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Details of Filing

Document Lodged: Expert Report
File Number: VID1228/2017
File Title: FRIENDS OF LEADBEATER'S POSSUM INC v VICFORESTS
Registry: VICTORIA REGISTRY - FEDERAL COURT OF AUSTRALIA



Dated: 10/01/2019 3:57:27 PM AEDT

A handwritten signature in blue ink that reads 'Warwick Soden'.

Registrar

Important Information

As required by the Court's Rules, this Notice has been inserted as the first page of the document which has been accepted for electronic filing. It is now taken to be part of that document for the purposes of the proceeding in the Court and contains important information for all parties to that proceeding. It must be included in the document served on each of those parties.

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No. VID 1228 of 2017

Federal Court of Australia
District Registry: Victoria
Division: ACLHR

FRIENDS OF LEADBEATER'S POSSUM INC

Applicant

VICFORESTS

Respondent

EXPERT REPORT OF STEPHEN MUECK

Contents:

1. Expert report of Stephen Mueck dated 10 January 2019
2. Enclosures to letter of instruction dated 7 January 2019 on USB flash-drive

Filed on behalf of (name & role of party)	Friends of Leadbeater's Possum Inc, the Applicant		
Prepared by (name of person/lawyer)	Danya Jacobs		
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10 January 2019

Danya Jacobs
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Environmental Justice Australia
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A'BECKETT ST VIC 8006
danya.jacobs@envirojustice.org.au

Dear Danya

**Friends of Leadbeater's Possum Inc v VicForest: Federal Court of Australia proceeding
VID1228/2017
Project no. 29294**

1. In response to your correspondence of 7 January 2019 (attached) and having viewed the relevant photos and video footage provided as part of "JRM-73" and "JRM-75" recorded from coupe 462-504-0004 (Skerry's Reach), I provide the following identifications and assessments. The identifications and assessments are provided using my experience as a practicing botanist in Victoria, my experience in the forests of the Victorian Central Highlands and my previous role as flora research manager on the Silvicultural Systems Project with the Victorian government department of Conservation and Environment (now Department of Environment Land Water and Planning (DELWP)). The extent of my experience is otherwise outlined in the attached Curriculum Vitae.
2. The focus of the photos and videos provided (unless stated as uncertain) is Tree Geebung *Persoonia arborea*. This species of *Persoonia* is endemic to the Central Highlands of Victoria and has distinctive foliage, flowers and fruit that readily identify it. This species grows as a tall understorey shrub to small tree in Wet Forest and on the margins of Cool Temperate Rainforest. It is also listed as vulnerable in Victoria by the Department of Environment Land Water and Planning (DELWP) advisory list of rare or threatened plants in Victoria (DEPI 2014).
3. Past observations and aging of Tree Geebung (Mueck, Ough and Banks 1996) indicate that prolific flowering and fruiting in this species is restricted to mature individuals estimated to be in excess of 100 years old. Larger specimens such as the individual depicted in photos DSC06014 and DSC06035 and video 00452 are likely to be over of 400 years old.
4. The photos and videos provided include a number of plants that have been physically damaged. Where plants are damaged, the damage appears indicative of physical damage caused in association with timber harvesting. Some of the images and video footage are clearly in areas where tree felling has occurred.

5. My identifications of the plants depicted within the photos and videos provided and my assessment of their maturity and whether or not they have been disturbed, damaged or destroyed are outlined in Table 1.
6. I have read the Expert Evidence Practice Notes (GPN-EXPT) and the associated Annexure A (Code of Conduct) provided (Allsop 2016) and confirm that I understand it and agree to be bound by it. I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Court.



Table 1: Identification of plants and condition assessments

Annexure	Folder name	Sub-folder	File name	File type	Species noted	Comments on physical condition	Comments on maturity
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC05997	photograph (.jpeg)	<i>Persoonia arborea</i>	Canopy of a small tree/ tall shrub. Foliage appears to be un-naturally in a lateral position	flowering mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC05998	photograph (.jpeg)	<i>Persoonia arborea</i>	Canopy of a small tree/ tall shrub. Foliage appears to be un-naturally in a lateral position	flowering mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC05999	photograph (.jpeg)	<i>Persoonia arborea</i>	foliage and flowers	flowering mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC06000	photograph (.jpeg)	<i>Persoonia arborea</i>	foliage and flowers	flowering mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC06006	photograph (.jpeg)	<i>Persoonia arborea</i>	foliage and single fruit with blurred flowers in the background	Appears to be a flowering and fruiting mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD03PA	DSC06007	photograph (.jpeg)	<i>Persoonia arborea</i>	Whole tree/tall shrub which appears to have been pushed over	mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD05PA	DSC06010	photograph (.jpeg)	Uncertain shrub / small tree	Branches broken	maturity of specimen uncertain
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD05PA	DSC06011	photograph (.jpeg)	<i>Persoonia arborea</i>	main branch broken	flowering mature plant

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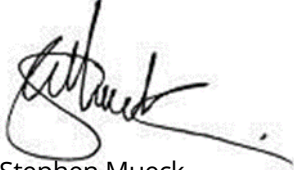
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Annexure	Folder name	Sub-folder	File name	File type	Species noted	Comments on physical condition	Comments on maturity
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD06PA	DSC06012	photograph (.jpeg)	<i>Persoonia arborea</i>	Trunk and some foliage of a large individual. At least two main branches broken	large mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD06PA	DSC06013	photograph (.jpeg)	<i>Persoonia arborea</i>	Trunk and some foliage of a large individual. At least two main branches broken	large mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD06PA	DSC06014	photograph (.jpeg)	<i>Persoonia arborea</i>	Trunk and most foliage of a large individual. At least two main branches broken	large mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD06PA	DSC06015	photograph (.jpeg)	<i>Persoonia arborea</i>	Close up of foliage. No damage obvious	Maturity of plant uncertain.
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD06PA	DSC06016	photograph (.jpeg)	<i>Persoonia arborea</i>	Close up of foliage with about 2 flowers. No damage obvious	Maturity of plant uncertain.
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD12PA	DSC06035	photograph (.jpeg)	<i>Persoonia arborea</i>	Trunk and most foliage of a large individual (may be more than one plant). No apparent damage	Mature plant
JRM-73	Figure 3 - Photographs taken within coupe 462-504-0004 - WOTCH	DDD12PA	DSC06036	photograph (.jpeg)	<i>Persoonia arborea</i>	Close-up of foliage. No damage obvious.	Maturity of plant uncertain.
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT01PA	,00450	video (.mp4)	<i>Persoonia arborea</i>	Video of shrub which appears to have been knocked over	overall size and maturity of plant uncertain.
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT01PA	DSC06283	photograph (.jpeg)	<i>Persoonia arborea</i> with <i>Acacia dealbata</i> in the background	Close up of dead / dying foliage	maturity of <i>Persoonia</i> uncertain
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT02PA	,00451	video (.mp4)	<i>Persoonia arborea</i>	Video of damaged shrub in disturbed vegetation. Shrub with a broken main branch	maturity of <i>Persoonia</i> uncertain.

Annexure	Folder name	Sub-folder	File name	File type	Species noted	Comments on physical condition	Comments on maturity
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT02PA	DSC06285	photograph (.jpeg)	<i>Persoonia arborea</i>	Close up of broken branch and some foliage	maturity of <i>Persoonia</i> uncertain. Shrub with a broken main branch
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT02PA	DSC06288	photograph (.jpeg)	<i>Persoonia arborea</i>	Close up of broken branches and some foliage	maturity of <i>Persoonia</i> uncertain. Shrub with a broken main branch
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT03PA	,00452	video (.mp4)	<i>Persoonia arborea</i>	Video of a large understorey shrub with some branch damage and damage to the main trunk. Plant appears to be within a heavily disturbed area of forest	Mature shrub / small understorey tree
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT04PA	,00453	video (.mp4)	<i>Persoonia arborea</i>	Mature shrub / small understorey tree damaged by falling eucalypt branch	maturity of <i>Persoonia</i> uncertain. Shrub with a broken main branch
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT04PA	DSC06298	photograph (.jpeg)	Uncertain photo of dead foliage (photo blurry)	Close up of dead understorey foliage	
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT05PA	,00455	video (.mp4)	<i>Persoonia arborea</i> under fallen eucalypt branches	Shrub under eucalypt branches adjacent to a felled tree stump	maturity of <i>Persoonia</i> uncertain. Shrub crushed under a eucalypt branch.
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT05PA	DSC06301	photograph (.jpeg)	Uncertain photo of dead foliage (photo blurry)	Close up of dead understorey foliage	
JRM-75	18.03.26 - Portas Rd Koala and Geebung Skerries	TTT05PA	DSC06306	photograph (.jpeg)	Uncertain photo of dead foliage including some dead eucalypt foliage.	Close up of dead understorey foliage with live foliage in the background	Based on the other photos and the location this photo appears to be of <i>Persoonia arborea</i> .

7. Please contact me by email (smueck@biosis.com.au) or phone (8686 4800) if you would like to discuss further.

Yours sincerely



Stephen Mueck
Senior Consultant Botanist
Biosis Pty Ltd
38 Bertie Street
Port Melbourne 3207

References:

8. Allsop, JLB 2016. *Expert Evidence Practice Notes (GPN-EXPT): General Practice Note*. Federal Court of Australia (Dated 25 October 2016).
9. DEPI 2014. *Advisory List of Rare or Threatened Plants in Victoria – 2014*. Victorian Government Department of Environment & Primary Industries, East Melbourne.
10. Mueck S, Ough K & Banks J C G 1996. How old are Wet Forest understories? *Australian Journal of Ecology* **21(3)**: 345-348.

Position

Senior Consultant Botanist

Qualifications

BSc (Hons), MEnvSc

Vegetation Quality Assessments (Habitat Hectares): HH173



Professional experience

Stephen has over 35 years experience in vegetation assessment, management and research and an extensive knowledge of the vegetation of south eastern Australia. Since becoming a senior botanist with Biosis Research in 1995, Stephen has been senior scientist and project manager on a number of major investigations. He has prepared numerous flora surveys, undertaken conservation value assessments, worked on nature reserve design and management, prepared ecological design guidelines for developments and supervised and participated in both large and small scale mapping exercises.

Stephen also has experience in preparing and implementing pest plant and animal management plans, is DELWP certified for vegetation quality assessments and has produced numerous plans and assessments for clients to achieve compliance with state and federal biodiversity legislation and policy.

He has helped develop novel techniques for assessing and mitigating impacts to threatened flora and fauna. He possesses strong project management skills. He has assisted in calculating and identifying the offset requirements for a number of larger Victorian projects including Melbourne's Wholesale Market, Esso's Longford pipeline, the upgrade of the Western Highway (Ararat to Stawell) for VicRoads and MAB's Alliance Business Park at Epping

Key project experience

Project Manager / Botanist Offset Strategy for the Longford Pipeline. Report for Esso Australia, prepared in consultation with Advisian (four offset sites assessed and registered).

Project Manager / Botanist Assessment of the ecological values and offset requirements for the Deer Park Bypass including assessment of impacts to private landowners, interactions with Victoria's Valuer General, defining prescribed offsets and sourcing the offsets to ensure project compliance for VicRoads.

Expert witness

Statement prepared and evidence provided in the Supreme Court of Victoria regarding the influence of biodiversity legislation and policy on the purchasing decision making of an informed developer in relation to compensation for the compulsory acquisition of land for the Melbourne Wholesale Market (S CI 2006 08035).

Other project experience

Project Manager / Botanist	Post-construction (2006/2007) audit of strategic firebreaks for Melbourne's water catchments: Flora and terrestrial fauna values. Report for Department of Sustainability and Environment.
Ecologist	EPA (Victoria) forest management audit team assessing the operations of the Department of Sustainability and Environment in state forest according to the Code of Forest Practices with GHD.
Senior Botanist/ Site Manager	Biosis Research managed three grassland reserves (totaling about 60 hectares) for four years (1999-2002). The reserves were established within an industrial subdivision for Cedar Woods Properties and AMP. Tasks included vegetation and rare species monitoring and the planning and coordination of pest plant and animal control works.
Team Leader/Botanist	describing and assessing the vegetation of the Twelve Mile Mineral Sands Project, at Garnpang and Birdwood Stations, Pooncarie, New South Wales, and identifying impact mitigation options for this proposed development of over 160 km ² (2000 for RZM).
Expert Witness Testimony:	provided expert witness statements for numerous clients and appeared before both panels and VCAT to provide evidence. This has involved proposal to develop residential and industrial subdivisions, quarries, mines, roads, powerlines and, power stations. He has also prepared evidence statements for the Department of the Environment, (DoE) for compliance actions under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).
Senior Botanist	description and mapping of the past and present vegetation communities within the South West Regional Forest Area (2.7 million hectares) (1999 for the Department of Natural Resources and Environment, Victoria).
Project Manager / Botanist	Flora and fauna assessment and reporting to inform the approvals process for the industrial subdivision of Ajax Road Altona for Axxcel Management Services.
Project Manager / Botanist	Site assessments, project management and preparation of documentation for the preparation of a Precinct Structure Plans at Lindum Vale for the Metropolitan Planning Authority (PSP 1202).
Project Manager / Botanist	Management of compliance conditions associated with the EPBC Act approval and Planning Permit requirements for an industrial subdivision at Maidstone Street Altona. This included sourcing and registration of offsets, onsite reserve management and the translocation of threatened flora.
Project Manager / Botanist	Site assessments, project management and preparation of documentation for the preparation of a planning permit application and preliminary information documentation under the EPBC Act for the rezoning of land for Shell at Kalkallo.

Other qualifications and training

Construction Induction (OH&S) Red/White Card

Rail Industry Safety Induction Card

First Aid (CPR) training

Publications

Stephen has written over 800 consultant's reports and published 15 other published reports and journal papers:

Mueck S. 2012. Forest Ecology – A Victorian Perspective: Abstract from a paper presented to the FNCV Biodiversity Symposium 2011. **Vic. Nat.** 129(5): 180.

John Turner, Marcia Lambert, David Flinn, **Steve Mueck**, Glen Kile 2005. An analysis of Australian research on indicators of sustainable forest management. Research Paper presented by John Turner at the International Union of Forestry Research Organisations (IUFRO) World Congress, 2005. Session 154: 'Research demonstration: Evaluation of sustainable forest management'.

Mueck S G 2000. Translocation of Plains Rice-flower *Pimelea spinescens*, Laverton, Victoria. *Ecological Management & Restoration* **1(2)**: 122-127.

Peel W 1999. Rainforest and Cool Temperate Mixed Forests of Victoria. DNRE, Melbourne. (Stephen has made significant contributions to this document i.e. he is the author of all the two-way tables).

Mueck S, Ough K & Banks J C G 1996. How old are Wet Forest understories? *Australian Journal of Ecology* **21(3)**: 345-348.

Loyn R, **Mueck S** & Ough K 1994. Vertebrate Pest Animals and Pest Plants. In: Joint ANZECC-MCFFA National Forest Policy Statement Implementation Sub-committee, The development of consistent nationwide baseline environmental standards for native forests, Draft Report.

Mueck S, Loyn R H, Ough K & Murphy A 1994. Research and development of ecologically sustainable systems of silviculture in Victoria's Mountain Ash forests. International Forest Biodiversity Conference, Canberra.

Turner L A & **Mueck S** 1992. The vegetation of the Sardine, Rich and Ellery Forest Blocks, Orbost Region, Victoria. DCE, VSP Technical Report No.9.

Mueck S & Peacock R J 1992. Impacts of intensive timber harvesting on the forests of East Gippsland, Victoria. DCE, VSP Technical Report No.15.

Mueck S 1990a. The Floristic Composition of Mountain Ash and Alpine Ash Forests in Victoria. Silvicultural Systems Project, Technical Report No. 4, Department of Conservation and Environment, Kew.

Mueck S 1990b. The Floristic Composition of Dry, Damp and Lowland Sclerophyll Forests in East Gippsland. Timber Industry Strategy, Department of Conservation, Forests and Lands, Kew.

Gillespie G R, Henry S R, **Mueck S**, Scotts D & Westaway J 1990. Flora and Fauna of the Pheasant Creek and Upper Buenba Forest Blocks, Alpine Area, Victoria. Department of Conservation, Forests and Lands, Ecological Survey Report No. 29.

Westaway J, Henry S R, Gillespie G R, Lobert B O, Scotts D & **Mueck S** 1990. Flora and Fauna of the West Errinundra and Delegate Forest Blocks, East Gippsland, Victoria. Department of Conservation, Forests and Lands, Ecological Survey Report No. 31.

Westaway J, Cherry K, Duncan P E, Gillespie G R, Henry S R, & **Mueck S G** 1990. Flora and Fauna of the Lower Wilkinson and Fainting Range Forest Blocks, Gippsland, Victoria. Department of Conservation, Forests and Lands, Ecological Survey Report No. 27.

Gell P A & **Mueck S G** 1987. Applications of Isolate Biogeographic Theory to the Delineation and Management of Mallee Nature Reserves. Proceedings of 21st Congress, Institute of Australian Geographers, University of Western Australia. May 1986.

Professional affiliations and memberships

Australian Network for Plant Conservation (Current member)

Native Fish Australia (Member 1990 –1995)

Pimelea spinescens Recovery Team (Current member)

EJA letter of 7 January 2019

7 January 2019

Mr Steve Mueck
Senior Consultant
Biosis
38 Bertie Street
Port Melbourne VIC 3207
By email only: smueck@biosis.com.au

Dear Mr Mueck

**Friends of Leadbeater's Possum Inc v VicForest: Federal Court of Australia proceeding
VID1228/2017**

1. We refer to our letter to you dated 17 December 2018
2. We wish to obtain your independent expert opinion in response to a further question.
3. Please find enclosed digital folders named "JRM-73" and "JRM-75" containing photographs and videos of trees recorded in coupe 462-504-0004 (Skerry's Reach), with index to those files.

Questions

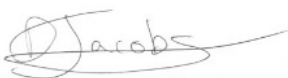
1. Please identify the tree species in the photographs and video files in the folders titled "JRM-73" (only those sub-folders with suffix "PA") and "JRM-75", and explain your reasons for each identification. Please assume that each sub-folder contains a set of photographs or videos taken at one location. For each specimen please provide your opinion including reasons as to:
 - (a) whether the specimen depicted is "mature" as you understand that term relates to the plant species depicted in the photographs.
 - (b) whether the specimen has been disturbed, damaged or destroyed.

Please present your findings in a convenient manner, such as in a table. We confirm you are not requested to view any files within sub-folders with suffixes "GGV" and "MBV" in the folder JRM-73, those subfolders are excluded from the index.

Please contact me if you require any further assistance or information for the preparation of your report. We confirm that the matters concerning the expert witness code set out in our first letter continue to apply to your response to this letter.

We would be grateful to receive your response to this additional question in your report by 9 January 2019.

Yours sincerely



Danya Jacobs

Senior Lawyer

Enclosures:

1. Expert witness code.
2. Digital folders "JRM-73" and "JRM-75", containing photograph and video files, with index to those files.