



Delburn Wind Farm

Landscape and Visual Impact Assessment Addendum report

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4 February 2021

Delburn Wind Farm Pty Ltd (An OSMI Australia Company)



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Project Manager: Alexandra Elliott
Author: Hayden Burge
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Jacobs Group (Australia) Pty Limited
ABN 37 001 024 095

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1. Introduction

Delburn Wind Farm Pty Ltd (an OSMI Australia Company) is seeking approval to develop a new wind energy facility in southeast Victoria.

The proposed Delburn Wind Farm (the Project) will include:

- Up to 33 wind turbines, with an overall height of 250 m;
- Internal access tracks;
- Wind monitoring masts;
- Operations and maintenance facilities; and
- Underground cabling and necessary infrastructure to connect the Project to the grid.

The Project, inclusive of the grid connecting infrastructure, is proposed within the existing HVP Plantations Thorpdale Tree Farm.

The original turbine layout proposed up to 53 wind turbines with an overall height of 250 m, internal access tracks, wind monitoring stations, underground cabling, and an on-site terminal station. This layout has been refined to remove 20 turbines in response to a range of initial concerns which include views and visual amenity.

Documentation supporting the Planning Application was submitted to DEWLP on 23 December 2020. The DELWP have requested a revised Visual Impact Assessment to assess the visual impacts of the proposed Wind Energy Facility to the following locations:

- The residential dwellings at Property ID's 853, 875, 1171 and 4155, and
- An additional location along the Grand Ridge Rail Trail east of the Old Darlimurla Road.

In response to the DELWP's request for further assessment from private dwellings, the proponent has attempted to gain access to the four additional residential dwellings for the purposed of undertaking an assessment of the Landscape and Visual Impacts of the Project. Details of the dates and methods of approach can be obtained via the client and the Community and Stakeholder Relations management data base.

At the time of preparing this report addendum, access to one residential dwelling was granted by the owner and tenant.

1.1 Purpose of this report

This report will assess the visual impact from the residential dwelling where access was granted. Permission to access the premises of the remainder of the dwellings was not able to be obtained. For these locations' imagery gathered from publicly accessible locations has been used to consider the potential for views and visual impact of the proposed turbines.

This report will also assess the visual impact from an additional location along the Grand Ridge Rail Trail east of the Old Darlimurla Road.

This addendum report should be read in conjunction with the e assessment, methodology and scale of effects set out in *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020*.

2. Residential Dwellings

Chapter 9 of the *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020* undertook an assessment of views and visual impact from a number of residential dwellings in proximity to the Project.

At the time of preparing the visual impact assessment from residential dwellings, it is understood that there were up to 1567 dwellings within 6.0km of a proposed turbine. The following table summarises the residential dwellings and their relative distance to the nearest turbine.

Table 2-1: Residential dwellings within 6.0km of a turbine

Distance to nearest turbine	Number of dwellings
1.0-2.0km	103
2.0-3.0km	214
3.0-4.0km	256
4.0-5.0km	694
5.0-6.0km	300*

It is understood these numbers to be conservative as some structures may comprise sheds, farm structures or abandoned dwellings. Actual numbers of dwellings were not able to be confirmed due in part to access restrictions limiting ground truthing.

A number of residential dwellings were visited during the early planning and assessment stages of the Project. Part of these visits were to assist with ongoing discussions regarding views, visibility, and potential visual impact from residential dwellings. Sixteen landowners or dwelling occupiers granted permission for their dwelling to be included in the assessment of views and visual impact from residential dwellings. These dwellings allowed for the assessment of a range of landscape settings, viewing distances and angles towards the Project.

Similar to access permissions sought in preparing the *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020*, access to only one of the four additional dwellings requested by DEWLP for further assessment has been granted. An assessment of views from this dwelling are provided in the following section. For the remaining three dwellings, views are an approximation only and should be considered as such.

2.1.1 Dwelling #853

Dwelling #853 is located within cleared farmland towards the northern portion of the proposed wind farm. The turbines include T07 approximately 1.45 km to the north, T08 approximately 1.75 km to the east, T26 approximately 1.1 km to the south and T24 approximately 1.5 km to the south-west. The dwelling is set low within a localised valley.

Access to the rear yard was not permitted at the time of the visit for the purposes of assessing views and visual impact from the dwelling. The internal layout or configuration of the dwelling was also not able to be confirmed.

Figure 2-1 shows the location of the dwelling in relation to the wind farm and the arrangement of the dwelling and any existing vegetation or structures within close proximity to the dwelling.

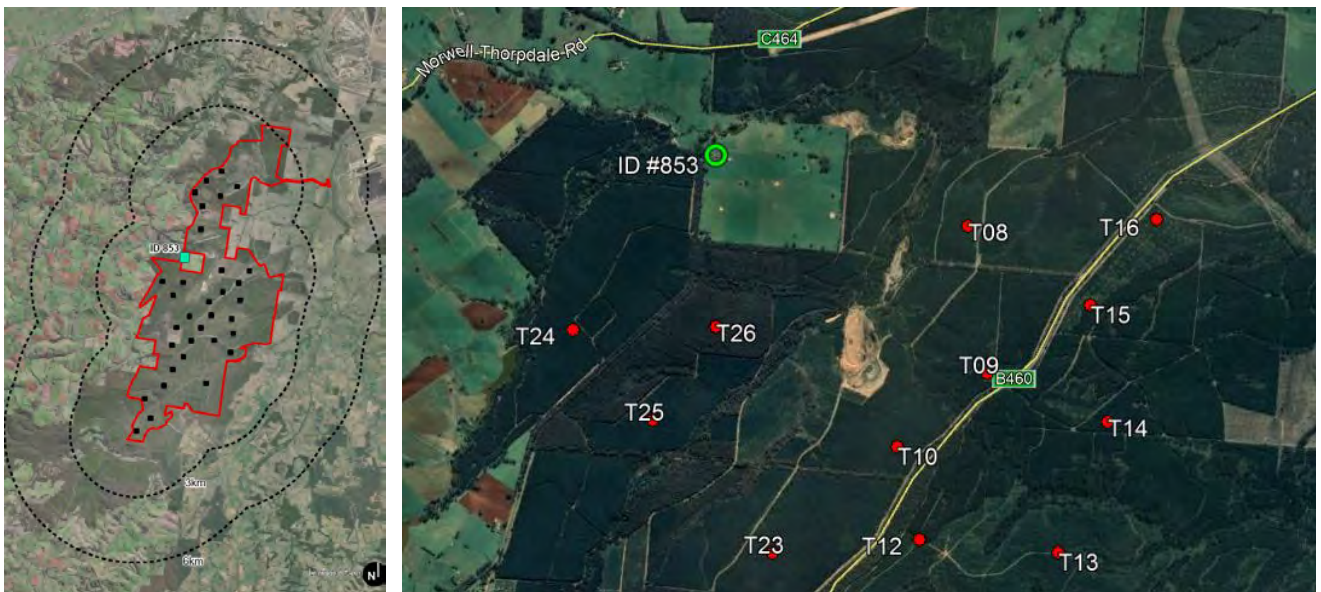


Figure 2-1: Dwelling #853 context map

Figure 2-2 shows the location of viewpoints captured in proximity to the dwelling for use in this assessment. Montages prepared using the TrueView® software utilised by OSMI for the Project were prepared from the Driveway. These have also been included.



Figure 2-2 Viewing locations

Figure 2-3 shows the view looking north towards the location of T07. This location is along the northern side of the dwelling in proximity to two internal windows. The function of the internal layout of the dwelling and nature of views was not provided.



Figure 2-3: Dwelling #853 – Existing view looking north

Turbine T07 would be to the left of the shed seen and in proximity to the power pole. In this view, the lower section of turbine T07 would be screened by the nearby vegetated rise, while the upper section of the tower, nacelle, and turbine visible. At a distance of approximately 1.45 km, the turbine would be of a visual scale that is similar to the existing power pole located central to this view.

Figure 2-4 shows the northern dwelling elevation and windows oriented generally towards turbine T07.

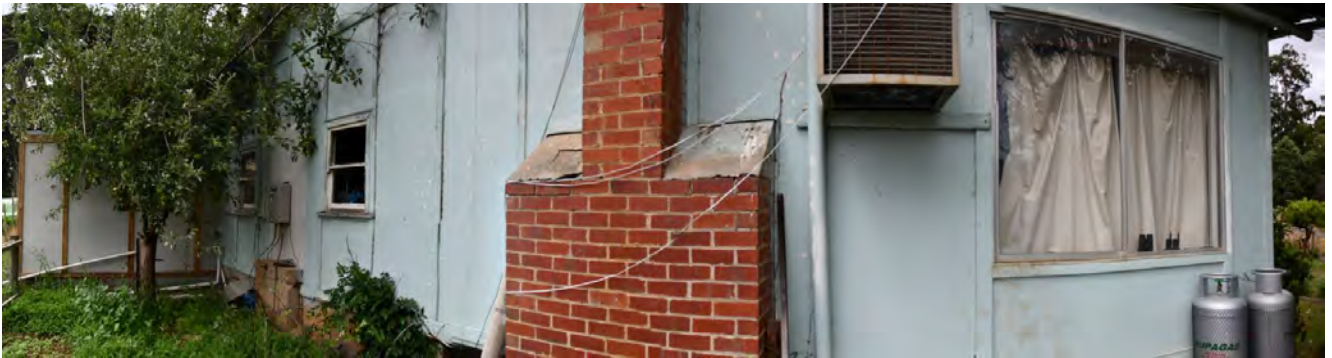


Figure 2-4 Northern Elevation

Views from the eastern (image left) and western (image right) windows appear to be partially screened or filtered by existing trees seen in both Figure 2-3 and Figure 2-4. Views in the direction of turbine 07 from the central window would be partially filtered by the tree seen in the left of the view.

Figure 2-5 shows the view looking east to south from the entrance drive and along the southern edge of the dwelling.



Figure 2-5: Dwelling #853 – Existing view looking east to south

Vegetation seen in the left of the image runs the length of the southern façade of the dwelling. Trees and shrubs within this planting screens views to the surrounding area and in the direction of the turbines. From this location, turbine T08 would be approximately 1.75 km to the east and along the drive. turbine T24 would be approximately 1.5 km to the south west, and Turbine T26 approximately 1.1 km to the south.

Figure 2-6 shows the view looking directly east towards turbine T08, approximately 1.75 km to the east. This view was captured by OSMI using the TrueView® imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 2-6: Dwelling #853 – TrueView® image looking west (Source: OSMI Australia)

Looking east along the drive, the upper portion of the turbine T08 would be visible over the stock yards and shedding seen in the background of the view. The upper portion (nacelle and above) of turbine T09 would be visible to the right of the trees and stock yards.

Figure 2-7 shows the view looking south towards turbine T026, approximately 1.1 km to the south. Turbine T26 is the closest proposed turbine to dwelling #853. This view was also captured by OSMI using the TrueView® imagery which shows the approximate scale and placement of the nearest turbines in the context of the view.



Figure 2-7: Dwelling #608 – TrueView® image looking south (Source: OSMI Australia)

Looking south, the upper portion of turbine T26 (nacelle and above) would be visible to the left of existing trees within the nearby paddocks, along Ten Mile Creek Road and the forestry areas beyond.

The imagery captured by OSMI through the TrueView® software assists to demonstrate the effect of topography and vegetation in screening views of turbines and the ability for landscape screening to be effective if required at this location. As stated in the main report, any proposed screening should be developed in concert with a bushfire management plan.

The overall visual impact would be **Low to potentially moderate**. The turbines to the east and south will be screened from the dwelling by existing shrubs and trees location along the southern edge of the drive.

There is the potential for views towards turbine T07 to the north from rooms located along the northern side of the dwelling. Views towards turbine T07 from within these rooms would be partially screened or filtered by existing vegetation. The moderated rating recognises that the internal nature of these rooms and views is not known. If required, views of the turbines have the potential to be screened through additional landscaping if required.

2.1.2 Dwelling #875

Dwelling #875 is located to the north and west of the project. Turbine T03 is approximately 1.2 km to the east, turbine T04 is approximately 1.0 km to the south east and turbine T05 is approximately 1.5 km to the south.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-8 shows the location of the dwelling in proximity to the nearest proposed turbines.



Figure 2-8: Dwelling #875 context map

The dwelling is approximately 300 m to the north of the main access road. Figure 2-9 shows the setting of the dwelling and ancillary structures located at property ID #875, all of which are set within forest and canopy vegetation.



Figure 2-9 Dwelling ID #875

The dwelling and ancillary structures are not visible from the road situated between the turbines and the dwelling.

Figure 2-10 shows the structure and integrity of vegetation in the areas of forest between the dwelling at property ID#875, the main access road and the proposed turbines. This view is taken approximately 50 m to the north of the roadway and along a publicly accessible forestry road. The location is approximately 600m to the south east of the dwelling closer to the proposed turbines and the edge of the canopy trees.



Figure 2-10: Forestry vegetation ~ 50 from road edge.

At 50 m inside the forestry edge, views towards the turbines are filtered by the trunks and canopy vegetation limited views towards the proposed turbines. Noting that the dwelling at property ID #875 is located approximately 300 m north of the road edge and set further into the canopy vegetation, it is unlikely that there would be views of the turbines.

For the above reasons and supported by the imagery included above, it is anticipated that the overall visual impact would be **NIL**. As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

2.1.3 Dwelling #1171

Dwelling #1171 is located approximately mid-way along the eastern boundary of the project. Turbine T13 is approximately 1.7 km to the north west, turbine T08 approximately 1.2 km to the east and turbine T19 approximately 1.2 km to the south-west.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-11 shows the location of the dwelling in proximity to the nearest proposed turbines.



Figure 2-11: Dwelling #1171 context map

The dwelling is approximately 130 m to south of the main access road and set lower on south to south east facing slope away from the proposed turbine locations. Figure 2-12 shows the setting of the dwelling and ancillary structures located at property ID #1171, all of which are set within canopy vegetation.



Figure 2-12 Dwelling ID #1171

The dwelling and ancillary structures are not visible from the road situated between the turbines and the dwelling.

Figure 2-13 shows the view along the driveway and access to the dwelling at property ID #1171.



Figure 2-13 Dwelling Access

Figure 2-14 shows the view looking west along the roadway in the direction of the proposed turbines. The dwelling is located to the left of the image and downslope. The proposed turbines would be in the background of this view.



Figure 2-14: View from roadway

From this location along the roadway there would be limited to no views of the proposed turbines. Noting that the dwelling at property ID #1171 is located further downslope and set within the vegetation shown in the above images, it is unlikely that there would be views of the turbines.

For the above reasons and supported by the imagery included above, it is anticipated that the overall visual impact would be **NIL**. As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

2.1.4 Dwelling #4155

Dwelling #4155 is located at the southern end of the project along the eastern side. Turbine T32 is approximately 1.6 km to the south-west, turbine T31 approximately 1.8 km to the west, turbine T30 approximately 1.3 km to the north-west and turbine T29 approximately 1.4 km to the north-east.

Access to the dwelling was not able to be obtained at the time of the site visit or prior to preparing this addendum.

Figure 2-15 shows the location of the dwelling in proximity to the nearest proposed turbines.

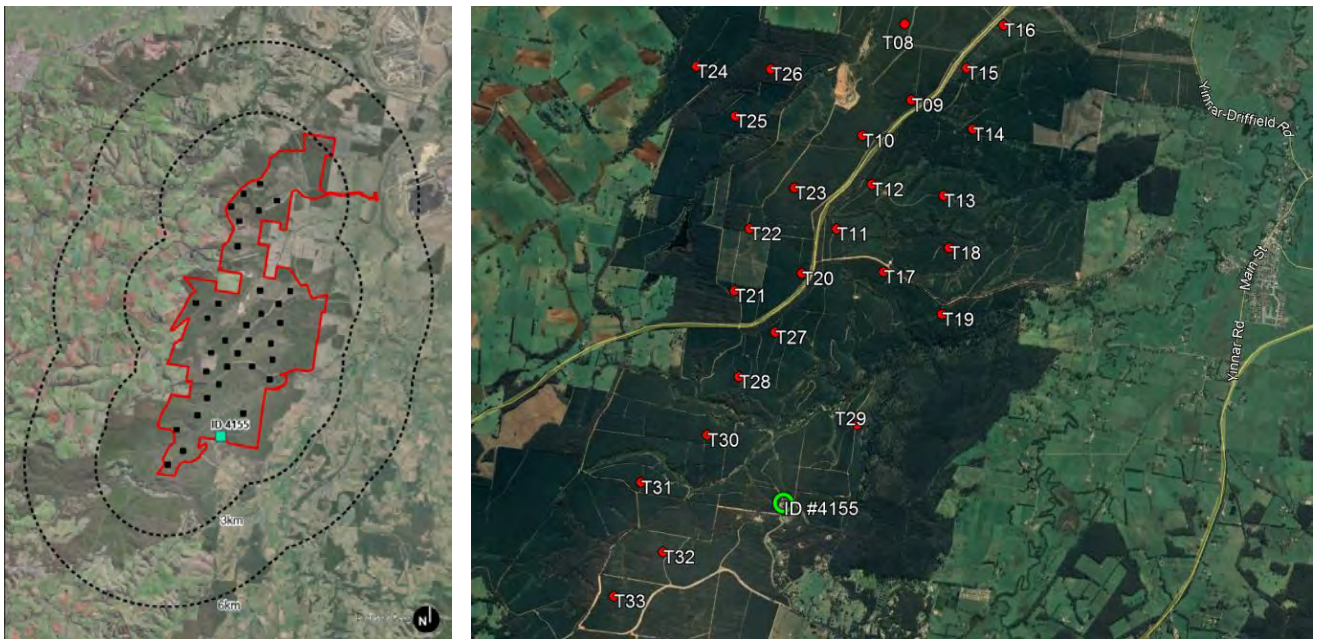


Figure 2-15: Dwelling #1171 context map

Figure 2-16 shows the setting of the dwelling and ancillary structures located at property ID #4155.



Figure 2-16 Dwelling ID #1171

The dwelling is set behind mature native trees generally to the north, east and south of the dwelling. The proposed turbines would be located within the timber plantation and forestry coups to the west, north and north west.

Figure 2-17 shows the view towards the dwelling from the roadway between the dwelling, plantation areas and the proposed turbines.



Figure 2-17 Dwelling Access

Figure 2-18 shows the view looking from south west to north east from the same location. Vegetation within the frontage of the allotment comprises predominantly tall, clear trunked eucalypts sufficiently spaced to allow views through the trunks and the underside of the tree canopy.



Figure 2-18: View from roadway looking south west to north east

From the viewing location along the roadway, the turbines would be screened by the plantation timbers on the opposing side of the road. It is recognised that these timbers are harvested, permitting views in the direction of the turbines. It is anticipated that trees would be re-established shortly after harvesting has ceased.

In the short-term, it is anticipated that the overall visual impact would be **NIL** due to the screening provided by the timbers within the forestry plantation. It is expected that this would change for a period of time following timber harvesting. Following which, the impact of views and amenity is difficult to discern without firstly understanding the layout of the dwelling and potential viewing locations.

As views from the dwelling have not been confirmed, it is recommended that this be confirmed on site should the owner or resident express concerns towards the project.

3. Grand Ridge Rail Trail – East of Old Darlimurla

It is a requirement of the Victorian Wind Farm Guidelines set out in 52.32 Wind Energy Facility to consider the potential for impacts on views and amenity from significant conservation and recreation areas, water features, tourist routes and walking tracks.

The LVIA *Jacobs, Delburn Wind Farm, Landscape and Visual Impact Assessment, Final Report, 10 December 2020* assessed the visual impact of the proposed Delburn Wind Farm from 11 recreational trails, parks, and areas of open space within the project viewshed.

Three locations were selected at key locations along the Grand Ridge Rail Trail to consider the range of views and likely visual impact of the proposed wind farm. The locations included

- RT1a - Grand Ridge Rail Trail head in Boolarra (Page 159)
- RT1b - Former Darlimurla Station and now trail interpretative station (Page 161); and
- RT1c - Grand Ridge Rail Trail head in Mirboo North (Page 163)

DEWLP have requested the assessment of views from an additional location along the Grand Ridge Rail Trail to the east of Old Darlimurla Road. This viewpoint will be described and viewpoint RT 1d – Grand Ridge Rail Trail east of Old Darlimurla Road.

Figure 3-1 shows the selected viewpoint locations along the Grand Ridge Rail Trail in green and the additional viewpoint RT 1d Grand Ridge Rail Trail east of Old Darlimurla Road.



Figure 3-1 Grand Ridge Rail Trail Viewpoint Locations

The majority of views from the trail are filtered or screened by topography, vegetation, or a combination of both.

3.1.1 Viewpoint RT 1d – Grand Ridge Trail east of Old Darlimurla Road

Viewpoint RT1d is located along the Grand Ridge Rail trail approximately 1.6 km east of the RT1b at the former Darlimurla Station.

The nearest turbine (T33) is approximately 1.45 km to the north.

Figure 3-2 shows the view looking north towards turbine T33. The location was selected as there are clear views from the trail over a farm gate and paddocks. Views in the direction of the turbines from locations further to the east and west are filtered or screened by vegetation along the margins of the trail.



Figure 3-2: Viewpoint RT1d – existing view looking north

Turbine T33 would be located in the direction of the large shed roughly central to this view and beyond the ridgeline.

Figure 3-3 shows the view looking east along the Grand Ridge Rail Trail heading towards Boolarra.



Figure 3-3 View looking east along rail trail

The proposed turbines would be to the north of this view (image left). The cleared area to the right of the image is the firebreak located around the perimeter of the timber plantation.

Figure 3-4 shows the view looking west along the rail trail heading towards Mirboo North.



Figure 3-4 View looking west along rail trail

The proposed turbines would be to the north of this view (image right). In this direction, dense vegetation is situated close to both edges of the trail.

Figure 3-5 shows a similar view where the turbines have been superimposed using TrueView[®].



Figure 3-5 View looking north (Source – Imagery supplied by OSMI Trueview®)

The vegetated rise seen beyond the shed is closer to the trail and higher in elevation than the base of the turbine which would screen the base and part of the turbine tower. Part of the upper section of turbine T33 would be visible above the vegetated horizon.

Turbine T33 would be visible from this location along the Grand Ridge Rail Trail where breaks or gaps in vegetation such as this location permits views. Turbine visibility would form part of the dynamic views afforded along the trail. Although the rail trail is a sensitive use, and views include both forested hills and farmland, views of the turbines would be fleeting and limited to select locations.

Due to the limited visibility, the overall visual impact would be **Low**.

VIEWPOINT RT1b – GRAND RIDGE TRAIL DARLIMURLA		
Distance	1.45 km northeast (T33)	Will always be visually dominant in the landscape
Landscape Unit	LU4a – Forested Hills (Natural)	Moderate-High
Viewer Numbers	Trail	Low
OVERALL VISUAL IMPACT	Low	

4. Conclusion

This addendum report has reviewed the impacts from several additional locations requested by DEWLP.

For the additional residential locations requested, the ability to assess the impacts in detail has been encumbered by the inability to gain access to several of the requested dwellings.

These additional viewpoints do however further confirm the observations made for views and visual impact from residential locations in the main report being that the greatest potential for visual impacts would be from individual dwellings located in close proximity to the Project. This further assessment has shown that views from these areas are diverse and visual impact changes dramatically over a short distance. Views from some dwellings have the potential to have a high visual impact, whereas dwellings which are located at a similar or even shorter distance to the proposed turbines will have no visibility at all. This is due to the topography of the landscape in which the dwellings are located, the orientation and proximity to vegetation both within the private realm, roadsides, plantations, and forestry areas.

The additional viewpoint identified along the Grand Ridge Rail Trail also supports the observations and conclusions made in the main report that there will be views of the turbines from locations along the trail. The majority of views from the trail will be forward looking in the direction of trail with fleeting views through breaks in trail vegetation. In these instances, views of the turbines will be dependent upon topography, vegetation and viewing direction.

This Addendum Report has not changed the findings of the original LVIA report that showed the Project is in an area that can accommodate the visual change of the Proposed Delburn Wind Farm and will not be detrimental to the views, character and amenity of the area within the viewshed of the Project.