

VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

ADMINISTRATIVE DIVISION

PLANNING AND ENVIRONMENT LIST

VCAT REFERENCE NO. P2395/2008 & P2654/2008
PERMIT APPLICATION NO. 08/0039

CATCHWORDS

Application under section 82 of the *Planning and Environment Act 1987* to review a **decision to grant** a permit. Application under section 80 of the *Planning and Environment Act 1987* to review **conditions** in a permit. Wind energy facility. Farming zone. Impacts to rural landscape. Rural lifestyle. Noise.

APPLICANTS IN P2395/2008	Kathy Russell & others
APPLICANT IN P2654/2008	International Power (Australia) Pty Ltd
IN P2395/2008 & P2654/2008 RESPONSIBLE AUTHORITY	Surf Coast Shire Council
RESPONDENTS IN P2395/2008	International Power (Australia) Pty Ltd
RESPONDENTS IN P2654/2008	Kathy Russell, Leah Graham and Lee Frances Watt.
SUBJECT LAND	480 Peel Road, 575 Gnarwarre Road and 170 Mt Pollock Road, Winchelsea
WHERE HELD	Melbourne
BEFORE	Jeanette Rickards, Presiding Senior Member Ian Potts, Member
HEARING TYPE	Hearing
DATE OF HEARING	2 – 5 March 2009
DATE OF ORDER	13 July 2009
CITATION	Russell & Ors v Surf Coast SC & Anor [2009] VCAT 1324

ORDER

In P2395/2006 and P2654/2008:

- 1 The decision of the Responsible Authority is varied.
- 2 The Tribunal directs that Permit No.08/0039 must contain the conditions set out in the Notice of Decision to Grant a Planning Permit 08/0039 issued by the Responsible Authority on 31 July 2008 with the following modifications:

- (a) Conditions 2(b) to 2(e) are deleted.
- (b) A new condition 2(b) is included as follows:
- 2(b) Any re-positioning of one or more turbines must be accompanied by a report or reports addressing the repositioning of the turbine or turbines in respect to the following matters as relevant:
- Cultural heritage impacts;
 - Noise impacts;
 - Shadow flicker and blade glint impacts;
 - Native vegetation impacts;
 - Landscape and visual amenity impacts;
 - Aviation safety; or
 - Any other matter that the Responsible Authority requires in order to be satisfied in accord with this condition.
- (c) Condition 6(a) is amended to read:
- 6(a) Details of a row of vegetation planting to be established and maintained along the eastern boundary of the wind farm site at Mt Pollock Road, extending from a line from opposite the property access way to 85 Mt Pollock Road (Watt property) to 10m to the northern boundary of that property.
- (d) A new condition 18(e) is included as follows:
- 18(e) A carrion and bird strike management plan. The plan must include (but is not limited to):
- The areas required to be inspected.
 - The frequency of monitoring and inspections.
 - Scavenger management, for example, regular removal of carcasses likely to attract raptors to areas near generators and other measures to routinely control bird feed and prey.
 - Recording and reporting requirements to the Responsible Authority.
 - A procedure for addressing any significant impacts on bird populations under the *Environment Protection and Biodiversity Conservation Act* (1999) or the *Flora and Fauna Guarantee Act* (1988) caused by the wind energy facility operation. This procedure must provide that the operator of the wind energy facility immediately investigates the possible causes of any significant impacts on bird populations, and thereafter must design and implement measures to mitigate those impacts in consultation with the Responsible Authority.
- (e) A new condition 19 is inserted as follows:

- 19 The use and development must be carried out in accordance with the endorsed environmental plan and those plans contained therein to the satisfaction of the Responsible Authority.
- (f) Condition 25 is amended to read:
- 25 A pre-construction qualitative survey must be carried out on television and radio reception for all residences within 5km of any turbine to the satisfaction of the Responsible Authority.
- (g) Condition 20 is deleted.
- (h) All conditions are renumbered accordingly.
- 3 The Responsible Authority is directed to issue a modified permit in accordance with this order.

Jeanette G Rickards
**Presiding Senior
Member**

Ian Potts
Member

APPEARANCES

For Kathy Russell in P2395/2008 and respondents Kathy Russell, Leah Graham and Lee Frances Watt in P2654/2008.

Ms Kathy Russell in person assisted on 2 March by Mr Christian Wild. Submissions were also made on 3 March 2009 by:

Lee Watt
Anika Naylor
Kathleen Hart
Tony Russell
John Staples and
Leigh Hart

Ms Russell called as expert witness:

- Dr Renzo Tonin an acoustics engineer of Renzo Tonin & Associates.

For Responsible Authority

Mr James Lofting, solicitor of Best Hooper.

For International Power (Australia) Pty Ltd as respondent in P2395/2008 and Applicant in P2654/2008.

Ms Michelle Quigley SC of counsel instructed by Freehills Lawyers. She called as expert witnesses:

- Dr Grant Palmer, an ecologist from the Centre for Environmental Management, University of Ballarat.
- Mr Christophe Delaire, an acoustics consultant from Marshall Day Acoustics Pty Ltd.
- Dr Trenton Gilbert, an aerospace engineer from Garrad Hassan Pacific Pty Ltd with experience in shadow flicker assessment.
- Dr Matthew Bechly, a mechanical engineer from Garrad Hassan Pacific Pty Ltd with experience in electro-magnetic interference assessment.
- Mr Matthew Tence, a landscape architect from ASPECT Studios Pty Ltd.

A letter of advice from Mr Stephen Rossington, Chief Pilot of Field Air, was tabled by Ms Quigley in respect to the capacity to undertake aerial spraying of land adjoining the proposed WEF facility.

INFORMATION

Description of Proposal

Construction and operation of fourteen (14) wind turbines with a total anticipated output of 28MW on the subject land.

Each turbine is to have a hub height of 80m above ground level. Combined with a maximum blade length of 50m, a total height of 130m is proposed.

The turbines are to be distributed across the subject land and include eight (8) turbines on the peak and upper flanks of Mt Pollock and six across the lower landscape.

Supporting infrastructure includes a substation, access and maintenance tracks, and underground cabling.

During construction a site office and staging area are to be established on the site.

Nature of Application

P2395/2008 – section 80 *Planning and Environment Act* 1987.

P2654/2008 – section 82 *Planning and Environment Act* 1987.

Zone and Overlays

Farming Zone (FZ) – Clause 35.07

Land Subject to Inundation Overlay (LSIO) – Clause 44.04.

Permit triggers

Clause 35.07-1 (Use for Wind energy facility).

Clause 35.07-4 (Buildings and works of a section 2 use in a FZ).

Land description

The subject land comprises of three properties held in three private ownerships.

- CA's 1 and 2, section 7, Parish of Carrung-E-Murnong otherwise known as 480 Peels Road, Inverleigh;
- CA's 1,2,3, 4 section 6 and CA 3, section 7, Parish of Carrung-E-Murnong otherwise known as 575 Gnarwarre Road, Inverleigh; and
- Lot 1 of PS148005E Vol 09600 Folio 306, otherwise known as 170 Mount Pollock Road, Buckley.

Together the subject land comprises of 685.4ha. The subject land is located approximately 10km northeast of Winchelsea and 5m southwest of Inverleigh.

Site inspection

The Tribunal undertook an accompanied inspection of the subject land and surrounding properties and an unaccompanied inspection of the area more generally on 6 March 2009.

REASONS

INTRODUCTION

- 1 On 31 July 2008, the Surf Coast Shire Council (the Council) issued a Notice of Decision to grant a planning permit for the development of a Wind Energy Facility (WEF) at Mount Pollock. Mount Pollock is a low hill near Winchelsea that is a remnant volcanic cone from Victoria's geological past. The proposed WEF would see fourteen wind turbines constructed and operating near the peak as well as the upper and lower flanks of this hill.
- 2 Ms Kathy Russell and a number of other people living in the area object to the granting of a permit for the WEF. They do so on a number of grounds and have lodged an application for review of the Council's decision.
- 3 Concurrently the proponent of the WEF, International Power (Australia) Pty Ltd (International Power), has lodged an application for review of certain permit conditions contained in the Notice of Decision (the NOD).
- 4 In these proceedings we have considered the application to review the decision to grant the permit and the application to amend conditions. For the reasons set out below we have found that a permit should be granted for the WEF, dismissing the appeal brought by Ms Russell and the others. In respect to conditions, we have found that some but not all the grounds for amendment have been made out. We have also concluded that it is appropriate to make amendments to certain other conditions. We have made our order accordingly.

The appeal of the notice of decision

- 5 The grounds of appeal lodged by Ms Russell on her behalf and that of over thirty local individuals and one local community organisation raise issue with a number of aspects of the WEF. Some twenty-two grounds of review are set out in the application. We will not repeat them all here, but summarise them as follows:
 - Improper procedures during the Council's assessment and final determination of the permit application; a lack of community consultation; and ineffectual or insufficient material relied upon by International Power (**the procedural issues**);
 - Detrimental impacts to the amenity of the area and to residents by way of noise, shadow flicker, aviation hazard lighting at night, construction and tourist traffic, interference by electro-magnetic emissions, intrusion into the landscape (**the amenity issues**);
 - Environmental and heritage impacts, including a failure to recognise the cultural importance of Mount Pollock, impacts to bird life and native vegetation (**the heritage issues**);

- Traffic issues;
- Impacts on rural land use; and
- Construction and decommissioning issues.

Various throughout her submissions, Ms Russell also questioned the claimed greenhouse abatement benefits of WEF's and the reliance on such benefits to justify the proposal against the adverse impacts that she and others are fearful of.

- 6 We acknowledge that Ms Russell's submissions took us through the considerable detail of each of these grounds. Her passion and strength of conviction about these issues is evident. However having heard Ms Russell's submissions and those of the other parties and having considered the evidence of the experts, it is our view that many of the grounds are not determinative in the decisions to be made in these proceedings.
- 7 The procedural issues that are raised are not relevant to the merits of what is to be decided by us. The application for review is a *de novo* hearing, that is to say, it is a new hearing of the merits of the case. What procedures were or were not adopted are not relevant in a new hearing of the merits. Expert evidence and reports have been tendered and witnesses made available for cross examination to test the veracity of that evidence. By such processes, Ms Russell and those that she represents have had the opportunity to test the evidence and the basis of submissions relied on by International Power. Similarly through the hearing Ms Russell and others from the community have had an opportunity to put their views in an open forum.
- 8 That said we need not address here the concerns expressed by Ms Russell about the manner by which some materials were said to be provided to Ms Russell by International Power prior to and during the hearing. While Ms Russell has expressed frustration in respect to obtaining various information, particularly in relation to acoustic assessments, we are of the view that ultimately the provision of such material has occurred and has not prejudiced Ms Russell's case.

The appeal of permit conditions

- 9 International Power has applied for review of six conditions contained within the Notice of Decision. These conditions and the grounds for review are:
 - Conditions 2(b), 2(c), 2(d) and 2(e) which impose requirements when contemplating the micro-siting of wind turbines;
 - Condition 6(a) which imposes specific requirements for landscaping on the property at 85 Mt Pollock Road; and
 - Condition 20 which imposes requirements for background noise monitoring at the Russell property prior to the development commencing.

- 10 International Power contend that these conditions are restrictive and unnecessary. We will address the details of these submissions later in these reasons.

THE SUBJECT LAND AND ITS LOCALITY

- 11 Before turning to a consideration of the merits of these proceedings we will set out here the site context for the proposed WEF. In this respect we adopt part of Mr Lofting's overview for convenience:

The proposed wind farm is located on farm land approximately 10km north-east of Winchelsea and 5km south west of Inverleigh. The site comprises of 8 contiguous land parcels held in three private ownerships for a total land area of 685.4ha.

.....

The site is bounded in the north by Gnarwarre Road, in the east by Mount Pollock Road and on the west by Peels Road. The southern boundary abuts farming properties known as 250 Mount Pollock Road and 270 Peels Road, the [latter] containing a broiler farm and managers [sic] dwelling. Except for a small section of Gnarwarre Road, the roads abutting the site are unsealed.

The site encompasses most of the Mount Pollock area, which is a large, low larva cone surrounded by extensive and cleared areas of farmland with tree belt plantations.

- 12 There are no dwellings located on the subject site. The flatter areas of the site are used for cropping and grazing enterprises while the steeper slopes and peaks of Mount Pollock are used for grazing enterprises. Native grassland vegetation is present on and around Mount Pollock.
- 13 A 200kV transmission line cuts across the south-east corner of the site and the upper southern flank of Mount Pollock. A telecommunication tower is located on the upper southern flank of Mount Pollock. Two GPS transmission towers are located on top of Mount Pollock and are utilised by local farmers in the operation of GPS controlled agricultural machinery.
- 14 It is our observation that the subject land and surrounds are definitively farming in character, clearly bearing the evidence of agricultural enterprises, including cropped land, grazing and intensive animal husbandry. The latter comprises of the broiler sheds to the south-west of Mount Pollock and a piggery to the north. Various other infrastructure also are found across the site and surrounding areas. That said we agree that Mount Pollock is a prominent landform in the area (known as the Winchelsea Plains).¹
- 15 A tenement map provided by Mr Lofting indicates that there are nine (9) private landholdings that abut the site. Of these, three landholdings have a residence on each of them. These holdings include the properties of Ms

¹ A land unit description contained in the Municipal Strategic Statement at Clause 21.06-2.

Russell and Ms Watt who are objectors. Ms Watt's property comprises of a dwelling on 2.7ha of land, which we are told was excised from a lot that is now included in the overall 218ha Russell landholding. This residence sits to the immediate south-east corner of the subject site and is estimated to be approximately 1,000m to 1,100m from the eastern most proposed turbine locations (being No's 10, 11 and 14). Further to the east is the Russell residence that is some 2,100m from proposed turbine locations No's 10 and 14.

- 16 The broiler farm manager's residence to the south-west is located on a holding of 367ha, and lies some 1,100m from the nearest proposed turbine location (No 1) and approximately 2,200m or more from the nearest proposed turbine locations on the south-west flank of Mount Pollock.
- 17 A residence on the abutting landholding to the northeast lies some 1,600m (approximately) from proposed turbine location No 4, the nearest turbine to this dwelling. This dwelling sits at the northern most end of a 225ha landholding.
- 18 A further dwelling is located to the south of Mount Pollock on a landholding of 81ha. It is located approximately 1,100m south of the nearest proposed turbine location (No 14).
- 19 Apart from the Watt property and two smaller landholdings of 25ha (approx) and 33ha (approx) to the south of the subject site, the immediate area around the subject land can be characterised as small (i.e. 50ha or more) to medium (100ha or more) agricultural landholdings.
- 20 Some 4km to the south of the site (adjacent the Princess Highway) are a number of smaller, rural residential style allotments of 18ha or less in size. Similarly to the east, some four to five kilometres from the site's eastern boundary are a number of rural residential style allotments and residences associated with the settlement of Gnarwarre.

THE MERITS OF THE APPEAL AGAINST THE WINDFARM

Questioning of Policy on WEF's

- 21 Ms Russell questions the appropriateness of policy that weighs in favour of WEF's. The Tribunal's starting point is to consider those matters set out the *Planning and Environment Act* 1989, the relevant planning scheme (in this case the Surf Coast Planning Scheme), state and local policies and any other applicable guidelines or statutory requirements. A review of the merits does not provide an opportunity to discuss the rights or wrongs of policy. That is for another forum. What we are required to, and have sought to do is apply the applicable planning and other relevant policies and guidelines in a balanced manner as befits proper decision making. That said it is evident from State policy² and also under the Wind Energy

² Clause 15.14.

Guidelines³ that there is significant policy weight to be given to the establishment of WEF's in appropriate locations.

Environmental Benefits of WEF's

- 22 Apart from specific issues such as noise, visual impact and the like, we understand Ms Russell's objections to be partly based on a belief that the benefits of wind energy facilities are overstated and that the adverse amenity impacts said to be imposed on local communities cannot be justified in such a circumstance. She highlights that previous Tribunal decisions have been critical of the lack of information and modelling about greenhouse gas abatement benefits for proposals.⁴ She maintains that the absence of such modelling in this application is because the benefits are too low or cannot be substantiated.
- 23 To support such arguments Ms Russell has undertaken an extensive assessment of available data on power generation and supply from WEFs into the national power grid.⁵ The upshot of this assessment over an almost eight month period is an estimate of capacity factors for various WEFs in Australia of between 14% and 36% (with an average of 28%). It is Ms Russell's submission that these low capacity factors and the intermittency of operation/contribution to the power network underscore a failure of WEFs to deliver stated environmental benefits.
- 24 Ms Quigley does not seek to dispute the nature of the data and assessment by Ms Russell. Rather she points to the fact that WEFs cannot and do not seek to replace base load supplies of power. This is due to the widely recognised intermittency of wind resources on which the WEFs rely. It is her submission that WEFs are part of an overall package of solutions to greenhouse gas abatement and that State policy is more than just about supporting WEFs it is about facilitating their development.
- 25 The Wind Energy Guidelines set out various matters to be considered in assessing permit applications for WEFs. These guidelines are the main instrument for assessment and are referred to under the applicable planning provisions of Clauses 15.14-2 and 52.32. The Wind Energy Guidelines provide a method for the estimation of greenhouse benefits that relies on a capacity factor of 35% in the absence of modelling by the proponent.⁶
- 26 We have not been privy to any modelling by the proponent, however they rely on a capacity of 28MW from the 14 turbines and estimated energy generation of 80,000 MWh per year. At a capacity factor of 35%, 14 turbines and 28MW capacity equates to a generation of almost 86,000 MWh. International Power's estimation is therefore obviously lower than

³ *Policy and planning guidelines for development of wind energy facilities in Victoria*., Sustainable Energy Authority Victoria, May 2003.

⁴ Reference was made to *Perry v Hepburn SC* [2007] VCAT 1309 and *Synergy Wind Pty Ltd v Wellington SC* [2007] VCAT 2454.

⁵ Apparently available from the NEMCO website.

⁶ Appendix 1 of the Wind Energy Guidelines.

the 35% capacity factor and can be estimated to be around 32-33%. Such factors are within the range of those estimated by Ms Russell.

- 27 Decision guidelines at Clause 52.32 require the views of Sustainable Energy Association of Victoria (Sustainability Victoria) to be taken into account. The permit application was referred to this authority by the Council. The response was supportive of the proposal, indicating a potential abatement of 80,000 tonnes of CO₂ for a generation of 80,000MWh. The Council also relies on the response from Sustainability Victoria that the 'proposal offers a quantifiable contribution to reducing greenhouse gas pollution'.
- 28 Taking all these matters into consideration we do not accept the contention that the proposal fails to deliver on greenhouse benefits and renewable energy targets as required under the Wind Energy Guidelines and State policy. We find that the proposal is consistent with such requirements. With policy that asks for considerable weight to be given to proposals such as these, we do not consider that the argument has been made out that this proposal will not deliver environmental benefits. We find that on balance the estimated benefits are within policy expectations.

Amenity Issues

- 29 The second limb to the benefit versus impact arguments put by Ms Russell is that any purported benefits did not outweigh the adverse amenity impacts that the local community would be subjected to. She contends that such impacts will arise from noise, shadow flicker and a reduction in the landscape values and views attained from properties.
- 30 Having found that there is acceptable benefit expectations from this proposal, we also find that the impacts are not as great as those expressed by the objectors. We set out our reasons for this finding below. Having arrived at these findings however, it follows that in the balance of impacts to benefits the balance weighs favourably to the granting of a permit for this proposal.

Noise

- 31 We do not intend to address all the noise issues raised by Ms Russell. It is relevant that apart from one issue, the two acoustic experts called by Ms Russell and Ms Quigley agree on a number of determinative points.
- 32 The evidence of Mr Delaire is that after undertaking monitoring and assessment in accordance with the Wind Energy Guidelines and New Zealand Standard NZ6808:1998 (NZS6808),⁷ the predicted level of noise generation by the WEF will be compliant with the criteria set out under that standard. Dr Tonin agrees with these conclusions. Further Dr Tonin considers that the variations from NZS6808 made by Mr Delaire are

⁷ New Zealand Standard NZ6808:1998 Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators.

acceptable and helpful with a conservative air absorption co-efficient being adopted, the use of wind speeds at hub height (80m) and assessment of night time noise being more realistic representations for noise impact assessment.⁸

- 33 Where the two experts disagree is the effect of windshear⁹ and the generation/propagation of a modulated, impulsive or ‘thumping’ noise generally known as the ‘van den Berg effect’. Much time and energy was spent by the parties in addressing this van den Berg effect - so named after Dr G.P van den Berg, a physicist who assessed reported noise impacts from the Rhede Wind Park in north-west Germany.¹⁰ It is an issue that arises often in objections to wind farm applications,¹¹ with the Bald Hills EES having the benefit of evidence from Dr van den Berg directly.¹²
- 34 Since the Bald Hills EES we understand from the evidence of Dr Tonin and Mr Delaire that it is an effect that has been studied and reviewed at some length by regulatory authorities around the world.¹³ There was and remains to this day disagreement between acoustic experts as to the presence, extent and possible causes of the effect.
- 35 Dr Tonin’s evidence is that under certain metrological conditions of windshear, stable atmospheric layers and / or inversions the operation of wind turbines may generate and propagate the van den Berg thumping noise in addition to the normal aerodynamic swishing noise expected from WEF turbines. He accepts that the van den Berg effect is not one that can be definitely expected to occur at this site with the type of turbines being proposed but he urges caution. He does so because he considers that there is a real risk of windshear given the topographic characteristics of the site and potential for generation of higher than expected noise levels at the turbine hub heights. The possible propagation of higher noise levels should be assessed, in his view, by a more detailed assessment of windshear, frequency of atmospheric stability and inversion layers.
- 36 In arriving at these conclusions Dr Tonin does not necessarily rely on the calculations of windshear coefficients estimated by Ms Russell. He maintains that these calculations are indicative of the possible risk for

⁸ We note that at clause 4.5.5 of NZS6808, the standard set out that the correlation of background noise levels at day, night or different wind directions may be necessary, although no guidance is given as to when this may be the case. Presumably the decision to do so depends on the merit of each site location and professional judgement.

⁹ In these proceedings we refer to the phenomena of windshear. More precisely the phenomena is about the change in wind speed with height under stable air conditions. It is understood that under certain stable air conditions, the speed of the wind at ground level can be almost nil or very light, while at wind turbine hub heights the wind can be much stronger. Analysis of WEF noise projections using low level winds could therefore under predict the incidence and level of noise.

¹⁰ See: G.P. van den Berg *Effects of wind profile at night on wind turbine sound*. Journal of Sound and Vibration Vol. 277(4), 2004.

¹¹ See *Perry v Hepburn SC* [2007] VCAT 1309 at [90] to [93].

¹² Pages 196-197 of the *Bald Hills Windfarm Project Panel Report* 24 June 2004.

¹³ See for example: *Wind Turbine Facilities Noise Issues, Acoustic Consulting Report prepared for the Ontario Ministry of the Environment*, Aiolos Report Number 4071/2180/AR155Rev 3 December 2007.

windshear to occur and that the result of such initial calculations indicates a need for caution and further assessment by an atmospheric scientist.

- 37 Having had regard to this evidence and that of Mr Delaire we do not agree with Dr Tonin's suggestions for further assessment to be undertaken. We do so on the basis that:
- The van den Berg effect appears to be the subject of only one peer reviewed assessment at one site, under very specific atmospheric and ground conditions and for a certain type of turbine. The extension of this effect to other sites has been treated with extreme caution by many other experts.
 - Mr Delaire's assessment has addressed a number of short comings said to be present in the assessment and ultimate impacts at the Rhede site as reported by Dr van den Berg. Mr Delaire has used hub height wind speeds not wind speeds at 10m above ground level and adopted night time background noise levels not average background levels. Dr Tonin agrees such an approach is appropriate. Further the turbine type proposed for Mount Pollock has been assessed for tonal qualities of which there are none under standard test conditions. The turbines proposed to be used are of a different, more recent design and are said to provide improved control over blade angles and rotation speeds.
 - Turbine rotation speeds reported for when the van den Berg effect occurred are higher than those for the proposed turbines at Mount Pollock and hence the aerodynamic behaviour of the turbine blades are likely to be different to those at the Rhede site.
- 38 Further, while we have had regard to Dr Tonin's evidence, ultimately we must assess this proposal and the nature of noise impacts in accordance with the Wind Energy Guidelines. The Wind Energy Guidelines require assessment under NZS6808. The assessment for this WEF shows that the applicable noise criteria will not be exceeded at the nearest non-stakeholder dwellings. Dr Tonin does not dispute this result nor does he dispute the manner by which the assessment was undertaken.
- 39 Notwithstanding the argument over other impulsive or excessive noise risks arising from atmospheric conditions, we find the assessment to be acceptable, including allowances made for tonal penalties which would see an additional 5dBA added to noise generated from the turbines. We are further comforted by the fact that if impulsive noise was to be generated, the evidence of Mr Delaire is that such noise can be addressed by limiting the speed of turbine blade rotation or by controlling which turbines are in operation. Such requirements will be subject to testing once the site is in operation. Permit conditions will be in place to address noise levels and provide for corrective actions to be undertaken by the operator if necessary.
- 40 There remains one additional noise issue to address, the issue of whether or not pre-construction assessment is required at the Russell property. It is

submitted by Ms Russell that the assessment should have included her property due to its proximity to the WEF site.¹⁴

41 Standard NZS6808 requires assessment at:

...locations at or within the nearest affected residential property boundary, (the notional boundary – if a rural property), and near the location of representative positions for any other residential location within the vicinity of a WTG or windfarm.¹⁵

42 The two background monitoring sites were selected by Mr Delaire on the basis of them being representative of the residences in the area and the two dwellings closest to the WEF site. Dr Tonin did not dispute the site selection for background noise monitoring or the predictive outcomes being extended to other locations in this way.

43 The purpose of the background noise monitoring is to assess the level of noise generated by a range of events or activities. This includes the degree of exposure of representative sites as well as setting characteristics such as wind noise in vegetation. Location 19 is a property with some low shrubs and the like around the dwelling but has a very open exposure directly toward the WEF site. Location 22 is closer to the site than location 19, however there are high canopy trees in proximity to this dwelling. Having inspected both properties and that of Ms Russell, we are satisfied that the testing at locations 19 and 22 present representative results for other nearby residences including the Russell property. Further, we note that in the more critically sensitive night time period, the level of background noise levels were not so significantly different between the two locations despite the difference in settings as to warrant further assessment.

44 Given these facts and the agreement between the two experts in respect to the process of the NZS6808 assessment we find that there is no compelling need for further background monitoring at the Russell property.

Landscape and visual amenity impacts

45 It is apparent to us that Ms Russell and the objectors place a high degree of value on the landscape of Mount Pollock and its setting within the Winchelsea Plain. It is a prominent feature within the landscape and in the eyes of some it contributes to the overall amenable rural landscape setting of the area.

46 It is inescapable that 80m high turbine towers with 50m rotating blades will be visible in such a setting. Being visible or invisible is not the test we are required to apply. The Wind Energy Guidelines highlight that WEFs will have some degree of impact to the landscape and direct an evaluation to

¹⁴ Ms Russell's motivation may also be due to the stated medical condition of Mr Russell and his susceptibility to noise. While his condition and that of Ms Watt has been drawn to our attention, ultimately the test of noise or any other amenity impact cannot be based on the hyper-sensitivity of particular individuals.

¹⁵ Clause 4.5.1 of NZS6808.

consider 'planning scheme objectives for the landscape including whether the land is subjected to [overlays] in the relevant planning scheme'. In assessing the capacity of the landscape to absorb the WEF, relevant factors include the degree of visibility, the location and distances from where the site can be viewed, the sensitivity of the landscape to change and its significance. Visual impacts are also to be assessed by having regard to the number and nature of the turbines and other works, removal of vegetation and the features of the landscape.

- 47 As we have stated, Mount Pollock is prominent in the landscape. However we also observed during our site inspection that the surrounding topography of the area is such that the prominence of Mount Pollock is confined within the broad valley in which it lies. The undulating nature of the surrounding area, particularly but not limited to the Barrabool Hills east of the site, limits direct views of the site to within a few kilometres. Where it is more visible from western approaches, its low form reduces the level of prominence from a distance. Given the above, we would not characterise its prominence as being any greater than that of a local landmark feature.
- 48 In addition we have taken account of the fact that notwithstanding the heartfelt expressions of importance to local community members, the level of importance within the landscape is not so significant as to have warranted protection under the planning scheme. No landscape, vegetation or environmental overlays have been applied to the site or the surrounds.
- 49 Further one cannot discount the fact that the hill is part of working farm. Features present on and within this include cropped land, fencing, tree belts and other rural infrastructure. A high voltage transmission line crosses the site and there are other various towers. Such features do not of themselves justify further turbine towers, but they do point to the fact that this is not a pristine landscape. It is one that has been and is subject to a high degree of disturbance.
- 50 It is in this context that we find that many of the claims made by objectors as to the impact to views to be insufficient to warrant the refusal of this WEF proposal. Further, while there may have been disputes over the veracity of various photomontages of the site after development, we can set such matters to one side. We have the benefit of having inspected the site and wider area and assessed for ourselves the degree of intrusion into the landscape that may arise from the WEF.
- 51 In having undertaken such an inspection we acknowledge that views of the site can be gained from the properties and dwellings owned by Ms Watt, the Russells and others. Views of the site would also be gained from the properties to the immediate south, including from the Murphy and Meulblok properties which currently do not contain any dwellings.¹⁶ The site and turbines would also be visible from farm dwellings to the west. However, all of these locations have a wide variety of views available to

¹⁶ These properties were said to be subject of applications or had gained permits for dwellings.

them. In some instances, the views of the WEF are not within the main view shed enjoyed from the residences or broader property.

- 52 Notably the Watt and Russell properties have extensive views available to the north and north-east that will remain unaffected. More widely, properties in and around Gnarwarre have very limited exposure to the site, if at all. Thus while we acknowledge the level of visibility of the towers on the site, we find that the degree of impact is limited in so far as the wider landscape remains unaffected and remains available for unaffected views from nearby dwellings.
- 53 It is helpful to remember that the site sits within a farming zone. The use of the land for various non-urban activities is possible and has occurred and will no doubt continue to occur. One of those potential uses includes WEFs,¹⁷ a use that requires location at sites where the wind resources are available. Approval of such a use is on the basis that there is limited, acceptable impact on a range of values.¹⁸ Landscape is but one value that the planning scheme and Wind Energy Guidelines call for consideration but in the context of the considerable weight to be given for renewable energy development. It follows from the above reasons that we find the degree of impact to the amenity of the landscape to be acceptable within the framework of the Wind Energy Guidelines and the decision guidelines contained within the planning scheme, the values to be assigned to this landscape and the level of amenity impact that can be anticipated to occur.

Other amenity impacts

- 54 The presence of the WEF has also been highlighted as subjecting the local community to impacts from possible electromagnetic interference (EMI) and shadow flicker.¹⁹
- 55 Assessments and evidence as to these two potential impacts have been presented in these proceedings. The assessment of EMI has been largely unchallenged. There has been consultation with the owners of the telecommunications tower and the siting of turbines to avoid interference with this tower. There has also been an assessment of possible interference with television reception, of which two possible sources of transmission are available within the area.
- 56 Conditions in the permit will require pre-development assessments and redress of any interference attributable to the WEF. Dr Bechly's evidence highlights that while there is potential for interference with analogue TV signals from a Ballarat repeater station, alternative reception is available as well as alternative means of providing television services.
- 57 Notwithstanding such evidence, ultimately we find comfort from the fact that digital TV, which will be replacing analogue TV services, are less

¹⁷ Clause 35.07-1.

¹⁸ Clause 52.32.

¹⁹ Shadow flicker being the casting intermittent shadows as the turbine blades rotate.

likely to be impacted by EMI or other interference from the WEF. Given such evidence and the acceptance of conditions to address any adverse impacts, we are satisfied that EMI or other impacts to telecommunication signals can be satisfactorily addressed should the need arise.

- 58 Similarly other impacts feared by objectors to GPS signals and other telecommunications has been addressed by the location of turbines or are not the subject of interference from the WEF.
- 59 Ms Russell pursued the issue of shadow flicker with some vigour, relying on observations and video recording of shadow cast made when visiting the town of Toora and the nearby WEF. She expresses concern most particularly about the potential impacts to the Watt property but also more generally that the extent of shadow flicker has been underestimated in terms of the distance of shadow cast and degree of amenity impact.
- 60 We observe from her video that shadow was indeed being cast into the town of Toora in the early morning time of that recording. However we also consider that this recording demonstrates the behaviour of diffuse shadow explained by Dr Gilbert in his evidence to us. The intensity of shadow cast in the Toora video was sufficient to be noticeable outdoors in full sunlight but not so strong as to be casting a full block out of sunlight or to be detrimental to general amenity. The level of amenity impact of such a diffuse shadow would in our opinion, be at the very lowest end of the scale if at all noticeable.
- 61 It is the evidence of Dr Gilbert, that full block out of light is required to generate the level of amenity impact that is contemplated under the Wind Energy Guidelines. The extent of such full block out shadowing is said by Dr Gilbert to occur up to a distance of around four times the blade diameter of the turbine. By ten times the blade diameter, Dr Gilbert's evidence is that the degree of shadowing is sufficiently diffuse to be of no concern. At ten times the diameter of this proposal, the nearest residence at 1,100m, being the Watt residence, should not be expected to be adversely impacted upon.
- 62 Further to this evidence is the modelling of shadow flicker. Dr Gilbert submits that such modelling is inherently conservative given the simplistic geometric approach of assuming the blade disc is always oriented perpendicular to the line between the sun and the receptor. This is not expected to occur for all turbines over all daylight hours. The modelling also does not account for the diffusing effects of cloud overcast, rain, dust or other means by which the strength of shadow cast would be reduced.
- 63 Given this evidence we are satisfied that notwithstanding the observations made by the Russells at Toora and the fears held by them and others, the degree of shadow cast has been conservatively estimated and still remains within acceptable levels for the Watt property and more widely for the rest of the community. We do not find that the degree of shadowing will be unacceptable.

Heritage Issues

- 64 Here we turn to the matters raised about natural and cultural heritage. Concerns have been expressed about the presence of and impact to native vegetation, Aboriginal cultural heritage values and the natural heritage values of Mount Pollock as a place of geomorphological and geological significance. Consideration of such matters is appropriate. The decision guidelines within the planning scheme call for consideration of the impact of the WEF on the natural environment and natural systems.²⁰ The objectives of the Farming Zone include protecting and enhancing the 'natural resources and the biodiversity of the area'.²¹
- 65 Ms Russell contends that the assessment of such issues has been inadequate, not in compliance with requirements or otherwise dismissive of these issues.²² Having had regard to the expert evidence and the submissions of the proponent and Council, we find that the issues raised are either of insufficient substance to refuse a permit for this facility or can be dealt with by permit conditions. The latter is certainly the case for issues in respect to the impacts on native vegetation. We set out below our findings in respect to key issues raised by Ms Russell.

Ecological impacts

- 66 The Wind Energy Guidelines set out that the assessments should consider the presence of species or communities protected under the *Environment Protection and Biodiversity Act* (Cth) 1999 (the EPBC Act) and the *Flora and Fauna Guarantee Act* 1988 (the FFG Act). Where species listed under either of these two acts are present, surveys are required.²³
- 67 Notwithstanding the above requirements, the removal of native vegetation needs to be assessed against the requirements of Clause 52.17 of the planning scheme, that is under Victoria's Native Vegetation Management - A Framework for Action²⁴ (the NVMF).
- 68 These assessments have been undertaken on behalf of the International Power, with the results presented in Dr Palmer's expert evidence, as supplemented by the application report prepared in support of the permit application.

²⁰ Clauses 35.07-6, 52.32 and 65.01.

²¹ Clause 35.07.

²² Ms Russell raises procedural issues in respect to the timing and extent of surveys and consultative processes for such matters as the EPBC referral. As we have noted elsewhere in these reasons, this hearing is not about reviewing such processes. We consider that there has been sufficient ventilation of the merits of the issues raised by Ms Russell to enable a decision to be made.

²³ A survey under the FFG Act is required within the 12 months preceding the application. Somewhat erroneously, Ms Russell submitted that all the surveys should precede the application in this way. This is not the situation, and in any event permit conditions require the completion of native vegetation surveys for each turbine tower and other work locations. Surveys for the striped legless lizard are also required.

²⁴ Department of Natural Resources, 2002.

- 69 Ms Russell challenges many aspects of this assessment and the veracity of the outcomes. She highlights the presence of 'significant' wetlands in the wider region, the location of the site within proximity to RAMSAR listed wetlands of the western districts, Port Phillip Bay and Bellarine peninsula. She expresses concern as to the cumulative impact from this WEF in conjunction with others approved at Mt Gellibrand and a proposal for Berribank. Her concerns focus on the impact to migratory birds, as well as local Wedge Tailed eagles, other raptors, bats and the loss of native vegetation located on the site.
- 70 With the greatest of respect we find the suggested impacts to avifauna, bats and wetlands to be overstated given the context of this site and its surrounds. While there may be some transitional movement of birds and bats from one location to another and thus possible across the site, there was no evidence produced to indicate the site to be a significant roosting or foraging site for significant avifauna or bat species. The matter was referred to the Commonwealth Minister in line with EPBC Act requirements and has been assessed as being an uncontrolled action under the provisions of that act.
- 71 Dr Palmer's response in respect to the raptors, bats and other avifauna is that Mount Pollock is not a preferred roosting or singular foraging site for such species.²⁵ It is likely to form part of a wider foraging range especially for the raptors. We accept such evidence. We also accept that from time to time such species are likely to frequent the local area and the site as part of their normal foraging activities. We do not see such behaviour as being prohibitive to the use of the site for the WEF, but rather we will include permit conditions that require management of the site to minimise risks to these species, such as through the regular removal of carrion and the like to reduce scavenging opportunities around the turbines.
- 72 Dr Palmer has identified the potential for the FFG and EPBC listed Striped Legless Lizard (*Delma impar*) to be present on the site. This is due to viable habitat within existing areas of native grassland being identified on the site rather than from direct observation of this species. A small number of EPBC Act and FFG Act listed migratory bird species are indicated under the respective data bases to be potentially present on the site but Dr Palmer records that supporting habitat for these fauna has not been found on the site.²⁶ We would consider these species to be at no risk given such a finding.
- 73 Other significant species have been identified from fauna data bases to be potentially present or have been recorded in the area. Similar to the EPBC

²⁵ We note that significant sites for biodiversity are listed in the Local Planning Policy Framework at Clause 21.05. While a number of locations within this policy are in the vicinity of the subject site, the site itself is not seen to be of national, state or regional significance.

²⁶ *Winchelsea Wind Farm Flora, Vegetation and Fauna Assessment*, Centre for Environmental Management, December 2007, at Section 3.5.1 and Appendix 5.

and FFG listed species, Dr Palmer's evidence is that the habitat found on the site would not support these species.

- 74 Overall we conclude from the evidence that the potential presence of significant species is somewhat limited given the disturbed nature of the site, with local areas of retained native habitat being the priority on which to focus any future surveys and actions.
- 75 The assessment of native vegetation to date by Dr Palmer, we take to have been very much an overview of conditions. The survey is not to be relied upon as a definitive assessment for estimating any off-sets that may arise from the location of individual towers or works areas in areas of native vegetation. Permit conditions set out the various requirements for more detailed surveys, which will be subject to review by the Department of Sustainability and Environment. Such an approach is acceptable in view of conditions to allow micro-siting of towers within 100m of nominated tower locations.
- 76 In terms of the strategic overview, the assessment has identified a number of areas of existing native vegetation that will warrant further survey of tower locations prior to works commencing. The native vegetation has been identified as Stony Knoll Shrubland, Plains Grassland and Plains Grassy Woodland ecological vegetation classes (EVCs). No works are proposed in the latter two EVCs while three tower locations are proposed in the area of the Stony Knoll Shrubland EVC.
- 77 All the EVCs identified on the site have a regional status of endangered for the Victorian Plains bioregion. Sample assessment areas of each of the EVCs provided habitat scores ranging from 0.28 to 0.48.²⁷ Given these scores and the endangered status, the conservation significance of potential turbine locations may be expected to range from high to very high.²⁸ As such clearing of native vegetation under the NVMF would generally not be permitted (for high conservation significance) or clearing would not be permitted unless under exceptional circumstances (for very high conservation significance).²⁹
- 78 Dr Palmer's evidence is that the survey indicates poor quality Stony Knoll Shrubland to be present in and around the upper slopes and peak of Mount Pollock while better quality vegetation of this EVC is present elsewhere on Mount Pollock. In his view, assessment of two areas close to turbine location 9 demonstrates these conclusions. It is his evidence that the level of disturbance will be minimal to the higher quality vegetation and works will avoid locations where significant vegetation species have been recorded.³⁰ With three turbine locations within the poorer quality native vegetation areas and all other turbines avoiding native vegetation, it is

²⁷ Table 3.2 of cited text at note 26.

²⁸ Appendix 3 of the NVMF.

²⁹ Appendix 4 of the NVMF.

³⁰ The Small Scurf-pea, Purple Blown-grass and Basalt Tussockgrass.

submitted that the requirements of avoid, minimise and offset under the NVMF can be adequately addressed by the proposal.

- 79 Ms Russell disagrees, indicating that the degree of disturbance will go beyond the footprint of the turbines, and will include the access tracks, sub-surface service trenches and the laydown/work areas around each turbine. In respect to the latter she submits that each turbine will require a 100sqm area to accommodate the hub and blade construction and so will disturb significant areas of native vegetation.
- 80 In assessing the issues of native vegetation management, we have borne in mind that the purpose of the NVMF is not just about gaining in the quantity of native vegetation, but is about obtaining gains in quality and quantity or put another way it is about a net habitat gain.³¹ The offsetting of losses from poorer quality native vegetation can be seen as one way of achieving such a net gain.
- 81 Consideration is to be given to the conservation significance of the vegetation/habitat to be potentially lost. In this respect, the high to very high conservation significance of the vegetation signals that under most circumstances the need to disturb the habitat must be weighed carefully against the need or form of the proposal. In this instance, there is considerable emphasis and weight to be given to the need for renewable energy facilities such as WEFs, as highlighted in the Wind Turbine Guidelines and under Clause 52.32. Additionally the DSE have not objected to the proposal subject to site specific surveys of each turbine and work location and the appropriate responses and management of each location in line with the conservation and biodiversity values assigned to each.
- 82 In respect to this issue, a balanced view is to be taken. In favour of this proposal is that much of the works areas and 11 of the 14 turbine locations are not located on high valued native vegetation habitat. The process of further assessment and possible micro-siting of the turbine towers is one that can see adjustments to minimise the loss habitat quality. The degree of disturbance, where it is to occur, can be managed in accord with recognised processes that will result in net gain outcomes if native vegetation is to be disturbed.
- 83 If the degree of disturbance suggested by Ms Russell were to occur without proper regard to such processes, this would be cause for concern. However we are satisfied that the initial assessment has been sufficient to identify the extent and nature of the native vegetation conditions and provide for an appropriate management regime.

Cultural and Geomorphological Heritage

- 84 In submission, Ms Russell raised concerns over the degree of impact the WEF will have on Aboriginal cultural heritage and geomorphological

³¹ Discussed under section 6 of the NVMF.

values of Mount Pollock. She points to the finding of Aboriginal artefacts on the hill top during the archaeological surveys of the site and the significance of Mount Pollock as a remnant volcano that is representative of Victoria's geological past. We take her various submissions on the latter point to be that the form of this volcanic hill remains unchanged rather than untouched, since it is clear to us that the hill and the surrounds have been subject to significant modifications and changes since European settlement.

- 85 Ms Russell advocates a high level of protection to this landform that is not supported in the planning scheme or by any other statutory means. Other features in the area to which she refers to have been assessed and ascribed some level of significance but not this one.
- 86 Notwithstanding the debate about what level of significance should be applied, the question to be asked is whether the establishment of a WEF on and around the site will detract from its geomorphological values.
- 87 Mount Pollock is, to the trained eye, clearly of volcanic origin and represents a record of geological past. It has the low rise form typical of many eruption points in the western Victoria basalt plains. Scoria and basalt are present at the cone peak and slopes. These features will not change under this proposal. Neither will such significance be lost despite the presence of additional towers and other infrastructure being located on and around the site. Accordingly we do not consider that these grounds warrant the refusal of the proposal at this location.
- 88 As to the archaeological values, we defer to the outcomes of the archaeological survey, views of the Aboriginal stakeholder group, the Wathaurong Aboriginal Co-operative, that has been consulted and the advice of Aboriginal Affairs Victoria. The survey identified the need for pre-construction surveys of sensitive areas, being the higher ground on which eight of the turbines are proposed but the sensitivity levels are not such as to preclude the proposal from going ahead. The Wathaurong and AAV support these findings and the recommended management steps. We find no reason to depart from these outcomes.

Other issues

- 89 Ms Russell and others raise issues in respect to impacts from aviation hazard lighting (as may be required by the Civil Aviation Authority), potential fire risks, potential risk to crop duster and aerial fire bombing activities, traffic and interference with the ground based GPS units located on Mount Pollock and utilised by local farmers.
- 90 We will not address these issues in detail in these reasons. While we have heard of these concerns we have also heard the response to them from the various experts and submissions of Ms Quigley. On balance we are of the view that none of these are substantive issues that deliver singularly or collectively a knock out blow to the WEF. In the instance of aviation lighting, we find that the options available for minimising perceived

impacts are available, such as through baffling. Similarly management of other issues such as traffic during construction can also be addressed.

- 91 The issues of fire related risks and interference to aerial activities are, on the balance of considerations, matters that are by all accounts no more of a risk than any other activity that may occur in the area and can be subject to appropriate site management precautions. They are not grounds that warrant refusal of a permit for this proposal.

Appropriateness of WEFs in a Farming Zone

- 92 It is apparent to us that ultimately, many of the issues such as the impacts to the landscape and other similar amenity issues arise from the objectors belief that WEFs are an 'industrial' use of farming land that is inappropriate in a rural environment. It was submitted by Ms Russell and other objectors a number of times that there will be adverse impacts to the amenity of their rural lifestyle.

- 93 We understand that part of the attraction of living and / or working in farming areas is about a rural lifestyle. That said, it is also clear that rural living, particularly in farming zones is not without impacts such as dust, noise and lighting from a range of activities that can legitimately be undertaken in such areas. Of course this does not mean that any or all activities can be undertaken in an unfettered manner. There are checks and balances to ensure that impacts to the environment and amenity of rural residents are not so severe as to be make life unbearable or irreparably damage the environment. Nevertheless, the amenity expectations in a farming area must be tempered by what can legitimately occur in such areas.

- 94 While the objectors say that wind turbines are an industrial use, one could say the same of large sheds, transmission towers or other such structures commonly seen on farming land. Mines, quarries and some coal fired power stations are all facilities that may be said to employ industrial processes or utilise structures akin to industrial sites. They are however features of the Australian rural landscape that are legitimately located to take advantage of, or provide support to primary industry activities or use of natural resources.

- 95 So to do we consider that the proper approach to WEFs is that they are to be seen as a facility that is harnessing a natural resource, in this instance the wind. They are effectively a primary industry that utilises a natural resource in a sustainable manner. It would be an absurd outcome not to contemplate their establishment in areas where such resources are available. Their contemplation in a range of robust non-urban zones under the planning scheme points to such outcomes being desired rather than denied.

- 96 In addressing amenity expectation issues it is also useful to recall the purposes of the farming zone. These purposes provide for the use of land

for agriculture, i.e. primary production.³² Residential amenity is not a primary purpose and indeed the purposes seek to ensure that the primary industry function of the land is not comprised by non-agricultural uses including dwellings established solely for rural lifestyle purposes.

- 97 The use of land for a WEF is a section 2 use, requiring permission. As has been said earlier, it is about harnessing a natural resource just like other primary production activity. The location of a WEF is constrained in the first instance to where such resources are available. It is further constrained by finding parcels of land large enough to accommodate the expanse of area and separation from residences necessary for operation while minimising potential impacts such as we have addressed in these proceedings. Finally, any such site must then also address a range of other possible constraints. These are set in the planning scheme and the Wind Turbine Guidelines. Ultimately such constraints lead to the undisputable result that the sites for WEFs will in the normal course of events be in rural areas and not industrial urban land.
- 98 We have found that this proposal has satisfactorily addressed various requirements and presents a minimal level of risk to potential amenity and other environmental and natural heritage impacts. We consider that the decision of the Responsible Authority is to be affirmed and that a permit should issue, subject to further consideration of permit conditions which we will turn to now.

THE APPEAL OF PERMIT CONDITIONS

- 99 As we set out at the beginning of these reasons International Power has applied for a review of a number of conditions contained in the NOD. Here we will address each of the conditions the subject of this appeal.

Micro-siting restrictions

- 100 Condition 2 contains a number of restrictions and requirements in relation to the micro-siting of the turbines. Micro-siting is the process of further refining the location of individual wind turbines in relation to each other across the site. In the general course of events, it is expected that micro-siting will not require turbines to be moved any further than 100m from the submitted application plan locations. Condition 2(a) imposes this general restriction of 100m.
- 101 Condition 2 also requires that any changes to the turbine locations must not occur unless the Responsible Authority is satisfied that there is no 'material change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise or aviation impacts'.
- 102 Conditions 2(b) to 2(e) then go on to specify a number of other restrictions in location by way of reference to distances to be maintained from the

³² Clause 35.07.

Russell and Watt dwellings and having no turbine closer than 100m to an outer site boundary or road.

- 103 In reading the requirements of condition 2, by implication one could understand that any change in location of one or more turbines would need to be re-assessed for potential amenity or other impacts. It would also seem that turbines #2, #3 and #4 would need to be moved to achieve the 100m buffer from Peel Road.
- 104 The Council submits that the specific requirements of Condition 2 are necessary to protect the amenity of the Watt and Russell dwellings, particularly the Watt dwelling where the current assessment for noise and shadow flicker are close to the acceptable criteria limits. The Council also point to Condition 2(e) specifically addressing the location of turbines #1 to #6 to ensure a proper setback from the roadways.
- 105 We find that we are in agreement with the submissions of Ms Quigley in respect to these conditions. There is no planning policy or requirement in respect to any setback from the roads. Indeed the evidence of Dr Gilbert is that shadow flicker across roads will be no more disconcerting than the flicker associated with a treed road, so common to many rural roads. We note that the Council concedes that there is not expected to be a high degree of increased traffic in the area from tourism. Neither does the Council offer any traffic engineering reason for the setbacks.
- 106 In view of the above, we find there is no reason to require condition 2(e) and direct its removal from the permit.
- 107 We also concur with submissions that there is no need to especially single out the potential impacts to the Russell and Watts dwellings that potentially arise from micro-siting the turbines. It is apparent that any micro-siting activity will require an assessment of the changes against the various tests for shadow flicker, noise and other amenity matters. We would expect such assessments to be undertaken as a matter of course for all appropriate dwellings. It remains to be said that such assessments should demonstrate no adverse outcomes arising from the micro-siting.
- 108 We are however concerned as to the possible ambiguity as to what the proponent may think should be submitted to achieve 'the satisfaction of the Responsible Authority'. To this end we have ordered the deletion of conditions 2(b) to 2(e) but direct the rewording of condition 2 to ensure appropriate assessments and reports are prepared to demonstrate continued compliance of the WEF with the Wind Energy Guidelines.

Landscaping to the Watt property

- 109 International Power relies on the requirements of condition 7 of the NOD to satisfy any landscape screening to be undertaken on surrounding properties. It is argued that condition 6(a) is unnecessary for the purposes of screening the Watt residence from views of the site. It is also argued that planting on

the Watt property will be more effective than any planting on the site's boundary.

- 110 We disagree on both accounts. Firstly if there is an opportunity to reduce the degree of visual impact by on-site landscaping, then we consider that the proponent should be required to undertake such activity. Notwithstanding that there is no objection to International Power to undertaking off-site planting, the various details of such work, in particular the ongoing maintenance are yet to be resolved. As a matter of principle, it is our view that where ever possible, the reduction of visual amenity impacts from the planting of screening vegetation should occur within the subject site. That way the obligations for planting and ongoing maintenance are clear, unambiguous and need not resort to secondary consents and or agreements with off-site landholders. We accept however that for all but the closest dwellings there are unlikely to be benefits from such onsite vegetation planting.
- 111 We have found that the degree of visual amenity impact is acceptable under the circumstances, however this does not mean that the impacts should not be lessened if the opportunity arises from on-site screen planting. It is our view that in the situation of the Watt dwelling, the planting of a strip of vegetation along a limited section of the WEF's site boundary to the Mt Pollock Road will assist in reducing visual impacts. However we do not consider that a 5m wide planting strip is necessary nor do we consider that the full extent of the common boundary to the Watt property need be screened. Given the extent of existing vegetation on the eastern side of the road and degree of outlook requiring protection we consider that a single strip of upper and lower storey plantings is required from adjacent to the entrance to the Watt property to 10m beyond the northern extent of the Watt property.

Background noise monitoring at the Russell residence

- 112 Council expresses a concern that the Russell property, being the third closest to the WEF site has not been the subject of background noise testing. Condition 20 of the NOD requires such testing to be undertaken.
- 113 It follows from our reasons that we accept the evidence of Mr Delaire (and that of Dr Tonin) that the assessment of noise has generally been compliant with NZS6808 and the few departures from this standard are one's that are supportive of a better assessment outcome. This assessment indicates that at a distance of over 2,000m from the site, noise from the WEF will be below the applicable guideline criteria. Mr Delaire's assessment indicates a noise level of 31dBA. Even allowing for tonal penalties of 5dBA (if they were to apply) the outdoor noise level near the residence would be below the NZS6808 criteria of 40dBA.
- 114 Council argues that an assessment that will establish a benchmark for noise levels at this location could prove to be of assistance in the future. It

follows from our earlier reasons on the assessment of noise impacts that such an assessment is not required. Further, we note that post commissioning assessment of noise is required under condition 21 of the NOD. Such an assessment is in our view sufficient.

OTHER PERMIT CONDITION MATTERS

- 115 During the proceedings a number of matters were raised either in submission or during the course of expert evidence that gave rise to possible permit conditions. These included Dr Tonin's evidence of the need for a windshear/atmospheric stability assessment and the extent to which TV reception assessment should be undertaken.
- 116 We have addressed Dr Tonin's suggestion for further assessment of windshear and atmospheric stability earlier in these reasons. Given our findings in those reasons, we reiterate here that we see no need for this further assessment.
- 117 As to the range of TV reception surveys, Ms Russell argues that given Dr Bechley's evidence of possible interference to analogue TV at distances of up to 5km, Condition 25 should be amended to require a pre-construction survey to the same distance rather than the 3km contained in the NOD. While Dr Bechley's response is that a survey out to 5km would be a 'gold standard' we find that it would follow from his evidence that a 5km distance is more appropriate than the somewhat nominal distance of 3km supported by International Power. Accordingly we have directed this distance to be amended in Condition 25.

CONCLUSIONS

- 118 For the reasons that we have set out we find that a permit should issue for the WEF at Mount Pollock subject to some variations to the conditions contained within the NOD issued by the Responsible Authority. We have prepared our orders accordingly.

Jeanette G Rickards
**Presiding Senior
Member**

Ian Potts
Member