

Annual Management Report

(EPBC2016/7734)

Northwest Grassland

Long Paddock Offset Site

6165 Hamilton Highway, Cressy

Year 4: August 2021- August 2022

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Landowner Reporting Form

Landowner of offset site	Deep Lead Property Pty Ltd
Location and address of offset site	6165 Hamilton Highway, Cressy, Vic
Offset site number (if applicable)	C2017_1
Offset plan reference number	EPBC 2016/7734
Responsible Authority	Trust for Nature, DCCEEW (formerly DoEE)
Report #	Year 4
Signature	Paul Guest – Director- Deep Lead Property Itd
Date	31/8/2022



1. INTRODUCTION

This document addresses the requirements for Offset management reporting, for offsets located at 6151 Hamilton Highway, Cressy. The broader 75ha site is the location of Offset areas for 5 separate Offset Agreements.

This report presents information relating to offset management for Year 4 of a 10-year management plan for the relevant Offset Area - Offset Management Zone 1 (OMZ-01), named the **Northwest Grassland**. The following page presents a map of the site, highlighting the relevant offset areas for this report.

The offset was created as part of infrastructure works undertaken by **Soho Living**, which resulted in impacts to matters of National Environmental Significance, under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) in relation to **EPBC referral 2016/7734**, including;

- Threatened Ecological Community Natural Temperate Grassland of the Victorian Volcanic Plains;
- Golden Sun Moth (GSM) Synemon plana; and
- Striped Legless Lizard (SLL) Delma impar

Far East Grassland (FEG)

The date of legal execution for the Offset Agreement and commencement of the Offset Management Plan (OMP) (Biosis 2018) for this site is **4th October 2018**.

Reporting requirements for this offset area are as follows:

- Annual management report, (this document) containing details of management actions, including on-ground works, undertaken within the reporting period, to be completed by 31st August each year
- Annual monitoring report, presenting results of annual monitoring activities during spring, to be completed by
 30th November each year including GSM monitoring report for Years 2, 4, 6, 8, and 10

	-			
	Zone Name	Offset Management Zone	Size	Date of Legal Execution
Tier 1	Northwest Grassland (NWG)	0MZ-01	5 ha	4th October 2018
Tier 2A	Central East Grassland (CEG)	0MZ -05	29.1 ha	17 th April 2019
Tier 2B	Seasonal Herbaceous Wetland Two (SHW2)	0MZ -04	11.86 ha	17 th April 2019
Tier 2C	Seasonal Herbaceous Wetland One (SHW1)	0MZ -03	2.52 ha	17 th April 2019
Tier 3	Southwest Grassland (SWG)	0MZ -02	16 ha	26th Sant 2020
			TO LIG	20° Sept 2020

0MZ -06

Table 1. Offset Agreements located at the property of 6165 Hamilton Hwy, Cressy





Figure 1. Management areas pursuant to Offset Agreement [EPBC 2016/7734]. OMZ-01, Northwest Grassland



2. <u>Completed Works</u>

2.1 Record keeping

- The site logbook in an online record of times and dates that landowners, contractors, consultants, or other relevant parties have visited the site for the purposes of management or monitoring actions and plays an important role in recording completed works on the site
- The logbook is maintained by the landowners through regular correspondence with contractors to record important information relating to site management or monitoring.
- Typical entries include date, name of personnel on site, activities being completed, general observations of flora or fauna, weather, presence of standing water, comment on biomass etc.
- The Summary of Site Logbook for Year 4 is provided in Appendix 1

2.1.1 Quarterly Site visits

The site is required to be visited at least quarterly by the landowner. The following activities are undertaken at each quarterly visit;

- walk of boundary fencing to assess any signs of damage or unauthorised entry of people or stock
- general observations. This includes locations and notes as appropriate regarding;
 - woody or herbaceous weed infestations- species and location
 - estimates of percentage cover of inter-tussock space
 - \circ signs of pest animals, or other tracks scats, or signs of predation
 - \circ ~ signs of erosion, pugging, damage to vegetation
- Detailed observations from quarterly site visits are available on request

2.2 Fence Condition

- Stock and vehicle proof fencing was in place for the perimeter of the entire 75 ha property at the time of property purchase.
- Fencing work was completed in Year 4 along the northern boundary with Hamilton Hwy, to stabilise the existing stone wall fence to ensure the site is stock-proof
- There has been no evidence of any trespassing by vehicles or people on foot, and no signs of unpermitted stock access outside of the grazing period

Please refer to Section 3: Future Works and Adaptive Management for discussion of additional fencing requirements



2.3 Offset demarcation

- The numerous Management Zones within the site are not individually fenced. The intersections of the OMZs with boundary fencing have been marked with short (approx. 30 cm high) star pickets for identification
- Yellow safety caps identify the boundaries visually; tags are also attached to indicate the offset area

2.4 Weed Monitoring and Control

2.4.1 Site Walkover – Spring 2021

- Weed monitoring is conducted annually in Spring and involves on-foot inspection of the entire offset area for woody weeds
- All infestations or individual woody weeds are identified to species level and mapped with a GPS. Locations of woody weeds are then supplied to the weed management contractor/landholder for treatment
- Subsequent monitoring revisits previously mapped infestations to evaluate the success of weed control, as well as inspecting the entire offset site for new infestations.
- During the survey, information on herbaceous weed species is also recorded, including the mapping of species and areas suitable for targeted treatment

Results

The Site walkover was conducted in over several days in November 2021 by Bush Blocks Project Manager Emma Wilkin, on behalf of the landowner.

Woody Weeds -- no woody weeds are present within Offset Area

Grassy and Herbaceous Weeds

- Wet areas within and adjacent to OMZ-01 prone to patches of dense **Toowoomba Canary-grass** *Phalaris aquatica* infestations.
- Large Quaking Grass Briza maxima is ubiquitous across the property, occurring at varying cover from 10%-30%.
- Yorkshire Fog Holchus lanatus, high cover (up to 80% in patches) creating high biomass within OMZ
- Spear Thistle Cirsium vulgar, occur sporadically throughout, and occasionally in denser patches
- Purple Salsify Tragopogon porrifolius occurring in western areas of OMZ-01

Data collected has been provided to site contractors and incorporated into an annual works plan for Year 5. GIS mapping data from site walkover is available on request.



2.4.2 Weed Control

Weed management is conducted by a suitably qualified contractor. The nominated contractors are Seed2Leaves Pty Ltd, and Tree Management Pty Ltd.

Basic principles for herbicide use for the entire property are as follows;

- Careful Spot spraying as default method for treatment within the site to minimise off target damage
- All weed control is to be conducted under appropriate conditions, in line with best practice protocols
- No off-label use of herbicide is permitted
- All contractors are required to complete a daily work record, identifying species targeted, herbicide type, rate and amount, works areas, as well as diary/logbook entries as standard

Woody Weeds

- Woody weeds are treated as soon as possible after identification, to reduce opportunity for maturity/flowering.
- Cut and paint method may be implemented any time of year, as appropriate of size/life cycle of species.

Herbaceous and Grassy Weeds

- Combination of grazing and ecological burns as preferred approach
- If herbicide is required, spot spraying only is permitted (no large scale/boom spraying equipment) and is implemented as required for target species, weather and other site conditions permitted.

<u>Results</u>

- No herbicide used on site within the Year 4 period grazing used as the primary control method for annual grasses
- Grazing also used to control biomass and seed-setting associated with perennial grasses Phalaris
- Selective spot spraying of *Phalaris* tussocks is scheduled for early spring, after removal of sheep
- Flower-heads of Thistles and Salsify (not sprayed) were removed during site walkover to prevent seed set

2.4.3 Pest Animals

- Observations of pest animals are recorded in the property logbook as record of pest animals occurring on site.
- There were no recorded sightings of pest animals within the Offset Area in Year 4 management period.
- Individual hares are sometimes sighted in the area, but are not found to be creating disturbance, or any other impact to site values. There were no signs of active or inactive rabbit warrens, or areas that could be seen as intensely browsed by rabbits or hares. There are also no areas of rubbish, or surface harbour within the site.
- No foxes have been observed within the property boundary. Foxes continue to be observed within the neighbouring area, and occasionally as roadkill on the Hamilton Highway within 10k of the property.
- The has been no evidence of any other pest animal species occurring on site.



2.5 Grazing and Biomass

2.5.1 Grazing

Arrival date	Removal date	Number of animals	Areas grazed
9/4/2021	19/08/2021	752	All
12/03/2022	13/04/2022	798	All
13/04/2022	4/05/2022	798	All
21/05/2022	8/08/2022	432	All
08/08/2022	31/08/2022	432	All

2.5.2 Grazing progress monitoring

- Site is checked regularly at times where stock is present on site. Notes are taken regarding general site condition, grazing progress, signs of trampling, selective or overgrazing, pugging etc.
- Photos are also used as evidence of site condition during time of grazing, though the key measure of grazing success is through of review of biomass monitoring results from across the extent of the offset property.
- Photos and notes of grazing progress can be provided on request

2.5.3 Annual Biomass monitoring – Spring 2021

- This methodology is additional to that outlined in the OMP. This survey utilises a total of 100 (2x2 meter) quadrats that are placed at 50m intervals along entire length the 75ha property. A total of 24 biomass monitoring quadrats are located within or on the boundaries of the Offset Area.
- Objective is to gain a clear picture of how the wider offset site is changing and if management goals are fulfilling their objectives.
- There are two systems in place to measure biomass at each quadrat. The use of both giving more to the data collected

Indicator species (Lunt 2003)

The measuring of the abundance of these species is used to determine that native and exotic grasses have not outcompeted native herbs. The three species chosen species all occur within the offset sites, these are

- Lemon Beauty-head Calocephalus citreus,
- Common Everlasting Chrysocephalum apiculatum, and
- Scaly Buttons Leptorynchos squamatus,



Inter-tussock space

- The percentage of bare ground present is separated into five categories: 1-20%, 20-40%, 40-60%, 60-80%, and 80-100%.
- The objective range that must be maintained across the grassland over time is 20-40% bare ground with closer to 40% being the desirable goal. If the amount of bare ground reaches 50% pulse grazing should halt.
- This measurement of bare ground provides a clearer assessment of what areas should be targeted for biomass reduction and when mapped can show areas where controlled burns are a higher priority.

Results

- Biomass is considered acceptable if indicator species are present, and/or percentage or bare ground is at least 20-40%
- Assessment was conducted on 23rd November 2021 by Project Manager Emma Wilkin
- Results show no improvement in biomass levels, despite grazing during the Yar 4 period
- Offset Area (OMZ-01) has the highest biomass levels of anywhere within the offset site. This is largely due to high cover of Phalaris and introduced pastoral grasses that have thrived in response to high rainfall associated with La Nina, and with removal of Sheep in Spring

These results have been used to inform the proposed grazing strategy for the property. The implementation of the proposed grazing strategy will enable concentrated grazing within these high biomass areas to improve conditions substantially as is required to improve conditions for Golden Sun Moth associated with this Offset Area.





2.6 Photo points

- Photo points are located at the boundaries and at the junction of offset management areas
- Photo point monitoring is conducted in Spring each Year
- Results of Year 4 Photo points monitoring are provided in Appendix 4



3. <u>Future Works and Adaptive Management</u>

3.1 Biomass reduction

3.1.1 Current challenges

- The wider 75ha property (single paddock) which contains the Offset Area is subject to 5 separate offset agreements/management plans, each written to address the specific conditions of each area
- An assumption is made across each of the Offset agreements that pulse grazing is possible. This is difficult to achieve without fencing of individual management areas- which each of the management plans state is not required/recommended
- The site has historically been grazed continuously using low numbers of sheep (approximately 400) which has been effective in retaining the significant grassland values. The application of grazing restrictions, the inability to effectively pulse-graze, along with 2 wet years associated with La Nina has resulted in an increase in biomass and decline in overall quality of the grassland
- Biomass and vegetation monitoring have identified high levels of biomass, and reduction in suitable habitat for Golden Sun Moth
- Adaptive management actions are therefore sought to effectively management the site in relation to biomass control and grazing management

3.1.2 Proposed adaptations

- Installation of semi-permanent fencing to separate areas of the site based on key features. Refer to Appendix 3

 Maps
 - **Cell 1** Domestic Zone (non-covenanted area)
 - Cell 2- includes all of OMZ-01, features generally higher biomass, higher weed-cover
 - o Cell 3- higher quality grassland and seasonal herbaceous wetland areas with stricter grazing restrictions
 - Cell 4- includes larger, high quality grassland area, moderate biomass, lower weed-cover
 - o Cell 5- features generally higher biomass, higher weed-cover
- Installation of bore within Domestic Zone, for additional water points (note this will include minor disturbance for installation of additional water points within Cells 2 and 3 (and in Cell 1 exempt). The current dam will support Cells 4 and 5.
- Permission to graze into Spring (non-wetland areas only) when conditions require additional biomass reduction due to high rainfall



3.1.3 Benefits of proposal

- o Ability to conduct rotational and/or pulse grazing as required by each of the management plans
- Reduction in selective grazing across the broader site, more effective biomass reduction and greater control/levelling of grazing pressures
- Ability to selectively graze problem areas of the site as required, either for selective weed/grass types to prevent seed set, or to target areas of high biomass
- o Ability to prevent sheep access, or traversing, of wetter areas to drastically reduce chance of pugging
- Enable greater use and management of ecological burns as alternative biomass reduction, including ability to protect burnt areas from grazing for 6- 12 months as required, without restricting grazing to the broader site
- Reduce movement– sheep are currently required to use single water source (existing dam) resulting in permanent tracks across the entire property from everyday movement across the paddock

3.1.4 Potential risks and mitigation

- o Disturbance of soil and ground layer during for installation of fencing
 - risk reduced through selecting of appropriate fencing design, and sensitive approach in relation to site access and machinery
- o Potential long-term compaction of gateways and fence lines
 - Grazing to occur in single cells at any given time, to reduce movement through gateways (i.e. gates with be closed) (except for Cells 1 and 2 - see next point)
- o Disturbance and compaction resulting from the creation of additional water points
 - Water point for Cell 1 and Cell 2 will be located within Domestic Zone (Cell 1), outside of the covenanted areas. Fencing of Cell 1 be located 10m within domestic zone area boundary, so that any compaction associated with the everyday movement through gateways is restricted to the non-covenanted area
 - Solar pump and small above ground pipes will be used no earthworks will be conducted in association with movement of water to new sources
 - Entire site is already subject to compaction through permanent tracks created from the everyday
 movement of sheep across the site for access to single water source. This plan will seek to minimise
 effects of compaction overall across the property



3.2 Annual Works Plan

A detailed annual works plan for the entire site will be provided to Trust for Nature in January of each year, in response to results of all management and monitoring actions.

A preliminary summary of Annual Works relating to the Offsets Area for Year 3 is as follow

- Finalisation of infrastructure to support proposed grazing strategy
- Commencement of pulse grazing to focus on reduction of biomass in
- Completion of at least one ecological burn, located within <u>either_</u>OMZ-01/OMZ-02 or OMZ-06
- Selective spot-spraying for *Phalaris*, Thistles, and *Salsify*



Appendix 1. Property Logbook Summary

Start	End	Title	Type of visit	Who
09/04/2021	18/08/2021	Grazing	management	700 sheep
16/08/2021		Grazing progress check	monitoring	Emma Wilkin
29/08/2021	29/08/2021	Quarterly Site Visit	monitoring	Emma Wilkin, Paul Guest
08/10/2021		SLL Monitoring 1/6	monitoring	Practical Ecology
18/10/2021		SLL Monitoring 2/6	monitoring	Practical Ecology
27/10/2021		SLL Monitoring 3/6	monitoring	Practical Ecology
04/11/2021		SLL Monitoring 4/6	monitoring	Practical Ecology
17/11/2021		SLL Monitoring 5/6	monitoring	Practical Ecology
17/11/2021		Weed control - Flower head removal	management	Emma Wilkin
23/11/2021		Flora Monitoring	monitoring	Practical Ecology
23/11/2021		Weed control - Flower head removal	management	Emma Wilkin
26/11/2021	26/11/2021	Quarterly Site Visit	monitoring	Emma Wilkin
29/11/2021		GSM survey 1/4	monitoring	Practical Ecology
29/11/2021		Weed control - Flower head removal	management	Emma Wilkin
03/12/2021		SLL Monitoring 6/6	monitoring	Practical Ecology
24/12/2021		GSM survey 2/4	monitoring	Practical Ecology
13/01/2022		GSM survey 3/4	monitoring	Practical Ecology
16/01/2022		Seed collection	contracting	Seed2leaves
24/01/2022		GSM survey 4/4	monitoring	Practical Ecology
01/02/2022		Site Meeting - Paul Bath	site meeting	Emma Wilkin, Paul Guest, Lincoln Kern, Paul Bath
11/02/2022		Site Meeting - Chris Callaghan	site meeting	Emma Wilkin, Chris Callaghan
18/02/2022		Fencing	contracting	Tree Management Services
21/02/2022	22/02/2022	Fencing	contracting	Tree Management Services
12/03/2022	13/04/2022	Grazing	management	798 sheep
13/03/2022		Quarterly Site Visit	monitoring	Lincoln Kern
22/03/2022	23/03/2022	SLL Tiles In	management	Emma Wilkin, Jamie McCarter
13/04/2022	04/05/2022	Grazing	management	798 sheep
15/04/2022		Site Visit - grazing progress check	general site visit	Lincoln Kern
27/04/2022	28/04/2022	Fencing	contracting	Tree Management Services
04/05/2022	06/05/2022	Fencing	contracting	Tree Management Services
21/05/2022	08/08/2022	Grazing	management	400 sheep
20/06/2022		Quarterly site visit	monitoring	Paul Guest, Emma Wilkin
16/07/2022	16/07/2022	Site Visit - grazing progress check	general site visit	Lincoln Kern
01/08/2022	01/08/2022	SLL Tiles out	monitoring	Emma Wilkin
08/08/2022	31/08/2022	Grazing	management	400 sheep
09/08/2022		Site Meeting - Louise Falls	site meeting	Lincoln Kern



Appendix 2. Summary of required management actions – Year 4

Year no.	Action no.	Activity Description	Timing	Standard to be achieved	Achieved?	Comments
2-10	X.1	Maintain fences and gates around broader offset area and markers around offset site in good working order.	Continuous (inspection and management)	Potential threats (i.e., rabbits, domestic stock, unauthorised entry) excluded.	Y	Fences monitored and maintained through the Year 4 period. Refer site logbook, Appendix 1
2-10	X.2	Undertake pulse grazing to reduce biomass. biomass. A minimum of three pulse grazing cycles are required within the grazing period, and one of these will occur immediately before the exclusion period (unless otherwise advised by the fire management plan). The maximum grazing length at any one time is four weeks with a minimum two-week rest period between grazing cycles. Vegetation cover will not be grazed below 50% and inter-tussock space will be maintained to at least 30%.	16th January – 31st July	Maintain an open tussock grassland with at least 30% cover of inter-tussock space.	Y	Infrastructure not yet in place to undertake pulse grazing. Sheep were permitted to graze during Year 4 period. Refer Section 2.5
2-10	X.3	Develop burn plan and undertake ecological burn of the offset site to reduce plant biomass and promote recruitment of native species. Ecological burns may be undertaken over 20% of the offset area at least ten times during 10-year management period.	Sep-Oct or March - May (or as specified in the burn plan)	Medium intensity burns over 20% of the 5.0 ha area. Some small areas within burn boundary left unburnt. No area to be burnt at a frequency of more than once every three years. Follow up weed control will be undertaken within the burn area in accordance with section 3.9. Burns must also be undertaken to generate a mosaic pattern of burnt and unburnt areas	Y	A Draft Burn Plan has been developed and Provided in Year 2 Draft Plan will be updated to reflect changes to grazing strategy and use of separate paddocks for post-burn management
2-10	X.4	Control pest animals (e.g., rabbits, hares, foxes and cats) within the offset and surrounding area (within 500m of offset site where possible).	Feb-Apr, Sep-Nov	No ground disturbance by pest animals within offset site. No active rabbit warrens present within offset site, minimal surface harbour for rabbits and hares present (but excluding natural harbour such as rocks)	Y	No control deemed necessary within Year 4 period.
2-10	X.5	Control all high threat grass / herb weeds before seed set using appropriate methods to ensure a reduction of existing weed levels. Monitor for new and emerging weeds and eliminate any found	July–Nov as detailed in the annual works plan	Minimise the occurrence of weeds with a reduction in total cover of weeds, including high threat weeds, beyond current levels. See Target percentage cover	Y	Grazing used as primary method of control of grasses in Year 4 period Extensive spot spraying was undertaken in Year 3 and will be repeated in Year 5



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Year no.	Action no.	Activity Description	Timing	Standard to be achieved	Achieved?	Comments
2-10	X.6	Qualified ecologist to undertake vegetation and SLL monitoring (including Habitat hectare assessment), and refine management actions based on results. Identify any new high threat weeds for priority control. Report to regulator as directed.	Oct-Nov monitoring Dec Reporting	Prepare standard report including results from photos and agreed performance measures outlined in Section 3.9.	Y	Biometric monitoring completed in Year 4 Results provided in Practical Ecology Monitoring report
2-10	X.7	Undertake regular site inspections at a frequency to ensure management activities are conducted as prescribed. This will incorporate identification of any new weeds and evaluation of biomass conditions. These inspections will be conducted by the land owner. TfN to participate in site inspections at least four times over offset period.	Nov - Dec	Reporting of management activities as agreed. This can consist of a series of notes of observations made by the land owner during site inspections.	Y	Refer site log book – Appendix 3
2-10	X.8	Prepare annual report based on site inspections conducted throughout the year. Report to be provided to TfN, Soho and DoEE.	August Nov	Report reviewing the success of management and level of implementation of OMP provided to TfN, DoE, and Soho.	N	Aug – Annual Management Report (this document) Nov- Annual monitoring Report
2-10	X.9	Review and update Annual Works Plan in consultation with TfN.	Dec	Following year's management tailored to current site conditions	N	Discussions with TfN determined that best approach is to provide an Annual Works Plan for the entire site at the beginning of each calendar year (January)
2, 4, 6, 8 & 10	X10	Conduct GSM monitoring surveys	GSM flight season (November to December)	Report documenting the results of the survey and comparisons with past surveys	Y	Year 4 GSM monitoring results to be provided in Practical Ecology monitoring report



Appendix 3. Maps









Long Paddock Offset Site 6165 Hamilton Hwy, Cressy



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Inundated (not assessed)

Offset Management Zones

Offset Area

Data Source: Aerial Photography from Esri Satellite

Date: 30 August 2022

Created by: Emma Wilkin

Version: 1





Photopoint Monitoring <u>2021</u>

Legend



Property Boundary Long Paddock Offset Site 6165 Hamilton Hwy, Cressy





Offset Edge / Photopoint

Offset Area - Soho

Details

Date: 30 August 2022 Version: 1 Created by: Emma Wilkin

Data Source: Aerial Photography from Esri Satellite



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Appendix 4. Photopoint Monitoring – Spring 2021







OE12-S







OE11-W



OE13-E



OE14-E



OE12-E



OE13-S

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