**Wellington Registry** **ENV-WLG-2024-001**
**Te Whanganui-a-Tara Rohe**

**In the Environment Court**
**I Mua I Te Kōti Taiao O Aotearoa**

Under the Resource Management Act 1991 (**RMA**)

and in the matter of the direct referral of an application for resource consents by Meridian Energy Limited in respect of the proposed Mt Munro wind farm under section 87G of the Resource Management Act 1991

**Meridian Energy Limited**
Applicant

and

**Tararua District Council, Masterton District Council, Manawatū-Whanganui Regional Council and Greater Wellington Regional Council** (**Councils**)
Consent Authorities

and

**s 274 Parties**

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# Statement of Evidence of Rhys James Girvan on behalf of Meridian Energy Limited

**24 May 2024**

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## INTRODUCTION

1. My full name is Rhys James Girvan. I hold the qualifications of master's in landscape architecture from Lincoln University and Bachelor of Arts majoring in psychology from the University of Canterbury. I am a registered member of the New Zealand Institute of Landscape Architects (NZILA).

2. I have practiced as a landscape planner for approximately 20 years. My experience includes the assessment of landscape and visual effects for development projects of many types and scales, including infrastructure use and development encompassing windfarms, utilities, quarries, mines, landfills, and roading projects. I am experienced in preparing district and region wide landscape assessments which recognise and articulate important landscape values as well as preparing landscape plans and associated rehabilitation strategies to support successful development proposals within a wide range of natural and built contexts.

3. I have been a landscape planning consultant for Boffa Miskell Limited (**BML**) since April 2012, having previously worked on behalf of Queenstown Lakes District Council and a large multi-disciplinary planning and design practice in the United Kingdom. Since 2012, I worked from BML's Wellington office prior to relocating to BML's Christchurch office in 2018 where I continue to provide consultancy services for a range of clients throughout New Zealand. Many projects have involved preparing landscape assessments and hearing evidence to address any landscape and visual effects, informing decisions relating to Schedule 4.7(1)(b) of the RMA.

4. I was engaged by Meridian Energy Limited (**Meridian**) in 2021 to consider the layout of the windfarm then prepare an assessment of landscape and visual effects, which was completed on 12 May 2023 (the **Assessment**). The Assessment forms **Appendix K** of the Assessment of Environmental Effects (**AEE**) that was included in an application for resource consents to the Manawatū-Whanganui Regional Council (Horizons Regional Council), Greater Wellington Regional Council, Tararua District Council, and Masterton District Council (collectively referred to as the **Councils**).

5. Much of the detail underpinning my technical assessment (albeit updated where applicable) is contained in **Appendix 1** to my evidence. My evidence also comprises an A3 Graphic Supplement, which contains additional

supporting figures (**RG1 - RG4**) and reproduces the visual simulations included within my Assessment.

6. As well as Mount Munro Windfarm, I have undertaken assessments of several other wind farm proposals including the Harapaki windfarm presently under construction in the Hawkes Bay and an offshore windfarm within the Taranaki Bight.

## CODE OF CONDUCT

7. I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment Court Consolidated Practice Note 2023. I agree to comply with this Code of Conduct. In particular, unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

## SCOPE OF EVIDENCE

8. In this evidence I address the following matters:

    (a) The assessment methodology, including adherence to 'Te Tangi a te Manu – Aotearoa New Zealand Landscape Guidelines', which was published in July 2022;

    (b) Summarise aspects of the Mount Munro Wind Farm proposal relevant to landscape matters;

    (c) Set out the relevant statutory planning framework;

    (d) Summarise the existing landscape, including the values and characteristics of the Site and its surroundings;

    (e) Describe elements of Mount Munro Windfarm and the associated potential landscape and visual amenity issues;

    (f) Set out an assessment of landscape and visual effects;

(g) Summarise measures taken to avoid, remedy and mitigate potential adverse landscape effects;

(h) Address relevant submissions;

(i) Respond to the RMA s87F Landscape Report; and

(j) Conclusion.

**SUMMARY OF LANDSCAPE ASSESSMENT REPORT**

9. The following section summarise the Mount Munro Wind Farm – Landscape Effects Assessment, of which I was a co-author:

10. The proposed Mount Munro Windfarm ('Site') occupies an area of elevated working rural landscape approximately 5 km south of Eketahuna and 1.5 km east of State Highway 2 at its nearest point. The Site straddles the boundary of the Tararua and Masterton Districts and respective Horizons and Greater Wellington Regions. The Site is zoned rural and falls outside any identified Outstanding Natural Features or Outstanding Natural Landscapes (see **Figure RG1**).

11. The proposed wind farm encompasses up to 20 wind turbines located along a series of relatively low open hills which will continue to be managed as grazed pasture as part of a larger working farm. Each proposed wind turbine has a hub height of up to 92 metres, blade rotor diameter of up to 136 metres and tip height of up to 160 metres and will be located within a defined Turbine Envelope Zone. This layout helps ensure the wind farm will appear coherent along a primary ridgetop and adjoining lower more rounded ridge to the north-west.

12. Physical effects will result from earthworks necessary to create the access roads and wind turbine platforms and associated laydown areas during construction. Roads have been located so that potential views of cut and fill batters are largely contained within the Site. Areas of fill can be reinstated in pasture enabling ongoing rural land use following construction. The main accessways onto the primary ridgetop have been located within the folded landform, thereby largely internalising available views.

13. Wind turbine platforms and access roads between these will generally occupy elevated gently rolling ridgelines to minimise earthworks and limit external views of proposed changes in landform. Vegetation removal will be minimal and is primarily limited to existing pasture and small areas of regenerating native shrubs within Turbine Envelope and Turbine Exclusion Zones required for access track earthworks and to form wind turbine platforms.

14. The location of individual wind turbines and associated access and earthworks responds well to the underlying topography, and this limits the potential for wider landscape effects. The potential for visual effects also occurs within the context of an existing productive working rural landscape which will remain.

15. Views towards proposed wind turbines will be available from a range of near and more distant viewpoints. In open views, proposed wind turbines may appear highly visible along the skyline as part of a wider rural view or backdrop. In many locations within closer proximity to the Site, views are restricted by intervening landform and/or established vegetation, with full open views of proposed wind turbines seen along the skyline limited to a few dwellings and more open working rural areas.

16. Within 2 km of the Site, 36 dwellings / future dwellings have been assessed, with corresponding potential visual effects identified between very high to very low, dependent on the nature of available views (refer **Figure RG2** for locations). This range of effects also recognises that many private dwellings do not face directly towards the Site or otherwise have views of wind turbines limited by surrounding landform, buildings and / or vegetation.

17. The actual extent of visual effects depends on the specific landscape context observed and is also influenced by an individual's disposition towards the specific proposal including windfarms (which can change over time). Accordingly, the Assessment provides an objective (and effectively worst case) assessment of the degree of change, against which the variety of subjective responses and consequent levels of effect can be considered.

18. From dwellings associated with the Project, potential visual effects include one dwelling with very high effects[1] and three dwellings with high effects[2].

19. Beyond the Site, four dwellings[3] located between 1.1 km and 1.5 km of the Site have been identified with potential high visual effects resulting from open primary views of wind turbines seen above an open rural backdrop. In such views, dynamic wind turbines will appear prominent, but not dominant and overwhelming in primary views within an established working rural landscape which remains apparent. Effects will vary on account of each observer's individual preference and any change in that over time.

20. Between approximately 2 and 5 km, the potential for visual effects has been assessed with reference to 7 viewing areas (A-G) (refer **Figure RG3**) within which available views may occur. To the east of the Site, beyond approximately 2 km, dwellings along parts of Bowen Road (Area A) and Mount Munro Road and North Road extending north of Mauriceville (Area B) remain relatively well contained within valley landforms within the undulating rolling hill country and established vegetation, generally resulting in low effects.

21. Beyond 2 km to the west of the Site, some views occur from dwellings along South Road No.2 Road (Area C) and a broad swathe of undulating rural landscape to the north of the Pahiatua Basin including part of State Highway 2 (Area D). Here the potential for prominent views diminishes, along with frequent boundary shelterbelt vegetation which more generally limits any potential to obtain open views towards the Site. Notwithstanding this, some moderate level effects will occur throughout this expansive area.

22. Approaching 5 km from the Site, including views from within residential areas of Eketahuna (Area E) and its adjoining rural landscape to the west (Area F), views towards the wind farm become increasingly subsumed in long distance views encompassing the surrounding rural

[1] 85 Coach Road

[2] 73 Hall Road, 171 Opaki Kaiparoro Road and 168 Old Coach Road

[3] 48 Smiths Line, 31 Hall Road, 117 Opaki Kaiparoro Road, 51 Falkner Road.

landscape, generally with no more than low-moderate and minor levels of effect. Views increasingly dissipate beyond greater distances to the north of Eketahuna (Area G) from which very low-level effects are identified. Over the range of distances from the Site, views of earthworks generally remain more limited and internalised due to screening by landform.

23. The nature of landscape and visual effects relating to windfarms are complex and often change over time, particularly following construction. High visual change does not necessarily or automatically constitute high adverse landscape effects. The nature of landscape and visual effects also depends on the context and setting of the wind farm and the extent to which wind turbines will appear successfully absorbed as part of this landscape in response to its underlying values. Landscapes are not static and are consistently undergoing natural and human induced change. In general terms, rural areas which express a productive working rural character are the most appropriate types of landscape for windfarms, within which views of wind turbines do not automatically result in adverse effects.

24. There are also opportunities to respond with specific mitigation measures which have an ability to reduce the overall level of potential significant visual effects from four individual private properties, which may otherwise experience a high degree of change to views. Such off-site landscape mitigation and planting, which has been offered by Meridian, would be carried out on affected properties and would remain subject to owners' preferences and agreement. I acknowledge that the scale of wind turbines and their ridgeline locations (which are both necessary to harness the available wind resource) means it is generally not possible to screen all potential views through planting introduced beyond the more immediate location from which views are obtained.

25. Potential cumulative effects will remain very limited given the distance of the Mount Munro wind farm between other wind farm sites, and the nature of the surrounding landscape. The nearest consented wind farm at Castle Hill is located over 13 km away and is unlikely to be visible in the context of the Site. Over longer distances, wind farms along the Tararua Range remain well separated from the Site with any

cumulative views no more than a series of glimpsed distant views typically obtained when travelling along SH2 and some open rural areas in very long-distance views.

## METHODOLOGY

26. During the preparation of the Assessment, methodology and process was undertaken with reference to Te Tangi a te Manu: Landscape Assessment Guidelines (TTatM, 2022) and previous signposts to established best practice including, Quality Planning (2013) Landscape Guidance Note[4] and Guidelines for Landscape and Visual Impact Assessment, version 3 (GLVIA3, 2013) from the United Kingdom.

27. The method adopted to complete my assessment can be summarised as follows:

### *Understand the Site and its Landscape Context*

28. As part of undertaking my assessment of landscape and visual effects, I have visited the Site on several occasions, including as part of identifying available views and obtaining representative photographs and to assist with completing an assessment of residential visual amenity effects from private properties for which potential significant visual effects were identified within 2 kilometres of the Site.

29. As part of understanding the potential level of visibility, a Zone of Theoretical Visibility (ZTV) map was prepared based on landform information only (see **Figure RG3**). This was used in the initial stages of the Assessment to identify the potential locations beyond the Site from which views towards the proposed windfarm may occur and which may result in adverse visual effects.

30. For landcover within the Site, an Unmanned Aerial Vehicle was used to obtain aerial photographs and topographic information to enable a 3d digital model to be created which has helped demonstrate shelterbelts and other trees, buildings and structures which also may obscure the

[4] Plan Topics (qualityplanning.org.nz)

wind turbines totally or in part. ZTV and 3D modelling has been supported with ground-truthing and other analysis where possible through Site visits.

***Relevant Statutory and Policy Documents***

31. In order to determine a framework on which an assessment of landscape and visual effects could be made, landscape-related objectives and policies in the National Policy Statement for Renewable Electricity Generation, National Policy Statement on Electricity Transmission, Horizons One Plan, Greater Wellington Natural Resources Plan, Tararua District Plan and Wairarapa Combined Plan were analysed.

32. From a landscape and visual perspective, the above-mentioned policy statements and plans are required to give effect to sections 6(a), 6(b), 7(c) and 7(f) of the Resource Management Act 1991 (**RMA**) – these being key provisions of the Act for which Schedule 4.7(1)(b) requires landscape and visual effects to be assessed.

***Potential Landscape and Visual Amenity Issues***

33. Landscape and visual amenity issues which have been identified include matters relating to the characteristics and values of the Site and its surrounding landscape. In accordance with current best practice, the principal issues which have been identified are set out below:

(a) Physical landform effects.

(b) Rural character and amenity effects.

(c) Effects on sensory and perceptual aesthetic values including coherence and as result of movement, glare, shadow flicker and lighting.

(d) Cumulative effects.

***Assessment of Landscape and Visual Effects, Including Cumulative Effects***

34. As set out in Appendix 1 of the Assessment, the analysis of landscape and visual effects has adopted a process consistent with TTatM and GLVIA3. This has entailed assessing the landscape's sensitivity (combining an ability to absorb change and the specific landscape values of the Site or views) with the magnitude of change (size or scale, geographical extent, duration and reversibility) to determine the overall nature and levels of effect. This process promotes transparency in understanding the reasoning when assessing landscape and visual effects as represented in **Figure 1**.


*Figure 1: Assessment Process*

35. The nature of effect may be positive, neutral or negative in the context of the specific landscape values or view. Effects may also change through time depending on the specific context where change occurs and according to the subjective experience of the viewer. When assessing effects, it should be emphasised that a change in view is not automatically adverse. The Assessment seeks to qualify the nature or extent of change proposed within the specific landscape values or viewing audience affected. Through this method, the Assessment seeks to enable transparency while acknowledging differences in both sensitivity and change when considering overall levels of effects.

36. The overall level (degree) of effect has adopted the standard seven-point scale, consistent with that set out in TTatM, as represented in **Figure 2** below. Where effects approach the upper end of this scale, such as when turbines would become dominant, overbearing and unavoidable in the main view from a house or garden (i.e. very high), this is generally the point at which independent experts usually consider significant adverse effects become unacceptable.


*Figure 2: Seven-point scale applied when determining the level of landscape and visual effects.*

37. For completeness, I have set out my evidence in accordance with the recommended process and emphasis of TTatM combining understanding of relevant landscape values (embodied in certain attributes) and the relevant provisions when assessing and determining overall levels of effect. Through this I can confirm that the overall findings of my Assessment remain unchanged from what is set out in the AEE.

***Public Attitudes Towards Wind Farms***

38. Several studies have shown that attitudes to wind power are different to attitudes to wind farms. Although the public in general is in favour of renewable energy sources including wind, there may be strong opposition by local people living in neighbouring areas of wind farm developments. Such negative public opinion can also be high during the planning and construction stages of a wind farm and significantly lower after the wind farm has been built (Karydis, 2013).

39. Attitudes to windfarms also change over time. Local studies of Te Apiti wind farm also identified that disapproval of this project declined once the project was operational (Shephard, 2005). Interestingly, research has shown those living closer to wind turbines generally have more-positive attitudes, compared to those living further away (Hoen et al. 2019). This can influence the way people ultimately experience the nature of visual effects.

40. International research suggests that the aesthetic quality of the landscape forms a key determinant of visual preference (Betakova B., 2015). This supports a view that windfarms located within more typical rural or hill country environments are generally not perceived to be as

offensive when compared with highly valued areas of landscape such as scenic reserves.

41. Various other factors also often affect people's perception of wind farms (e.g. local impacts of construction, people's perception of the developer, wind turbine colour, tower design) (Devine-Wright, 2005; Stephenson, 2009).

## THE WIND FARM PROPOSAL

42. Other witnesses have elaborated on features of the proposed wind farm. Here, I simply record that apart from up to 20 wind turbines of up to 160 m height with aviation safety lights at the nacelle, the features which have the potential to cause landscape and visual effects include, transformers housed either in the tower bases or in small buildings at the base of each wind turbine, two electricity substations (one internal and one terminal substation), transmission lines, a maintenance and operations building, one permanent wind monitoring mast, access roads and fill zones (for the deposition of excess excavated material).

43. Features with the potential to cause temporary landscape and visual effects include offices, workshops, stores and staff facilities, material and wind turbine component lay down areas, a concrete batching plant, night lighting and erosion and sediment control measures.

## ELEMENTS OF MT MUNRO WIND FARM AND THEIR POTENTIAL LANDSCAPE AND VISUAL EFFECTS

44. Elements of the project that have potential for landscape and visual effects can be grouped as follows:

(a) The wind turbines – their number, layout, size and colour, and the movement of the rotor blades, including the potential for shadow flicker.

(b) Permanent modifications to the landscape as a result of developing a wind farm site – resulting from upgrading

existing, or constructing new, access roads; construction of wind turbine platforms and formation of fill sites.

(c) Ancillary structures and features – such as small transformer buildings adjacent to each wind turbine, two electricity substations, power transmission lines, an operations/maintenance building, a meteorological (wind monitoring) mast and aviation safety and security lights.

45. During construction, which is expected to take up to 32 months, temporary facilities – such as offices, stores and security entrance, staff facilities, lay down areas, concrete batching plants and night lights will also occur.

46. The above-listed elements of the project are, in the main, described in some detail by other witnesses for Meridian. In this section of my evidence, I outline aspects of the project's elements that may give rise to landscape and visual effects. I also address how any potentially adverse effects are proposed to be avoided, remedied or mitigated following my assessment of landscape and visual effects.

***Wind Turbines***

47. Each wind turbine comprises a tower, a nacelle, and a rotor hub with three blades. For the purpose of assessing landscape and visual effects, an indicative wind turbine layout was used which adopts the following parameters:

(a) 136m blade diameter

(b) 92m hub height

(c) 160m blade tip height.

48. Wind turbine platforms are typically located on ridgelines but where possible in locations so that earthworks associated with the platforms will not be visible from beyond the Site. All proposed wind turbines will be located within the Turbine Envelope Zone. This shall ensure wind

turbines maintain a coherent array on the main ridge and secondary lower adjacent ridge to the north-west.

***Landform Modification***

49. Preliminary earthwork calculations for Mount Munro Wind Farm, have determined that, up to 1,410,820 m³ of material may need to be excavated and disposed of from within the Site[5]. The main sources of land disturbance will arise from access and wind turbine platforms alongside more limited disturbance resulting from erecting ancillary structures and features and establishing temporary facilities.

50. The majority of cut will be generated along access roads and wind turbine platforms. Some steeper areas of cut will extend through greywacke rock, with short steeper areas (< 5 metres high) up to 1(v):0.3(h) and cut heights up to 25.5 metres laid back at 1(v):0.7(h). The tops of areas of cut will be laid back at 45$^{o}$ and tie in with adjoining areas of pasture. Some local areas of box cutting are identified within Turbine Exclusion Zones and reduce the potential for cut and large fill batters appearing more visible from beyond the Site on outer slopes.

51. Fill which is generated through the Proposal is proposed to be disposed of within the Site and contained within the Turbine Envelope and Turbine Exclusion Zones. The maximum finished gradient of the fill disposal areas is 1(v):3(h) with 1(v):2(h) proposed in association with engineered fill required to provide for roads. All area of fill will be re-established in grass to tie in with their surrounding pastoral context.

***Site Access***

52. The site entrance will be located on a section of land near the end of Old Coach Road. The construction yard is near the site entrance and near the end of this no exit road. During construction this will house the construction village; including temporary site offices (described further below), amenities, security, parking, and a laydown area (for deliveries

[5] Tonkin and Taylor (2023)

of wind turbine components and for holding these until delivery up to final wind turbine locations).

53. From the site entrance, construction of an internal road network will be required to install and service the wind turbines. The “access roads” that run from the bottom of the hill to the wind farm ridges via relatively steep slopes will be between 6 metres and 8 metres in width. The combined length of these roads will be approximately 5.5 kilometres. Two main access roads will likely be built for safety and practicality reasons: one for the heavy components and one for light traffic / service vehicles.

54. The wind farm access roads along the ridge tops and between the wind turbines will be between 8 and 11 metres in width. These roads will have relatively gentle slopes, but due to the topography will result in cut and fill batters which will be re-established in pasture following construction. The combined length of these roads will be approximately 6.0 kilometres. Construction of internal roads will also entail up to 12 culverts within the context of watercourses which are highly modified by land clearance and farming and a single bridge over a tributary of the Mākākahi River.

***Wind Turbine Platforms***

55. Each wind turbine will require a flat area for the foundation, crane pad, and blade laydown area onto which the wind turbine can be erected. This hardstand area will measure approximately 136 metres long by 60 metres wide (including the access road) and require cuts of up to 25.5 metres along a central ridge which is generally screened from external view.

***Ancillary Structures and Features***

*Turbine Unit Transformers*

56. The transformers that step the voltage up at each wind turbine generator to the internal network voltage of 33 kV will be located either

inside the tower's base or outside the tower (in a kiosk or mounted on a pad). If located outside the tower, the transformer of approximately 4.5 metres long, 3 metres wide and 2.7 metres tall will be situated in a position that minimises any visual effects when viewed from outside of the project area (wherever practicable). If present, external transformers would also be finished in a neutral and visually recessive colour (e.g., green/brown) so that they blend in with the landscape in and would be unlikely to be clearly discerned from beyond the Site.

*Internal* Substation *and Transmission Lines*

57. The internal wind farm 33 kV network will be underground from the wind turbines to a point near the southwest most wind turbine on the main ridge. Here the cables will be collected into an internal substation/switching station (Internal Substation). This will have a footprint of 70 metres x 90 metres and height of up to 7 metres with the exception of poles and gantries up to 20 metres and a lightning rod up to 23 metres.

58. The Internal Substation will be connected to the External Substation by a 33 kV, dual circuit 33 kV, or 110 kV line crossing farmland for approximately 3.5 kilometres. The poles for the transmission line could be concrete or steel and up to a total height of 20 metres.

*Terminal Substation*

59. The connecting substation (Terminal Substation) for the wind farm will be located on the western side of the corner of Kaiparoro Road and SH2, near the existing 110 kV Transpower line to enable connection into the National Grid. This is an unobtrusive location, behind a shelter belt of trees, although there will be some fleeting views from north bound traffic along SH2. This substation area has a proposed footprint of 100 x 125 metres and height of 7 metres with exception of poles and gantries up to 18 metres. The main transformer (33 kV to 110 kV) will be housed here or at the Internal Substation.

*Services Buildings*

60. Several temporary portacom single storey buildings are proposed within the Site Entrance area which will be removed upon the completion of the construction phase.

61. A permanent Services / Operations and Management building will be located opposite the Site entrance along Old Coach Road. This building will be approximately 35 m x 20 metres, and approximately 6.5 metres high and potentially include up to two small control buildings up to 7 metres in height. In its Section 92 Response[6], Merdian has confirmed it no longer proposes to locate the Operations and Maintenance Building within the terminal substation site.

*Meteorological Mast*

62. The Site will require one permanent wind monitoring tower (mast), similar to the current mast. This will be up to 92 metre tall, guy-wired and either a tubular or lattice type tower. The location of this monitoring mast will depend on the final locations of the wind turbines. The existing wind monitoring mast within the Site will be decommissioned and removed.

*Aviation Safety Lights*

63. Civil Aviation Authority Requirements (Part 77, Objects and Activities Affecting Navigable Airspace) require that a wind farm, such as is proposed on the Mount Munro, include visual aids for denoting obstacles. For this project, proposed permanent lighting is located on up to nine wind turbines. These comprise of three low intensity aviation warning lights installed on wind turbine towers and a medium intensity flashing light (between 20 - 60 flashes per minute) on the wind turbine nacelle. The aviation lights are ground shielded, as described in the evidence of Mr Phillips. No lighting is required on the proposed wind meteorological mast.

[6] Incite (31 January 2024) Response to 20 December 2023 Section 92 Additional Information Request.

*Other Permanent Lighting*

64. The roads built to service the wind farm will have low traffic levels, with no regular traffic at night, and will not be lit. Permanent lighting accommodating the proposed Operations and Maintenance Building, Site Substation and Terminal Substation will comprise of wall mounted perimeter lights controlled by occupancy sensors. In addition, proposed Site and Terminal Substations yards will include 3000K colour temperature floodlights on 20 metre poles designed with horizontal cut offs to reduce blue light scatter and skyglow. These will only be on when required for very low use nighttime operations.

***Temporary Facilities***

*Project Office*

65. During Construction, the Project Office will be located adjacent to the Site Entrance along Old Coach Road. When the wind farm's construction phase has been completed, the project offices and associated facilities will be removed, and disturbed areas restored to pasture.

*Site Lay Down Areas*

66. The primary laydown area is located along Old Coach Road opposite the Site entrance. This area is relatively flat and will require minimal earthworks to be established. The yard formation will be constructed by stripping topsoil from the full extent of the laydown area and stockpiling on Site. A granular hardfill layer will be placed to provide a sound working surface.

67. When the wind farm's construction phase has been completed, laydown areas which are no longer required will be restored to pasture with provision for a potential Operations and Maintenance Yard supporting the ongoing windfarm operation.

*On-site Concrete Batching Plant*

68. The batching plant is a temporary structure, required for the construction of the wind turbine and mast foundations. This will be located along the main ridges, or saddles on the access roads within the Turbine Envelope Zone or Turbine Exclusion Zone. Condition CB1 proffered by Meridian ensures this will not be established within the Construction Laydown and Site Administration Area with a likely location identified along the main ridgeline in the vicinity of wind turbine 7. The concrete batching plant will occupy an area of approximately 100 m by 60 m. All structures required are below a maximum height of 7 m and surrounded by a fence. At the completion of construction all of these temporary structures will be removed and the land reinstated.

*Lighting*

69. Temporary lighting will typically consist of wall mounted lighting on temporary buildings fitted with occupancy sensors, machinery mounted floodlights and portable telescopic pole mounted floodlights with extendable booms up to 9m in height. The selection and set up of temporary lighting would be controlled through a Construction Lighting Management Plan that would provide guidance requiring all lights to be directed / focused to the work area and not in the direction of light sensitive receivers such as dwellings and public roads.

**RELEVANT STATUTORY PROVISIONS**

70. The following documents give effect to Part II of the RMA within the context regions and districts.

(a) National Policy Statement for Renewable Electricity Generation

(b) Horizons One Plan

(c) Greater Wellington Natural Resources Plan

(d) Tararua District Plan

(e) Wairarapa Combined Plan

71. In essence, the above-listed policy statements and plans are required to give effect to the following key provisions of the RMA, in relation to landscape and visual matters:

(a) Section 6(a) concerning the preservation of the natural character of the coastal environment (including the coastal marine area) and water bodies and their margins, and the protection of them from inappropriate subdivision, use and development.

(b) Section 6(b) seeking the protection of outstanding natural landscapes and features from inappropriate subdivision, use and development.

(c) Section 7(c) requiring that regard is had to the maintenance and enhancement of amenity values (as defined in the Act).

(d) Section 7(f), which requires that regard is had to the maintenance and enhancement of the quality of the environment.[7]

72. On review of the relevant landscape and visual related provisions as summarised below, I consider that a wind farm proposal would be consistent with the anticipated character of this rural environment and wind turbines would represent a scale and function that is appropriate within this Rural Zone.

73. Mount Munro is not mentioned in any of the District or Regional Plans, or Policy Statements as having any heritage sites and is not identified on any local maps as being a place of cultural or significant heritage.

[7] While the concept of the quality of the environment is a broad one, matters pertaining to the quality of the environment which relate to landscape and visual effect are, in essence, also covered under sections 6(a), 6(b) and 7(c).

***Natural Character***

74. The Site falls outside the coastal environment and contains no rivers or lakes where effects on natural character must be considered under s6(a) of the RMA. Within the context of established pastoral land use, the Site contains modified and largely ephemeral streams and wetlands for which natural character should be preserved.

***Outstanding Natural Features and Landscapes***

75. The Site is not identified as an outstanding natural landscape or feature in any of the applicable planning instruments. To inform my assessment, I have assessed the physical, sensory and associative dimensions of the landscape in accordance with current best practice and concur that the Site and its immediate surrounding does not form part of any Outstanding Natural Landscape or Outstanding Natural Feature at either a regional or district scale. Accordingly, it is my opinion that the Site is not subject to section 6(b) of the RMA as illustrated in **Figure RG1** included in the Graphic Supplement.

***Visual Amenity***

76. The RMA section 7(c) is concerned with the maintenance and enhancement of amenity values, which are defined in the Act as:

> *"…those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributes."*

77. Amenity values encompass a broad range of issues and like most rural areas in New Zealand, the site is subject to section 7(c) of the RMA. Section 7(f) of the RMA is also relevant and concerned with the maintenance and enhancement of the quality of the environment. The definition of 'environment' also includes reference to amenity values. Related amenity issues concerning noise, shadow flicker and lighting are covered in the evidence of Mr Halstead, Mr Faulkner and Mr Wright respectively and to which I defer, with my evidence focussed on related

landscape and visual effects where relevant. I also rely and draw on the responses to cultural matters where they effect landscape, as outlined in the evidence of Mr Bowmar and the statement of Mr Kendrick in relation to Ngāti Kahungunu o Tamaki-nui- ā-Rua.

***National Policy Statement for Renewable Energy Generation***

78. The National Policy Statement for Renewable Electricity Generation (2011) includes aspects relevant to the landscape assessment, as follows:

(a) **Policy A** requires decision-makers to recognise and provide for the national significance and benefits of renewable electricity generation. The reversibility of effects under Policy A(d) is also a relevant benefit to be recognised - i.e. the wind turbines could be removed in the future if no longer needed or at the end of the consent, leaving little if any residual landscape and visual effects.

(b) **Policy B** directs decision makes to have particular regard to meeting the New Zealand Government's national target for the generation of renewable resources including the significant development of renewable electricity generation activities.

(c) **Policy C1** identifies that decision makers shall have particular regard to a) the need to locate renewable electricity generation where the resource is; and b) the logistics or technical practicalities associated with developing renewable energy generation, and the location of the existing structures and infrastructure including the national grid.

(d) **Policy E3** requires Regional Policy Statements and Regional and District Plans to include objectives, policies and methods to provide for (amongst other things) the

development of new wind energy generation activities to the extent applicable to the region or district.

***Regional Planning Provisions***

*Horizons One Plan*

79. Policy 3-6 of the Horizons One Plan, relating to Renewable Energy requires Regional Council and Territorial Authorities to have particular regard to the benefits of the use and development of renewable energy, including:

> *"a.iii. the need for renewable energy activities to be located where the renewable energy resource is located."*

80. Policy 6-6 includes a list of the region's outstanding natural features and landscapes, none of which apply to the Site or its immediate surroundings. Policy 6-7 sets out criteria for identifying and establishing the relevant values to be considered when assessing effects on any outstanding natural features and landscapes.

81. Policy 6-8 Natural Character requires the natural character of wetlands and lakes to be preserved and protected from inappropriate use and development and restored and rehabilitated where this is appropriate and practicable. Policy 6-9 relates to the management of natural character. Under this policy use or development must generally be considered appropriate if it is compatible with the existing level of modification to the environment and will provide for the restoration and rehabilitation of natural character where that is appropriate and practicable.

*Wellington Regional Policy Statement*

82. Within the Wellington Regional Policy Statement, Objective 17 is relevant to the Region's outstanding natural features and landscapes. Under this objective, Policies 26 and 50 require the identification, protection and management of outstanding natural features and landscapes. Objective 18 refers to the Region's special amenity

landscapes with policies 27 and 28 referring to their identification and management. No outstanding natural features and landscapes or special amenity landscapes have been identified within the Site. Section 3.3. of the RPS relates to Energy, including the development and benefits of renewable energy.

*Greater Wellington Natural Resources Plan*

83. Within the Greater Wellington Natural Resources Plan, Policy 11 requires that when considering proposals that relate to the provision of regionally significant infrastructure, or renewable energy generation activities, particular regard will be given to the benefits of those activities.

84. Policy 13 provides for the use, development, operation, maintenance, and upgrade of regionally significant infrastructure and renewable energy generation activities are provided for, in appropriate places and ways.

85. Policy P24 requires that significant adverse effects on areas of natural character outside the coastal marine area are avoided, remedied or mitigated. Policy P52(c) requires the protection of outstanding natural features and landscapes outside the coastal environment.

***District Planning Provisions***

*Tararua District Plan*

86. The Site is zoned Rural Management Area under the Tararua District Plan. Objectives in the Tararua District Plan for the Rural Zone aim to "*ensure a high level of environmental quality and amenity throughout the rural areas of the District*" and "*to protect natural features and landscapes, trees and areas of indigenous vegetation and* habitats *of indigenous fauna…*". The Tararua District Plan also recognises the potential of the Rural Management Area "*for renewable energy generation and wind farms in particular*".

87. The subsequent two policies attached to that objective, being 2.8.4.2(a) and (b) require that the *"local, regional and national benefits derived from wind farms are recognised"*, and *"To remedy, mitigate, or avoid, where possible, the actual and potential adverse effects on the environment of wind farms and other renewable electricity generation facilities…"*.

*Operative Wairarapa Combined District Plan*

88. The Site is zoned Rural under the Operative Wairarapa Combined District Plan Objectives NUE1 and NUE2 in relation to Networks Utilities and Energy Wairarapa Combined District Plan notes that higher landforms in the district have "*considerable potential for wind energy generation*". It notes that there will be "*some consequential effects*" which can be "*managed to maintain rural amenity values*". Objectives within the plan for the Rural zone also aim to "*maintain and enhance the amenity values of the Rural Zone, including natural character*" (Objective 4.3.1), ensure that "*primary production and other land uses function efficiently and effectively in the Rural Zone*" (4.3.2), and "*encourage energy efficiency and the generation of energy from renewable sources*" (16.3.1).

89. I note that since the resource consent was lodged, a Proposed Wairarapa Combined District Plan has been notified. I understand that this is largely a duplication of the Operative Plan in terms of renewable energy generation.

**THE EXISTING LANDSCAPE**

90. The Site occupies part of a larger sequence of rolling hill country which continues to the east and straddles the boundary between the Wairarapa to the south and the Manawatū-Whanganui to the north (see **Figure RG1**). Land to the west continues across the Pahiatua Basin which separates the Site from the Tararua Ranges. This area, including the western part of the Site, is located within the Tararua District and the Manawatū-Whanganui Region. Land within the eastern part of the Site and continuing into the hill country accommodating the headwaters

of the Kōpuaranga River to the south-east is located within the Wellington Region and the north-western part of the Masterton District.

91. The broader area of rolling hill country of which Mount Munro forms a part, commences approximately 6 kilometres east of the Tararua Ranges and extends eastwards to the coast. The landform of Mount Munro rises to the east of the undulating Pahiatua Basin and continues a pattern of established rural land use along the catchments of the Mākākahi and the Mangatainoka rivers and general alignment of State Highway 2 located approximately 1.5 kilometres from the Site at its nearest point.

92. Pūkaha / Mount Bruce (710m asl) is located near the southern end of the Pahiatua Basin approximately 2.7 kilometres to the south-west of Mount Munro. This feature is characterised by a distinct change in landcover predominantly comprising established native vegetation. This follows the same series of inland hills, separated from Mount Munro by a tributary of the Mākākahi River in the vicinity of the Opaki Kaiparoro Road. State Highway 2 crosses into the Wairarapa valley via the Mount Bruce saddle approximately 7 kilometres to the south-west of the Site.

93. At a broader scale, the Tararua Range physically separates the western and eastern parts of the Whanganui Region. Together with the Remutaka Range to the south and the Ruahine Range to the north, the Tararua Ranges form part of the North Island's axial range which stretches from the south Wairarapa Coast to beyond the Manawatū Gorge. This sequence of mountain ranges is highly expressive of the underlying geological forces that created New Zealand and has a defining effect on the weather for much of the lower North Island. These features also form a significant part of the Region's identity with both the Ruahine, and Tararua Forest Parks recognised as outstanding natural landscapes in the Horizons One Plan.

94. To the east of the Tararua Ranges, the broader area of hill country which includes the Site continues as a lower extensive elongated sequence of generally south-west to north-east running ridgelines and relatively contained rural valleys which extend approximately 50 km towards the coast. To the north of the Site the landform culminates along a low valley which accommodates the Wairarapa Railway Line

with a low saddle to the south of the Site forming the catchment boundary between the Mākākahi River to the west and the Kōpuaranga River to the east. The rolling hill country also continues south into the northern valleys and hills associated with enclaves of rural settlement within Mauriceville and Mauriceville West.

95. At a finer scale, the topography of the Site encompasses two generally parallel ridgelines – the main ridgeline which includes Mount Munro (470m) to the southwest rising to a higher point to the northeast at 510m and a secondary more bisected ridgeline to the northwest formed by three lower lying rounded landforms between 388 and 452 masl separated by tributaries to the Mākākahi River. The landform of the Site comprises steep hill faces with more gently rolling topography on the ridgelines, with some areas of sharper, more defined ridgelines in the northeast.

96. The current land use and vegetation cover within the Site is predominantly pasture interspersed with fences, isolated rural buildings and farm tracks. Within the context of variation within the underlying landform, this remains consistent with its surrounding broader working rural character. Some small areas of regenerating native bush and wetland areas also occur within the lower slopes of the gullies.

97. The centre of Eketahuna lies around 5 km to the north of the Site and is the main town centre for the area supporting a population of 1,566 in 2018[8]. Beyond this town, dwellings are mostly single level distributed throughout the surrounding rural area and are more frequently surrounded by shelterbelts, hedgerows, and amenity planting, often to provide wind protection and enclosure defining outdoor living areas and curtilage. Sheep and beef farming are the primary land uses in the area.

98. The eastern part of the Site extends within the Mauriceville character area as identified in the Wairarapa Landscape Study (Boffa Miskell, 2010). In this area, Te Rangitumau is recognised as the ancestral mountain for Māori of the central and upper Ruamahanga River valley. The summit of Te Rangitumau is located approximately 16 kilometres

[8] Nireaha-Eketahuna (2018 Census)

south-east of the Site. Several important papakainga and pā sites are also located within this area. The Kōpuaranga valley was heavily cultivated and was also the location of the main pre-European track going north towards Eketahuna and other northern villages.

99. European settlement throughout this area resulted in the clearance of the pre-existing native forest, Te Tapere Nui o Whatonga (Seventy Mile Bush) which began in the early 1860s. A temporary camp for settlers at Kōpuaranga, known as the 'Scandinavian Camp', provided short term accommodation for the Danes, Swedes, Norwegians and other settlers, who came to the area under a New Zealand government subsidised scheme to farm, clear the bush or build the road to Napier. Eketāhuna was founded by Scandinavian settlers in 1872 as a bush settlement and was originally named Mellemskov (heart of the forest).

100. A predominantly Scandinavian settlement was established at Mauriceville West when the railway was constructed through the Kōpuaranga River valley. Mauriceville became the focus of the community and remains so today with the lime company and school currently located there.

101. Mount Munro was named after Alex Munro, a government engineer and surveyor in the district. Other heritage aspects of note include Old Coach Road, which passes through the western area of the Site and was originally the main road linking Eketāhuna to Masterton in the south. This remains legible, often in combination with revegetated batter slopes which have since established and will remain unmodified along part of the toe to the west of Mount Munro.

102. Further to the west, ANZAC Bridge is located to the west of State Highway 2 and approximately 2.2 kilometres from the nearest wind turbine. This was constructed to honour the people from within the surrounding area identified as Kaiparoro who died on active service in World War One and Two. It has consistently been the site of ANZAC Day ceremonies since 1923.

***Cultural Values Assessments***

103. Ngāti Kahungunu (Te Taiwhenua o Tāmaki Nui-a-Rua), Ngāti Kahungunu ki Wairarapa, Rangitāne o Tāmaki Nui-a-Rua and Rangitāne ki Wairarapa are identified within the AEE as having interest in this area. I have reviewed the Cultural Values Assessment which have been prepared to accompany this application and acknowledge Meridian have directly engaged with iwi / hapu throughout the planning process including establishing ongoing partnerships as identified in the evidence of Mr Kendrick.

104. Ngāti Kahungunu ki Tamaki nui a Rua identify that the area around Mount Munro sits within a cultural landscape imbued with history and many years of habitation and use by tangata whenua. Both the Mākākahi River and Pūkaha / Mount Bruce as a remnant of Te Tapere nui a Whatonga are considered very significant including through the importance of the many taonga species that these features support. The surrounding area is also recognised for the many Pā / Papakainga strategically located through this area, none of which have been specifically identified within the Site.

105. The pervasive presence of mosquito and sandflies prior to the drainage of swamps and clearance of forests is also noted. Where major construction activities are planned, the use of native species as a landscape restoration measure is encouraged.

106. The Cultural Values Assessment of Rangitāne o Tamaki nui a Rua tracks the layers of tribal history which have occurred in this area, and which build strong associations with this whenua and landscape. It also identifies that the Māori who occupied this territory on a seasonal basis would have preferred to camp along the Mākākahi River at the base of the range where they would have trapped eels, gathered rongoa, snared birds and gathered other types of food. In this context, reference to Te Taperenui a Whatonga (Seventy Mile Bush) recalls a vast forest with sparse, seasonal occupation.

107. There is no evidence to suggest that Mount Munro has high spiritual significance. Despite some effort, an original Māori name for Mount Munro has not yet been identified or defined. Notwithstanding this, the

current form of Mount Munro is identified by Rangitāne o Tamaki nui a Rua as a skyline of importance and described as standing out magnificently when viewed from the north, east and south as well as from the west viewed as a view of rolling hills seen from State Highway 2 road users.

108. In response to visual concerns, Rangitāne initially asked that the wind turbines should not compete with or compromise the aesthetic value of the range and surrounding landscapes, especially the great works that the people of Pūkaha and surrounding trusts are undertaking at present and in the future. Accordingly, Rangitāne recommended that wind turbines should be brought down off the ridgelines and avoid any area where they compromise the natural qualities of the range and impose an industrial character.

109. Following lodgement of the application, Meridian has sought clarification from Rangitāne o Tamaki nui-ā-Rua in relation to their concerns relating to wind turbines being sited on skyline ridges. This has been clarified as being an item of concern of earlier times and is no longer a concern raised in relation to the Mount Munro Windfarm. This clarification is addressed further in the evidence of Mr Bowmar.

## ASSESSMENT OF LANDSCAPE AND VISUAL EFFECTS

110. When assessing landscape effects, there is an overlap between the perception of change to landscape character and visual amenity. The landscape character of a place is derived from the combination and pattern of landscape elements and their perceived characteristics and values within the view.

111. As discussed above, current best practice[9] recognises that relevant factors considered when assessing landscape effects encompass a range of physical, sensory and associative dimensions. The physical impacts within the Site have been considered including the layout and scale of wind turbines and other built elements, access, laydown areas and other earthworks implemented during construction. Effects on

[9] New Zealand Institute of Landscape Architects (2022) Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines.

wider landscape character, including maintaining and enhancing amenity values relating to rural character and interrelated sensory and associative dimensions have also been considered, including a specific understanding of visual effects from private viewpoints.

112. The assessment of landscape character effects has considered the relationship to combinations and patterns of views as experienced by the surrounding people and communities. Consistent with best practice, landscape effects as identified within the Assessment consider the outcome for the accompanying landscape values within which change is proposed to occur. By comparison, visual effects can be understood as effects on landscape values as experienced in views. This includes an assessment of visual effects from public and private viewpoints within the surrounding landscape as discussed separately below.

113. In terms of landscape values, the Site forms part of a broader working rural hill country landscape to the southeast of Eketahuna, characterised by a larger expanse of rolling predominantly pasture covered hill country that defines and continues to the east of the Pahiatua Basin and across the Upper Ruamahanga catchment and beyond. In this context, the Site comprises part of a relatively uniform rural hill property, separating the catchments and tributaries of the Mākākahi river and Kōpuaranga river and which extend between the larger more distinctive vegetated form of the Tararua Ranges to the west beyond the Pahiatua Basin and the North Island's east coast.

114. Landscape character is derived from the distinct and recognisable pattern of elements that occur consistently in a particular landscape. In physical terms, a landscape reflects the combinations of geology, landform, soils, vegetation, land use and features of human settlement. In perceptual and associative terms, it creates the unique sense of place that changes in characteristics and values when defining different areas.

115. Given the scale of wind turbines and their inherent potential to be highly visible in elevated ridgeline locations, wind farms can undoubtedly change the character of any landscape. Equally, Mount Munro is not widely recognised as an important landscape or feature. Within this broader working hill country context, Mount Munro has a defined

horizontal mass that can visually anchor large wind turbines and maintain a coherent wind farm array. Any physical effects will remain relatively localised and retain this underlying form that continues to support an established working rural character.

116. While some people are averse to the changes in character which may result, others may consider the nature of effect to be benign or sometimes positive. This was evident during my fieldwork and visiting the owners and occupiers of several dwellings in the vicinity of the Site who expressed a range of views. This included reference to the form and movement of individual wind turbines in relation to their outlook and in relation to the overall coherence of the resulting array of wind turbines capturing the natural element of wind.

117. The siting of the proposed wind farm on a series of ridgelines is typical of New Zealand's wind farms which are almost invariably situated on elevated rural locations along ridges and hilltops where wind speeds are most favourable. Notwithstanding differences between locations and individual's preferences and the corresponding nature of effect (described in further detail relating to visual effects below), the proposed wind farm is sited to limit physical landform impacts perceived beyond the Site and ensure the landscape's established working rural use may continue.

118. It must be emphasised that visibility and change are not of themselves adverse landscape effects. Whether the outcome of change is appropriate must be considered in the context of the specific working rural landscape within which the Mount Munro windfarm is proposed. Whilst parts of the Site may hold local value to those living in and alongside this rural area, it is void of any formal landscape classification at the district or region wide scale. The acceptance or appropriateness of change must also account for landscape outcomes as anticipated in the relevant planning provisions.

119. A summary of matters relevant to my assessment of landscape effects is set out below:

***Natural Character Effects***

120. In the context of a working farm, potential natural character effects are limited to smaller tributaries of the Mākākahi and Mangaroa Streams affected by the proposed road alignment including upgrades to existing tracks and the construction of a new route. This will involve installing or upgrading existing culverts and the construction of a new bridge across a tributary of the Mākākahi Stream at the southern end of Old Coach Road. Within the Site, the proposed layout will also affect parts of some seepages and small gullies and parts of exotic dominant wetlands.

121. Based on the underlying modified rural context within which the proposed wind farm is located and corresponding limited and localised waterbody effects which will remain well contained beyond the Site, any adverse effects on natural character will be very low and can be readily addressed in accordance with recommendations as identified in the ecological assessment.

***Effects on Outstanding Natural Features and Landscapes***

122. The Site is not located within any identified district or regional landscapes of importance, including any Outstanding Natural Landscape or Outstanding Natural Feature.

123. Pūkaha / Mount Bruce is the nearest outstanding natural feature to the Site and is located approximately 2.7 kilometres from the nearest proposed wind turbine. Amongst other matters, Pūkaha is recognised for its prominence from SH2 and high natural values. The proposed wind farm will not disrupt the visibility of Mount Bruce from the State Highway (and is not visible within the same view), nor will it modify any recognised natural values, including its sanctuary for significant taonga species. In terms of visual effects from Pūkaha, I also note that the dense nature of the bush covering the area in combination with intervening landform means that there is limited intervisibility from the network of walking tracks in this area to the Site.

124. Further to the west, the highest ridges and hilltops of the Ruahine and Tararua Ranges are recognised for their visual and scenic

characteristics, ecological values, contribution to the national conservation estate, recreation and historic values, together with their recognised importance to tangata whenua and cultural values. While there will be intervisibility between the Ranges and the Site, they are well separated, the larger landform of the ranges will remain dominant and the proposal will not adversely affect any of the recognised recreation, historic or scenic characteristics of the Ranges.

125. Given the above, potential adverse landscape effects on regionally or district important landscapes, are therefore considered to be **low** and insignificant.

***Effects on Rural Character and Amenity***

126. The existing rural character of the Site forms part of and contributes to the character of the wider landscape. The dense forest which formerly cloaked this landscape has been cleared and has primarily made way for pastoral grazing. In this context, the Site reflects a reasonably contained area of pastoral hill country typical of the immediate and wider surrounding landscape. The underlying rolling to steep landforms form part of a broader low-lying backdrop between Pahiatua Basin and Hastwell and adjoining an extended sequence of contained valleys extending north of Mauriceville.

127. Within the context of this landscape, the underlying rural character ensures natural elements and systems remain, however they are often manipulated to enhance productivity or overlaid with patterns and processes of human activity. This land use typically results in a more open or uniform landcover and boundary planting enabling both longer distance and contained rural views. The type of rural activity and settlement patterns that overlay them are also factors which contribute to their character. Human induced patterns and processes within rural landscapes commonly reflect productive land uses such as agriculture, horticulture and forestry. Such broad-scale rural land use patterns will continue in the context of the proposed windfarm and in this context will remain juxtaposed against the larger more widely recognised and vegetated landforms which include Pūkaha / Mount Bruce to the south-

west and the Tararua Ranges to the west, both recognised as outstanding.

128. In terms of rural character and amenity, rural settlement also occurs throughout this rural landscape however this is typically more scattered and dispersed, usually restricted to small clusters and individual dwellings which are associated with rural living and larger working rural land holdings. Rural buildings and other utilitarian structures, such as large implement sheds and overhead transmission lines are also present, alongside mature shelter vegetation which typically accompanies such features and forms part of the existing character of rural settlement which has been established throughout this specific area of landscape. The degree of impact on rural character relates in part to the potential change of this character with the introduction of the proposed wind farm.

129. Generally, the proposed wind farm will have the greatest influence on the character and views of its more immediate locality. In visual terms, the proposed wind farm will have the greatest visibility within approximately 2 km of the Site, within which proposed wind turbines may be visible as a prominent array of dynamic structural elements extended along a local area of skyline. Where visible, the proposed layout of the wind farm would appear to follow the grain of the underlying topography and will be located to enable ongoing rural activity to remain. Broadscale farming activity will continue to underpin this rural landscape and assist with absorbing the windfarm within the context of its established and ongoing working rural context. Enduring rural characteristics and values will essentially remain.

130. In terms of aesthetic coherence, the layout of the wind farm responds well to the underlying broad landform patterns. Where wind turbines are visible together, their layout will remain coherent and respond well to the Site's underlying sequence of elongated rolling ridgetops. Whilst individual and combined wind turbines may appear highly visible, particularly within proximity to the Site, the overall layout will appear responsive within this rural landscape setting. Ensuring the windfarm layout remains coherent thereby assists the windfarm appearing to 'fit'

within its underlying legible landform and thereby reduces the potential level of adverse landscape character effects.

131. Once operational, individual wind turbines will sustain a relatively simple dynamic sweeping rotation in response to the direction and speed of the prevailing wind. Their light grey and low reflective paint finish will make them less distinguishable when viewed against the sky, particularly when hazy or cloudy conditions prevail, conditions not unusual in this hill country. While wind turbines will often appear obvious as mechanical structures extended above the skyline, their function also remains clearly associated with harnessing a natural resource and appears integrated within ongoing pastoral land use. This ensures a functional and integrated form which also works well within the context of underlying natural and rural landscape values.

132. Within its more immediate landscape setting, the landform and rural backdrop of Mount Munro will remain predominantly intact with moderate aesthetic values above which dynamic wind turbines will be seen above the skyline. By comparison, it is lower and less distinctive than the more widely recognised vegetated landmarks of Pūkaha/Mt Bruce and the Tararua Ranges which will remain unchanged. Mount Munro is not identified as a special feature and does not appear to have any recognised broader associative values. Notwithstanding this, given the scale and ridgeline location of wind turbines necessary to harness the available wind resource, landscape change may inevitably result in some adverse landscape character effects. As the potential prominence of the proposed windfarm reduces, landscape character effects will also dissipate.

133. Based on the potential for high visual change within approximately 2 kilometres, the proposed wind farm is considered to have **moderate-high** adverse effects on landscape character. Such effects remain contained along a defined area of rural hill country which continues to support an established working rural landscape context and are not considered to be significant.

134. As distances from the wind farm increase, the size or scale of change reduces alongside the identified level of effect. Beyond distances of approximately 2 kilometres, viewing distance means that proposed

wind turbines, whilst often clearly visible become increasingly more subsumed as part of a broader rural background. The nature of topography and intervening landscape features, such as shelterbelts also often assists a further reduction in the potential prominence of wind turbines observed in these broader areas of landscape. Between approximately 2 km and 5 km this generally results in **moderate** to **low** landscape character effects which remain increasingly more embedded in their underlying rural character. Beyond about 5 km, where viewing distance, changes in landform and intervening vegetation and surrounding settlement in Eketahuna provide an increasing sense of separation from the wind farm. While turbines will remain visible over this distance, any adverse landscape character effects will typically be **low** and no more than minor, appearing increasingly absorbed as a distinct but localised element within its surrounding rural landscape.

135. In essence, where wind turbines are visible, the ongoing operation of the underlying farmland and its associated working rural character will remain apparent. The landscape will retain its sense of spaciousness, openness and relative isolation consistent with established rural activity. The wind turbines will not domesticate or industrialise the landscape in the same way as a proliferation of houses or factories. As a visible array of dynamic mechanistic structures, wind turbines will remain part of the underlying rural context, similar to other rural based infrastructure and utilities rather than imposing any inherent urban or industrial character through which rural landscape values may otherwise be diminished.

***Physical Effects***

136. Physical landscape effects result from changes to the underlying landscape fabric of the Site. Such effects principally result from earthworks, which result in changes to the existing landform and vegetation pattern of the area. Minimal vegetation clearance (typically small areas of scrub) is proposed as a part of the construction of access. As set out in above, proposed earthworks are also required to create wind turbine foundations and laydown areas as well as areas of fill. Such areas generally avoid tall / woody vegetation however some

small areas may require removal for establishing new or widening access tracks and where fill is required to tie into slopes.

137. The Turbine Exclusion Zone has been located to remain relatively well contained within the Site. The resulting earthworks generally respond to the existing contour and minimise potential for broader landform effects. This typically restricts impacts along the underlying landform so that external views are limited. Roads and wind turbine foundations follow the main and secondary ridgelines of the Site and where practicable minimise cut and benching works. Due to the steep nature of the surrounding scarps, local box cutting is proposed to remain within defined corridors and reduce external views, thereby limiting the scale of exposed fill batters extending across more visible slopes. While some earthworks areas are substantial, following completion, cut batters are generally internalised and any fill batters will be returned to pasture, mitigating longer term adverse effects on any changes in landform which is observed.

138. Based on construction, temporary effects on landform are assessed as **moderate adverse**, reducing to **low adverse** following completion and reseeding of exposed batter slopes. Effects on vegetation are **low adverse** during the construction period and **neutral** at completion.

***Visual Effects***

139. The assessment of visual effects considers the effect of visibility of the proposed windfarm on the available viewing audience. Occupiers of dwellings are assumed to have a high sensitivity to change, at the heart of a property. Effects at nearby dwellings have generally resulted in the greatest level of visual change, and therefore effect. Where visible, the proposed wind turbines typically extend well above the local landform and would generally be visible above the skyline some distance from the Site.

140. Having said that, it must be emphasised that the effect of a change in available views is not automatically adverse. This assessment also takes account of the landscape's underlying characteristics and values both within the Site and in the context of the broader undulating rural

hill country context within which the proposed windfarm would be seen. As with landscape character effects, the potential visual effects of wind turbines and other built elements and structures associated with the wind farm including transmission lines and substations are increasingly reduced with distance from the Site.

141. The scale and relationship between proposed wind turbines and their surroundings is another key consideration when assessing visual effects in the context of the rural landscape within which they are proposed. The proposed wind turbines are a different order of size to other vertical elements within this rural landscape, such as buildings and trees. Notwithstanding this, the actual size of wind turbines can sometimes be difficult to gauge accurately given the absence of any inherent scale references within their form (i.e. wind turbines of different scales typically have the same generic shape and appearance).

142. How wind turbines are perceived (and associated visual effects) is generally not proportional to their dimensions. The scale of wind turbines also influences the speed of rotation of wind turbine blades, with larger wind turbines having a slower and somewhat more graceful speed of rotation. Larger wind turbines also generate more electricity so can be a more efficient use of the landscape resource with fewer numbers of wind turbines overall and less clutter where visible in combination, all other things being equal.

143. Within the Assessment, visual effects were assessed from 36 individual properties which contain existing or potential future dwellings within approximately 2 kilometres of the Site (see **Figure 2**) and 7 Viewing Areas which contained groups of dwellings located between 2 and beyond 5 kilometres from the Site (see **Figure 3**).

144. Since the application was lodged, and in response to a relatively small number of individual submissions, I have provided a more detailed assessment of the individual dwellings within identified viewing areas and between 2 and 5 kilometres. While all possible attempts have been made to ensure the validity and accuracy of data provided, there may be instances where this is incomplete or inaccurate. This exercise identified 46 rural dwellings and 240 dwellings within the southern area

of Eketahuna within which potential views of wind turbines may occur within 5 kilometres of the Site.

145. In addition to rural dwellings, visual effects have also been assessed from within the residential area of Eketahuna, public roads and places of interest, again taking account of the specific sensitivity and magnitude of change in these specific landscape contexts.

***Wind Farm Visibility***

146. At a regional scale, the proposed windfarm remains relatively well-contained by the Tararua Ranges to the northwest and the surrounding hill country to the south and east. State Highway 2 provides the most frequented publicly accessible view towards the Site from the west. Public views are also available from the surrounding rural roads in closer proximity to the Site and more generally within 2 kilometres of the nearest wind turbine encompassing Old Coach Road and Falkner Road to the west and southwest of the Site, Opaki-Kaiparoro Road to the south and east of the Site and Hall Road and Smiths Line to the east.

147. To the west of the Site, the main ridgeline of Mount Munro is visible in combination with the comparatively lower foreground ridgetop landforms to the north-west. Views from this area include a mixture of open views from roads including parts of State Highway 2 and generally more enclosed views from dwellings most typically observed beyond a foreground of intervening rural landscape which is also frequently punctuated by vegetation. Shelterbelts, amenity planting and intervening landforms also frequently foreshorten views obtained through this general area.

148. Beyond approximately 2 kilometres to the west of the Site, the undulating nature of the Pahiatua Basin landform influences the potential for views towards the surrounding hills including to the east and towards the Site. This includes a local ridgeline which rises to the west of SH2 and reaches 325 m (B1AK). The nature of this broader folded landform results in the Site varying in prominence along the

horizon beyond successive undulating ridges which define the catchments and network of tributaries of the Mākākahi River.

149. To the east of the Site, most views are contained within the defined rural enclave of Hastwell and within part of the headwater catchment of the Kōpuaranga River. Within this area, the often convoluted and rounded grazed landforms of Mount Munro, with its lower undulating spurs and small pockets of bush in contained gullies, form defining elements of this landscape and result in a locally distinctive rural backdrop and skyline. Beyond this more localised rural basin, views generally become increasingly enclosed within valleys which extend south towards Mauriceville and continue east as folded hill country extends towards the coast.

150. More distant views towards the Site are also available from within the broader undulating Pahiatua Basin which continues towards the Tararua Range to the north-west of the Site. In this area views will occur, however they typically become more limited as a result of variation within intervening landform and because of existing shelter and amenity vegetation, including numerous established shelterbelts.

151. From within Eketahuna, buildings, vegetation and other structures within this local more built-up area often contribute to restricting wider views. Where available, visibility of wind turbines will also vary throughout the day and year in response to climatic conditions and relative to cloud cover, shadows and lighting in the sky. At times when wind turbines are more clearly visible, they will form a dynamic element along part of a broader rural hinterland, with transient and localised wider landscape effects. Proposed earthworks, once completed and grassed, will appear to be absorbed within the established working rural context of the Site.

152. Beyond 20 kilometres, very distant views towards the Site are theoretically possible from Masterton, which is over approximately 25 km away. However, any actual views were unable to be identified during site visits and any such visual effects are considered very low.

***Visual Simulations***

153. As part of the Assessment, a series of representative panoramic photographs were taken from publicly accessible and private viewpoints and used to prepare visual simulations to demonstrate the nature of the proposal in views when looking towards the Site and within its wider landscape context.

154. The selection of representative public viewpoints used to prepare visual simulations was based on the following criteria:

(a) To provide an even spread of representative viewpoints within the viewshed and from different directions towards the Site;

(b) From locations which represent a range of near, middle and long-distance views; and

(c) Specific viewpoints chosen because they are key or promoted viewpoints within the landscape, have noted visual or recreational amenity or particular cultural associations.

155. Whilst private views are also relevant in terms of visual effects, public viewpoints were principally used and provide accessible representative worst-case open views which assist with understanding potential change when viewed from surrounding areas. Whilst not universally the case, views from dwellings are more often curtailed by building location and orientation. Intervening buildings, fences and vegetation often influence the nature of views which often cannot be assessed without gaining access to private property. As part of completing the Assessment, I visited 24 private dwellings or sites of future dwellings in the vicinity of the Site for the purpose of preparing visual simulations shared with landowners and to inform a more detailed Residential Amenity Effects Assessment included in Appendix 1.

156. Photo simulations are widely recognized as providing a useful tool to understand the extent of visibility and change. Notwithstanding this, they do have limitations including those highlighted within Council's

Peer Review when endorsing the accuracy of the simulation material prepared. Photographs are necessarily taken from static fixed viewpoints rather than capturing the way people move through the landscape and the dynamic and changing nature of landscape experienced, including for this project the rotation that a wind turbine normally maintains. They are also commonly acknowledged as tending to flatten perspective and focus attention on the subject to the extent people may gain a lesser appreciation of distance and scale than would otherwise be perceived when experiencing change in the context of a broader landscape. I am very familiar with their use and limitations and their generally accepted value as a useful tool.

157. To assist with the Assessment, Visual Simulations have been prepared to convey a standard 90$^{o}$ horizontal field of view and have been reproduced as a series of panoramas which have been prepared at scale of A3 and included within a separate Graphic Supplement supporting the Assessment. During Open Days, BML provided Meridian with A0 prints of selected visual simulations which provide a comfortable reading distance (55 centimetres) and further assist understanding the magnitude of change proposed in available views, notwithstanding the above limitations.

158. The locations and photographs obtained from publicly accessible locations are included within the Graphic Supplement and as described in **Section 5** of the Assessment.

***Summary of Visual Effects***

159. Generally, within around 2 kilometres of the Site, wind turbines have potential to appear as prominent elements in views. However, in many locations, views are also restricted by intervening landform and vegetation, the latter of which particularly occurs in association with views from dwellings and within established curtilage areas. As distance from wind turbines increases, the potential for visual effects dissipates. Beyond 2 kilometres, viewing distance generally ensures the magnitude of changes no longer results in significant effects, noting some moderate-high effects at some locations. Over greater distances, around 5 kilometres from the Site, no more than low-moderate or minor

visual effects are anticipated. I have already discussed the subjective response of viewers to wind turbines.

160. Within the more detailed Residential Visual Amenity Assessment set out in **Appendix 1**, one dwelling is identified with potentially **very high** effects and three dwellings with potentially **high** effects within or associated with the Project Site. Beyond the Site, a further four dwellings are assessed as resulting in potentially **high** effects from which wind turbines will form prominent elements in primary open views. Such effects also occur within the context of a broader working rural landscape which will remain and will continue to influence the nature of effects. Other private dwellings within 2 kilometres of the Site are assessed as having potentially moderate – high to very low visual effects, dependent on the orientation and nature of available views and which also may be influenced by the responses of viewers. This range of effects also recognises that many private dwellings do not face directly towards the Site or otherwise have views screened by surrounding landform and/or vegetation.

161. Since preparing the Assessment, I have undertaken a more detailed analysis of the individual rural and residential dwellings for which visual effects may occur. This exercise updates the more generic identification of viewing areas A – G included in the Assessment and identifies a total of 50 individual rural dwellings and 240 combined dwellings within the residential areas to the south of Eketahuna from which theoretical visibility towards the Site may occur as illustrated in **Figure RG3** included with my evidence. This expanded visual effects assessment also considers the visual effects from the addresses of five submissions received within this broader area as indicated in Appendix 1. An expanded Viewing Area B containing 4 additional dwellings (B7-B10) was also identified within the Kōpuaranga Valley along Opaki-Kaiparoro Road north of Mauriceville, however no submissions were received from persons within this area with potential visual effects assessed as no more than **low-moderate** (minor).

162. For completeness, where no theoretical visibility was identified from other dwellings within 5 km, namely two dwellings along Mangaoranga Road, visual effects were assessed as very low and have been collated

together with an overall quantity of dwellings from which visual effects have been assessed set out in **Table 1** below. My more detailed assessment is set out in **Appendix 1**.

| Very High | High | Moderate -High | Moderate | Low - Moderate | Low | Very Low |
|---|---|---|---|---|---|---|
| 1 | 7 | 12 | 13 | 22 | 28 | 2 |

*Table 1: Summary of Visual Effects from individual dwellings within 5 km of the Site.*

163. Potential views towards Mount Munro from within the township of Eketahuna are most frequently curtailed beyond intervening built development and vegetation characteristic of this built-up area. Where wider panoramic are made available, they also frequently include established vegetation and structures which break the skyline in the foreground and further influence views of the Site observed on the distant rural backdrop associated with Mount Munro. The overall level of visual effects from within the residential area of Eketahuna are considered no greater than **low-moderate** (minor).

164. From roads which enable views surrounding the Site, the change in view and level of effects are similar, albeit reduced, given the transient nature, and associated lower sensitivity of this viewing audience who experience moving through this rural landscape. Notwithstanding this, some moderate effects would occur from road users along rural roads nearest the Site – namely along Falkner Road, parts of Opaki Kaiparoro Road and Smiths Line. From State Highway 2 to the west of the Site, some moderate effects may also occur albeit limited by the orientation of the road and speed of traffic. As distance increases the effects from roads similarly reduces, with users of more distant rural roads beyond approximately 3 kilometres such as Nireaha Road and the northern extent of South Road No.2 typically assessed as resulting in low visual effects.

165. From local locations of interest, the level of effects also varies – there will be no visual effects at the site of the historic Mauriceville Church as the Site remains screened by landform and intervening vegetation. Views towards the Site are available from the Anzac Bridge. Whilst

intervening landform limits the view from here, the tops of wind turbine blades will appear as dynamic elements which sweep along the skyline beyond established rural land use with low-moderate visual effects during operation.

***Effects from Aviation Safety Lighting***

166. To support the Project, a lighting assessment which includes an Assessment of Aviation Safety Lighting has been prepared by Stephenson and Turner, dated 9 September 2023 and addressed further in Mr Wright. This identifies that Civil Aviation Authority requirements means that up to 9 of the 20 wind turbines will require safety lighting. Such lighting comprises of 3 intermediate low intensity red non flashing lights (Orca L92 Low-Intensity LED Obstruction Light) at half the wind turbine nacelle height and 1 medium intensity flashing red light (Orca L550 Medium-Intensity LED Obstruction Lights) on top of the nacelle with a secondary backup light should this light fail to operate.

167. Where lighting is required, this has been designed to be directional to the extent it includes a horizontal cut off that ensures any visible lighting from dwellings below will be substantially reduced. Whilst lights may be visible, these will remain well below applicable standards and assimilate within the occupied rural character, for which lighting will not appear entirely at odds. Any low-level lighting is therefore considered to appear characteristic of, or consistent with, the low-density rural settlement within the surrounding landscape.

***Shadow Flicker***

168. Shadow flicker is caused by the rotation of wind turbine blades relative to the position of the sun. This casts intermittent shadows that appear to ‘flicker’ as the sun passes behind the wind turbine blades. Typically, this is most apparent when the shadow passes across the window of a dwelling resulting in an internal effect within an affected room. The duration of this effect can be calculated using the geometry of the wind turbine and the relative locations of the wind turbine and the resultant

viewer (i.e. through windows or similar). The likelihood of the effect occurring, and the duration and intensity of such an effect depends upon several factors:

(a) the distance of the dwelling from the wind turbine.

(b) the orientation of the dwelling relative to the wind turbine.

(c) the height and rotor diameter of the wind turbine.

(d) the time of day and time of year.

(e) the prevailing wind direction.

(f) the frequency of sunshine hours (i.e. cloud free days).

(g) the nature of the intervening terrain between the dwelling and wind turbine.

(h) the impact of any intervening vegetation and/or structures.

169. International guidelines[10] state that acceptable levels of exposure to shadow flicker are deemed to be either:

(a) Acceptable Level = 30 hours per year (modelled)

(b) Acceptable Level = 10 hours per year - actual (measured).

170. To assist an understanding of shadow flicker, the Assessment considered the extent of shadow flicker based on the likely wind turbine layout and identified timing of shadow flicker for individual dwellings where shadow flicker may occur. This identified a total of eight out-of-compliance dwellings which would potentially experience shadow flicker exposure (BML ID#, 1, 2, 6, 10, 11,12, 14, and 15).

171. When assessing the extent of modelled Shadow Flicker, the identified hours do not take account of the orientation or presence of intervening structures or vegetation around the buildings which may restrict direct

[10] Australian EPHC "National Wind Farm Development Guidelines" Draft July 2010, Technical Appendix E.

effects between wind turbines and affected dwellings. It is proposed these more detailed influences will be measured to ensure this effect complies with an acceptable actual level.

172. Assuming no on-site mitigation is undertaken by the owners of affected residences (such as drawing curtains) there are two main mitigation strategies that Meridian Energy could implement to reduce the number of hours of shadow flicker at the dwellings surrounding the Site. This could comprise a curtailment strategy where certain wind turbines can be shut off during periods of the year or the presence of intervening vegetation and structures which limit available views. This mitigation is addressed further in the evidence of Mr Faulkner and supported by Proposed Conditions SF1- SF3 to ensure identified shadow flicker limits will be met and resultant adverse effects will be addressed.

***Summary of Landscape and Visual Effects***

173. The proposed windfarm avoids any identified outstanding or significant natural landscapes or features with the nearest such areas located several kilometres from the Site and nearest turbine, resulting in no more than low and less than minor adverse effects.

174. The Site forms part of a broader working rural hill country landscape to the southeast of Eketahuna which is characterised by a larger expanse of rolling predominantly pasture covered hill country that rises to the east of the Pahiatua Basin and continues towards substantial distances towards the North Island's East Coast. In this context, the proposed layout of wind turbines will appear confined along two main ridgelines which will appear coherent within the Site's underlying north-east to south-west pattern of hills which form the transition between the Wairarapa and Tararua. The proposed layout will avoid or minimise potential effects on landform, watercourses, and vegetation and effectively retain the Site's natural patterns and processes consistent with modified farmland.

175. With respect to landscape character effects, the windfarm will have the greatest potential effects within approximately 2 kilometres of the Site, where wind turbines may appear prominent along the skyline. In this

context, the wind farm would harness the available wind resource and remain viewed in conjunction with ongoing rural activity which will continue as an enduring characteristic within this working rural landscape. The simple forms of the wind turbines and light grey colour will further assist with reducing landscape effects. It will not industrialise or domesticate the landscape and ensures farming activities will continue below the wind turbines to the extent the Site will principally retain its underlying rural character.

176. Where wind turbines are visible as dynamic elements on the skyline, the layout will follow the underlying ridgeline topography defined by the Turbine Envelope Zone. This ensures the spacing of individual wind turbines avoid or minimise perceived 'stacking' where turbine blades appear to cross or overlap and ensures wind turbines will appear logical in response to the ridgelines underlying form.

177. In perceptual terms, while Mount Munro is recognised as a locally defined rural backdrop and skyline, it is lower and a less distinctive than the landmark of Pūkaha / Mt Bruce. It is therefore comparatively less remarkable and less widely recognised with more limited aesthetic value. It is not identified as a special feature and does not appear to have any recognised associative values.

178. More broadly, Mount Munro is located adjacent to the central Pahiatua valley along which infrastructure is concentrated. While this increases visibility, it means the wind farm is located in a comparatively modified rural setting. Farmland, and the rural character derived from productive primary activities, will continue beneath the wind turbines. Wind turbines also 'harvest' a natural process consistent with surrounding productive land use. Farmland is the type of landscape in which wind farms are most readily accommodated.

179. Within approximately 2km of the Site, a relatively small number of individual dwellings have been identified with potential high and therefore significant visual effects. Beyond the Site, open private views of turbines from dwellings are considered prominent but not dominant and overbearing within the context of a broader working rural landscape which will remain. Resultant effects will also vary on account of each observer's preference and change over time, including where

subject to landscape mitigation offered by Meridian to reduce high level effects where landowner approval may be provided.

180. The prominence of wind turbines diminishes at distances between 2 km and 5 km. Viewing distance is also often combined with variations in topography and intervening landscape features, such as shelterbelts and settlement, obscuring potential open views towards the wind farm. Whilst visual effects will occur over this range of viewing distances, effects are not considered significant, albeit with some more than minor effects. At approximately 5 km and including visual effects from within more built-up areas within Eketahuna, the proposed windfarm may be visible, however visual effects dissipate and generally are no more than low-moderate (minor) as the windfarm becomes increasingly more subsumed within its broader surrounding rural landscape.

***Cumulative Effects***

181. With regard to cumulative effects, the relevant definition of effect contained in the RMA states:

> *"3 Meaning of "effect"*
>
> *In this Act, unless the context otherwise required, the term effect .... includes –*
>
> *(a) Any cumulative effect which arises over time or in combination with other effects-"*

182. Concerning wind farms and their landscape and visual effects, cumulative effects are the effects of a particular proposal in combination with those of previous lawfully established development. This depends upon the siting and design of the individual wind farms and the overall character of the landscape or landscapes in which they are sited. Potential cumulative visual effects may also be affected by the relative distance between established or consented wind farms which may be observed.

183. The locations of other wind farm sites which are either operational or consented which have been considered as part of assessing cumulative effects are as follows (see **Figure 4**):

(a) Castle Hill Wind (Consented) 13 km east;

(b) Puketoi Wind Farm (Consented) 23.7km northeast;

(c) Turitea Wind Farm (Operational) 23.2km north;

(d) Te Rere Hau Wind Farm (Operational) 31.1km north;

(e) Tararua Wind Farm (Operational) 33.8km north; and

(f) Te Apiti Wind Farm (Operational) 42km north.

184. To the east and northeast respectively, the wind farms at Castle Hill and Puketoi remain separated from the Site by the sequence of rolling hill country to the east and north-east of Eketahuna. The nearest wind farm site to the Mount Munro Site is the consented Castle Hill Wind farm site, the boundary of which is located around 13km east of the Mount Munro Site boundary. The intervening area consists of a number of complex hill and valley systems which limit the potential for views of the Site in combination or succession with the Castle Hill and Puketoi sites.

185. With respect to more distant windfarms along the Tararua Ranges, within which the nearest windfarm is over distances beyond 20 km, the ability to observe cumulative wind farm development will result in a combination of very distant successive views. Such viewing opportunities are generally limited given the surrounding landform, vegetation, and climatic conditions, ensuring the potential for any cumulative succession effects will be limited. The cumulative visual effect in combination with the proposed wind farm at Mount Munro is therefore assessed as very low.

186. Travellers in vehicles along State Highway 2 and other rural roads in the vicinity have the potential to experience sequential visual effects, of different wind farm developments, principally those developments on the Tararua Ranges, combined with the Mount Munro development.

Typically, the sequential appearance of these cumulative wind farms would be experienced as a series of closer and more distant dynamic views, within which wind turbines feature beyond a broader intervening settled and working landscape which remains characteristic of the broader Pahiatua Basin.

187. In the wider intervening rural area to the north-west of the Site and towards windfarm development along the Tararua Ranges, there are also numerous shelterbelts established along road corridors and intervening paddock boundaries. This vegetation influences the availability of potential sequential cumulative long-distance views within which potential for cumulative visual effects is considered very low.

## MEASURES TAKEN TO AVOID, REMEDY AND MITIGATE POTENTIAL ADVERSE LANDSCAPE EFFECTS

188. Recommendations with respect to landscape and visual effects, are summarised (depending on whether they are avoidance, remediation or mitigation of adverse effects) as follows:

189. Avoidance:

(a) Roadworks and earthworks associated with the construction of new access roads within the Site will be confined within identified envelope in response to the existing contour and to ensure views remain relatively limited in wider views beyond the Site. In places, due to the steep nature of surrounding scarps, local box cutting will be used to reduce external views and limit the scale of exposed fill batters extending onto more visible slopes.

(b) Wind turbine platforms will be located along gently sloping ridgelines and, where possible, in locations so that earthworks associated with the platforms will be relatively limited and generally not visible from beyond the Site.

(c) No significant indigenous vegetation will be removed as a result of land disturbance and wherever possible native plant

communities and habitats, even if not recognised as significant, will be avoided.

190. Remediation:

(a) As construction works progress, it is proposed to reinstate exposed slopes with pasture as soon as is reasonably practicable – especially those that will potentially be visible from beyond the Site.

(b) Fill sites will be married-in to the existing topography and their surfaces will generally be covered with topsoil (which will have been previously removed and stockpiled) and revegetated with pasture species already growing in the immediate vicinity of fill sites.

(c) All sites used for temporary purposes and for temporary facilities, such as for lay down areas, project offices and a concrete batching plant, will be fully rehabilitated when they are no longer required. Rehabilitation will involve earth working to restore the natural lie of the land, back filling with topsoil and revegetating as appropriate.

191. Mitigation:

(a) All wind turbines will be identical and adopt an ordered pattern along a relatively uniform sequence of ridgelines which contributes to their aesthetic coherence and will result in the proposal having a considerable measure of unity.

(b) Wind turbines will be coloured a light grey colour with a low level of gloss to reduce blade glint and assist in mitigating their visual effect when predominantly viewed against the sky.

(c) Aviation safety lights will be fitted with shields to substantially reduce the effect of the lights on night-time visual amenity values, especially when the wind farm is viewed from below, such as from roads and dwellings on the floors of valleys in the general vicinity of the site.

(d) The scale of the wind turbines and the relatively large rotor diameter in proportion to tower height ensure the wind turbines will maintain a slower and somewhat more graceful rotation speed.

(e) Permanent light sources shall include wall mounted occupancy sensor lighting and pole lighting with 3000K directional lighting designed to limit skyglow.

(f) Where actual Shadow Flicker occurs over accepted guidelines (taking account of actual effects given cloud cover and intervening structures and vegetation), the rotation of individual wind turbines will be managed including a curtailment strategy to mitigate the potential for adverse effects so that this does not exceed acceptable limits.

(g) Existing tree planting is located to the south-east of the proposed terminal substation. This should be retained and supplemented with additional buffer planting to the south-west to assist with reducing open view so the substation when approaching this site form the south along State Highway 2 to reduce transient visual effects. The requirement for this planting is as detailed in Condition WFL3.

(h) Additional boundary planting is proposed along the northern boundary of the construction laydown along Old Coach Road with the adjoining property to the north (Sec:17 Blk: IX SD MANGAONE) as detailed in Condition WLF7.

(i) For those dwellings not associated with the Project and which have been identified as obtaining open prominent views of proposed wind turbines and thereby the potential for high effects, it is noted that on-site landscape works have been offered, which include facilitating the reorientation of decks and associated living areas alongside carefully located amenity planting to soften and punctuate available views and reduce the level of effect. The uptake of this offer is dependent upon the affected landowner. This mitigation has

been offered to the following four dwellings as set out in the evidence of Mr Bowmar:

(i) (2) 48 Smiths Line;

(ii) (12) 117 Opaki Kaiparoro Road;

(iii) (18) 51 Falkner Road; and

(iv) (31) 31 Hall Road.

192. Given the characteristics of the Site and wind turbines (which mean that some landscape and visual effects cannot be avoided or remedied), with these measures I am satisfied that Meridian has committed to undertake all available and practicable mitigation.

**RESPONSE TO ISSUES IN SUBMISSIONS**

193. Comment was made about the landscape and visual effects relating to the Mount Munro Windfarm in 40 submissions. Negative comments were made in 38 submissions and positive comments in two. Broadly speaking the comments can be grouped under the following six headings which relate to potential landscape and visual effects:

(a) Loss of natural and rural character and amenity

(b) Industrialisation of the landscape

(c) Visual amenity effects

(d) Nighttime lighting effects

(e) Shadow flicker effects

(f) Colour of turbines and effects relating to glint and glare

194. In paragraphs that follow, I will address comments made about the above-listed issues in turn.

***Loss of Natural and Rural Character and Amenity***

195. Concerns relating to a loss of the existing natural and rural character and its associated amenity is explicitly raised in 10 submissions[11].

196. As described in paragraphs 126–135 above, the character of the Site is considered part of and will remain within a wider working rural landscape. The surrounding land use supports rural activity including pastoral activity and rural lifestyle opportunities. In terms of landscape values, the Site is not identified as an Outstanding Natural Landscape at either the regional or district scales. Other than interruptions during construction, existing rural use will continue and maintain an established working landscape character within which views of the existing hill country landform will remain largely intact and above which the windfarm will be highly visible and become a new characteristic part.

197. In terms of impacts on rural character, wind turbines will be more highly visible from surrounding working rural areas, particularly more open rural areas from which visibility will remain subject to variations in atmospheric changes throughout the day and year. Within the context of dwellings, views are more frequently foreshortened and enclosed within curtilage areas and in response to the local context. Following site rehabilitation, potential physical adverse landscape effects will be reduced and ensure rural land use will become effectively re-established. Landscape elements will continue to change and respond to their specific rural setting.

198. Once operational, the Site will continue to support the existing rural land use and underpinning the existing rural landscape character, within which proposed wind turbines would also often appear highly visible. The visual prominence and consequent adverse effects on rural character will gradually decrease with distance. Beyond 5 km of the Site, no more than minor effects are anticipated where wind turbines

[11] Submissions: 8: Chris Clarke; 9: Shelly Pender; 13. Hastwell Mt Munro Protection Society Inc.; 16. Jenny Clarke; 21. Charmaine Jane Semmens; 34: Glen Opel Ltd., 42. Naomi Pussell; 61. Teresa Bardella; 70. Andrew and Brigitte Sims; and 73. Gary Goombridge

are visible in the context of broader available rural views, as described further with respect to paragraphs 126–135 above.

199. During construction and once operational, there will be a degree of activity and change which will have associated adverse landscape character effects. These effects relate, in part, to perceived elements of rural character and amenity. Based on the ability to maintain the underlying working rural characteristics and values, the Assessment identifies that landscape effects will be **moderate-high** within approximately 2 km of the Site and avoid significant adverse landscape effects. Proposed mitigation includes measures to ensure adverse effects on established rural characteristics and values can be appropriately managed. In the long term the effects of wind turbines are also largely reversible, within which the major impacts of the windfarm can essentially be removed.

200. Based on the ability to avoid, remedy or mitigate adverse landscape effects, I consider the Site is appropriate for a wind farm in the context of maintaining underlying working rural landscape values. The parameters of the project can be successfully configured to fit the nature of landscape change and given this context can address any potential for significant adverse rural character and amenity effects.

201. In response to the single submission identifying concerns in relation to natural character, I note this appears to apply the concept more generically rather than identifying more specific concerns with natural character as applied to streams, wetlands and their margins to be addressed under RMA Section 6(a). Notwithstanding this, I consider any related natural character effects will also remain limited given the modified working rural context within which the windfarm is proposed and can and will be readily addressed in accordance with ecologists' recommendations.

***Industrialisation of the Landscape***

202. Concern with "industrialisation" of the landscape has explicitly been raised in six submissions12 in addition to the Cultural Values Assessment provided by Rangitāne o Tamaki nui a Rua. Whilst wind turbines are necessarily large mechanical structures which will be broadly visible from within their surrounding rural context, they also have a demonstrated ability to maintain underlying rural landscape characteristic, supported through enduring rural land use. Within this context, key rural landscape characteristics and values will largely remain intact.

203. In my opinion, "industrialisation" is not an accurate description of the proposed wind farm which has been configured to maintain the Site's ongoing rural land use and context. Industrial character is most typically associated with areas of factories and warehouses and expanses of hard stand which may otherwise remove rural characteristics. While the wind turbines are very large visible structures, the landscape will also retain its existing character derived from enduring working rural activity. Rural landscapes are a combination of the natural landform and human introduced elements. The type of rural activity and settlement patterns that overlay them are also factors which contribute to their character. In rural landscapes, natural patterns are evident and natural systems operate; however rural activities, such as pastoral farming prevail.

204. While the terminal substation may present with a somewhat more industrial or utilitarian character, it is a relatively small installation sited in a discrete location. As mechanical structures, wind turbines engage with the natural process of the wind. Wind turbines are also associated with clean energy and environmental values including climate change mitigation, in contrast to typical associations with industrial areas in which the ongoing operation of natural systems is often reduced or entirely removed.

[12] Submissions: 8. Chris Clarke; 13. Hastwell Mt Munro Protection Society Inc.; 34. Glen Opal .42. Naomi Pussell; 56. Janet McIlraith; 58. Falene Grimmer; and 61. Teresa Bardella.

***Visual Amenity Effects***

205. Concerns with adverse effects on visual amenity have been identified in 29 submissions[13]. Such concerns variably describe wind turbines as "visual pollution", "ugly", "unsightly", "destroying views" and as "a complete eyesore". Concerns with visual effects also include impacts on "presently uninterrupted views", "clean views of nature" and personification as a "picket line" and "row of dictators". A subset of these submissions raises concerns specific to the height of wind turbines[14], describing them as "massive", "monstrosities" and "giants" and often including reference to their relationship with the scale of Mount Munro. Given their scale, some submitters also identify that no amount of planting will hide them.

206. Concerns with visual effects are almost solely in relation to wind turbines. Related concerns with lighting and movement are addressed separately below. One submitter also raises concerns with the proximity of transmission lines to private homes[15].

207. Proposed wind turbines have a tip height of up to 160 metres and blade diameter of 136 metres. This represents a scale of development orders of magnitude above existing built development in this landscape and will remain visible from several kilometres from the Site. However, visibility alone does not automatically result in negative adverse visual effects. Determining the level and nature of visual effects requires engaging with how existing landscape values are understood or interpreted. In this context, the need for renewable energy and familiarity with wind turbines also influences how changes in views are perceived, comparable to the perceived need to clear forest cover to provide productive farmland.

[13] Submissions: 3. David and Mary Cook; 6. Chris Davies; 7. Dave Berry; 8. Chris Clarke; 11. Ian Maxwell; 13. Hastwell Mt Munro Protection Society Inc.; 17. Bruce Wallace; 21. Charmaine Jane Semmens; 22. Jeckobi Semmens; 30. Ian Olliver; 33. Hera Wi Repa; 34. Glen Opel Ltd.; 37. Robin Olliver; 38. Carrolyn and John Braddick; 41. Jodi Tomlin; 42. Naomi Pussell; 44. Brendon Braddick; 45. E. Hamilton; 48. Anne Braddick; 54. Gavin Osbourne; 55. Merryn Osborne; 57. Eketahuna Health Centre; 61. Teresa Bardella; 66. Cade, Wayne and Kim McDermott; 67. Andrea Sutherland; 68. Deborah Gully; 70. Andrew and Brigitte Sims; 71. Amy Sutherland Submission; and 73. Gary Goombridge.

[14] Submissions: 11. Ian Maxwell; 13. Hastwell Mt Munro Protection Society Inc.; .21. Charmaine Jane Semmens; 34. Glen Opel Ltd.; 37. Robin Olliver; 38. Carrolyn and John Braddick; 44. Brendon Braddick; 48. Anne Braddick; 49. Jess Braddick; 54. Gavin Osbourne; 55. Merryn Osborne; 61. Teresa Bardella; and 70. Andrew and Brigitte Sims

[15] Submission 13. Hastwell Mt Munro Protection Society Inc.

208. In addition to differences in perceptions which are to be considered when assessing visual effects and change, it must also be emphasised that the nature of a visual effect is not fixed or automatic and can change through time.

209. The landscape ultimately reflects the values and relationships between people and their environments. In rural landscapes, natural elements are often modified in response to their particular characteristics and values, typically to maintain or optimise a productive rural character. Familiarity may also influence the nature and response to a change in view.

210. During visits to residents within 2 kilometres of the windfarm with more open views, as identified when preparing my Residential Visual Amenity Assessment, I heard a range of other anecdotal views with respect to the nature of effects, with some noting ambivalence or even looking forward to when wind turbines would appear. This variation is consistent with research into public opinion.

211. Some submitters identify views of wind turbines will more typically occur across open areas of their farms and where observers spend most of their time. In terms of visibility, views from dwellings are more generally reduced through established curtilage planting, within which people's homes may often appear relatively contained within their open and more homogenous rural surrounds. Throughout this landscape, planting is frequently also used as shelter in response to prevailing winds and to facilitate privacy and help define outdoor rural living areas. As the 'heart' of the property from which appreciation of living on their farm or within a rural area is centred, views from curtilage areas are assessed as the most sensitive locations from which potential greater levels of effect may occur. Whilst effects from other rural areas are acknowledged, observers in such contexts are also generally occupied with or moving through the landscape or otherwise engaged in activity through which appreciation of other key rural characteristics will continue.

212. As part of addressing concerns with identified high visual effects, recommended mitigation includes offering off-site landscape mitigation entailing new or additional sympathetic planting and/or hard landscape

elements surrounding dwellings. The intent of this mitigation would be to establish or reinforce existing gardens and ameliorate the specific impacts of prominent wind turbines identified in more sensitive primary views. This mitigation arrangement requires the participation of affected landowners to enable a carefully designed landscape outcome in more sensitive views and a consequent reduction in significant visual effects.

213. In terms of visual effects, I consider that during construction and into the initial operation period, the proposed wind farm has potential to detract from a relatively small number of dwellings. Such effects are most pronounced within 2 km of the Site. Within this more locally defined area, significant effects are limited to the occupiers of eight dwellings only four of which are not associated with the Project. Meridian continues to be engaged with the occupiers of these dwellings to address visual effects as outlined in the evidence of Mr Bowmar. Beyond 2 km, and from within other closer private and public views, there will be additional visual effects. However, these are considered to result in comparatively lower and insignificant effects in the context of the ongoing rural land use which will remain.

214. Given the established rural character underpinning available views of wind turbines and related infrastructure which will remain, I consider the level and nature of adverse visual effects can be absorbed within this rural landscape and enables a small number of significant visual effects identified from nearby dwellings to be appropriately addressed. Where there are open views, these mostly comprise transient views obtained along surrounding roads and more open areas within rural landholdings. Where open views and high effects remain from identified dwellings further offsite landscape mitigation has been offered by Meridian and, if accepted by private landowners, can be expected to change as people respond to their specific landscape context. Over greater distances the magnitude of visual effect is reduced within the surrounding broader rural landscape.

215. Whilst differences in individual preference will inevitably remain, the consequent level of significant visual effects can be expected to reduce as wind turbines become established and appear increasingly integrated and familiar within their ongoing working rural context.

### *Night Time Lighting Effects*

216. Concern with effects on the night sky and most typically as a result of aviation safety lights has been identified in 12 submissions[16]. As identified in paragraph 166 above, since the Assessment was prepared, proposed lighting has been further defined by Stephenson and Turner (28 August 2024) and accompanies an assessment of environmental effects provided as part of the section 92 request and is addressed further in the evidence of Mr Wright. This ensures safety lighting will adhere to Civil Aviation Authority (CAA) Requirements and any other associated lighting during construction and at operation will not project above the horizontal and prevent spill light into dwellings.

217. Whilst additional lighting is proposed as a result of this Project, including aviation safety lights on up to nine wind turbines, measures are employed to ensure the reduction in its intensity on surrounding houses below, and that any wider effects on skyglow are minimised. In the context of ongoing low-level lighting which occurs and enabled within this working rural landscape as anticipated through planning provisions, I agree with the findings of the lighting assessment that adverse effects will be no more than minor as further detailed in paragraphs 166–167 above.

### *Shadow Flicker and Wind Turbine Movement*

218. Concern with the inherent movement of wind turbines and associated potential for flicker has been identified in 14 submissions[17]. Shadow Flicker is caused by the rotation of wind turbine blades, which cast intermittent shadows that may result in light intensity appearing to 'flicker' as wind turbine blades pass in front of the sun within the more immediate proximity of the windfarm. This effect reduces with distance as the relative proportion of the blade creating a shadow is reduced. It

[16] Submissions: 8. Chris Clarke; 11. Ian Maxwell; 13. Hastwell Mt Munro Protection Society Inc.; 17. Bruce Wallace; 21. Charmaine Jane Semmens; 34. Glen Opel Ltd.; 37. Robin Olliver; 41. Jodi Tomlin; 49. Jess Braddick; 56. Janet McIlraith; 57. Eketahuna Health Centre; and 61. Teresa Bardella

[17] Submissions: 8. Chris Clarke, 11. Ian Maxwell, 13. Hastwell Mt Munro Protection Society Inc, 16. Jenny Clarke, 34. Glen Opal, 38. Carrolyn and John Braddick, 44. Brendon Braddick, 45. Hamilton, 47. Marc Braddick, 49. Jess Braddick, 37. Robin Olliver, 67. Andrea Sutherland, 68. Deborah Gully, 71. Amy Sutherland.

is also most apparent when the shadow passes across the window of a house causing the internal intensity of light perceived to pulse or flicker.

219. As part of the Assessment, modelling was used to identify eight dwellings for which shadow flicker may exceed international guidelines and therefore may require further mitigation measures to address actual levels of effect. This process should be confirmed through updated modelling of the final wind turbine layout to ensure this will not exceed 30 hours per year and an accepted 'actual' or measured level (taking into account mitigations such as shielding by structures or vegetation) of no more than 10 hours per year at the window of any habitable room. Where necessary, shadow flicker may be reduced to meet the limit through planting, or by curtailment / shutting down any individual wind turbines during times where shadow flicker may otherwise exceed these limits. Based on the above, I consider concerns relating to adverse shadow flicker effects will be readily addressed in accordance with conditions SF1 – SF3. This is explained in more detail in the evidence of Mr Faulkner.

220. Movement of wind turbines is inherent in their nature and in response to the natural element of the wind. The layout and scale of wind turbines ensure the rotation of individual wind turbines most often appears unimpeded above the skyline. Views from Hastwell to the east would generally observe an evenly spaced array of individual wind turbines extended along the skyline, alleviating concerns with blades appearing to 'cross' or 'stack' in relation to each other when viewed from this area.

221. Whilst some perceived stacking occurs in views to the north-west, whereby wind turbines on the lower ridgeline to the north-west appear in the foreground of wind turbines along the main ridge, this does not appear to be a concern raised by submitters in this area. In a sense, the scale of the wind turbines ensures the effect of movement appears lifted up above the ridgeline in response to the more dynamic element of wind and against a backdrop of the more variable and changing sky.

***Colour, Glint and Glare***

222. In addition to shadow flicker, a number of submissions raise concerns relating to the colour of turbines and associated glare[18.] To address this issue, wind turbines are specifically proposed to be a light grey neutral matt colour (RAL 7035) designed to manage reflectivity. This neutrality of colour and elevated location is viewed above the skyline rather than views against a landform backdrop helps the wind turbines to blend more readily into their background, which most typically means set against views of the changing sky. The matt paint on the blades will have a reflectance value of less the 30% to assist in mitigating potential additional effects relating to glint and glare and reflecting sunlight, although certain lighting conditions may accentuate the light colour. Under low light conditions the off-white wind turbines tend to look grey in appearance, particularly where there is a backdrop of clouds and works to ensure no increase in potential adverse effects.

**RESPONSE TO RMA SECTION 87F LANDSCAPE REPORT**

223. I have reviewed the Section 87F report with respect to identified landscape effects, and the technical report prepared by Mr Joshua Hunt which is attached as Appendix 3 to that report.

224. The Section 87F Report authors agree that wind farms are consistent with the anticipated character of the rural environment from a regional and district plan policy perspective. The Section 87F Report also confirms that potential for any significant adverse landscape and visual effects which result from the proposed Mount Munro Wind Farm are limited to four properties within 2 kilometres of the Project, based on Mr Hunt's review.

225. To address the high (or significant) effects from these four dwellings, Mr Hunt is supportive of Meridian offering additional landscape mitigation to provide a visual buffer, whilst noting third parties must

[18] Submissions: 8. Chris Clarke, 13. Hastwell Mt Munro Protection Society Inc.34. Glen Opel Ltd., 37. Robin Olliver

ultimately decide whether they take up this offer. Mr Bowmar addresses this matter further in his evidence.

226. In terms of other landscape effects which are more than minor but not significant, I note the Section 87F Report refers to there being moderate-high adverse character effects within 4 km of the site.[19] This is inconsistent with my findings, and also with the review prepared by Mr Hunt. We agree moderate-high landscape character effects are confined to a lesser distance, i.e. within 2 km of the Project[20] and I therefore consider that the reference to 4 km may have been an error in the Section 87F Report. Beyond 2 km, I consider landscape character effects reduce from between moderate to low and become no more than minor beyond approximately 5 km as the project becomes increasingly absorbed within its wider surrounding rural context.

227. I note that as part of conducting his peer review, I accompanied Mr Hunt on a site visit to Mount Munro and its surrounding landscape on 19 June 2023. During this site visit, I shared the outputs of my 3d digital model to assist with his understanding of the proposal alongside Visual Simulations as included in the Graphic Supplement supporting the Assessment. Following this site visit, I provided a response to his Section 92 request dated 29 July 2023 in which Mr Hunt confirmed all additional information that was requested had been provided.

228. In making their recommendations, one of the gaps noted in the Section 87F report refers to the location of the concrete batching plant[21]. Through their response to information requests, Meridian has confirmed that this will not be located in the Construction Laydown Area as per condition CB4 and will likely be located along the ridgeline, where it is closest to the turbine platforms. It must be located within the Turbine Envelope Zone or Turbine Exclusion Zone. I understand that Mr Hunt shares my view that this is likely to be a minimal temporary

[19] Lauren Edwards, Joshua Pepperell and Damien McGahan – Planning Section (15 March 2024) 87F Report, paragraph 489

[20] Section 87F Report of Joshua James Hunt – Landscape (15 March 2024), paragraph 31.

[21] Lauren Edwards, Joshua Pepperell and Damien McGahan – Planning Section (15 March 2024) 87f Report, paragraph 10(f).

component of views obtained from beyond the Site and result in low visual effects which are acceptable from a landscape perspective.

229. Concerns previously raised by Rangitāne o Tamaki Nui-ā-Rua in relation to bringing turbines down off the ridgelines, and which are noted in Mr Hunt's report, have now been resolved, as discussed in paragraph 109 above and explained in the evidence of Mr Bowmar.

230. Overall, Mr Hunt's Peer Review considered my Assessment "to be well reasoned and appropriately reflects the overall degree of landscape and visual amenity effects"[22]. In reaching this conclusion, he recognises that wind farms are consistent with the anticipated character of the rural environment and considers the scale of the proposal can be readily integrated into this productive rural landscape.

231. Furthermore, Mr Hunt supports the technical accuracy of simulations in conveying representations of the scale/location of the proposed turbines. These are consistent with NZILA direction for photo simulations and provide a tool to enable professional judgement alongside assisting accurate understanding of the proposal by the wider public. He also agrees with the discussion and conclusions in relation to construction and operational lighting and has undertaken subsequent 'ground truthing' of the Harapaki Wind Farm when concurring that lighting will have an overall minor effect.

232. In response to any residual concerns with fill deposit sites and cut slopes, I note CM1 requires a landscape assessment for the fill disposal sites to be used and of the cut slopes, confirming the design is consistent with the assessment outcomes. I agree with this approach.

**CONCLUSION**

233. The proposed Site is considered appropriate for a windfarm within which the proposed Mount Munro Wind Farm development will remain well integrated within this underlying rural setting. The proposed layout of turbines will appear responsive to the undulating topography with

[22] Joshua Hunt (15 March 2024) Section 87f Report of Landscape. Paragraph 12(b).

limited views of earthworks from beyond the Site. Whilst turbines may be prominent elements from some areas, including a relatively small number of private views within 2 km of the Site, such views remain relatively localised and embedded within the context of this broader working rural landscape.

234. People's responses to landscape change are subjective and relate to the values of the landscape within which change is observed, which may also change over time. Notwithstanding this, no very high visual effects have been identified from beyond the Site. Meridian has offered landscape mitigation for the small number of most affected residences in proximity to the Site in response to identified high visual effects which may also change the degree to which wind turbines are observed in such primary views. Whether or not such offers are accepted is beyond Meridian's control.

235. Overall, I consider the project is consistent with the landscape and visual outcomes anticipated by the Tararua District Plan and Wairarapa Combined Plans and will ensure this wind farm can be effectively absorbed within this area.

## APPENDIX 1: RESIDENTIAL VISUAL AMENITY ASSESSMENT

Visual Effects from Dwellings within 5km of Nearest Wind Turbine

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **1*** | 72 Smiths Line, Eketahuna | 1.1km | Dwelling located on an elevated knoll to north-east of Mount Munro from with primary views face southeast and away from the Site. Mature trees and shelterbelt vegetation extend from the north to the southwest to the rear of the dwelling and limits available views towards the wind farm. Landowner anticipates some intervening mature vegetation will need to be removed given its age.<br><br>The wind farm Site is also visible from more open areas of the larger working farm which continues along a ridge to the north. | From curtilage areas, views towards the proposed wind farm will remain filtered and largely obscured by mature trees and shelterbelts established to the rear of the dwelling. Individual wind turbines may appear visible along the treeline and further changes in view may occur in the event mature vegetation is removed. Existing screening would be gradually replaced as shelter belts are re-established.<br><br>Earthworks to construct the ridgeline access track will remain concealed except for a localised cut to access wind turbines 13 and 14. This section of access is to be accommodated in box cutting within the Site to limit external views. | Total of 62.4 hours per year. (Wind turbines 8,9 and 10)<br><br>Occurs on 172 days per year around 4pm between May and September. Mean of 22 minutes per day. | Moderate |
| **2*** | 48 Smiths Line, Eketahuna | 1.3km | Dwelling located along north-eastern toe of Mount Munro. Primary views from living areas face north and west and incorporate open views towards the Site.<br><br>Established vegetation within this property has predominantly been maintained to enable views towards the rural backdrop of Mount Munro. A single individual deciduous tree and overhead | Views looking west from the living areas will observe wind turbines 1-12, the nearest of which will form prominent dynamic elements along the skyline. Wind turbines 13-14 are located relatively lower along the ridgeline to the north and will largely remain screened beyond intervening vegetation.<br><br>The majority of proposed earthworks will remain concealed beyond the ridgetop. A localised area of proposed cut will be visible to form access below the base of wind turbine 12, however this | Total of up to 49.8 hours per year (Wind turbines 8, 9 and 10).<br><br>Occurs on 132 days per year around 4pm between April and August. Mean of 23 minutes per day. | High |

[23] Based on MTMR_v10-01_20_WTG. Zone of influence for Shadow Flicker based on 10 x rotor diameter (1,360m).
* Indicates location of dwelling has been visited as part of confirming this assessment

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | transmission line punctuates the skyline to the west of the dwelling. | will remain below the main ridge and remain prominently screened beyond established vegetation. The existing visible landform will remain in pasture and support ongoing rural land use. | | |
| **3** | 12 Smiths Line, Eketahuna | 1.6km | Dwelling located within broader rural land holding to the east of Mount Munro with primary views appearing to face north and west but enclosed within established garden vegetation that conceals longer distance views including towards the wind farm Site.<br><br>There may be some partially screened or filtered views from the vicinity of outbuildings and other areas of this working farm. | Views of the proposed wind farm from the dwelling and its associated curtilage areas appear to remain concealed by existing intervening vegetation and would result in no apparent visual change. In the event existing vegetation is removed, wind turbines 1-14 may appear visible along the main ridgeline not currently observed. Wind turbines 15-20 along the lower western ridgeline would remain concealed.<br><br>With the exception of a local area of box cut supporting access to wind turbines 13 and 14 to the lower northern end of Mount Munro, no views of proposed earthworks would occur with tracks and wind turbine foundations remaining concealed within the existing landform within the Site. Any views of the larger Site would continue to support ongoing pastoral land use. | No shadow flicker effects identified | Low - Moderate |
| **4** | 2219 Opaki Kaiparoro Road, Eketahuna | 2 km | Dwelling located to the east of Mount Munro with primary views facing north-east away from the proposed wind farm and partially enclosed within established garden vegetation.<br><br>Potential long-distance views appear to occur from the north-west side of the dwelling and the adjoining driveway. | Secondary views of wind turbines 1 -14 would likely be visible as an ordered array of dynamic structures along the skyline in long distance views. From this location, parts of the tips of wind turbines 19 and 20 are also visible above the top of the intervening ridgeline.<br><br>Earthworks within the Site would remain obscured by the intervening landform with the exception of part of the access track beneath wind turbine 12. The larger landholding | No shadow flicker effects identified | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | | surrounding the proposed wind turbines will continue to support ongoing pastoral land use. | | |
| **5** | 2310 Opaki Kaiparoro Road | 1.7km | Dwelling located to the south- east of Mount Munro with primary views appearing to face east away from the wind farm. Rear views to the north-west appear to encompass a backdrop which encompass part of the broader Mount Munro backdrop which will include the wind farm Site. Potential views are punctuated by intervening vegetation and outbuildings to the north-west. Access was not provided to this dwelling to confirm views. | Partial and open long-distance views of wind turbines 1 – 7 would likely be visible in long distance views and form an ordered array of dynamic structures along the skyline to the rear of the dwelling. Views of wind turbines 8-14 to the north-west appear to be partially screened by intervening vegetation which reduces the extent to which the larger wind farm will remain apparent.<br><br>With the potential exception of a local area of box cut and fill supporting access to wind turbines 13 and 14, proposed earthworks would remain concealed within the existing landform with the Site. The larger landholding surrounding the proposed wind turbines would continue to support ongoing pastoral land use. | No shadow flicker effects identified | Moderate - High |
| **6*** | 73 Hall Road, Eketahuna | 950m | Dwelling located along the eastern toe of Mount Munro. Primary view face northeast away from the Site with rear views primarily contained within established planting which encloses the garden. Views towards the Site remain available from curtilage areas including the driveway and from larger working areas of the farm. | Views from much of the curtilage area will remain screened by intervening garden planting and shelterbelt trees. Some rear views between intervening vegetation from curtilage areas will enable prominent views of individual wind turbines above the ridgeline to the west. Open views will also be available from other areas of the farm.<br><br>Proposed earthworks will remain concealed within the existing landform with the Site. The larger landholding surrounding the proposed wind turbines will continue to support ongoing pastoral land use. | Total of up to 100.5 hours per year (Wind turbines 2,3,4,5 and 6).<br><br>Occurs during 212 days per year around 4pm between February and October for a mean of 29 minutes per day. | High<br><br>(Within Project Site) |
| **7** | 2420 Opaki Kaiparoro | 1.5km | Dwelling located to the south-east of Mount Munro with primary views | Views of the proposed wind farm from the dwelling and its associated curtilage areas | No shadow flicker effects identified | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | Road, Eketahuna | | appearing to face east within an established garden. Vegetation in the rear garden to the north of the dwelling combined with intervening shelter belts to the west appear to limit other available views from the dwelling and associated curtilage areas. | appear to remain largely concealed by existing intervening vegetation. Individual wind turbines may appear visible in rear views through gaps between vegetation, or the event existing vegetation is removed. Wind turbines 15-20 along the lower western ridgeline will remain concealed.<br><br>No potential earthworks will be visible. Any views of the larger landholding supporting the wind turbines will continue to support ongoing pastoral land use. | | |
| **8*** | 2472 Opaki Kaiparoro Road, Eketahuna | 1.2km | Dwelling to the south-east of Mount Munro with primary views facing northeast through gaps in established vegetation. The east facing slopes of Mount Munro are not generally visible on account of mature vegetation established to the rear of the Site and which encloses curtilage areas. | Possible views of the tops wind turbines 1-4 may occur from parts of the curtilage area. Such views would remain largely filtered by intervening vegetation and limits the extent to which changes are observed.<br><br>No potential earthworks will be visible being contained within the landform of the Site. | Total of up to 11.3 hours per year (Wind turbine 1).<br><br>Occurs during 37 days per year around 3pm in the middle of winter. Mean of 18 minutes per day. | Low - Moderate |
| **9** | 310 Opaki Kaiparoro Road, Eketahuna | 970m | Dwelling located to the south-east of Mount Munro from which primary views appear to face southwest and away from the wind farm. Views towards the Site are primarily obscured by intervening roadside vegetation and mature shelter belts on the opposite side of the road. | Oblique potential views towards wind turbines 1 – 8 will remain obscured by intervening roadside shelterbelts.<br><br>No earthworks will be visible within the Site. | No shadow flicker effects identified | Low - Moderate |
| **10*** | 174 Opaki Kaiparoro Road, Eketahuna | 680m | Dwelling recently upgraded with new living areas constructed to the south-west of Mount Munro. Primary views to the north and west remain relatively well contained within established pine trees. The dwelling is arranged in separate | Dwelling set back from the roadside and property boundary established with existing shelterbelt vegetation which largely restricts existing external views. Possible partial views of wind turbines 1, 2 and 3 and the upper part of wind turbine 4 where there are gaps through existing | Total of up to 105.3 hours per year (Wind turbines 1,2,3 and 4).<br><br>Occurs during 193 days per year before 8am between | Moderate -High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | pods which require occupiers to regularly move between buildings across the curtilage area of the Site. | intervening vegetation and in the event existing vegetation is removed. Potential longer distance views towards wind turbines 15 – 20 remain relatively low along the more distant skyline and predominantly screened by intervening vegetation. | September and March. Mean of 33 minutes a day. | |
| **11*** | 152 Opaki Kaiparoro Road, Eketahuna | 670m | Dwelling to south-west of Mount Munro with primary views facing north-west away from the Site and towards part of the Tararua Ranges observed along the alignment of Opaki Kaiparoro Road. Open rear views of southern part of Mount Munro from driveway approaching dwelling with rear views from dwelling remaining partially obscured by intervening vegetation. | Primary views from dwelling are in opposite direction of wind farm and therefore remain largely unchanged. When approaching the dwelling along the driveway and through gaps in vegetation, wind turbines 1 and 2 will appear as prominent structures along the skyline of the adjoining rural backdrop. The remaining wind turbines within the wind farm will remain concealed by established boundary vegetation.<br><br>No earthworks will be visible within the Site. | Total of up to 79 hours per year (Wind turbines 1,2,3 and 4).<br><br>Occurs during 79 hours per year before 8 am between September and March.<br><br>Mean of 28 minutes per day. | Moderate -High |
| **12*** | 124 Opaki Kaiparoro Road, Eketahuna | 1.1km | Small dwelling 'The Cottage' with primary views looking north-west and overlooking an upper tributary along the Makākahi River. Oblique open views are available from a side window looking north-east towards the wind farm. | Primary views from dwelling overlooking the Makākahi River will remain unchanged. Oblique open views to the northeast will observe wind turbines 1-11 along the skyline of the main ridge alongside partial views of wind turbines 15-20 forming an overlapping cluster to the right over greater distances. The larger array of wind turbines may appear prominent as part of this secondary rural outlook.<br><br>No earthworks will be visible within the Site. | Total of up to 38.4 34 hours per year (Wind turbines 1 and 2).<br><br>Occurs during 100 days per year before 7 am between November and January. | Moderate - High |
| **13*** | 117 Opaki Kaiparoro Road, Eketahuna | 1.2km | Dwelling located to the west of Mount Munro within enclosed rural valley which extends along Falkner Road. Primary views from dwelling look northeast towards the wind farm Site and south-west along the alignment of | Primary views from the dwelling will observe the majority of the proposed wind farm which will appear as prominent dynamic structures along the skyline. Parts of wind turbines 13,14 and 20 will be obscured beyond the intervening landform. | No shadow flicker effects identified | High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | Opaki Kaiparoro Road towards the Tararua Ranges.<br><br>Farm sheds and mature vegetation punctuates parts of the Mount Munro ridgelines | No earthworks will be visible within the Site. | | |
| **14*** | 171 Opaki Kaiparoro Road, Eketahuna | 775m | Dwelling located on an elevated knoll within the confines of the wind farm with primary views to the west and north. Views typically enclosed within an established garden setting with open views from the side of the dwelling also available including from the north facing washing line. | Primary views to the west will remain contained within established garden areas. Open side views will observe wind turbines 6-14 extending along the main ridgeline. To the left of this wind turbine 15 will appear prominent on the western ridgeline to the left of partial views of wind turbines 16-20 which appear to overlap as they continue to the north.<br><br>Oblique rear views towards the nearest wind turbines 1-5 will remain partially obscured beyond established vegetation. | Total of up to 77.8 hours per year (Wind turbines 1,5,6 and 15).<br><br>Occurs on 197 days per year between October and February around 7am and in the middle of winter around 9am. Mean of 24 minutes per day. | High<br><br>(Within Site) |
| **15*** | 85 Old Coach Road South, Eketahuna | 625m | Dwelling located on an elevated spur which extends between the ridgeline areas where wind turbines are proposed. Living areas associated with this dwelling face west towards the Tararua Range in the distance and north overlooking the Site. | Long distance views to the west will remain unchanged. Secondary views from north facing living areas will observe open near distance views of wind turbines which continuing along the main ridgeline to the east. The nearest wind turbines (wind turbines 15 and 5-7) will from dominant elements in the view within a larger surrounding wind farm.<br><br>During construction, areas of earthworks will extend along and below the ridgetop visible from this elevated location. Where visible, the larger wind farm will form a dominant characteristic in middle distance views for much of this northern aspect. | Total of up to 36.6 hours per year (Wind turbines 6,7 and 8).<br><br>Occurs on 93 days per year between September and November and January and March around 7am. Mean of 24 minutes per day. | Very High<br><br>(Within Site) |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **16*** | 136 Falkner Road, Eketahuna | 915m | Dwelling located to the west of Mount Munro within a working dairy farm. Views from dwelling are largely enclosed within established garden planting which extends to the east with secondary more open views looking to the north and from south facing bedrooms.<br><br>Some open views are also available the larger working rural land holding. | Views east towards proposed wind turbines will remain contained by established intervening vegetation. Oblique views from the southern side of the dwelling and parts of the curtilage area will observe prominent views of wind turbines 15-17 along the western ridgeline and in the foreground of the larger array of wind turbines 1-12 along the main ridgeline.<br><br>Proposed earthworks associated with access to the Site extend below wind turbines 18-20 observed from this dwelling and remain concealed. | Total of up to 25.6 hours per year (Wind turbines 16 and 17).<br><br>Occurs on 76 days per year between November and January prior to 7am. Mean of 20 minutes per day. | Moderate - High |
| **17*** | 114 Falkner Road, Eketahuna | 985m | Dwelling is located to the west of Mount Munro with primary views facing north and east, including filtered views towards the wind farm through vegetation established along the road frontage.<br><br>Some open views are also available the larger working rural land holding. | Existing garden and roadside vegetation typically punctuate and break up the skyline of the larger Mount Munro ridge from the dwelling along which the wind farm and limits the extent to which the Site forms a primary focus of the view.<br><br>Where visible, individual wind turbines may appear prominent, however established planting also contributes to foreshortening and breaking up larger views of the wind farm and limits the overall observed magnitude of change.<br><br>Proposed earthworks associated with access to the Site extend below wind turbines 15-19 and may be observed in partial views through gaps between established plantings. | No shadow flicker effects identified | Moderate - High |
| **18*** | 51 Falkner Road, Eketahuna | 1.1km | This dwelling is located to the west of Mount Munro with primary views facing south-west and framed by mature vegetation.<br><br>Rear open views to the south-east of the dwelling also face towards the Site and overlook low level hedging, | Oblique partial views and open rear views of wind turbines 15-20 will appear prominent along the skyline of Mount Munro. Beyond this, the larger array of wind turbines 1-10 will appear along the main ridgeline. Possible views of blade tips of wind turbines 11 and 13 wiping beyond landform will also appear in this view. | Total of up to 18.6 days per year (Wind turbine 20).<br><br>Occurs on 54 days per year during January and November before | High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | including views from the vicinity of the washing line. | Earthworks associated with the Site access and wind turbines 16-19 along the skyline will also reveal an initial raw worked appearance before being re-established in pasture and assimilated in the working rural nature which remains evident in this view. | 7am. Mean of 20 minutes a day. | |
| **19*** | 32 Falkner Road, Eketahuna | 1.2km | Dwelling located to the north-west of Mount Munro. Primary views from the dwelling face east and north of the wind farm with oblique views remaining enclosed by mature garden vegetation which will continue to partially obscure long-distance views towards the Site. | Primary views from dwelling will remain largely enclosed within an established garden setting beyond which partial long- distance oblique views of wind turbines will appear visible along the skyline. Where visible wind turbines 15-20 will appear relatively larger along the lower western ridge with wind turbines 1-12 visible beyond these along the main ridgeline. Partial views with a wiping action of wind turbine blades for wind turbines 12-14 may also be visible beyond the intervening landform.<br><br>Areas of earthworks associated with the access and wind turbines 16-19 may also be visible, however these are typically obscured by garden vegetation which encloses the dwelling. | No shadow flicker effects identified | Low - Moderate |
| **20** | 84743 State Highway 2, Eketahuna | 1.5km | Dwelling established along an elevated terrace to the west of the Makākahi River and north-west of Mount Munro. Primary views from dwelling appear to face northwest in the opposite direction of the Site, with rear views appearing to remain largely enclosed within mature garden vegetation and other planting which continues along the margins of the Makākahi River. | Primary views from dwelling appear to remain largely enclosed by intervening vegetation established in the rear garden and continuing along the margins of the Makākahi River. In this context, potential long distance rear views towards proposed wind turbines appear to remain filtered through gaps in established planting and reduce the overall extent of visual change.<br><br>Earthworks associated with access into the Site would similarly remain obscured by intervening vegetation with proposed earthworks necessary | No shadow flicker effects identified | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | | to access the Site otherwise visible from this area. | | |
| **21*** | 168 Old Coach Road, Eketahuna | 660m | Dwelling located along the western toe of Mount Munro. Primary views from dwelling face northwest and away from the Site. There are potential rear east facing views from curtilage areas. | Primary views look in the opposite direction of the Site and will not therefore change. Possible oblique prominent views towards wind turbines 18 – 20 above the adjoining ridgeline and north of wind turbines 15-17. Beyond these, wind turbines 5 ad 6 may be visible along the head of a local gully with parts of wind turbines, 4-12 forming wiping along the summit of the ridgetop visible from this area. | No shadow flicker effects identified | High<br>(Within Site) |
| **22** | 103 Old Coach Road, Eketahuna | 1.1km | Dwelling located to the north-west of Mount Munro. Primary views appear to face north and west away from the Site. Existing views to the south and south-east appear to be obscured by a mature shelterbelt which encloses the dwelling. | Existing primary views are not expected to change. Potential rear views appear to remain concealed beyond established vegetation which will continue to screen wind turbines along the skyline. Areas of earthworks along the secondary access track and associated with wind turbines 18 and 19 along the lower western ridgetop which may otherwise appear visible remain similarly concealed. | No shadow flicker effects identified | Low - Moderate |
| **23** | 56 Old Coach Road, Eketahuna | 1.5km | Dwelling located to north-west of Mount Munro along terracing above the Makākahi River. Primary views appear to face south-east towards the northern extent of the larger wind farm. A semi-mature shelter belt extends to the south of the dwelling and limits potential south facing views. Established vegetation along the roadside boundary and opposite side of the road provides some further established screening to the east. | Potential oblique partial views from eastern windows of the dwelling may observe part of the larger array of wind turbines along the skyline to the south of a sequence of low elevated hills. Wind turbines 15- 20 would appear relatively larger along the lower western ridge against a broader backdrop of wind turbines 1-20 along the main ridgeline in long distance views.<br>Some earthworks may also be visible in association with the secondary access and wind turbines 18 and 19 near the ridgetop. | No shadow flicker effects identified | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **24** | 47 Old Coach Road, Eketahuna | 1.5km | Dwelling located to the north-west of Mount Munro. Primary views from dwelling appear to face southwest, towards the Site, however these appear to remain predominantly screened by existing shelterbelt vegetation. | The dwelling's enclosure within mature vegetation appears to limit any potential long-distance views towards the Site and thereby minimise the potential for any visual change. From other areas of this working farm and in the event existing intervening vegetation is removed, views of wind turbines 1 – 14 may be visible along the skyline in long distance views.<br><br>Some potential earthworks may also be visible in associated with the main access into the Site and in the vicinity of Wind turbines 12 and 19 along the ridgetop. | No shadow flicker effects identified | Low - Moderate |
| **25**<br><br>**(C13)** | 85151 State Highway 2, Eketahuna | 2.4km from wind turbines, 300m from transmission line corridor | Dwelling located to the south-west of Mount Munro and accessed SH2. Primary views from this dwelling appear to face northwest and remain largely enclosed within a mature framework of vegetation. | Potential views of the proposed wind farm remain obscured by landform. However, this dwelling has potential views from the southern side towards the proposed transmission line however vegetation along the southern boundary of the property likely screens these views. | No shadow flicker effects identified | Low |
| **26**<br><br>**(C14)** | 85237 State Highway 2, Eketahuna | 3km from wind turbines, 200m from transmission line corridor and 300m from substation | Dwelling located to the south-west of Mount Munro and east of the substation proposed on the opposite side of SH2. Primary views from this dwelling appear to face northeast and remain largely enclosed within established vegetation which buffers views along SH2. | Potential views from the dwelling toward the wind turbine sites occur in very long distances and appear to be largely screened by intervening vegetation. This dwelling is approximately 200m south-west of the proposed transmission line corridor and 300m from the proposed substation location on the opposite side of the road. Views of the substation have an ability to remain concealed by existing vegetation. Existing vegetation and local landform north of the dwelling screens views towards the transmission line. | No shadow flicker effects identified | Low |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **27 (C15)** | 85274A State Highway 2, Eketahuna | 3.5km from wind turbines, 300m south of substation, 850m south of transmission line corridor. | Dwelling located to the south-west of Mount Munro and west of SH2. Primary views from dwelling appear to face southeast and remain well enclosed within mature garden vegetation. | Views from the dwelling toward the proposed wind farm appear to remain screened by existing garden and shelterbelt vegetation. This vegetation will also screen views from the dwelling towards the proposed substation and transmission line. | No shadow flicker effects identified | Low |
| **28 (C16)** | 85289 State Highway 2, Eketahuna | 3.4km from turbines, 450m to substation, 830m from transmission line corridor. | Dwelling located to the south-west of Mount Munro and east of SH2 with primary views facing northeast towards the proposed wind farm in very long-distance views. Transmission lines and the substation are also visible in closer proximity straddling SH2. | Very long-distance views of wind turbines remain partially obscured beyond the intervening landform to the south of Opaki Kaiparoro Road. This property will also have views to the north towards the transmission line which will be partially screened by intervening vegetation. Oblique views will be possible towards the substation, which will be partially screened by an existing shelterbelt to the east. | No shadow flicker effects identified | Low - Moderate |
| **29** | Land owned by Glen Opel | 1.5 km closest wind turbine to boundary distance | Consented subdivision, however, lots are unbuilt. Where there are existing or anticipated dwellings within this area, these have been separately assessed below. | A series of open and partial views towards the main ridgeline may be available from within these lots. As a result, there may be a range of potential visual effects, the scale of which is dependent on the location and orientation of viewer and intervening planting to be established in associated curtilage areas. Given the absence of such development from which effects can be understood assessed, the level of effect is unable to be determined. | No shadow flicker effects identified | N/A |
| **30** | 18 Hall Road | 1.65 km | Land to the east of Mount Munro with no permanent dwelling yet. Temporary dwelling located within existing shed | The orientation and establishment of curtilage areas of a future permanent dwelling will affect the potential magnitude of visual change. | No shadow flicker effects identified. | Moderate -High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | within the Site, Views assessed from the road only. | Existing views towards the Site are punctuated by mature shelter belts beyond which views of wind turbines 5-14 would be visible along the main ridgeline. Wind turbines 15-20 will remain concealed beyond the main ridgeline.<br><br>Proposed earthworks will remain concealed within the existing landform with the Site. The larger landholding supporting the wind turbines will continue to support ongoing pastoral land use. | | |
| **31*** | No address<br><br>Hall Road | 1.4km | New house recently delivered with living areas facing north-east, North facing bedroom window with open view of ridgeline. Mature shelter belts surround this rural property with no established curtilage areas or planting surrounding the dwelling. | Proposed wind turbines 1-14 would appear prominent as an ordered array or dynamic structures visible along the adjoining skyline. The lower parts of wind turbines 11-14 will appear partially obscured by intervening trees which punctuate the skyline. Wind turbines 15-20 along the lower western ridgeline will remain entirely concealed.<br><br>Proposed earthworks will remain concealed within the existing landform with the Site. The larger landholding supporting the wind turbines will continue to support ongoing pastoral land use. | No shadow flicker effects identified. | High |
| **32** | 18A Hall Road<br><br>Hall Road | 1.6 km | Caravan and temporary accommodation adjoining site of future dwelling, the location and orientation of which is yet to be confirmed.<br><br>Recent planting established along parts of the boundary of the Site with no established curtilage areas or planting surrounding a future site of the dwelling. | The orientation and establishment of curtilage areas of the permanent dwelling will affect the potential magnitude of visual change.<br><br>From the existing curtilage of the temporary dwelling there are open views towards the main ridgeline along which wind turbines 1 - 14 will be visible as an ordered pattern along the skyline. The lower parts of wind turbines 1-3 will likely be partially obscured by intervening trees which | No shadow flicker effects identified. | Moderate - High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | | punctuate the skyline with. Wind turbines 15-20 obscured beyond the main ridgeline.<br><br>Proposed earthworks will remain concealed within the existing landform with the Site. The larger landholding supporting the wind turbines will continue to support ongoing pastoral land use. | | |
| **33** | 18C<br><br>Hall Road | 1.6 km | No dwelling yet (but containers visible on site). | The orientation and establishment of curtilage areas of a future permanent dwelling will affect the potential magnitude of views.<br><br>Views from open areas of Site observe the ordered array of wind turbines 1-14 along the skyline.<br><br>Beyond this, wind turbines 15-20 will remain obscured beyond the main ridgeline.<br><br>Proposed earthworks will remain concealed within the existing landform with the Site continuing to support ongoing rural land use. | No shadow flicker effects identified. | Moderate -High |
| **34*** | (No address) Old Coach Road | 1.1km | Dwelling under construction facing primary views to the north-west along the Makākahi River.<br><br>Rear views towards the Site are partially obscured by intervening roadside vegetation beyond which parts of the Site are visible. | The primary views from the dwelling to the north-west along the Makākahi River will remain unchanged.<br><br>Rear views of wind turbines 18-19 and 15-17 will be visible along the hill backdrop beyond roadside vegetation which punctuates the skyline. Beyond this, partial views of wind turbine blades 1-14 may also be visible through intervening roadside vegetation. The larger landholding surrounding the proposed wind turbines will continue to support ongoing pastoral land use. | No shadow flicker effects identified | Moderate -High |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **35*** | Old Coach Road | 930m | No dwelling yet, however building platform orientated to face northwest along the Makākahi River.<br><br>Some established and more recent planting is established along the toe of the adjoining hillside in rear views. | The primary views from the building platform are focused to the north-west along the Makākahi River and will remain unchanged. Rear views of wind turbines 18-20 will appear prominent along the skyline with partial views of wind turbines 1-14 visible beyond this. will be visible along the hill backdrop.<br><br>Earthworks associated with the secondary access and wind turbines 18 and 19 along the ridgetop may also be visible. The larger landholding surrounding the proposed wind turbines will continue to support ongoing pastoral land use.<br><br>To the south of the Site along Old Coach Road, the laydown area and permanent Services / Operations Building will be visible adjoining the Site. | No shadow flicker effects identified | Moderate - High |
| **36** | 22 Bowen Road | 2.2km | Dwelling to east of Mount Munro. Primary views face south-west with the proposed wind farm visible in long distance oblique views. Views to the north-west towards the Site are predominantly screened by intervening garden and roadside vegetation.<br><br>The Site is also visible from more open areas of the working farm. | From curtilage areas, the proposed wind farm will remain largely concealed beyond intervening vegetation. Proposed wind turbines at the southern end of Mount Munro (Wind turbines 1-5) may be visible in long distance oblique views with the majority of wind turbines to the north of the main ridge remaining obscured beyond intervening vegetation.<br><br>Earthworks are not generally visible. A localised area of earthworks below wind turbine 12 will be concealed beyond intervening vegetation from this dwelling. The larger landholding surrounding the proposed wind turbines will continue to support ongoing pastoral land use. | No shadow flicker effects identified | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **A1** | 97 Bowen Road, Eketahuna | 1.9km | Dwelling located near the valley floor west of Bowen Road to the east of Mount Munro. | Views to the north-west towards the Site are partially screened by vegetation within the property and the landform of the adjoining Bowen Hills. Potential partial views of wind turbines 3 - 11 filtered through intervening vegetation. | | Low-Moderate |
| **A2** | 134 Bowen Road, Eketahuna | 1.9km | Dwelling located near the valley floor east of Bowen Road to the east of Mount Munro. | Views facing north-west towards the Site are predominantly screened by the intervening landform of the Bowen Hills and substantial mature vegetation surrounding the dwelling. | | Low |
| **B1** | 455 North Road, Mauriceville | 2.1km | Dwelling located on a valley floor to the south of Mount Munro. | Views to the north towards the Site are screened by the elevated landform and vegetation west of the dwelling between Mt Munro Road and North Road. | | Low-moderate |
| **B2** | 423 North Road, Mauriceville | 2.2km | Dwelling located on a valley floor to the south of Mount Munro. | Views to north towards the Site are largely screened by the elevated landform to the north and north-west of the dwelling between Mt Munro Road and North Road. | | Low |
| **B3** | 404 North Road, Mauriceville | 2.4km | Dwelling located on a valley floor to the south of Mount Munro. | Views to the north towards the Site are predominantly screened by vegetation to the north of the dwelling and along North Road. | | Low-moderate |
| **B4** | 329 North Road, Mauriceville[24] | 2.8km | Dwelling located along the toe of an elevated spur to the south of Mount Munro. | Views to the north towards the Site are partially screened by the elevated landform to the north of the dwelling and west of North Road. | | Low - moderate |
| **B5** | 340 North Road[25] | 2.9km | Dwelling located on an elevated spur to the south of Mount Munro. | Views to the Site appear open with wind turbines visible in long distance views. | | Moderate - high |
| **B6** | 222 North Road, Mauriceville | 3.8km | Dwelling located on a valley floor to the south of Mount Munro. | Dwelling faces north, from which potential open long distance views facing north towards Wind turbines 1-12 are visible. | | Moderate |

[24] Submission 70. Andrew and Brigitte Sims.

[25] Submission 17. Bruce Wallace.

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **B7** | 2024 Opaki-Kaiparoro Road | 3.8 km | Dwelling located near the valley floor to the east of and south-east of the windfarm. | Views from dwelling appear focussed to the north and wet with long distance views towards the Site partially obstructed by out buildings and mature vegetation in the direction of the Site. | Nil | Low - moderate |
| **B8** | 10 Station Road | 4.0 km | Dwelling located near the valley floor to the west of the Kōpuaranga River and to the south-east of the windfarm | Views from dwelling appear focussed to the west and north and partially obscured by out buildings to the north-west and intervening landform in the direction of the Site. Potential for partial views of wind turbines 7-13 appear obstructed by established vegetation along the Kōpuaranga River. | Nil | Low |
| **B9** | 19 Mangamahoe Road | 4.5 km | Dwelling located near the valley floor, east of the Kōpuaranga River and to the south-east of the windfarm. | Views from the dwelling appear to face south and remain enclosed within surrounding mature vegetation which appears to obscure any potential views towards the Site. | Nil | Low |
| **B10** | 1881 Opaki-Kaiparoro Road | 4.5 km | Dwelling located near the valley floor near the Kōpuaranga River and south-east of the windfarm | Views from dwelling appear enclosed within surrounding curtilage planting which obscures potential views towards the Site. | Nil | Low |
| **C1** | 31 Opaki-Kaiparoro Road, Eketahuna | 1.9km | Dwelling located to the west of Mount Munro. The dwelling is surrounded by elevated landform in its immediate context. | Views towards the Site are largely screened by an elevated knoll to the east of the dwelling and west of Mount Munro and mature vegetation established surrounding the dwelling. | Nil | Low |
| **C2** | 17 Opaki-Kaiparoro Road, Eketahuna | 2km | Dwelling located to the west of Mount Munro with its immediate context surrounded by elevated landform. | Views towards the Site are predominantly screened by the surrounding vegetation and the elevated knolls north and north-east to the dwelling. Potential partial views of wind turbine 15-20 the north-west of the Site however these appear predominantly concealed by mature intervening vegetation. | Nil | Low - moderate |
| **C3** | 13 South Road No 2, Eketahuna | 2.3km | Dwelling located on the lower slopes to the south of South Road No 2 and west of Mount Munro. | Views towards the Site are largely screened by vegetation within the property, elevated landform to the north of the dwelling and elevated knoll west of Mount Munro. Potential views towards | Nil | Low-moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | | the wind turbines through gaps between vegetation. | | |
| **C4** | 16 South Road No 2, Eketahuna | 2.5km | Dwelling located to the west of Mount Munro. To the northeast of the dwelling is characterised by undulating topography and established shelter and amenity planting. | Views facing from the dwelling are predominantly enclosed within the vegetation in the immediate surround of the dwelling. Potential views towards the Site appear to be concealed by intervening vegetation. | | Low-moderate |
| **C5** | 43 South Road No 2, Eketahuna | 2.6km | Dwelling located on the plains to the west of Mount Munro. | Views towards the Site are predominantly screened by the vegetation to the south-east of the dwelling and along South Road No 2. | | Low |
| **C6** | 19 Morgans Road, Eketahuna | 3.3km | Dwelling located on the plains to the west of Mount Munro. Views from dwelling appear to focus north and west towards the Tararua Ranges. | Views towards the north and southern part of the Site are partially screened by mature vegetation to the south-east of the dwelling. Views facing east towards the Site from the dwelling partially obstructed by outbuildings and intervening vegetation. | Nil | Moderate |
| **C7** | 36 Morgans Road, Eketahuna | 3.6km | Dwelling located on the plains to the west of Mount Munro and appear to be enclosed within surrounding vegetation. | Views towards the Site are predominantly screened by mature vegetation within the property. | | Low |
| **C8** | 54 Morgans Road, Eketahuna | 3.7km | Dwelling located on the plains to the west of Mount Munro with a generally flat topography in its immediate context. | Views towards the Site appear to be largely screened by shelterbelt immediately south of the dwelling and vegetation at the nearby properties. Potential partial views towards the Site from views facing east. | Nil | Low - moderate |
| **C9** | 76 Morgans Road, Eketahuna[26] | 4km | Dwelling located on the plains to the west of Mount Munro. The topography in its immediate context is generally flat with substantial vegetation enclosing the dwelling. | Views from dwelling appear to be focussed to the west towards the Tararua Range. Views facing east and south-east from the dwelling towards the windfarm appear partially enclosed within amenity vegetation surrounding the dwelling. The 110kv overline is located east of this dwelling and | Nil | Low |

[26] Submission 42. Naomi Pussell

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | | in the foreground of any available views towards the Site. | | |
| **C10** | 98 Morgans Road, Eketahuna | 4.1km | Dwelling located on the plains to the west of Mount Munro. The immediate surrounds of the dwelling are characterised with a generally flat topography. | Views from dwelling appear to be focussed to the west towards the Tararua Range and east across adjoining farmland. Views towards the windfarm to the east appear largely screened by vegetation surrounding the dwelling and established along adjoining sections of Morgans Road. | | Low |
| **C11** | 133 Morgans Road, Eketahuna | 4.4km | Dwelling located on the plains to the west of Mount Munro. The curtilage area surrounding the dwelling is characterised with a generally flat topography and substantial shelter planting to the east. | Views from dwelling appear to be focussed to the west towards the Tararua Range. Views facing east and southeast towards the windfarm appear enclosed within vegetation in the immediate surround of the dwelling. | | Low |
| **C12** | 155 Morgans Road, Eketahuna | 4.6km | Dwelling located on the lower slopes of a spur to the west of Mount Munro. Views from dwelling appear to focus south and east towards the windfarm | Potential views to the east towards the windfarm appear to the partially obscured by outbuildings and mature vegetation established in proximity to the dwelling. | | Low-Moderate |
| **C17** | 85354 State Highway 2 | 3.9km | Dwelling located on the rural planning to the west of State Highway 2 with views focussed north within substantial shelter planting to the south-west of Mount Munro. | Views to the north-east towards windfarm appear to be partially obstructed by intervening vegetation adjoining the dwelling and intervening landforms which rise to the east of State Highway 2. Some wind turbines may be visible along the skyline and through gaps within intervening vegetation. | Nil | Low |
| **D1** | 84579 State Highway 2, Eketahuna | 2km | Dwelling located on the plains to the north of Mount Munro. The topography in its immediate surrounds is generally flat. Views appear to be focussed wet towards the Tararua Range and encloses within substantial vegetation. | Views towards the Site appear to be largely screened by intervening vegetation and outbuildings established to the south of the dwelling. | Nil | Low |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **D2** | 84588 State Highway 2, Eketahuna | 2.1km | Dwelling located on the plains to the north of Mount Munro. Dwelling appears to be orientated north-west and in the opposite direction of the windfarm. | Views facing south towards the Site appear to be predominantly screened by intervening vegetation in the immediate surround of the dwelling. | Nil | Low |
| **D3** | 77 South Road No 1, Eketahuna | 2.3km | Dwelling located to the north-west of Mount Munro. Its immediate surround features an undulating topography and established shelter planting. | Views facing south-east towards the Site appear to be screened by the shelterbelt immediately to the east and south of the dwelling. | Nil | Low |
| **D4** | 215 South Road No 1, Eketahuna | 2.6km | Dwelling located on the north-east flank of an elevated knoll to the north-west of Mount Munro. | Views facing south-east towards the Site appear to be screened and by intervening landform and vegetation. | Nil | Low |
| **D5** | 262 South Road No 1, Eketahuna | 2.9km | Dwelling located to the north-west of Mount Munro. The topography in its immediate surround is undulating with intervening outbuildings to the south-east in the direction of the windfarm, | Views facing south-east towards the Site appear to be screened and by a combination of intervening outbuildings, landform and vegetation. | Nil | Low |
| **D6** | 271 South Road No 1, Eketahuna | 3km | Dwelling located on a relatively flat topography to the north-west of Mount Munro with limited established curtilage planting. | Views facing south-east towards the windfarm may include views of wind turbines seen beyond the undulating landform. | Nil | Low - moderate |
| **D7** | 139 South Road No 2, Eketahuna | 3.3km | Dwelling located on an elevated landform to the west of Mount Munro. Views from dwelling appear to be focussed to south and north and screened be established vegetation to the east. | Views facing east towards the windfarm appear to be screened by vegetation to the south-east of the dwelling and opposite side of the road. | Nil | Low |
| **D8** | 184 South Road No 2, Eketahuna | 3.3km | Dwelling located on the western flank of a gently sloping area of topography to the west of Mount Munro. Views from dwelling appear to be focussed to the east towards Mount Munro. Established | Views facing east to south-east are predominantly screened by intervening landform, however the tops of wind turbines may appear visible beyond intervening rural views. | Nil | Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | amenity planting extends to the north and south. | | | |
| **D9** | 198 South Road No 2, Eketahuna | 3km | Dwelling located to the west of Mount Munro on the eastern flank of a gently downward sloping topography facing north and south-east towards Mount Munro. Some established amenity planting to the west and south. | Potential open views facing south-east towards the Site may observe the tops of wind turbines beyond intervening rural views. | Nil | Moderate |
| **D10** | 301 South Road No 2, Eketahuna | 3.6km | Dwelling located on a generally flat area to the north-west of Mount Munro and enclosed within established curtilage planting. | Views facing south-east towards the Site are partially screened by shelterbelts in a distance. Potential open views may be visible to the east beyond intervening rural views. | Nil | Moderate |
| **D11** | 321 South Road No 2, Eketahuna | 3.9km | Dwelling located on a generally flat area to the north-west of Mount Munro. Dwelling appears to face north and east with limited curtilage planting. | Views facing south-east towards the Site are partially screened by intervening shelter belts and tree groups on both sides of the road. Beyond this, potential partial views of wind turbines may be visible to beyond intervening rural views. | Nil | Low-Moderate |
| **D12** | 329 South Road No 2, Eketahuna | 4.2km | Dwelling located on an elevated terrace to the north-west of Mount Munro. Several out buildings surround the dwelling and foreshorten surrounding rural views | Potential partial views towards the Site and wind turbines may be obtained across intervening rural landscape. | Nil | Moderate |
| **D13** | 369 South Road No 2, Eketahuna | 4km | Dwelling located on a generally flat area to the north-west of Mount Munro. Established tree planting to the east appears to limit available views towards the Site. | Views facing south-east towards the Site are predominantly screened by vegetation within the property and elevated landform on the opposite side of the road. | Nil | Low |
| **D14** | 424 South Road No 2, Eketahuna | 4.2km | Dwelling located to the north-west of Mount Munro. The dwelling is largely surrounded by elevated landform in its | Views facing south-east towards the Site are partially screened by an existing outbuilding and elevated landform in the distance. Potential open views towards the northern part of the Site. | Nil | Low - Moderate |

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| | | | immediate context and an intervening outbuilding to the south-east. | | | |
| **D15** | 436 South Road No 2, Eketahuna | 4.2km | Dwelling located to the north-west of Mount Munro. The dwelling is on a lower elevation when compared to its immediate surrounding where it has an undulating topography and several intervening outbuildings in the direction of the windfarm. | Views facing south-east towards the Site appear to remain partially screened by intervening outbuildings and elevated landform. | Nil | Low - Moderate |
| **E** | Eketahuna Township (240 dwellings) | 3.4-5km | Township located to the north of Mount Munro. Dwellings are generally located on a flat topography. | Views from dwellings towards the Site are generally limited by intervening vegetation and buildings. The Site is more visible from dwellings in the southern edge of the town. | Nil | Low - Moderate |
| **E1** | 54 Alfredton Road[27] | 4.7km | Dwelling located to the south-east of town on larger rural lifestyle lots associated with increased shelter vegetation. | Views from dwelling appear focussed to the west and north away from the windfarm. Mature amenity trees are established to the south and appear to screen views to the south towards the windfarm. | Nil | Low |
| **E2** | 44 High Street[28] | 4.3km | Dwelling within residential areas of Eketahuna with established fencing and planting typically limiting wider views | Views from dwelling will remain largely curtailed by immediate curtilage planting and other planting as established throughout intervening rural areas. | Nil | Low |
| **F1** | 37 Parkville Road, Eketahuna | 3.5km | Dwelling located on a generally flat area to the north-west of Mount Munro and south-west of Eketahuna. | Views facing south-east towards the Site are predominantly screened by vegetation within the property. | Nil | Low |
| **F2** | 36 Parkville Road, Eketahuna | 3.7km | Dwelling located on a generally flat area to the north-west of Mount Munro and south-west of Eketahuna. | Views facing south-east towards the Site are predominantly screened by vegetation groups in the immediate surrounds of the dwelling. | Nil | Low |

[27] Submission 33. Hera Wi Repa.

[28] Submission 58. Falene Grimmer

| ID | Address | Distance to nearest wind turbine | Nature of the View (Sensitivity) | Magnitude of Visual Change | Shadow Flicker Analysis[23] | Potential Visual Effect |
|---|---|---|---|---|---|---|
| **F3** | 61 Parkville Road, Eketahuna | 3.7km | Dwelling located on a generally flat area to the north-west of Mount Munro and south-west of Eketahuna. | Views facing south-east towards the Site are partially obscured by vegetation immediately south and south-east of the dwelling. Potential partial views can be obtained through gaps in the vegetation across intervening rural landscape. | Nil | Low-moderate |
| **F4** | 236 Parkville Road, Eketahuna | 4.8km | Dwelling located on a generally flat area to the north-west of Mount Munro. | Views facing south-east towards the Site are predominantly screened by the vegetation to the south of the dwelling and elevated landform south of Parkville Road. | Nil | Low |
| **F5** | 238 Parkville Road, Eketahuna | 4.8km | Dwelling located on a generally flat area to the north-west of Mount Munro. | Views facing south-east towards the Site are predominantly screened by the vegetation to the south of the dwelling and elevated landform south of Parkville Road. | Nil | Low |