[redacted], s 47F

From: s 47F [redacted]@dlapiper.com]
Sent: Friday, 13 May 2011 12:22 PM
To: s 47F [redacted]
Cc: s 47F [redacted]@intrapac.com.au; Brett Lane
Subject: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina
Attachments: 20110513121324154.pdf; 9123 DSEWPC Memoto-110502 - Offset Site.pdf; 9123.3 Preliminary Documentation_no appendix_110512.pdf; Report 9123 (4 2) Lot 11 Westmeadows Lne-FINAL 110515.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Dear s 47F and s 47F

Please see the attached documentation in relation to the proposed residential development at 115 Westmeadows Lane, Truganina (EPBC Act Reference No. 2010/5791).

Please contact us if you have any queries.

Kind Regards, s 47F

s 47F [redacted]
Senior Associate

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13 May 2011

s 47F
Environment Assessments Branch
Department of Sustainability, Environment, Water, Population and Communities
By email s 47F **@environment.gov.au**

s 47F
Department of Sustainability, Environment, Water, Population and Communities
By email s 47F **@environment.gov.au**

Dear s 47F

RESIDENTIAL DEVELOPMENT: 115 WESTMEADOWS LANE, TRUGANINA VIC, EPBC ACT REFERENCE NO. 2010/5791

We refer to your letter dated 4 February 2011 in which you advised that Intrapac's proposed action to construct a residential development and associated infrastructure at 115 Westmeadows Lane, Truganina (**Subject Land**) is a controlled action and requires assessment (by preliminary documentation) and approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**).

Your letter also requested that our client provide further information in relation to the proposed offset sites for the Golden Sun Moth (**GSM**). As you are aware, since the date of your letter our client and its consultant, Brett Lane of Brett Lane & Associates (**BLA**), has been in discussions with a landowner about a potential offset site. BLA has also been in contact with both the Department of Sustainability and Environment (**DSE**) and the Department of Sustainability, Environment, Water, Population and Communities (**SEWPaC**) about various aspects of the required offset.

As Brett Lane has previously advised SEWPaC, BLA has assessed a site in western Victoria as containing suitable offset areas. Following a series of meetings and discussions with the landowner, the landowner has agreed to making the land available to our client for the purpose of the offset subject to negotiation of the area required, it proposed management requirements and price. However, our client anticipates that will still take considerable time to negotiate and reach agreement with the landowner.

As a consequence of the likely time this will involve, and the potential for further delay to have significant commercial implications for our client's development, we have proposed in this letter that approval under the EPBC Act be made conditional upon our client providing money on trust for the purpose of financing the offset. We understand

that SEWPaC has approved such offset arrangements in the past as conditions of approval (for example, EPBC Act Ref 2009/4888 and 2010/5473). We have addressed these matters in more detail below.

Request for Further Information

Attached to this letter is a Memorandum (prepared by BLA, 4 May 2011) outlining the proposed offset and an attached Report (prepared by BLA titled *Preliminary Documentation*) addressing the further information you requested. These attachments address your request for further information.

4:1 Ratio

Your Request for Preliminary Documentation dated 4 February 2011 states that, whilst any proposal submitted will be considered on its own merits, the general expectations of the Department in relation to GSM offsets are that proposed offset sites support a large, abundant population of GSM, with known presence of female moths, important habitat attributes and long term viability including an area ratio of approximately 4:1.

We consider that the 4:1 ratio is arbitrary and not consistent with the Department's commitment to consider each proposal on a case-by-case basis. The 4:1 offset area ratio is not referred to in the EPBC Act, Regulations, guidelines or SEWPaC's policy documents. For example, there is no mention of the 4:1 ratio in the *Draft Policy Statement: use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999 (*DEWR, August 2007) (**Draft Offset Policy**) save for the statement that *'offset ratios may be applied when available.'* Rather, the Draft Offset Policy states that at principle 5 that *'environmental offsets should, as a minimum, be commensurate with the magnitude of impacts of the development and ideally deliver outcomes that are 'like for like"*. We submit that there is no legal basis to require our client to provide an offset of four times that required to be removed from the development site.

Without prejudice to that position, as set out in the attached memorandum from BLA, it is submitted that there are also good ecological reasons why, in relation of the proposed offset site, that the Department's recommended 4:1offset ratio is not appropriate in this case. As stated by BLA in the Memorandum there are other ecological valves that can be protected at this site which adds to the ecological valve of the offset proposed to be protected - that is, the site also supports Natural Temperate Grasslands of the Victorian Volcanic Plain **(NTG VVP)** - and provides justification for a reduction of the suggested offset ratio.

Securing a GSM Offset

We refer to our previous meeting in Canberra with s 47F s 47F on 16 November 2010 in which the problem of securing a GSM offset was raised and discussed. As you are aware, Intrapac has spent considerable time and effort in attempting to secure the offsets required by both State and Federal legislation.

At that meeting and in writing, our client sought confirmation from your Department that the offsets offered by the DSE's BushBroker Scheme to satisfy State requirements for native vegetation removal will also satisfy any SEWPaC requirements under the EPBC Act.

As stated to in our letter dated 16 December 2010, our client was offered an offset of 1.23 Habitat Hectares of Very High Conservation Significance Plains Grassland and 1.54 Hectares of degraded treeless vegetation both with Best 50% GSM Habitat in the Victorian Volcanic Plain Bioregion. These offsets are located in the Western Grasslands Reserve, to be established as part of the *Delivering Melbourne's Newest Sustainable Communities* Program.

Our client's ecologist Brett Lane and DSE confirmed that this offset met the requirements of both the Victorian Net Gain Framework and the Final Prescription for the GSM under the endorsed program approval (dated 8 July 2010) under the EPBC Act. DSE had made an offer and issued our client with an invoice on 5 November 2010 in the amount of $236,270.

We note the statement is your letter dated 4 February that it *'remains the preference of the department that suitable offset sites be identified outside of the Western Grasslands Reserves'.* However, the requirement to find additional offsets has caused our client significant delay and additional cost.

Intrapac is concerned that the delays in obtaining a suitable offset site and, as a consequence, your Department's assessment and approval, will result in a delay in construction (particularly due to the onset of winter weather conditions) and may result in loss of pre-committed sales of residential allotments.

Provision of money on trust as an approval condition

Upon provision of the attached information, we understand that the Department will now undertake an assessment of the documentation contained in this package and make a determination on approval of the action and any conditions within the statutory timeframes.

To avoid delay in the finalisation of the offset (i.e. negotiations on price, preparation and agreement of the offset management plan and a section 173 agreement or other agreement or covenant), our client is prepared to provide the Department with some form of financial security whilst the purchase of the offsets are being finalised, so that a conditional approval may be granted to allow construction activities to commence, prior to finalisation of the offset negotiations.

Based on the available market rates we estimate that on offset area of 9.9 hectares of NTGVVP (supporting GSM habitat) is likely to be worth approximately $450,000.

To satisfy the Department, our client would be prepared to put forward a sum of money which is double the amount already offered to our client in the Western Grassland Reserves under Bushbroker and the approximate market rate for the offset (that is, a total of $500,000) to be held on trust for the proposed offset area while the management details and a price for the offsets is being negotiated, or if agreement cannot be reached with this landowner on reasonable terms, until an alternative offset area is secured.

Based on our discussions with s 47F and s 47F of the Department, we understand that the Department currently has no preferred mechanism for this trust arrangement but that the Trust for Nature mechanism used in EPBC Act Ref 2009/4888 and 2010/5473 and has been supported in the past. We have also spoken to s 47F of Trust for Nature and obtained the standard trust documentation (the Deed for Funds Offset Package). Our client is prepared to

DLA PIPER

proceed in this manner but also considers that options could be explored such as a back guarantee or insurance bond providing the right to the Department or Trust for Nature to call on those financial instruments to purchase the offsets. We would like to discuss such options with you further in a meeting.

Our client requests a further opportunity to meet with the Department. Could you please confirm a time we could meet with you in Canberra in the week beginning 16 May 2011.

Despite these ongoing discussions on the form of trust arrangement and amount, we request that you confirm that you now have adequate information to proceed with the assessment of the preliminary documentation in accordance with the EPBC Act.

Please contact me if you require any further information.

Yours sincerely

s 47F
Partner
Direct +61 3 s 47F
s 47F @dlapiper.com
Encl

115 WESTMEADOWS LANE, TRUGANINA

PRELIMINARY DOCUMENTATION

EPBC ACT REFERRAL NUMBER 2010/5791

Intrapac Projects Pty. Ltd.

BL&A
Brett Lane & Associates Pty. Ltd.
Ecological Research & Management
Ph. (03) 9815 2111
Fax. (03) 9815 2685

April 2011
Report No. 9123 (6.0)

ISSUE AND REVISION RECORD

Revision	Date	Author/s	Reviewer	Revisions
6.0	May 2011	s 47F	Brett Lane	Initial draft

CONTENTS

TABLES

FIGURES

1. INTRODUCTION

1.1. Project Overview

Intrapac Projects Pty. Ltd. is proposing a residential development with associated infrastructure at 115 Westmeadows Lane, Truganina, Victoria, 3029.

Project Title: 115 Westmeadows Lane, Truganina

Proponent: Intrapac Projects Pty. Ltd.

33 Coventry Street

South Melbourne

Victoria, 3205

1.2. About Intrapac Projects

Intrapac Projects Pty. Ltd. is a small firm specialising in property development. As a result of its astute understanding of land development industries, Intrapac has been able to consistently identify and acquire sites in strategic geographic locations throughout Victoria, New South Wales and Queensland. Where appropriate, Intrapac contributes its knowledge and expertise in the areas of urban design and planning to manage the development of its land holdings into award winning master-planned estates.

Cardinia Road, Pakenham is an example of the type of projects undertaken by Intrapac Projects. This is a residential development proposed at 110 Cardinia Road, Officer, located approximately 45 kilometres south-east of Melbourne, Victoria. This development includes road and drainage infrastructure. The project is currently being assessed under the EPBC Act (EPBC Act Reference: 2010/5729). The proposed site supports Growling Grass Frog and as part of the provisions an Environmental Management Plan has been prepared for the species. The wetlands supporting the species have been retained in addition to a drainage line which would allow the species to move between a network of wetlands in the surrounding area. The wetland and drainage line will be managed to ensure the habitat is maintained and enhanced where possible.

Intrapac Projects has been working with landscape architects and environmental consultants to maximise the environmental benefits of the project.

1.3. Project Objectives

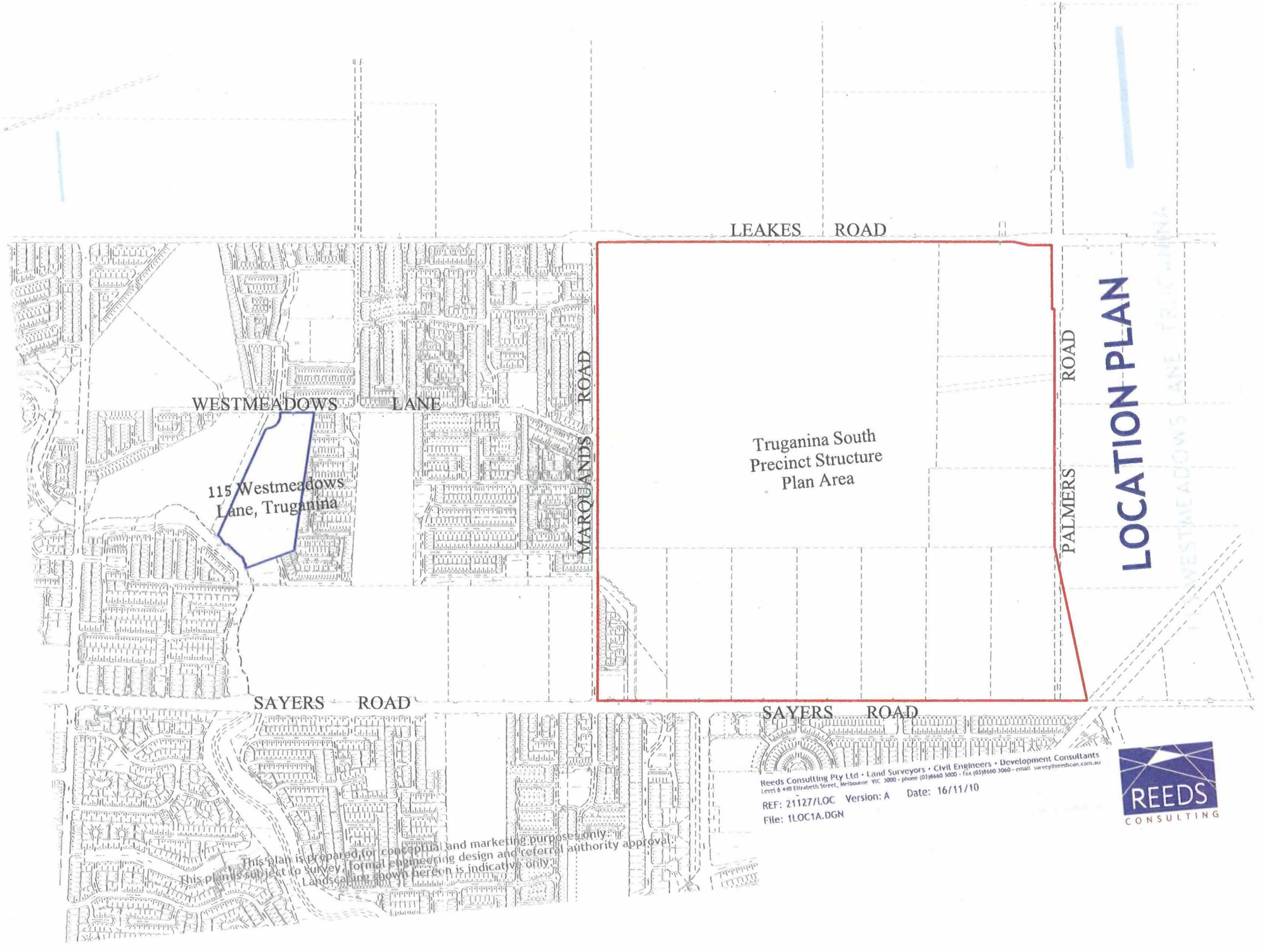
The aim of the project is to provide residential housing in Truganina. Open space has been integrated into the development for the benefit of the future residents.

1.4. Location of the Project

The development site comprises 10.54 hectares of open space bounded by Westmeadows Lane to the north and skeleton creek to the south. The site is located in the Victorian Volcanic Plains bioregion. The land was formerly Plains Grassland, although most of the native vegetation has been modified as a result of agricultural activities. A locality map is provided as Figure 1 and coordinates are provided in Table 1.

Table 1: Project Coordinates

Location point	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NE corner	37°	50'	32.52"	144°	43'	01.47"
NW corner	37°	50'	32.00"	144°	42'	55.71"
(three points)	37°	50'	33.65"	144°	42'	54.44"
	37°	50'	33.75"	144°	42'	53.02"
SW corner	37°	50'	42.94"	144°	42'	45.99"
SE corner	37°	50'	48.56"	144°	42'	51.02"
(two points)	37°	50'	47.57"	144°	42'	56.58"


LEAKES ROAD
WESTMEADOWS LANE
MARQUANDS ROAD
PALMERS ROAD
115 Westmeadows Lane, Truganina
Truganina South Precinct Structure Plan Area
SAYERS ROAD
SAYERS ROAD
LOCATION PLAN
This plan is prepared for conceptual and marketing purposes only.
This plan is subject to survey, formal engineering design and referral authority approval.
Landscaping shown hereon is indicative only.
Reeds Consulting Pty Ltd • Land Surveyors • Civil Engineers • Development Consultants
Level 6 440 Elizabeth Street, Melbourne VIC 3000 • phone (03)8660 3000 • fax (03)8660 3060 • email: surveyl@reedscon.com.au
REF: 21127/LOC Version: A Date: 16/11/10
File: 1LOC1A.DGN
REEDS CONSULTING

1.5. Background to the Development of the Project

115 Westmeadows Lane, Truganina is the last infill site in this block. It is surrounded by an existing housing development which has been ongoing for some time. The aim of this development was to provide affordable housing. It is located adjacent to a reserve which Intrapac will be upgrading as part of the works. The site is located near existing infrastructure, services, facilities and open space.

1.6. How the Action Relates to Other Actions

The site and surrounding properties are zoned as residential. Several developments have been constructed or are in the process of being developed in Truganina. The site is located approximately one kilometre within the urban growth boundary.

1.7. Current Status of the Action

A planning permit (number: WYP3491/09) has been issued by the Wyndham City Council for the development of the site as described herein, including removal of native vegetation in the study area.

The project is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* and will be assessed via preliminary documentation by the Minister for Sustainability, Environment, Water, Population and Communities (DSEWPC) (EPBC Reference: 2010/5791). This document responds to the Department's preliminary documentation requirements.

1.8. Consequences of Not Proceeding with the Project

The social and economic benefit of the project will be lost at a number of levels including jobs created for its construction. Less affordable housing would be made available if this project was to not proceed. The drainage line in the west and south of the study area would not be improved and a Golden Sun Moth population in an area of very high conservation significance would not be secured.

2. LEGISLATIVE, POLICY AND STRATEGIC CONTEXT

The site falls under the Port Phillip and Westernport Catchment Management Authority. The local planning authority is the Wyndham City council. The land is zoned Residential 1 Zone (R1Z).

The project was referred to DSEWPC as a controlled action. The project will be assessed through preliminary documentation, presented here.

A planning permit (Planning Permit number WYP3491/09) under the Victorian *Planning and Environment Act 1987* has been issued for the development and the removal of native vegetation by Wyndham City Council. The Department of Environment and Sustainability (DSE) was the Referral Authority for the permit application. The permit provides for offsetting of vegetation removal, consistent with Clause 15.09 of the State Planning Policy Framework in the Whittlesea Planning Scheme. The relevant planning permit conditions are reproduced below.

> *"Prior to the removal of native vegetation, an offset plan showing appropriate offsets, to compensate for the removal of 0.76 habitat hectares of high conservation significance Plains Grassland EVC, must be submitted and approved to the satisfaction of the Department of Sustainability and Environment. The offsets area must also provide suitable habitat for the Golden Sun Moth."*

Note that the planning permit is not correct and the correct native vegetation removal and offset target figures are given below.

The proposed development would require the removal of:

- 0.615 habitat hectares of Plains Grassland (EVC 132_61) in two habitat zones. The net gain target is 0.922 habitat hectares.

Golden Sun Moth was recorded in the study area in both remnant Plains Grassland and in additional areas of Degraded Treeless Vegetation. The total area of moth habitat to be removed by the proposal is 4.05 hectares.

Implications under the EPBC Act, FFG Act and DSE advisory list have been considered. No other listed species were recorded in the study area and none of the criteria for any of the other acts (e.g. Victorian EE Act) have been met. Therefore, there are no other implications under the EPBC Act for this proposed action.

3. DESCRIPTION OF THE ACTION

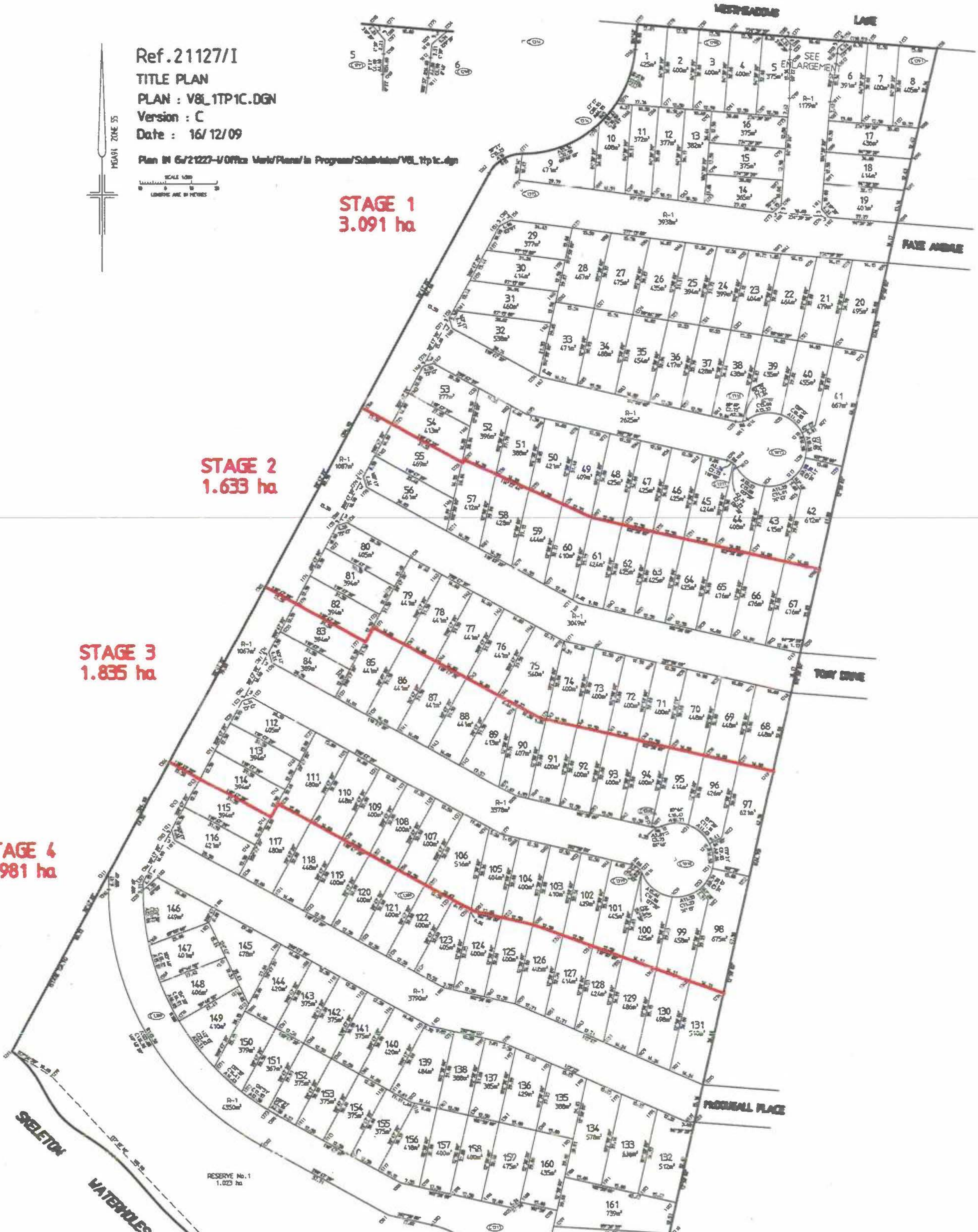
3.1. Key Project Components

The proposed action comprises the construction of a residential subdivision totalling 140 residential allotments of between 372 and 815 square metres. The components of the development are:

- 140 lots covering 10.54 hectares
- Associated roads and services
- A landscaped open space corridor along Skeleton Creek
- A stormwater drainage system.

A layout of the proposed development is presented in Figure 2.

Figure 2: Development Layout


Ref.21127/I
TITLE PLAN
PLAN : V6L_1TP1C.DGN
Version : C
Date : 16/12/09
STAGE 1
3.091 ha
STAGE 2
1.633 ha
STAGE 3
1.835 ha
STAGE 4
3.981 ha
SEE ENLARGEMENT
FAYE AVENUE
TONY DRIVE
RESERVE No.1
1.023 ha
SKELETON
WATERHOLES
CREEK

3.2. Construction Methods and Techniques

The project is currently split into four stages.

Prior to construction, the drainage line which forms the southern and western border will be fenced off to ensure its quality is not compromised during the construction phase.

3.3. Design Parameters

Urban design experts Reeds Consulting developed a layout that provides an appropriate mix of lot sizes. The western and southern boundary of the development comprises a drainage line which will be managed by Melbourne Water and which will include an enhanced buffer.

3.4. Project Stages and Timing

3.4.1. Project Planning

The proposed development will occur in four stages.

Stages 1 and 2 would be completed 22 weeks after commencement. It is proposed that the construction of Stage 1 would commence as soon as possible. The anticipated completion date would be August 2011.

Stages 3 and 4 would commence in July 2011 and terminate in December 2011.

Following feasibility investigations and scope agreement with the proponent, all relevant service infrastructure authorities will be consulted to ensure approvals are obtained throughout the design and construction phase. Once works are completed, necessary letters of approval will be obtained by the statutory authority.

3.4.2. Project Construction

The project construction involves all road carriageway, drainage, earthworks on lots, footpaths, driveways, watermains, gas mains, sewer mains, electricity supply and Telstra supply.

The location of these is presented in Figure 2.

4. ALTERNATIVES TO THE PROPOSED ACTION

There are no alternatives to the proposed development.

5. DESCRIPTION OF THE ENVIRONMENT AND MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

5.1. Vegetation Communities of National Environmental Significance

The EPBC Act protected matters search tool identified three listed communities as potentially occurring within the study area and the surrounding ten kilometres. These were:

- Grassy Eucalypt Woodland of the Victorian Volcanic Plain (critically endangered)
- Natural Temperate Grassland of the Victorian Volcanic Plain (critically endangered)
- Grey Box (*Eucalyptus macrocarpa)* Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (endangered).

None were found to be present on site.

The areas of remnant Plains Grassland and Degraded Treeless Vegetation did not pass the indigenous cover threshold for the Natural Temperate Grassland of the Victorian Volcanic Plain. The other two communities have not been present historically on site.

5.2. Flora of National Environmental Significance

FIS records (Viridans Biological Databases 2010a) and the EPBC Protected Matters Search Tool (DSEWPC 2010) indicate that within the search region there are records of, or there occurs potential suitable habitat for, 24 EPBC act listed flora species. Their likelihood of occurrence in the study area is presented in Table 2. Species likely to occur are highlighted.

Table 2: Likelihood of occurrence of EPBC Act listed flora species

Common Name	Scientific Name	EPBC Act listing	Habitat and Likelihood of occurrence
Button Wrinklewort	*Rutidosis leptorhynchoides*	E	Occurs in basalt grasslands. Modified habitat in study area therefore **unlikely to occur**.
Clover Glycine	*Glycine latrobeana*	V	Occurs in grasslands and grassy woodlands. Not known to occur in the search region – **unlikely to occur.**
Curly Sedge	*Carex tasmanica*	V	Occurs in seasonally wet, heavy soils north of Melbourne. Not known to occur in the search region – **unlikely to occur**
Fragrant Leek-orchid	*Prasophyllum suaveolens*	E	Grassland species, almost extinct. Sensitive to grazing – unlikely to occur
Large-fruit Fireweed	*Senecio macrocarpus*	V	Occurs in Kangaroo-grass grasslands. No substantial habitat in study area therefore **unlikely to occur.**
Maroon Leek-orchid	*Prasophyllum frenchii*	E	Occurs in heathland and grassland on black clays. Sensitive to grazing pressure – **unlikely to occur** .
River Swamp Wallaby-grass	*Amphibromus fluitans*	V	Occurs in wetlands and permanent swamps. No permanent habitat occurs at study area – **unlikely to occur**
Small Golden Moths	*Diuris* sp. aff. *chryseopsis* (Basalt Plains)	E	Occurs in grassland of the Basalt Plains. Sensitive to grazing pressure – **unlikely to occur**
Spiny Rice-flower	*Pimelea spinescens s.l.*	C	Occurs in grassland of the Basalt Plains. Modified habitat at study area therefore **unlikely to occur.**
Sunshine Diuris	*Diuris fragrantissima*	E	Occurs in grassland of the Basalt Plains. Sensitive to grazing pressure – **unlikely to occur**

C = Critically Endangered; **E** = Endangered; **V** = Vulnerable

No suitable habitat for listed threatened flora species was recorded during the flora assessment of the project area due to the highly degraded state of the site from past agricultural development and use. Limited potential was found for the occurrence of the Spiny Rice-flower and the Large-fruit Fireweed and the state of the site was considered too degraded to support them. Targeted surveys of the adjacent land failed to find them and the quality of habitat on the subject site for these plants was considered comparably low, with a low likelihood of their occurrence.

5.3. Fauna of National Environmental Significance

The review of existing information indicates that 16 fauna species listed under the EPBC Act, including migratory birds, may occur within the search region. This includes eight bird, five mammals, two reptiles, one frog and one invertebrate species. Their likelihood of occurrence within the study area is assessed and presented in Table 3. Species that are likely to occur are highlighted.

The review of existing information identified the following 25 listed migratory species as potentially occurring in the study area.

- Bar-tailed Godwit
- Black-tailed Godwit
- Broad-billed Sandpiper
- Cattle Egret
- Common Greenshank
- Curlew Sandpiper
- Double-banded Plover
- Eastern Great Egret
- Fork-tailed Swift
- Great Knot
- Grey-tailed Tattler
- Latham's Snipe
- Little Curlew
- Marsh Sandpiper
- Pacific Golden Plover
- Rainbow Bee-eater
- Red Knot
- Red-necked Stint
- Ruddy Turnstone
- Rufous Fantail
- Sharp-tailed Sandpiper
- Whimbrel
- White-bellied Sea-eagle
- White-throated Needletail
- Wood Sandpiper

No suitable habitat was found to be present. Therefore, none are likely to occur.

Table 3: EPBC Act listed fauna species which may occur in the study area

Common Name	Scientific Name	EPBC Act Listing	Habitat	Number of Records	Year of Last Record	Likelihood of Occurrence
Birds						
Australian Painted Snipe	*Rostratula australis*	VU, M (CAMBA)	Lowlands on shallow freshwater swamps with emergent vegetation and flooded saltmarshes (Marchant and Higgins 1993).	1	1985	Absence of suitable habitat, therefore **unlikely to occur.**
Eastern Great Egret	*Ardea modesta*	M (JAMBA, CAMBA)	Occurs in a variety of wetlands including: permanent water bodies on flood plains: shallows of deep permanent lakes, either open or vegetated with shrubs or trees; semi-permanent swamps with tall emergent vegetation (e.g. Typha) and herb dominated seasonal swamps with abundant aquatic flora (Marchant and Higgins 1990).	None	None	Absence of suitable habitat, therefore **unlikely to occur.**
Fairy Prion	*Pachyptila turtur*	VU	Marine bird; in subtropical and subantarctic seas (Marchant and Higgins 1990).	1	1950	Absence of suitable habitat, therefore **unlikely to occur.**
Orange-bellied Parrot	*Neophema chrysogaster*	EN	Inhabits natural saltmarshes dominated by Beaded Glasswort and Shrubby Glasswort as well as associated grassy or weedy pastures (Commonwealth of Australia 2005).	8	2004	Absence of suitable habitat, therefore **unlikely to occur.**
Plains-wanderer	*Pedionomus torquatus*	VU	This species inhabits native grasslands with sparse cover, preferring grasslands that include Wallaby Grass and Stipa species (Marchant and Higgins 1993).	5	1974	Absence of suitable habitat, therefore **unlikely to occur.**
Regent Honeyeater	*Xanthomyza phrygia*	EN, M (JAMBA)	Inhabits dry box-ironbark eucalypt forests near rivers and creeks on inland slopes of the Great Dividing Range. It could also occur in small remnant patches or in mature trees in farmland or partly cleared agricultural land (Higgins *et al.* 2001).	1	1950	Absence of suitable habitat, therefore **unlikely to occur.**
Shy Albatross	*Diomedia cauta*	VU	Marine, in subantarctic and subtropical waters, occasionally reaching tropic waters (Marchant and Higgins 1990).	1	1956	Absence of suitable habitat, therefore **unlikely to occur.**
Swift Parrot	*Lathamus discolor*	EN	Prefers a narrow range of eucalypts in Victoria, including White Box, Red Ironbark and Yellow Gum as well as River Red Gum when this species supports abundant 'lerp' (Emison *et al.* 1987; Higgins 1999; Kennedy and Tzaros 2005).	1	1995	Absence of suitable habitat, therefore **unlikely to occur.**
Mammals						
Eastern Barred Bandicoot	*Perameles gunnii*	EN	Originally volcanic plain native grasslands, nowadays farmland, parkland and suburban gardens (Menkhorst 1995).	4	1982	Absence of suitable habitat, therefore **unlikely to occur.**
Grey-headed Flying-fox	*Pteropus poliocephalus*	VU	Roosts in riverine habitat in Melbourne and forages widely in flowereing eucalypts and fruit trees (Menkhorst 1995).	2	1988	Absence of suitable habitat, therefore **unlikely to occur.**
New Holland Mouse	*Pseudomys novaehollandiae*	VU	Coastal heath and scrub, heathy woodland, open forest and vegeatated sand-dunes (Menkhorst 1995).	None	None	Absence of suitable habitat, therefore **unlikely to occur.**
Southern Brown Bandicoot	*Isoodon obseulus obesulus*	EN	Heathy forest, woodland, coastal scrub and heathland (Menkhorst 1995).	1	1881	Absence of suitable habitat, therefore **unlikely to occur.**
Spot-tailed Quoll	*Dasyurus maculatus maculatus*	EN	Rainforest, wet and dry forest, coastal heath and scrub and River Red-gum woodlands along inland rivers (Menkhorst 1995).	None	None	Absence of suitable habitat, therefore **unlikely to occur.**
Reptiles						
Grassland Earless Dragon	*Tympanocryptis pinguicolla*	EN	The species is confined to native tussock grassland on basalt plains north and west of Melbourne. has not been confirmed in Victoria since the 1960's (Robertson and Cooper 2000).	None	None	Absence of suitable habitat, therefore **unlikely to occur.**
Striped Legless Lizard	*Delma impar*	VU	Tussock grasslands on the volcanic plains, often associated with scattered rocks and cracked soils (Cogger 2000).	53	2005	Recent historical records present and suitable habitat therefore **likely to occur.**
Frogs						
Growling Grass Frog	*Litoria raniformis*	VU	Permanent, still or slow flowing water with fringing and emergent vegetation in streams, swamps, lagoons and artificial wetlands such as farm dams and abandoned quarries (Clemann and Gillespie 2004).	15	2006	Recent historical records present and suitable habitat therefore **likely to occur.**
Invertebrates						
Golden Sun Moth	*Synemon plana*	CE	Areas that are, or have been native grasslands or grassy woodlands. It is known to inhabit degraded grasslands with introduced grasses being dominant, with a preference for the native wallaby grass being present (DEWHA 2009).	1	2005	Suitable habitat present, therefore **likely to occur.**

C = Critically Endangered; **E** = Endangered; **V** = Vulnerable, **M** = Listed migratory species; **(JAMBA)** = Japan-Australia Migratory Bird Agreement; **(CAMBA)** = China-Australia Migratory Bird Agreement; **(ROKAMBA)** = Republic of Korea- Australia Migratory Bird Agreement; **(Bonn)** = Bonn Convention

Three species were identified as being likely to occur, based on the habitats present in the study area:

- Striped Legless Lizard
- Growling Grass Frog
- Golden Sun Moth.

Targeted surveys were therefore recommended and subsequently undertaken.

Striped Legless Lizard and Growling Grass Frog were not recorded during the targeted assessments. Habitat is too disturbed and fragmented for Striped Legless Lizard and lacks surface shelter in the form of dense tussocks or extensive surface rock.

The dams on the site lack dense fringing vegetation that would provide shelter for the Growling Grass Frog and it is unlikely to occur in these. Fringing vegetation along Skeleton Creek may provide occasional habitat for frogs moving along the creek.

Golden Sun Moth was confirmed to occur on the site. This species was recorded in the eastern parts of the site.

The Golden Sun Moth is listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and is considered to be critically endangered at a national level. The species occurs in native temperate grasslands, and open grassy woodlands where the ground layer is dominated by wallaby grass (DEC 2007). While previous studies suggested that the species prefers grasslands which have a greater than 40% coverage of wallaby grass over a given area (O'Dwyer & Attiwill 1999), more recent studies show a broader tolerance for other species compositions, including degraded grasslands dominated by exotic Chilean Needlegrass (*Nassella neesiana*) (Braby & Dunford 2006; Gibson 2006; Gilmore *et al.* 2008).

The targeted survey was undertaken using best-practice survey methods, recently published by DEWHA (2009). During this assessment 101 Golden Sun Moths were recorded during the first survey, 307 during the second and two during the third visit. No Golden Sun Moths were recorded during the last visit. The moths were generally recorded in areas where bare ground was abundant and the dominant indigenous grass species were wallaby-grasses. Figure 3 indicates the extent of the species' occurrence on the site.

0 50 100 200 Meters

Legend

- Study Area
- Golden Sun Moth Areas
- Dam

Figure 3: Golden Sun Moth Areas

Project: Lot 11 Westmeadows Lane, Truganina

Client: Intrapac Projects Pty. Ltd.

Project No.: 9123	Date: 14/01/2010	Created by: G. Roy / D. Soldatos

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6. RELEVANT IMPACTS

6.1. Ecological Communities of National Environmental Significance

No EPBC Act listed communities occur or potentially occur in the study area. Therefore impacts to nationally listed species will not be significant.

6.2. Flora of National Environmental Significance

The study area does not support any nationally listed flora species. Based on the habitats present, none are considered likely to occur. Therefore, impacts to nationally listed flora species will not be significant.

6.3. Fauna of National Environmental Significance

Golden Sun Moth is the only EPBC Act listed fauna species present in the study area. Four hundred and eight individuals were recorded during the targeted survey.

The proposed development would result in the following impacts on Golden Sun Moth:

- Habitat loss:

  The area of remnant grassland in the study area that will be removed in the proposed development area is 4.048 hectares, comprising all remnant grassland on the site. Golden Sun Moths were not found in all of this vegetation and were generally confined to the eastern edge of the site. Golden Sun Moths were not found in all of this vegetation and were generally confined to the eastern edge of the site.

- Habitat fragmentation:

  The surrounding properties which have not yet been developed appear to support similar habitats to those identified in the study area, based on observations during field surveys, although these sites have not been formally surveyed. Should these habitats be suitable for Golden Sun Moth the proposed development would result in the fragmentation of these connecting habitats. Fragmentation can increase isolation from other populations and can impact the viability of resident populations.

- Habitat degradation:

  During the construction and operational phases of the proposed development, habitat degradation can occur through the introduction of non-indigenous species which can impact habitat quality for this species. Habitat quality can then affect populations by reducing larval food, which can then result in a decrease in Golden Sun Moth numbers.

  Habitat degradation can also occur through soil compaction during construction works.

The significant impact guidelines (DEWHA 2009) state that for areas of Golden Sun Moth habitat up to four hectares, any habitat loss, fragmentation or degradation is considered a significant impact to the species. The proposed development would therefore have a significant impact on Golden Sun Moth. Suitable offset and mitigation measures are proposed below.

7. PROPOSED MITIGATION MEASURES AND OFFSETS

7.1. Mitigation Measures

As part of the mitigation measures, a landscaped buffer between development and the Skeleton Creek is being provided, consistent with the objectives of the Wyndham Planning Scheme Environmental Significance Overlay that requires the values of Skeleton Creek to be retained and enhanced. The landscape plan (see Figure 4) indicates the nature and extent of the proposed waterway enhancement works. These works are not inconsistent with similar works elsewhere along the Skeleton Creek and will have components that enhance habitat opportunities for the Growling Grass Frog, such as revegetated pool and riffle sequences and fenced, dense ground cover adjacent to the creek.

Melbourne Water has set stormwater management standards for developments in the Skeleton Creek catchment and these will apply to the current development proposal. Works along Skeleton Creek will assist in mitigating the off-site effects of the development on the current, somewhat degraded ecological attributes of the Skeleton Creek and an eventual improvement in vegetation cover and aquatic habitat conditions is anticipated as a consequence of implementation of the landscape plan.

The proposed development will involve the removal of all Golden Sun Moth habitat from the site and no mitigation measures are feasible. Offsetting for the removal of this habitat is described in the following sub-section of this document.

Figure 4: Landscape Plan

LEGEND

ENTRY BOULEVARD TREES
Tall clear trunked ornamental tree.
Eg. Ulmus parvifolia - Chinese Elm
Eucalyptus mannifera ssp maculosa - Red Spotted Gum

OPEN SPACE INTERFACE TREES
Australian native species.
Eg. Eucalyptus melliodora - Yellow Box
Eucalytptus radiata - Narrow-leaf Peppermint

LOCAL STREET TREES
Small to medium drought tolerant tree species.
Matching with existing street trees where necessary.
Eg. Eucalyptus scoparia - Wallangarra White Gum
Eucalyptus leucoxylon ssp.megalocarpa - Large-fruited Flowering Gum
Pyrus calleryana 'Aristocrat' - Ornamental Pear

WATERWAYS
Subject to Melbourne Water approval.
Planting to Melbourne Water Reserve and interface with Skeleton Creek.
Grassed channel with scattered trees on banks.
Eg. Eucalyptus camaldulensis - River Red Gum
Allocasuarina verticillata - Drooping Sheoak

OPEN SPACE
To be designed & developed by City of Wyndham.
ata - Smooth Bark Apple
Eucalyptus melliodora - Yellow Box

NATURE STRIPS
Hydroseeded grass in accordance with City of Wyndham requirements.

THRESHOLDS AND PARKING BAYS
By others

INDICATIVE IMAGES

Possible picnic shelter

Melbourne Water reserve treatment

A1
SCALE 1:2000
0 20 40 100

LANDSCAPE MASTERPLAN

WESTMEADOWS LANE, TRUGANINA

PROJ/DRG NO 30933 MP01 REV 02 DRWN MS CHKD RTW DATE 15.12.20

Tract

7.2. Proposed Offsets

Offsets have been identified for the removal of the Golden Sun Moth habitat. In total, 4.048 hectares of Golden Sun Moth habitat will be removed. Consistent with the Commonwealth's *Draft EPBC Act Policy Statement 4.1 –Use of Environmental Offsets under the EPBC Act*, an off-site area of confirmed Golden Sun Moth habitat will be secured and managed for moth conservation into the future. The offset site will have the attributes below, based on advice from the Commonwealth DSEWPC sent on 4th February 2011:

- Evidence of breeding
- Equal or higher population density
- Equal or higher habitat quality
- Area ratio of approximately 4:1 (offset : removed)
- Reasonable proximity
- Identified and, preferably secured, prior to approval of the proposed action.

The proponent has committed to securing these offsets or providing funds in trust to purchase the required offsets before any grassland is removed from the proposed development site, to the satisfaction of the Commonwealth Minister for the Environment. Until approval of the project under the EPBC Act is forthcoming, it is not possible to enter into any binding legal agreement about offsets.

An offset site has been located that meets most of these criteria. It is located between Geelong and Ballarat, approximately 50 kilometres from the development site.

The site will be subject to an ongoing management plan that will be developed with the relevant landowner, this will ensure that Golden Sun Moth habitat is retained, enhanced and managed for the species into the future.

The offset site is proposed to be secured through an agreement between the owner and the local council under section 173 of the Victorian *Planning and Environment Act 1987*.

Details of the offset site are being provided to the Commonwealth DSEWPC separately in order not to prejudice any commercial negotiations between Intrapac Projects Pty Ltd and the offset site owner.

8. ENVIRONMENTAL RECORD OF PERSONS PROPOSING TO TAKE THE ACTION

Intrapac Projects Pty. Ltd. Is an established and experienced property developer firm specialising in residential subdivisions for almost 25 years. They have undertaken a number of projects throughout Victoria and won several industry UDIA Awards for Excellence, detailed below. Intrapac Projects is currently working on an Environmental Policy and Planning Framework. For many years Intrapac Projects has been influenced by a goal of achieving quality and environmentally sensitive projects. Intrapac Projects adheres to all environmental and planning legislation and policies.

Similarly, when developing projects, they aim to avoid and minimise impacts on environmental values at the design stage by incorporating these values into the development layout, and have worked on projects that meet the for "Net Gain" step of avoidance. When this was not possible, Intrapac Projects has offset any vegetation removal according to the national, state and local policies, usually achieved onsite.

Intrapac Projects has won excellence awards from the Urban Development Institute of Australia (UDIA) Victoria Branch, including: Churchill Park, Lysterfield; Oaktree Rise, Lysterfield; Lorikeet Ridge, Langwarrin; The Quay, Torquay. These are awarded for the best urban developments, including those that adopt, among other things, best environmental practice.

Project Name: 110 Cardinia Road, Officer

Project Type: Subdivision and residential development

Project history: Intrapac Projects commissioned environmental consultants to undertake a Growling Grass Frog assessment to determine whether a population of this listed species was present in the subject land.

Environmental Values:

- The assessment indicated that the subject land was an important stronghold for Growling Grass Frog.
- The subject land supported core Growling Grass Frog habitat.

Response:

- The original development layout was modified to incorporate mitigation measures to allow Growling Grass Frogs to survive alongside the development. These measures include:
    - Retention of the large dam known to be inhabited by Growling Grass Frogs.
    - Provision of a 30 metre buffer around the dam between residential lots, roads or passive recreational infrastructure, to be revegetated with low shrub and tussock grass species to provide terrestrial non-breeding season hibernation habitat (along the southern edge of this a shared trail is to be provided).

- Revegetation of this area should comprise a mix of tussock grasses and low (<1.5m) shrubs) to reduce shading of the dam and fencing should be provided to exclude human access.
- Retention of linkages to habitats to the west along the northern boundary of the property, adjacent to the railway line, comparable in width and linking to similar links in planned development to the west (VicUrban).
- Establishing a north-south high-flow drainage link through the development to a proposed drainage retarding basin south of the study area (VicUrban) to facilitate frog movement to proposed new potential wetland habitats off-site, to be vegetated with grass. and
- Provision within this north-south link of ponds either side of the culvert under the proposed road, vegetated with dense sedges with rocky banks (approx. 40% of bank by area), providing cover for any frogs that move along the link.

Project Name: Somerfield Estate, Keysborough

Project Type: Residential development

Project history: Intrapac Projects commissioned environmental consultants to undertake a Native Vegetation assessment to identify the environmental values in the study area and recommend measures to minimise potential impacts to these.

Environmental Values:

- Patches of Plains Grassy Woodland
- Large and very large trees
- Scattered very large, large, large, medium and small trees.

Response: The project has been designed, in consultation with landscape architects Tract, to minimise its impact through the adoption of the following specific design measures:

- The largest area of native vegetation was avoided and acted as an offset for the removal of native vegetation.
- There is over 20% open space and wetlands integrated into the development.
- Recycled water is used.
- As many trees as possible were retained and incorporated into the development design in the areas of open space.
- Retention of the larger patches of vegetation north of Island Road in a proposed Council Reserve.
- Inclusion of two large allotments (both exceeding 4 000 m^2) in the northern part of the subdivision area.
- Protection of remnant native vegetation in the rear of these allotments in a Section 173 Agreement.

- Adjustments to the road layout connecting the study area with adjacent areas proposed for subdivision to minimise the areas of remnant native vegetation required to be removed for road works.

9. INFORMATION SOURCES PROVIDED IN THE PRELIMINARY DOCUMENTATION

- AVW: This database is administered by the DSE and holds all records of fauna species within Victoria prior to 2009. Data for this database has been gathered from ecological surveys undertaken by DSE, museum specimens, professional zoologists outside DSE, competent field naturalists and zoological literature. Records from this database provide an indication of which species are present in an area and not an estimate of population size.
- FIS: This database is administered by the DSE and holds all records of flora within Victoria prior to 2009. Data has been collected by ecological surveys undertaken by the DSE, herbarium specimens, botanists outside of DSE, competent field naturalists and botanical literature. Records from this database provide an indication of which species are present in an area and not an estimate of population sizes.
- EPBC Act Protected Matters Search Tool: This online database is administered by the Department of Sustainability, Environment, Water, Population and Communities. Information originates from AVW and FIS and Bioclim modelling of potential species occurrence.
- BL&A Surveys:
    - Overview assessment which identified the vegetation communities present in the study area and habitats likely to support listed threatened species.
    - Habitat hectare assessment and subsequent net gain analysis to determine the offset requirements for the proposed development.
    - Targeted Striped Legless Lizard survey. No individuals were identified during the assessment.
    - Targeted Growling Grass Frog Survey. No individuals were recorded during the assessment.
    - Targeted Golden Sun Moth Survey. A population of Golden Sun Moth were recorded in the study area, as discussed in the sections above.

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BL&A Brett Lane & Associates Pty. Ltd.
Ecological Research & Management

MEMORANDUM

To: Department of Sustainability, Environment, Water, Population and Communities

Date: May 4th 2011

From: Brett Lane, Director, Brett Lane & Associates Pty. Ltd.

Subject: EPBC Act Referral 2010/5791, Westmeadows Lane, Truganina - Offset Site at Marchments Rd, Meredith, Victoria

Intrapac Projects Pty. Ltd. propose to develop a housing estate at Westmeadows Lane Truganina. In doing so, it would remove 4.04 hectares of degraded treeless vegetation and low quality Plains Grassland (habitat score 20 to 27 out of 100), that does not qualify as the EPBC Act listed threatened community Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP). This area supports a population of the Golden Sun Moth, which was detected during targeted surveys in 2010-11 (see attached map).

This memorandum summarises information on the proposed offset site for the removal of this 4.04 hectares of Golden Sun Moth habitat. The proposed offset site is located at Meredith, between Geelong and Ballarat, approximately 50 kilometres from the proposed development site. It comprises two areas totalling 9.9 hectares in which there are recent records of the Golden Sun Moth. It is a site that has previously been subject to extensive environmental management under the Victorian Bush Tender Scheme and for which no further funds exist for management. The landowner is keen to protect and preserve the environmental values of the land and has agreed, subject to suitable commercial terms, to make the site available to Intrapac Projects Pty. Ltd. as an offset site.

You have indicated in your letter of 4th February 2011 that you require the offset site to meet a number of criteria, discussed below.

- Evidence of breeding

During the targeted surveys described in the attachment, Golden Sun Moth was observed. It has been observed by the landowner and others on the site in a number of recent summers, indicating a viable population. The landowner has indicated that he has found a pair copulating. The presence of good numbers of male flying Golden Sun Moths over at least the last two years is a good indication that the site supports a viable population.

- Equal or higher population density

Measures of population density of the Golden Sun Moth can only ever be snapshots of a particular survey day and are meaningless due to the highly variable nature of their activity. The survey at the development site found 101, 307, 2 and no individuals over four visits in November and December 2009 (see Flora and Fauna report attached to the Referral). Four surveys at the offset site found none, 100 and 5 individuals over three surveys in November and December 2010 before conditions were no longer suitable for surveying.

- Reasonable proximity

The site lies approximately 50 kilometres west south west of the proposed development site within the same bioregion, namely the Victorian Volcanic Plain.

- Area ratio of approximately 4:1 (offset : removed)

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The draft policy guidelines (DEW, 2007) indicate that *"offsets should deliver a real conservation outcome."* In addition to protecting the Golden Sun Moth, the offset site supports Natural Temperate Grassland of the Victorian Volcanic Plain an EPBC Act listed threatened community with a habitat score of 52 out of 100. This habitat type is not being affected by the proposed development. Concurrently, the habitat at the offset site is more extensive and less fragmented compared with the habitat being removed at the development site. This makes the offset area of significantly greater value for EPBC Act listed matters than the area being removed.

The areas that support the Golden Sun Moth in the proposed offset occur within two paddocks totalling 9.9 hectares (one of 3.6 and one of 6.3 hectares). Although the proposed offset is less than the 4:1 ratio, the additional value of the land as described above should be considered in determining an appropriate ratio.

- Identified and, preferably secured, prior to approval of the proposed action

The proponent has committed to securing these offsets or providing funds in trust to purchase the required offsets before any grassland is removed from the proposed development site, to the satisfaction of the Commonwealth Minister for the Environment. Until approval under the EPBC Act for the proposed development project is forthcoming, it is not possible to enter into any binding legal agreement with the owner of the offset site.

The site will be subject to an ongoing management plan that will be developed with the relevant landowner to ensure that Golden Sun Moth habitat is retained, enhanced and managed for the species into the future.

The offset site is proposed to be secured through an agreement between the owner and the local council under section 173 of the Victorian *Planning and Environment Act 1987*.

The foregoing arrangements are also adequate to meet the offset security requirements for this project under its approval consistent with the State Native Vegetation Management Framework. Note that Intrapac Projects proposes to collocate both Victorian and Commonwealth offset requirements.

Conclusion

The draft guidelines state that the Australian Government's position is to have a flexible approach to offsets which *"achieve long-term and certain conservation outcomes which are cost effective for proponents."* The availability of Golden Sun Moth offsets in close proximity to the proposed development is very restricted. Therefore, the application of a flexible approach for this offset site is considered appropriate, considering the positive environmental outcome of protecting and enhancing two EPBC Act listed values, of which only one would be impacted in the proposed development.

Brett Lane
Principal Consultant
Brett Lane & Associates Pty. Ltd.

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Legend

- Study Area
- Golden Sun Moth Areas
- Dam

0 50 100 200 Meters

Golden Sun Moth Areas		
Project: Lot 11 Westmeadows Lane, Truganina		
Client: Intrapac Projects Pty. Ltd.		
Project No.: 9123	Date: 14/01/2010	Created by: G. Roy / D. Soldatos

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LOT 11 WESTMEADOWS LANE, TRUGANINA

FLORA AND FAUNA ASSESSMENT

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May 2011

Report No. 9123 (4.2)

CONTENTS

TABLES

FIGURES

APPENDICES

1. EXECUTIVE SUMMARY

Brett Lane and Associates Pty. Ltd. (BL&A) was commissioned to undertake a review of existing information, a flora and fauna assessment and Golden Sun Moth targeted survey of Lot 11 Westmeadows Lane, Truganina. The assessment was undertaken in view of a proposed residential development in the area.

Six habitat zones were identified in the study area. Four of these comprised degraded treeless vegetation, and two comprised lower-quality remnant Plains Grassland. No listed threatened flora species were recorded in the study area. Button Wrinklewort, Large-headed Fireweed and Spiny Rice-flower were considered to have a low likelihood of occurrence in the study area. The remnant grassland identified in the study area does not qualify as the EPBC Act listed threatened community Natural Temperate Grassland of the Victorian Volcanic Plain.

No listed threatened vertebrate fauna were recorded during the overview assessment. Suitable habitat was found for Striped Legless Lizard, Growling Grass Frog and Golden Sun Moth. No Striped Legless Lizards or Growling Grass Frogs were recorded during targeted surveys. The Golden Sun Moth survey indicated that the site supported a population of the species, with a total of 409 individuals recorded over four survey dates.

2. INTRODUCTION

Brett Lane and Associates Pty. Ltd. (BL&A) was commissioned to undertake a review of existing information, a flora and fauna assessment and Golden Sun Moth targeted survey of Lot 11 Westmeadows Lane, Truganina. The assessment was undertaken in view of a proposed residential development in the area.

This investigation was commissioned to provide information on the extent and condition of native vegetation and fauna habitat in the study area and outline any implications under various national, state and local legislation and policy. Of particular focus were any implications of the proposal under Victoria's Native Vegetation Management Framework (DNRE 2002), referred to herein as the 'Framework'.

Specifically, the scope of the investigation included:

- Review of existing information;
- Site surveys in January 2007, January 2008 and November to December 2009 were undertaken involving:
    - Preparation of a flora species list using incidental observations and Habitat Hectare Assessments in areas determined to contain native grassland with native species composition greater than 25%;
    - Targeted threatened flora surveys;
    - Fauna surveys using incidental searching, rock rolling and assessment of habitat;
    - Targeted surveys for Striped Legless Lizard (pitfall trapping) and Golden Sun Moth transect surveys;
- Maps were prepared of the site outlining areas of native vegetation and fauna habitat.

This report presents the findings of the assessments, including information contained in previous BL&A Reports 7009 (1.1) and 7111 (1.0). It is divided into the following sections:

Section 3 describes the sources of information, including the methods used for the field surveys.

Section 4 presents the investigation results.

This investigation was undertaken by a team from Brett Lane & Associates Pty. Ltd. comprising s 47F (Botanist), s 47F (Zoologist), s 47F (Zoologist) s 47F (Botanist), s 47F (Senior Ecologists) and Brett Lane (Principal Consultant).

3. SOURCES OF INFORMATION

3.1. Existing Information

Existing information on flora and fauna used for this investigation is described below. Note that 'study area' refers to the area of land bounded by Westmeadows Lane to the north, a drainage line to the west, houses to the east and Skeleton Creek to the south. Existing information has been obtained from a wider area, termed the 'search region' defined for this assessment as an area with radius five kilometres from the approximate centre point of the study area of coordinates: latitude 37° 50' 35" S and longitude 144° 42' 57" E.

The following report was reviewed, in addition to the database searches provided below:

Biodiversity Due Diligence Assessment – 115 (Lot 11) Westmeadows Lane, Truganina (EarthTech July 2007) prepared for Brico Pty. Ltd.

3.1.1. Flora

Flora records from the Viridans Flora Information System (FIS), a public database administered by the Department of Sustainability and Environment (DSE) were obtained. This database search listed all plant species, including rare and threatened plants, known to occur in a search region.

The likelihood of suitable habitat on the site for nationally threatened flora species was ascertained through a search of the *Environment Protection and Biodiversity Conservation* Act 1999 Protected Matters Search Tool (DEWR 2007).

Plant taxonomy used throughout this report follows the FIS standards.

3.1.2. Ecological Vegetation Classes

Online interactive vegetation mapping (both existing and pre-1750) administered by the DSE was reviewed to determine the Ecological Vegetation Classes (EVC) likely to be encountered in the field. Descriptions of these were obtained from benchmarks published by DSE.

3.1.3. Fauna

A list of the fauna species recorded in the search region was obtained from the Atlas of Victorian Wildlife (AVW), a database administered by DSE.

Fauna taxonomy used throughout this report follows the AVW nomenclature.

The presence or likelihood of occurrence in the study area of nationally threatened fauna species was obtained through the EPBC Act Protected Matters Search Tool (DEWHA 2009).

3.2. Field Methodology

Field assessments were undertaken over several surveys. On January 31st 2007, the overview flora and fauna assessment was undertaken. During this survey, listed threatened species likely to occur were identified and targeted surveys for these were recommended. Details of the methods for the targeted surveys are provided in the sections below.

During the overview flora and fauna assessment, the study area was surveyed on foot. Sites in the study area found to support native vegetation and/or habitat for rare or threatened flora and/or fauna were mapped. Mapping was undertaken through a combination of aerial photograph interpretation and ground-truthing using a hand held GPS (accurate to approximately five metres).

In addition, surveys of an adjacent property (Lot 10) were undertaken in spring 2007 and due to the proximity of the patches of grassland on this site, these were considered helpful in determining whether the vegetation in this general area supports significant populations of threatened plant species so reference is made to these results in this report.

Incidental records of flora species were made based on random intuitive sampling methods. A compiled list of flora species recorded is provided in Appendix 1.

A revised flora assessment was conducted in mid-July 2009. The scope of this assessment was to re-assess vegetation within the study area that had been previously mapped by BL&A in 2007 and to compare the condition of the grassland on the site as habitat for the Golden Sun Moth with that of a nearby site known to support the species. In addition, further information was collected on the state of the grasslands to determine if they qualified as the EPBC Act-listed Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP). The cover of indigenous grass species and weeds was compared with relevant criteria in the EPBC Act Listing Advice and Policy Statement 3.8 (DEWHA 2008) for this threatened community. Threatened grassland flora species were also searched for during this survey using random intuitive searching.

3.2.1. Native vegetation

Native vegetation in Victoria has been defined by the DSE as belonging to three categories:

- Remnant patch;
- Scattered trees; and
- Degraded treeless vegetation.

A description of these is provided below with the prescribed DSE methods to assess them.

Remnant patch

Remnant patches of native vegetation comprise indigenous plant species considered part of a clearly definable EVC and are defined by the DSE as:

- An area of native vegetation, with or without trees, where at least 25% of the understorey cover is indigenous (excluding bare ground); and/or
- "A group *(i.e. three or more) of trees where the tree* canopy *cover is at least 20%*" (DSE 2007a).

Remnant patch vegetation is assessed using the habitat scoring or habitat hectare method (Parkes *et al.* 2003; DSE 2004) whereby components of native vegetation (e.g. tree canopy, understorey and ground cover) are assessed against a DSE-issued EVC benchmark (see appendices) that described the notional pre-

European condition of that EVC. The score effectively measures the percentage resemblance of the vegetation to its original condition.

The habitat hectare score assists in defining the value of remnant native vegetation for assessing its conservation significance and for calculating offsets if removal of native vegetation is approved.

Scattered trees

DSE (2007a) define scattered trees as indigenous trees with a diameter at breast height (1.3 metres) (DBH) greater than ten centimetres "*within an area where at least 75% of the total understorey plant cover is introduced vegetation and the overall canopy cover for a group (i.e. three or more) of the tree is less than 20%*".

Scattered trees are counted and their DBH measured. The size class of scattered trees is based on the large tree DBH in the relevant benchmark for the EVC to which it once belonged.

Degraded treeless vegetation

Degraded treeless vegetation comprises all other vegetation (DSE 2007a) including:

- Wetlands;
- Treeless vegetation with less than 25% total cover of indigenous species (excluding bare ground); or
- Treeless vegetation that has greater than 25% total cover of indigenous species (excluding bare ground) but is dominated by a small number of opportunistic native species which were unlikely to have been dominant prior to a disturbance event (e.g. cropping).

3.3. Fauna

3.3.1. Overview Assessment

The following techniques were used to detect fauna species inhabiting the study area:

- Incidental searches were undertaken for mammal scats, tracks and signs (e.g. diggings, signs of feeding and nests/burrows);
- Turning over logs and other ground debris for reptiles, frogs and mammals;
- Bird observation during the day;
- General searches for reptiles and frogs; including listening to frog calls in seasonally wet areas.

Weather conditions during this survey were fine and mild, sunny, with a moderate to fresh southerly breeze; ambient air temperature varied from about 15 °C up to 20 °C in the early afternoon.

Fauna habitat types were characterised in the study area and are described in Section 4.2.1. The quality of fauna habitat was assessed based on the criteria detailed below. The three following quality categories were used:

High: All fauna habitat components, including old-growth trees, fallen timber, leaf litter, surface rocks are usually present and habitat linkages to other remnant ecosystems in the landscape are intact.

Moderate: Some fauna habitat components are missing, although linkages with other remnant habitats in the landscape are intact.

Low: Many fauna habitat components have been lost as have linkages with other remnant habitats in the landscape. Remnant vegetation possesses few indigenous components.

3.3.2. Targeted Striped Legless Lizard Survey

The survey was completed between February 11th and 16th 2007, and between February 19th and 24th 2007. It was undertaken in patches of remnant native grassland on the Lot 10 Westmeadows land, adjacent to the current site. Prior to commencing the survey, three plots each containing four pitfall buckets (25 cm diameter and 30 cm deep ice cream buckets) placed mid-line within a seven metre long nylon mesh fence of approximately 25-30 cm height, was installed in the study area. Two of the pitfall trapping plots were situated in the plateau area at the eastern end of the study area, while the other one was placed at a lower level, closer to Skeleton Creek in remaining suitable habitat. They were checked twice daily, shortly after dawn and before dusk, until the final survey day.

Environmental conditions were mostly very warm and humid throughout the survey period with little or no rain. Overall, temperature ranged from 16 °C to 36 °C but in the early morning generally varied from 20 to 23 °C. On the weekend of 17th and 18th February, conditions were hot (maxima 37-39 °C) and dry and traps were closed. The traps were mainly operated in fine weather, however some light rain was experienced overnight and on the mornings of 19th and 24th February. Conditions were suitable throughout the survey for Striped Legless Lizard activity, and this, combined with the thoroughness of the pitfall trapping method employed, was considered sufficient to find the species if present.

3.3.3. Targeted Growling Grass Frog Survey

The targeted survey method involved two call playback and spotlighting sessions in pools along Skeleton Creek adjacent to the study area. Two small dams on the site did not hold water at the time of the survey and were considered to lack essential habitat features for this species, such as a dense fringe of aquatic vegetation.

Evening surveys were carried out on the 21st and 28th February 2007. The first survey was conducted from 20:35 to 21:15 and consisted of five minutes listening for frog calls, followed by five minutes of playback through a loudspeaker of a recording of the male Growling Grass Frog's advertisement call. This was followed by 30 minutes of spotlight searching of the billabongs and associated reed beds and fringing and submerged vegetation that made up Skeleton Creek at this point.

Environmental conditions on 21st February were fine, partly cloudy and humid with a slight southerly breeze and ambient temperature of around 22 °C. Conditions in recent weeks had been mostly dry with only three or four days of light rainfall (< 5 mm) for one month prior to the visit. The second survey took

place on 28th February 2007, from 20:55 to 21:35 hours. Conditions on this occasion were fine, calm and partly cloudy with an ambient temperature of 24 °C and relative humidity of 68%. There had been 7 mm of rainfall the previous night at the Bureau of Meteorology's Laverton gauge, situated about 3 kilometres southeast of the study area. This resulted is some boggy ground at the edges of the creek course, but made little difference to water levels in the billabongs. The same Growling Grass Frog search procedure was employed as on the 21st.

3.3.4. Targeted Golden Sun Moth Assessment

Two targeted Golden Sun Moth surveys were undertaken, in early January 2008 and one in November to December 2009. The former survey was undertaken prior to the publication of the Commonwealth survey guidelines. During this survey, transects five metres apart were walked on one occasion.

The survey was repeated in 2009 as requested by DSE. Areas identified as supporting native grassland and wallaby grasses during the initial survey were further surveyed for Golden Sun Moth following the new survey guidelines (DEWHA 2009a). Surveys were conducted in suitable conditions, namely:

- On a warm to hot day where the temperature exceeds 20°C by 10 am;
- During the warmest part of the day (i.e. between 10 am and 2 pm);
- With a clear or mostly cloudless sky;
- With still or relatively still wind conditions during the survey period; and
- At least two days since rain.

Surveys were undertaken on four occasions in 2009, at approximately weekly intervals. The surveyor walked the length of each transect, situated 10 metres apart and searched for Golden Sun Moths. Transect length depended on the size of native vegetation patch.

Golden Sun Moths were identified during the first visit. As such, during subsequent visits, the relative distribution of the species was ascertained.

Table 1 provides details of transects surveyed and weather conditions. Transect locations are provided in Figure 2.

3.4. Limitations

Where feasible, all efforts are made to schedule flora and fauna field surveys in optimal weather conditions and times of year. Nevertheless, field surveys usually fail to record all species present for various reasons, including the seasonal absence of some species and short survey duration. Rare or cryptic species are often missed in short surveys.

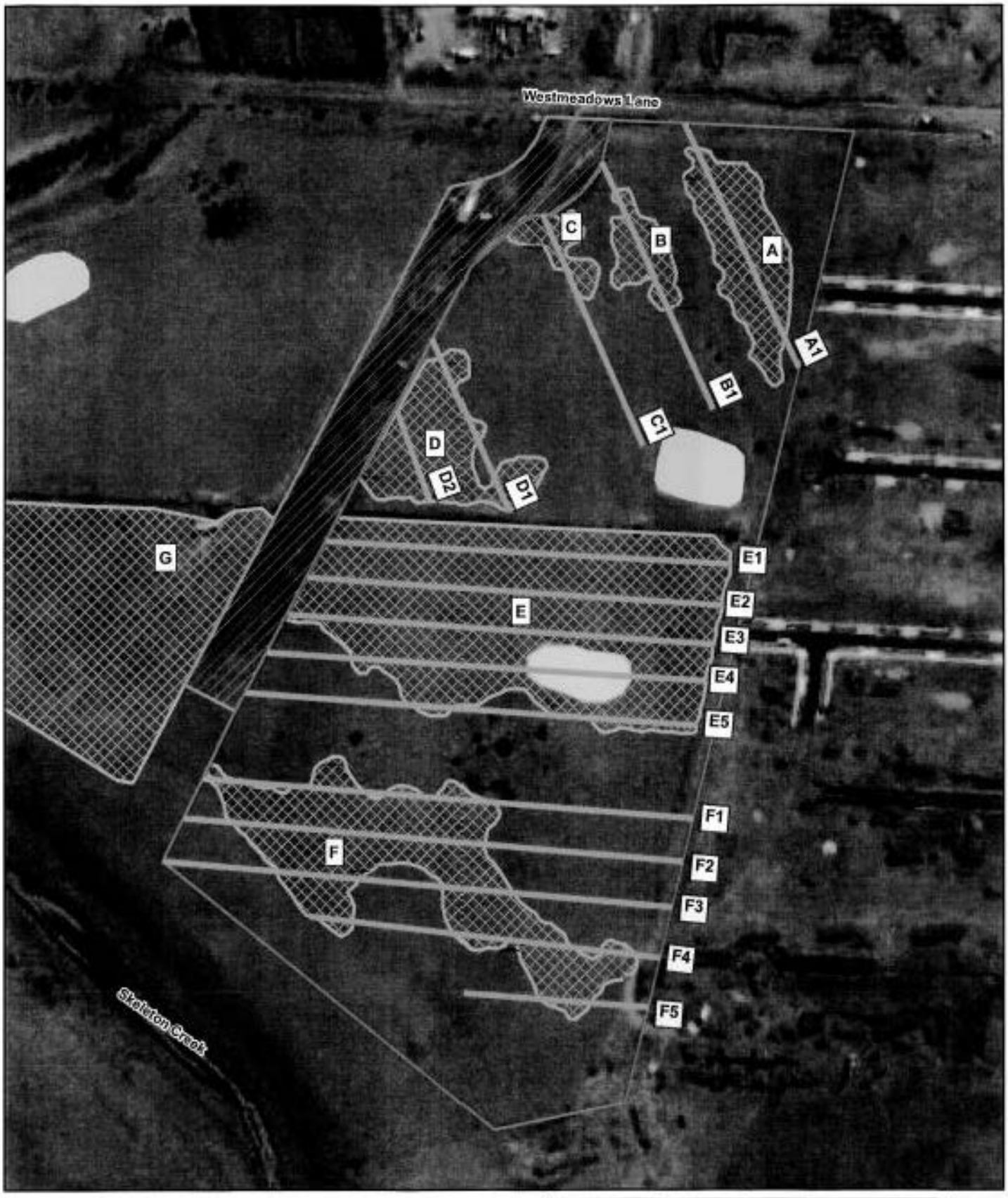
To overcome these limitations, targeted flora surveys were undertaken in early October to determine the presence or otherwise of spring-flowering flora species. Surveying was also undertaken in December and January to determine the composition of summer-flowering native grasses such as spear grasses in comparison with the invasive Chilean Needle Grass.

Initial fauna surveying was carried out in summer. Weather conditions and timing of the survey were considered sufficient to detect the presence of most vertebrate fauna (mammals, birds, reptiles and frogs) that may occur on the site.

Table 1: Golden Sun Moth Transect Locations and Weather Conditions

Transect ID	Corresponding Habitat Zone	Survey Start Time				Average Temperature °C	Rain	Wind Strength	Wind Direction	Transect Length (m)
		09/11/09	13/11/09	02/12/2009	15/12/2009					
A1	A		14:20	15:17	13:50	38	-	Light to moderate	South to South-East	80
B1	B		14:25	15:21	14:00	38	-			150
C1	C		11:55	15:25	14:10	37	-			100
D1	D		12:10	15:30	14:20	37	-			100
D2			12:20	15:32	14:30	37	-			30
E1	E	12:50	12:30	15:10	14:50	39	-			170
E2		13:02	12:40	15:06	15:00	40				170
E3		13:07	12:50	14:59	15:10	40				170
E4		13:12	13:07	14:54	15:20	40				170
E5		13:17	13:15	14:50	15:30	40				170
F1	F	13:19	13:30	14:43	15:40	39				170
F2		13:30	13:40	14:37	15:50	39				170
F3		13:40	13:50	14:31	16:00	39				170

Transect ID	Corresponding Habitat Zone	Survey Start Time				Average Temperature °C	Rain	Wind Strength	Wind Direction	Transect Length (m)
		09/11/09	13/11/09	02/12/2009	15/12/2009					
F4		13:43	14:00	14:28	16:10	39				170
F5		13:52	14:15	14:25	16:20	39				80
Total										2070



Legend

- Study Area
- Plains Grassland
- Dam
- GSM Survey Transect
- A — Habitat Zone ID
- A1 — Transect Number

Figure 2: Golden Sun Moth Survey Locations

Project: Lots 10 & 11 Westmeadows Lane, Truganina

Client: Intrapac Pty. Ltd.

Project No.: R123	Date: 24/11/2009	Created by: G. Roy / Syahrudin

BL&A Brett Lane & Associates Pty. Ltd.

The scope of work initially requested habitat zones E and F to be surveyed. On the second visit to the site a brief visit in the northern section of the study area indicated that Golden Sun Moths were present in habitat zones A to D. Further Golden Sun Moth surveys were therefore undertaken in these areas. Whilst four surveys were not completed in these habitat zones, the data collected indicated that the species was present. Poor weather conditions during the rest of the species' flight season did not allow more surveys to be undertaken.

Therefore, the conditions of surveys were deemed suitable to identify the presence of a population at the site and provide an indication of species' distribution.

Wherever appropriate, a precautionary approach has been adopted in the discussion of implications. That is, where insufficient evidence is available on the occurrence or likelihood of occurrence of a species, it is assumed that it could be in an area of habitat, if suitable, and the implications under legislation and policy are considered accordingly.

4. RESULTS

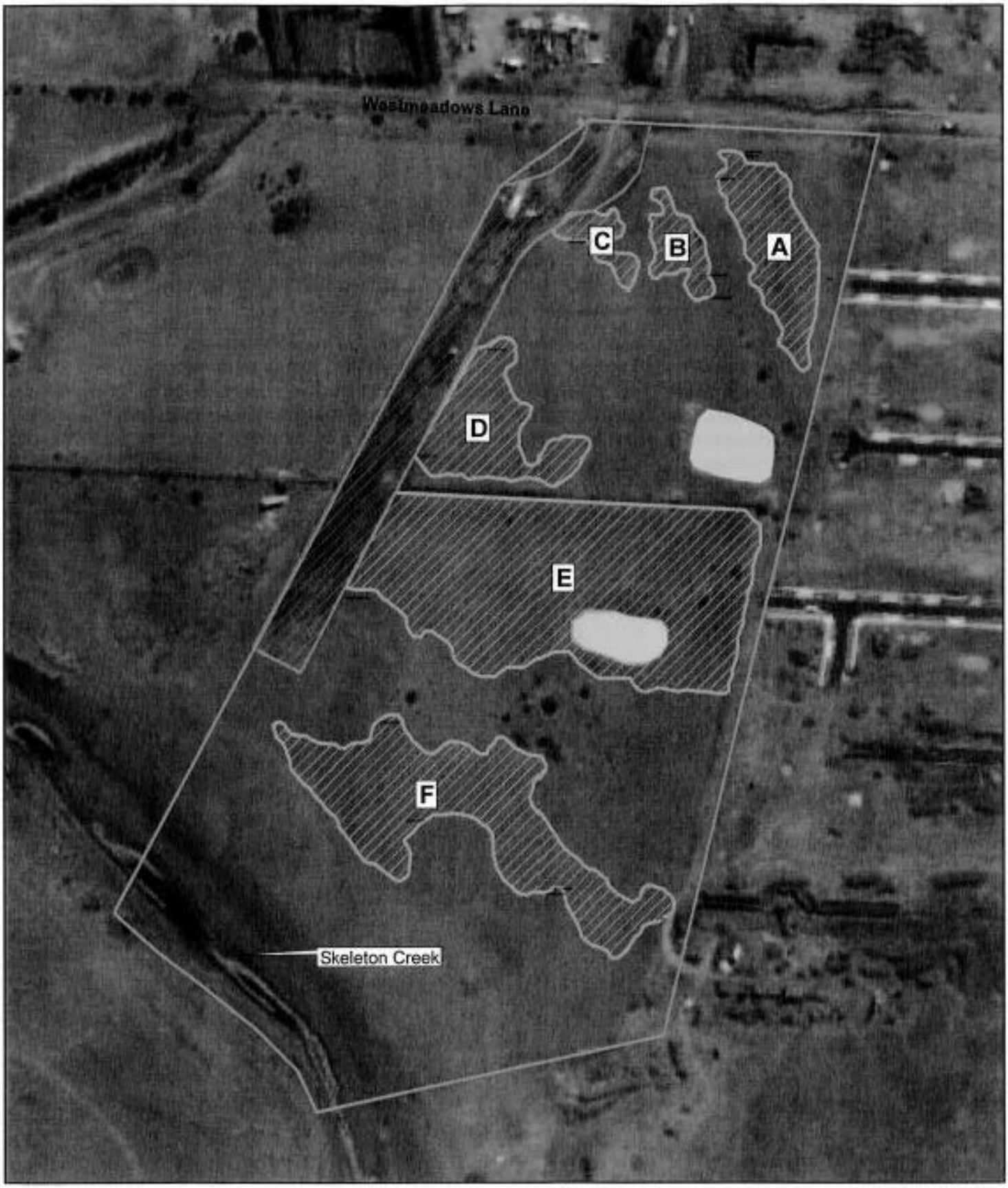
4.1. Study area description

The study area comprises a 10.54 hectare area of agricultural land bounded by Westmeadows Lane in the north and Skeleton Creek in the south. The surrounding land comprises a mixture of recent residential development and land for which development plans have been approved.

The study area is predominantly flat, except for an escarpment in the southern part of the study area that drops to lower terrain along the Skeleton Creek valley. A recently formed drainage channel forms the western boundary of the area. Three dry dams were observed during the field investigations (Figure 2). The remnants of several rock walls occur throughout the study area.

The study area supports patches of native spear grasses and wallaby grasses at higher than 25% indigenous cover (Figure 2). All of these patches occur in areas previously grazed and, in some cases cultivated and are therefore highly modified. The listed Restricted Weed Chilean Needle-grass is present in moderate to high cover throughout these patches and the study area in general. Kangaroo Grass, usually the dominant species in the pre-existing Plains Grassland vegetation is restricted to two minor occurrences within mapped patches. One remnant Black Wattle and a planted River Red-gum occur along the course of Skeleton Creek abutting the study area.

The study area is located in the Port Phillip and Westernport Catchment Management Authority region in the Victorian Volcanic Plains bioregion. The local planning authority is the City of Wyndham and the land is zoned Residential (R1Z). An Environmental Significance Overlay (ESO1) intended to preserve and enhance waterways, covers Skeleton Creek and its escarpment under the Wyndham Planning Scheme.



Meters
0 50 100 200

Legend

- Study Area
- Dam
- Constructed Drainage
- Plains Grassland Habitat Zones

Figure 2: Study Area and Native Vegetation		
Project: Lot 11, Westmeadows Lane, Truganina		
Client: Intrapac Pty. Ltd.		
Project No.: 7200	Date: 02/06/2010	Created By: G. Roy / L. Braun

BL&A

4.2. Flora species

Sixty-three plant species were recorded during the field surveys. Twenty-one on these (33%) were indigenous and 42 (67%) were introduced species.

FIS records and the EPBC Act Protected Matters Search Tool indicate that within the five kilometre search region, there are records of, or potential habitat for 24 species listed as threatened at a state or national level.

No state or nationally listed species were detected during the surveys. The likelihood of occurrence of species listed under the EPBC Act is addressed in Table 2. This analysis determined the limited potential for two such species to occur in the study area: Spiny Rice-flower and Large-fruit Fireweed. These species were not detected during field work in the study area or during surveys of adjacent patches of grassland. It is considered unlikely that a significant population of these plants occurs in the area due to the degraded state of grassland in the area from past grazing and cultivation.

Table 2: EPBC Act listed flora species known or predicted to occur in the search region

EPBC Act status	Common Name	Scientific Name	Habitat and likelihood of occurrence on the study area
E	Button Wrinklewort	*Rutidosis leptorhynchoides*	Occurs in basalt grasslands. Modified habitat in study area: • **Not recorded during targeted survey – Lot 10** • **unlikely to occur in Lot 11**
V	Clover Glycine	*Glycine latrobeana*	Occurs in grasslands and grassy woodlands. Not known to occur in the search region – **unlikely to occur**
V	Curly Sedge	*Carex tasmanica*	Occurs in seasonally wet, heavy soils north of Melbourne. Not known to occur in the search region – **unlikely to occur**
E	Fragrant Leek-orchid	*Prasophyllum suaveolens*	Grassland species, almost extinct. Sensitive to grazing – **unlikely to occur**
V	Large-fruit Fireweed	*Senecio macrocarpus*	Occurs in Kangaroo-grass grasslands. No substantial habitat in study area: • **Not recorded during targeted survey – Lot 10** • **Limited potential to occur in Lot 11**
E	Maroon Leek-orchid	*Prasophyllum frenchii*	Occurs in heathland and grassland on black clays. Sensitive to grazing pressure – **unlikely to occur**
V	River Swamp Wallaby-grass	*Amphibromus fluitans*	Occurs in wetlands and permanent swamps. No permanent habitat occurs at study area – **unlikely to occur**
E	Small Golden Moths	*Diuris* sp. aff. *chryseopsis* (Basalt Plains)	Occurs in grassland of the Basalt Plains. Sensitive to grazing pressure – **unlikely to occur**
C	Spiny Rice-flower	*Pimelea spinescens s.l.*	Occurs in grassland of the Basalt Plains. Modified habitat at study area: • **Not recorded during targeted survey – Lot 10** • **Limited potential to occur in Lot 11**
E	Sunshine Diuris	*Diuris fragrantissima*	Occurs in grassland of the Basalt Plains. Sensitive to grazing pressure – **unlikely to occur**

Notes: E = Endangered; V = Vulnerable; C = Critically Endangered

4.3. Ecological Vegetation Classes

Pre-1750 EVC mapping indicates that the study area supported Plains Grassland (EVC 132_61) prior to European settlement. This EVC is listed as having an *endangered* Bioregional Conservation Status in the Victorian Volcanic Plain bioregion. The benchmark for this EVC (Appendix 4) describes this vegetation as "treeless vegetation mostly less than one metre tall, largely dominated by graminoid [grass-like] and herb life forms."

In addition to being *endangered* in the Victorian Volcanic Plains bioregion, the community is listed on the state *Flora and Fauna Guarantee Act 1988* (FFG Act). The updated flora assessment identified the habitat zones presented in Table 3

Assessment of the grassland against criteria for the EPBC Act listed threatened community NTGVVP indicated that the grasslands were too degraded to qualify as this community.

Table 3 Classification and description of habitat zones within the study area (Figure 2)

Habitat Zones	Description	Degraded remnant patch OR Degraded treeless vegetation
A	Weeds dominate with a significant component of indigenous spear grass (approx. 40%), with a smaller cover of wallaby grass. No Kangaroo Grass was recorded within the patch. The patch is degraded and Toowoomba Canary-grass has since invaded. Top soil appears to be remnant, not artificial, and the use of fertilisation in the past appears to have assisted the colonisation of several weeds. Native vegetation appears opportunistic.	Degraded Treeless Vegetation
B	Weeds dominate, with a significant cover of indigenous wallaby grass (approx. 40%), with a lesser cover of spear grass. Bare ground is very limited as weed cover is high. Native vegetation of limited diversity made up of predominantly opportunistic species.	Degraded Treeless Vegetation
C	Weeds dominate, with significant cover of indigenous spear grass and wallaby grass (approx. 40%). High threat weeds dominate the weed cover. The zone appears very disturbed. Bare ground has been invaded by weeds.	Degraded Treeless Vegetation

Habitat Zones	Description	Degraded remnant patch OR Degraded treeless vegetation
D	Weeds generally dominate, although small patches of high indigenous grass cover persist. Wallaby grass dominates the indigenous cover (approx. 30%). The cover of spear grass is patchy and has been reduced. Cover of bryophytes and soil crusts has increased to approximately 15%. High threat weed cover is lower than surrounding areas with less than 25% of the 20% cover of weeds being high threat. Lower height of vegetation compared to E and F, and absence of basalt rock cover, suggests some recent disturbance.	Degraded Treeless Vegetation
E	Weeds dominate and wallaby grass cover is approximately 30%. The cover of spear grass is reduced. High threat weeds dominate the weed cover in this area, including Artichoke Thistle. Basalt floaters were observed across the zone and the height of the vegetation suggests it has avoided the more recent apparent disturbance regimes of zones A - D.	Degraded Remnant Patch
F	Weeds dominate this zone with spear grass cover totalling approximately 30%. The cover of wallaby grass is much reduced. The cover of Artichoke Thistle and Galenia, which are high threat weeds, is high. Basalt floaters observed across the zone and the height of the vegetation suggests it has avoided the more recent disturbance regimes of A - D.	Degraded Remnant Patch

4.4. Habitat Hectare Assessments

Six habitat zones were identified and assessed against the Plains Grassland (EVC 132_61) benchmark using the Habitat Hectare Assessment method. A summary of these assessment results is presented in Table 4, including conservation significance as determined by criteria outlined in the Framework and discussed in Section 5.1.2.

Table 4: Summary of Habitat Hectare Assessment results

Habitat Zone	Area in habitat zone (ha)	Habitat score out of 1	Framework Conservation Significance*
A	0.315	0.27	DTV
B	0.109	0.20	DTV
C	0.778	0.20	DTV
D	0.338	0.20	DTV
E	1.618	0.27	Very High
F	0.89	0.20	Very High
Total	4.048		

*** If vegetation determined to be *degraded treeless vegetation* (DTV), this vegetation does not warrant the assigning of a bioregional conservation status, and therefore has no conservation significance under the Framework**

The criteria for conservation significance for endangered EVCs (DNRE 2002) indicate that an area with a habitat score less than 0.4 is of 'High' conservation significance. However, the presence of Golden Sun Moth in the area elevates conservation significance to 'Very High'.

The offsets for the removal of Habitat Zones E and F have been calculated as 1.23 habitat hectares (compared with 1.14 habitat hectares in the planning permit).

4.5. Fauna

4.5.1. Overview Assessment

Fauna habitats

The study area supports two habitat types, characterised below.

Mixed pasture

The ground vegetation is dominated by native pasture species such as spear grasses (*Austrostipa* spp.) and wallaby grasses (*Austrodanthonia* spp.), together with exotic species such as Chilean Needle-grass (*Nassella neesiana*). Other plants commonly encountered included African Boxthorn (*Lycium ferocissimum*), Spanish Artichoke (*Cynara cardunculus*) and Flatweed (*Hypochoeris* sp.). Some surface rock has been collected and removed, to form a rock wall bisecting the study area, however, surface and embedded rocks remain scattered throughout the study area.

The study area has been cultivated in the past and the vegetation appears to have recolonised, although it has a significant exotic component. The density of surface rock cover, the low density of tussock grasses and the history of cultivation make it unlikely that indigenous ground fauna remains on the site.

The area surrounding the site has also been modified for residential purposes or retains a rural character (but with infestations of weeds such as Serrated Tussock (*Nassella trichotoma*) evident to the south of Skeleton Creek). Some connectivity with other areas of remnant Plains Grassland EVC remains close to the study

area, i.e. along the escarpment of Skeleton Creek and to the east of the study area. This landscape connectivity may offer some habitat opportunities for native fauna.

Because of the limited extent of habitats on the site and their moderate connectivity to other nearby habitats, this habitat is considered to be of low to moderate quality for fauna.

Aquatic habitats

Skeleton Creek runs along the southern boundary of the study area and was assessed as part of this investigation. Within the study area, it is an ephemeral creek, which held standing water in three or four pools at the time of the assessment. A dam close to the northern boundary of the study area was dry during the field visit and it supported no native vegetation.

Dominant wetland vegetation along the creek is Bulrushes (*Typha* sp.) and rushes (*Juncus* sp.). There are also patches of Arrowgrass (*Triglochin* sp.) away from the banks, a solitary remnant Black Wattle (*Acacia mearnsii*) and many young River Red Gums (*Eucalyptus camaldulensis*) have been planted. A number of embedded and surface rocks remain close to the creek banks and some are within the inundated area. These have potential to be used as winter sheltering sites by frogs and reptiles. The creek provides good habitat for some common frog species and is likely to attract common waterbirds when conditions suit. Due to the degree of modification of the aquatic areas from their original condition and their reduced vegetation diversity, this represents a moderate quality habitat for fauna.

Fauna species

Based on the field assessment and the review of existing information, the study area is known to, or may potentially, support 106 species of terrestrial vertebrate fauna, including 7 species of mammals (5 introduced), 85 species of birds (10 introduced), 8 species of reptile and 6 species of frog. These species are listed in Appendix 2 (which also includes scientific names). Species for which there is no habitat on the site have been excluded from consideration.

The AVW and the EPBC Act Protected Matters Search Tool list a number of threatened species of vertebrates for the search region. Some of these species are unlikely to occur in the study area due to a lack of suitable habitat, and these have been excluded from consideration on this basis. The likelihood of regular occurrence of fauna species for which suitable habitat exists, or those species listed as potentially occurring in the area by the EPBC Act Protected Matters Search Tool, is discussed in more detail in the following sub-sections.

Mammals

Seven mammals species occur or are likely to occur within or close to the study area, based on the AVW records. On the day of the field assessment two species were recorded: the Brown Hare and the European Rabbit. Evidence Red Fox, was also observed. The majority of species likely to occur are common or pest species such as mice, rats, foxes and rabbits. **Fat-tailed Dunnart** (lower risk, near threatened in Victoria: DSE 2005) was assessed as having a low likelihood of occurrence due the presence of a small area of suitable native grassland remnant

with intact surface rocks remains, and an artificial rock wall. There is some connectivity to other areas of intact grassland nearby, particularly to the east and along the Skeleton Creek escarpment. During pitfall trapping in February 2007, no Fat-tailed Dunnart were trapped, suggesting very low population densities or absence from the site.

Four species of threatened mammal have been identified by the EPBC Protected Matters Search Tool as potentially occurring in the search region. There was no habitat on the site for three of them, the **Spot-tailed Quoll, Southern Brown Bandicoot** and the **Smoky Mouse**.

The other species listed as a nationally threatened species under the EPBC Act is the **Grey-headed Flying Fox.** There are no records of this species from within the search region, although it has been recorded to the south west of Melbourne and some ten kilometers south of the study area at Werribee in 1988 (AVW records). The flying-fox may occasionally fly over the site on its nightly foraging excursions from roost sites on the Yarra River near Melbourne, although the Truganina area would not constitute habitat for the species.

Birds

A total of 85 species of birds occurs or potentially occurs within the search region based on the AVW records, excluding species for which there is no suitable habitat on the site. This total includes ten introduced species. During the field assessment, 22 species of bird were observed, including 8 introduced species (Appendix 2).

A number of threatened bird species have been flagged by the EPBC Act Protected Matters search tool as nationally threatened species that could potentially occur in or near the study area: the **Swift Parrot, Regent Honeyeater** and **Australian Painted Snipe**. Habitats on the site are unlikely to be suitable for any of these species. Core habitat for the Swift Parrot and Regent Honeyeater are forests or woodlands, although they may rarely occur in isolated or planted trees in farmland or urban environments (Higgins 1999; Higgins *et al*. 2001), while the Australian Painted Snipe prefers densely vegetated freshwater wetlands (Marchant and Higgins 1993). There are very limited areas of such wetland along Skeleton Creek for the Painted Snipe and it is unlikely to use such small areas of wetland.

The study area is suitable for a number of grassland-dwelling birds, including species threatened at state level such as **Black Falcon** (however none were detected during the field assessment). The **Brown Quail** could also occur regularly, especially with long grass and reed cover (providing essential shelter for quail) along the Skeleton Creek. There is one record of the **Plains-wanderer** from the 5 km radius search region, in 1973. This species is listed as critically endangered in Victoria and vulnerable nationally (DSE 2005). It occurs in sparse native grasslands, preferring areas with approximately 50% grass cover and 50% bare ground (Marchant and Higgins 1993). Because of the limited extent of remaining plains grassland in the study area, it is unlikely that this species would now occur there, particularly in light of the limited connectivity with other areas of native grassland surrounding the study area that could provide extensive contiguous areas of suitable habitat.

A number of water birds threatened at state level, e.g. **Latham's Snipe** (lower risk, near threatened in Victoria: DSE 2005), **Royal Spoonbill, Lewin's Rail** and **Baillon's Crake** (all vulnerable in Victoria: DSE 2005) are known or predicted to occur in the study region based on AVW and the EPBC search tool data. The study area contains only a small area of suitable habitat for water birds, along Skeleton Creek. Due to the lack of diversity (e.g. limited area of soft mud for Latham's Snipe) and extent of this habitat however, it is unlikely to support significant numbers of water birds or to support any threatened species regularly, notwithstanding the possibility they might visit the study area occasionally.

The EPBC search tool lists eight additional migratory or marine-overfly species as likely to occur in the region of the study area. These are: the **Great Egret, Cattle Egret, White-bellied Sea-Eagle, White-throated Needletail, Fork-tailed Swift, Rainbow Bee-eater, Satin Flycatcher** and **Rufous Fantail**. These species are unlikely to occur in the search region regularly or in great numbers due to a lack of habitat and were not detected during the field assessment. The Great Egret might occasionally occur in the pools on the Skeleton Creek, but would not be regular there. Under current conditions, the Cattle Egret is unlikely to occur since the study area has no grazing cattle. The White-bellied Sea-Eagle is unlikely to occur due to the lack of suitable extensive, open wetland habitats. The needletail and swift are likely to occasionally fly over the area, but the swift prefers areas further inland (Higgins 1999) and the needletail would be likely to occur only a few days per year when weather conditions were suitable in late summer and early autumn. Similarly the bee-eater prefers habitats further inland in Victoria (Emison et al. 1987) and would be unlikely to occur except as a rare, unpredictable visitor, to the study area. The habitat is too dry and lacks forest that forms the core habitat of the Satin Flycatcher and Rufous Fantail and they would be, at best, very rare visitors during migration to the few trees remaining on the site.

Reptiles

A total of 8 species of reptiles occurs or potentially occurs within the search region based on the AVW and EPBC search tool. During the field assessment, one species of reptile was found, a Common Blue-tongued Lizard found under discarded corrugated iron near the rock wall bisecting the study area.

Among the 9 species listed by AVW and EPBC search tool for the region, two species are of ecological significance and are protected nationally and at state level. The EPBC Act search tool identified the potential for the **Striped Legless Lizard**, or its habitat to occur in the search region, and there are five records of this species from the 5 km radius AVW search region. The Striped Legless Lizard is endangered at state level where it is protected under FFG Act legislation, and vulnerable nationally under the EPBC Act (DSE 2005). It is a specialist of native grasslands and nearby grassy woodlands and exotic pasture. It is also found in areas with dense ground cover, comprising rocks, dense tussock grassland or fallen timber, but generally including dense tussock grass. The availability of such shelter appears to be an important component of its habitat.

Historical land-use and previous surveys in the nearby property suggest that Striped Legless Lizard is highly unlikely to persist in the study area.

The **Grassland Earless Dragon** is flagged by the EPBC Protected Matters Search Tool as potentially occurring in the search region. There are no confirmed records of this nationally endangered species in Victoria since the 1960's although there are unconfirmed reports from areas closed to the west and north of Melbourne in 1990. Given its rarity and the small extent of its preferred intact native grassland habitat in the study site, this species is extremely unlikely to occur and is therefore omitted from further consideration (Appendix 2).

Frogs

A total of 6 species of frogs occurs or potentially occurs within the search region based on the Atlas of Victorian Wildlife records and field assessment of the habitat. During the field assessment, one species was found, the Common Froglet, which was heard calling from within the Skeleton Creek. Aquatic habitats on the study area may provide habitat and shelter for a few common frog species.

One threatened species of frog is identified as potentially occurring in the search region by the EPBC Protected Matters Search Tool, the **Growling Grass Frog**, which is vulnerable nationally and endangered in Victoria (DSE 2005).

The Growling Grass Frog is predominantly aquatic and associated with permanent and semi-permanent water bodies, such as streams, lagoons, farm dams and old quarry sites with fringing vegetation (Cogger 2000, Organ 2002). It is usually associated with water bodies supporting large areas of fringing and aquatic vegetation such as Common Reed (*Phragmites australis*), Bullrush (*Typha spp.*) and Water Ribbon (*Triglochin procera*). There are three records of this species in the 5 km radius AVW search region, since 1988. The most recent record, from 2003 is from Skeleton Creek, downstream at Point Cook. The study area has a small area of permanent pools that have appropriate fringing vegetation (Bulrushes, *Typha* sp.) as well as rocks for winter sheltering sites, so that the requirements of the Growling Grass Frog appear to be met. This species is therefore considered to potentially occur in the study area.

The status of this species on the site was investigated through a targeted call playback and spotlighting survey over two nights in February 2007. No Growling Grass Frogs were recorded during this survey; however, the suitability of habitat in the creek indicates that the Growling Grass Frog may use the course of Skeleton Creek adjacent to the study area, at least as a movement corridor during times of dispersal. Two small ephemeral dams in the study area were considered unsuitable for this species.

Invertebrates

Areas containing moderate to high levels of wallaby grasses were present within the study area. This species of grass is known to form a significant component of grassland habitats for the nationally threatened Golden Sun Moth (*Synemon plana*). This threatened day-flying moth is listed on both the FFG Act and the Commonwealth EPBC Act as a threatened species. A targeted survey for this species was undertaken in 2008 and 2009. The results are presented in section 4.5.4.

4.5.2. *Targeted Striped Legless Lizard Survey*

No Striped Legless Lizard was recorded during the targeted survey of the adjacent property in 2007. The lack of nearby records, combined with the degraded, isolated nature of the vegetation and past cultivation of part of the area, make it unlikely that this species would be present in the study area.

4.5.3. *Targeted Growling Grass Frog Survey*

No Growling Grass Frogs were recorded during the targeted survey. It is therefore considered unlikely that this species occurs regularly in the study area.

4.5.4. *Targeted Golden Sun Moth Survey*

No Golden Sun Moths were found in the study area during the first survey.

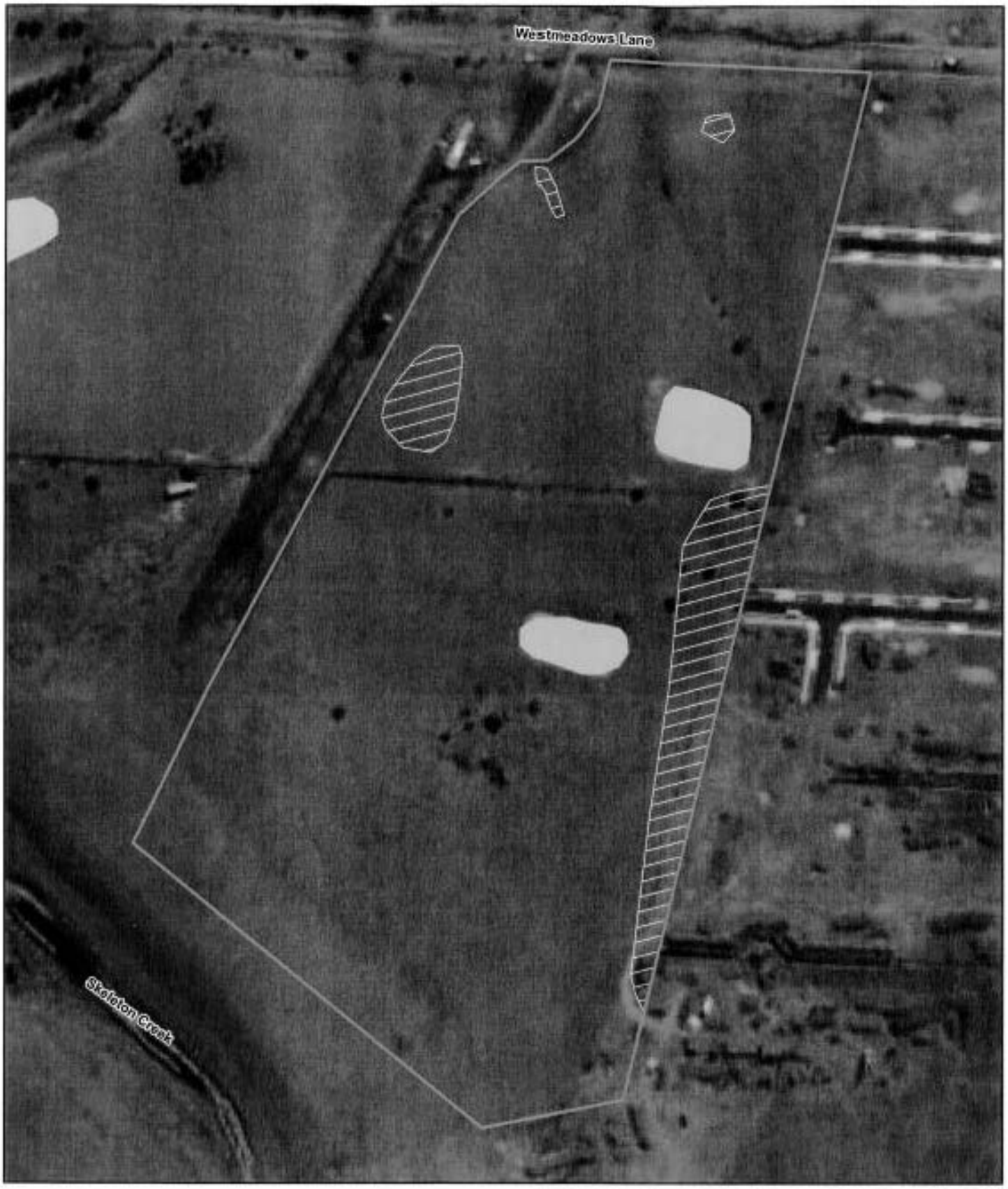
Over the repeat survey in 2009, Golden Sun Moths were observed on three occasions. The number of individuals identified in each survey is provided in Table 3. Figure 3 provides details of the areas where the species was detected. The location of the species suggests that they may have moved with a preceding westerly wind from habitat elsewhere on the site. Figure 4 shows the nature of the habitat on the site.

Table 5: Targeted Survey Results

Transect ID	Survey Date			
	09/11/09	13/11/09	02/12/09	15/12/09
A1		1	-	-
B1		-	-	-
C1		10	-	-
D1		27	-	-
D2		6	-	-
E1	1	35	-	-
E2	-	34	-	-
E3	1	29	2	-
E4	2	24	-	-
E5	3	32	-	-
F1	4	31	-	-
F2	6	11	-	-
F3	29	26	-	-

Transect ID	Survey Date			
	09/11/09	13/11/09	02/12/09	15/12/09
F4	23	24	-	-
F5	32	17	-	-
Total	101	307	2	-

As shown in Figure 3 the GSM records were concentrated around the eastern edge of habitat zones E and F (Figure 4). In these areas there was abundant bare ground, in addition to Wallaby-grass species.



Meters
0 50 100 200

Legend

- Study Area
- Golden Sun Moth Areas
- Dam

Figure 3: Golden Sun Moth Areas		
Project: Lots 10 & 11 Westmeadows Lane, Truganina		
Client: Intrapac Pty. Ltd.		
Project No.: 9123	Date: 14/01/2010	Created by: G. Roy / D. Soldatos

BL&A Brett Lane & Associates Pty. Ltd.

Figure 4: An Example of the Golden Sun Moth Habitat Present in Habitat Zones E and F.

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Appendix 1: Flora species recorded from the study area and rare and threatened species known or predicted to occur in the search region

FFG	EPBC	DSE	Origin	Common Name	Scientific Name	Recorded
			*	African Box-thorn	*Lycium ferocissimum*	x
			*	Annual Meadow-grass	*Poa annua*	x
			*	Barley Grass	*Hordeum* spp.	x
		e		Basalt Podolepis	*Podolepis* sp. 1	
			*	Bathurst Burr	*Xanthium spinosum*	x
				Berry Saltbush	*Atriplex semibaccata*	x
			*	Black Nightshade	*Solanum nigrum s.s.*	x
				Black Wattle	*Acacia mearnsii*	x
				Bristly Wallaby-grass	*Austrodanthonia setacea*	x
				Broad-leaf Cumbungi	*Typha orientalis*	x
				Brown-back Wallaby-grass	*Austrodanthonia duttoniana*	x
			*	Buck's-horn Plantain	*Plantago coronopus*	x
f	E	e		Button Wrinklewort	*Rutidosis leptorhynchoides*	
			*	Cat's Ear	*Hypochoeris radicata*	x
			*	Chilean Needle-grass	*Nassella neesiana*	x
			*	Clover	*Trifolium* spp.	x
f	V	v		Clover Glycine	*Glycine latrobeana*	
			*	Cocksfoot	*Dactylis glomerata*	x
				Common Cotula	*Cotula australis*	x
				Common Nardoo	*Marsilea drummondii*	x
			*	Common Peppercress	*Lepidium africanum*	x
			*	Common Sow-thistle	*Sonchus oleraceus*	x
			*	Couch	*Cynodon dactylon* var. *dactylon*	x
			*	Curled Dock	*Rumex crispus*	x
f	V	v		Curly Sedge	*Carex tasmanica*	
			*	Cut-leaf Cranesbill	*Geranium dissectum*	x
			*	Drain Flat-sedge	*Cyperus eragrostis*	x

FFG	EPBC	DSE	Origin	Common Name	Scientific Name	Recorded
			*	Fat Hen	*Chenopodium album*	x
				Flat Spurge	*Chamaesyce drummondii*	x
			*	Four-leaved Allseed	*Polycarpon tetraphyllum*	x
f	E	e		Fragrant Leek-orchid	*Prasophyllum suaveolens*	
			*	Galenia	*Galenia pubescens* var. *pubescens*	x
		v		Golden Cowslips	*Diuris behrii*	
			*	Gorse	*Ulex europaeus*	x
				Grassland Wood-sorrel	*Oxalis perennans*	x
				Grassy Bindweed	*Convolvulus remotus*	x
			*	Great Brome	*Bromus diandrus*	x
			*	Hair Grass	*Aira* spp.	x
			*	Hairy Hawkbit	*Leontodon taraxacoides* subsp. *taraxacoides*	x
				Kangaroo Grass	*Themeda triandra*	x
				Kneed Wallaby-grass	*Austrodanthonia geniculata*	x
				Knotty Spear-grass	*Austrostipa nodosa*	x
			*	Large Quaking-grass	*Briza maxima*	x
f	V	e		Large-fruit Fireweed	*Senecio macrocarpus*	
f	E	e		Maroon Leek-orchid	*Prasophyllum frenchii*	
			*	Medic	*Medicago* spp.	x
				Nodding Saltbush	*Einadia nutans* subsp. *nutans*	x
			*	Onion Grass	*Romulea rosea*	x
			*	Ox-tongue	*Helminthotheca echioides*	x
		v		Pale Swamp Everlasting	*Helichrysum* aff. *rutidolepis* (Lowland Swamps)	
			*	Paterson's Curse	*Echium plantagineum*	x
			*	Pepper Tree	*Schinus molle*	x
				Pink Bindweed	*Convolvulus erubescens* spp. agg.	x
		k		Plains Joyweed	*Alternanthera* sp. 1 (Plains)	
f		e		Plump Swamp Wallaby-grass	*Amphibromus pithogastrus*	

FFG	EPBC	DSE	Origin	Common Name	Scientific Name	Recorded
			*	Prairie Grass	*Bromus catharticus*	x
			*	Prostrate Knotweed	*Polygonum aviculare s.l.*	x
		e		Proud Diuris	*Diuris X fastidiosa*	
			*	Ribwort	*Plantago lanceolata*	x
	V			River Swamp Wallaby-grass	*Amphibromus fluitans*	
			*	Rough Sow-thistle	*Sonchus asper s.l.*	x
				Ruby Saltbush	*Enchylaena tomentosa var. tomentosa*	x
				Rush	*Juncus* spp.	x
		r		Rye Beetle-grass	*Tripogon loliiformis*	
			*	Rye Grass	*Lolium* spp.	x
			*	Serrated Tussock	*Nassella trichotoma*	x
				Slender Dock	*Rumex brownii*	x
		k		Slender Tick-trefoil	*Desmodium varians*	
f	E	v		Small Golden Moths	*Diuris* sp. aff. *chryseopsis* (Basalt Plains)	
f	E	e		Small Scurf-pea	*Cullen parvum*	
			*	Small-flower Mallow	*Malva parviflora*	x
		r		Smooth Groundsel	*Senecio glabrescens*	
			*	Soft Brome	*Bromus hordeaceus* subsp. *hordeaceus*	x
			*	Soursob	*Oxalis pes-caprae*	x
			*	Spanish Artichoke	*Cynara cardunculus*	x
			*	Spear Thistle	*Cirsium vulgare*	x
f		e		Spiny Rice-flower	*Pimelea spinescens*	
	C	v		Spiny Rice-flower	*Pimelea spinescens* subsp. *spinescens*	
				Streaked Arrowgrass	*Triglochin striata*	x
f	E	e		Sunshine Diuris	*Diuris fragrantissima*	
				Swamp Crassula	*Crassula helmsii*	x
f		v		Swamp Diuris	*Diuris palustris*	
			*	Sweet Briar	*Rosa rubiginosa*	x

FFG	EPBC	DSE	Origin	Common Name	Scientific Name	Recorded
f		e		Tough Scurf-pea	*Cullen tenax*	
			*	Twiggy Turnip	*Brassica fruticulosa*	x
		k		Wetland Blown-grass	*Lachnagrostis filiformis* var. 2	
				Windmill Grass	*Chloris truncata*	x

Notes:

FFG = *Flora and Fauna Guarantee Act 1988*

EPBC = *Environment Protection and Biodiversity Conservation Act 1999*

DSE = Advisory List of Rare and Threatened Plants in Victoria (DSE 2005)

* = introduced species

f = FFG Act listed

C = critically endangered

E, e = endangered

V, v = vulnerable

R, r = rare

k = insufficiently known

Appendix 2: Fauna species recorded or likely to occur in the Westmeadows Lane Truganina study area based on the Atlas of Victorian Wildlife

Origin	Common Name	Scientific Name	Conservation status			Recorded
			EPBC	DSE	FFG	
	Birds					
	Australasian Grebe	*Tachybaptus novaehollandiae*				
	Australian Hobby	*Falco longipennis*				
	Australian Magpie	*Gymnorhina tibicen*				X
	Australian Pelican	*Pelecanus conspicillatus*				
	Australian Shelduck	*Tadorna tadornoides*				
	Australian Spotted Crake	*Porzana fluminea*				
	Australian White Ibis	*Threskiornis molucca*				
	Australian Wood Duck	*Chenonetta jubata*				
	Baillon's Crake	*Porzana pusilla*		VU	L	
	Banded Lapwing	*Vanellus tricolor*				
	Barn Owl	*Tyto alba*				
	Black Falcon	*Falco subniger*		VU		
	Black Kite	*Milvus migrans*				
	Black Swan	*Cygnus atratus*				
	Black-faced Cuckoo-shrike	*Coracina novaehollandiae*				
	Black-fronted Dotterel	*Elseyornis melanops*				
	Black-shouldered Kite	*Elanus axillaris*				
	Black-winged Stilt	*Himantopus himantopus*				
	Brown Falcon	*Falco berigora*				
	Brown Goshawk	*Accipiter fasciatus*				
	Brown Quail	*Coturnix ypsilophora*		NT		
	Cattle Egret	*Ardea ibis*				
	Chestnut Teal	*Anas castanea*				
	Clamorous Reed Warbler	*Acrocephalus stentoreus*				

Origin	Common Name	Scientific Name	Conservation status			Recorded
			EPBC	DSE	FFG	
*	Common Blackbird	*Turdus merula*				X
*	Common Myna	*Acridotheres tristis*				X
*	Common Starling	*Sturnus vulgaris*				X
	Crested Pigeon	*Ocyphaps lophotes*				X
	Dusky Moorhen	*Gallinula tenebrosa*				
	Eurasian Coot	*Fulica atra*				
*	Eurasian Tree Sparrow	*Passer montanus*				
*	European Goldfinch	*Carduelis carduelis*				X
*	European Greenfinch	*Carduelis chloris*				X
	Flame Robin	*Petroica phoenicea*				
	Galah	*Cacatua roseicapilla*				
	Golden Whistler	*Pachycephala pectoralis*				
	Golden-headed Cisticola	*Cisticola exilis*				X
	Grey Fantail	*Rhipidura fuliginosa*				
	Grey Teal	*Anas gracilis*				
	Hoary-headed Grebe	*Poliocephalus poliocephalus*				
*	House Sparrow	*Passer domesticus*				X
	Latham's Snipe	*Gallinago hardwickii*		NT		
	Lewin's Rail	*Rallus pectoralis*		VU	L	
	Little Black Cormorant	*Phalacrocorax sulcirostris*				
	Little Eagle	*Hieraaetus morphnoides*				
	Little Grassbird	*Megalurus gramineus*				
	Little Pied Cormorant	*Phalacrocorax melanoleucos*				X
	Little Raven	*Corvus mellori*				X
	Magpie-lark	*Grallina cyanoleuca*				X
	Masked Lapwing	*Vanellus miles*				
	Musk Lorikeet	*Glossopsitta concinna*				X
	Nankeen Kestrel	*Falco cenchroides*				

Origin	Common Name	Scientific Name	Conservation status			Recorded
			EPBC	DSE	FFG	
	New Holland Honeyeater	*Phylidonyris novaehollandiae*				
	Pacific Black Duck	*Anas superciliosa*				
	Pallid Cuckoo	*Cuculus pallidus*				
	Peregrine Falcon	*Falco peregrinus*				
	Purple Swamphen	*Porphyrio porphyrio*				
	Red Wattlebird	*Anthochaera carunculata*				
	Red-browed Finch	*Neochmia temporalis*				
	Richard's Pipit	*Anthus novaeseelandiae*				
*	Rock Dove	*Columba livia*				X
	Royal Spoonbill	*Platalea regia*		VU		
	Rufous Whistler	*Pachycephala rufiventris*				
	Silver Gull	*Larus novaehollandiae*				
	Silvereye	*Zosterops lateralis*				
	Singing Bushlark	*Mirafra javanica*				
*	Skylark	*Alauda arvensis*				X
	Spiny-cheeked Honeyeater	*Acanthagenys rufogularis*				
*	Spotted Turtle-Dove	*Streptopelia chinensis*				X
	Straw-necked Ibis	*Threskiornis spinicollis*				X
	Striated Fieldwren	*Calamanthus fuliginosus*				
	Stubble Quail	*Coturnix pectoralis*				
	Superb Fairy-wren	*Malurus cyaneus*				X
	Tree Martin	*Hirundo nigricans*				
	Welcome Swallow	*Hirundo neoxena*				
	Whistling Kite	*Haliastur sphenurus*				
	White-faced Heron	*Egretta novaehollandiae*				
	White-fronted Chat	*Epthianura albifrons*				
	White-necked Heron	*Ardea pacifica*				
	White-plumed Honeyeater	*Lichenostomus penicillatus*				X

Origin	Common Name	Scientific Name	Conservation status			Recorded
			EPBC	DSE	FFG	
	Willie Wagtail	*Rhipidura leucophrys*				X
	Yellow Thornbill	*Acanthiza nana*				
	Yellow-billed Spoonbill	*Platalea flavipes*				
	Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*				X
	Zebra Finch	*Taeniopygia guttata*				X
	Mammals					
*	Brown Hare	*Lepus capensis*				X
*	Cat (feral)	*Felis catus*				
*	European Rabbit	*Oryctolagus cuniculus*				X
	Fat-tailed Dunnart	*Sminthopsis crassicaudata*		NT		
*	House Mouse	*Mus musculus*				
*	Red Fox	*Canis vulpes*				#
	Short-beaked Echidna	*Tachyglossus aculeatus*				
	Reptiles					
	Common Blue-tongued Lizard	*Tiliqua scincoides*				X
	Cunningham's Skink	*Egernia cunninghami*				
	Eastern Brown Snake	*Pseudonaja textilis*				
	grass skink FORM (P.pag/cry)	*Pseudemoia sp. FORM (P. pag/cry)*		Ssp		
	Large Striped Skink	*Ctenotus robustus*				
	Little Whip Snake	*Suta flagellum*				
	Striped Legless Lizard	*Delma impar*	VU	EN	L	
	Tiger Snake	*Notechis scutatus*				
	Frogs					
	Common Froglet	*Crinia signifera*				X
	Common Spadefoot Toad	*Neobatrachus sudelli*				
	Growling Grass Frog	*Litoria raniformis*	VU	EN	L	
	Southern Bullfrog	*Limnodynastes dumerilii*				
	Spotted Marsh Frog	*Limnodynastes tasmaniensis*				

Origin	Common Name	Scientific Name	Conservation status			Recorded
			EPBC	DSE	FFG	
	Invertebrates					
	Golden Sun Moth	*Synemon plana*	CE	EN	L	

Notes:
DSE – Status from DSE (2003)
EPBC – Status under EPBC Act
FFG – Listed under FFG Act
CR – Critically Endangered;
EN – Endangered;
VU – Vulnerable;
NT – Near Threatened;
L – Listed as threatened on the Victorian Flora and Fauna Guarantee Act 1988 (FFG).
* = introduced species
X = confirmed to occur during field inspections.
# - indirect evidence of occurrence during field assessment, e.g. scats, nest, burrow etc.

Appendix 3: Detailed Habitat Hectare Assessment results

Habitat Zone			A	B	C	D	E	F
EVC Number			**132_61**	**132_61**	**132_61**	**132_61**	**132_61**	**132_61**
Area in Zone (ha)			**0.315**	**0.109**	**0.778**	**0.338**	**1.618**	**0.890**
		score out of						
Site Condition	Large Old Trees	**10**	n/a	n/a	n/a	n/a	n/a	n/a
	Canopy Cover	**5**	n/a	n/a	n/a	n/a	n/a	n/a
	Lack of Weeds	**15**	4	4	4	4	4	4
	Understorey	**25**	10	5	5	5	10	5
	Recruitment	**10**	3	3	3	3	3	3
	Organic Matter	**5**	2	2	2	2	2	2
	Logs	**5**	n/a	n/a	n/a	n/a	n/a	n/a
	subtotal		*19*	*14*	*14*	*14*	*19*	*14*
	*corrected subtotal**		*26*	*19*	*19*	*19*	*26*	*19*
Landscape Condition	Patch Size	**10**	1	1	1	1	1	1
	Neighbourhood	**10**	0	0	0	0	0	0
	Distance to Core	**5**	0	0	0	0	0	0
Total Habitat Score		**100**	**27**	**20**	**20**	**20**	**27**	**20**
Habitat score out of 1			0.27	0.20	0.20	0.20	0.27	0.20
Habitat hectares in Zone#			0.08	0.02	0.16	0.07	0.43	0.18
EVC Conservation Status			Endangered	Endangered	Endangered	Endangered	Endangered	Endangered
Conservation Significance	Conservation Status x Habitat Score		High	High	High	High	High	High
	Threatened Species Rating		Low	Low	Low	Low	Low	Low
	Other Site Attribute Rating		Low	Low	Low	Low	Low	Low
	Overall Conservation Significance (highest)		**High**	**High**	**High**	**High**	**High**	**High**

* MODIFIED APPROACH TO HABITAT SCORING for treeless vegetation (site condition component multiplied by an index of 1.36 to account for lack of tree and log components)

#Habitat hectares = habitat score (out of 1) x area in zone

Appendix 4: Plains Grassland (EVC 132_61) benchmark

Department of Sustainability and Environment

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Victorian Volcanic Plain bioregion

EVC 132_61: *Heavier-soils* Plains Grassland

Description:
Treeless vegetation mostly less than 1 m tall dominated by largely graminoid and herb life forms. Occupies fertile cracking basalt soils prone to seasonal waterlogging in areas receiving at least 500 mm annual rainfall.

Life Forms:

Life form	#Spp	%Cover	LF code
Large Herb	2	5%	LH
Medium Herb	12	20%	MH
Small or Prostrate Herb	4	5%	SH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	13	40%	MTG
Medium to Tiny Non-tufted Graminoid	4	5%	MNG
Bryophytes/Lichens and Soil Crust*	na	20%	BL

* Note: treat as one life form in this EVC

LF Code	Species typical of at least part of EVC range	Common Name
SS	*Pimelea humilis*	Common Rice-flower
LH	*Rumex dumosus*	Wiry Dock
MH	*Calocephalus citreus*	Lemon Beauty-heads
MH	*Acaena echinata*	Sheep's Burr
MH	*Leptorhynchos squamatus*	Scaly Buttons
MH	*Eryngium ovinum*	Blue Devil
SH	*Solenogyne dominii*	Smooth Solenogyne
SH	*Lobelia pratioides*	Poison Lobelia
LTG	*Austrostipa bigeniculata*	Kneed Spear-grass
LTG	*Dichelachne crinita*	Long-hair Plume-grass
MTG	*Themeda triandra*	Kangaroo Grass
MTG	*Austrodanthonia caespitosa*	Common Wallaby-grass
MTG	*Elymus scaber* var. *scaber*	Common Wheat-grass
MTG	*Schoenus apogon*	Common Bog-sedge
MNG	*Microlaena stipoides* var. *stipoides*	Weeping Grass
MNG	*Thelymitra pauciflora* s.l.	Slender Sun-orchid
MNG	*Microtis unifolia*	Common Onion-orchid
SC	*Convolvulus erubescens*	Pink Bindweed

Recruitment:
Episodic/Fire or Grazing. Desirable period between disturbances is 5 years.

Organic Litter:
10% cover

Victoria
The Place To Be

EVC 132_61: *Heavier-soils* Plains Grassland - Victorian Volcanic Plain bioregion

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	*Plantago lanceolata*	Ribwort	high	low
LH	*Cirsium vulgare*	Spear Thistle	high	high
LH	*Sonchus oleraceus*	Common Sow-thistle	high	low
MH	*Hypochoeris radicata*	Cat's Ear	high	low
MH	*Leontodon taraxacoides* ssp. *taraxacoides*	Hairy Hawkbit	high	low
MH	*Trifolium subterraneum*	Subterranean Clover	high	low
MH	*Plantago coronopus*	Buck's-horn Plantain	high	low
MH	*Trifolium striatum*	Knotted Clover	high	low
MH	*Trifolium dubium*	Suckling Clover	high	low
LTG	*Phalaris aquatica*	Toowoomba Canary-grass	high	high
LNG	*Holcus lanatus*	Yorkshire Fog	high	high
MTG	*Romulea rosea*	Onion Grass	high	low
MTG	*Vulpia bromoides*	Squirrel-tail Fescue	high	low
MTG	*Briza minor*	Lesser Quaking-grass	high	low
MTG	*Bromus hordeaceus* ssp. *hordeaceus*	Soft Brome	high	low
MTG	*Briza maxima*	Large Quaking-grass	high	low
MTG	*Lolium rigidum*	Wimmera Rye-grass	high	low
MTG	*Lolium perenne*	Perennial Rye-grass	high	low
MTG	*Nassella neesiana*	Chilean Needle-grass	high	high
MNG	*Cynosurus echinatus*	Rough Dog's-tail	high	low
MNG	*Juncus capitatus*	Capitate Rush	high	low

Published by the Victorian Government Department of Sustainability and Environment December 2004

www.dse.vic.gov.au

Appendix 2: Non location specific Offset Management Plan for the proposed offset site

s 47F

From: s 47F
Sent: Monday, 30 May 2011 10:23 AM
To: s 47F @intrapac.com.au'
Cc: 'blane@ecologicalresearch.com.au'; s 47F
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

Follow Up Flag: Follow up
Flag Status: Completed

Classification Classification:
UNCLASSIFIED
Classification FullClassifications:
UNCLASSIFIED/#/#

Dear s 47F ,

Thank you for travelling to Canberra to meet with s 47F and I last week. As discussed at the meeting, each project is assessed on a case-by-case basis. In this case, a large/abundant population of critically endangered Golden Sun Moth inhabit the proposed development site. As such, the EPBC Act requires that we reach an acceptable environmental outcome that adequately compensates for the loss of this population.

At the meeting, you advised that you had been researching precedents to provide an indication of what had been considered acceptable in the past and approved by the Minister. The precedents that you raised at the meeting included EPBC 2010/5473 and EPBC 2009/4888. I note that both these developments impacted upon very small populations of Golden Sun Moth in poor habitat. For example, it appears that only 12 individual Golden Sun Moths were recorded at the Coolaroo site (EPBC 2010/5473). You also asked that we provide you with some additional examples of recent precedents relating to Golden Sun Moth to further outline past requirements for this critically endangered species:

- EPBC 2010/5552 – offset ratio of 3.3:1 plus an indirect offset of $150,000
- EPBC 2010/5347 – offset ratio over 4:1 plus an indirect offset of $250,000
- EPBC 2010/5380 – offset ratio of 6:1
- 2009/4856 – offset ratio of 4:1
- 2008/4161 – offset ratio of 4:1
- 2007/3524 – offset ratio of 10:1

From our meeting last week, I understand that there is scope to revise your proposed offset to encompass a larger area of habitat for the Golden Sun Moth at the same proposed offset site. The Department would look favourably on this option given the work that has been done to date, that this would provide a high degree of certainty on the overall outcome for Golden Sun Moth, as well as the presence of other matters of national environmental significance on site.

I recall that s 47F was going to forward through his summary from the meeting. I look forward to receiving your revised preliminary documentation shortly and proceeding with the assessment of your project as quickly as possible given your time constraints.

Regards,
s 47F

s 47F
A/g Director
Victoria and Tasmania Section | Environment Assessment Branch
Department of Sustainability, Environment, Water, Population and Communities
T: (+612) 6274 s 47F | F: 6274 s 47F | E: s 47F @environment.gov.au
Post: GPO Box 787, Canberra ACT. 2601

From: s 47F [mailto s 47F @dlapiper.com]
Sent: Wednesday, 25 May 2011 14:36

To: s 47F
Cc: s 47F s 47F @intrapac.com.au'; 'blane@ecologicalresearch.com.au'
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

s 47F

Attached are a number of plans (some previously provided to the Department) to assist with our discussion tomorrow.

s 47F
Partner

DLA Piper Australia

T +61 3 s 47F
F +61 3 s 47F
M +61 s 47F
E s 47F @dlapiper.com

www.dlapiper.com
Please consider the environment before printing.

From: s 47F [mailto s 47F @environment.gov.au]
Sent: Wednesday, 25 May 2011 12:52 PM
To: s 47F
Cc: s 47F
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

Hi s 47F

Thank-you for the attached information.

We look forward to meeting with you all tomorrow.

Kind Regards
s 47F

s 47F
Victoria and Tasmania Section
Environment Assessment Branch | Department of Sustainability, Environment, Water, Population and Communities
T: 02 6275 | E s 47F @environment.gov.au
Level 5, 33 Allara Street, Canberra, ACT, 2601
Please consider the environment before printing this email

From: s 47F [mailto s 47F @dlapiper.com]
Sent: Wednesday, 25 May 2011 12:32 PM
To: s 47F ; s 47F
Cc: s 47F s 47F @intrapac.com.au'; 'blane@ecologicalresearch.com.au'
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

s 47F

I refer to our discussion yesterday.

As requested I attach an agenda and related documents for tomorrow's meeting.

As discussed, the objective of our meeting is to reach a conclusion on the matters listed in the agenda, confirm that SEWPaC has all necessary information and the timing for a decision on an approval to be made. As mentioned in our previous correspondence, our client is now under significant commercial pressure to proceed with this development.

As we discussed, you said that you would confirm:

- whether there is any more specific information that SEWPaC require in addition to the preliminary documentation already submitted;
- what is the 'body of precedent' you refer to in your 18 May email. As I indicated to you over the phone we have extensively reviewed existing approvals relating to GSM offsets in Victoria and have only identify 1 approval which required an offset ratio of 4:1 (EPBC Ref 2008/4161).

Our flight arrives in Canberra at 9.30am, so we hope to be at your offices at 10.30am. I will call you to confirm timing on arrival.

I look forward to receiving the information above. Please let me know if you have any queries.

Yours sincerely,

s 47F
Partner

DLA Piper Australia

s 47F

s 47F

www.dlapiper.com
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From: s 47F [mailto s 47F @environment.gov.au]
Sent: Wednesday, 18 May 2011 2:33 PM
To: s 47F
Cc: s 47F s 47F
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

Hi s 47F

Thank you for your call and email. We would be available for a meeting with you on Thursday the 26 May 2011. We are available in the morning until 12pm. Based on this I will set aside an hour from 11am to 12 pm. s 47F (Ag Director) and myself will attend the meeting at this stage.

As outlined in my previous email, in order to have a productive meeting that is able to achieve an outcome we ask that you provide adequate information prior to arriving. This should include an agenda detailing what is to be discussed and any information (briefs etc.) that you wish to discuss in the meeting. This would be welcomed by COB on Tuesday 24 May 2011.

I will arrange a room at our offices. Please call me from reception when you have arrived and I will collect you.

I look forward to hearing from you if this is acceptable.

Kind Regards
s 47F

s 47F
Victoria and Tasmania Section
Environment Assessment Branch | Department of Sustainability, Environment, Water, Population and Communities
T: 02 6275 s 47F | E: s 47F @environment.gov.au

Level 5, 33 Allara Street, Canberra, ACT, 2601

From: s 47F]
Sent: Wednesday, 18 May 2011 2:28 PM
To: s 47F
Cc: s 47F ; s 47F
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

Hi s 47F

As discussed, our client would like to take you up on the offer of a meeting in Canberra in the week of 23 May 2011.

The most suitable day and time next week is Thursday 26 May 2011 between 11am and 4pm. Can you please let us know of a time that would suit and let us know who will be involved in that meeting? From our end there will be s 47F (Intrapac), Brett Lane (Brett Lane & Associates) and s 47F DLA Piper).

We look forward to hearing back from you shortly.

Regards, s 47F

s 47F
Senior Associate

DLA Piper Australia

s 47F

From: s 47F [mailto s 47F @environment.gov.au]
Sent: Wednesday, 18 May 2011 9:17 AM
To: s 47F
Cc: s 47F
Subject: RE: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina [SEC=UNCLASSIFIED]

Dear s 47F

Thank you for your email regarding the proposed offset package for 115 Westmeadows Lane, Truganina.

The department has reviewed the information sent through and has determined that more detailed information is required regarding both the proposed offset for Golden Sun Moth and the proposed long term management arrangements for the offset site. This information is necessary before the department is able to provide advice on the acceptability of the proposal and direct you to publish relevant documents for public comment.

As outlined in our 'request for preliminary documentation' letter dated 4th February 2011, the department requested information relating to a number of factors, some of which have not been addressed in the current proposal. I have attached a copy of this letter for your convenience. Ideally the department would be provided with a draft offset management plan which clearly outlines the overall conservation outcome (i.e. the conservation values of the offset site compared with the losses at the impact site and associated survey outcomes), and including relevant maps, details of the legal mechanism to be used to secure the site and timing for this, as well as management arrangements for the site.

In addition to this advice, the department provided advice to Brett Lane in a conversation on the 17th March 2011 indicating that the 9.9 ha offset outlined in the offset proposal was unlikely to be considered favourably by the department as it is not consistent with all of the department's offset requirements. During this conversation the department noted that whilst the area in question also provides an offset for Natural Temperate Grassland of the Victorian Volcanic Plain, this consideration is second to ensuring that impacts to Golden Sun Moth are adequately mitigated and offset. Previous discussions with Brett Lane have indicated that there may be areas adjacent to the land to be acquired and, if suitable for Golden Sun Moth, that this would increase the area to be offset to approximately 15 ha. In addition to habitat offsets, the department has also discussed the possibility of non-habitat offsets (i.e. in the form of education, research etc.). Whilst the department assesses each proposal on its merits, it is also important that decisions made by the department display consistency in outcomes which includes referring to a body of precedent in addition to relevant department guidelines.

As always, we are happy to meet with you to discuss this action and are available in the week of the 23rd May 2011 if required. We would ask that prior to planning a meeting, adequate information be made available to the Department in order to facilitate a further discussion regarding offset outcomes which would be acceptable to both parties.

Kind Regards

s 47F

s 47F
Victoria and Tasmania Section
Environment Assessment Branch | Department of Sustainability, Environment, Water, Population and Communities
T: 02 6275 s 47F | E: s 47F @environment.gov.au
Level 5, 33 Allara Street, Canberra, ACT, 2601
Please consider the environment before printing this email

From: s 47F
Sent: Friday, 13 May 2011 12:22 PM
To: s 47F
Cc: s 47F @intrapac.com.au; Brett Lane
Subject: EPBC Act Reference No. 2010/5791 - 115 Westmeadows Lane, Truganina

Dear s 47F

Please see the attached documentation in relation to the proposed residential development at 115 Westmeadows Lane, Truganina (EPBC Act Reference No. 2010/5791).

Please contact us if you have any queries.

Kind Regards, s 47F

s 47F
Senior Associate

DLA Piper Australia

s 47F

www.dlapiper.com

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Australian Government
Department of Sustainability, Environment, Water, Population and Communities

s 47F
Chief Executive Officer
Intrapac Projects Pty Ltd
33 Coventry Street
SOUTH MELBOURNE VIC 3205

Date: 24 February 2011
EPBC Ref: 2010/5791
EPBC contact: s 47F

Dear s 47F

Request for Preliminary Documentation
Residential Development, Lot 11 Westmeadows Lane, Truganina, Victoria (EPBC 2010/5791)

On 21 January 2011, we decided that your proposed action to construct a residential development and associated infrastructure at Lot 11 Westmeadows Lane, Truganina, Victoria, required assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

While I have determined that your project will be assessed by preliminary documentation, we require some further information to be able to assess the relevant impacts of the action. Your referral makes reference to "offset sites", in relation to the loss of a Golden Sun Moth (*Synemon plana*) population, that are currently under consideration. Please provide information on how these proposed sites would satisfy *Draft EPBC Act policy statement 4.1 - Use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999*. Please note that any information provided will be made available for public comment except by the prior agreement of the Department. Your response should include:

- if applicable, any measures proposed to further reduce the impact on Golden Sun Moth at the site of the proposed action;
- justification that any proposed offset property will adequately compensate for impacts on Golden Sun Moth associated with the proposed action, in terms of its size, shape, quality and location (all claims must be reasonably substantiated);
- information on the legal mechanisms, levels of protection and tenure afforded any proposed offset property (the Department prefers covenants under section 3A of the *Victorian Conservation Trust Act 1972* or section 173 of the Victorian *Planning and Environment Act 1987* and expects that offset properties will be protected in perpetuity);
- a plan outlining arrangements for ongoing management of the proposed offset site. Such a plan should document measures to ensure that retained Golden Sun Moth habitat and populations on site are protected and are likely to persist in the offset property, monitoring measures, and details of roles and responsibilities, expected timelines and financial arrangements ; and
- if applicable, information on any non-habitat-based offsets proposed.

Information provided should primarily focus on the matter of National Environmental Significance mentioned in this letter. The information provided should contain sufficient information to avoid the need to search out previous or supplementary details and be supported by relevant maps, plans, diagrams, tables, surveys, references or other descriptive detail, so it may be easily understood by the general public.

Any proposal submitted will be considered on its own merits; however, the general expectations of the Department in relation to Golden Sun Moth offsets are that proposed offset sites support a large, abundant population of Golden Sun Moth, with known presence of female moths, important habitat attributes and long term viability, such as follows:

- evidence of breeding;
- equal or higher population density;
- equal or higher habitat quality;
- area ratio of approximately 4:1;

- reasonable proximity; and
- identified, and preferably secured, prior to approval of the proposed action.

It remains the preference of the Department that suitable offset sites be identified outside the Western Grassland Reserves, which are committed to offsetting environmental impacts (including on matters of national environmental significance) associated with the strategic assessment of Melbourne's urban growth boundaries, as described in *Delivering Melbourne's newest sustainable communities*. The Department considers that this should be possible to achieve.

In any correspondence with the Department please quote the title of the action and EPBC reference, as shown on the beginning of this letter. You can send information to us:

by letter Victoria and Tasmania Section
Environment Assessment Branch
Department of the Environment, Water, Heritage and the Arts
GPO Box 787
CANBERRA ACT 2601

by email s 47F [redacted]@environment.gov.au

When this information has been provided to the satisfaction of the Department, you will be directed to publish all relevant documents for public comment.

In relation to a request made by your solicitor in association with the referral of your proposed action, the approval process under the EPBC Act includes a mandatory period during which you may comment on a proposed approval / refusal decision, along with any proposed conditions.

If you have any further questions about the assessment process or this decision, please contact the EPBC project manager and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

s 47F [redacted]
Director
Victoria and Tasmania Assessment Section

Cc: s 47F [redacted] – Partner, DLA Phillips Fox

Australian Government

Department of the Environment, Water, Heritage and the Arts

Approval

Highlands Residential Development, Craigieburn, Victoria (EPBC 2008/4161)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	Stockland Pty Ltd
proponent's ACN and ABN	ABN 43 000 181 733
proposed action	To develop the Highlands Residential Development at Craigieburn, Victoria, and as described in the referral received on 15 April 2008 and the Preliminary Documentation dated April 2009.

Approval decision

Controlling Provision	**Decision**
Listed threatened species and communities (sections 18 & 18A)	Approve

conditions of approval	This approval is subject to the conditions at Attachment A.
expiry date of approval	15 September 2020

Decision-maker

name and position	Vicki Middleton Assistant Secretary Environment Assessment Branch
signature	Vicki Middleton
date of decision	3 September 2009

Conditions of approval

1. The person taking the action must retain at least 44 ha of core habitat for *Synemon plana* (the Golden Sun Moth) at Highlands Craigieburn, as shown at Annexure A.
2. The person taking the action must submit for the Minister's approval a Conservation Management Plan to manage and protect Golden Sun Moth, River Swamp Wallaby-grass, Growling Grass Frog and Matted Flax-lily habitat at Highlands Craigieburn. The plan must identify measures:
   (a) to manage a minimum of 44 ha of core habitat for the Golden Sun Moth within the conservation Reserves (Annexure A) at Highlands Craigieburn;
   (b) to mitigate impacts on core habitat for the Golden Sun Moth during construction, in particular, the person taking the action must:
      (i) establish 'No-go' zones in areas of identified core habitat to be retained (Annexure A), including use of fencing and signage;
      (ii) implement and maintain sediment control protocols;
      (iii) ensure that all pathways sealed and unsealed are placed outside of core habitat areas; and
      (iv) induct construction workers and contractors about requirements to protect core Golden Sun Moth habitat.
   (c) to protect the nine (9) existing populations of River Swamp Wallaby-grass, in particular the person taking the action must:
      (i) determine whether previous translocations at Aitken Creek South and other relevant translocation programmes for this species are successful, prior to undertaking any subsequent translocations;
      (ii) If proven successful, future translocation must be in accord with the proven methodology
      (iii) monitor and protect the viability of the identified nine populations of the species; and
      (iv) implement weed management protocols.
   (d) to protect existing populations of Growling Grass Frog, in particular the person taking the action must:
      (i) ensure that no impacts occur downstream on existing populations as a result of impacts from wetland treatment sites (shown on Annexure B);
      (ii) implement management protocols to ensure habitat for Growling Grass Frog on wetland treatment sites is maintained;
      (iii) monitor for Growling Grass Frog populations to determine the success of management or the need for intervention,
      (iv) include the establishment of thresholds that if reached would require intervention measures
      (v) identify what further management measures must be implemented when threshold is reached.
   (e) to protect the Matted Flax-lily, the person taking the action must;
      (i) ensure that all pathways, sealed and unsealed are placed outside of GSM core habitat areas;
      (ii) undertake weed management;
      (iii) must inform the Minister in the event of locating additional plants prior to removal or translocation

   The person taking the action must submit the Conservation Management Plan prior to 30 December 2009. Construction cannot continue beyond that date until the Conservation Management Plan has been submitted, the Minister has approved the Conservation Management Plan and the Conservation Management Plan is implemented.

3. The person taking the action must submit for the Minister's approval an Offset Strategy to offset impacts resulting from the loss of 30.8ha of core Golden Sun Moth habitat. The Offset Strategy must:

   - require the purchase and management of land to conserve core habitat for the Golden Sun Moth in perpetuity;
   - protect a minimum ratio of 4:1 (123.2ha) of core habitat for the Golden Sun Moth to offset the 30.8ha of core habitat for the Golden Sun Moth to be cleared;
   - require that the purchased site must have core habitat for the Golden Sun Moth that reflects the quality at an equivalent or better biodiversity value to the habitat retained within conservation reserves at Highlands Craigieburn;
   - monitor and enhance core habitat for the Golden Sun Moth on the purchased land;
   - contribute to the protection of a contiguous reserve system for the Golden Sun Moth;
   - require the purchase of the land with core habitat for the Golden Sun Moth is within the Victorian Volcanic Plain bioregion; and
   - require the purchase the land with core habitat for the Golden Sun Moth is within a 50 km radius of the Highlands Craigieburn site.

   The person taking the action must submit the Offset Strategy prior to 30 March 2010. Construction cannot continue two months beyond that date until the Offset Strategy has been approved by the Minister and the Offset Strategy is implemented.

4. An offset for a minimum of 4:1 core habitat for the Golden Sun Moth must be purchased before 30 December 2010 as required under paragraph 3. Construction cannot continue beyond this date until the offset has been purchased.

5. If the person taking the action wishes to carry out any activity other than in accordance with the Conservation Management Plan (Condition 2) or the Offset Strategy (Condition 3) approved by the Minister, the person taking the action must submit for the Minister's approval a request for revision of the plan. If the Minister approves the revised plan so submitted, the person taking the action must implement that plan instead of the plan as originally approved.

6. If the Minister believes that it is necessary or desirable for the better protection of matters of National Environmental Significance (NES), the Minister may request that the person taking the action make specified revisions to a plan or measure approved pursuant to conditions 2 or 3 and submit the revised plan or measure for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan or measure pursuant to this condition, the person taking the action must implement that plan or measure instead of the plan or measure as originally approved.

7. If, at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the proposed action, the action must not thereafter be commenced without written agreement of the Minister.

Definitions:

Construction – includes any preparatory works required to be undertaken, including clearing vegetation, the erection of any onsite temporary structures, and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure.

Core habitat - for the Golden Sun Moth *(Synemon plana)* parallels the definition provided by the proponent. The department considers the below values as key to the description of core habitat for Golden Sun Moths and is taken from section 7.3 of the report entitled 'Environmental Values – Highlands, Craigieburn (2008), they are as follows:

- Areas that support a high abundance of Golden Sun Moth
- Known presence of female moths
- Presence of important habitat attributes
- Position in landscape
- Potential for long-term viability

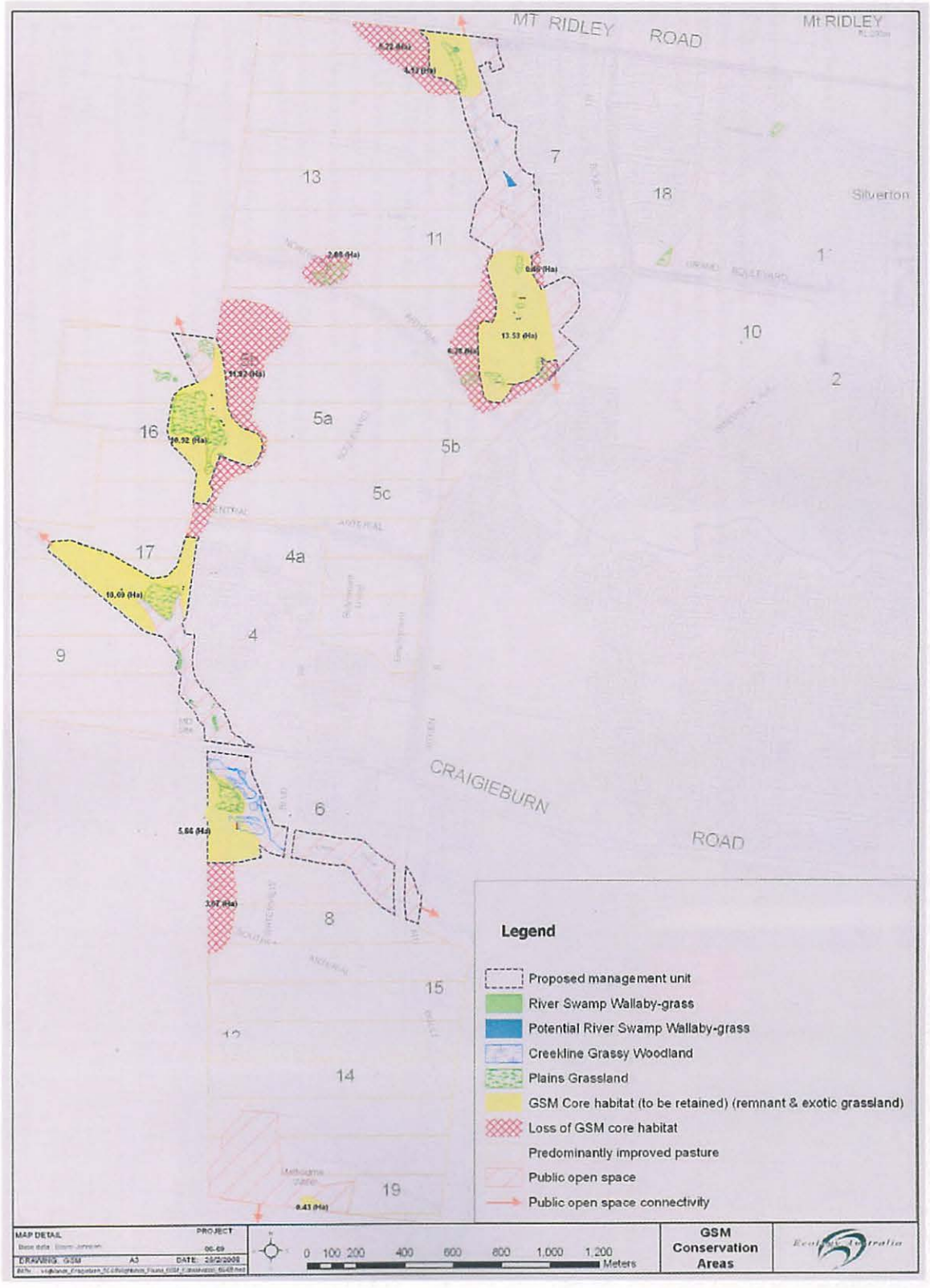
Minister - The Minister of the Department of the Environment, Heritage and the Arts, or whatever the Department that administers his approval is thereafter called.

No Go Areas – Areas which require protection from construction and temporary impacts including: the movement of construction vehicles and machinery, stockpiling and any actions that will degrade or damage grassland species.

Victorian Plain Bioregion - is an area of flat to undulating plains in south-western Victoria, stretching from Melbourne west to Portland, south to Colac and north to Beaufort. It is characterised by vast open areas of grasslands, small patches of open woodland, stony rises denoting old lava flows, the low peaks of long extinct volcanoes dotting the landscape and numerous scattered large shallow lakes. (http://www.nre.vic.gov.au/plntanml/biodiversity/Directions/volcanic.htm)

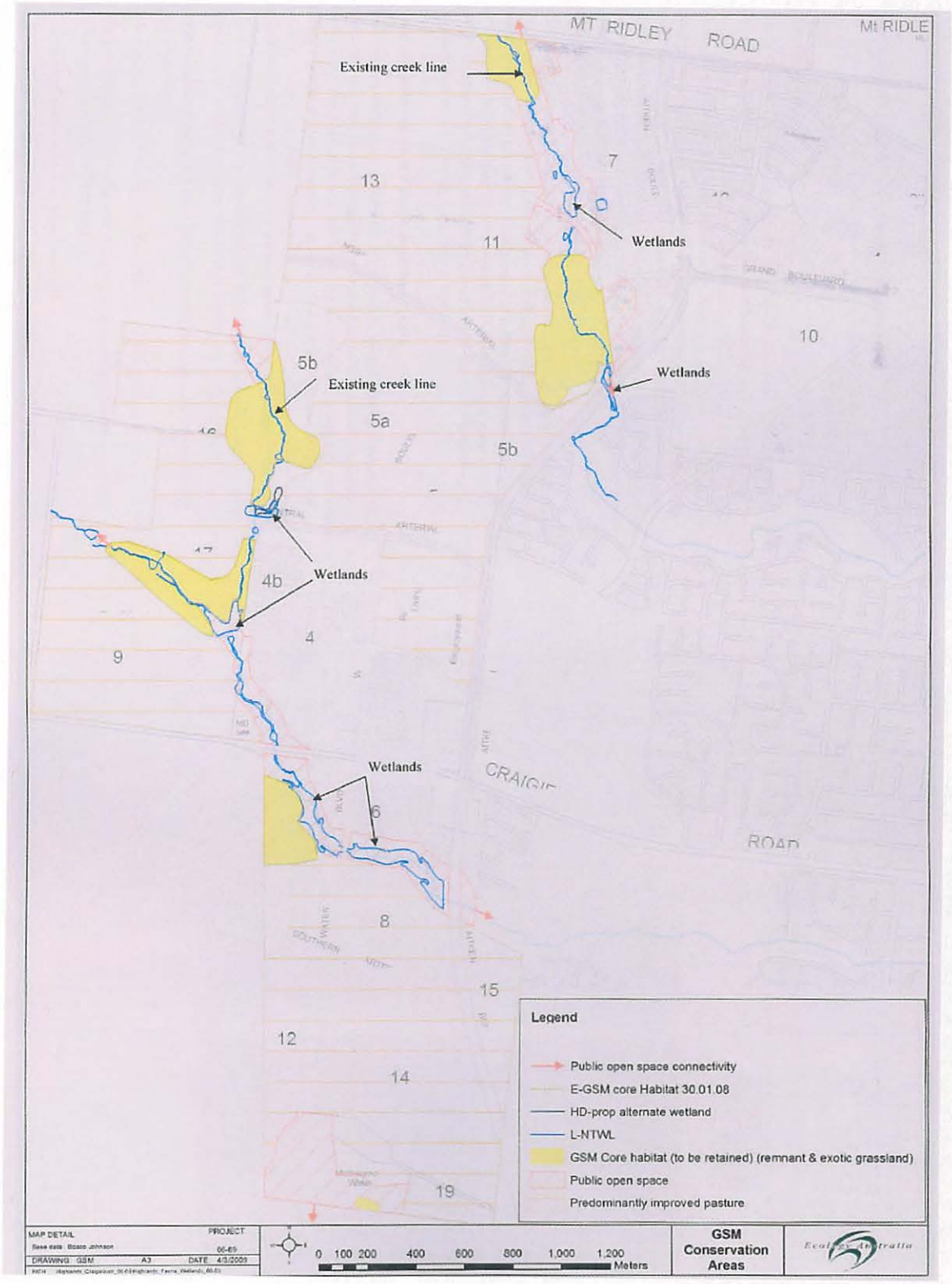
Annexure A

Golden Sun Moth retained core habitat and Public Open Space



Annexure B

Wetland Treatment site locations



Approval

Residential Development, 220 Harvest Home Road and 219 Epping Road, Wollert, Victoria (EPBC 2009/4888)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action	
person to whom the approval is granted	AV Jennings Limited
proponent's ACN and ABN	ACN 126373082 ABN 83126373082
proposed action	Residential development at 220 Harvest Home Road and 219 Epping Road, Wollert, Victoria, as described in the referral received on 7 May 2009.

Approval decision	
relevant controlling provision	This decision to approve has effect for: • Listed threatened species and communities (sections 18 & 18A)
conditions of approval	This approval is subject to the conditions specified below.
expiry date of approval	This approval has effect until 30 October 2019.

Person authorised to make decision	
name and position	Michelle Wicks A/g Assistant Secretary Environment Assessment Branch
signature	Wicks
date of decision	17/11/2009

Conditions

1. To compensate for the loss of 6 hectares of native vegetation that provides habitat for the listed threatened species Golden Sun Moth (*Synemon plana)* at the 220 Harvest Home Road and 219 Epping Road development site, the person taking the action must provide an offset package. The offset package must include the protection in perpetuity of an area of land ('the protected land'), which must contain known Golden Sun Moth habitat.

   The offset package must be approved by the **Minister**. In approving any proposed offset package, consideration will be given to:

   a. the quality of Golden Sun Moth habitat on protected land;

   b. the extent of Golden Sun Moth habitat and native vegetation on the protected land;

   c. proximity of the protected land to existing grassland reserves; and

   d. distance of the protected land from the development site.

2. The person taking the action must enter into a written agreement with **Trust for Nature** ('the agreement') to identify potential sites to form the basis of the offset package (as required under Condition 1) and to secure the protection in perpetuity of the protected land.

   The person taking the action must provide a sum of $1,000,000 ('the funds') to **Trust for Nature** to be held until such time as the protected land is identified and the offset package approved, at which time the money will form the basis of the payment to purchase environmental services from the owner of the protected land. If the cost of purchasing the environmental services is greater than $1,000,000, the person taking the action will provide additional funds to **Trust for Nature** as required. If the cost of purchasing the environmental services is less than $1,000,000, the funds will be returned to the person taking the action. The arrangements for the provision and expenditure of the funds must be set out in the agreement.

   A draft copy of the agreement must be provided to the **Department** for approval prior to its signing by all parties.

   A copy of the agreement must be provided to the **Department** within 7 days of its signature by all parties.

3. The person taking the action must:

   a. Within 18 months of the date of this approval, secure the tenure of the protected land by co-signing with **Trust for Nature** and the protected land owner/s a **Credit Trading Agreement**. The **Department** must be provided with a copy of the signed **Credit Trading Agreement** within 2 weeks of its signature by all parties.

   b. Within 6 months of the date of signing the **Credit Trading Agreement**, ensure that a **Deed of Covenant** for the protected land is executed with

Trust for Nature and is registered on the title documents of the protected land. The **Department** must be provided with a copy of the signed **Deed of Covenant** within 2 weeks of its signature by all parties.

c. Ensure that the property is managed in perpetuity in accordance with a Trust for Nature Covenant Management Plan or through incorporation into an existing grassland reserve following the conclusion of the 10 year Offset Management Plan for the protected land (as required under Condition 5). The Covenant Management Plan must be approved by the **Minister** prior to the conclusion of the Offset Management Plan.

4. Within 12 months of the date of signing the **Credit Trading Agreement**, the person taking the action must ensure that a baseline survey of Golden Sun Moth on the protected land is conducted. The baseline survey must:

   a. Be conducted by a suitably qualified ecologist. This person must be approved by the **Department**.

   b. Be undertaken during appropriate conditions, within the flying season for Golden Sun Moth (late October to early January) and in accordance with the **Department's Golden Sun Moth survey guidelines**.

   The results of the baseline survey must be provided to the **Department** within two months of the completion of the survey.

5. Prior to entering into the **Credit Trading Agreement** (as required under Condition 3), an Offset Management Plan for the protected land, to remain valid for a period of 10 years from the commencement date of the **Deed of Covenant**, must be completed by the person taking the action, endorsed by the land owner/s and submitted to the **Department**. The final Offset Management Plan must:

   a. Provide for the conservation and enhancement of Golden Sun Moth habitat and populations on the protected land and include measures to:

      i. rehabilitate and maintain Golden Sun Moth habitat;

      ii. control weed species and pest animals;

      iii. control access to the protected land;

      iv. prohibit grazing activities;

      v. monitor the status of Golden Sun Moth populations and condition of Golden Sun Moth habitat; and

      vi. report the results and frequency of monitoring and management activities to the **Minister**.

   b. Include provisions and measures to ensure that actions taken to conserve, manage and protect Golden Sun Moth populations and habitat have no detrimental impact on the habitat and populations of other listed threatened species and ecological communities that are identified in the Offset Management Plan as occurring on the protected land.

   c. Include corrective actions and contingency measures to be implemented (including the timing of implementation of these) where monitoring of the

protected land under the Offset Management Plan indicates a decrease in the population of Golden Sun Moth or degradation of Golden Sun Moth habitat.

d. Incorporate the results from the baseline survey.

The Offset Management Plan must be approved by the **Minister**. The approved Offset Management Plan must be implemented.

6. **Construction** may not commence until such time as:

   a. Condition 2 has been satisfied; and

   b. The person taking the action has engaged a suitably qualified ecologist, as approved by the **Department**, to conduct Golden Sun Moth surveys on potential offset sites.

   c. The **Department** has acknowledged the receipt of evidence of the engagement identified in 6b.

7. Within 7 days of commencement of **construction**, the person taking the action must advise the **Minister** in writing of the actual date of commencement.

8. If ownership and/or management of the protected land is to be transferred to another party, the person taking the action must provide the **Minister** with evidence that the other party has agreed to assume all the management responsibilities in accordance with the Offset Management Plan and the conditions of this approval prior to any transfer occurring.

9. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans 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 approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.

10. If, at any time after 3 years from the date of this approval, the **Minister** notifies the person taking the action in writing that the **Minister** is not satisfied that there has been **substantial commencement** of the action, the action must not thereafter be commenced without the written agreement of the **Minister**.

11. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, reports or strategies referred to in condition 5 the person taking the action must submit for the **Minister's** approval a revised version of any such plan, report or strategy. If the **Minister** approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.

12. If the **Minister** believes that it is necessary or desirable for the better protection of listed threatened species and ecological communities to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or strategies approved pursuant to condition 5 and submit the revised plan,

report or strategy for the **Minister's** approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.

Definitions

Construction means any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure.

Credit Trading Agreement means the legal agreement between Trust for Nature and the person taking the action and the property owner of the protected land. The agreement stipulates the obligations of each party, including financial payments, to manage the protected land for a period of 10 years.

Department means the Australian Government Department responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999.*

Golden Sun Moth survey guidelines means the most up-to-date survey guidelines issued by the Department for the Golden Sun Moth, as currently available in the *EPBC Act Policy Statement 3.12 Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (Synemon Plana), January 2009.*

Deed of Covenant means an encumbrance registered to Trust for Nature on the title of the protected land and includes the Offset Management Plan and any other document that the owner of the protected land is required to comply with.

EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999.*

Minister means the Australian Government Minister responsible for the *Environment Protection and Biodiversity Conservation Act 1999.*

Substantial commencement means actions to develop residential properties including the clearance of vegetation, development of roads and supporting infrastructure, general earthworks, installation of drainage and sewage pipelines, housing and pavement construction

Trust for Nature means the Trust for Nature (Victoria) as established and defined by the *Victorian Conservation Trust Act 1972.*

Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Approval

Commercial development at Lot 2, Pascoe Vale Road, Coolaroo, Victoria (EPBC 2010/5473)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	Hydrox Nominees Pty Ltd
proponent's ACN	139 262 123
proposed action	Staged development of Lot 2, Pascoe Vale Road, Coolaroo, Victoria, as a commercial complex comprising home improvement retail store, six additional retail premises and associated car parking

Approval decision

Controlling Provision	Decision
listed threatened species and communities (sections 18 & 18A)	approved, subject to conditions

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 12 years from the date of this notice

Decision-maker

name and position	Michelle Wicks Assistant Secretary Environment Assessment Branch
signature	mwicks
date of decision	20 October 2010

Conditions

1. To compensate for (offset) the loss of an existing population of the critically endangered Golden Sun Moth (*Synemon plana*) over 9.52 hectares at the site of the proposed action, the person taking the action must, within six months of the date of this approval, secure the approval by ***the Minister*** of an offset package. The offset package must include the protection in perpetuity of an area of land. ***The protected land*** must:
   a. support known Golden Sun Moth populations, including females and / or larvae, and males at equal or higher density (individuals per unit area) than the population that will be removed from the site of the proposed action (defined in terms of numbers per hectare using comparable survey methods);
   b. support at least twice the area of Golden Sun Moth occupancy as will be removed from the site of the proposed action; and
   c. be located within the Victorian Volcanic Plains bioregion.

   The offsets package may also include indirect measures to advance the protection of the Golden Sun Moth in the Victorian Volcanic Plains bioregion.

2. The person taking the action must enter into a written agreement with ***Trust for Nature*** ("the Engagement Agreement") to identify potential sites to form the basis of the offset package (as required under Condition 1) and to secure the protection in perpetuity of ***the protected land***. A copy of the Engagement Agreement must be provided to ***the Department*** within 7 days of its signature by all parties.

   Prior to the commencement of ***construction***, the person taking the action must provide a sum of $1,500,000 (one million, five hundred thousand dollars) ("the funds") to ***Trust for Nature*** to be held until such time as suitable land is identified and the offset package approved, at which time the funds will form the basis of the payment to purchase environmental services from the owner of ***the protected land*** in fulfilment of Condition 3 below. If the cost of purchasing the environmental services is greater than $1,500,000, the person taking the action must provide additional funds to ***Trust for Nature*** as required. If the cost of purchasing the environmental services is less than $1,500,000, surplus funds will be returned to the person taking the action.

   The arrangements for the provision and expenditure of the funds must be set out in an agreement ("the Funding Agreement"). A draft copy of the Funding Agreement must be provided to ***the Department*** for approval prior to its signing by all parties. A copy of the Funding Agreement must be provided to ***the Department*** within 7 days of its signature by all parties.

3. To secure and manage ***the protected land***, the person taking the action must:
   a. within 12 months of the date of this approval, secure the tenure of ***the protected land*** by co-signing a ***credit trading agreement*** with ***Trust for Nature*** and the owners of ***the protected land*** and provide ***the Department*** with a copy of the signed agreement within 2 weeks of its signature by all parties;
   b. within 12 months of the date of this approval, ensure that a ***deed of covenant*** for ***the protected land*** is executed with ***Trust for Nature*** and is registered on the title documents of ***the protected land***. ***The Department*** must be provided with a copy of the signed ***deed of covenant*** within 2 weeks of its signature by all parties;
   c. within 12 months of the date of this approval, ensure that a baseline survey of Golden Sun Moth on ***the protected land*** is conducted in accordance with *EPBC Act Policy Statement 3.12 - Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (*Synemon plana*)*;
   d. within 12 months of the date of this approval, secure the approval by ***the Minister*** of an offset management plan for ***the protected land***. The plan must:
      i. clearly define the location and boundaries of ***the protected land***, through maps and / or textual descriptions as well as an accompanying ***shapefile***;
      ii. describe the ecology of ***the protected land***, with particular reference to Golden Sun moth populations;
      iii. include provisions for the conservation and enhancement of Golden Sun Moth populations and habitat, and include measures to:
         - rehabilitate habitat if required;
         - control weed species and pest animals;
         - control access;
         - manage grazing activities;
         - manage fire;
         - monitor the status of populations and habitat; and
         - report the results of monitoring and management activities to ***the Minister***;
      iv. describe corrective actions and contingency measures to be implemented where monitoring indicates a decrease in the Golden Sun Moth population or degradation of Golden Sun Moth habitat;
      v. include provisions to ensure that actions taken to conserve and enhance Golden Sun Moth populations and habitat have no detrimental impact on the populations or habitat of other listed threatened species and ecological communities identified in the offset management plan;
      vi. include details on funding arrangements; and
      vii. remain valid and be implemented for a period of 10 years from the date of its approval by ***the Minister*** (subject to any approved review regime);
   e. ensure that, following the conclusion of the offset management plan, arrangements are put in place for the management in perpetuity of the protected land in accordance with a ***Trust for Nature*** Covenant Management Plan or through incorporation into an existing grassland reserve. The Covenant Management Plan must be approved by the Minister prior to the conclusion of the offset management plan.

4. To ensure the protection of the vulnerable Striped Legless Lizard (*Delma impar*) at the site of the proposed action, the person taking the action must implement *Lot 2, Pascoe Vale Road, Coolaroo, Victoria: Striped Legless Lizard* Delma impar *Salvage and Translocation Plan* (August 2010).

5. Within 7 days of the commencement of ***construction***, the person taking the action must advise ***the Minister*** in writing of the actual date of commencement.

6. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to ***the Minister***. 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 approval. Summaries of audits will be posted on ***the Department***'s website. The results of audits may also be publicised through the general media.

7. If, at any time after 3 years from the date of this approval, ***the Minister*** notifies the person taking the action in writing that ***the Minister*** is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of ***the Minister***.

8. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans referred to in Conditions 3 and 4, the person taking the action must submit for ***the Minister***'s approval a revised version of any such plan. If ***the Minister*** approves such a revised plan, that plan must be implemented in place of the plan originally approved.

9. If ***the Minister*** believes that it is necessary or desirable for the better protection of listed threatened species and ecological communities to do so, ***the Minister*** may request that the person taking the action make specified revisions to the plans approved pursuant to Conditions 3 and 4 and submit the revised plan for ***the Minister***'s approval. The person taking the action must comply with any such request. The revised approved plan must be implemented in place of the plan originally approved.

Definitions

Construction means the physical development of the site of the proposed action, including any preparatory works such as the clearing of vegetation, the use of heavy machinery, the erection of permanent or temporary buildings, paved surfaces or other structures, and any site rehabilitation or remediation.

Credit Trading Agreement means the legal agreement between Trust for Nature and the person taking the action and the property owner of the protected land. The agreement stipulates the obligations of each party, including financial payments, to manage the protected land for a period of 10 years.

Deed of Covenant means an encumbrance registered to Trust for Nature on the title of the protected land and includes the Offset Management Plan and any other document that the owner of the protected land is required to comply with.

The Department means the Australian Government Department responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999*.

The EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999*.

The Minister means the Australian Government Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999*.

The protected land means the land protected in fulfilment of Condition 1.

Shapefile means an ESRI Shapefile, containing '.shp', '.shx.' and '.dbf' files and other files capturing attributes including at least the EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format.

Trust for Nature means the Trust for Nature (Victoria) as established and defined by the Victorian *Conservation Trust Act 1972*.

Australian Government

Department of Sustainability, Environment, Water, Population and Communities

VARIATION TO CONDITION ATTACHED TO APPROVAL

Commercial development at Lot 2, Pascoe Vale Road, Coolaroo, Victoria (EPBC 2010/5473)

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	Hydrox Nominees Pty Ltd ACN 139 262 123
proposed action	Staged development of Lot 2, Pascoe Vale Road, Coolaroo, Victoria, as a commercial complex comprising home improvement retail store, six additional retail premises and associated car parking.

Variation

Variation of condition of approval	The variation is: • Delete condition 1 attached to the approval dated 20 October 2010 and substitute the condition specified below.
Date of effect	This variation has effect on the date the instrument is signed.

Person authorised to make decision

name and position	Michelle Wicks Assistant Secretary Environment Assessment Branch
signature	mwks
date of decision	19 April 2011

Variation of Condition attached to the Approval

1. To compensate for (offset) the loss of an existing population of the critically endangered Golden Sun Moth (*Synemon plana*) over 9.52 hectares at the site of the proposed action, the person taking the action must, within six months of the date of this approval, secure the approval by ***the Minister*** of an offset package. The offset package must include the protection in perpetuity of an area of land. ***The protected land*** must:
   a. support a known and viable population of Golden Sun Moths, as confirmed by targeted surveys and expert advice;
   b. support at least twice the area of Golden Sun Moth occupancy as will be removed from the site of the proposed action; and
   c. be located within the Victorian Volcanic Plains bioregion.

   The offsets package may also include indirect measures to advance the protection of the Golden Sun Moth in the Victorian Volcanic Plains bioregion.

Definitions

The Minister means the Australian Government Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999*.

The protected land means the land protected in fulfilment of Condition 1.

123 Marchments Road, Meredith, Victoria – Proposed offset site for 115 Westmeadows Lane, Truganina

The ecological characteristics of the proposed offset site can be summarised as:

Tenure	Private
Zoning	Farming zone
Historical use	Agriculture – grazing, record of one previous cultivation
Bioregion	Victorian Volcanic Plain
EVC	Heavier Soils Plains Grassland (EVC 132_61)
Area	12.5 hectares
Habitat score	52/100 (Victorian Native Vegetation Management Framework)
Conservation Significance	Very high (Victorian Native Vegetation Management Framework)
EPBC Act listed communities	Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP) (12.5 hectares)
EPBC Act listed plant species	Present
EPBC Act listed fauna species	Golden Sun Moth
Proposed offset security	The offset will be secured by way of a Section 173 agreement.
Proposed offset management	Offset management will be undertaken by the landholder. An offset management plan will be prepared for SEWPaC approval once the offset boundaries have been confirmed. Note that the landholder has been responsible until now for the implementation of previous conservation works that have enhances the environmental values of this site.

The proposed offset location is presented in Figure 1. Shaded areas represent the areas proposed to be secured for the offset.

25 Burwood Rd, Hawthorn VIC 3122
PO Box 74, Richmond VIC 3121
ABN 12 095 541 334
ph (03) 9815 2111 | fax (03) 9815 2685
enquiries@ecologicalresearch.com.au
www.ecologicalresearch.com.au

Legend

Proposed Offset

0 62.5 125 250 Meters

Figure 1: Proposed Offset Location

Project: West Meadows Lane, Truganina

Project: Intrapac Projects

Project No.: 9123	Date: 24/05/2011	Created By: G.Roy/ M.Ghasemi

BL&A Brett Lane & Associates Pty Ltd.

DLA PIPER

EPBC ACT REFERENCE NO. 2010/5791

115 WESTMEADOWS LANE, TRUGANINA VIC

Date & Time: 26 May 2011 at 10.30/11.00am

Venue: Environment Assessment Branch, Department of Sustainability, Environment, Water, Population and Communities Level 5, 33 Allara Street, Canberra, ACT, 2601

Attending: s 47F , s 47F (Intrapac), s 47F (DLA Piper), Brett Lane

Agenda

1. Confirmation of adequacy of further information supplied - does SEWPaC require any further information?

   See attached further information on potential offset site referred to in Offset Package.

2. Agreement to conditioning approval with trust for nature or offset strategy arrangement (as used in EPBC Ref 2009/4888, 2010/5473, 2008/4161).

   See attached approvals.

3. Agreement on offset ratio required.

4. Agreement on amount trust deposit (if required).

5. Confirmation of timing for assessment, exhibition and decision on approval and SEWPaC personnel responsible.

180610
ument 2h

MGA ZONE 55

LEAKES ROAD

WESTMEADOWS LANE

MARQUANDS ROAD

115 Westmeadows Lane, Truganina

Truganina South Precinct Structure Plan Area

PALMERS ROAD

SAYERS ROAD

SAYERS ROAD

LOCATION PLAN

115 WESTMEADOWS LANE, TRUGANINA

This plan is prepared for conceptual and marketing purposes only.
This plan is subject to survey, formal engineering design and referral authority approval.
Landscape shown hereon is indicative only.

Reeds Consulting Pty Ltd ▪ Land Surveyors ▪ Civil Engineers ▪ Development Consultants
Level 6 440 Elizabeth Street, Melbourne VIC 3000 ▪ phone (03)8660 3000 ▪ fax (03)8660 3060 ▪ email survey@reedscon.com.au

REF: 21127/LOC Version: A Date: 16/11/10

File: 1LOC1A.DGN

Scale 1:10000@A3

REEDS CONSULTING

FOI 180610
Document 2i

MGA ZONE 55

PROPOSED SUBDIVISION PLAN

115 WESTMEADOWS LANE, TRUGANINA

No. OF LOTS : 162
No. OF LOTS PER HECTARE : 15.4
SITE AREA : 10.54 ha
5% OF SITE : 5270m²
AREA OF WETLANDS : 1500m²
AREA BELOW 100 YEAR FLOOD LEVEL : 2875m²

OPEN SPACE REQUIRED ABOVE
100 YEAR FLOOD LEVEL : 6770m²

OPEN SPACE PROVIDED ABOVE
100 YEAR FLOOD LEVEL : 7971m²

TOTAL OPEN SPACE PROVIDED: 1.085 ha

NOTE: FLOOD LEVEL PROVIDED BY OTHERS
AND SUBJECT TO CONFIRMATION BY
MELBOURNE WATER

ORIGINAL		SCALE		REFERENCE: 21127/1-PP
SHEET SIZE	SCALE	10 0 10 20 30 40 50	Reeds Consulting Pty Ltd Level 6 440 Elizabeth Street Melbourne VIC 3000 phone (03) 8660 3000 fax (03) 8660 3060 email survey@reedscon.com.au	VERSION: B
A1	1:1000	LENGTHS ARE IN METRES		DATE: 30-09-09
				PC FILE: 1PP1B.DGN
				SHEET 1 OF 1 SHEETS

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MGA ZONE 55

PROPOSED STAGING PLAN

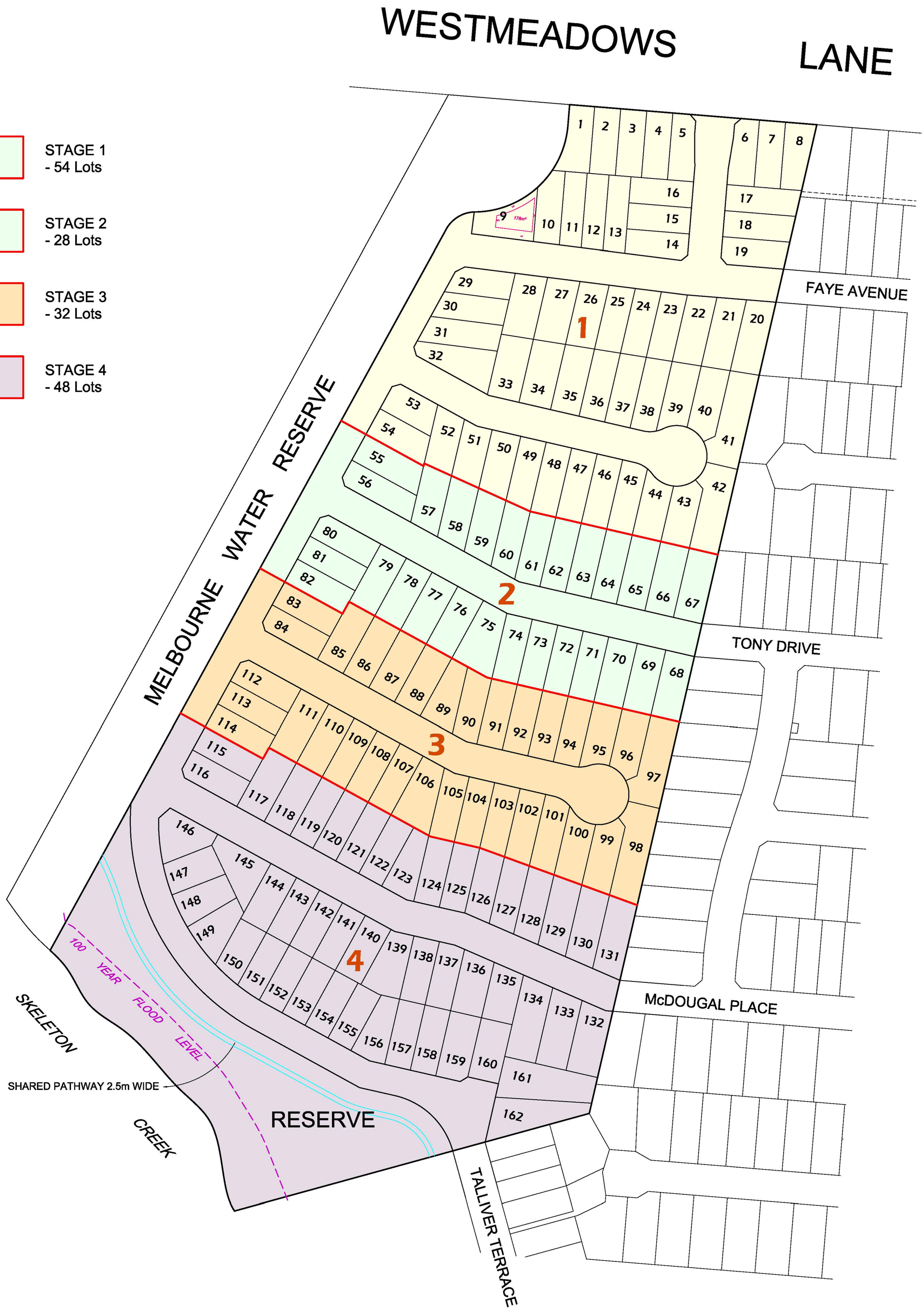
115 WESTMEADOWS LANE, TRUGANINA

STAGE 1
- 54 Lots

STAGE 2
- 28 Lots

STAGE 3
- 32 Lots

STAGE 4
- 48 Lots



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LENGTHS ARE IN METRES

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VERSION: A
DATE: 12-10-09
PC FILE: 1STAGES1A.DGN
SHEET 1 OF 1 SHEETS

Reeds Consulting Pty Ltd ACN 079 642 818 ABN 17 251 075 871
Level 6 440 Elizabeth Street
Melbourne VIC 3000
phone (03) 8660 3000 fax (03) 8660 3060
email survey@reedscon.com.au

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PROPOSED SUBDIVISION PLAN

115 WESTMEADOWS LANE, TRUGANINA

MGA ZONE 55

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AREA OF WETLANDS : 1500m²
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OPEN SPACE REQUIRED ABOVE
100 YEAR FLOOD LEVEL : 6770m²

OPEN SPACE PROVIDED ABOVE
100 YEAR FLOOD LEVEL : 7971m²

TOTAL OPEN SPACE PROVIDED: 1.085 ha

NOTE: FLOOD LEVEL PROVIDED BY OTHERS
AND SUBJECT TO CONFIRMATION BY
MELBOURNE WATER

WESTMEADOWS LANE
FAYE AVENUE
TONY DRIVE
McDOUGAL PLACE
TALLIVER TERRACE
MELBOURNE WATER RESERVE
SKELETON CREEK
100 YEAR FLOOD LEVEL
SHARED PATHWAY 2.5m WIDE
RESERVE

ORIGINAL	
SHEET SIZE	SCALE
A1	1:1000

SCALE
10 0 10 20 30 40 50
LENGTHS ARE IN METRES

REFERENCE: 21127/1-PP
VERSION: B
DATE: 30-09-09
PC FILE: 1PP1B.DGN
SHEET 1 OF 1 SHEETS

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email survey@reedscon.com.au

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Ref. 21127/I

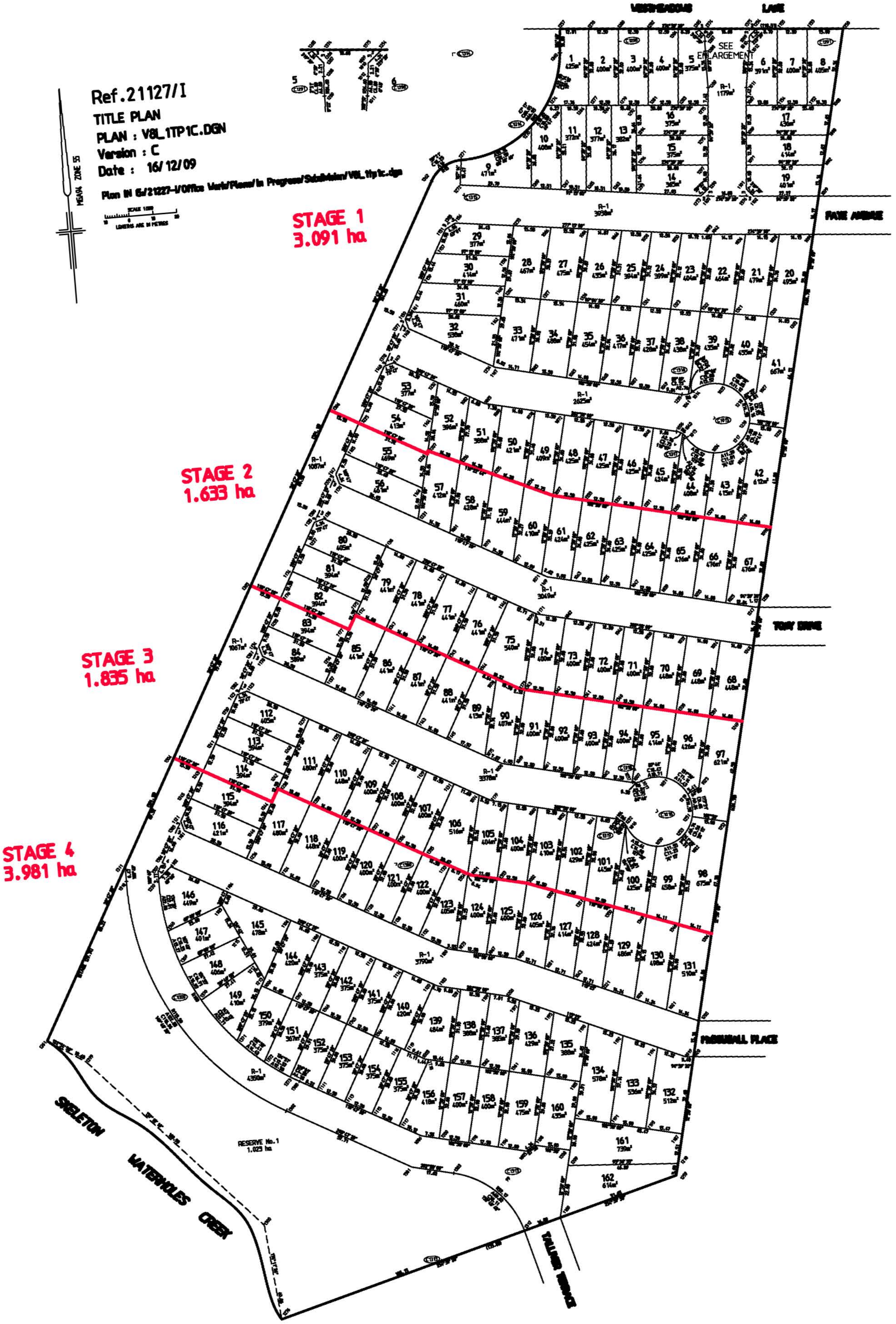
TITLE PLAN

PLAN : V8L_1TP1C.DGN

Version : C

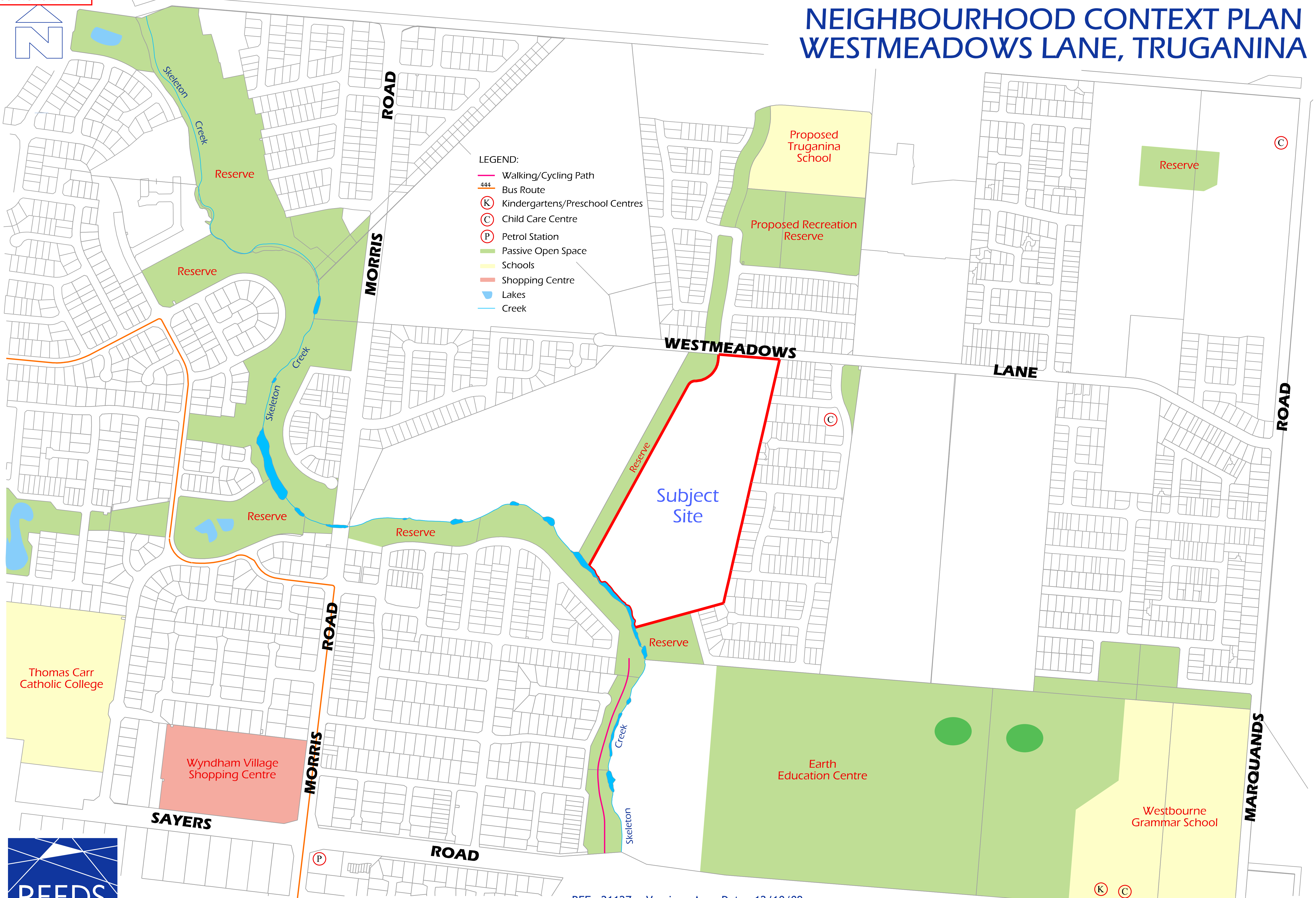
Date : 16/12/09

Plan IN G:/21227-1/Office Work/Plans/In Progress/Subdivision/V8L_1tp1c.dgn



FOI 180610
Document 2m

NEIGHBOURHOOD CONTEXT PLAN
WESTMEADOWS LANE, TRUGANINA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Walking/Cycling Path
Bus Route
Kindergartens/Preschool Centres
Child Care Centre
Petrol Station
Passive Open Space
Schools
Shopping Centre
Lakes
Creek
Skeleton Creek
Reserve
MORRIS ROAD
WESTMEADOWS LANE
MARQUANDS ROAD
SAYERS ROAD
Proposed Truganina School
Proposed Recreation Reserve
Subject Site
Thomas Carr Catholic College
Wyndham Village Shopping Centre
Earth Education Centre
Westbourne Grammar School

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REF: 21127 Version: A Date: 12/10/09
File: Locality1a.dgn