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Our Ref: 2318d

4 December 2023

Matt Apostola
Development Manager
The GPT Group
Level 10 Melbourne Central Tower
360 Elizabeth Street
Melbourne VIC 3000

Dear Matt,

Re: Natural Temperate Grassland of the Victorian Volcanic Plain Offset Calculation, 485 Cooper Street, Epping, Victoria

This correspondence provides the offset estimate for the removal of the Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP) ecological community for the proposed development at 485 Cooper Street Epping (the study area). NTGVVP is listed as 'Critically Endangered' ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

It is intended to provide our best estimate of the offset obligation to assist with the referral being made by Nature Advisory. We have provided an explanation of calculations to provide transparency. Ultimately, the offset must be accepted by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

This correspondence is informed by:

- *485 Cooper Street, Epping – Early Works Flora and Fauna Assessment* prepared by Nature Advisory (2023); and
- *Vegetation Assessment and Offset Management Plan, 185 Mt Gow Road, Shelford, Victoria* prepared by Ecolink Consulting Pty Ltd (2023).

Nature Advisory found that Habitat Zones (Patches) A, B, D, E, F and P were classified as NTGVVP. A list of NTGVVP size and the Average Habitat Hectare Condition Scores of the vegetation is provided in Table 1.

Table 1. NTGVVP size and the Average Habitat Hectare Condition Scores (Source Nature Advisory Pty Ltd 2023)

Habitat Zone	Size (Hectares)	Condition Score (out of 100)
A	0.586	39
B	0.123	27
D	0.261	31
E	0.074	31
F	0.099	31
P	1.021	32
Total Size and **Avg. Condition Score**	2.164	31

The Shelford offset site contained higher quality vegetation than the impact site, with a Habitat Hectare Condition Score of 51 (out of 100) (Ecolink Consulting Pty Ltd 2023). This would feasibly reduce down to 33 (out 100) without management intervention, but could increase to 63 (out of 100) with management intervention in accordance with the management prescriptions included in the Offset Management Plan (Table 2).

Table 2. Projected Vegetation Quality Assessment of the offset area assuming offset presence/absence over a ten-year period (Source: Ecolink Consulting Pty Ltd 2023)

Vegetation Quality Assessment			Current Quality	Projected Quality without Offset	Projected Quality with Offset
Bioregion			Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain
EVC name			Plains Grassland	Plains Grassland	Plains Grassland
EVC number			132_61	132_61	132_61
Conservation rating within bioregion			Endangered	Endangered	Endangered
Assessment Criteria		**Max. Score**	**Patch Score**	**Patch Score**	**Patch Score**
Site Condition	a. Large old trees	10	N/A	N/A	N/A
	b. Canopy cover	5	N/A	N/A	N/A
	c. Understorey	25	15	10	15
	d. Lack of weeds	15	6	2	9
	e. Recruitment	10	6	3	10
	f. Organic litter	5	3	2	5
	g. Logs	5	N/A	N/A	N/A
	h. Total (sum of a-g)	**75**	**30**	**17**	**39**
Standardised Score			(x 1.36) 41	(x 1.36) 23	(x 1.36) 53
Landscape	j. Patch size	10	8	8	8
	k. Neighbourhood	10	1	1	1
	l. Distance to core	5	1	1	1
m. Habitat Score (sum of h-l)		**100**	**51**	**33**	**63**

The Habitat Hectare Condition Score was used as a proxy for determining the current quality of NTGVVP at Epping and at the proposed offset site at Shelford. It was converted from a number out of 100 into a number out of 10 for the Offset Calculator (Attachment 1).

The Offset Calculator suggests that 7.9 hectares of NTGVVP at the Shelford offset site will be required to offset the 2.164 hectares of NTGVVP at the Epping development site (Attachment 1). A justification of the figures entered into the Offset Calculator are provide in Table 3.

Table 3. Summary of the figures entered into the Offsets Calculator for losses at the study area

Input Heading	Input Subheading	Striped Legless Lizard Response and Justification
Quantum of Impact	**Area of Impact Site**	2.164 hectares (includes Habitat Zones A, B, D, E, F and P.
Quantum of Impact	**Quality of Impact Site**	The Habitat Hectare Condition Score was used as a proxy for determining the current quality of NTGVVP at Epping and at the proposed offset site at Shelford. It was converted from a number out of 100 into a number out of 10 for the Offset Calculator.
Proposed Offset	-	185 Mount Gow Road, Shelford, Victoria.
Risk-related Time Horizon	**Time Over Which Loss is Averted**	Twenty years. This is the maximum score, as the offset site will be maintained into perpetuity.
	Time until Ecological Benefit	Ten years. This is the time over which the Offset Management Plan will be implemented.
Start Area and Quality	**Start Area (hectares)**	7.9 hectares. Is the area estimated to achieve the offset, subject to DCCEEW accepting the figures entered into the Offset Calculator.
	Start Quality Scale	The vegetation quality was determined to be 5 (out of 10) using the state-endorsed Habitat Hectare Assessment Method. The score is stated within the Offset Management Plan.
Future Area and Quality Without Offset	**Risk of Loss Without Offset**	0%. DCCEEW have advised that this figure should be 0% on the basis that 'an assessment and approval under Commonwealth, State, or council regulation. Actions such as these should not count towards risk of loss calculations, because an offset would be required for this action'.
	Future Quality Without Offset	Four. Whilst the Offset Management Plan demonstrates a decrease to a 3 (out of 10), we have conservatively assumed a 4 (out of 10) in line with previous guidance provided by DCCEEW.
Future Area and Quality With Offset	**Risk of Loss With Offset**	0%. It is highly unlikely that the area would be lost with an offset secured and managed on-site.
	Future Quality With Offset	Six. The OMP demonstrates that habitat improvements can be made through weed and pest management.
Confidence in Result (%)	-	80%. We are confident in the figures put forward by an independent and impartial assessor.
Cost $ Total	-	TBA
Information Source	-	The Offset Management Plan as prepared by Ecolink Consulting

It is recommended that the GPT Group expect to offset 7.9 hectares of NTGVVP at the Shelford offset site.

I trust the above meets with your expectations, but please contact me if you have any queries.

Kind regards,

Simon Scott
Principal Ecologist
Ecolink Consulting Pty Ltd

References

Ecolink Consulting Pty Ltd (2023). Vegetation Assessment and Offset Management Plan, 185 Mt Gow Road, Shelford, Victoria. Unpublished report for The GPT Group. (Ecolink Consulting Pty Ltd: Northcote).

Nature Advisory Pty Ltd (2023). 485 Cooper Street, Epping – Early Works Flora and Fauna Assessment. Unpublished report for The GPT Group. (Nature Advisory Pty Ltd: Camberwell).

Attachement 1. DCCEEW Offset Calculator

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	NTGVVP
EPBC Act status	Critically Endangered
Annual probability of extinction Based on IUCN category definitions	**6.8%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	Yes	NTGVVP	**Area**	2.164	Hectares	•485 Coooper Street, Epping – Early Works Flora and Fauna Assessment
			Quality	**3**	Scale 0-10	
			Total quantum of impact	0.65	Adjusted hectares	
Threatened species habitat						
Area of habitat	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)		% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes	0.65	Adjusted hectares	185 Mount Gow Road, Shelford	**Risk-related time horizon (max. 20 years)**	20	**Start area (hectares)**	7.9	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	0.00	80%	0.00	0.00	0.65	100.85%	Yes		
									Future area without offset (adjusted hectares)	7.9	**Future area with offset (adjusted hectares)**	7.9									
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**5**	**Future quality without offset (scale of 0-10)**	**4**	**Future quality with offset (scale of 0-10)**	**6**	2.00	80%	1.60	0.83					
Threatened species habitat																					
Area of habitat	Yes		Adjusted hectares		**Time over which loss is averted (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**		0.00		0.00	0.00	0.00	#DIV/0!	#DIV/0!		
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0									
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**		0.00		0.00	0.00					
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**		**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																				
Condition of habitat Change in habitat condition, but no change in extent	No																				
Threatened species																					
Birth rate e.g. Change in nest success	No																				
Mortality rate e.g Change in number of road kills per year	No																				
Number of individuals e.g. Individual plants/animals	No																				

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	0	0.00	#DIV/0!	**#DIV/0!**	$0.00	#DIV/0!	#DIV/0!
Area of community	0.6492	0.65	100.85%	**Yes**	$0.00	N/A	$0.00
					$0.00	**#DIV/0!**	**#DIV/0!**