

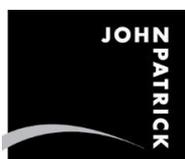
Planning Panels Victoria

Submission to Support Application to Amend
Planning Permit No. PL-SP/05/0548
STOCKYARD HILL WIND FARM

EXPERT WITNESS STATEMENT OF JOHN PATRICK

PREPARED FOR MAWALLOK PASTORAL COMPANY PTY LTD
INSTRUCTED BY STEPHEN MITCHELL

January 2017



LANDSCAPE ARCHITECTS
ENVIRONMENTAL HORTICULTURISTS
LANDSCAPE HERITAGE CONSULTANTS
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1 NAME AND ADDRESS OF THE EXPERT

1.1 John William Patrick
324 Victoria Street
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2 QUALIFICATIONS AND EXPERIENCE

2.1 M.Sc. Ecology (University of Durham).

2.2 M.Sc. Landscape Ecology, Design and Management (Wye College, University of London).

2.3 Associate Member of the Australian Institute of Landscape Architects.

2.4 John Patrick has worked in the discipline of Landscape Design since 1976. He established his practice in Australia in 1980 becoming full-time in 1988. From 1980-1988 he was Senior Lecturer in Amenity Horticulture at VCAH-Burnley.

2.5 In his practice John Patrick has undertaken an extended range of Landscape Architectural projects including:

- studies of Old Parliament House and Government House, Canberra;
- studies of Fitzroy, Flagstaff, Treasury, Alexandra and Carlton Gardens, Melbourne;
- provision of Landscape Architectural services to hospitals, schools, residential subdivisions, private residences and parks etc;
- design services for the City of Sydney 'Living Colour' Committee including street design for the Olympic and Paralympic Games 2000, and;
- heritage studies and conservation management plans for numerous sites including Government House, Melbourne, The Domain, Eureka Stockade Parklands and Central Park, Caulfield.

2.6 He is a past presenter of Burke's Backyard, a current presenter on ABC's Gardening Australia, a past Board Member of the Royal Botanic Gardens, Melbourne, the Garden State Advisory Committee and Parks Victoria Dandenong Gardens Advisory Board and has written or contributed to 14 books.

3 AREA OF EXPERTISE

3.1 John Patrick has experience in Landscape Architecture, Landscape Heritage and Landscape Horticulture.

4 EXPERTISE TO PREPARE THIS REPORT

4.1 John Patrick is regularly involved with the preparation of Landscape Architectural schemes for residential and commercial developments and has provided expert evidence to Planning Panels Victoria on many occasions.

5 INSTRUCTIONS THAT DEFINE THE SCOPE OF THIS REPORT

5.1 This report has been prepared following written and verbal instruction from Stephen Mitchell. I have no business or private relationship with the permit applicant or Stephen Mitchell other than being instructed to prepare this statement.

6 THE FACTS, MATTERS AND ASSUMPTIONS ON WHICH THE REPORT PROCEEDS

- 6.1 The report assumes that the Photomontages and Diagrams provided by Geoscene International are correct as these have been used as the basis for information contained in this report.

7 DOCUMENTS VIEWED IN PREPARING THIS REPORT

- 7.1 In the preparation of this report I have viewed and reviewed the following items:

- Geoscene International, Photomontages and Diagrams prepared by Dennis Williamson, 28 January 2017, including;
 - 1 of 11
 - 2 of 11 VP2A
 - 3 of 11 VP2B
 - 4 of 11 VP2C
 - 5 of 11 VP3A East
 - 6 of 11 VP3A Centre
 - 7 of 11 VP3A West
 - 8 of 11 VP3B East
 - 9 of 11 VP3B East_DigitalCam
 - 10 of 11 VP3B Centre_DigitalCam
 - 11 of 11 VP3B West_DigitalCam
- Stockyard Hill Wind Farm, Pyrenees and Corangamite Planning Schemes Permit applications PL-SP/05/0548, P2009/105 and P/2009/104 Planning Report, August 2010.
- Submissions to the previous Panel by Lovell Chen, Dennis Williamson, Bryce Raworth Pty Ltd, John Patrick, Dr Harriet Edquist, Allan Willingham and myself.
- Policy Planning GUIDELINES for Development of Wind Energy Facilities in Victoria, January 2016
- Stockyard Hill Windfarm – Submission to Support Application to Amend Planning Permit No. PL-SP/05/0548, May 2016 (Updated August 2016), Final, by Jacobs, and particularly Appendix U, Landscape and Visual Assessment Impact by ERM, April 2016.
- Wind Energy: Visual Assessment Bulletin: For State significant wind energy development, NSW Department of Planning and Environment, December 2016.
- Victorian Heritage Directory, Mawalok, 3802 Geelong Road Stockyard Hill, Pyrenees Shire, VHR H0563
- Australian ICOMOS (International Council on Monuments and Sites), The Burra Charter, The Australia ICOMOS Charter for Places of Cultural Significance, October 2013

8 IDENTITY OF THE PERSON WHO PREPARED THIS REPORT

- 8.1 The author of this report, John Patrick, has visited the site and has undertaken a visual assessment of the site and reviewed the Photomontages and Diagrams prepared by Geoscene International.

9 AGREEMENT WITH EXPERT WITNESS GUIDELINES

- 9.1 I understand that I have a paramount duty to assist the Panel on matters relevant to my expertise and agree to be bound by the Panel's expert witness guidelines.

10 A SUMMARY OF THE OPINIONS OF THE EXPERT

- 10.1 The Mawallok garden is the most significant privately owned garden in Victoria. Recognised by Heritage Victoria, Registration Number VHR H0563 its Statement of Significance offers a sense of the importance of the site and its history,

"Mawallok is of aesthetic and historical significance as an outstanding example of a designed landscape. Mawallok, with its extensive windbreak plantings, hedges, stone walls, gateways, drives, gravel courtyard, its Guilfoyle garden, lake and views to Mt Cole, is amongst the finest and largest gardens in Victoria. William Guilfoyle, arguably Australia's greatest garden designer, laid out the Royal Botanic Gardens from 1873-1909. Mawallok is his last known, and perhaps his grandest, homestead garden design, completed towards the end of his remarkable career.

Mawallok is of historical significance for its associations with the early pastoral settlement of Victoria and with the Russell family, important pastoralists in the early settlement of rural Victoria. The different phases of construction of the original homestead and the 1908 Arts and Crafts house and 1909 garden demonstrate the development of a successful pastoral station. The significance of the place is enhanced by the retention of the original homestead, woolshed, stables, coach house and other outbuildings and the intactness of the house and garden.

The 1908 house at Mawallok is of architectural significance as an important example of the Arts and Crafts style and for its early use of concrete in Victoria.

Mawallok is of social significance as an exceptional example of the Guilfoyle style, important in the study of garden history and landscape design in Victoria. It is highly valued by students, visitors and the community."

A complete description from Heritage Victoria of the Mawallok property is provided elsewhere including the earlier Panel Report.

- 10.2 It is worth considering this statement in light of the Burra Charter, the document that provides the framework for Conservation of Places of heritage significance.

"Article 1. Definitions

- 1.1 Place means a geographically defined area. It may include elements, objects, spaces and **views**.
- 1.2 Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, **setting**, use, associations, meanings, records, related places and related objects.
- 1.4 Conservation means all the processes of looking after a place so as to retain its cultural significance.
- 1.11 Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Article 2. Conservation and management

- 2.1 Places of cultural significance should be conserved.

Article 8. Setting

- 8.1 **Conservation requires the retention of an appropriate setting.** This includes retention of the **visual** and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.”

- 10.3 While the Panel recognised that a number of proposed wind turbines in the original Origin Energy proposal would have significant harm on the views from the Mawalok gardens and should be removed from the proposal, other turbines were retained that were located at the edge of the main views from the property's terrace but were part of broader viewshed from the site for example the ha-ha wall, the northern boundary of the Guilfoyle garden.
- 10.4 Reference to the Guilfoyle plan for Mawalok shows that while the key viewlines that Guilfoyle indicated on his plan emanated from the terrace in the garden front of the house and extended out into the countryside and the distant views of Mt Cole, the garden followed the typical character of a landscape of Picturesque English Landscape Style. By utilising a peripheral path that follows close to the edge of the garden, the opportunity was created for views into the broader landscape throughout the site.

It would be erroneous to view the important Mawalok views as being those from the terrace alone; Mawalok is a garden of views, both internal and external. It is a classic representation of the English Landscape Movement in Australia and, to my knowledge, is unmatched in this regard by any other garden in Australia.

- 10.5 I note that photomontages prepared by ERM utilise a single point on the Mawalok terrace and while the Guilfoyle plan indicates a single point for origins of views, from a practical viewpoint, views are obtained from the full length of the terrace. In my opinion all viewpoints from the terrace are of equal significance. An analysis of the proposed windfarm from the full width of the terrace would be likely to reveal views to at least a part of a number of enlarged turbines.
- 10.6 The new proposal, put forward by Origin Energy, differs from the earlier one in that the 20 wind turbines required to be removed as a result of the findings of the earlier Panel Hearing have been removed, the size of these that remain has been increased, in height from 132m to 180m from base to top of blade and in width of rotor blades from 104m to 142m. In addition a meteorological tower and quarry have been added to the proposal.
- 10.7 The impact of the increase in height of the towers and the increased width of the blades is apparent in the photomontages prepared by Dennis Williamson of Geoscene International. So too the meteorological tower; regardless of its final colour finishes and ultimate size, its presence in the landscape is clearly in conflict with the heritage values of the site. It is proposed to be located directly within the main viewline from the house and the terrace toward Mt Cole in perhaps the most sensitive location in relation to the garden.
- 10.8 As a horticulturalist with interest in trees and policies dealing with their management and replacement, what I notice in the images prepared by Geoscene International is that any screening of the proposed turbines (and the lower portion of many of them can be seen to be screened by existing vegetation) the trees that provide the screening are senescent. This is apparent from the open and sparse upper canopy revealed in the pictures of the pines in the Geoscene International photomontages.

Foliage density in a number of the trees is likely to be insufficient to meet the energy demands of the tree and their decline from this point is likely to be rapid. Their life expectancy, while difficult to identify precisely, is very clearly limited. What is clear is that they will all need to be removed within the next 25 years, many within the next five years and others progressively within the stated life of the windfarm.

Any screening value they offer will decline progressively in the near future. Their existing level of cover is a fine filigree created by a skeleton of largely dead branches. The demise of the trees may be as a result of storm damage, concerns about safety from shedding of deadwood leading up to their complete death or programmed removal of the trees. Ultimate decline may be the result of prolonged drought, often the cause of the demise of many trees.

- 10.9 In this situation the question to be considered is how quickly a replacement planting of trees can re-establish a screening benefit and whether there are strategies that would allow the existing screening values to be extended, even temporarily while a new screen is grown.
- 10.10 There is no practical mechanism to extend the life of the existing Pine tree screen. These trees are Monterey Pine (*Pinus radiata*) possibly planted to create windbreaks for the Mawallok garden at the time of Guilfoyle's work. An estimated age of 100 years would be quite appropriate for these trees.

Unlike many other trees, the removal of senescent limbs from opening the canopy to greater impact from wind with resultant canopy destruction will not lead to further growth of juvenile branches, rather it will hasten loss of the tree. In addition, the degree of decline of these trees is such that modification of their root zone by weed control, irrigation or the implementation of fertiliser programmes will not achieve any benefits.

These trees are at the end of their lives and, as can be seen from other sites around the Mawallok property, will need to be removed.

- 10.11 The implications of this for view from the Mawallok garden is perhaps most apparent on image 6/11, VP3A Centre where turbine A1 may be seen clearly albeit located directly to the rear of a group of Mawallok pines. Loss of these trees will leave turbines entirely exposed.
- 10.12 In addition to the Monterey Pines, it is evident from 10/11, VP3B Centre that Monterey Cypress (*Hesperocyparis macrocarpa* syn. *Cupressus macrocarpa*) also contributes significantly to the existing screening on the Mawallok property. I have not inspected these trees closely though they are clearly mature.

Such mature trees are under threat from Cypress Canker caused by several species of fungi which impact upon the sap-conducting system of the tree. Mature trees are specially at risk and the impact of the disease is widely apparent on windbreak plantings in the Colac area.

It would be most unwise to depend upon existing Monterey Cypress to provide long-term cover or to use Monterey Cypress for future screening plantings.

- 10.13 Appropriate practice suggests that any new screening planting used in relation to the Mawallok garden should reflect historic precedents so as to retain the existing heritage, form and character. While the use of a monoculture of Monterey Pine might appear appropriate, this would be unwise; a disease could wipe out a monospecific planting.

On that basis, a mixed planting of Monterey Pine with Aleppo Pine (*Pinus halepensis*) and Canary Island Pine (*Pinus canariensis*) would have merit; all are generally drought tolerant Pines used extensively in nineteenth century landscape planting.

10.14 However, what is critical about the replacement of existing trees with replacement planting is the intergenerational period between the existing pines and mature future pines. Pines are not generally available or established as larger nursery stock, their establishment as advanced trees can be difficult and their growth rates in the ground are such that there is little benefit in establishing them as large plants. Future growth rates will vary depending upon factors such as soil type, water availability and wind exposure, with Canary Island and Monterey Pine growth rates as high as 1metre per annum, Aleppo Pine considerably less.

10.15 What is apparent from those brief observations is that the existing screening vegetation within the Mawallok landscape cannot, of itself, be considered to provide an appropriate screen to the proposed wind turbines. These trees would not have proven of any meaningful value in addressing the original proposal, it is my opinion that their value is even less when the larger turbine size is considered. The photomontages created by Dennis Williamson of Geoscene International confirm this view.

In addition, any planting that is established within the next 2-3 years will make negligible impact upon the views of the turbines over the life of the turbines. Even replacement planting established within the last 5 years will have little meaningful impact in establishing a screen in the short to medium term. Only with maturity will these trees offer any softening of views of the windfarm and, given the life of the windfarm is suggested as 25 years, any benefits will generally accrue after the life of the project.

10.16 A strategy that might be pursued would be to plant new screening adjacent and parallel to the existing trees, but beyond impact of shade and root competition. This vegetation can grow to supplement and replace the existing pines which can be progressively removed as they die or as they are blown over.

In theory, this strategy has merit, but in fact the short life expectancy of the existing trees combined with the modest size of the proposed planting means that there will be very little impact from either the new planting or the existing trees through the life of the wind turbine project. For such a strategy to be successful, it is probably that the new planting should have occurred at least 25 years ago.

10.17 I note the Panel's findings during the earlier Hearing that suggested that "new plantings should be considered as appropriate to deal with these turbine views" (the wider external views obtained from the edge of the garden) "and the view of other turbines which may become available as ageing windbreaks die off and are removed."

This was not a realistic prospect when the earlier proposal with smaller turbines was considered and remains an inappropriate option in the face of the taller proposed turbines.

10.18 Reviewing this situation in the context of the Burra Charter, it is apparent that the presence of wind turbines in the landscape surrounding the Mawallok gardens is contrary to the Charter. Views are an integral part of a heritage place and cultural significance is embodied, not only in the place, but its setting. Under Article 8 of the Charter, "Conservation requires the retention of an appropriate setting." The Charter continues, "this includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate."

10.19 I am informed that a new quarry is proposed as part of the work and that concern has been expressed about the effect of this working on the security of supply of water to the Mawallok spring and those to the Monash Lake and the irrigation system associated with the garden.

This spring is the major source of water for garden irrigation at Mawallok. The Monash Lake is a major feature of the viewline albeit one created some years after the Guilfoyle garden. Any works that have a negative impact of water supply to the site should be avoided; it is fundamental to the maintenance both of the physical form of the garden and its long-term health.

CONCLUSIONS

- 10.20 The decision of the earlier Panel to delete a number of turbines from the proposed Stockyard Hill Windfarm was appropriate.

The decision to replace the original turbines with larger structures will have deleterious impacts on view from the Mawalok garden.

Existing vegetation provides a fragile screen to these structures. Its condition is poor and replacement vegetation will not offer any screening benefit within the greater part of the 25 year lifespan of the Stockyard Hill Windfarm proposal.

11 PROVISIONAL OPINIONS.

- 11.1 None.

12 INACCURACIES AND ADDITIONAL MATTERS.

- 12.1 None.



John Patrick
John Patrick Landscape Architects Pty Ltd