	By 30 August of each year after commencement of the action, the person taking the action must publish and maintain a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the department at the same time as the compliance report is published.	SLA, PCS and TCCS	Non-Compliant (rectified)	<p>This report fulfils part of the requirement of Commitment 17 to produce and publish a report addressing compliance with the approval conditions.</p> <p>This report fulfils part of the requirement of condition 17 to report on the implementation of the Offset Management Plan for Jarramlee (see section 3 of this report).</p> <p>Monitoring reports are published on the ACT Environmental Offsets Register:</p> <ul style="list-style-type: none"> • 2013-14 Report: published 20th Jan 2015 • 2014-15 Report: published 9th May 2016 • 2015-16 Report: published 16th Dec 2016 • 2016-17 Report: published 21st Dec 2017 • 2017-18 Report: published 17th Jan 2019 • 2018-19 Report: published 3rd Oct 2019 • 2019-20 Report: published 8th Oct 2020 • 2020-21 Report: published 21st Sep 2021 • 2021-22 Report: published 20th Jun 2022 <p>The 2022-23 monitoring report is currently being finalised and will be published upon finalisation.</p>
18	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of the compliance with the conditions of approval is conducted and report submitted to the Minister. The independent auditor must be approved by the Minister and the audit report	SLA, PCS and TCCS	Not applicable	No direction given.

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	must address the criteria to the satisfaction of the Minister.			
19	If the person taking the action wishes to carry out an activity otherwise than in accordance with the Offset Strategy, OMP and, if required, the Restoration Plan or AOS, and any other report, strategies, agreements however described as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of the Offset Strategy, OMP and, if required, the Restoration Plan or AOS, and any other report, strategies, agreements however described.	SLA, PCS and TCCS	Compliant	<p>No changes.</p> <p>The Jarramlee Offset Management Plan has been revised under the Gooromon Grasslands Offset Management Plan to fulfil commitments within the West Belconnen Strategic Assessment (WBSA). Commitments for <i>both</i> the WBSA and the Lawson approval decisions are within this single OMP, which was approved at the end of 2018 and is available on the ACT Environmental Offsets Register.</p> <p>The review of the OMP undertaken in October 2021 included details of remediation works within a swale and subsidence area falling within GSM habitat.</p> <p>Riverview Project (ACT) Pty Ltd is the approval holder of the WBSA. The Ginninderry Development team manages the WBSA on behalf of Riverview. The Ginninderry Conservation Trust manages all environmental land within the WBSA that is not managed by the PCS – PCS manages the Jarramlee Offset area and the West Macgregor Offset area.</p>
20	If the Minister believes that it is necessary or convenient for the better protection of the listed threatened species and communities and Commonwealth land to do so, the Minister may request that the person taking the action make specified revisions to the Offset Strategy, OMP and, if required, the Restoration Plan or AOS, and any other report, strategies, agreements however described as specified in the conditions and submit	SLA, PCS and TCCS	Not applicable	No requests have been made; however, a restoration plan is currently being produced alongside a review of the EMP.

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	the revised Offset Strategy, OMP and, if required, the Restoration Plan or AOS, and any other report, strategies, agreements however described for the Minister's written approval.			
21	If, at any time after five years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.	SLA	Not applicable - Compliant	Action commenced on 12 September 2013 and substantially commenced by January 2014.
22	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all management plans, ecological surveys, reports, strategy and agreement however described referred to in these conditions of approval on their website. Each management plan, ecological surveys, reports, strategy and agreement must be published on the website within 30 days of being approved.	SLA, PCS and TCCS	Compliant	The new Gooromon Grasslands Offset Management Plan was published online within 30 days of approval. Plans are published on the ACT Environmental Offsets Register . Monitoring reports are published on the ACT Environmental Offsets Register .

3. Implementation of the Offset Management Plan

The following table describes how the ACT Parks and Conservation Service (Environment, Planning and Sustainable Development Directorate) has undertaken the management actions described within the Offset Management Plan (OMP) for the 2022-2023 reporting season on behalf of the Suburban Land Agency (the proponent). Please note the relevant OMP for the Jarramlee offset is the new Gooromon Grasslands OMP 2018-2023, which covers other offset areas not relevant to this report (West Macgregor and Lot 2 Wallaroo Road). The Jarramlee Offset Management Plan was revised under the [Gooromon Grasslands Offset Management Plan](#) to fulfil commitments within the [West Belconnen Strategic Assessment](#) (WBSA) which incorporated Jarramlee. Commitments for *both* the **WBSA** and the **Lawson approval decisions** are within this single OMP, which was approved at the end of 2018 and is available on the [ACT Environmental Offsets Register](#). Riverview Projects (ACT) Pty Ltd is the approval holder of the WBSA, while the ACT Government and the SLA is the approval holder for the Lawson south Development. This OMP implementation document is relevant for Jarramlee and West Macgregor only and does not intend to fulfil any requirements Riverview Projects Pty Ltd may have in relation to the WBSA conditions of approval.

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
Mitigation of public land use impacts	<ol style="list-style-type: none"> Activity Declarations (which are notifiable instruments under the Nature Conservation Act 2014) must be brought into effect for the ACT offset sites (Jarramlee and West Macgregor). Activity Declaration signage must be displayed at the entrance into these sites. 	2019/20	<p>This process has begun in the 2021-22 reporting period with process completion expected in 2023 calendar year. An Activities Declaration has been drafted and submitted for Conservator approval.</p> <p>Jarramlee was included in this review to ensure that Jarramlee Activities Declaration appears in the legislative register and any further signage is updated. The subsidence project has been finished; however, the additional Reserve sign is to be installed post approval from the Conservator.</p> <p>Three activities declarations (AD) and reserve entry signage were installed in 2020-21 at the entrance to the Jarramlee site. West Macgregor is still under a rural lease and is a closed reserve, so no signs are at the entrance to this reserve.</p>
Integration with the Canberra Nature Park Plan of Management	<ol style="list-style-type: none"> Manage the ACT offset sites (Jarramlee and West Macgregor) as part of Canberra Nature Park in accordance with the relevant ACT legislation, policy, strategies and plans outlined in Figure 2 [of the 	On-going	The new Gooromon Grasslands Offset Management Plan has been accepted and is guiding current works in Jarramlee Offset area. Offset commitments in West MacGregor have been finalised although the site is managed as a Nature Reserve under a rural lease.

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	Gooromon Grassland Offset Management Plan]		<p>The OMP is planned for review in the 2023-24 reporting year.</p> <p>The CNP Reserve Management Plan (RMP) was finalised and released at the end of 2021. Amendments (relating to the Jarramlee Subsidence Project) to the Gooromon OMP were approved through the Commonwealth and relevant stakeholders.</p>
NSW land zoning and Biodiversity Stewardship Agreement	<ol style="list-style-type: none"> The land will be rezoned as Zone E2 Environmental Conservation under the Yass Valley Local Environment Plan 2013 A Biodiversity Stewardship Agreement (BSA) will be established over the land under the provisions of the NSW Biodiversity Conservation ACT (BC Act) 	-	<i>This activity is not relevant to the Jarramlee offset site.</i>
Engagement with local Aboriginal people	<p>Work with the Healthy Country Programs team and Murumbung Yurung Murra Rangers to:</p> <ol style="list-style-type: none"> Implement the Ngunnawal Cultural Landscape Project: - incorporating cultural heritage / traditional ecological knowledge and Aboriginal land management practices. Implement the Ngunnawal Reserve Naming Project. 	2022/23	<p>PCS Operations Teams continue to engage with the Dhawura Ngunnawal Caring for Country Committee and work with Ngunnawal and non-Ngunnawal Aboriginal staff on land management activities.</p> <p>In 2022, the Jarramlee subsidence remediation project commenced implementation. PCS Projects team and Offsets Ops staff directly engaged with the DNCCC on design of landscaping features.</p> <p>These works are now complete. In collaboration with Transport Canberra and City Services, a Ngunnawal interpretation space and native 'entry garden' has been created. This includes breakout spaces showcasing carved seating logs and boulders with engraved locally native animal and plant totems such as the wedge-tailed eagle and platypus (or Maliyan and Mallungunng in Ngunnawal language).</p> <p>There is also a large central ground map, which is an interactive space that interprets the continuing connection Ngunnawal people</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
			<p>have to the native grasslands, river systems and mountain ranges of the region.</p> <p>Prior to breaking ground for the commencement of the remediation phase of the project, a smoking ceremony was conducted on site lead by Ngunnawal Elders</p> <p>The project contractor, Cord Civil, has further information and photographs relating to works undertaken on their website, Jarramlee Nature Reserve Cord Civil.</p>
Management of heritage values	<ol style="list-style-type: none"> Follow the guidelines outlined in the Cultural Heritage Reporting Policy. This document details the cultural assessment and reporting requirements for projects that may impact on places or objects with indigenous or historic heritage value. Any discovery of an Aboriginal place or object will be reported to the Heritage Council within five working days. 	On-going	<p>The ACT Heritage unit will be consulted as necessary for future projects including restoration works.</p> <p>Guidelines are being followed.</p> <p>Works commenced at Jarramlee in the reporting period have undergone required assessment and approvals for cultural heritage. The Construction Environmental Management Plan (CEMP) for the Jarramlee subsidence remediation project included an unexpected finds protocol.</p>
Bushfire risk mitigation	<p>ACT sites (Jarramlee and West Macgregor):</p> <ol style="list-style-type: none"> During the ACT fire season (October-March, subject to seasonal variation), maintain biomass to ACT Bushfire Management Standards, within the prescribed Regional Fire Management Zones, under the ACT Strategic Bushfire Management Plan (2014-2019) (SBMP). Any changes with management practices required following the review of the SBMP must be implemented. <p><i>Other points relate to NSW site and have not</i></p>	On-going	<p>Biomass has been maintained to ACT Bushfire Management Standards.</p> <p>Guidelines and plans are being followed.</p> <p>Good seasonal conditions experienced during 2020-21 and again in 2022-23 resulted in strong biomass growth. Wider fire breaks were slashed during the bushfire season. Grazing management was undertaken for fire fuel management, keeping in line with requirements for ecological species management. Biomass methods of slashing, grazing, and mowing have been employed during the year to bring higher fuel loads into prescription ahead of the fire season.</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	<i>been included in this table</i>		
Utility notifications	1. Adhere to the Code of Practice between PCS and ActewAGL	On-going	The Code of Practice is being adhered to.
Annual reporting	1. Fulfil all reporting commitments as identified in the WBSA [West Belconnen Strategic Assessment] and Jarramlee offset approvals	On-going and annually by 30 th August	This report fulfils the reporting requirements.
Offset Management Plan review	1. The Gooromon Grasslands OMP will be reviewed and updated in 2023	31 st December 2023	Not applicable this reporting period.
Manage Pest Plants	<ol style="list-style-type: none"> 1. Continue the existing pest plant control program at Jarramlee and develop targeted control programs for West Macgregor and Lot 2 Wallaroo Road 2. Funding may be included to seek advice from experts on novel weed control options. 3. Carry out regular field investigations to identify the location of any pest plant incursions within the Gooromon Grasslands. 4. Coordinate the implementation of pest plant control programs across sites that contain common species. 5. Maintain accurate records for all pest plant control programs. 6. PCS and SLA staff and contractors will continue to utilise the ArcGIS Collector application when undertaking weed control activities; to gather data on the presence and extent of different weed 	Annually	<p>Weed control was undertaken for St John's Wort, Chilean Needle Grass, Serrated Tussock, African Love Grass, Saffron Thistle, Blackberry, and other woody weeds at Jarramlee and West Macgregor and in surrounding buffer zones. Priority was given to protecting high priority sites including NTG and holding paddocks surrounding the subsidence site to manage risk of invasion into the restoration area.</p> <p>Lot 2 Wallaroo Rd is currently managed for weeds by the Ginninderry Conservation Trust.</p> <p>Regular field investigations identified the issue early. Chemical treatment was employed to address the germination and some areas were slashed to inhibit growth to seeding, particularly focusing near to high value NTG areas. Some high value NTG patches with low density St John's Wort infestations were hand weeded.</p> <p>A weed control program was undertaken to address invasive grasses, St John's Wort, woody weed species and Chilean Needle Grass in identified containment areas. Weed buffers were also treated to minimise weed spread, including within the equestrian</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	species, as well as the area within which weed species are being controlled.		<p>trail which traverses the site.</p> <p>Pre-treatment and post treatment records were captured on ACT Government apps including 'Field maps'. These records inform treatment strategies and help to target follow up year on year.</p> <p>Control is coordinated across the neighbouring reserve areas with CNP Rangers.</p>
Manage Pest Animals	<ol style="list-style-type: none"> 1. Continue the existing rabbit control program at Jarramlee and develop targeted control programs for West Macgregor and Lot 2 Wallaroo Road 2. Carry out regular field investigations to identify the location of any active rabbit warrens within the Gooromon Grasslands 3. Continue to conduct bi-annual (autumn and spring) nocturnal transect surveys for rabbits across Gooromon Grassland sites 4. Incorporate the Dunlop Grasslands Nature Reserve within the rabbit survey and control program as is required (determined by survey results) 5. Programs should be co-ordinated across all offsets and the Dunlop Grasslands Nature Reserve maintain accurate records for all pest animal control programs. 6. PCS staff and contractors will continue to utilise the ArcGIS Collector application when undertaking control activities; to gather data on the presence and extent of rabbit warrens, document control sites and 	On-going	<p>Seasonal rabbit monitoring is ongoing at Jarramlee. Spotlighting is conducted in spring and autumn to monitor rabbit and other pest species numbers and is part of the broader district Rabbit Control Program. Treatment is applied if monitoring results reach control point. Lot 2 Wallaroo Rd isn't currently included in the district control program as this is managed by Ginninderry Conservation Trust.</p> <p>Monitoring and burrow treatment was recorded on ARCGIS Field Map apps.</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	record control methods.		
Manage appropriate biomass disturbance regime	<ol style="list-style-type: none"> 1. NTG, native pasture and GSM habitat patches will be maintained in accordance with the Jarramlee Grazing Management Plan and feed budgets developed by Alcock (2018). 2. <i>Not relevant to Jarramlee.</i> 3. <i>Not relevant to Jarramlee.</i> 4. Biomass records will be maintained within the 'feed budgeting tool' format for management and reporting purposes; with field monitoring scheduled quarterly (or after significant rainfall events). 5. Grazing licence and lease arrangements at Jarramlee and West Macgregor will remain in effect during this plan period to provide a secure disturbance mechanism to manage biomass. 6. Slashing will be used in place of grazing (where logistically feasible) to manage biomass within the Chilean Needle Grass (CNG) Dominant GSM Habitat Zone. 7. Implement ecological burns (subject to appropriate approvals, weather and monitoring programs). 	On-going	<p>Biomass is managed to appropriate levels via a strategic grazing plan. Agistment licence holder works in collaboration with PCS to achieve desired outcomes. Biomass is assessed and managed to appropriate levels via strategic grazing management and in accordance with ACT herbage mass guidelines and informed by monitoring.</p> <p>Field monitoring of biomass attributes is undertaken annually by the Offsets monitoring team. Throughout the year monthly assessments are also undertaken to inform biomass management. Due to good seasonal conditions experienced during 2020-21, 2021-22 and again in 2022-23, strong biomass growth has been manipulated by employing slashing, mowing (and catching thatch), and strategic grazing management across Jarramlee and West Macgregor.</p> <p>Good working relationships with the stock agistee and dedication of the field staff has greatly assisted in achieving desired outcomes.</p> <p>Due to wet conditions and Agency prescribed burning priorities, ecological burns were not conducted at Jarramlee in 2022-23. Alternative biomass methods were employed. Identified ecological burns have been rolled over into the BOP for 2023-24.</p> <p>Operational staff are undertaking further training in livestock grazing management to maintain knowledge and skills in the workforce (started 2022-23, to be completed 2023-24). A suitable qualified consultant has been engaged to deliver this training in the classroom and the field.</p>
Manage identified human land use impacts	Implement land management activities adjacent to land subsidence exclusion points at Jarramlee:	On-going	<p>A subsidence paddock was fenced off from the larger 6 ha site, as opposed to erecting stock fences around each subsidence point.</p> <p>Weeds were only controlled in the grazed area of the subsidence</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	<ol style="list-style-type: none"> 1. Reinstate management to the area (approximately 3 ha) that has been cleared for full access. 2. Continue to exclude vehicle access to the remaining (approximately 3 ha) exclusion zone (subject to future clearances). 3. Following stock fencing upgrades around the identified subsidence holes (see Capital Works Activities) reinstate pest plant and pest animal control programs (delivered on foot) and grazing within the remaining (approximately 3 ha) exclusion zone (subject to future clearances). 		<p>paddock.</p> <p>The design for the subsidence remediation was completed in 2020-21. Jarramlee Subsidence Remediation Project commenced implementation works in 2022 and were completed in 2023. Works were launched and then celebrated at the conclusion of the project by smoking ceremony conducted by Ngunnawal Elders and included project partners and PCS. These works included the construction of a swale and site rehabilitation including Golden Sun Moth food plant species. This project was completed early 2023 calendar year and delivered 1.8 ha area of native grassland with GSM food species, Ngunnawal themed native garden for the community with interpretative signage and art works.</p> <p>The Closed Reserve Declaration over the subsidence project area will be lifted during 2023-24. A two-year maintenance and consolidation period has been contracted out for the restoration zone and the Ngunnawal Garden. Access will be limited to the grassland restoration zone as the grass and forb seeds emerge. This is primarily limited by fences. Access to the Ngunnawal Garden area is permitted.</p> <p>Pest plant and animal monitoring and related control programs have been reinstated in the areas not under contract for maintenance period.</p>
<p>Integrated threat management within adjacent reserves</p>	<ol style="list-style-type: none"> 1. Integrate Dunlop Grasslands Nature Reserve into coordinated threat management programs (pest plant control, pest animal control and biomass management) 	<p>On-going</p>	<p>Weed and pest animal programs are integrated into CNP North district works for efficiency gains. This includes rabbit spotlighting, weed buffer contracts and fire mitigation slashing. Different agistment licence holders graze across this matrix, so this land management function isn't wholly integrated.</p> <p>Decision making for these sites utilise the same data layers and</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
			decision tree tools such as the Biomass Management guidelines by all operations teams.
Grazing infrastructure	<ol style="list-style-type: none"> 1. <i>Not relevant to Jarramlee</i> 2. <i>Not relevant to Jarramlee</i> 3. <i>Not relevant to Jarramlee</i> 4. Install fencing around the known subsidence holes at Jarramlee that will support livestock grazing within the 3ha exclusion zone. 5. Maintain all existing grazing infrastructure within the Gooromon Grasslands offset sites. 	<p>4: 2018/19</p> <p>5: As required</p>	<p>Fencing at this site has been maintained. A two-year maintenance and consolidation period is now in place with contractors. The Closed Area declaration will be lifted in 2023-24 now that the subsidence hazard has been addressed.</p> <p>Flood waters damaged flood gates and fences again in 2022-23. Three flood gates and section of fence were replaced (under insurance), and other flood gates have been maintained. General maintenance to fence infrastructure was undertaken throughout the year.</p> <p>Temporary fencing has been erected to protect restoration plantings throughout the site from Kangaroos and livestock. After a two-year consolidation period these fences are removed and utilised in other target areas.</p>
Tracks and trails	<ol style="list-style-type: none"> 1. <i>Not relevant to Jarramlee</i> 2. Maintain all existing tracks and trails within the Gooromon Grasslands offset sites. 	On-going	<p>All trails and tracks are maintained as required.</p> <p>Improvements to the surface of Old Charnwood Road has been completed by ACT Roads (TCCS) following washing by repeated flood events. New flood markers and hazard signage will be implemented by TCCS in 2023-24. This Road forms part of the equestrian national trail network and is popular recreation track with locals.</p>
Increase the extent of Natural Temperate Grassland of the South Eastern Highlands	<ol style="list-style-type: none"> 1. The extent of NTG at Jarramlee (measured at 6.8 hectares in spring 2017) will be increased to at least 7.6 hectares over the life of the approval decision. 2. A restoration project will be implemented within a designated 1.5 hectare restoration 	30 th September 2032	<p>Actions to improve or maintain the natural temperate grassland at Jarramlee include:</p> <ul style="list-style-type: none"> • Regular field inspections to record emergence of forb species as indicators of higher value condition to improve, expand and connect other mapped areas of NTG. • Inspections to inform the timing around other biomass

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
	<p>zone (Native Pasture Buffer/Restore Zone 3) surrounding existing NTG remnants.</p> <p>3. The targets for the subsequent OMP period is a minimum of 0.3 hectare increase in NTG extent, delivered by increasing the cover of 'non-grass native species or indicator species' in line with the approach outlined in 5.1.3</p> <p>4. Individual project plans will be developed for all restoration works</p>		<p>manipulations (including mowing with catchers to remove thatch) to favour native species emergence and minimise exotic pasture dominance in identified zones.</p> <ul style="list-style-type: none"> • Establishment and maintenance of 13 seed nodes, which include the addition of native grass and forb tube stock and seed. Establishment of additional forb nodes during 2022-23 and expansion of already existing nodes. • Plantings during 2022-23. These plantings included, but were not limited to, <i>Poa labillardierei</i>, <i>Carex appressa</i>, <i>Juncus sp.</i>, <i>Rytidosperma carphoides</i>, <i>Leucochrysum albicans</i> and <i>Thysanotus tuberosus</i>. • Maintenance and monitoring of GSM Research Plots • Hand weeding in high value NTG areas occurred during Spring. This minimised the use of chemical in these zones. • Completion of the Gooromon Grasslands restoration plan. This plan will be converted to a spatial format in 2023-24. Individual restoration projects are planned using this information and relevant spatial data layers. Consideration to seasonal conditions will drive operational decision making on restoration methods.
<p>Increase the extent of Golden Sun Moth (<i>Synemon plana</i>) habitat</p>	<p><i>Not relevant to Jarramlee</i></p>	<p>-</p>	<p>Not applicable to Jarramlee but see 'Other actions' table in Section 4 for actions that have occurred to help increase GSM extent despite this not being a specific requirement. Subsidence restoration project species list included GSM habitat and food plants for restored grassland area.</p> <p>Technical advice has been provided to land managers for Lot 2 on weed control and biomass management.</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
Riparian restoration strategy	<ol style="list-style-type: none"> 1. Immediate works required to address instances of streambank erosion, in particular along Ginninderra Creek, will be delivered as part of this OMP. This will include engaging a suitably qualified expert to develop a plan to address priority restoration requirements. 2. Deliver riparian restoration plan. 3. <i>Relevant to future OMPs only.</i> 	<ol style="list-style-type: none"> 1. 2018/19 2. 2022/23 	<p>Local Land Services were engaged in 2018-19 to undertake restoration work on Ginninderra Creek in order to protect the riparian corridor at GSM habitat. This work was completed and went well, and further work is planned over the next few FYs.</p> <p>Site visits with qualified technicians to scope works for re-enforcing the streambank at the confluence of Ginninderra Creek and Gooromon Pond Creek were conducted during 2020-21. A tender process was undertaken to secure a suitably qualified contractor and a contract awarded.</p> <p>Due to the high flow from the urban catchment into this system and the good seasonal conditions experienced during 2020-21 and 2021-22, COVID19 lockdown in 2021-22, and further wet conditions in 2022-23 streambank works were unable to be scheduled due to wet soils and high stream flow. Procurement for this project has now expired. Technical drawings from the planning phase are owned by ACT Government. The floods and high flows that are experienced in this lower section of Ginninderra Creek Catchment (before it leaves the ACT) has been brought to the attention of the Catchment Planner in the newly formed ACT Office of Water. A review of the measures required over the whole catchment is required before proceeding further with these works into 2023-24. A riparian restoration plan was drafted during 2021-22 and delivered at the end of that financial year.</p>
GSM habitat and NTG mapping	GSM habitat will be mapped within the subsidence paddock following the methods outlined in Section 6.2.3 [of the OMP]	Spring/Summer 2018 (complete)	<p>This mapping has been completed.</p> <p>The 6-ha area known as the Jarramlee subsidence paddock was mapped in June/July 2018. Original plans to map in Nov/Dec 2017 were not met due to health and safety risks.</p> <p>The final report was published on the ACT Environmental Offsets</p>

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
			<p>Register in August 2021:</p> <ul style="list-style-type: none"> Jarramlee Subsidence Paddock Golden Sun Moth Habitat Report 2018 <p>Further mapping is planned for 2027, per the OMP schedule.</p>
GSM habitat condition threshold assessment method project	To assist GSM habitat and restoration planning, a GSM habitat 'condition threshold assessment method' will be developed (as described in Section 5.2.1 [of the OMP])	2019/20	A new method was trialled in SMEC 2018 but won't be taken any further.
PTWL habitat mapping	<i>Not relevant to Jarramlee</i>	-	-
GSM population monitoring	The GSM population will be monitored in accordance with Section 6.2.4 [of the OMP]	Spring / Summer 2018 (complete), 2019 (complete), 2022	<p>GSM population monitoring was undertaken at Jarramlee annually from 2016-2021. At West Macgregor, GSM population monitoring was undertaken annually from 2017-2022. At Yass Lot 2 Wallaroo Road, GSM population monitoring was undertaken annually from 2017-2020, and in 2022.</p> <p>Monitoring will continue at Jarramlee annually as part of a long-term study of the species at this site conducted by ACT Environmental Offsets, and to inform success of GSM habitat improvement experiments on the site.</p> <p>Monitoring was not able to be undertaken in 2022 due to poor flying conditions over the season across the board. However, annual monitoring will resume next reporting period.</p> <p>Monitoring data for 2018-19 and 2019-20 is available on the offsets register.</p>
GSM habitat and grassland monitoring	The GSM habitat and NTG will be monitored in accordance with Section 6.2.2 [of the OMP]	2018 (complete), 2019, 2022	GSM habitat condition monitoring was completed in 2018-2022 (as a component of understorey vegetation surveys) as a part of the larger ACT Government Environmental Offsets monitoring program. Floristics and understorey structure monitoring was undertaken

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
			<p>from 2018 to 2022 and is intended to be undertaken in the new reporting year.</p> <p>Understorey structure and weed monitoring will continue annually at the site to inform grazing, fire, and other management programs.</p>
Woodland bird monitoring	Woodland birds will be monitored following the methods in Greening Australia (2017).	Annually	<p>Woodland bird monitoring is undertaken as consistent with the Ecological Monitoring Program, per Canberra Ornithology Group (COG) methods.</p> <p>Woodland birds are being monitored by suitably qualified in-house ecologists as part the woodland bird monitoring program. This monitoring is consistently undertaken seasonally (every three months, four times a year), and was conducted in 2018, 2019, and 2020, with 3-year baseline data collection completed in Winter 2021.</p> <p>Future survey intervals are to be decided, with 3 or 5 yearly survey intervals likely.</p>
Monitoring threats	PCS are committed to refining and improving the standardised methods for collecting data on operational activities and management of threatening processes. This will be undertaken in line with the implementation of the CEMP. The monitoring activities for all threats will remain subject to further amendment, based on consultation and advice from ACT Government Ecologists and Territory Officers.	On-going	<p>Threats continue to be monitored as necessary.</p> <p>Weeds are monitored in Jarramlee, Yass Valley Lot 2, and West Macgregor as part of understorey vegetation monitoring, which was undertaken in 2018-2022, this will be undertaken again in 2023.</p>
Water quality and frog monitoring	PCS supports water quality and frog monitoring delivered under volunteer programs including Waterwatch and Frogwatch.	Annually	PCS support continued. Discussions will be held with the Catchment Planner from the ACT Office of Water during 2023-24 for advice and collaboration on improvements that can be made within the system. Monitoring data from various sources will be reviewed.

Activity	Description (from OMP)	Estimated Timeframe for Completion (as described in OMP)	Actions / Comments (from 01 July 2022 to 30 June 2023)
Staff resources	Staff are required to deliver the action outlined in this OMP. Staff include a Senior Ranger, Field Officer, Ecologist and Planner. Staff resources are calculated on a pro rata basis according to the level of service required to deliver the offset commitments.	On-going	Appropriate staff have been engaged to deliver on the actions outlined in the Offset Management Plan, including a Senior Ranger and a Field Officer.

4. Other Actions

Below are actions that have been undertaken within the offset area and are additional to those described within the offset management plan.

Activity	Description	Actions / Comments
Subsidence	There is 3 ha of active subsidence in an area that is above the de-commissioned sewage infrastructure.	<p>SMEC completed the Remedial Action Plan for Jarramlee Subsidence Site with a concept restoration design for the areas of concern and a clearance certificate enabling the return of status quo land management activities for the western 3 ha of the site.</p> <p>WSP have completed Stage 3 Design for the eastern 3 ha of the site.</p> <p>DA approval has been granted.</p> <p>Further funds were secured to commence construction in 2021-22.</p> <p>Construction phase was completed in early 2023.</p> <p>Internal PCS Ecologists will undertake ecological monitoring as per the OMP, with GSM population and habitat condition (understorey structure) monitoring to commence in 2023.</p>
Fox control	Fox management program and scat analysis	<p>This program has been developed to assist land management decisions by assessing the threat of the European Red Fox (<i>Vulpes vulpes</i>) on MNES and other threatened species in Environmental Offsets and Nature Reserves in the ACT.</p> <p>A fox scat analysis was then undertaken through University of Canberra to gain an understanding of fox predation on GSM and other species – this is an ongoing project.</p>
Increase the extent of Golden Sun Moth (<i>Synemon plana</i>) habitat	Research into restoring Chilean needle grass infested GSM habitat	<p>Wallaby grasses have been planted during Spring 2020 and 2021 and Autumn 2021 and 2022, to improve connectivity for Golden Sun Moth from Ginninderra Creek riparian zone across paddock 1 and the triangle paddock towards the Lot 2 block of Jarramlee. Volunteers assisted in planting days during Autumn 2022. Spring 2021 plantings were delivered by staff during COVID lockdown restrictions.</p> <p>A Golden Sun Moth habitat restoration project was established in a Chilean Needle Grass dominated area in Jarramlee. Two types of Needle Grass replacement treatment sites were investigated: burn patches and soil caps were implemented then planted with native wallaby grasses. Treatment plots were set up and maintained by Offsets staff with assistance from the field staff and volunteers. These plots were maintained and monitored during 2021-23.</p>

Activity	Description	Actions / Comments
Community Engagement & Interpretation	Promote and educate the community on values of Jarramlee and West Macgregor Nature Reserves	<p>In 2023, a cultural garden was established at Jarramlee-West MacGregor Grasslands Nature Reserve to showcase the area's rich cultural and ecological significance. Further information on the subsidence restoration project is referred to throughout this report.</p> <p>The works includes a new cultural garden to showcase the rich cultural significance of the area and construction of a lined swale required to limit subsurface water intrusion which contributes to subsidence. A large central ground map, an interactive space that interprets the continuing connection to Country for Ngunnawal people was also included.</p> <p>Interpretation signage combined with the totemic structures aims to promote and educate the wider community on the significance country and the values of the Jarramlee and West Macgregor Nature Reserves have for the Ngunnawal people.</p> <p>For example, in March 2023, a guided walk for a party of 15 from the ACT Bushwalking Club was delivered. During this walk, the values of Jarramlee and West Macgregor Nature Reserve, and the restoration methods and management challenges at the sites, was explained.</p> <p>For Reconciliation Week 2023, PCS Operational Staff also participated in a site visit to the Ngunnawal Gardens.</p>