



WIND

JEREMIAH WIND FARM

Scoping Report - Appendices

16 July 2021

Appendix C - Preliminary Visual Impact Assessment

Appendix C - Preliminary Visual Impact Assessment

A large, stylized, light gray tree graphic is positioned on the left side of the page. It features a thick, irregular trunk and a dense network of thinner, branching lines that spread out towards the top and right, resembling a wind turbine's internal structure or a complex network of roots and branches.

Preliminary Visual Impact Assessment

Jeremiah Wind Farm

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1.0 Introduction

1.1 Introduction

Moir Landscape Architecture have been commissioned by CWP Renewables Pty Ltd to prepare a Preliminary Visual Impact Assessment (PVIA) for the proposed Jeremiah Wind Farm (the Project). The purpose of this PVIA is to provide a preliminary assessment of the potential visual impacts of the proposed Jeremiah Wind Farm.

This PVIA has been prepared in accordance with the *Wind Energy: Visual Assessment Bulletin December 2016*. The visual assessment process is broken into two main stages (see *Figure 1*):

Phase 1: Preliminary Environmental Assessment and
Phase 2: EIS

This PVIA forms apart of *Phase 1: Preliminary Environmental Assessment* to be submitted to DPIE together with the Scoping Report for the request for the Secretary’s Environmental Assessment Requirements (SEARs).

The requirements of Stage 1: Preliminary Environmental Assessment are as follows:

At the Preliminary Environmental Assessment stage, a process consisting of community consultation regarding key landscape values and application of preliminary assessment tools has been developed. The tools include consideration of the potential impact of the proposals on dwellings and key public viewpoints.

The preliminary assessment tools have been designed to assist proponents to drive better outcomes. They will assist in identifying early in the process the locations where wind turbines may have impacts that warrant further consideration. This in turn provides an opportunity to refine the proposed wind turbine layout to avoid or minimise impacts, or justify the proposed design prior to lodgement of the application.

Proponents will be required to submit, with the request for SEARs, a Preliminary Environmental Assessment that includes a map with key information, results of community consultation and the application of the preliminary assessment tools. This will form the basis for the issue of the SEARs that will identify the matters that must be addressed in the Environmental Impact Statement (EIS).



This PVIA has been prepared to meet the requirements of 'Stage 1' of the Visual Assessment Process as per the Wind Energy: Visual Assessment Bulletin.

Figure 1 Steps in Visual Assessment Process (Source: Wind Energy Visual Assessment Bulletin, 2016)

1.0 Introduction

1.2 Relevant Experience

The Bulletin states *the proponent is expected to engage professionals from relevant natural resource management and design professions (for example environmental planners, geographers, landscape architects, or other visual resource specialists), with demonstrated experience and capabilities in visual assessment to carry out a wind energy project visual assessment.*

Moir Landscape Architecture Pty Ltd is a professional design practice and consultancy specialising in the areas of Landscape Architecture, Landscape Planning and Landscape and Visual Impact. Our team has extensive experience in undertaking Landscape and Visual Impact Assessments for wind energy projects. In the context of our experience and with guidance from the Visual Assessment Bulletin we have developed methodologies to ensure a comprehensive and qualitative assessment of the Project.

Relevant experience includes the preparation of Landscape and Visual Impact Assessments for the following Wind Energy Projects:

- Crudine Ridge Wind Farm (New South Wales)
- Bodangora Wind Farm (Bodangora, New South Wales)
- Capital II Wind Farm (Bungendore, New South Wales)
- Uungula Wind Farm (Wellington, New South Wales)
- Lord Howe Island Wind Turbines (Lord Howe Island, New South Wales)
- Hills of Gold Wind Farm (Nundle, New South Wales)

2.0 Study Method

2.1 Study Method

2.1.1 Desktop Assessment:

- Application of Preliminary Assessment Tools to determine receptors with potential sensitivity.
- Preparation of a preliminary Zone of Visual Influence (ZVI) to establish a theoretical zone of visibility of the Project.
- Identification of key viewpoints and landscape features using available mapping.

2.1.2 Site Inspection:

Photographic survey work for the study was undertaken in November 2020 to carry out a preliminary assessment of the existing landscape character from publicly accessible land within the Study Area. The purpose of the site inspection was to verify the findings of the desktop assessment, document key landscape features and identify additional key viewing locations.

2.2 Wind Energy: Visual Assessment Bulletin

The Wind Energy: Visual Assessment Bulletin for State Significant Wind Energy Development (referred to hereafter as ‘the Bulletin’) was prepared by the Department of Planning and Environment in December 2016. The Bulletin has been developed to guide the appropriate location of wind energy development in NSW and to establish an assessment framework for the assessment of visual impacts associated with wind energy. Visual impacts are one of a range of issues considered in the assessment and determination of wind energy projects.

The objectives of the Bulletin are to:

- *provide the community, industry and decision-makers with a framework for visual impact analysis and assessment that is focused on minimising and managing the most significant impacts;*
- *facilitate improved wind turbine and ancillary infrastructure siting and design during the pre-lodgement phase of a project, and encourage early consideration of visual impacts to minimise conflicts and delays where possible, and provide for a better planning outcome;*
- *provide the community and other stakeholders with greater clarity on the process along with an opportunity to integrate community landscape values into the assessment process; and*
- *provide greater consistency in assessment by outlining appropriate assessment terminology and methodologies.*

2.3 Report Structure

The following table provides an overview of the requirements of the Bulletin and where these have been addressed in the PVIA:

Preliminary Visual Impact Assessment Report Structure:	
Bulletin Requirements:	Addressed in report:
<ul style="list-style-type: none">• <i>Undertake community consultation to establish key landscape features valued by the community, key viewpoints in the area (both public and private) along with information about the relative scenic quality of the area.</i>	Refer to Section 4.0: Community Consultation
<ul style="list-style-type: none">• <i>Production of a map detailing key landscape features (informed by community consultation and any ground-truthing undertaken), the preliminary wind turbine layout, the location of dwellings and key public viewpoints, and an overlay of the wind resource.</i>	Refer to Section 5.0 : Existing Landscape Character
<ul style="list-style-type: none">• <i>Results of the preliminary assessment tools for both the visual magnitude and multiple wind turbine parameters.</i>	Refer to Section 6.0: Preliminary Assessment Tools
	Appendix A & B: Preliminary Dwelling and Viewpoint Assessment
<ul style="list-style-type: none">• <i>The use of Geographic Information Systems (GIS) to facilitate the application of the tools will streamline the evaluation phase of a project during the pre-lodgement stage. Most GIS systems can establish the theoretical ‘zone of visual influence’ of the proposal (the area from which the proposal is theoretically visible or the ‘visual catchment’).</i>	Refer to Section 7.0: Preliminary Zone of Visual Influence
Summary and Recommendations - Section 8.0	

Table 1 Preliminary VIA Report Requirements and Structure

3.0 Project Overview

3.1 The Proposed Development

The proposed Jeremiah Wind Farm (the Project) is located approximately 25 km east of Gundagai around the Adjungbilly area in the South West Slopes of NSW. The project sits within the Cootamundra-Gundagai Regional Council area. For the purpose of this report, general extent of the project area includes land bordering the Bungongo State Forest in the north, and Wee Jasper State forest in the south east is located on privately owned land, all of which is predominately used for agricultural purposes.

The proposal is to construct, operate, and ultimately decommission and a rehabilitate a commercial-scale wind farm indicatively producing 400 MW of clean energy to power the equivalent of approximately 200,000 average NSW households each year. The proposed project would connect to the existing 330 kV transmission line running approximately north-south within the project. The inclusion of an Energy Storage Facility (ESF) will allow for the Project to store and dispatch scheduled and reliable energy to and from the Project or the National Electricity Market (NEM).

The Project is generally comprised of the following:

- Approximately 65 wind turbine generators (WTGs) to maximum tip height of 300m
- Generating capacity of approximately 400 MW
- Provision for an Energy Storage Facility (ESF) (capacity and type to be determined)
- Ancillary infrastructure including site offices, internal roads, hardstands, underground and overhead cabling, monitoring masts, substation, a battery and a switching station.
- Temporary facilities: site compounds, laydown areas, stockpiles, rock crushing and concrete batch plants, temporary roads.

The proposed project elements including WTGs, ESF, Ancillary Infrastructure and Temporary Facilities will be micro-sited post-Development Consent during the optimisation, detailed design and construction phase programming.

The electricity generated and dispatched by the Project would provide significant carbon emission savings relative to the electricity from NSW coal powered generation.

In accordance with long-term strategic plans, the Project has been developed through a comprehensive process that incorporates community and stakeholder feedback to maximise positive social, economic and environmental outcomes while minimising adverse impacts and unintended consequences.

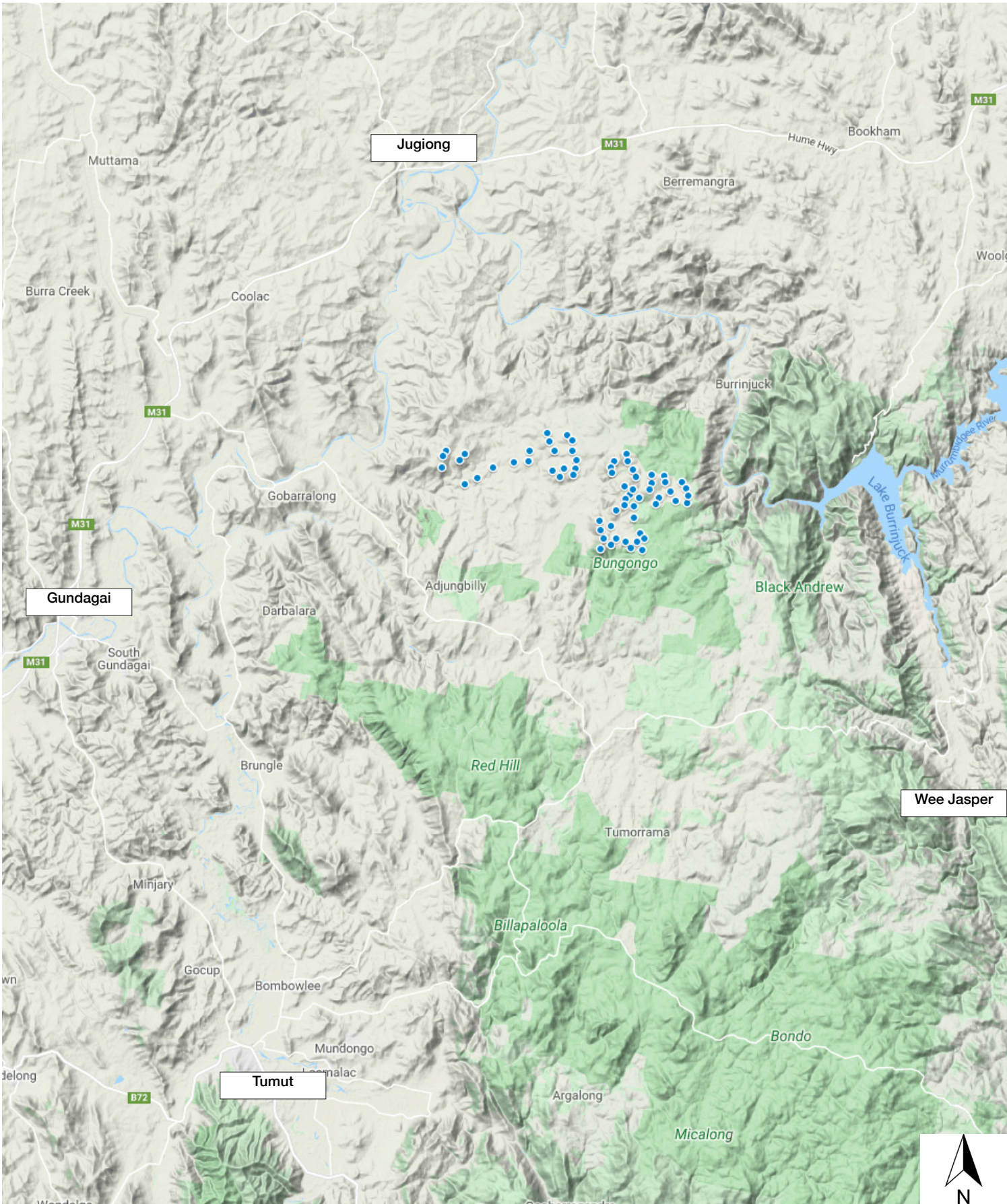
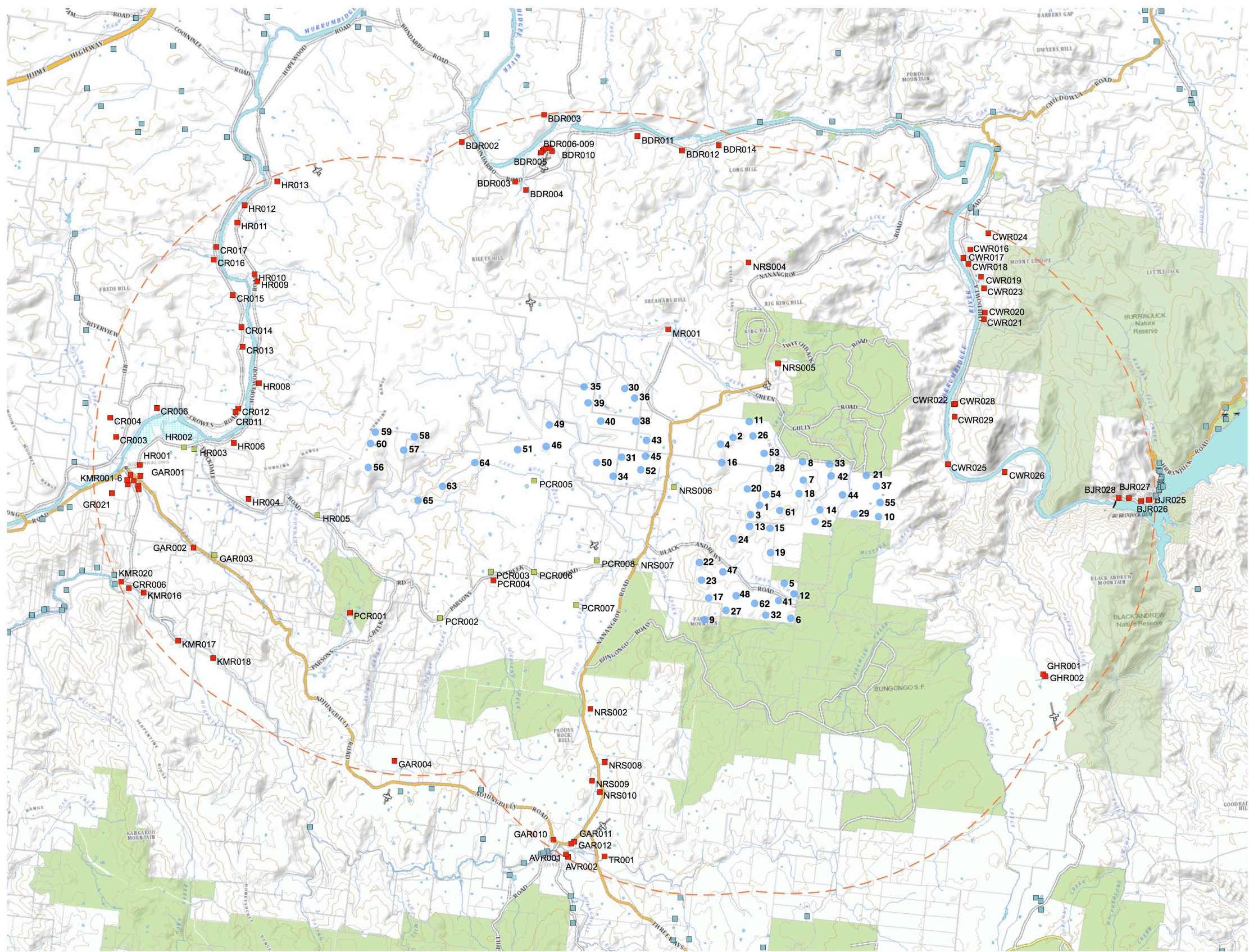


Figure 2 Site Context (Map Source: Google Maps, 2021)

3.0 Project Overview



Preliminary Project Layout

- LEGEND**
- Involved residence
 - Non-involved residence (within 8000m)
 - Non-involved residence (in excess of 8000m)
 - Indicative 300m Wind Turbine Location
 - 8000m from nearest wind turbine

Figure 3 Preliminary Project Layout (Map Source: Six Maps 2021)

4.0 Community Consultation

4.1 Community Consultation Process

In accordance with the Bulletin: community consultation at this early stage may be broad, but should include discussions about the proposed project area, likely corridors of development, or preliminary turbine layouts and must involve people from the visual catchment. The purpose of community consultation is to *establish key landscape features, areas of scenic quality and key public viewpoints valued by that community.*

In accordance with the Bulletin, ongoing community consultation has been undertaken by the proponent through face to face meetings and a questionnaire which was made available online. As of 26th April 2021, a total of seventeen (17) questionnaires had been completed, the results of which have been outlined in the following section. A copy of the tailored questionnaire provided to the community has been included in **Appendix D**, along with the full range of responses.

Community engagement will continue through the Project and provide the community with further opportunities to provide input into the Visual Baseline Study of the LVIA.

4.2 Community Perception

Understanding of the community perception towards the proposed development is an intrinsic component of the Landscape and Visual Impact Assessment process.

A CSIRO study published in 2012: Exploring community acceptance of rural wind farms in Australia provides a snapshot of community acceptance levels regarding Australian wind farms from a variety of stakeholder perspectives. It found levels of acceptance among the public are highly subjective and can differ depending on location, local context and place attachment.

The main concerns surrounding the project include Visual (53%), Noise (52%) and Effects on Flora and Fauna (59%). The concerns have been raised based on current understanding of the Project.

65% of respondents identified clean energy as a positive benefit of the Project.

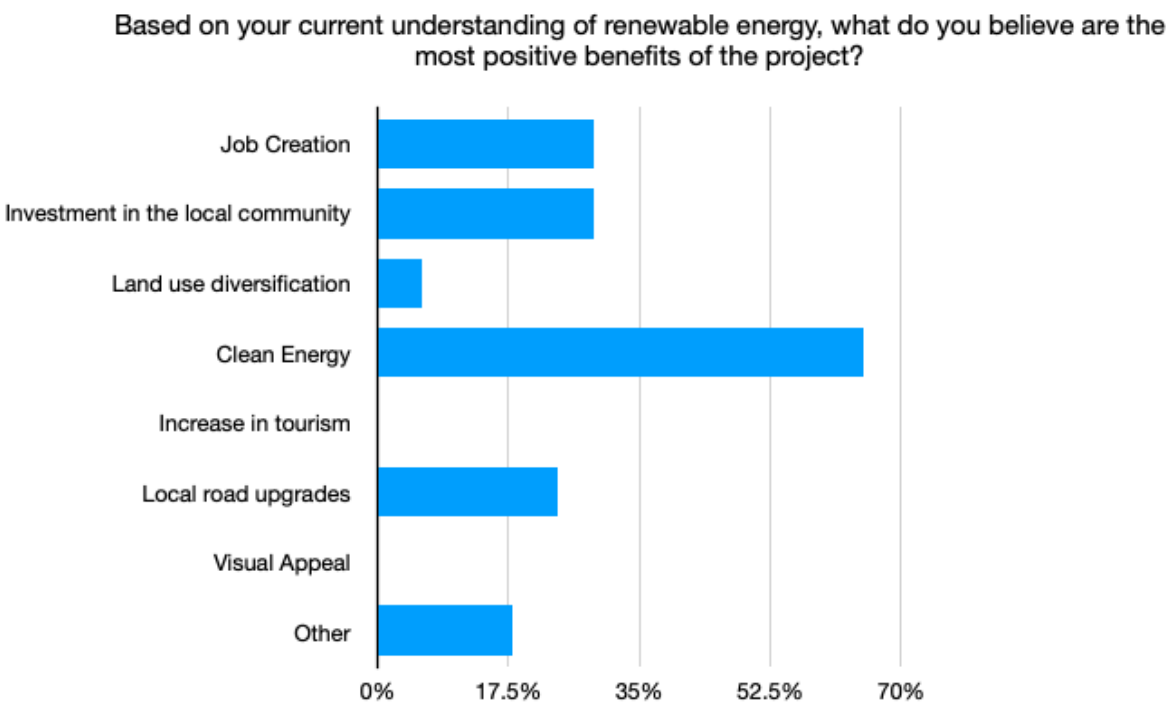


Figure 4: Results of Community Survey Question 2

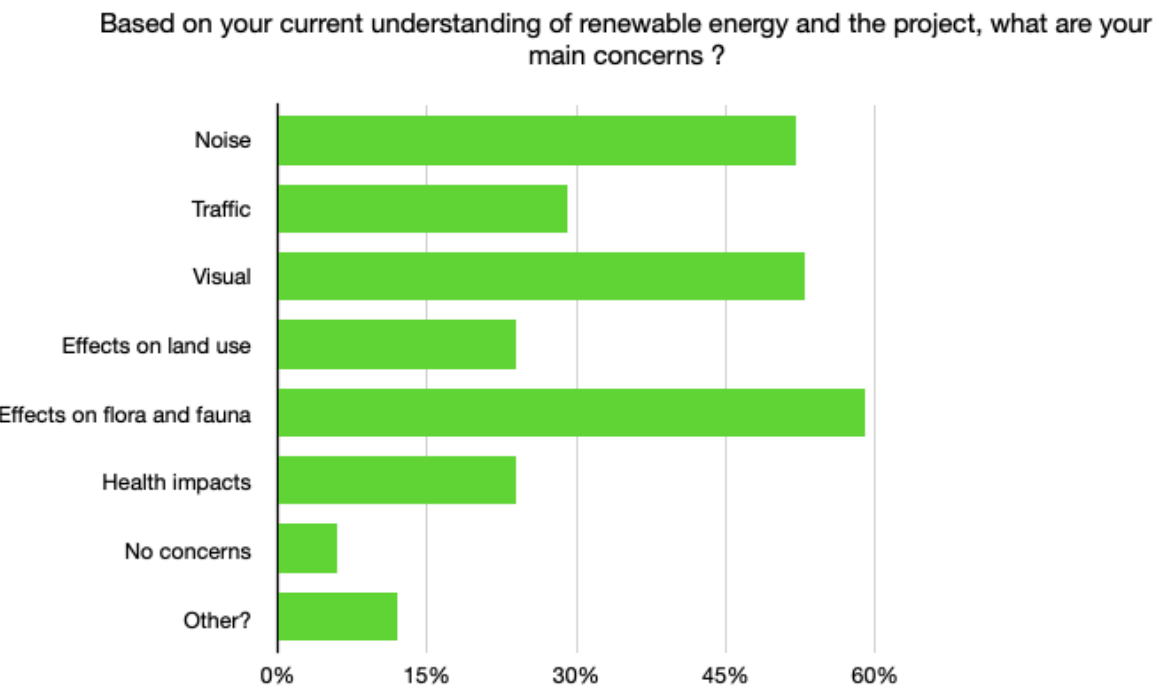


Figure 5: Results of Community Survey Question 3

4.0 Community Consultation

4.3 Landscape Values

Landscape values are highly subjective and can differ depending on location, local context and place attachment. The results of specific questions assisted in the identifying key areas of concern and ensuring the LVIA provided comprehensive assessment taking into account landscape values held by the community.

In response to the question ‘*what do you value most about your local area?*’, 76% of respondents identified recreation opportunities as a highly valued by the community. Following this, farming (65%) and local history (46%) were identified as valued by the community (See graph (**Figure 6**)).

Responses to the question ‘*what do you value about the existing natural and built environment?*’ varied, however the common theme in the responses relating to landscape values generally related to the following:

- Sense of isolation from the built environment (existing lack of man-made buildings and structures)
- Presence of wild life (in particular bird life)
- The river and associated valley
- Existing bushland / vegetation
- Hills and topography

The responses to the questionnaire have been included in **Appendix D** and will be considered in further detail through the Visual Baseline Study in the EIS Phase.

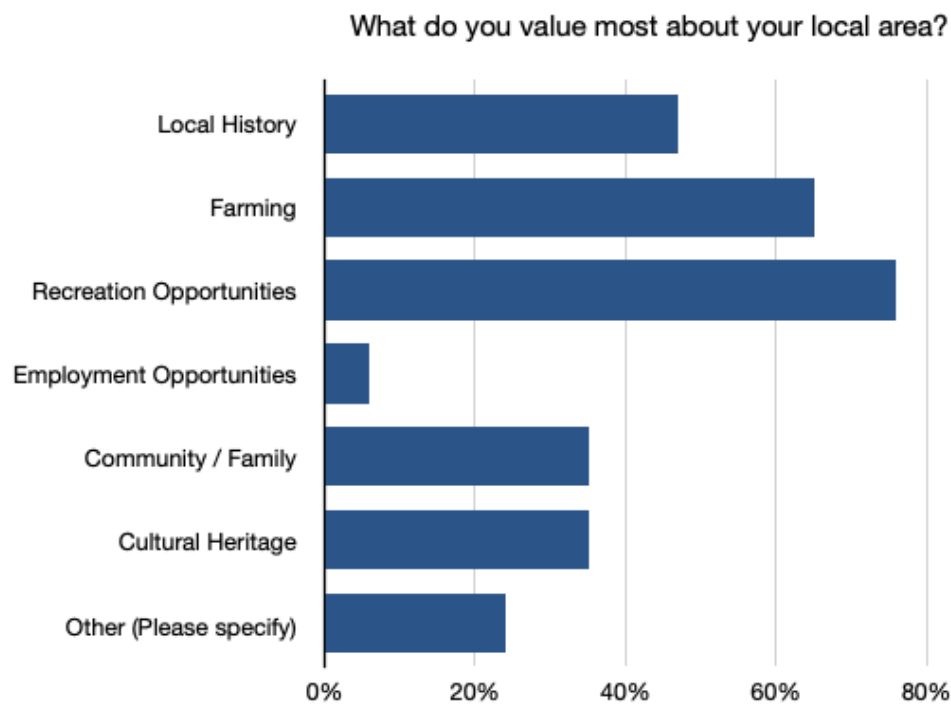


Figure 6: Results of Landscape Values Questionnaire Question 1

4.4 Key Landscape Features & Areas of Scenic Quality

In addition to a review of existing landscape maps and detailed field work. The community consultation questionnaire asked respondents to identify key landscape features in the area. A large percentage of the respondents identified the Murrumbidgee River and associated valley as a key landscape feature of the area. The following lists the features identified by the community:

- Murrumbidgee River
- Murrumbidgee Valley
- Burrinjuck Nature Reserve
- Mt Europe
- Black Andrew
- Wee Jasper Caves
- Burrinjuck Dam
- Wee Jasper Township
- Red Hill

Broad landscape features identified included:

- Undulating hills and mountains
- River Valley
- Natural scenery

The results of the questionnaire have been provided in full in **Appendix D**. The key landscape features have been included on **Figure 9** and will be assessed in further detail in the EIS Phase of the Project.

4.5 Key Public Viewpoints

Key viewpoints identified by the community for further assessment include:

- Kayaking along the river
- Childowla Road
- Burrinjuck Nature Reserve
- Private property

These locations have been included on **Figure 9** and where possible will be assessed in further detail in the EIS Phase.

5.0 Existing Landscape Character

5.1 Overview of Bio-region

The Project lies within the South Western Slopes Bioregion, considered as part of the Slopes Sub Region.

The Project borders the South Eastern Highlands Bioregion to the east.

The South Western Slopes Bioregion is characterised by foothills and isolated ranges comprising the lower inland slopes associated with the Great Dividing Range. It extends from north of Cowra through southern NSW into western Victoria.

The Upper Slopes region in particular is characterised by steep, hilly and undulating ranges and Granite basins and confined river valleys with terrace remnants.

The soil consist of shallow, stony soils on the tops of ridges and hills and includes a mixture of alluvial sands and loams along the valley floors and areas of alluvial clays nearer to the Riverine Plain.

The vegetation in the Subregion consists of mostly open forests and woodlands including Red Stringybark along hilly areas and Rough-barked Apple on flats with River Oak along tributaries and River Red Gum on lower and larger streams.

The South Western Slopes Bioregion is unique for its diversity of geology, geomorphology and biota which includes well-developed karst landscapes and rich fossil assemblages (Environment NSW, 2016)

The South Eastern Highlands Bioregion is typically characterised by rugged hills and stony slopes.

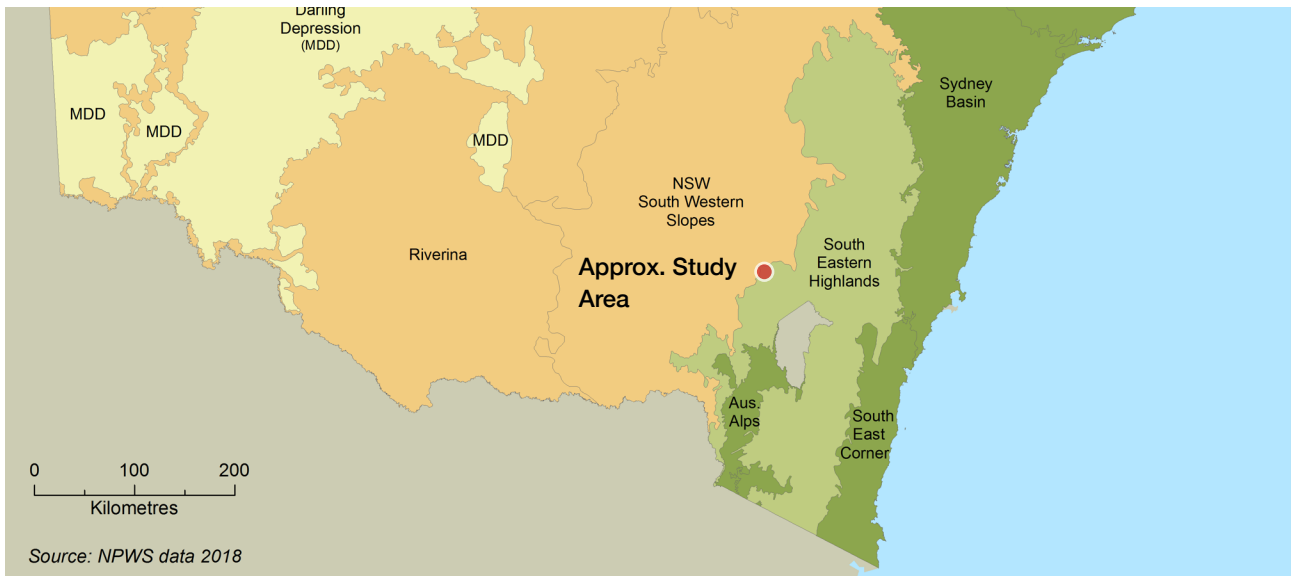


Figure 7 NSW Bio Regions (Source: NPWS)

5.2 Land use

For the purposes of this report, the Study Area is generally defined by a 15km area (approx.) from the Project Area. The extents of the Figure 10 Map demonstrates the area studied in preparation of the PVIA, making up the area referred to as the ‘Study Area’. The Yass Valley, Snowy Valleys and Cootamundra-Gundagai LGA areas are located within the Study Area. However, it is noted that the Project Site is located within the Cootamundra-Gundagai LGA only.

The following provides an overview of the land use zoning within the Study Area and its immediate surrounds (Refer Figure 8).

RU1 - Primary Production

RU3 - Forestry

E1 - Natural Parks and Nature Reserves

E3 - Environmental Management

RU5 - Village

R5 - Large Lot Residential

SP2 - Infrastructure

RU1 Primary Production

The Project Area and surrounding land is predominantly zoned RU1 - Primary Production. Both Tumut and Gundagai LEP state the following objective of the RU1 zoning that is relevant to the visual impact assessment:

‘To protect significant scenic landscapes’.

RU3 Forestry

The Bungongo State Forest adjoins the Project Area to the north, east and south. Red Hill State Forest is located approximately 9 km to the south of the Project Area.

These areas are zoned RU3 Forestry and are to enable development for forestry purposes and other development that is compatible with forestry land uses.

E1 Natural Parks and Nature Reserves

Burrinjuck Nature Reserve is located approximately 5km east of the Project Area.

Black Andrew Nature Reserve is located approximately 7km east of the Project Area.

Wee Jasper Nature Reserve is located approximately 15km south east of the Project Area.

These areas are classed as E1 - Natural Parks and Nature Reserves.

5.0 Existing Landscape Character

Nature Reserves are reserved under the National Parks and Wildlife Act 1974 (the Act). Section 30J of the Act states:

(1) The purpose of reserving land as a nature reserve is to identify, protect and conserve areas containing outstanding, unique or representative ecosystems, species, communities or natural phenomena so as to enable those areas to be managed in accordance with subsection (2).

- (2) A nature reserve is to be managed in accordance with the following principles—*
- (a) the conservation of biodiversity, the maintenance of ecosystem function, the protection of geological and geomorphological features and natural phenomena,*
 - (b) the conservation of places, objects, features and landscapes of cultural value,*
 - (c) the promotion of public appreciation, enjoyment and understanding of the nature reserve’s natural and cultural values,*
 - (d) provision for appropriate research and monitoring,*
 - (e) provision for the carrying out of development in any part of a special area (within the meaning of the Hunter Water Act 1991) in the nature reserve that is permitted under section 185A having regard to the conservation of the nature reserve’s natural and cultural values.*

- National Parks and Wildlife Act 1974 s. 30J (Austl.)

E3 - Environmental Management

The areas adjoining the northern lake frontage of Burrinjuck Lake as well as vegetated parcels of land to the north and south of the dam infrastructure have been classified as E3 - Environmental Management.

The objectives of this land use within the Yass Valley LEP applicable to the visual impact assessment are as follows:

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- To provide for a limited range of development that does not have an adverse effect on those values.*

RU5 - Village

Wee Jasper is located to the south east of the Project Area. It is classified as RU5 - Village within the Yass Valley LEP. The applicable objective under this land use is as follows:

‘To ensure that development is compatible with village character and amenity’.

There are a number of other small hamlets within the Study area however, they have not been classified as a Village within the LEP’s. They are as follows:

- Gobarraalong
- Adjungbilly
- Burrinjuck

R5 - Large Lot Residential

An area of large lot residential is surrounds the village of Wee Jasper approximately 16km south east of the Project Area. There are no applicable objectives as part of this land use typology.

SP2 - Infrastructure

The area associated with the convergence of the Murrumbidgee River and Burrinjuck Lake is zoned SP2 - Infrastructure. There are no applicable objectives as part of this land use typology.

5.0 Existing Landscape Character

5.3 Key Landscape Features

A variety of key landscape features exist within the Study Area and help to define the specific landscape character areas **(Refer Fig. 9)**.

Rivers and Creeks

The Murrumbidgee River and associated Valley runs through the Study Area. The River flows into Lake Burrinjuck and is a major tributary of the Murray River. The construction of Lake Burrinjuck has significantly reduced the occurrence of flooding in the area, however sections of the River are prone to flooding.

The roads generally follow the river, eventually leading to bridge crossings therefore, the River is a major landscape feature when traversing the area.

Lakes

Lake Burrinjuck is a major landscape feature within the area. It is a Heritage Listed Dam that began construction in 1907. Whilst it is a major feature within the area, the character is that of a constructed landscape for the purposes of hydroelectric power, flood mitigation and water supply. The has an industrial function and houses a hydroelectric power station and has three operational turbine generators, with a generating capacity of 28 MW of electricity.

Nature Reserves

Burrinjuck Nature Reserve is located to the east of the Project Area and adjoins Lake Burrinjuck to the south. It is characterised by steep and rugged slopes, including Mount Europe, that protect diverse forest ecosystems dominated by blue gums, peppermints, red stringybarks and box trees. It is also home to a variety of endangered Native Fauna including the yass daisy, crimson spider orchid, wee jasper grevillea, gang gang cockatoo and powerful owl (NPNSW, 2021). There are no public facilities in the reserve.

Elevations range from 400 metres on the shores of Burrinjuck Dam to 965 metres at Barran Jack Peak with a ridgeline running through the centre of the northern section of the Reserve, gently sloping down toward the Lake. (POM, 2010)

Black Andrew Nature Reserve is located to the east of the Project Area and adjoins Lake Burrinjuck to the north. The Reserve is considered to have a high diversity of vegetation types for such a small area, due to the sharp changes in elevation. Up to 7 distinct forest ecosystems have been identified within the reserve, providing high quality habitat for a number of significant native fauna species. There are no public access trails leading to the boundary of the nature reserve. (POM, 2006).

Wee Jasper Nature Reserve is located on the western side of the Wee Jasper valley and south east of the Project Area. The valley is relatively steep with valley walls rising abruptly from the valley floor to a maximum elevation of 800m in the reserve. The reserve consists of steep east-facing valley

slopes and alluvial flats along Wee Jasper Creek and Native Dog Creek and conserves 4 distinct forest ecosystems. The reserve is home to a series of cave and karst systems.

State Forests

Bungongo State Forest is an undulating to large State Forest located directly north and south of the Project Area. It includes a mixture of Hardwood and Softwood forests with rows of non-native *Pinus radiata* plantations occurring on the northern, southern and western boundaries of the area.

Ridgelines

The landscape is generally undulating, with some steep sections located around Lake Burrinjuck. Undulating landscapes and hillsides are characteristic of the area, particularly around Lake Burrinjuck, south of Adjungbilly Creek and along the northern section of the Murrumbidgee River.

Scenic Lookouts and Points of Interest

A desktop search and site visit identified no record of existing formalised lookouts in the area.

The Nature Reserves and Lakes are a major draw card to the area but as noted previously there are no public access trails or facilities.

Views from the Murrumbidgee River itself have been identified as important and popular scenic viewing location.

The impressive limestone formations of Careys Caves are located south east of the Project Area and are a popular tourist destination.

Walking Tracks & Camp Grounds

The Hume and Hovell Track cuts through the eastern section of Study Area. It is a 426km track that runs from Wondonga to Yass and passes through the Burrinjuck, Black Andrew and Wee Jasper Nature Reserves.

A variety of hikes traverse the Burrinjuck, Black Andrew and Wee Jasper Nature Reserves however due to the topography the majority are intended for use by experienced hikers only.

The Campgrounds are generally located in the vicinity of the Lake, Caves and Wee Jasper Nature Reserve. Jugiong Village has a popular free camp site located at the showgrounds.

5.0 Existing Landscape Character

5.4 Landscape Character Types

A number of Landscape Character typologies exist within the Project Area **(Refer Figure 10)**.

LCU01: Lake Burrinjuck

Steep to undulating densely vegetated hillsides including the Burrinjuck Nature Reserve, Black Andrew Nature Reserve and portions of the Bungongo State Forest. Land use in this area is generally densely vegetated and classed as Productive Forestry or Nature Reserve with pockets of cleared farmland in areas adjoining the Murrumbidgee River.

LCU02: Murrumbidgee River

Undulating to low rolling hills that meet with flat areas associated with the banks of the Murrumbidgee River. Land use in the area is mostly cleared grazing and modified pastures with small pockets of dryland and irrigated cropping within areas in proximity to the River. Vegetation in the area is generally located along rivers, creeklines, hilltops and valleys. The undulating topography contrasted with the Murrumbidgee River and Valley along with the various Creeklines form a major element to the character of the area. The LCU includes the town of Jugiong, located approximately 17km from the Project Area.

LCU03: Jeremiah

Jeremiah LCU is characterised the sloping to gently undulating landform to the south of the Murrumbidgee River. Land use in the area is mostly cleared grazing and modified pastures with small pockets of dryland and irrigated cropping within areas in proximity to the River. Vegetation in the area is generally located along rivers, creeklines, and ridgelines.

LCU04: Berremangra

Undulating to steep topography to the north of the Murrumbidgee River. The land use in the LCU is generally cleared grazing land. Remnant pockets of native vegetation exist within the valleys, along roadways and on the steeper slopes and mountain tops within the LCU.

LCU05: Adjungbilly

This landscape is characterised by steep ridgelines and gently undulating topography and is contrasted by a series of creeklines, to the south of the Murrumbidgee River. The area is mostly cleared with remnant native vegetation located along creeklines and within the steep valleys and mountain tops. The area in the east of the LCU is generally characterised by large flat areas, mostly used for grazing and modified pastures. The LCU includes the Red Hill State Forest to the south and is flanked to the north by Bungongo State Forest.

5.5 Key Viewpoints

Gobarralong

Gobarralong is a rural community of approximately 52 people and is located within 8km of the Project Area. There are no public buildings making up a the centre of the village, rather a number of rural properties

Adjungbilly

Adjungbilly is a rural community of approximately 80 people and is located within 8km of the Project Area. It consists of a Community Hall, Primary School and a handful of rural dwellings.

Burrinjuck

Burrinjuck is a small village located alongside the western side of the Lake and is located just within 8km of the Project Area. It consists of a small number of dwellings built into the hillside, a small general store servicing the camp ground and a Community Hall.

Wee Jasper

Wee Jasper is a small town, located in excess of 20km from the Project Area. It is popular with tourists due to its proximity to tourist attractions, camping opportunities and unique geological features.

Jugiong

Jugiong is a historic village located approximately 17km from the Project Area. It is popular with tourists, particularly those travelling by caravan.

5.0 Existing Landscape Character

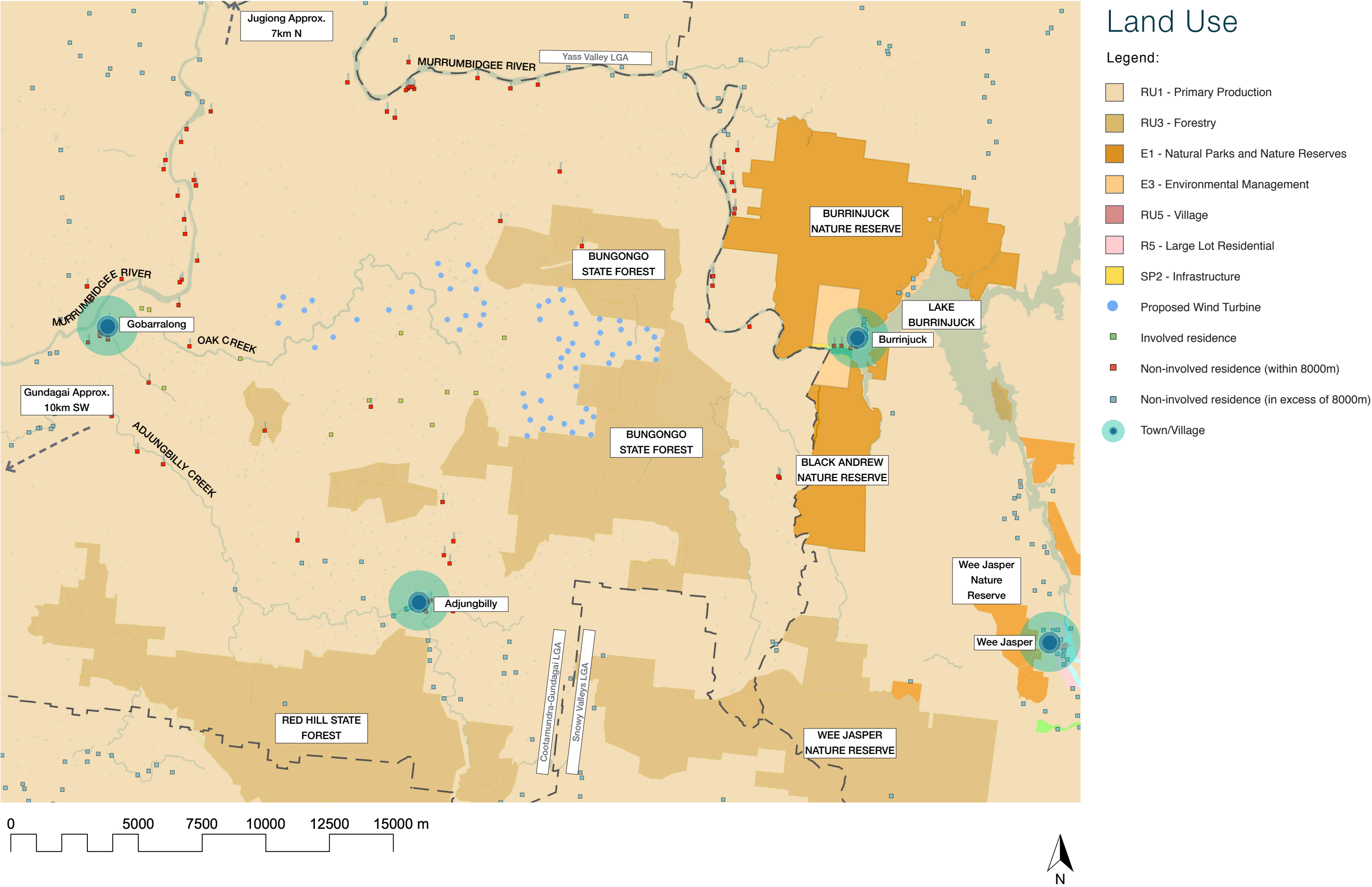


Figure 8 Land Use

5.0 Existing Landscape Character

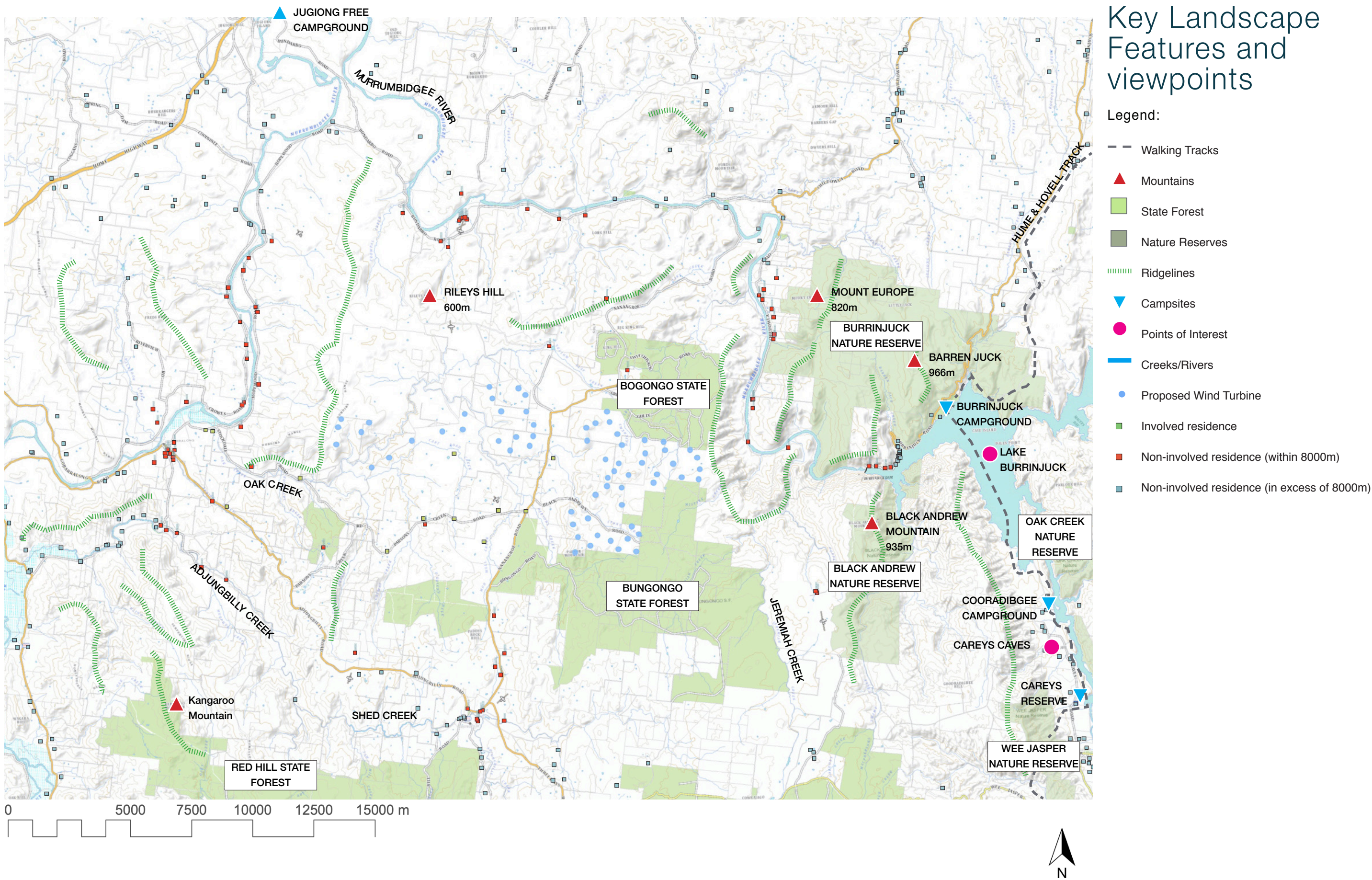


Figure 9 Landscape Features and Viewpoints

5.0 Existing Landscape Character

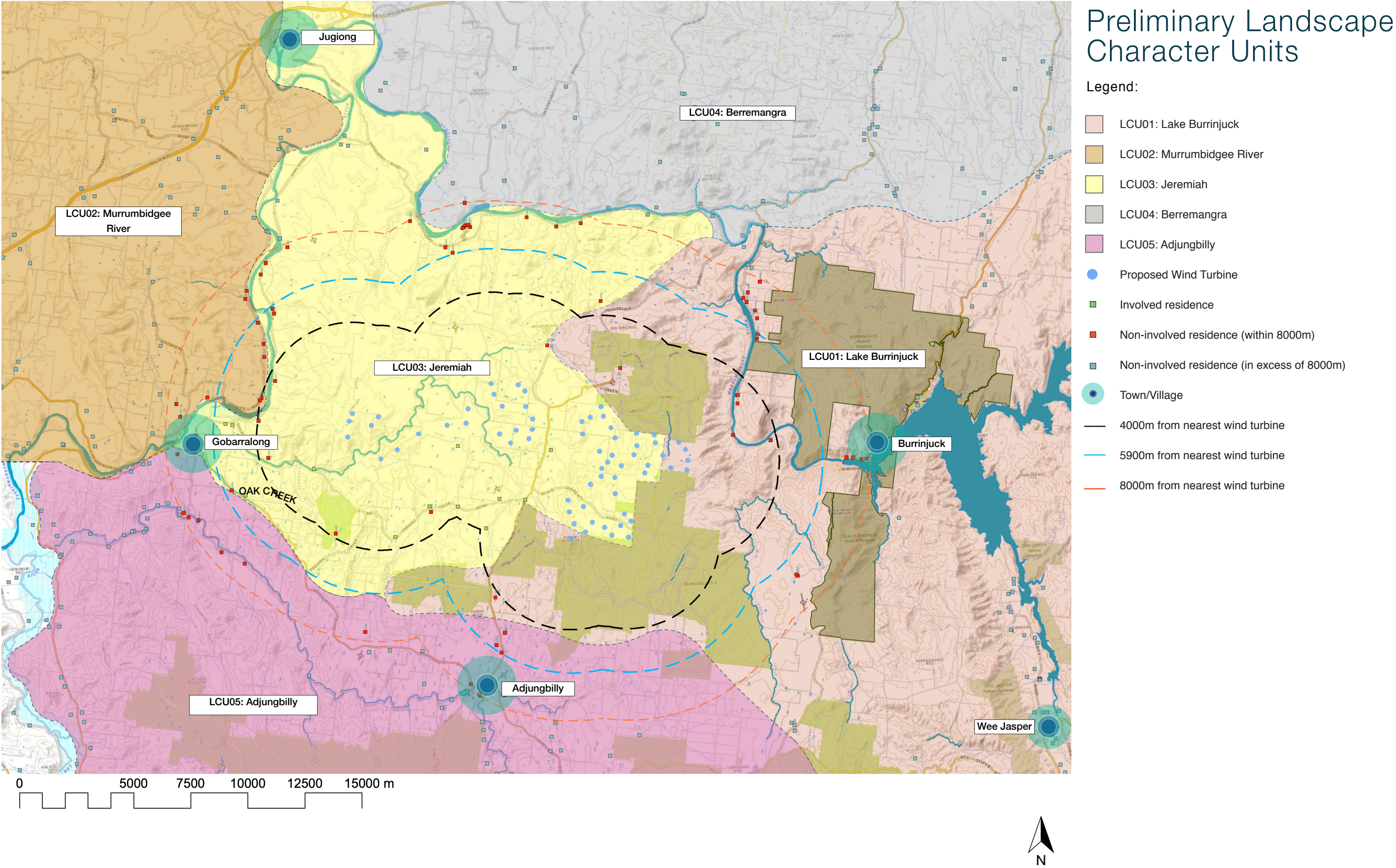


Figure 10 Landscape Character Types

6.0 Preliminary Assessment Tools

6.1 Preliminary Assessment Tools

Preliminary assessment tools have been developed in the Bulletin to provide an early indication of where turbines require careful consideration because of potential visual impacts. The tools apply to both dwellings and key public viewpoints in the study area. The tools provide an early indication of where placement of turbines will require further assessment and justification, and where consultation with potentially affected landowners needs to be focused – including discussions for landholder agreements.

- Wind Energy: Visual Assessment Bulletin, December 2016, NSW Planning & Environment

The preliminary assessment tools involve analysis of two key visual parameters:

- 1. Visual Magnitude (**Refer to Section 6.2**)
- 2. Multiple Wind Turbine Tool (**Refer to Section 6.4**)

In addition to the Preliminary Assessment Tools, the Bulletin recommends the use of technology to facilitate the application of the tools. Geographic Information Systems (GIS) has been utilised to establish a ‘Zone of Visual Influence’ of the proposal and provide an early indication of the extent of visibility of the project (based on the preliminary layout)(**Refer to Section 7.1**).

6.2 Preliminary Assessment Tool 1: Visual Magnitude

The Visual Magnitude Threshold, as defined in the Bulletin, is based on the height of the proposed wind turbines to the tip of the blade and distance from dwellings or key public viewpoints as shown in **Figure 9**.

In accordance with the Bulletin ‘*proposed turbines below the black line must be identified along with the dwellings or key public viewpoints as part of the request for SEARs*’. The proposed wind turbines are based on a worst case scenario with a tip height of up to **300 metres**. The ‘black line’ intersects at a distance of **4000 metres** and the ‘blue line’ intersects at **5900 metres**.

For the purpose of the Preliminary Assessment, the Visual Magnitude thresholds are based on a 2D assessment of the Project alone. Further assessment may indicate factors such as topography, relative distance and existing vegetation may minimise or eliminate the impacts of the project from residences.

Residences identified within 4000m of the nearest proposed turbine are shown on Figure 12 and listed in Table 2.

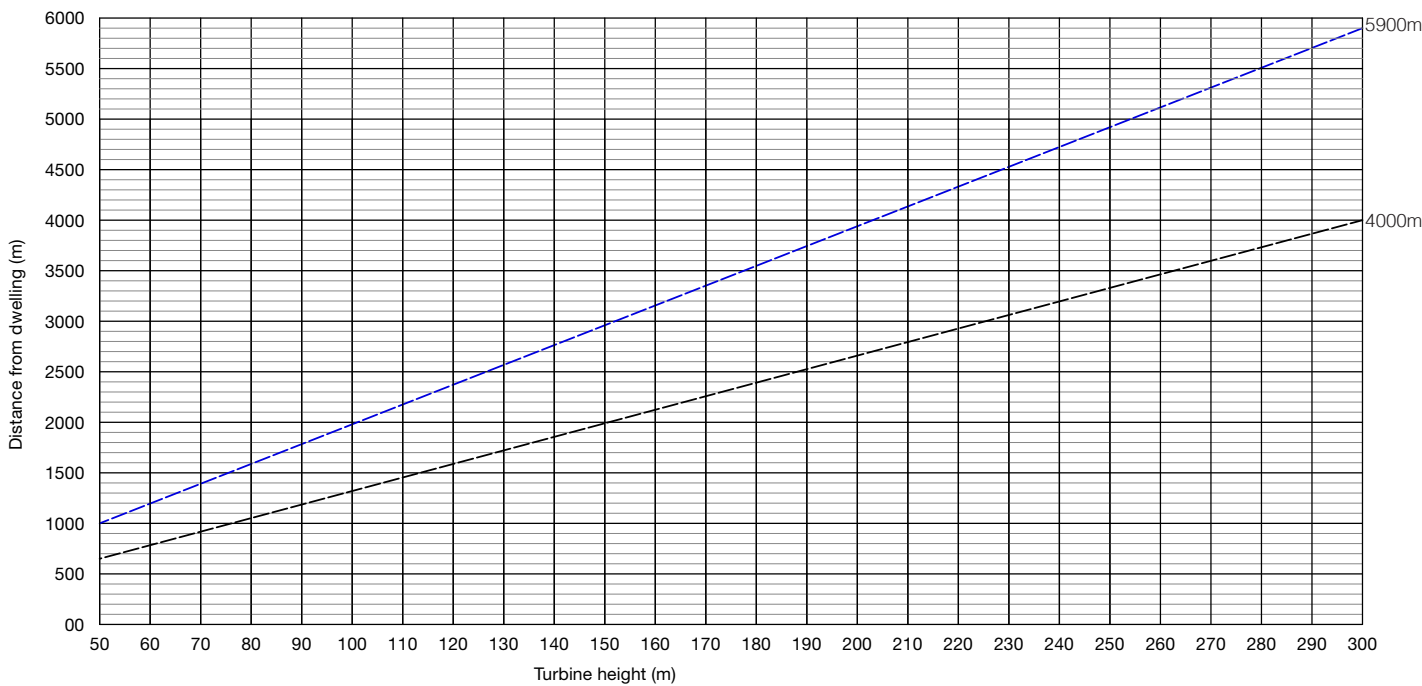
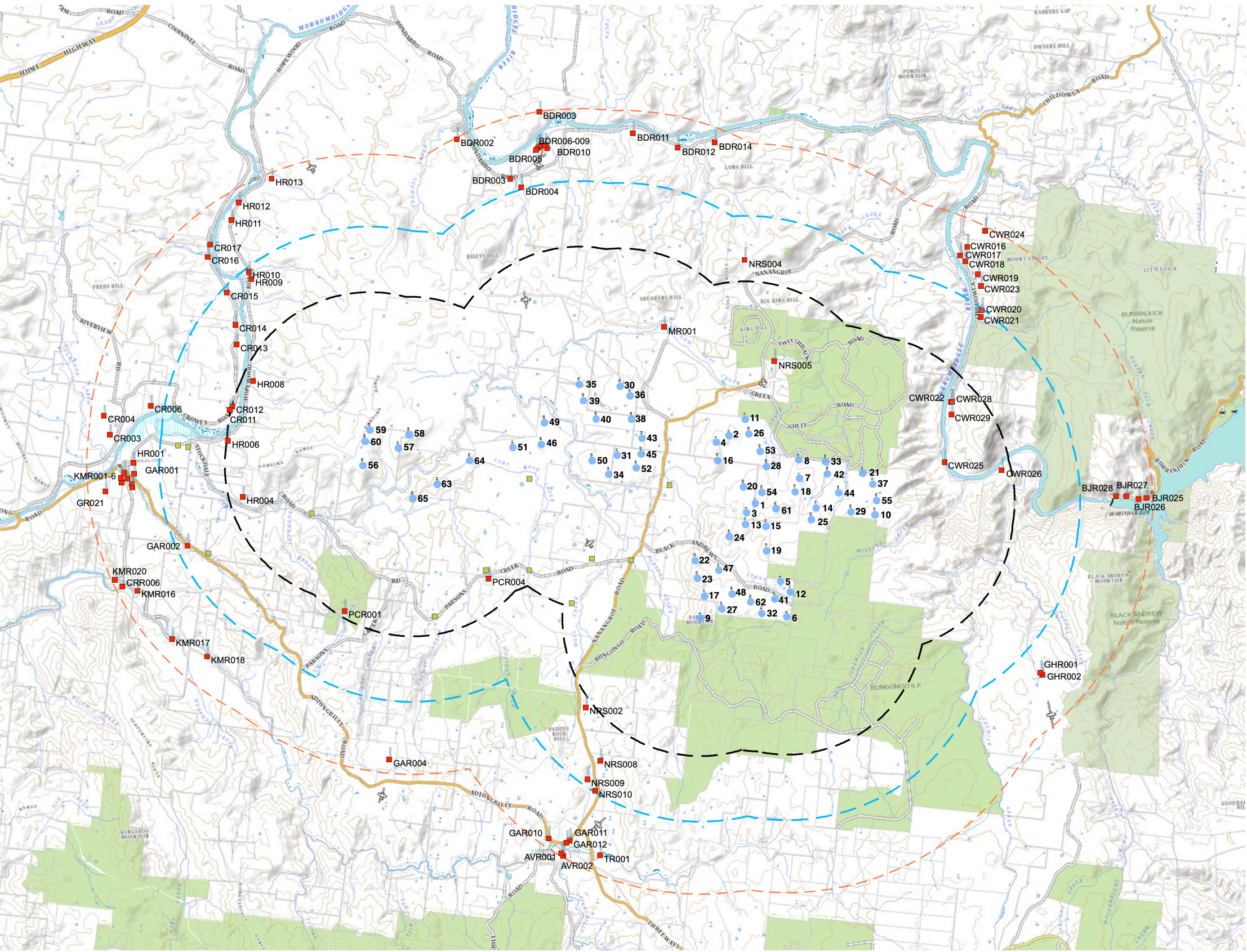


Figure 11 Visual Magnitude thresholds for Project Layout
(Source: Visual Assessment Bulletin)

6.0 Preliminary Assessment Tools



Visual Magnitude

Black Line = 4000m

Blue Line = 5900m

LEGEND

- Involved residence
- Non-involved residence (within 8000m)
- Non-involved residence (in excess of 8000m)
- 300m Wind Turbine
- 4000m from nearest wind turbine
- 5900m from nearest wind turbine
- 8000m from nearest wind turbine

Figure 12 Preliminary Assessment Tool 1: Visual Magnitude Thresholds

6.0 Preliminary Assessment Tools

6.3 Results of Visual Magnitude Assessment

Application of the *Preliminary Assessment Tools* to the Jeremiah Wind Farm Project identified dwellings which require further assessment in accordance with the Bulletin. Detailed assessment of these dwellings will be undertaken in the EIS Phase.

Within the black line of visual magnitude (4000 metres from nearest turbine):

- ***There are eleven (11) non-involved dwellings and two (2) possible dwelling locations located within 4000 m of the nearest turbine, Refer to Table 2.***
- ***There are nine (9) involved dwellings.***

Between the black and blue line of visual magnitude (4000 - 5900 metres):

- ***There are fourteen (14) non-involved dwellings are located within 5900 m of the nearest turbine, Refer to Table 3.***
- ***There are three (3) involved dwellings.***

6.0 Preliminary Assessment Tools

6.4 Preliminary Assessment Tool 2: Multiple Wind Turbine Tool

The Multiple Wind Turbine Tool provides a preliminary indication of potential cumulative impacts arising from the proposed wind energy project. To establish whether the degree to which dwellings or key public viewpoints may be impacted by multiple wind turbines, the proponent must map into six sectors of 60° any proposed turbines, and any existing or approved turbines within eight kilometres of each dwelling or key public viewpoint. **Figure 13** below provides examples of where a dwelling or key public viewpoint may have views to turbines in multiple 60° sectors.

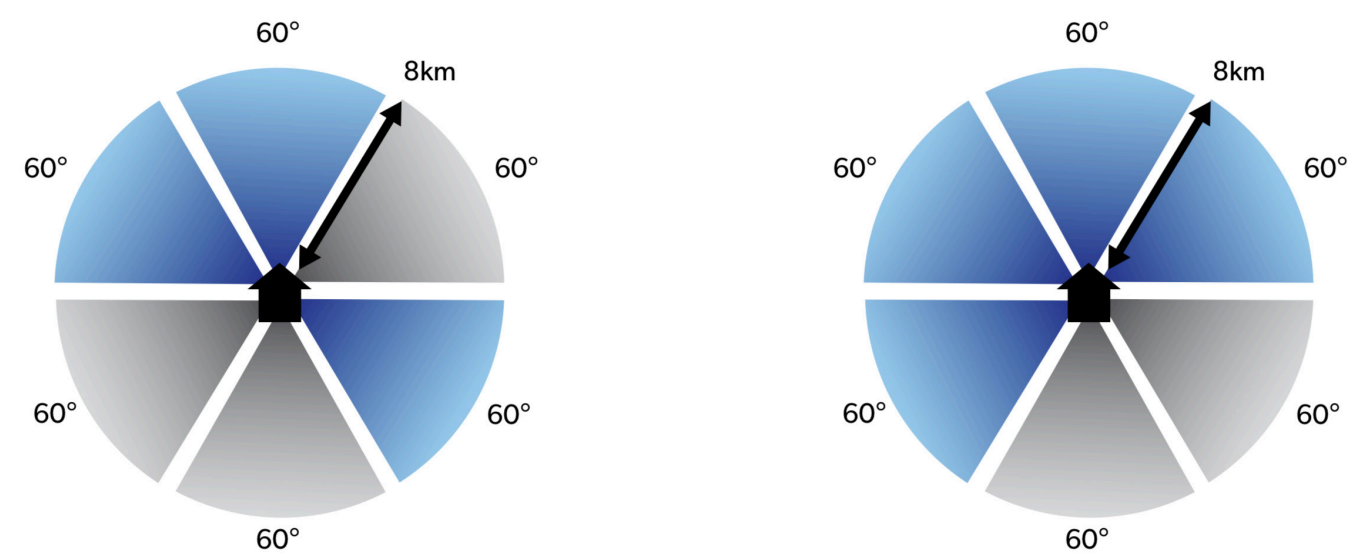


Figure 13 Preliminary Assessment Tool: Multiple Wind Turbines

(Source: Visual Assessment Bulletin)

In accordance with the Bulletin *Where wind turbines are visible within the horizontal views of the dwelling or key public viewpoints in three or more 60° sectors, the proponents must identify the turbines, relative dwelling and key public viewpoint, along with the relative distance and submit these to the Department as part of the request for SEARs.* These turbines will become a focus for assessment in the EIS.

Figure 14 provides an overview of the number of 60° sectors visible from each of the dwellings identified within 8 kilometres.

6.5 Results of Multiple Wind Turbine Tool

When applied to the Project, the 2D Multiple Wind Turbine Tool (see **Figure 14**) identified two (2) non-involved dwellings with more than two (2) 60° sectors of turbines within 8000 metres.

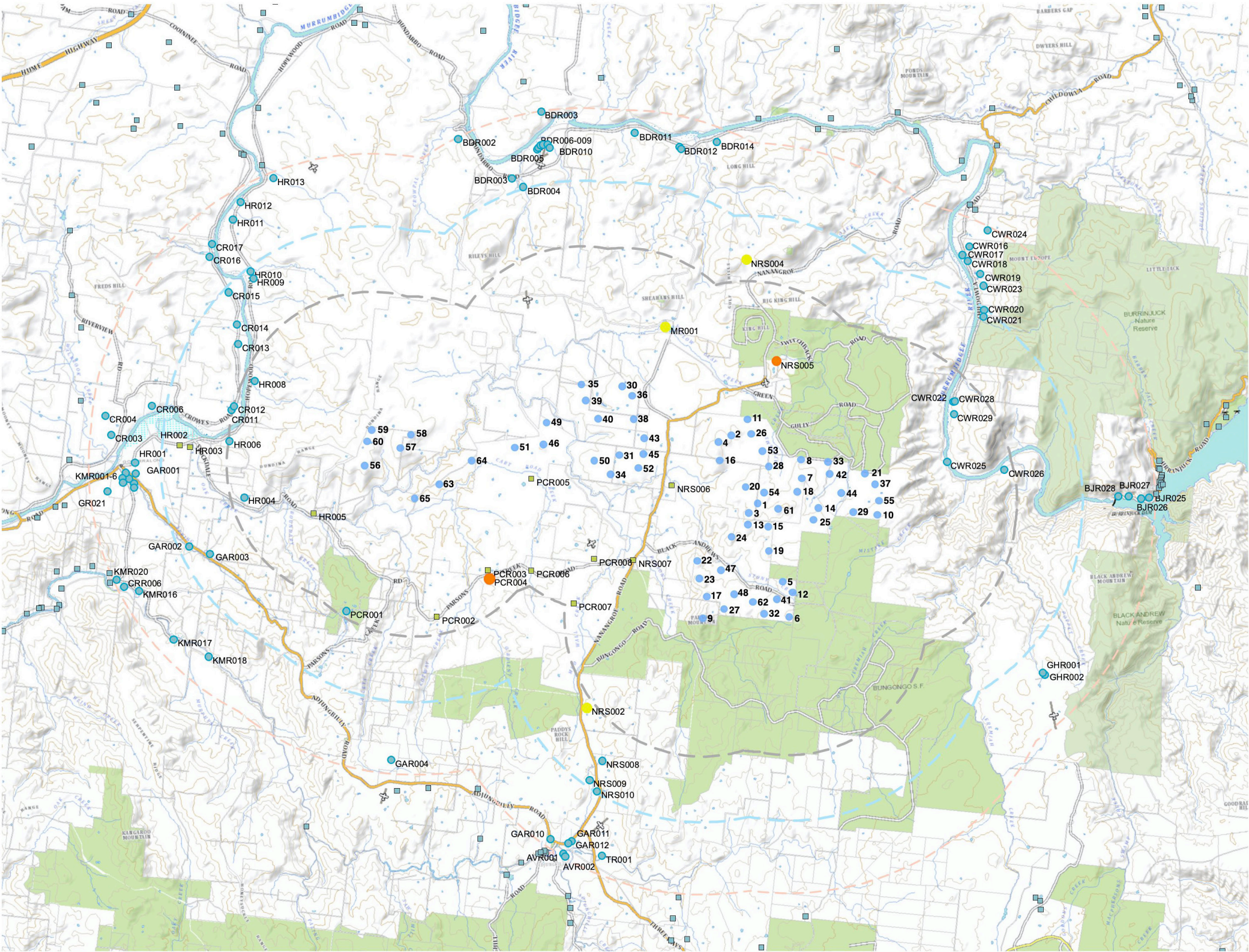
Three (3) dwellings have turbines in up to two 60° sectors (up to 120°). This is deemed acceptable.

- **MR001**
- **NRS004**
- **NRS002**

Two (2) dwellings have turbines in up to three 60° sectors (up to 180°). These dwellings will require detailed assessment:

- **PCR004**
- **NRS005**

6.0 Preliminary Assessment Tools



Multiple Wind Turbine Tool
Jeremiah Wind Farm

- LEGEND**
- Involved residence
 - Non-involved residence (within 8000m)
 - Non-involved residence (in excess of 8000m)
 - 300m Wind Turbine
 - 4000m from nearest wind turbine
 - 5900m from nearest wind turbine
 - 8000m from nearest wind turbine

- Number of sectors with turbines
(Based on 2D Assessment)
(Refer Appendix C)**
- One (1) 60° sector
 - Two (2) 60° sectors (up to 120°)
 - Three (3) 60° sectors (up to 180°)

Note:
Preliminary Assessment Tool 2: Multiple Wind Turbine Tool is based on a 2D Assessment alone and does not take into account topography, vegetation or other screening factors which may reduce the potential for viewing multiple turbines.

Figure 14 Preliminary Assessment Tool 2: Multiple Wind Turbine Tool

7.0 Preliminary Zone of Visual Influence

7.1 Preliminary Zone of Visual Influence

The Bulletin states *‘the use of Geographic Information Systems (GIS) to facilitate the application of the tools will streamline the evaluation phase of the evaluation phase of a project during the pre-lodgement stage. This can also assist in refining the number of turbines and viewpoints that will ultimately need more detailed assessment.’*

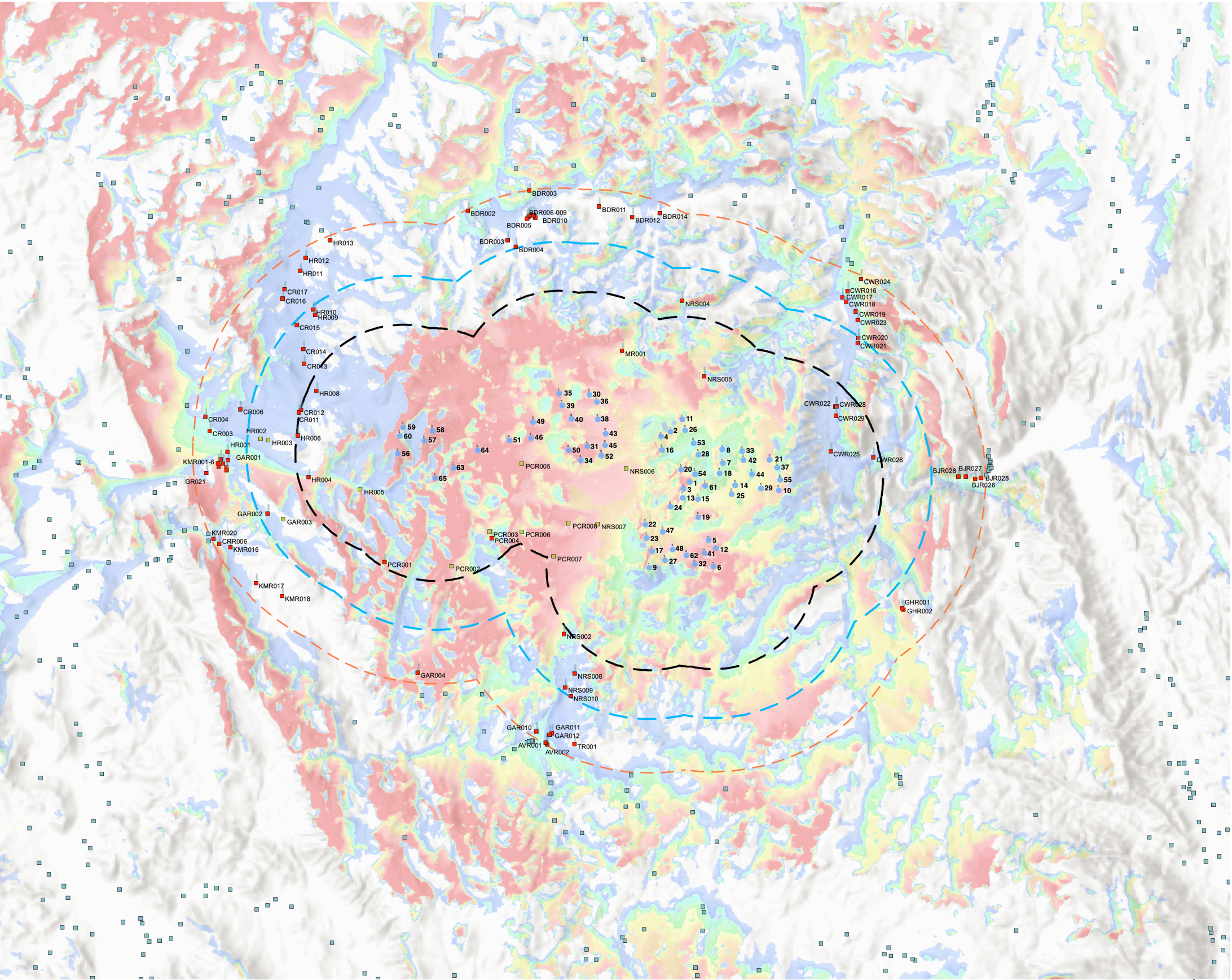
A preliminary Zone of Visual Influence (ZVI) has been prepared for the Project to illustrate the theoretical visibility of the proposed project (based on the preliminary layout). A wind turbine height of 300 metres has been used to provide a worst case scenario.

The Zone of Visual Influence (ZVI) represents the area over which a development can theoretically be seen, and is based on a Digital Terrain Model (DTM). The ZVI usually presents a bare ground scenario - ie. A landscape without screening, structures or vegetation, and is usually presented on a base map. It is also referred to as a zone of theoretical visibility (The Landscape Institute and the institute of Environmental Management and Assessment, 2002).

The ZVI has been determined through the use of digital topographic information and 3D modelling software *WindPro*. The ZVI has been assessed to approximately 10km from the project. Although it is possible for the development to be visible from further than 10km away, it is generally accepted that beyond 10km visibility is greatly diminished.

A preliminary ZVI figure has been prepared by Moir LA to assess the Jeremiah Windfarm. **Figure 15** depicts the areas of land from which the proposed development may be visible and provides an indicative number of visible wind turbines.

7.0 Preliminary Zone of Visual Influence

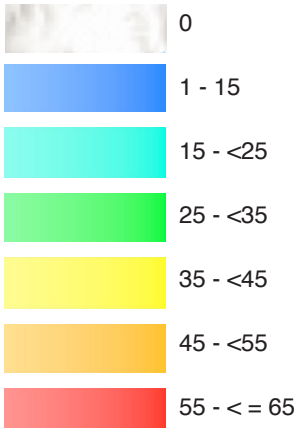


Preliminary Zone of Visual Influence Jeremiah Wind Farm

LEGEND

- Involved residence
- Non-involved residence (within 8000m)
- Non-involved residence (in excess of 8000m)
- 300m (Tip Height) Wind Turbine
- 4000m from nearest wind turbine
- 5900m from nearest wind turbine
- 8000m from nearest wind turbine

Number of visible turbines (Based on topography alone):



Note:

The ZVI is a preliminary assessment tool that represents a bare ground scenario - ie. a landscape without screening, structures or vegetation. As accurate information on the height and coverage of vegetation and buildings is unavailable, it is important to note the ZVI is based solely on topographic information. Therefore this form of mapping should be acknowledged as representing the worst case scenario.

0 5000 7500 10000 12500 15000 m

Figure 15. Zone of Visual Influence (Maximum blade tip height of 300m)

8.0 Summary

8.1 Summary of the Preliminary VIA

The application of *Preliminary Assessment Tools* as per the Bulletin identified eleven (11) non-involved dwellings and two (2) possible dwelling locations located within the black line of visual magnitude (4000 metres from nearest turbine) and fourteen (14) non-involved dwellings within the blue line of visual magnitude (4000 - 5900 metres).

The Moir LA have undertaken a Preliminary Viewpoint Analysis from key Public Locations as well as a Visual Preliminary Dwelling Assessments on the following Dwellings :

- CRO11
- CRO12
- CRO13
- CRO022
- PCR001
- PCR002
- PCR004
- BDR004
- BDR003
- BDR010
- BDR012
- NRS002
- NRS004
- NRS005
- NRS007
- NRS008
- NRS009
- NRS010
- BR003
- BJR026
- MR001
- GRO021
- HR004
- HR006
- HR009
- HR011
- HR014
- GHR002
- CWR0118
- CWR020
- GAR001
- GAR004
- GAR004
- GAR10
- KMR016

The 2D Multiple Wind Turbine Tool identifies three (3) non-involved dwellings with more than two (2) 60° sectors of turbines within 8000 metres (**MR001, NRS004 and NRS002**) and two (2) dwellings with turbines in up to three 60° sectors (up to 180°) (**PCR004 & NRS005**).

Detailed assessment of these dwellings will be undertaken during the EIS phase of the Project.

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<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Parks-plans-of-management/black-andrew-nature-reserve-plan-of-management-060129.pdf>

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NSW Government Land and Property Information, Spatial Information Exchange SIX Maps, Accessed at: <<http://maps.six.nsw.gov.au/>> [Accessed between November 2020 – May 2021]

<https://www.environment.nsw.gov.au/bioregions/SouthWesternSlopes-Maps.htm>

<https://www.environment.nsw.gov.au/bioregions/SouthEasternHighlands-Maps.htm>

Google Earth Pro 2020 Viewed November 2020 - May 2021 www.google.com/earth/index.html



Appendix A

Preliminary Assessment Tools

A1. Preliminary Assessment Tools

TABLE 2: Preliminary Desktop Assessment - Dwellings within 4000m (Black Line)

Non-associated Dwellings within 4000m							
HOUSE ID	Address:	Closest WTG (km):	Number of Turbines (Based on ZVI)	Number of 60° Sectors (Based on 2D Assessment)	Total Number of Turbines within 4000m	Turbines IDs within 4000m	Desktop Assessment
MR001	329 MARYVALE RD, ADJUNGBILLY 2727	2.12km	45 - 55	2 (Up to 120°)	13	11, 26, 2, 4, 45, 43, 31, 38, 36, 30, 40, 39, 35.	Up to 55 visible turbines in up to 120° of views generally towards the south. Limited intervening vegetation.
NRS005	NANANGROE RD, ADJUNGBILLY 2727	1.86km	35-45	3 (Up to 180°)	14	33, 42, 8, 7, 18, 54, 28, 53, 26, 11, 2, 4, 16, 20	Up to 40 turbines visible to the south. Scattered vegetation to the south of the house.
HR004	229 STOCKDALE RD, GOBARRALONG 2727	3.95km	1-15	1 (Up to 60°)	2	60, 56	The tip of one WTG may be visible from this dwelling. Existing buildings and scattered vegetation is likely to fragment / screen views.
HR006	372 HOPEWOOD RD, GOBARRALONG 2727	3.60km	1-15	1 (Up to 60°)	2	56, 60	Two blades visible to the east. Existing vegetation likely to intervene views.
PCR001	239 PARSONS CREEK RD, ADJUNGBILLY 2727	3.80km	55-65	1 (Up to 60°)	1	65	Dwelling appears to be located in an elevated position. All turbines likely to be visible. Limited intervening vegetation to the north east.
PCR004	866 PARSONS CREEK RD, ADJUNGBILLY 2727	3.19km	35-45	3 (Up to 180°)	4	65, 63, 64, 51	Approximately 45 WTGs visible to the north east. Dwelling appears to be located in an elevated position. No intervening vegetation.
CWR022	2504 CHILDOWLA RD, BOOKHAM 2582	3.27km	1-15	1 (Up to 60°)	4	21, 37, 55, 10	3 WTGs and two blades visible to the south west. Some intervening vegetation.
CR012	989 CROWES RD, COOLAC 2727	3.96km	1-15	1 (Up to 60°)	1	60	5 turbines visible to the east. No screening factors.
HR008	574 HOPEWOOD RD, GOBARRALONG 2727	3.66km	1-15	1 (Up to 60°)	2	59, 60	4 turbines visible to the east. Some intervening vegetation.
CWR025		2.17km	1-15	1 (Up to 60°)	9	10, 55, 37, 21, 29, 44, 42, 33, 14	Two blades and one turbine visible to the west. Dwelling located in densely vegetated area. Vegetation is likely to fragment / screen views.
CWR026	1160 BLACK ANDREWS RD, ADJUNGBILLY 2727	3.72km	1-15	1 (Up to 60°)	3	37, 55, 10	5 turbines visible to the west. Dwelling located in densely vegetated area. Vegetation is likely to fragment / screen views.
CWR028	Potential Dwelling Location 2504 CHILDOWLA RD, BOOKHAM 2582	3.31km	1-15	1 (Up to 60°)	4	21, 37, 55, 10	Two blades and three (3) turbines may be visible to the south west. This is a potential dwelling location and as such there is currently limited vegetation screening factors.
CWR029	Potential Dwelling Location 2504 CHILDOWLA RD, BOOKHAM 2582	3.04km	1-15	1 (Up to 60°)	7	21, 37, 55, 10, 33, 42, 44	One blade and four (4) turbines may be visible to the south west. This is a potential dwelling location and as such there is currently limited vegetation screening factors.

A1. Preliminary Assessment Tools

TABLE 3: Preliminary Desktop Assessment - Dwellings within between 4000m-5900m (Blue Line)

Non-associated Dwellings within 5900m					
HOUSE ID	Address:	Closest WTG (km):	Number of Turbines (Based on ZVI)	Number of 60° Sectors (Based on 2D Assessment)	Desktop Assessment
NRS002	346 NANANGROE RD, ADJUNGBILLY 2727	4.21km	35-45	2 (Up to 120°)	Up to 45 visible turbines in up to 120° of views generally towards the north. Existing buildings and scattered vegetation is likely to fragment views to a number of turbines.
NRS004	1989 NANANGROE RD, ADJUNGBILLY 2727	4.66km	15-25	2 (Up to 120°)	Approx. 23 WTGs visible to the south. Dwelling setback approximately 630m north of Bundarbo Road.
NRS008	200 NANANGROE RD, ADJUNGBILLY 2727	5.02km	1-15	1 (Up to 60°)	One turbine and two blades to the north east. Representative viewpoint will be taken from Nanangroe Road.
NRS009	NANANGROE RD, ADJUNGBILLY 2727	5.70km	1-15	1 (Up to 60°)	Three turbines and one blade to the NNE. Representative viewpoint will be taken from Nanangroe Road.
NRS010	NANANGROE RD, ADJUNGBILLY 2727	5.84km	1-15	1 (Up to 60°)	One turbine and one blade to the NNE. Representative viewpoint will be taken from Nanangroe Road.
CWR021	2253 CHILDOWLA RD, BOOKHAM 2582	5.67km	1-15	1 (Up to 60°)	5 WTGS and one blade tip visible to the south. Located close to road, will take representative viewpoint.
CWR020	2227 CHILDOWLA RD, BOOKHAM 2582	5.84km	1-15	1 (Up to 60°)	6 WTGS and one blade tip visible to the south. Located close to road, will take representative viewpoint.
CR011	989 CROWES ROAD, COOLAC 2727	4.02km	1-15	1 (Up to 60°)	4 turbines visible to the east. No screening factors.
CR013	1188 CROWES RD, COOLAC 2727	4.58km	1-15	1 (Up to 60°)	5 WTGs visible to the south east. Located close to Crowes Road, representative viewpoint will be taken.
CR014	1261 CROWES RD, COOLAC 2727	4.94km	1-15	1 (Up to 60°)	5 WTGs visible to the south east. Located close to Crowes Road, representative viewpoint will be taken.
CR015	1270 CROWES RD, COOLAC 2727	5.72km	1-15	1 (Up to 60°)	5 WTGs visible to the south east. Located close to Crowes Road, representative viewpoint will be taken.
GAR002	322 ADJUNGBILLY RD, GOBARRALONG 2727	5.56km	0	1 (Up to 60°)	Not visible due to topography.
HR009	878 HOPEWOOD RD, GOBARRALONG 2727	5.56km	1-15	1 (Up to 60°)	3 WTGs visible to the south east.
HR010	1065 HOPEWOOD RD, GOBARRALONG 2727	5.76km	1-15	1 (Up to 60°)	3 WTGs and one blade visible to the south east.



Appendix B

Preliminary Viewpoint Assessment

Preliminary Viewpoint Analysis

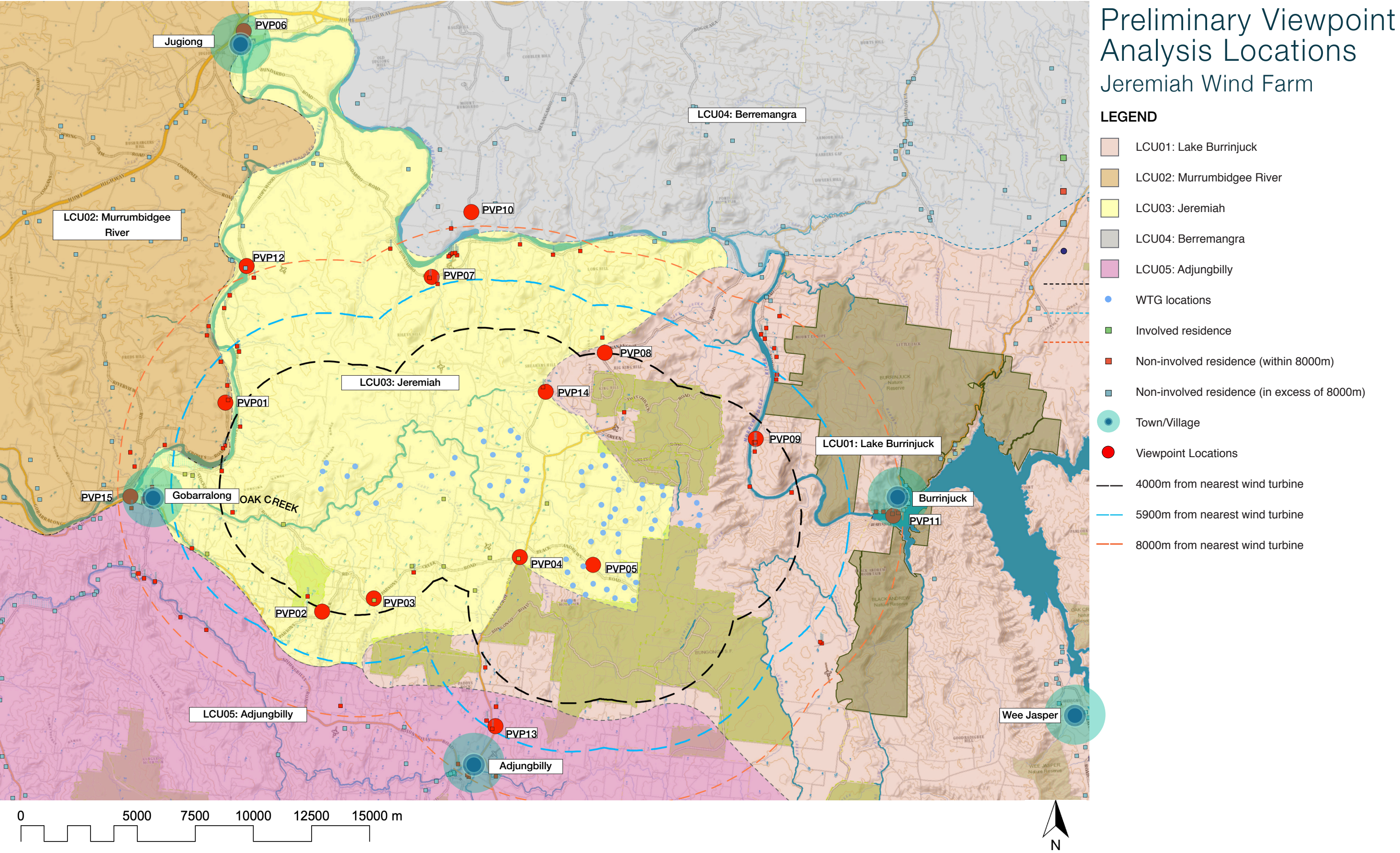
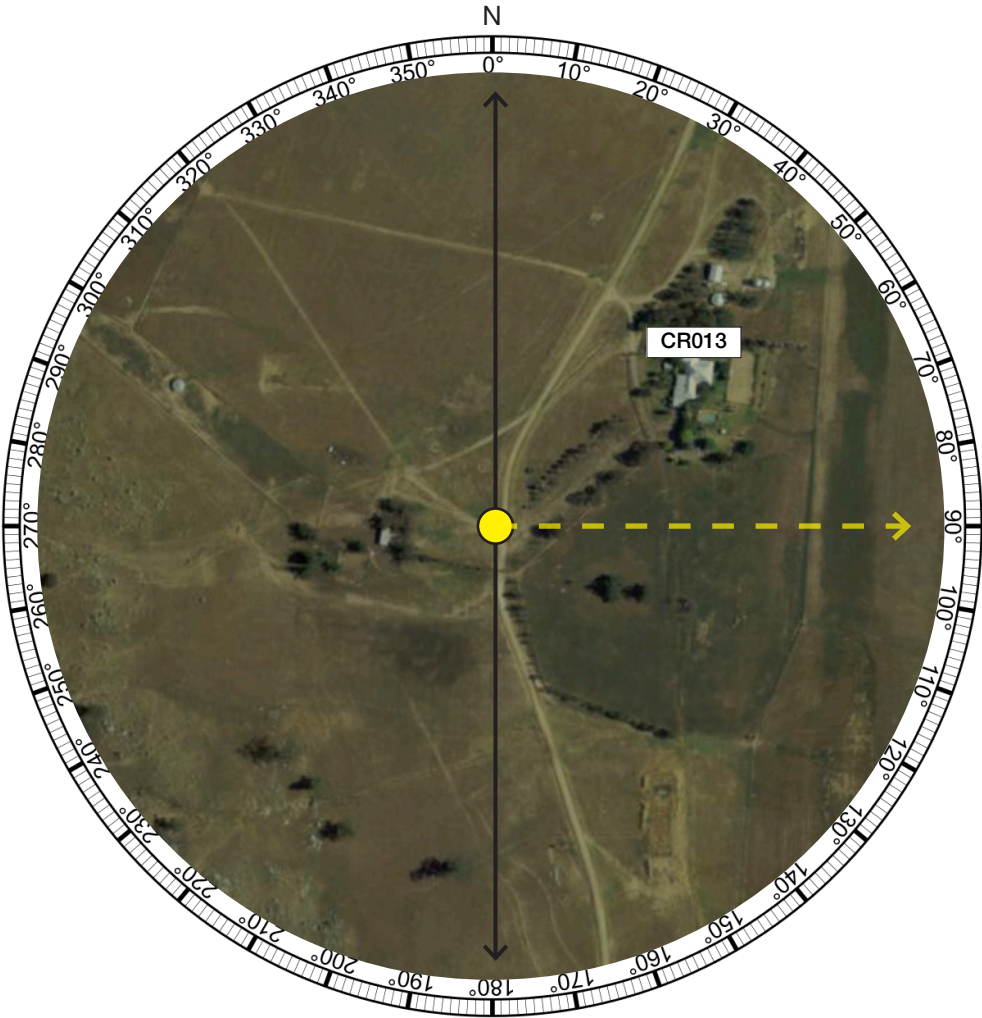


Figure 16 Preliminary Viewpoint Analysis Locations

PVP01 ‘Bongongo Angus’ Crowes Rd, Coolac. Dwelling ID: CR013



Existing View



Aerial Image PVP01 (Aerial Image Source: Six Maps)

VIEWPOINT PVP01

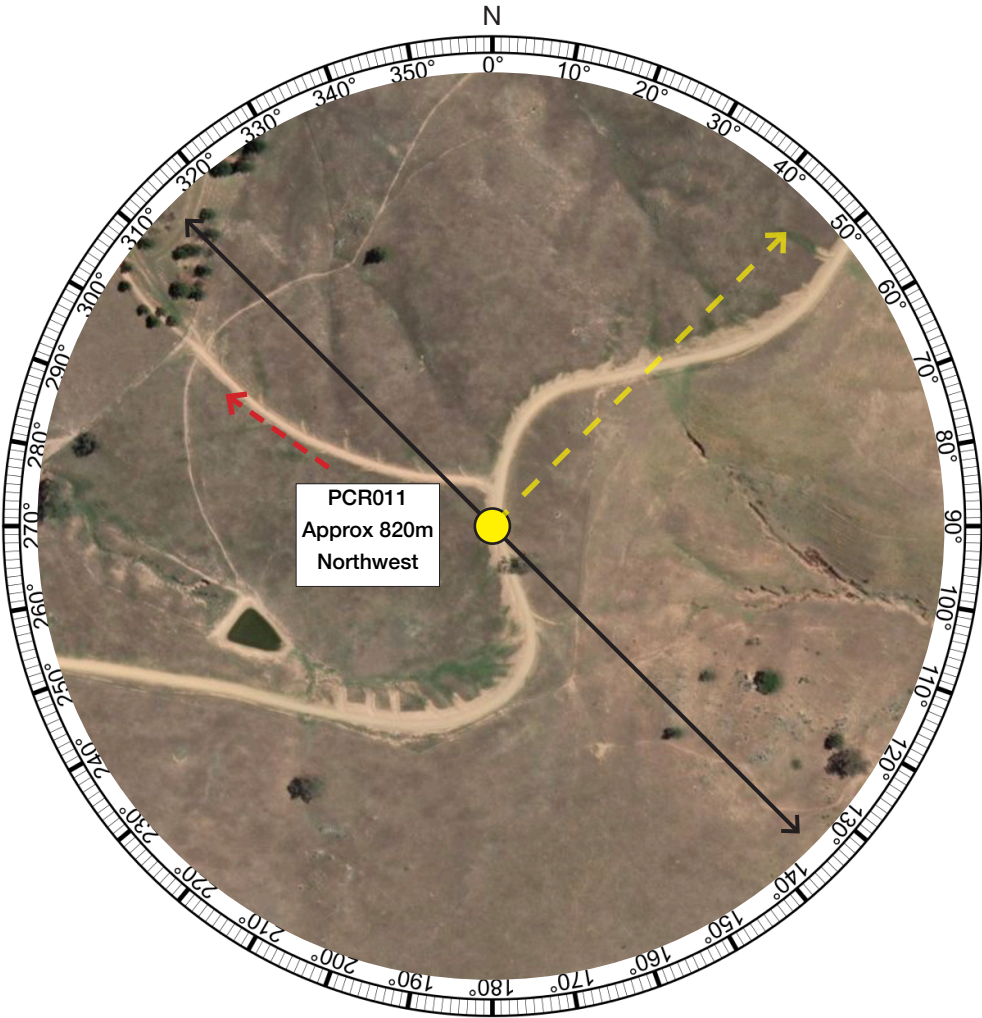
Viewpoint Summary:	
Location:	
Crowes Rd, Coolac	
Coordinates:	Viewing Direction:
148°18'26.95"E 34°57'8.44"S	East
Distance to nearest WTG:	Elevation:
4.16km	257m

Existing Landscape Character Description:
This viewpoint is taken from the driveway to CR013 on Crowes Road. Crowes Road is an unsealed low use road that provides access to a number of properties located along the banks of the Murrumbidgee River.
The land is mostly cleared agricultural land used for grazing and some irrigated cropping. The topography is generally undulating with contrasting vegetated river flats associated with the adjoining Murrumbidgee River. The Murrumbidgee River can be seen in the middle ground of the view.
Scattered remnant vegetation can be seen along the hilltops and valleys of the ridgeline in the background of the view. The ridgeline to the east of the view assists in screening views toward the east.
Potential Visual Impact:
From this location it is likely vegetation in the middleground may fragment views to the south east. A combination of vegetation and landform are likely to screen the majority of views toward the Project Area.

PVP02 Parsons Creek Rd, Adjungbilly. Dwelling ID: PCR001



Existing View



Aerial Image PVP02 (Aerial Image Source: Six Maps)

VIEWPOINT PVP02

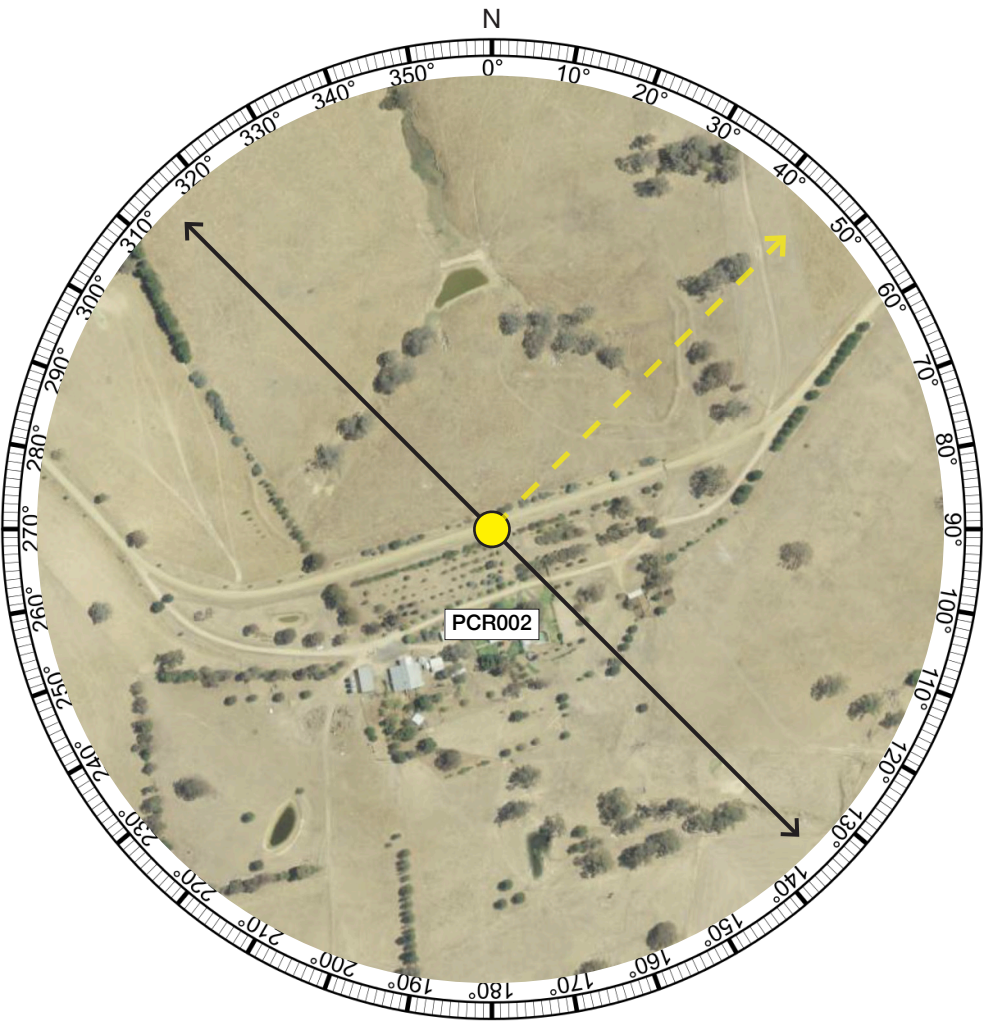
Viewpoint Summary:	
Location:	
Parsons Creek Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°20'41.51"E 35° 1'40.04"S	Northeast
Distance to nearest WTG:	Elevation:
4.10km	495m

Existing Landscape Character Description:
<p>This viewpoint is taken from a crest along Parsons Creek Road at the driveway to PCR001. Parsons Creek Road is an unsealed low use road providing access to a small number of isolated dwellings accessed via long private driveways.</p> <p>The land is mostly cleared agricultural land used for grazing and forestry purposes with a large parcel of dense vegetation associated with Bogongo State Forest visible in the middle ground, to the north of the view.</p> <p>The topography is undulating with the ridgeline associated with the Project Site visible in the background of the view. Roadside vegetation is uncommon in this area, allowing for expansive views toward the north east. Vegetation is visible along the top of the ridgeline and within the steep valleys.</p>
Potential Visual Impact:
<p>From this location it is likely a number of turbines will be visible to the north of the view. It is likely distance may fragment views to a number of turbines to the east, therefore reducing the number of turbines visible from this location.</p>

PVP03 Parsons Creek Rd, Adjungbilly. Dwelling ID: PCR002



Existing View



VIEWPOINT PVP03

Viewpoint Summary:	
Location:	
Parsons Creek Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°22'2.50"E 35° 1'26.33"S	Northeast
Distance to nearest WTG:	Elevation:
Approx 3.39km	452m

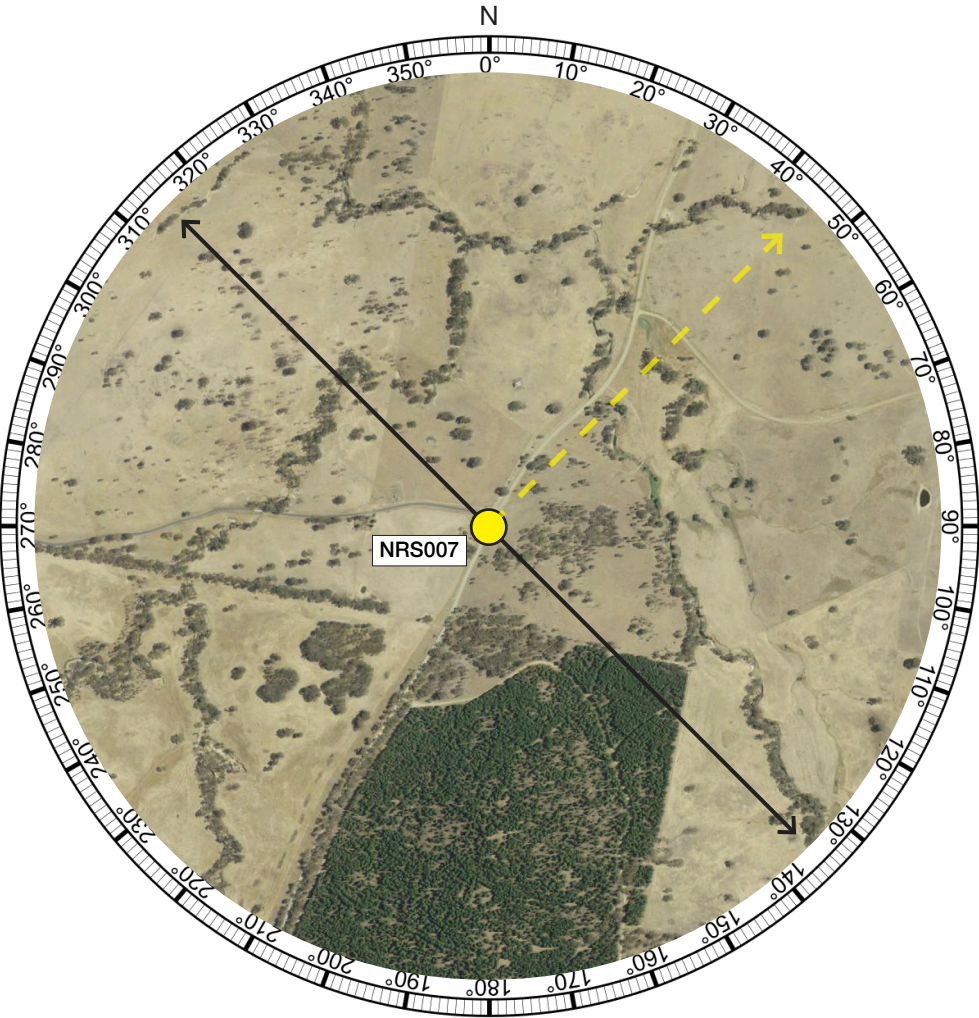
Existing Landscape Character Description:
This viewpoint is taken from the driveway to PCR002 on Parsons Creek Road. Parsons Creek Road is a low use, unsealed road.
The land is mostly cleared agricultural land used for grazing.
The topography is generally undulating with small vegetated valleys, hilltops and creeklines common in the area.
Roadside vegetation and vegetated windbreaks are visible in the foreground of the view and contain views to the east. Scattered remnant native vegetation is visible along the small ridgeline associated with the Project area in the background of the view.
Potential Visual Impact:
From this location it is likely a small number of turbines may be visible to the north of the view. It is likely a combination of the windbreak and roadside vegetation will fragment views toward the Project area to the north east therefore reducing the numbers of WTG's visible from this location.

Aerial Image PVP03 (Aerial Image Source: Six Maps)

PVP04 Parsons Creek Rd, Adjungbilly. Dwelling ID: NRS007



Existing View



VIEWPOINT PVP04

Viewpoint Summary:	
Location:	
Parsons Creek Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°25'51.20"E 35° 0'42.45"S	Northeast
Distance to nearest WTG:	Elevation:
1.82km	495m

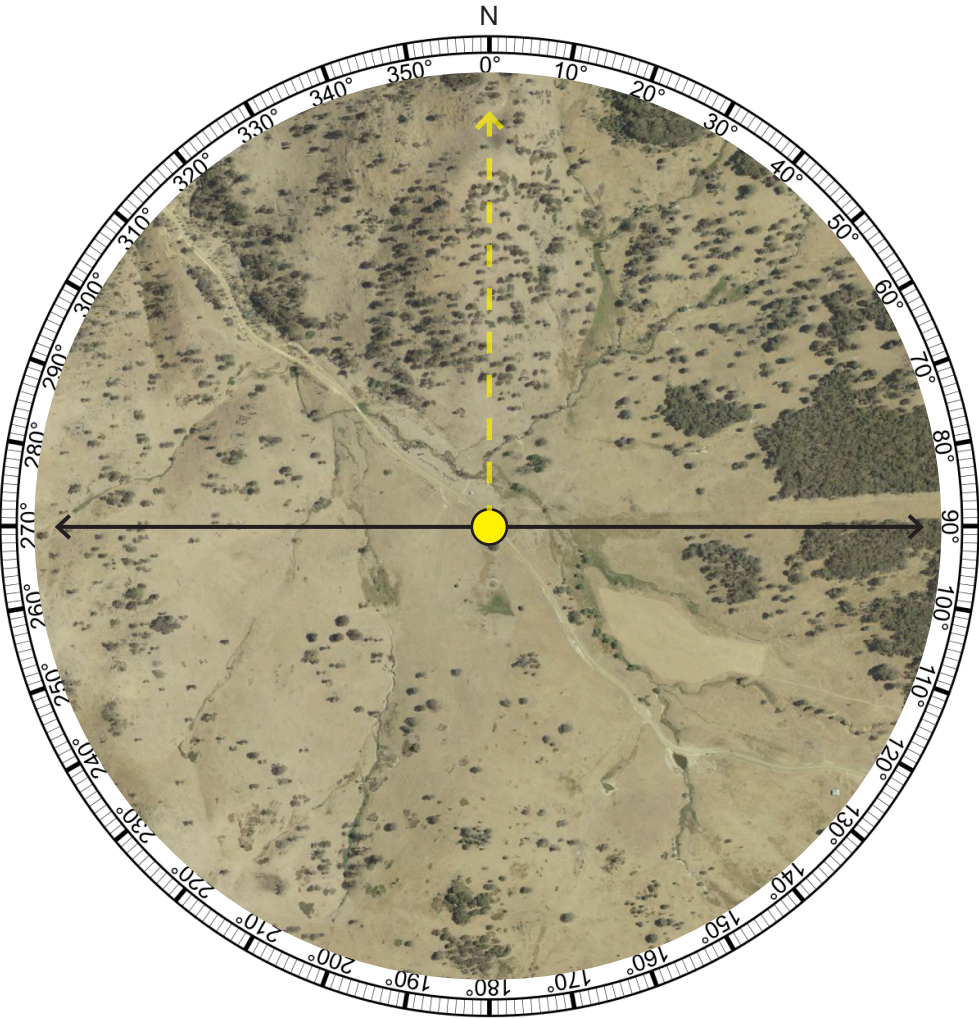
Existing Landscape Character Description:
This viewpoint is taken from the corner of Adjungbilly Road and Parsons Creek Road, nearby NRS007.
The land is partially cleared agricultural land used for grazing and forestry purposes.
Remnant native vegetation associated with Parsons Creek can be seen in the middle ground of the view, containing views to the north and north east. Large groupings of vegetation can be seen along the road side and along the hilltops of the surrounding ridgelines in the background of the view.
The topography is flat with the undulating landform of the ridgeline associated with the project site visible in the background of the view.
Potential Visual Impact:
From this location it is likely that a number of turbines may be visible, particularly to the east of the view. A combination of creekline and remnant native vegetation are likely to fragment views to a small number of turbines to the north and north east, reducing the number visible from this location.

Aerial Image PVP04 (Aerial Image Source: Six Maps)

PVP05 Black Andrews Rd, Adjungbilly. Dwelling ID: n/a



Existing View



VIEWPOINT PVP05

Viewpoint Summary:	
Location:	
Black Andrews Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°27'43.92"E 35° 0'56.33"S	North
Distance to nearest WTG:	Elevation:
0.38km	630m

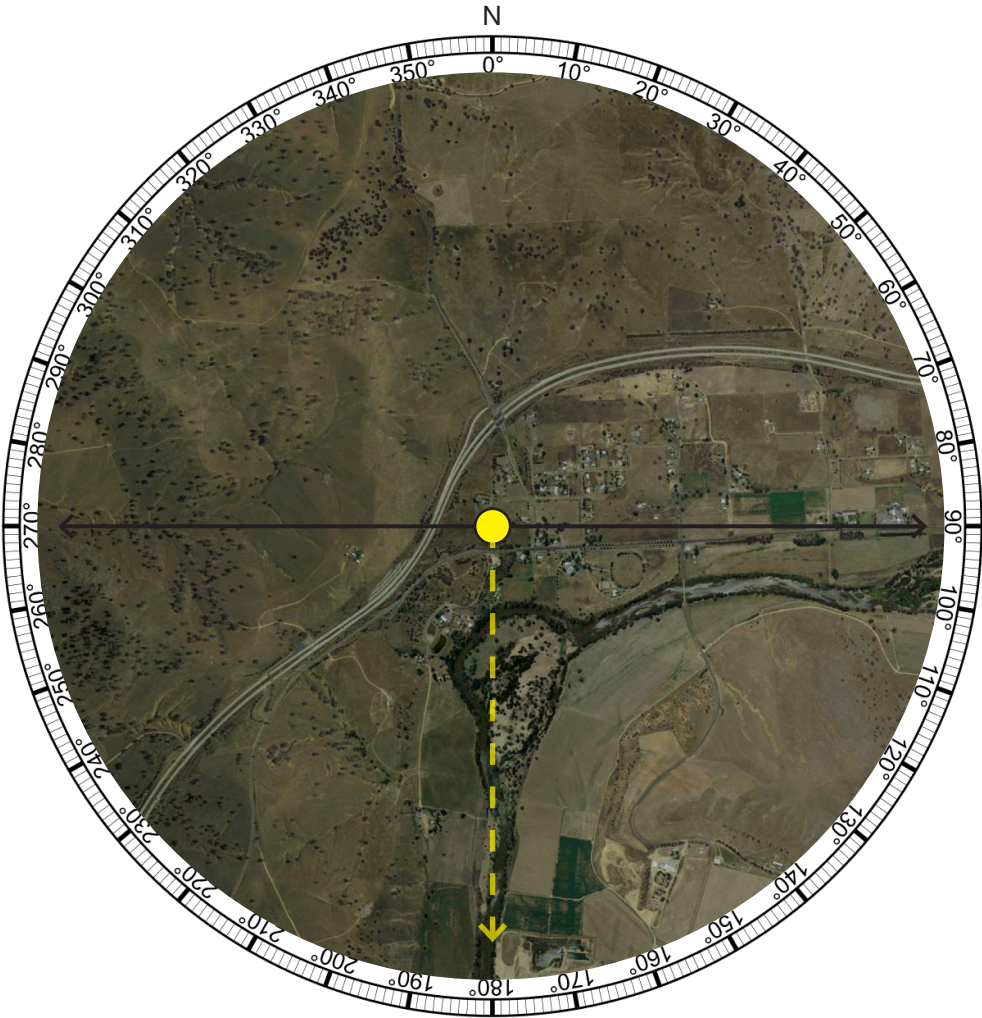
Existing Landscape Character Description:
This viewpoint is taken along Black Andrews Road. Black Andrews Road is a low use, unsealed road providing access to portions of the State Forest and a small number of isolated dwellings.
The viewpoint is taken from a flat low point within a small valley associated with the Project Site. Stony Creek is visible in the middle ground of the view and runs along the edge of the road.
The land is mostly cleared agricultural land used for grazing. Rolling vegetated ridgelines are visible in the background of the view.
The viewpoint is taken from a location at close proximity to a number of turbines.
Potential Visual Impact:
From this view it likely a number of turbines will be visible at close range. The ridgeline surrounding the viewpoint may contain views to a small number of turbines located outside of the valley.

Aerial Image PVP05 (Aerial Image Source: Six Maps)

PVP06 Stapylton St, Jugiong. Dwelling ID: n/a



Existing View



Aerial Image PVP06 (Aerial Image Source: Six Maps)

VIEWPOINT PVP06

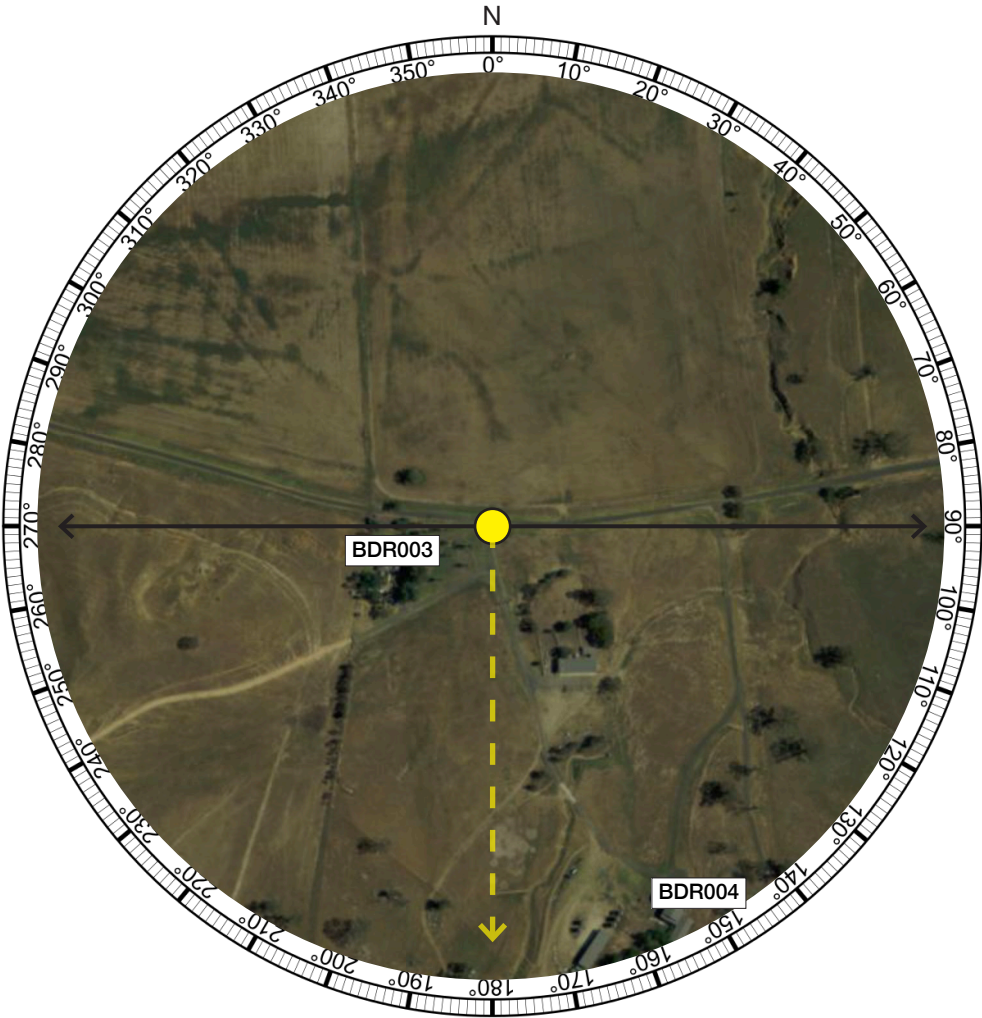
Viewpoint Summary:	
Location:	Elevation:
Stapylton St, Jugiong	274m
Coordinates:	Viewing Direction:
148°19'22.44"E 34°49'16.40"S	South
Distance to nearest WTG:	Elevation:
17.28km	274m

Existing Landscape Character Description:
<p>This viewpoint is taken nearby the Church located in the village of Jugiong.</p> <p>The viewpoint is taken from a high point within the Village. The Village is generally characterised by low density residential housing set amongst gently undulating and well vegetated streets. This is contrasted by large flat sections associated with the Murrumbidgee River and the surrounding rolling hillsides.</p> <p>Vegetation associated with the residential lots is visible in the in the middleground of the view.</p> <p>The landform to the south west of the view contains views to the south and west.</p>
Potential Visual Impact:
<p>An assessment based on topography alone, identifies a number of WTG's associated with the project may be visible from this location. However, vegetation in the middleground is likely to fragment views to the project area, reducing the number of WTG's visible form this location. When combined with the distance to the project area, it is likely the WTG's may be difficult to discern.</p>

PVP07 Bundarbo Rd, Gobarralong. Dwelling ID: BDR003



Existing View



Aerial Image PVP07 (Aerial Image Source: Six Maps)

VIEWPOINT PVP07

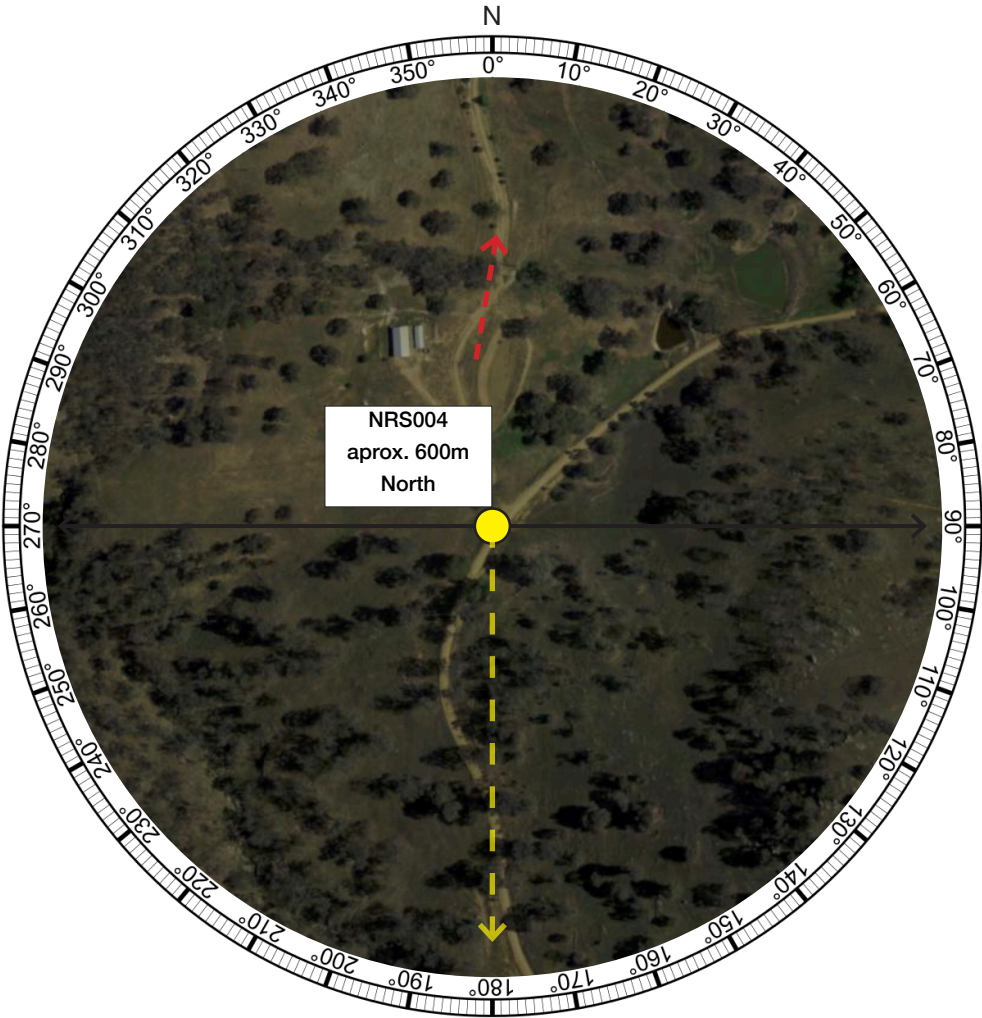
Viewpoint Summary:	
Location:	
Bundarbo Rd, Gobarralong	
Coordinates:	Viewing Direction:
148°23'55.19"E 34°54'40.61"S	South
Distance to nearest WTG:	Elevation:
6.28km	269 m

Existing Landscape Character Description:
<p>This viewpoint is taken nearby to BDR003 and BDR004 along Bundarbo Road. Bundarbo Road is a low use, partially sealed road providing access to a small number of properties accessed using private driveways. A portion of the road follows the Murrumbidgee River.</p> <p>The viewpoint is taken from a flat low point at proximity to the River. The topography of the area is generally flat to undulating. A ridgeline is visible in the background of the view and contains views to the south.</p> <p>The land is generally cleared agricultural land used for grazing and some areas of irrigated cropping.</p> <p>Scattered vegetation associated with homesteads and within grazing lots are visible in the middleground of the view.</p>
Potential Visual Impact:
<p>An assessment based on topography alone, identifies a number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation, it is likely views toward the Project Area will be screened from this location.</p>

PVP08 ‘Donna Valley’ Nanangroe Rd, Adjungbilly. Dwelling ID: NRS004



Existing View



Aerial Image PVP08 (Aerial Image Source: Six Maps)

VIEWPOINT PVP08

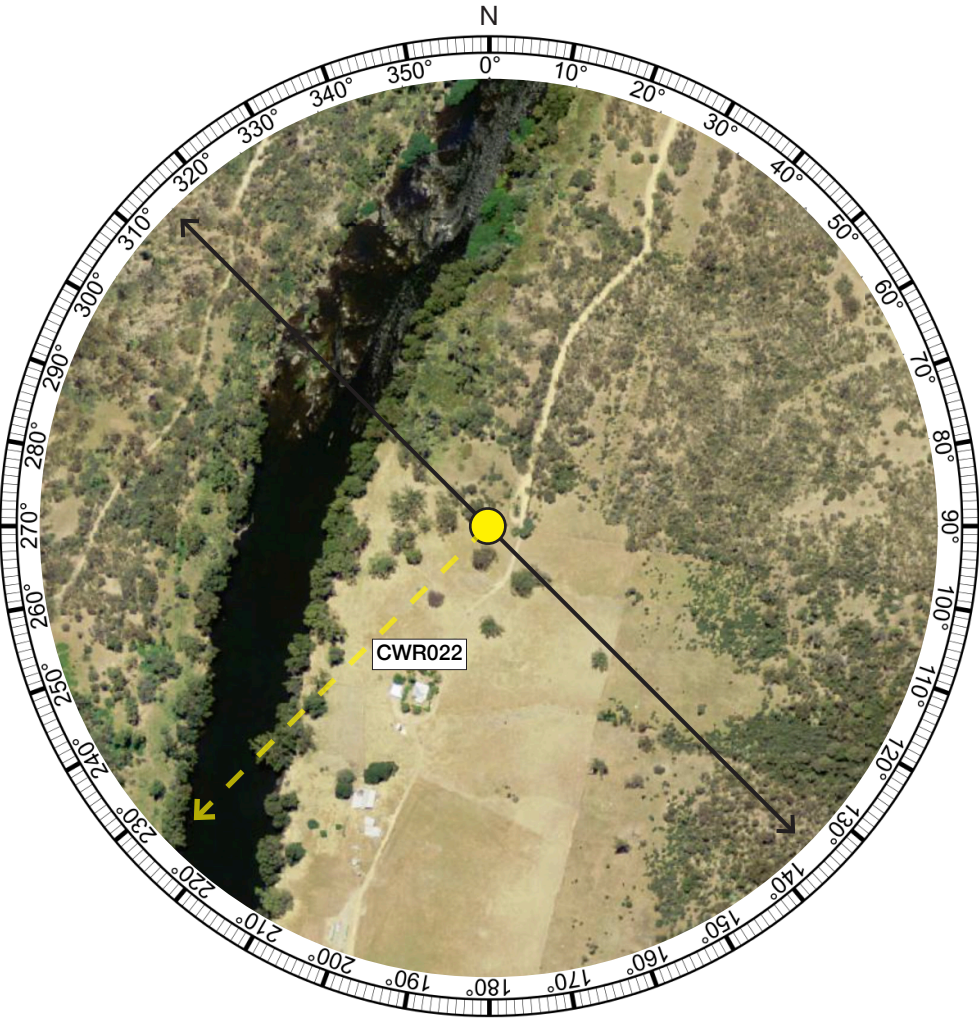
Viewpoint Summary:	
Location:	
Nanangroe Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°28'17.09"E 34°56'27.25"S	South
Distance to nearest WTG:	Elevation:
4.01km	539m

Existing Landscape Character Description:
This viewpoint is taken nearby to NRS004 along Nanangro Road. Nanangro Road is a low use road providing access to a small number of isolated dwellings accessed via private driveways.
The topography of the area is generally undulating. A localised, rise is visible in the foreground and background of the view and contains views to the south.
The land is generally partially cleared with remnant vegetation located along hillsides.
The land is generally used for grazing and forestry activities.
Potential Visual Impact:
An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation, it is likely views toward the Project Area will be difficult to discern from this location.

PVP09 2505 Chidowla Rd, Burrinjuck. Dwelling ID: CWR022



Existing View



VIEWPOINT PVP09

Viewpoint Summary:	
Location:	
2505 Chidowla Rd, Burrinjuck	
Coordinates:	Viewing Direction:
148°32'4.58"E 34°58'25.37"S	Southwest
Distance to nearest WTG:	Elevation:
3.42km	305m

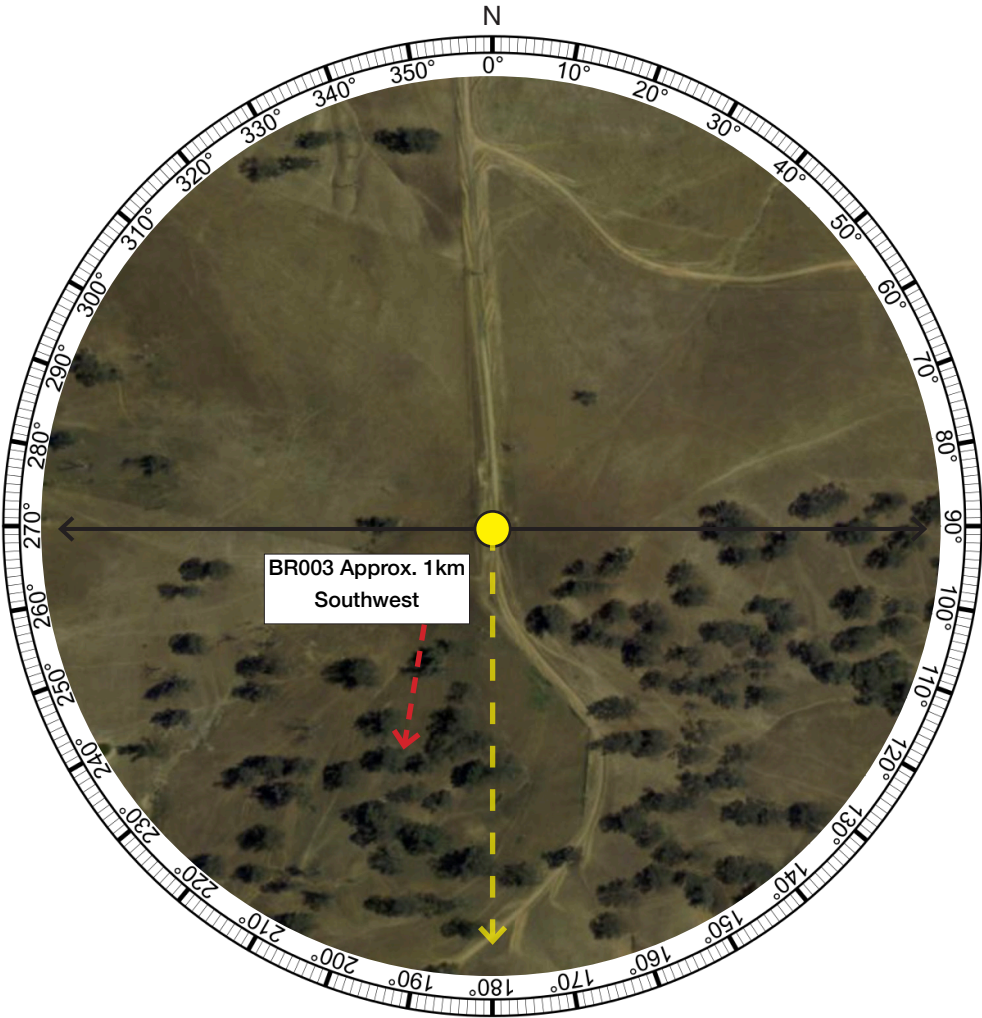
Existing Landscape Character Description:
This viewpoint is taken nearby to CWR022 at the end of Chidowla Road. Chidowla Road is a low use, unsealed road no through road providing access to a small number of isolated properties situated along the Murrumbidgee River.
The topography of the area is generally undulating to sloping with flat sections located at proximity to the River. A vegetated ridgeline is visible in the background of the view and contains views to the south west.
The land is generally partially vegetated to densely vegetated with some small sections of cleared agricultural land used for grazing.
Dense vegetation can be seen in the foreground and contains views to the west.
Potential Visual Impact:
An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation, it is likely views toward the Project Area will be fragmented from this location, reducing the number visible.

Aerial Image PVP09 (Aerial Image Source: Six Maps)

PVP10 Benangaroo Rd, Berremangra. Dwelling ID: BR003



Existing View



Aerial Image PVP10 (Aerial Image Source: Six Maps)

VIEWPOINT PVP10

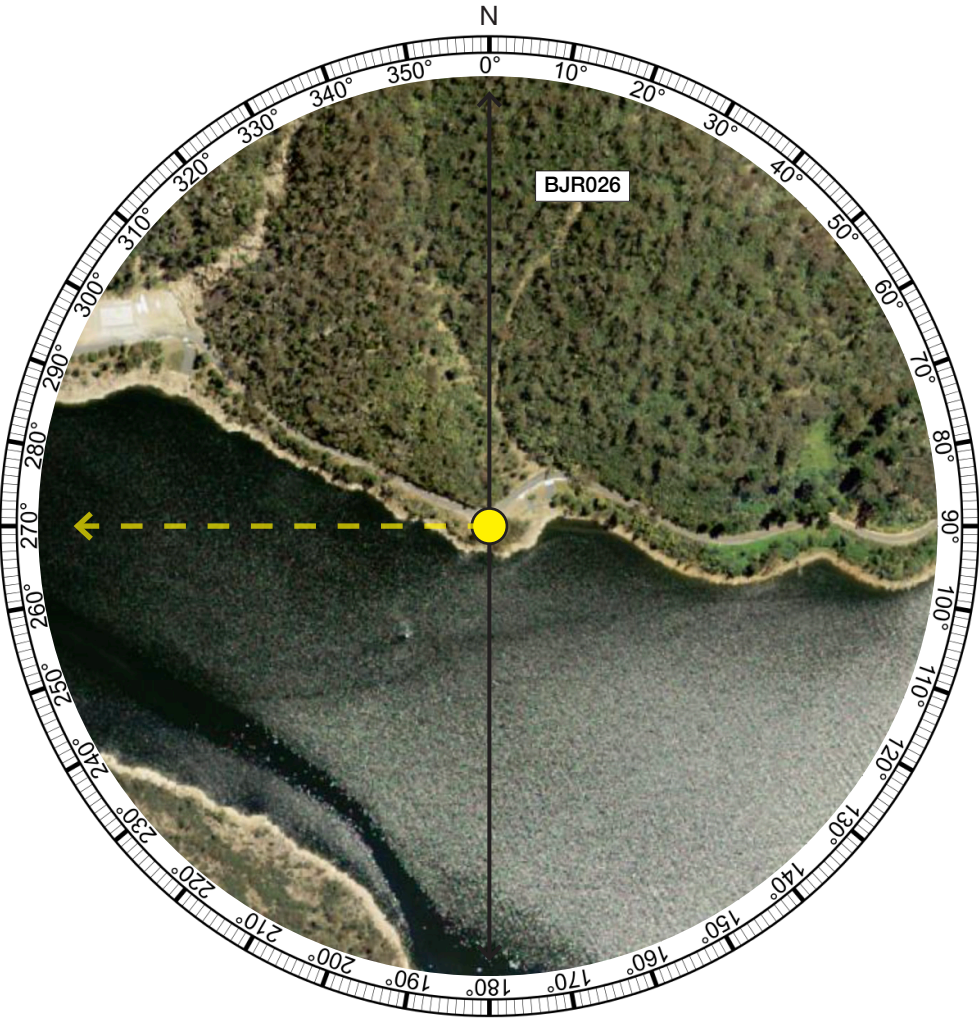
Viewpoint Summary:	
Location:	
Benangaroo Rd, Berremangra	
Coordinates:	Viewing Direction:
148°25'1.04"E 34°53'20.27"S	South
Distance to nearest WTG:	Elevation:
8.55km	396m

Existing Landscape Character Description:
This viewpoint is taken from a highpoint along Benangaroo Road at the driveway to BR003. Benangaroo Road is an unsealed low use no through road providing access to a small number of isolated dwellings accessed via long private driveways.
The land is mostly cleared agricultural land used for grazing, with scattered vegetation associated with hilltops and within grazing lots.
The topography is undulating to steep with the ridgeline associated with the Project Site visible in the background of the view. Vegetation is visible along the top of the ridgeline and within the valleys and creeklines.
Potential Visual Impact:
An assessment based on topography alone, identifies a number of WTG's associated with the project may be visible from this location. However, due to the combination of distance and vegetation, it is likely views toward the Project Area will be difficult to discern from this location.

PVP11 Burrinjuck Dam. Dwelling ID: BJR026



Existing View



VIEWPOINT PVP11

Viewpoint Summary:	
Location:	
Burrinjuck Dam	
Coordinates:	Viewing Direction:
148°35'31.90"E 35° 0'11.22"S	West
Distance to nearest WTG:	Elevation:
7.60km	368m

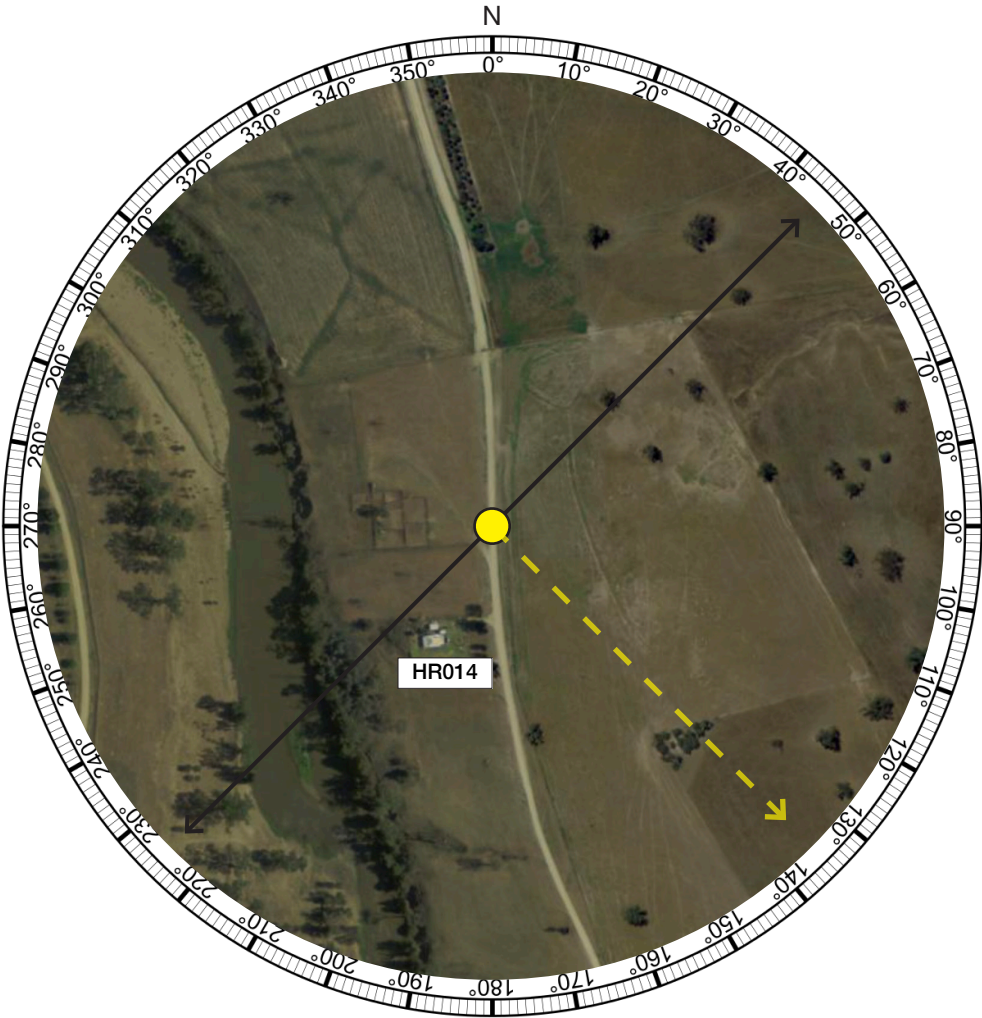
Existing Landscape Character Description:
<p>This viewpoint is taken near the access to the Weir associated with the Burrinjuck Dam and BJR026. The access road is a low use, sealed road no through road. Due to the topography and dam, there are limited public access or stopping opportunities along the length of this road.</p> <p>The topography of the area is steep and densely vegetated and generally contains views to the north and south.</p> <p>The land is generally used for dam infrastructure maintenance vehicles, with land located further toward the campground to the east used for passive recreation.</p> <p>Burrinjuck Dam can be seen in the foreground of the view.</p> <p>A small portion of the vegetated ridgeline associated with the Project Area is visible to the west in the distance of the view.</p>
Potential Visual Impact:
<p>An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation, it is likely views toward the Project Area will be fragmented from this location, making them difficult to discern.</p>

Aerial Image PVP11 (Aerial Image Source: Six Maps)

PVP12 Hopewood Rd, Gobarralong. Dwelling ID: HR014



Existing View



Aerial Image PVP12 (Aerial Image Source: Six Maps)

VIEWPOINT PVP12

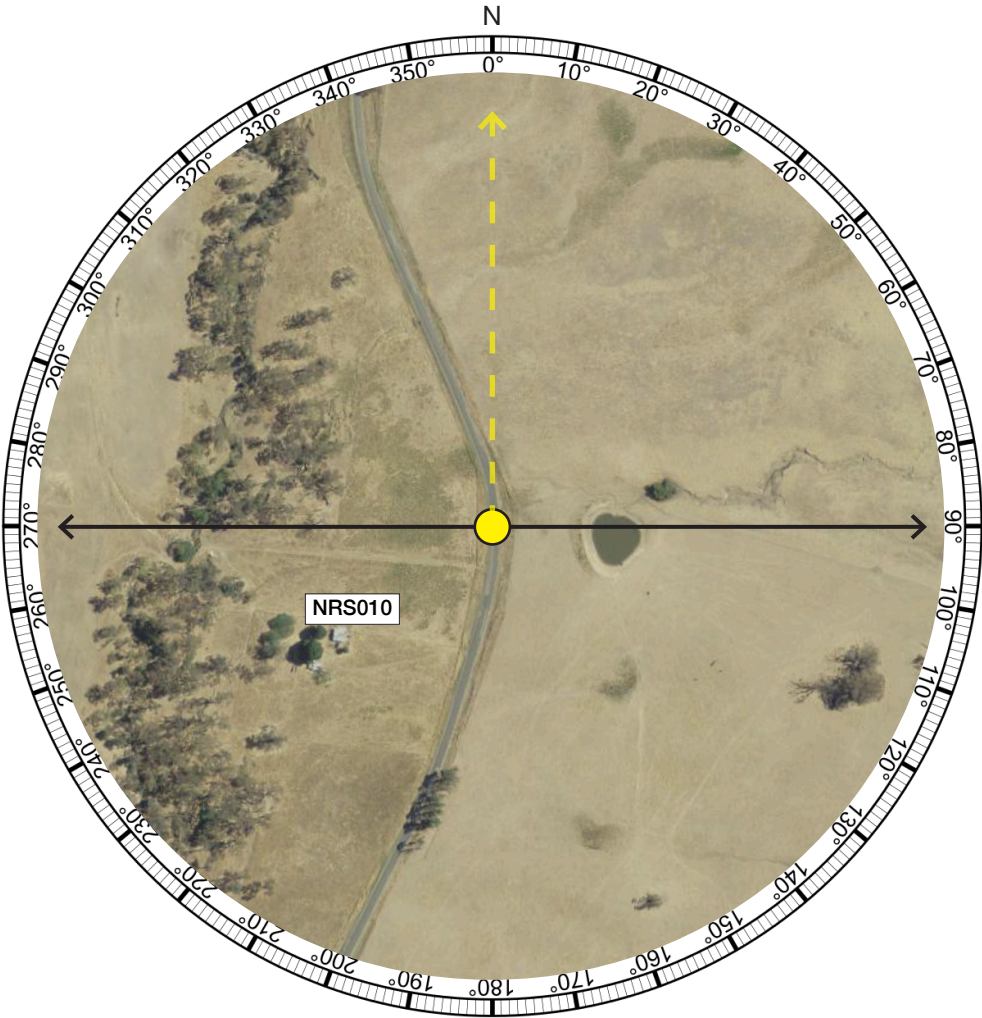
Viewpoint Summary:	
Location:	
Hopewood Rd, Gobarralong	
Coordinates:	Viewing Direction:
148°19'9.76"E 34°54'15.76"S	Southeast
Distance to nearest WTG:	Elevation:
8.34km	243m

Existing Landscape Character Description:
This viewpoint is taken from the driveway to HR014 on Hopewood Road. Hopewood Road is a low use, unsealed road that generally runs alongside the Murrumbidgee River.
The land is mostly cleared agricultural land used for grazing and areas of irrigated cropping.
The topography is gently undulating with scattered vegetation located within grazing lots, hilltops and along the rivers and creeks.
A localised rise is visible in the middleground to the east contains views toward the east.
A small vegetated ridgeline can be seen in the distance of the view.
Potential Visual Impact:
An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation it is likely views toward the Project Area may be difficult to discern from this location.

PVP13 Nanangroe Road, Adjungbilly. Dwelling ID: NRS009 & NRS010



Existing View



VIEWPOINT PVP13

Viewpoint Summary:	
Location:	
Nanangroe Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°25'1.59"E 35° 4'16.21"S	North
Distance to nearest WTG:	Elevation:
5.70km	545m

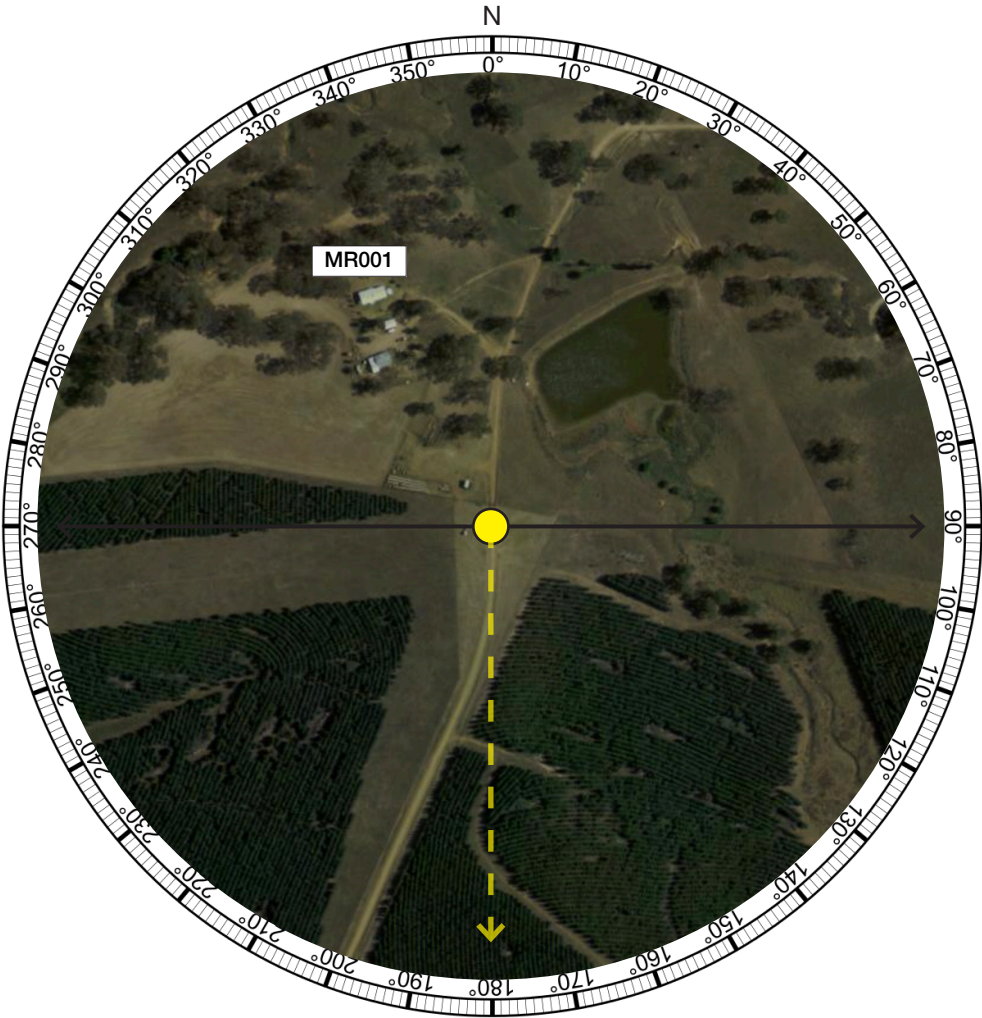
Existing Landscape Character Description:
This viewpoint is taken from Nanangroe Road, nearby NRS009 and NRS010. Nanangroe Road is a low use and partially sealed road.
The land is mostly cleared agricultural land used for grazing and irrigated cropping.
The topography is gently undulating with scattered vegetation located within grazing lots and hillsides.
Vegetation associated with the nearby unnamed creek is visible in the middleground of the view.
A localised rise is visible in the middleground and contains views toward the north east.
Potential Visual Impact:
An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography, distance and vegetation, it is likely views toward the Project Area will be screened from this location

Aerial Image PVP13 (Aerial Image Source: Six Maps)

PVP14 Maryvale Rd, Adjungbilly. Dwelling ID: MR001



Existing View



Aerial Image PVP14 (Aerial Image Source: Six Maps)

VIEWPOINT PVP14

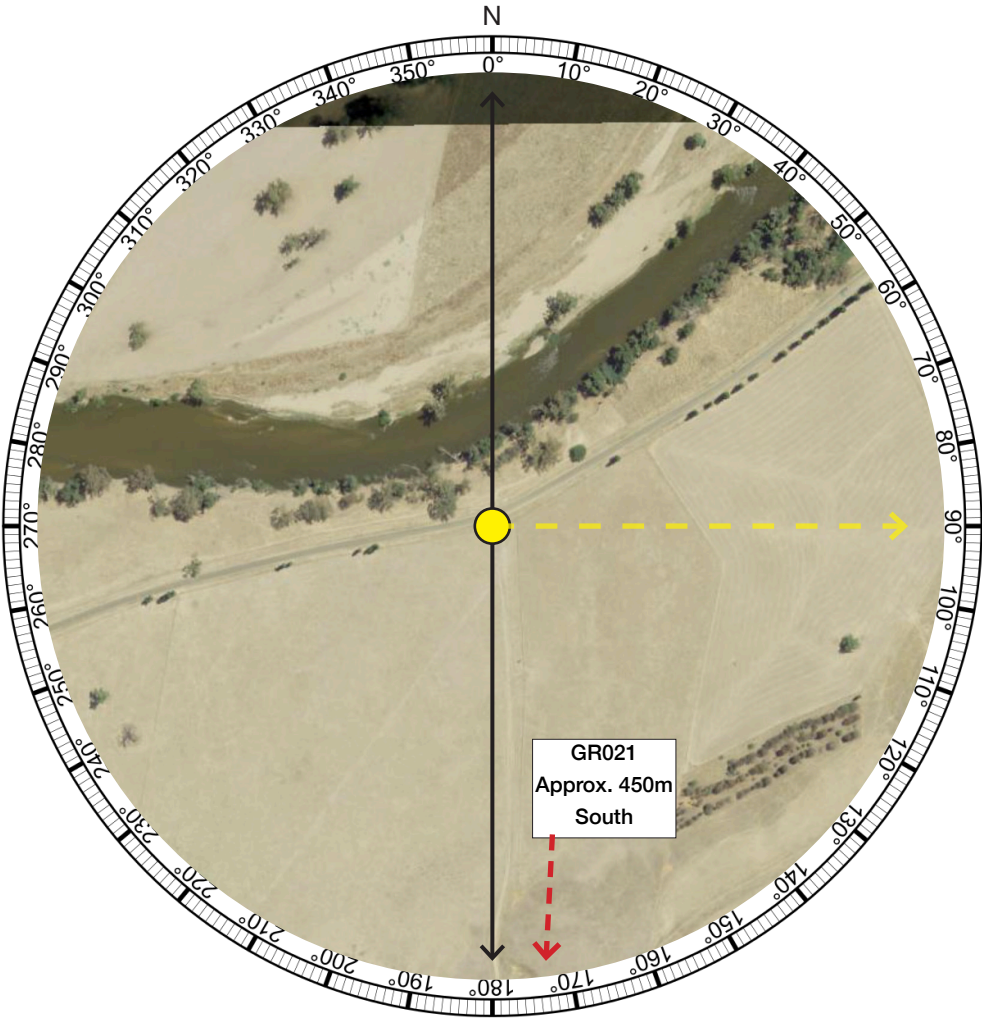
Viewpoint Summary:	
Location:	
Maryvale Rd, Adjungbilly	
Coordinates:	Viewing Direction:
148°26'43.24"E 34°57'13.52"S	South
Distance to nearest WTG:	Elevation:
2.06km	518m

Existing Landscape Character Description:
This viewpoint is taken from Maryvale Road at the driveway nearby MR001. Maryvale Road is a low use unsealed road used to access to a small number of isolated dwellings.
The land is a mixture of cleared agricultural land used for grazing and heavily vegetated forestry land. A portion of State Forest is visible in the middleground of the view.
The topography of the area is undulating with localised rises containing views to the east.
Potential Visual Impact:
An assessment based on topography alone, identifies a number of WTG's associated with the project may be visible from this location. A combination of topography and vegetation is likely to fragment a portion of the view toward the Project Area from this location.

PVP15 Gobarralong Rd, Gobarralong. Dwelling ID: GR021



Existing View



Aerial Image PVP15 (Aerial Image Source: Six Maps)

VIEWPOINT PVP15

Viewpoint Summary:	
Location:	
Gobbaralong Rd, Gobbaralong	
Coordinates:	Viewing Direction:
148°15'53.58"E 34°59'2.30"S	East
Distance to nearest WTG:	Elevation:
7.48km	234m

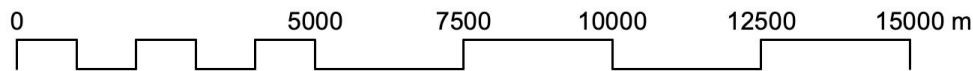
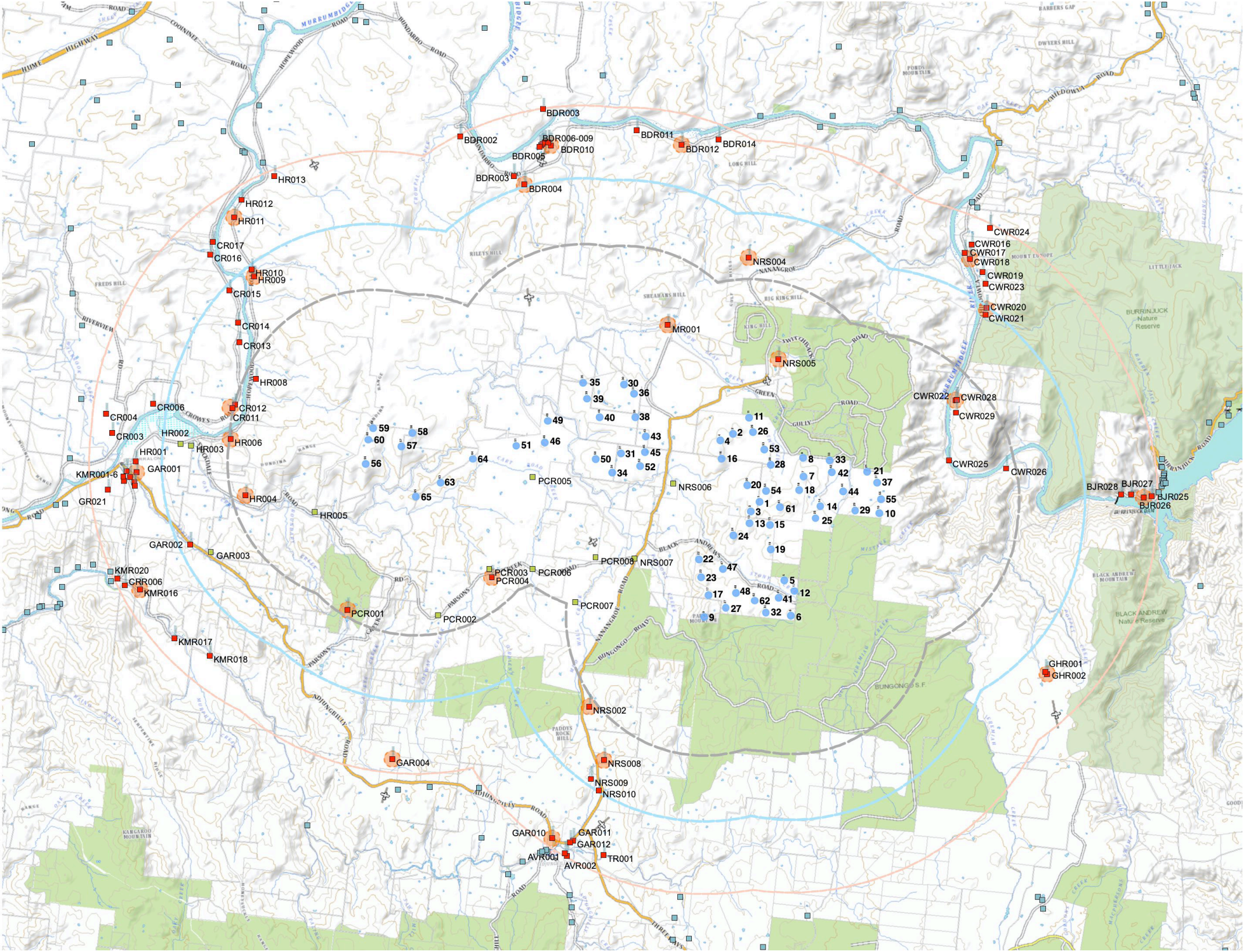
Existing Landscape Character Description:
<p>This viewpoint is taken from the driveway to GR021 on Gobarralong Road. Gobarralong Road is a low use, partially sealed road that generally runs alongside the Murrumbidgee River.</p> <p>The land is mostly cleared agricultural land used for grazing and areas of irrigated cropping.</p> <p>The topography is gently undulating with scattered vegetation located within grazing lots, hilltops and along the rivers and creeks.</p> <p>A localised rise is visible in the middleground to the south contains views toward the south.</p> <p>A small vegetated ridgeline can be seen in the distance of the view.</p>
Potential Visual Impact:
<p>An assessment based on topography alone, identifies a small number of WTG's associated with the project may be visible from this location. However, due to the combination of topography and distance, it is likely views toward the Project Area may be fragmented from this location.</p>



Appendix C

Preliminary Dwelling Assessment

Preliminary Dwelling Assessments



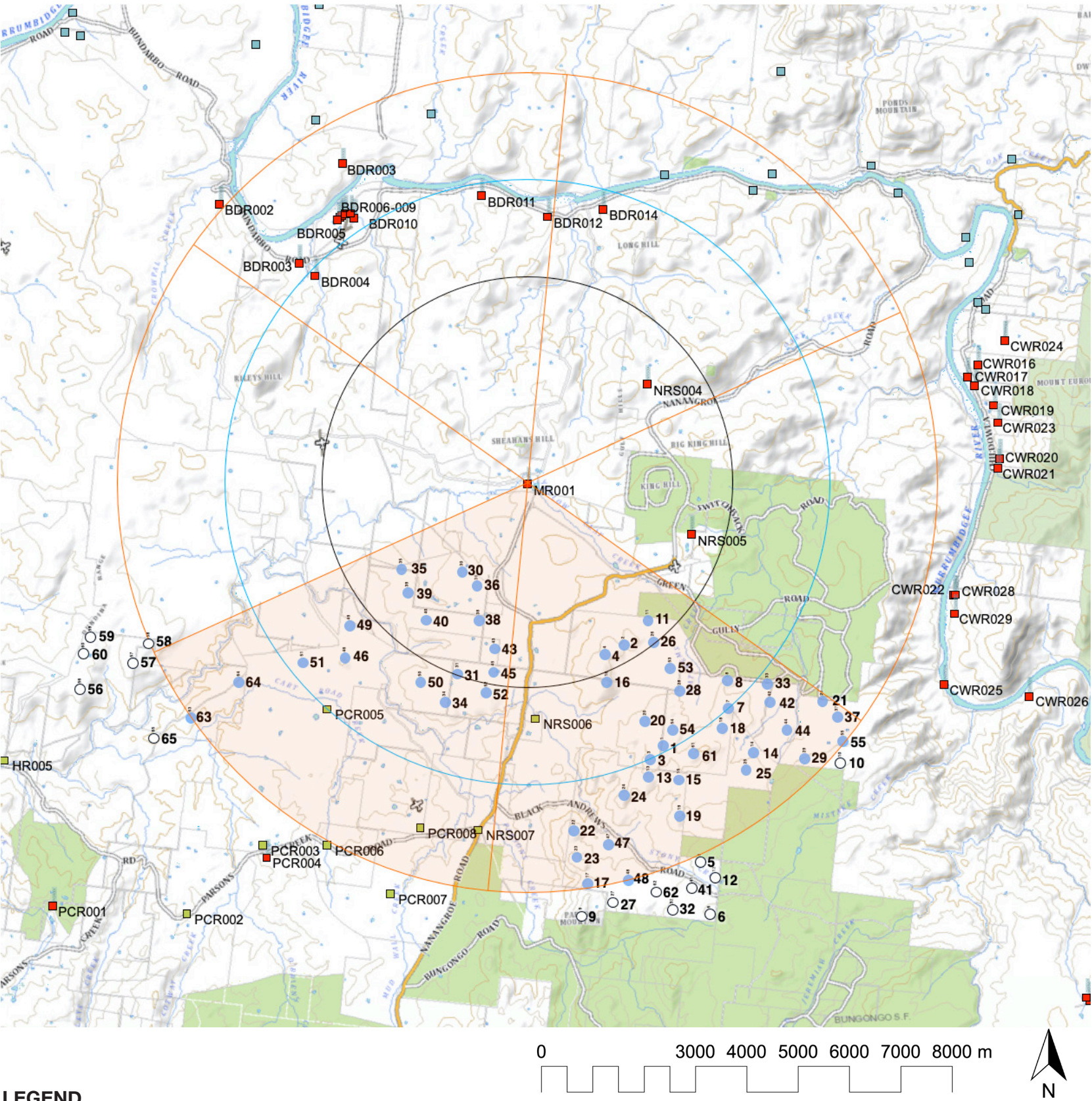
Preliminary Dwelling Assessment Locations Jeremiah Wind Farm

LEGEND

- Involved residence
- Non-involved residence (within 8000m)
- Non-involved residence (in excess of 8000m)
- 300m Wind Turbine
- 4000m from nearest wind turbine
- 5900m from nearest wind turbine
- 8000m from nearest wind turbine
- Preliminary Dwelling Assessment Location

Figure 17 Preliminary Dwelling Assessment Locations

Desktop Dwelling Assessment MR001



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

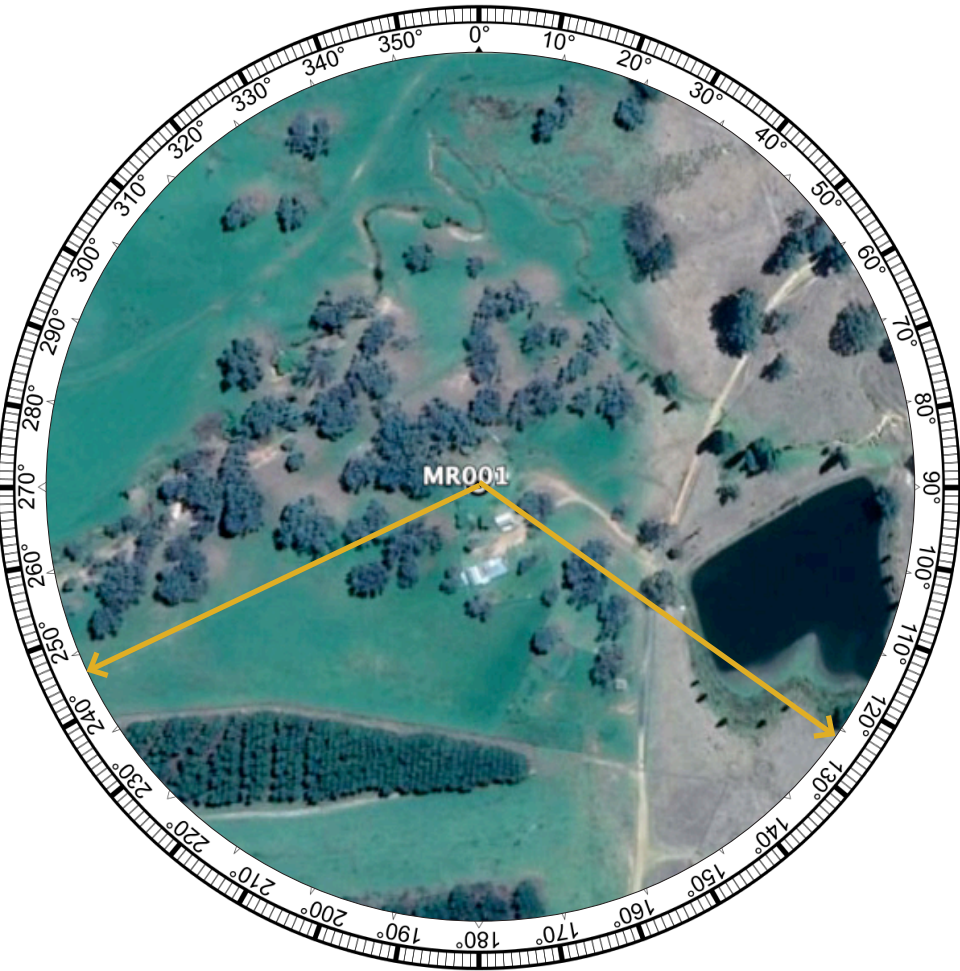
8000m from nearest turbine

60° sectors

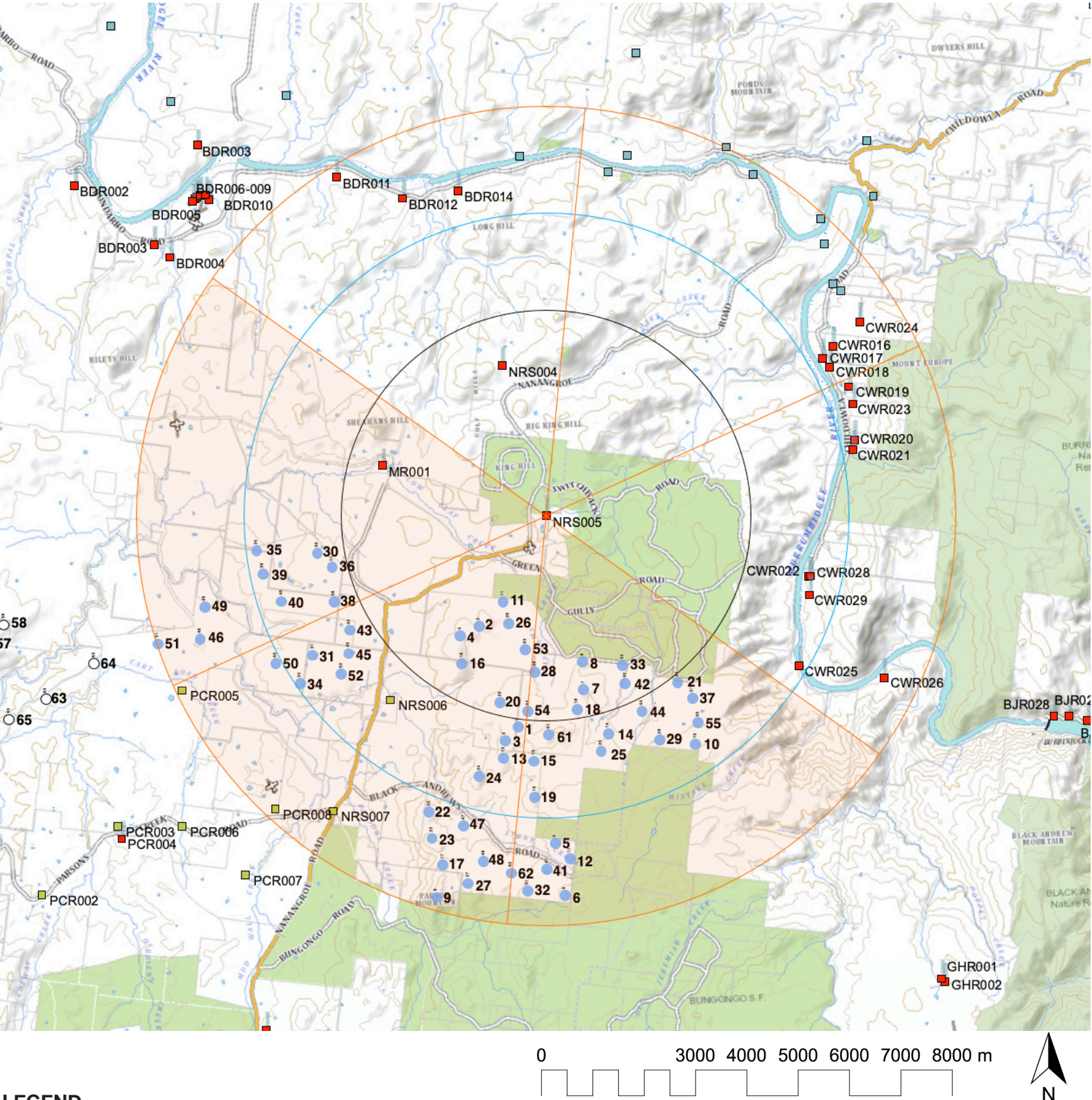
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	2.12 km (T30)
Number of proposed turbines within Black Line (4000m):	13
Number of theoretical 60° Sectors (Based on 2D Assessment):	Up to 2 (120°)
Number of potentially visible turbines (Based on ZVI assessment)	50 - 60



Desktop Dwelling Assessment NRS005



LEGEND

Proposed Turbine Location

Turbine in excess of 8000m

Involved Dwelling

Non-involved Dwelling

4000m from nearest turbine (Black Line)

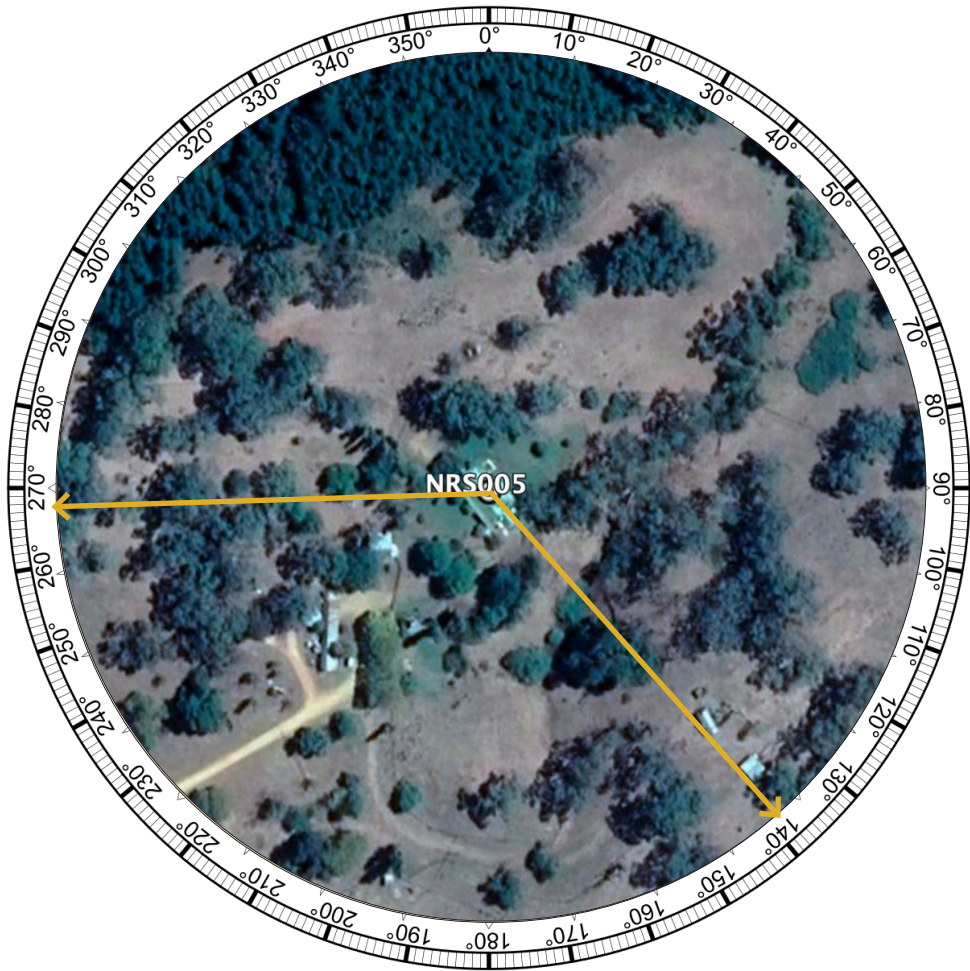
5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sectors

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	1.86 km (T11)
Number of proposed turbines within Black Line (4000m):	14
Number of theoretical 60° Sectors (Based on 2D Assessment):	Up to 3 (180°)
Number of potentially visible turbines (Based on ZVI assessment)	35-45



Desktop Dwelling Assessment **HR004**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sectors

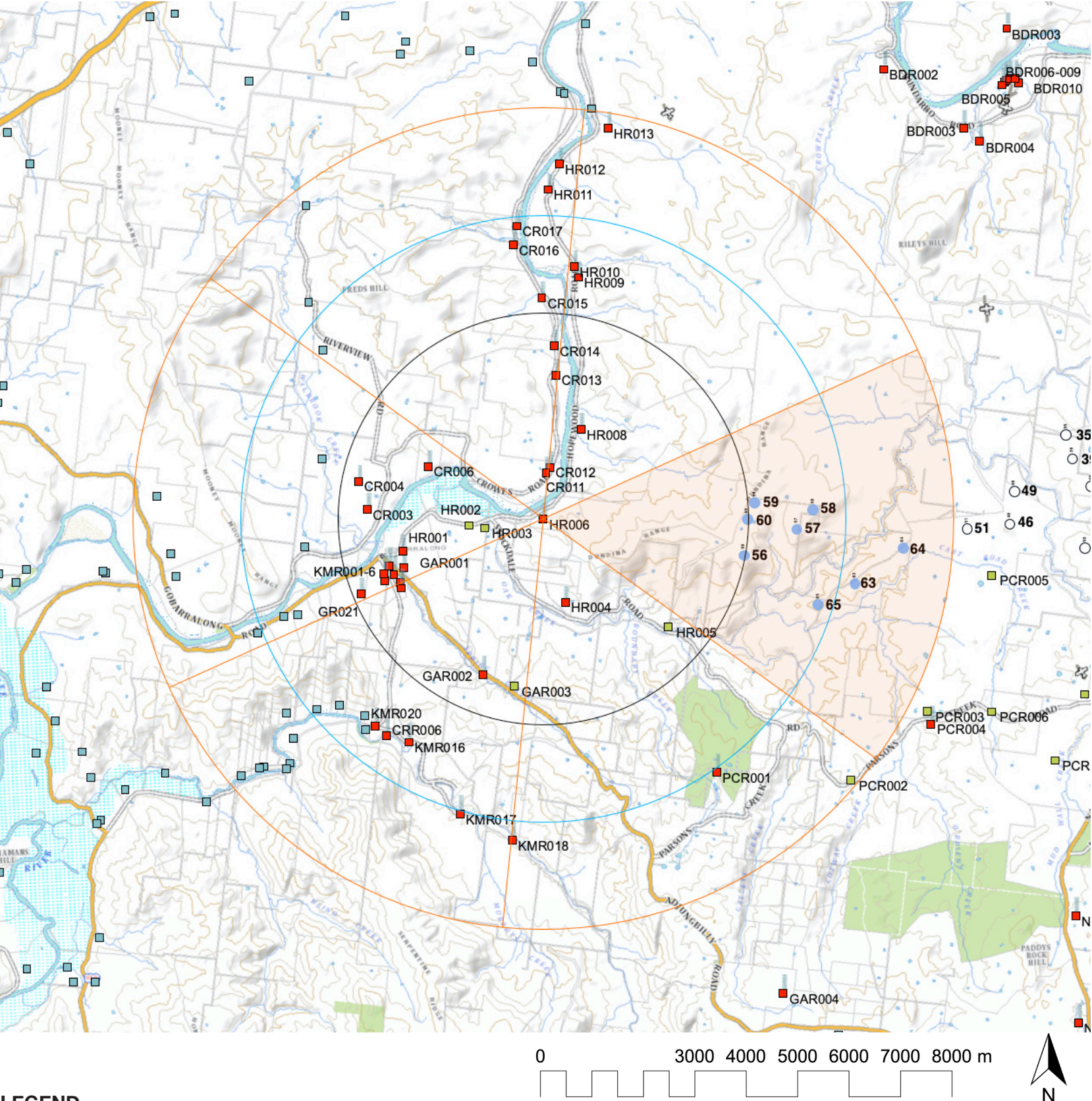
■

60° sector with turbine

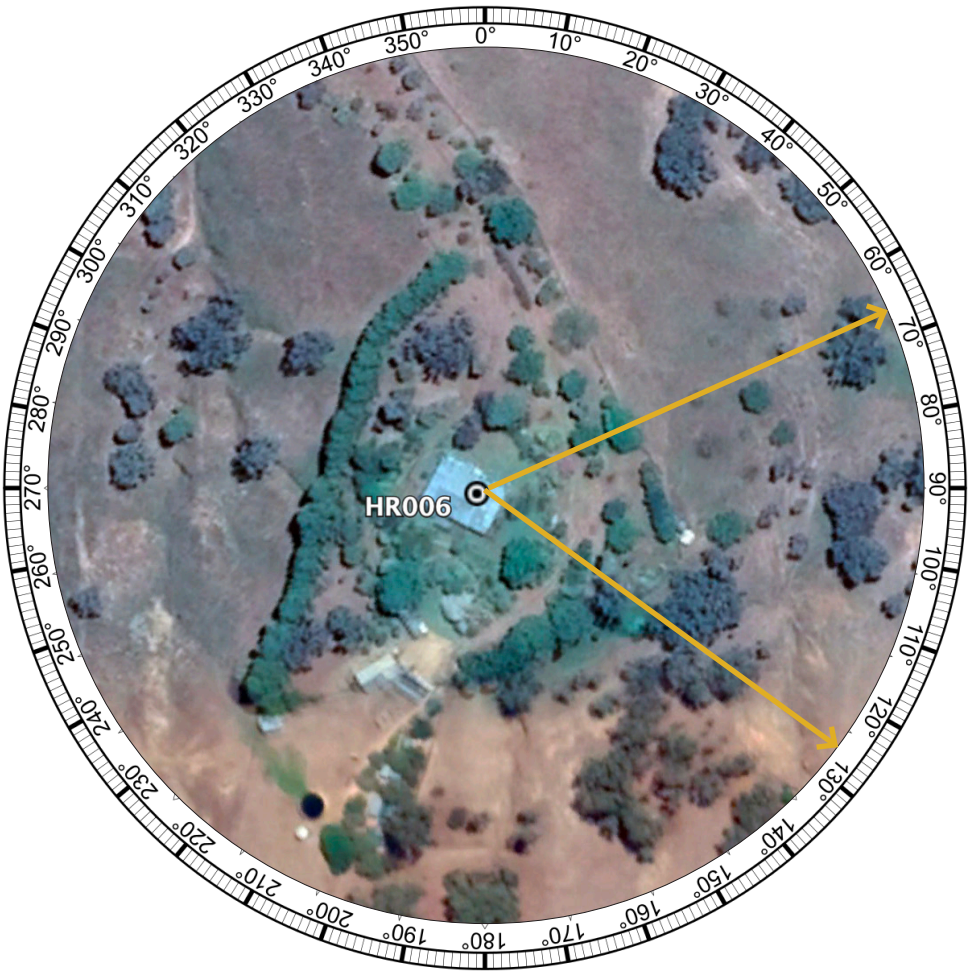
Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	3.96 km (T56)
Number of proposed turbines within Black Line (4000m):	2
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



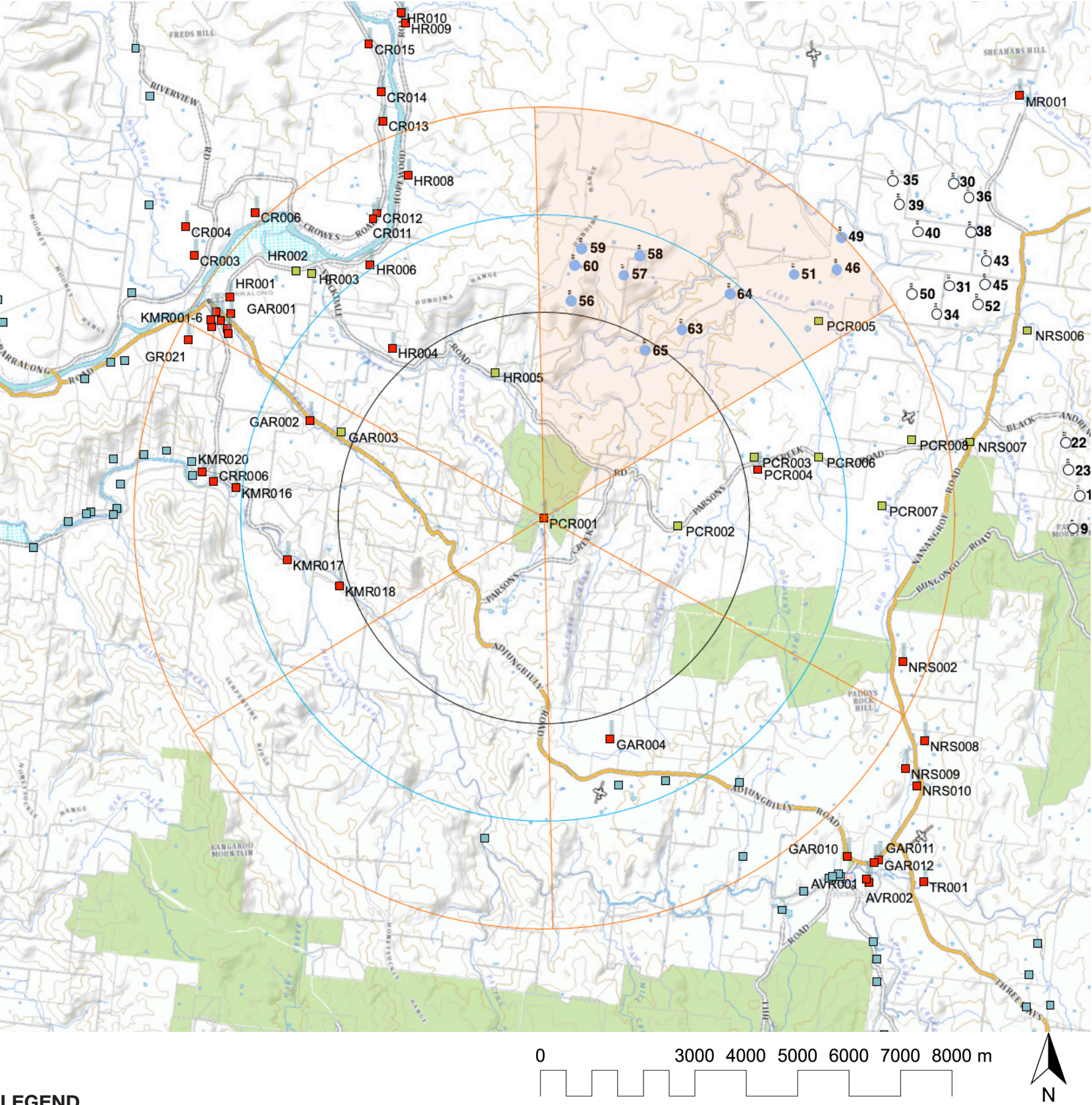
Desktop Dwelling Assessment **HR006**



Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	3.60km (T60)
Number of proposed turbines within Black Line (4000m):	2
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **PCR001**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

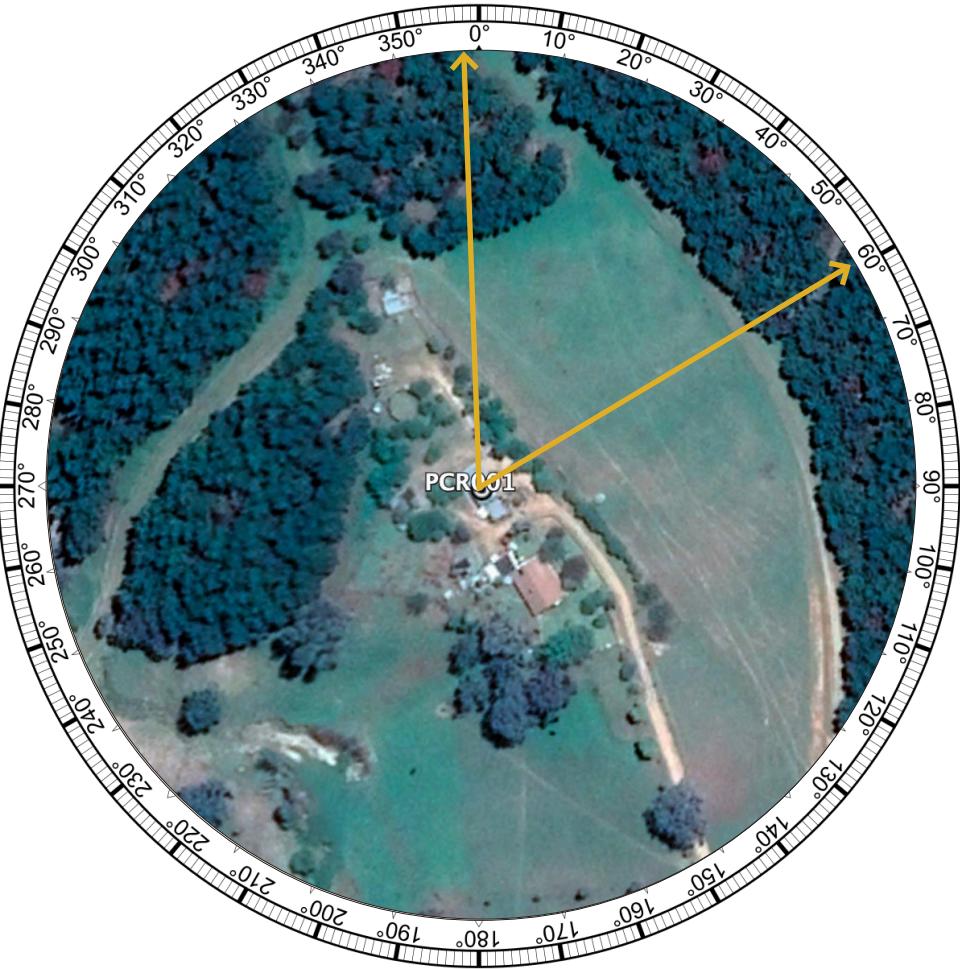
8000m from nearest turbine

60° sectors

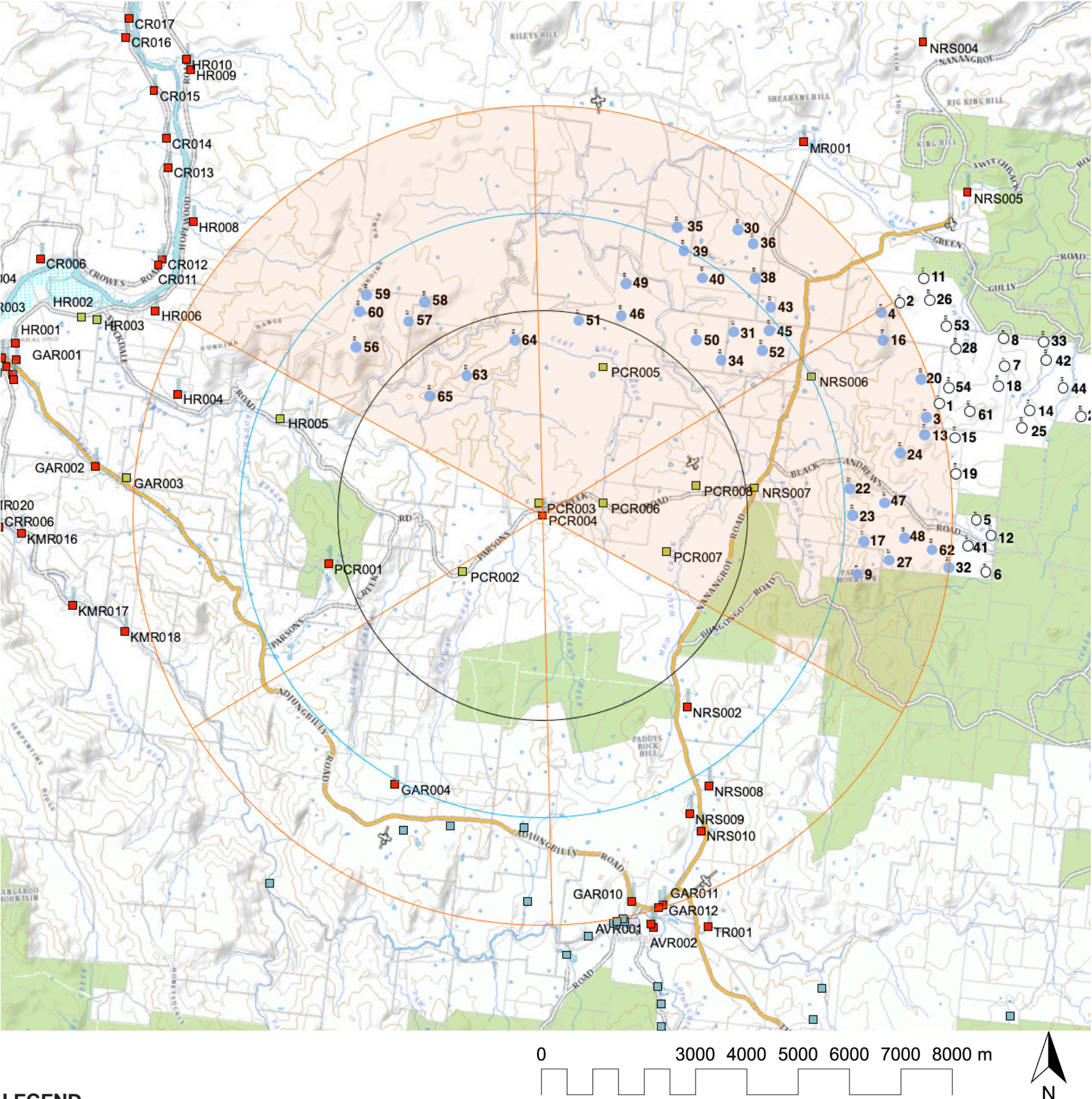
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	3.80km (T00)
Number of proposed turbines within Black Line (4000m):	1
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	55-65



Desktop Dwelling Assessment PCR004



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

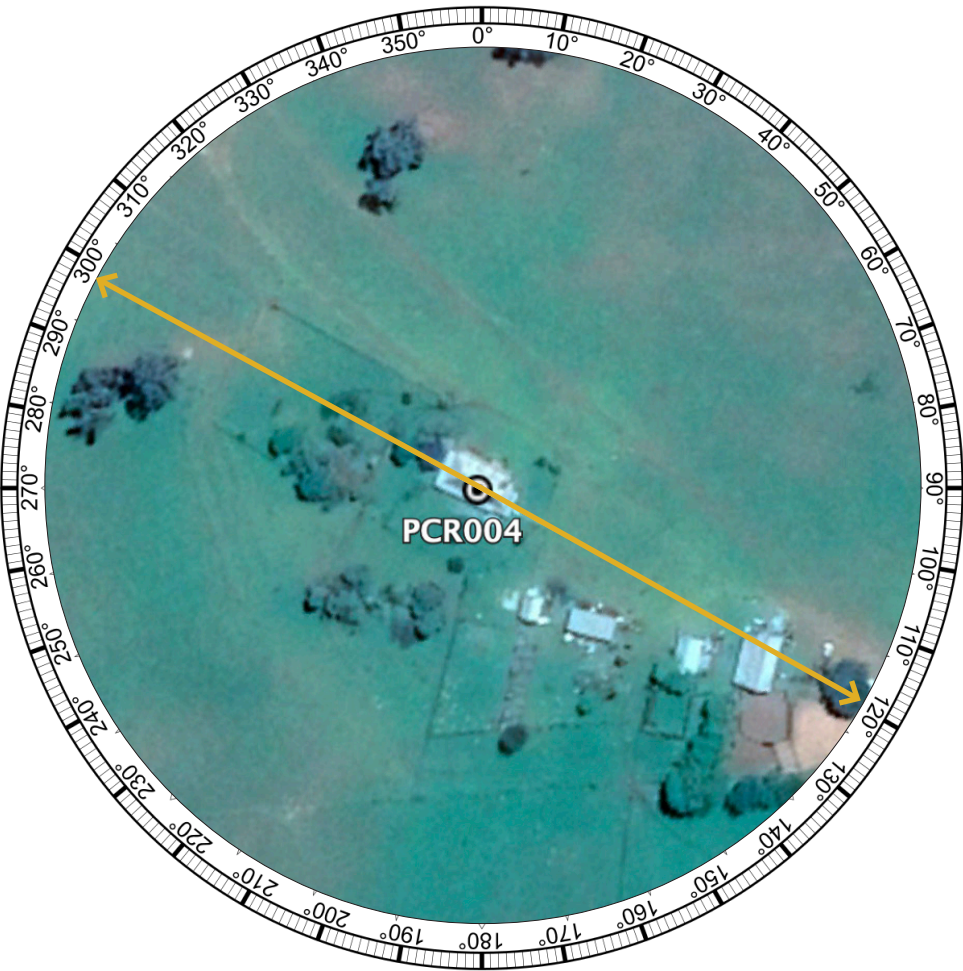
8000m from nearest turbine

60° sectors

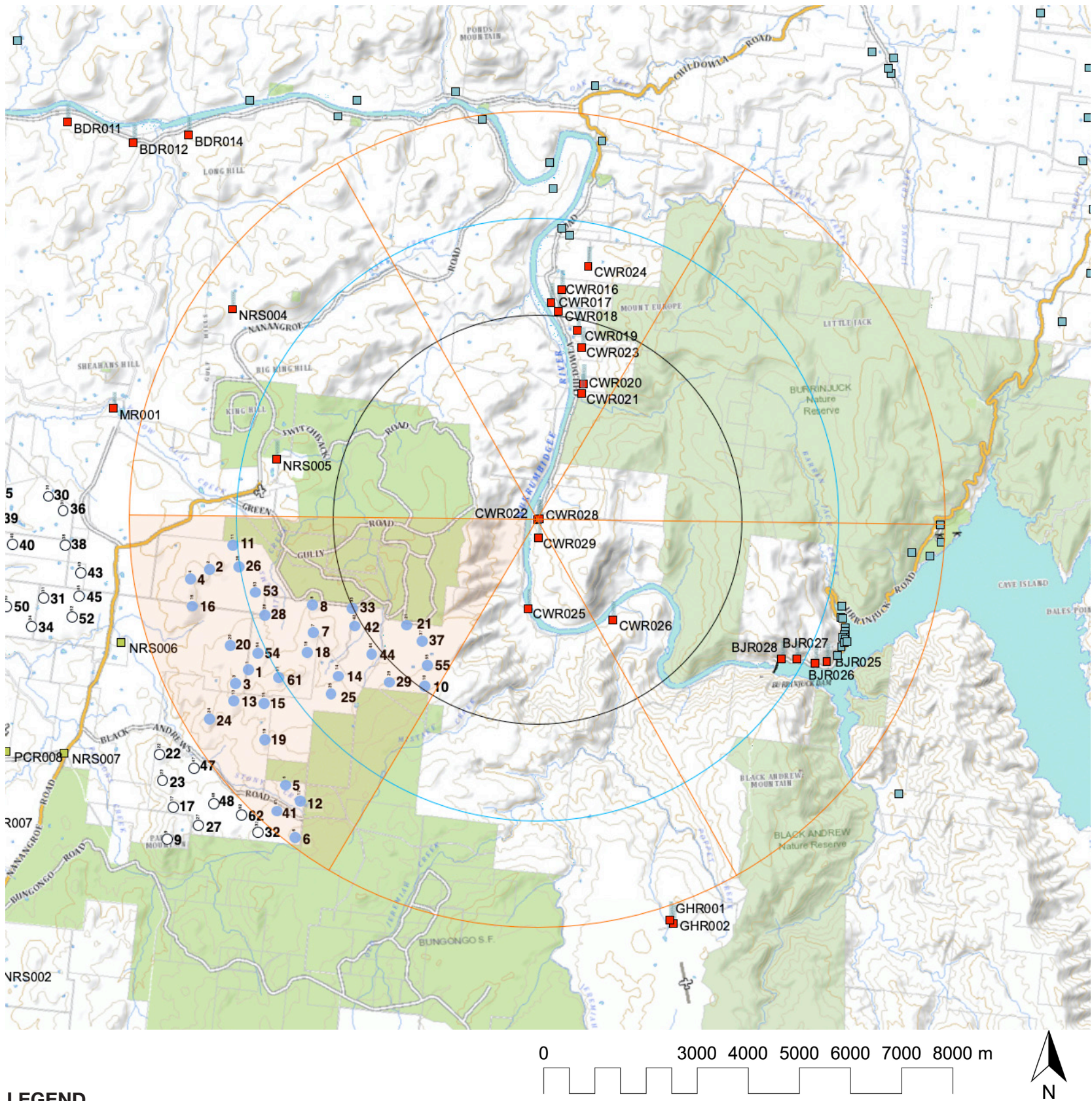
■

60° sector with turbine

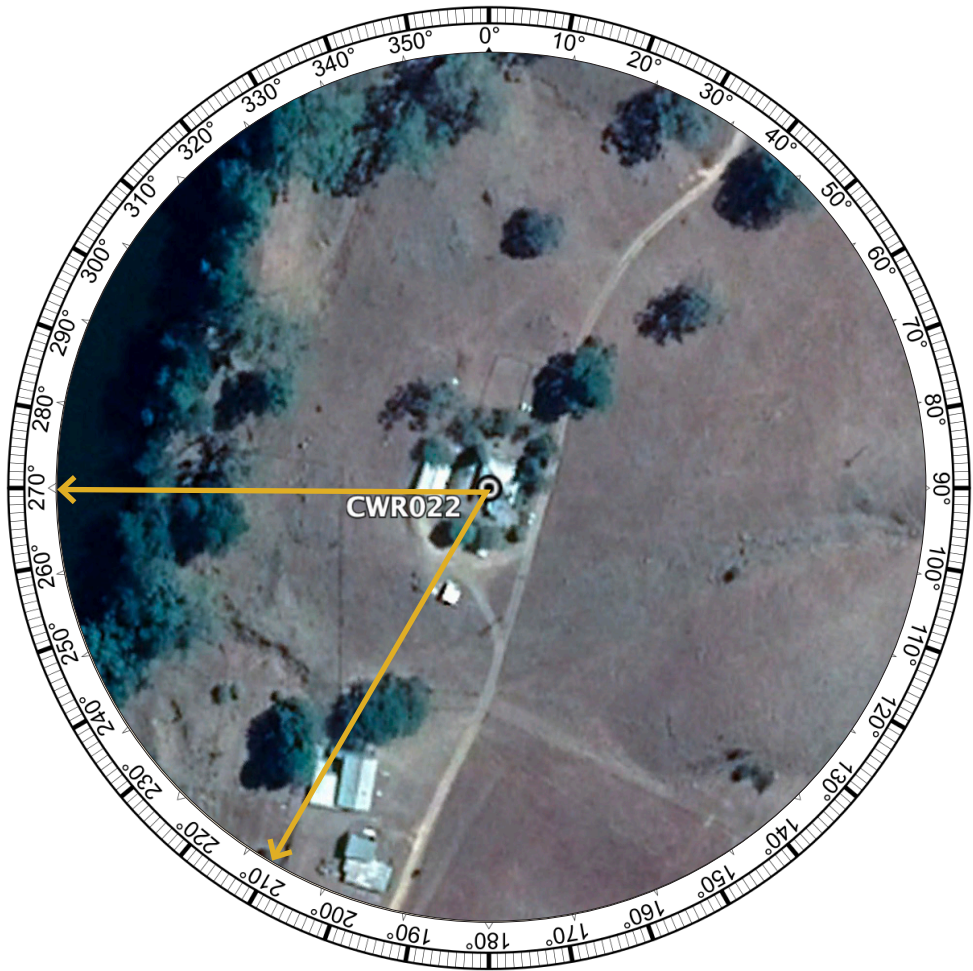
Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	3.19km (T00)
Number of proposed turbines within Black Line (4000m):	4
Number of theoretical 60° Sectors (Based on 2D Assessment):	3 (Up to 180°)
Number of potentially visible turbines (Based on ZVI assessment)	35-45



Desktop Dwelling Assessment **CWR022**



Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	3.27km (T37)
Number of proposed turbines within Black Line (4000m):	4
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15

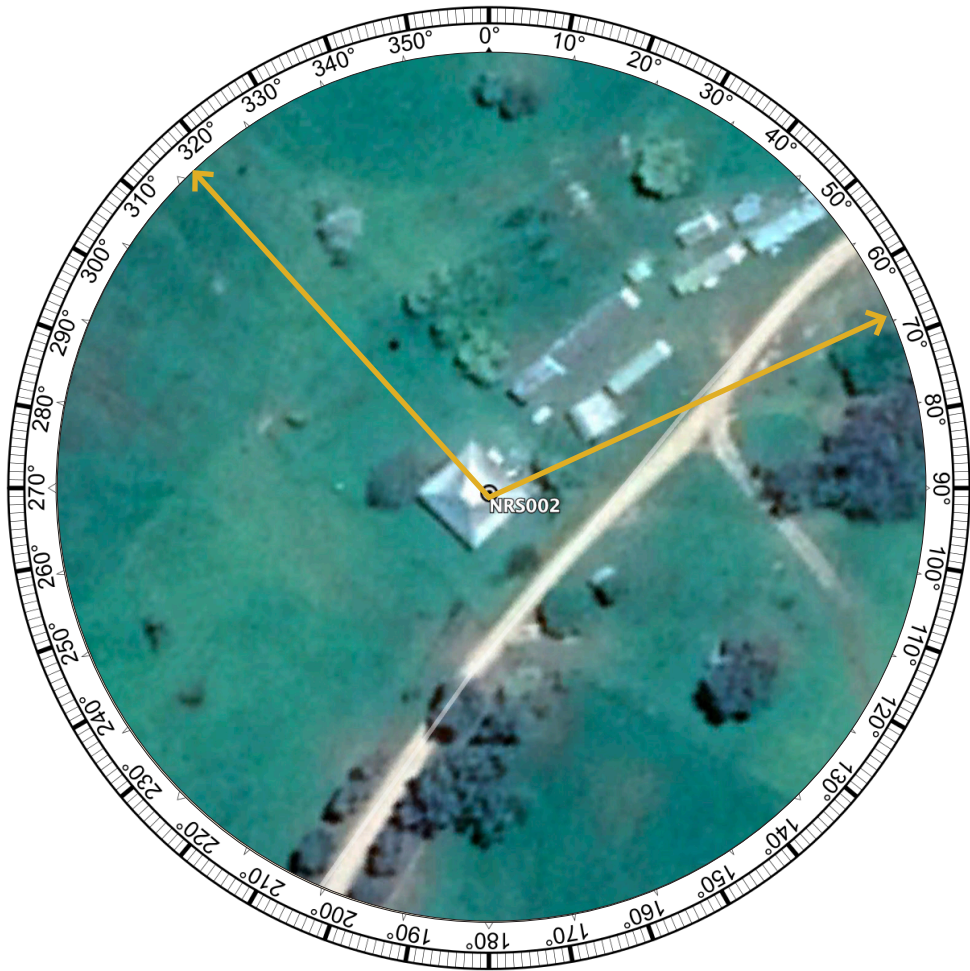


Desktop Dwelling Assessment NRS002

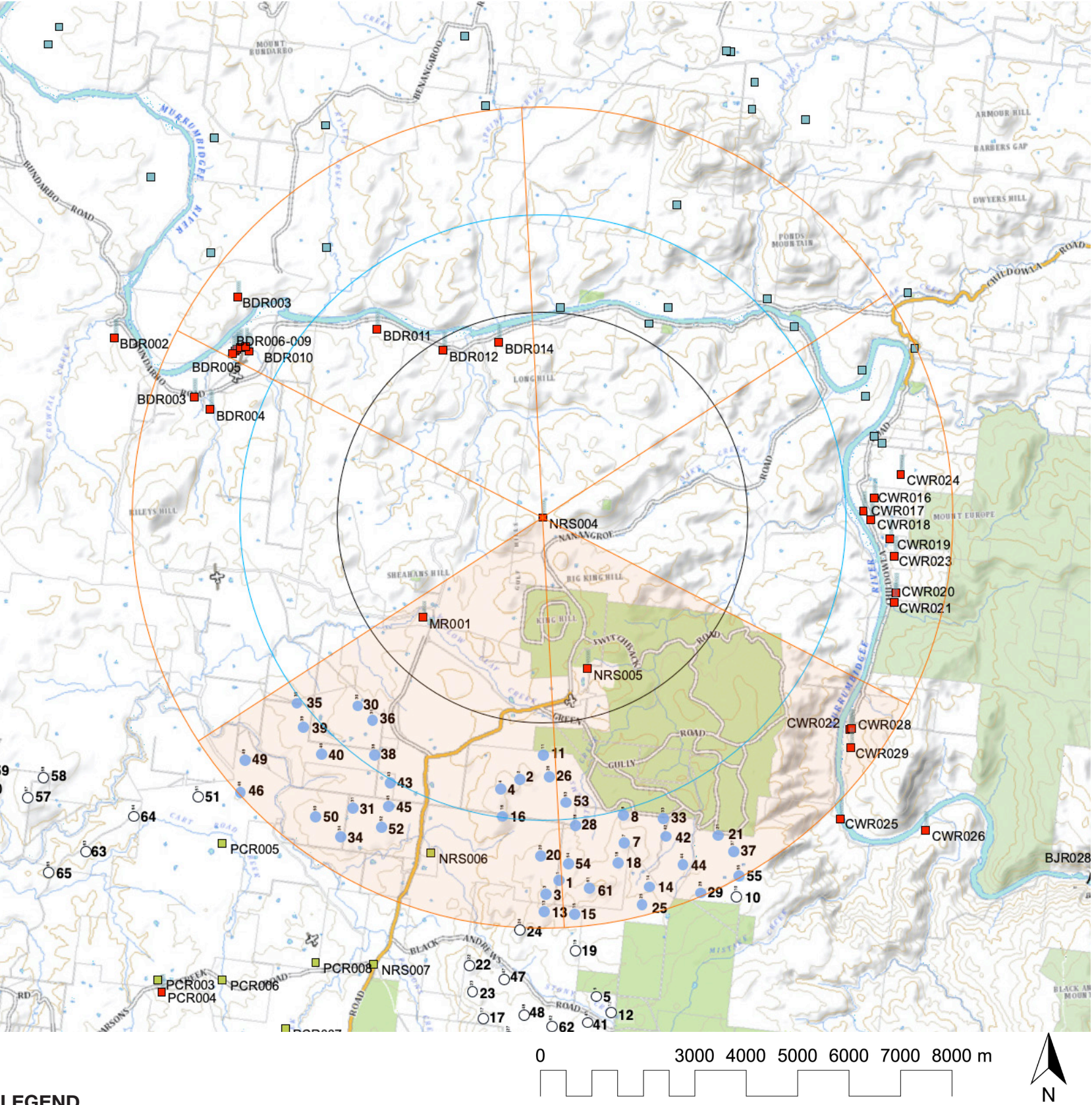


- LEGEND**
- Proposed Turbine Location
 - Turbine in excess of 8000m
 - Involved Dwelling
 - Non-involved Dwelling
 - 4000m from nearest turbine (Black Line)
 - 5900m from nearest turbine (Blue Line)
 - 8000m from nearest turbine
 - 60° sector with turbine
 - 60° sectors

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	4.21km (T09)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	2 (Up to 120°)
Number of potentially visible turbines (Based on ZVI assessment)	35-45



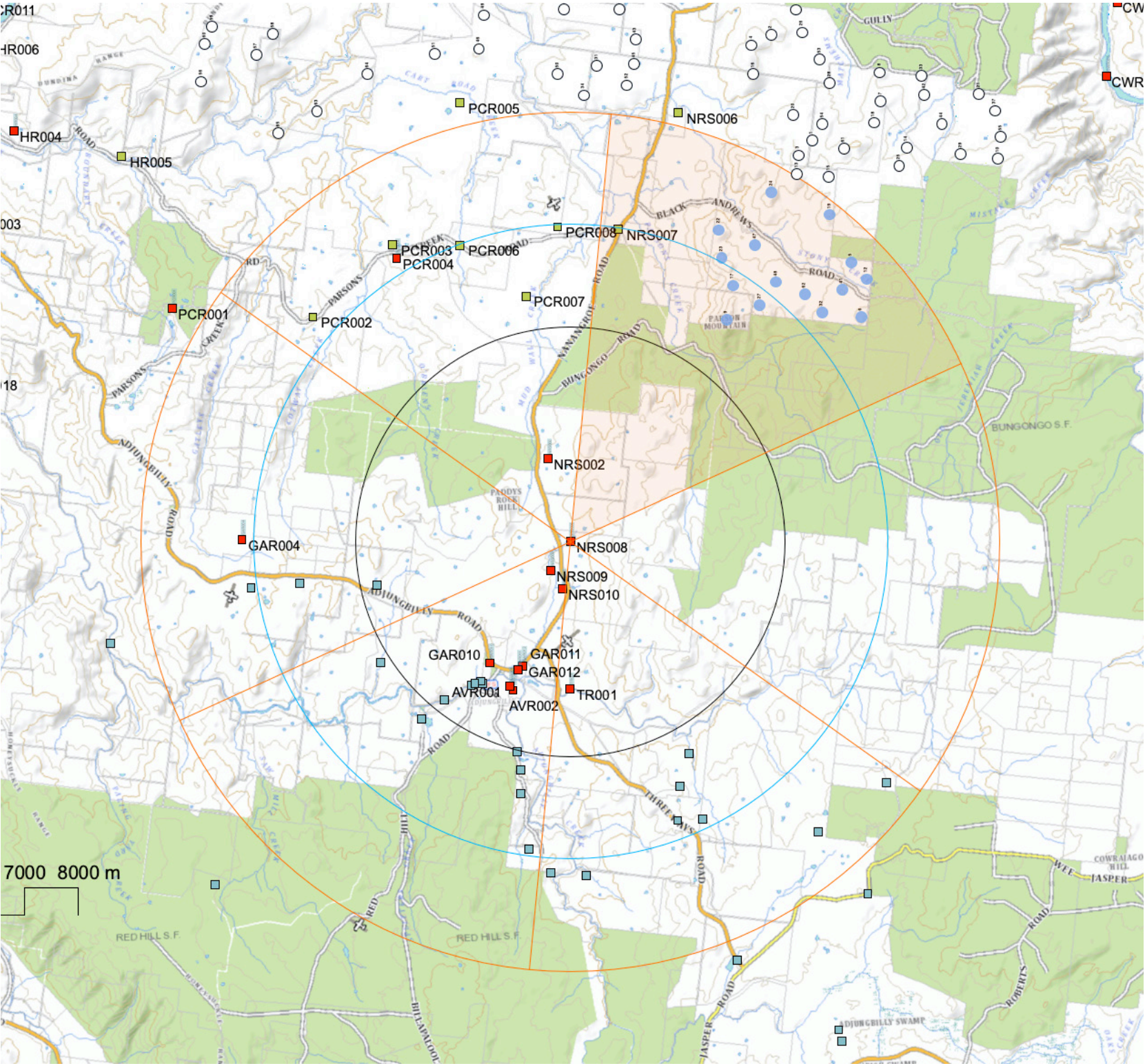
Desktop Dwelling Assessment **NRS004**



Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	4.66km (T11)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	2 (Up to 120°)
Number of potentially visible turbines (Based on ZVI assessment)	15-25



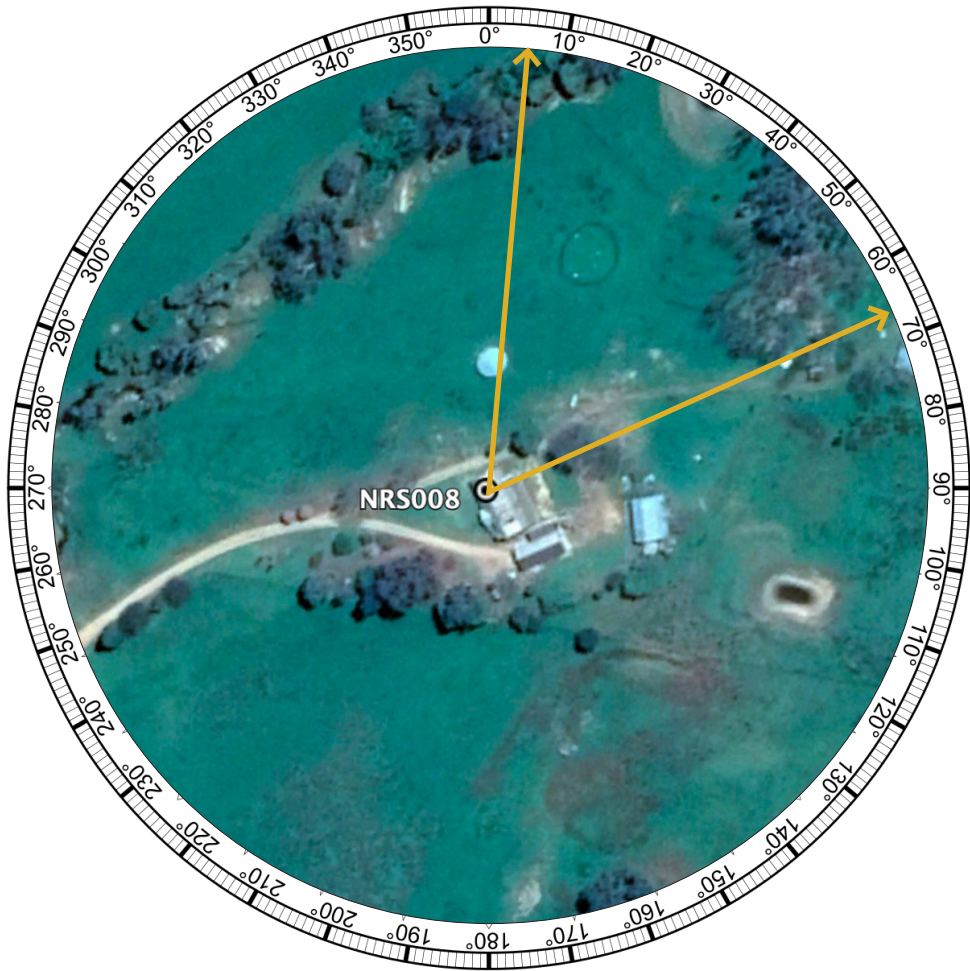
Desktop Dwelling Assessment NRS008



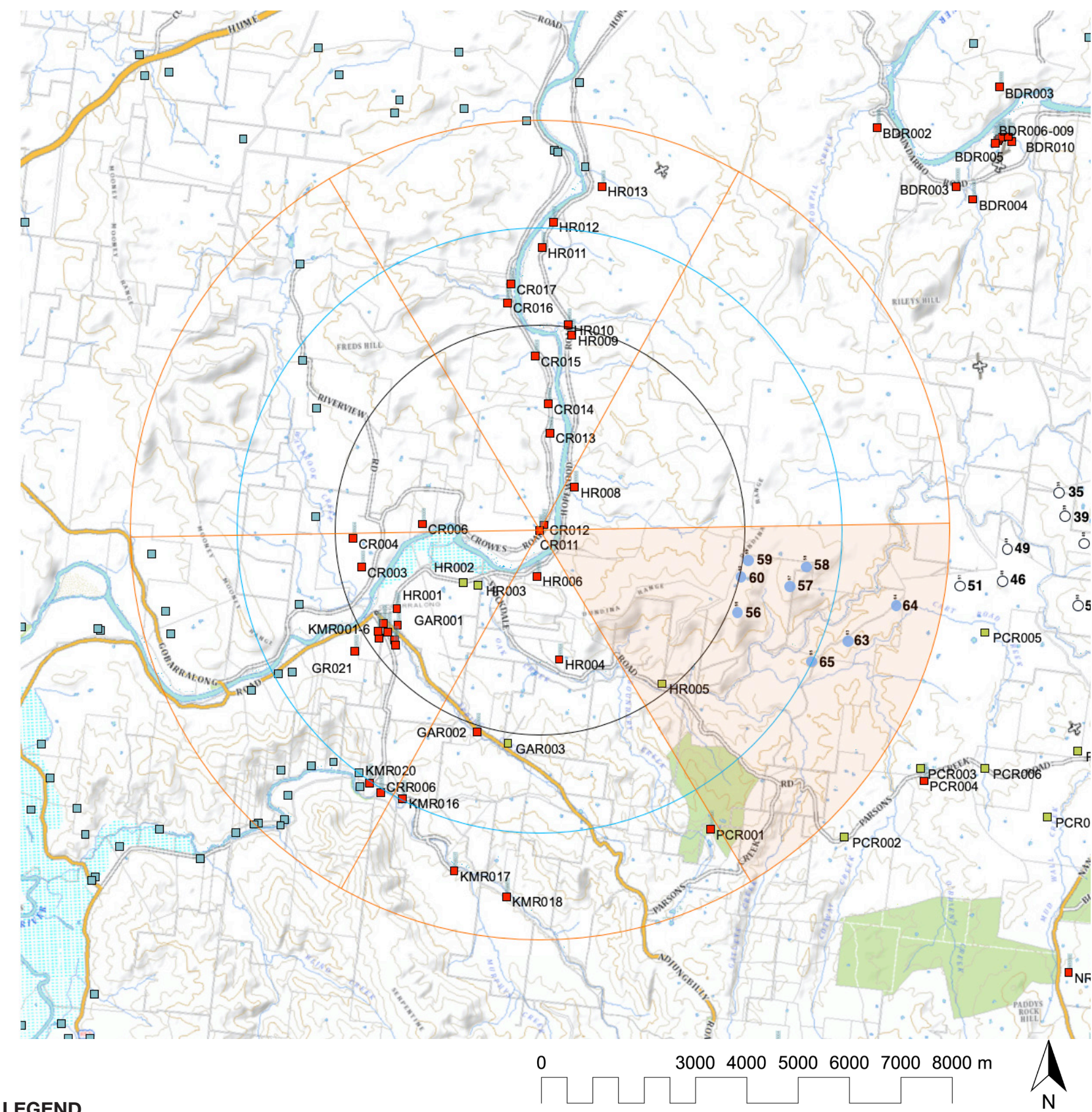
LEGEND

- Proposed Turbine Location
- Turbine in excess of 8000m
- Involved Dwelling
- Non-involved Dwelling
- 4000m from nearest turbine (Black Line)
- 5900m from nearest turbine (Blue Line)
- 8000m from nearest turbine
- 60° sector with turbine
- 60° sectors

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	5.02km (T09)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment CR011



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

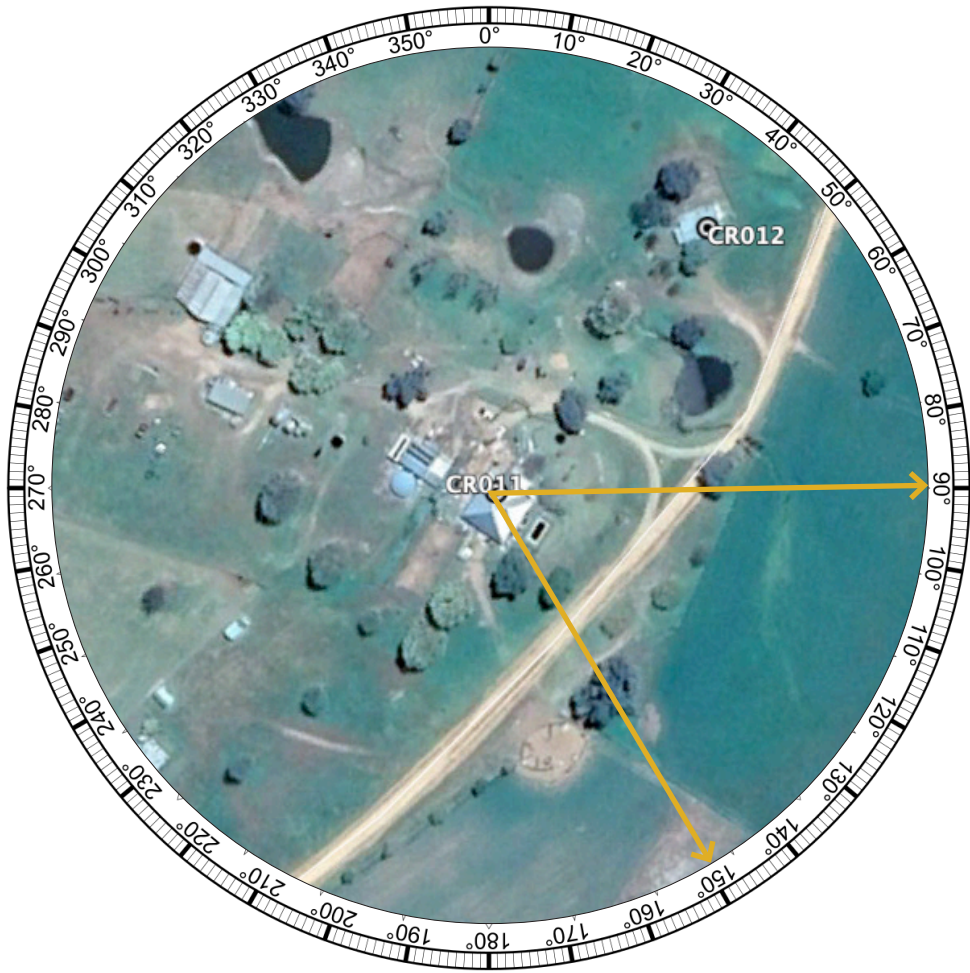
8000m from nearest turbine

60° sectors

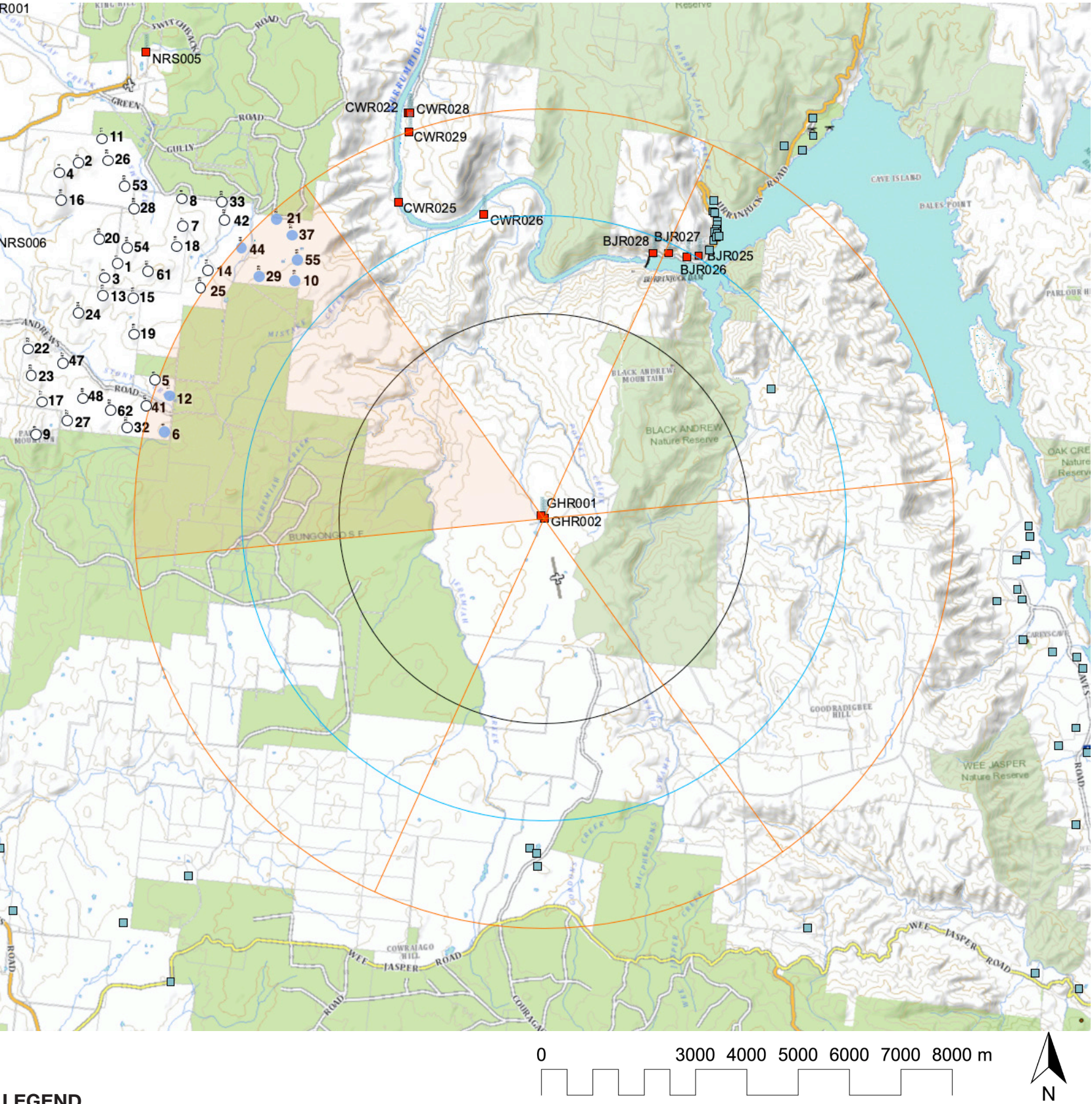
■

60° sector with turbine

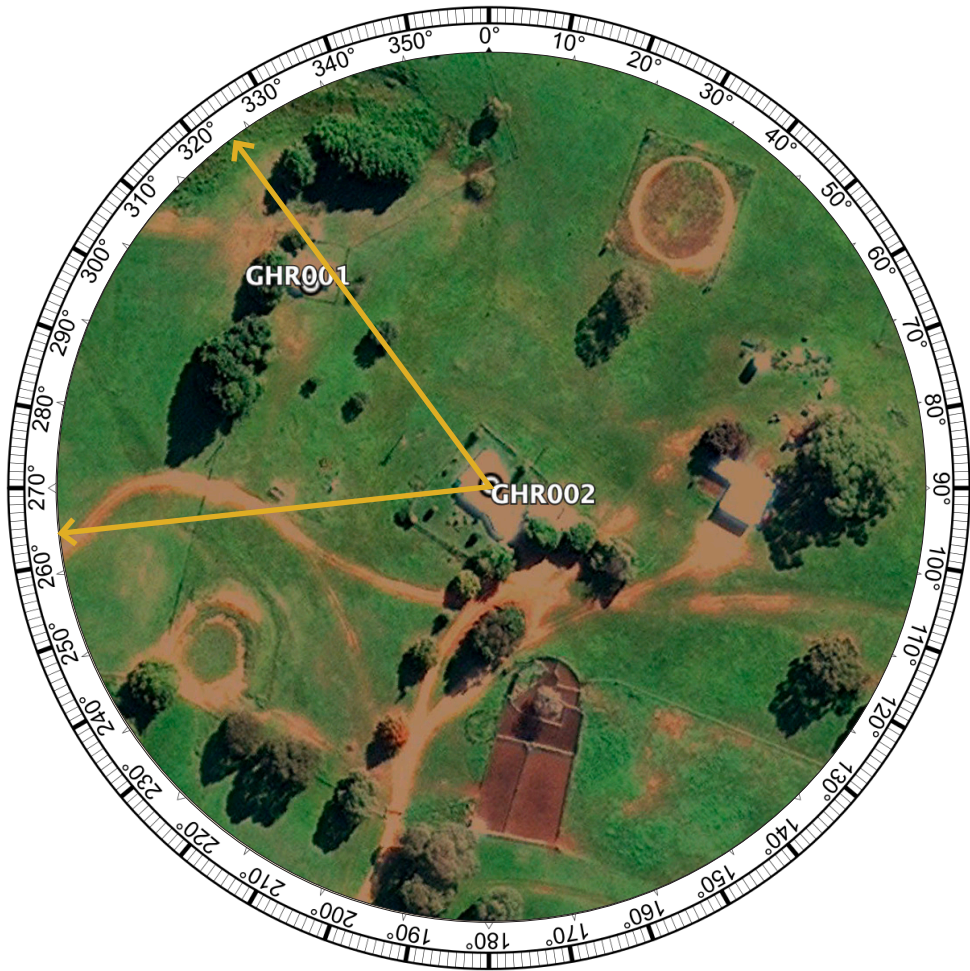
Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	4.02 km (T60)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **GHR002**



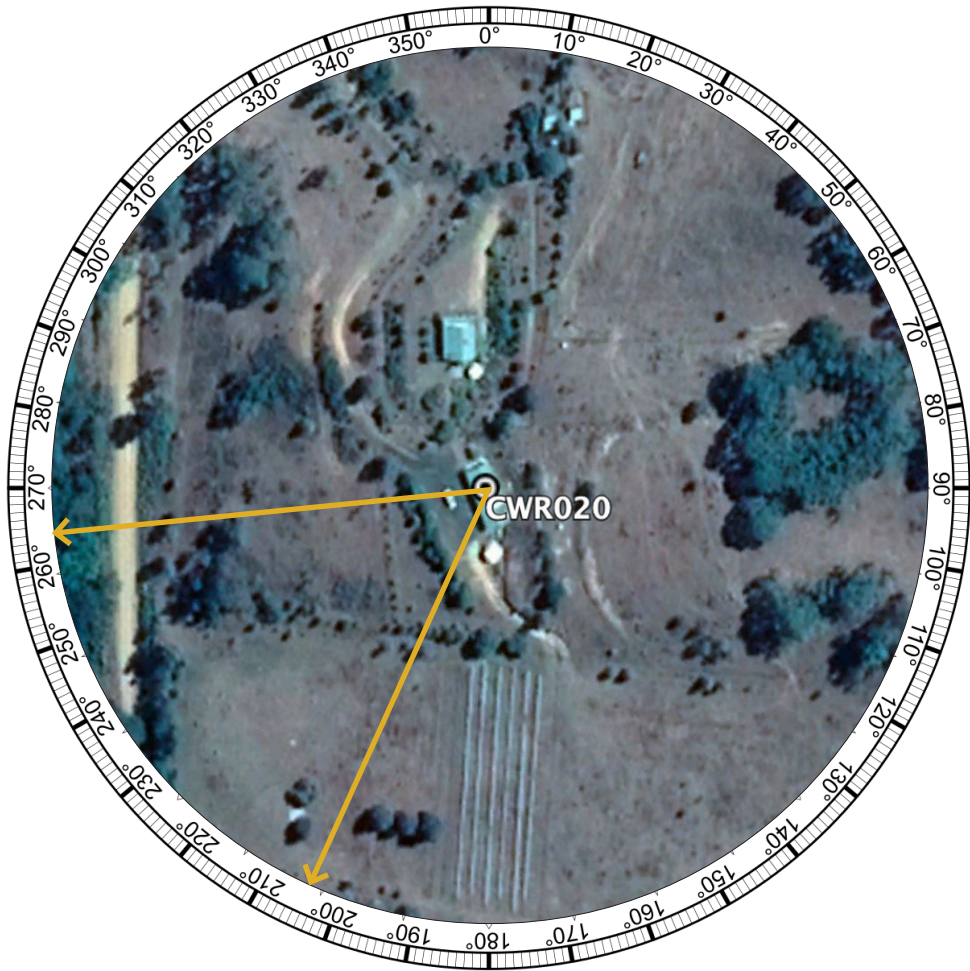
Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	5.70km (T10)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	35 - 45



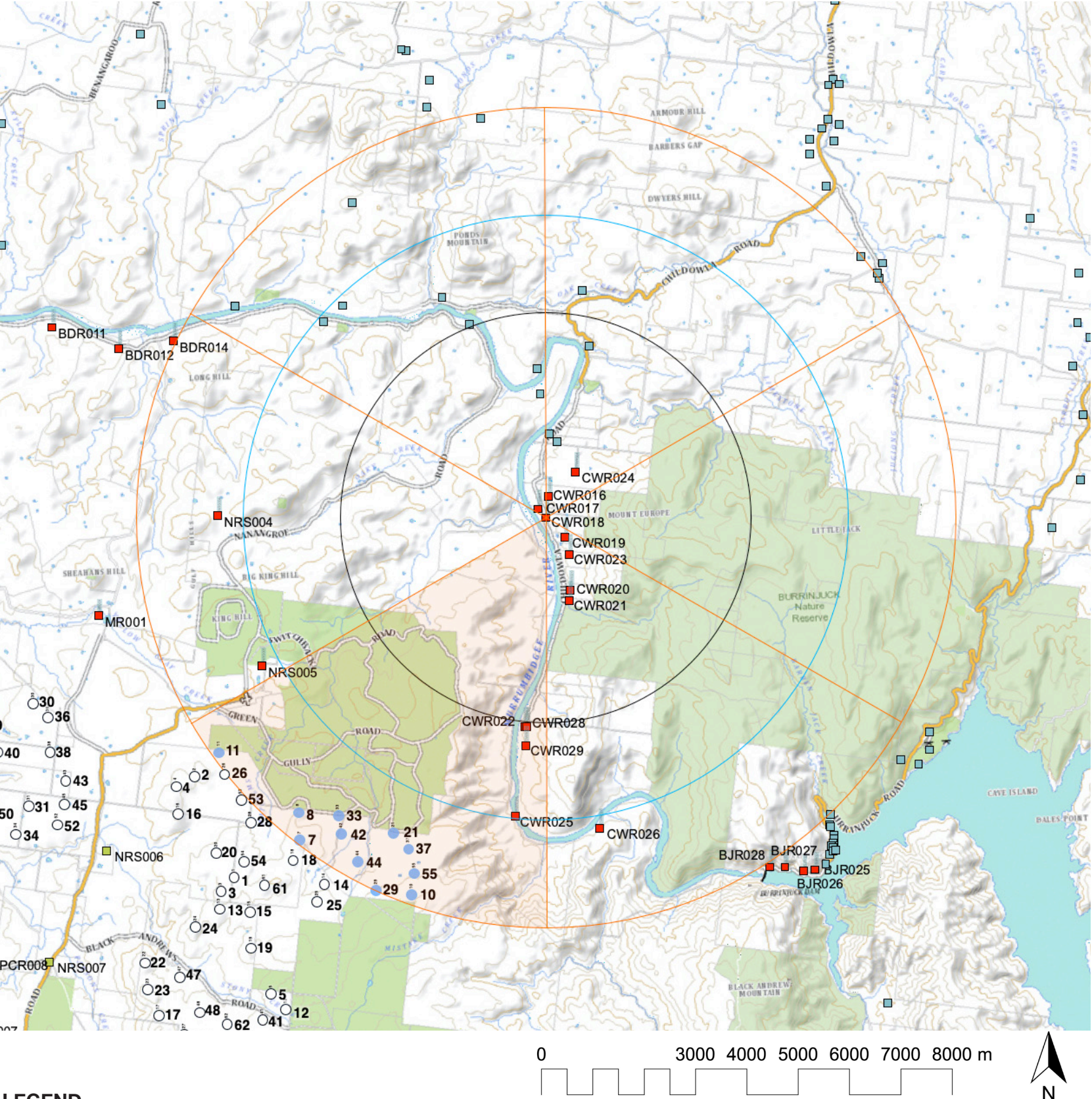
Desktop Dwelling Assessment CWR020



Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	5.84km (T21)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment CWR018



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

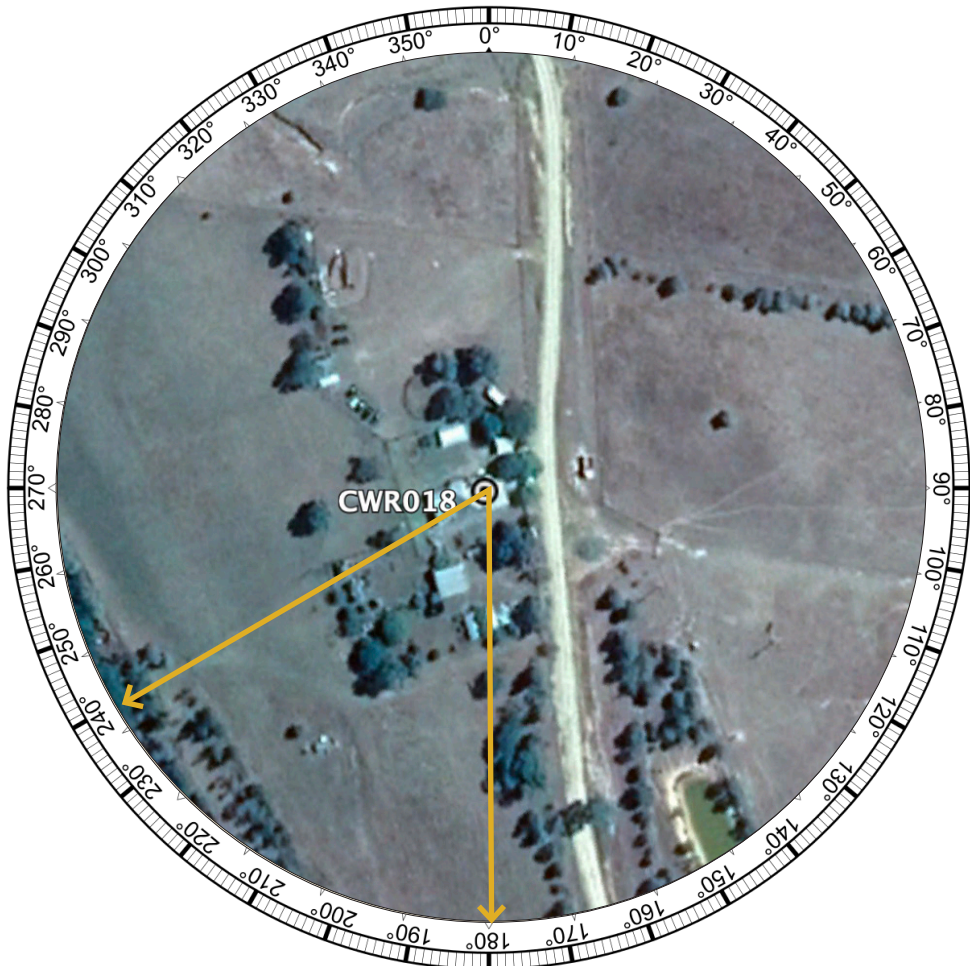
5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sector with turbine

60° sectors

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	6.83km (T21)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **BDR012**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

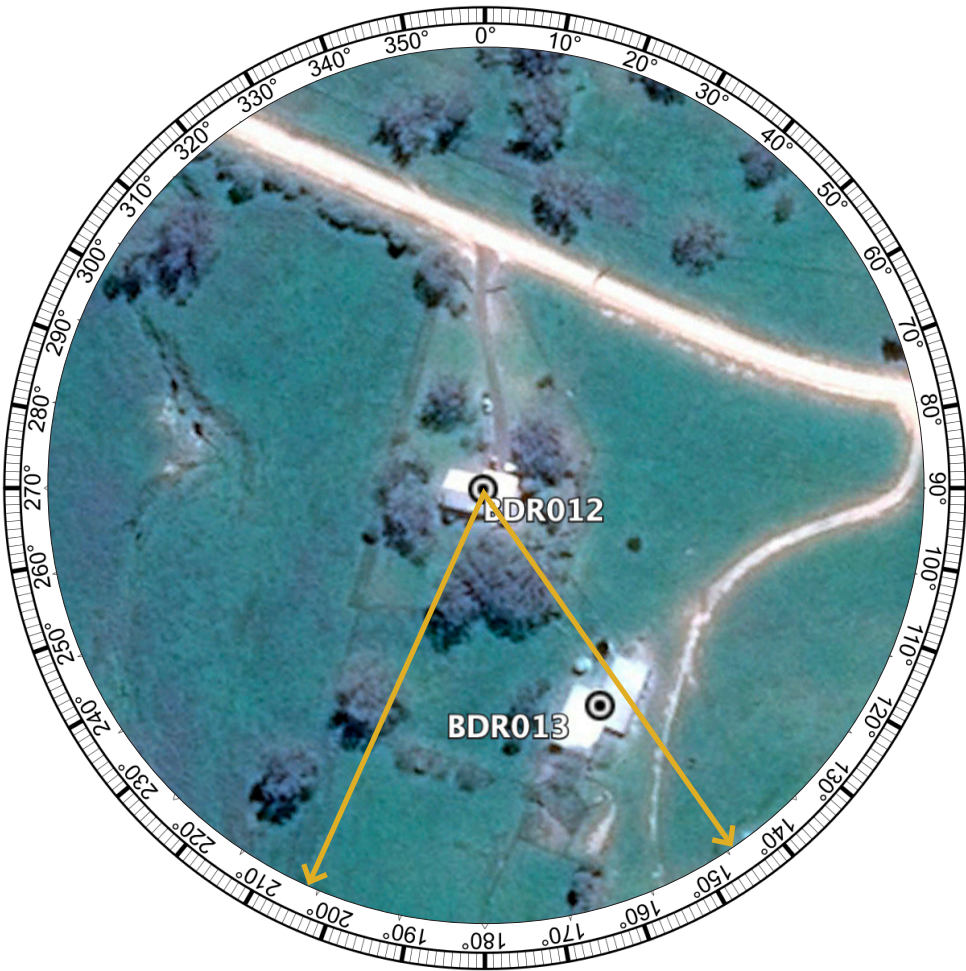
8000m from nearest turbine

60° sectors

■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.020km (T30)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	0



Desktop Dwelling Assessment **BDR010**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

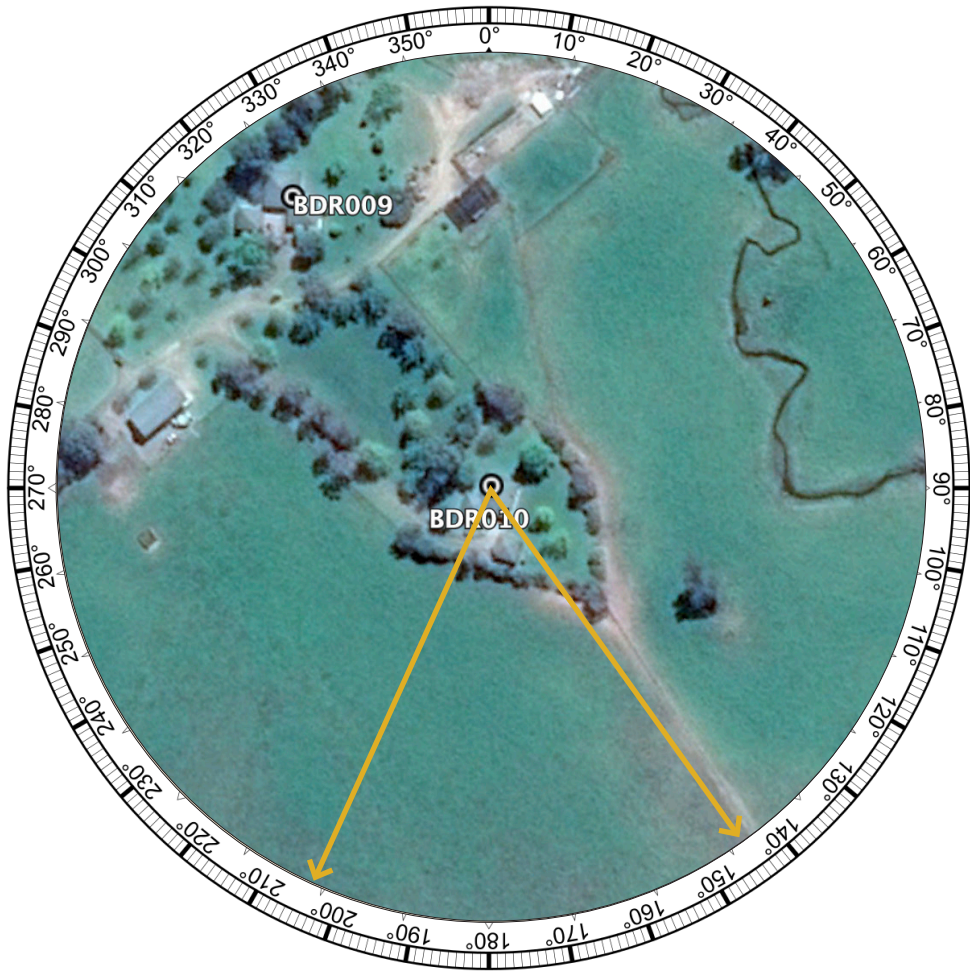
8000m from nearest turbine

60° sectors

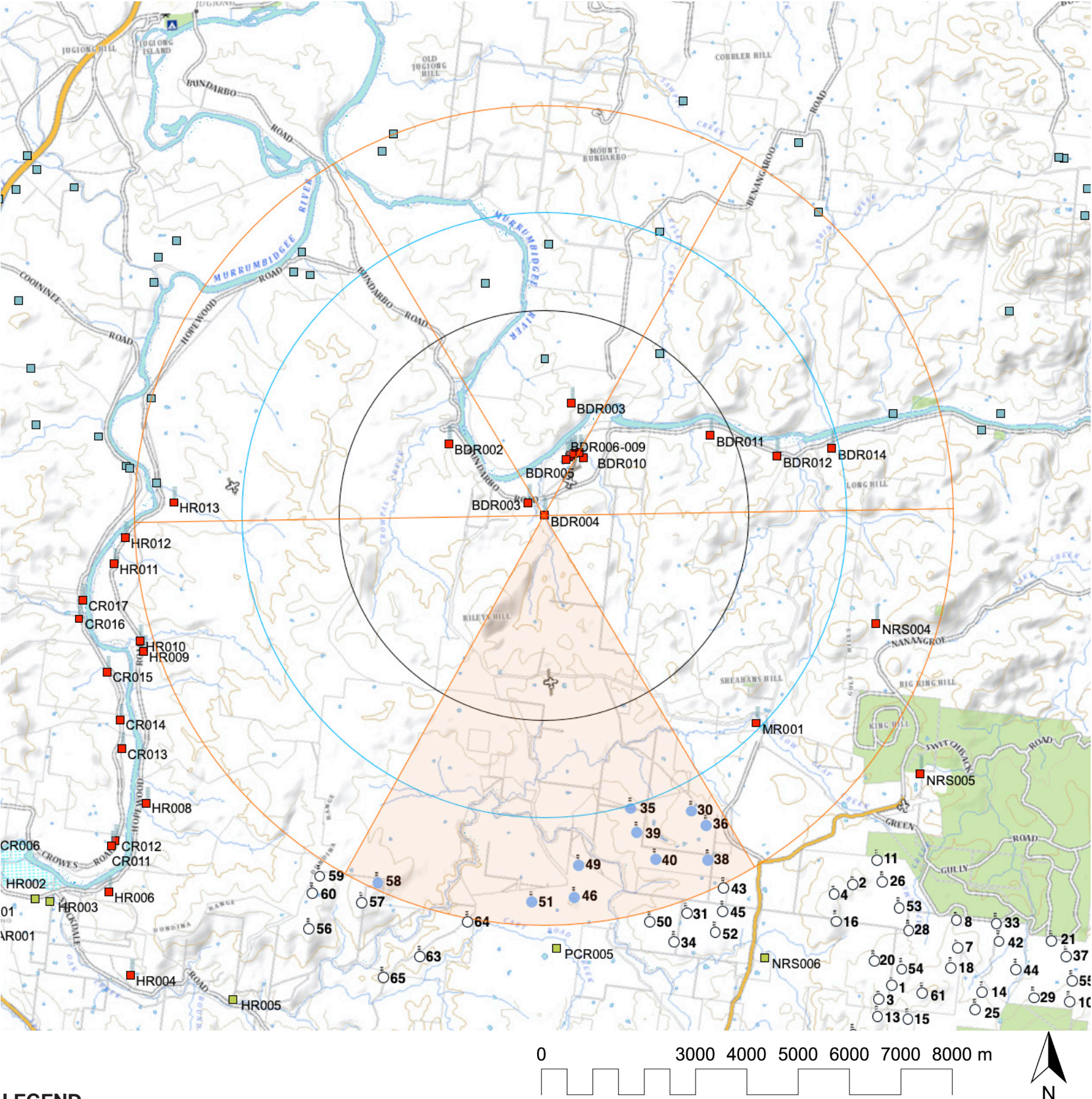
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	6.91km (T35)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **BDR004**



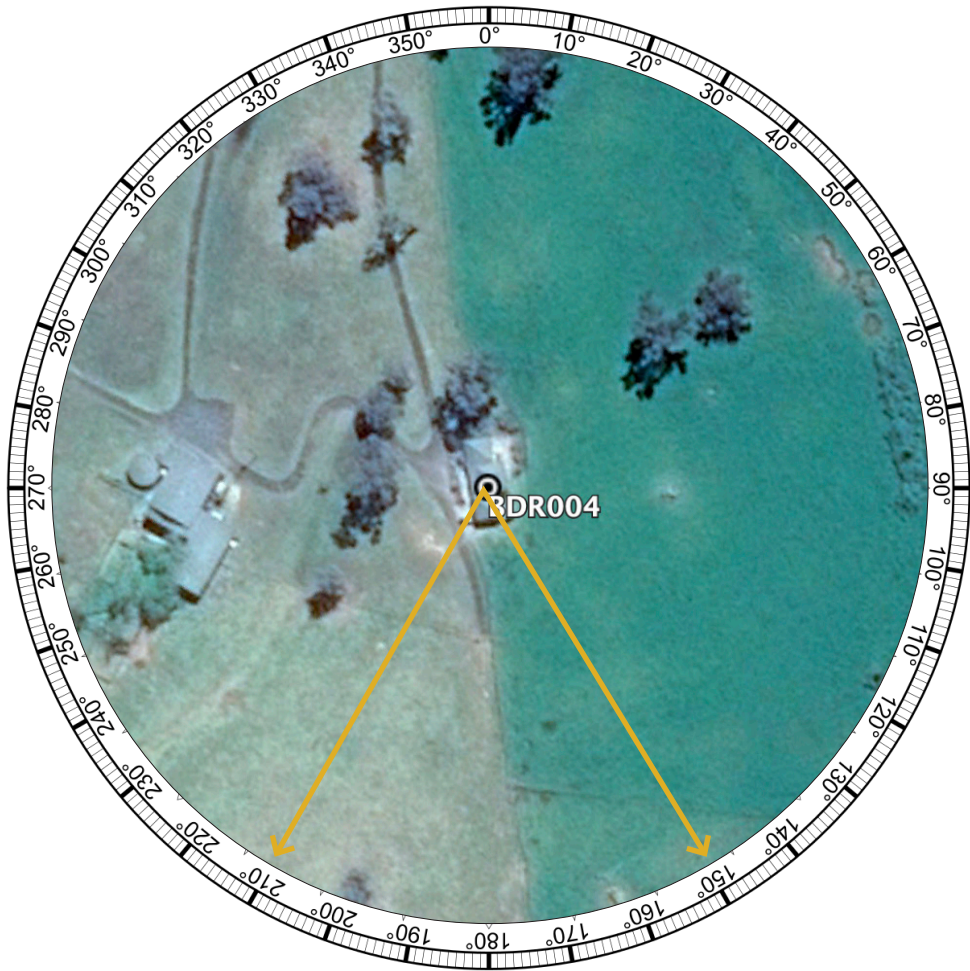
LEGEND

- Proposed Turbine Location
- Turbine in excess of 8000m
- Involved Dwelling
- Non-involved Dwelling

- 4000m from nearest turbine (Black Line)
- 5900m from nearest turbine (Blue Line)
- 8000m from nearest turbine
- 60° sectors

- 60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	5.96km (T35)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **HR009**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sectors

■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	5.56km (T59)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **HR011**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

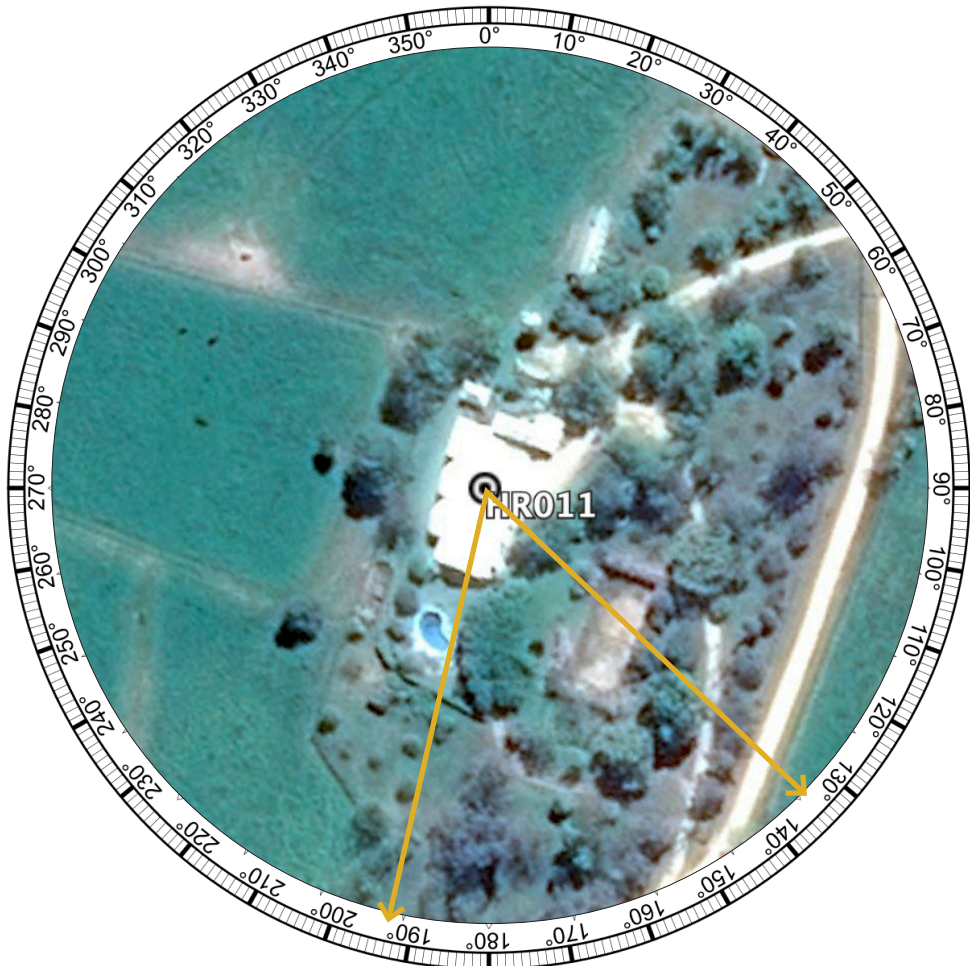
8000m from nearest turbine

60° sectors

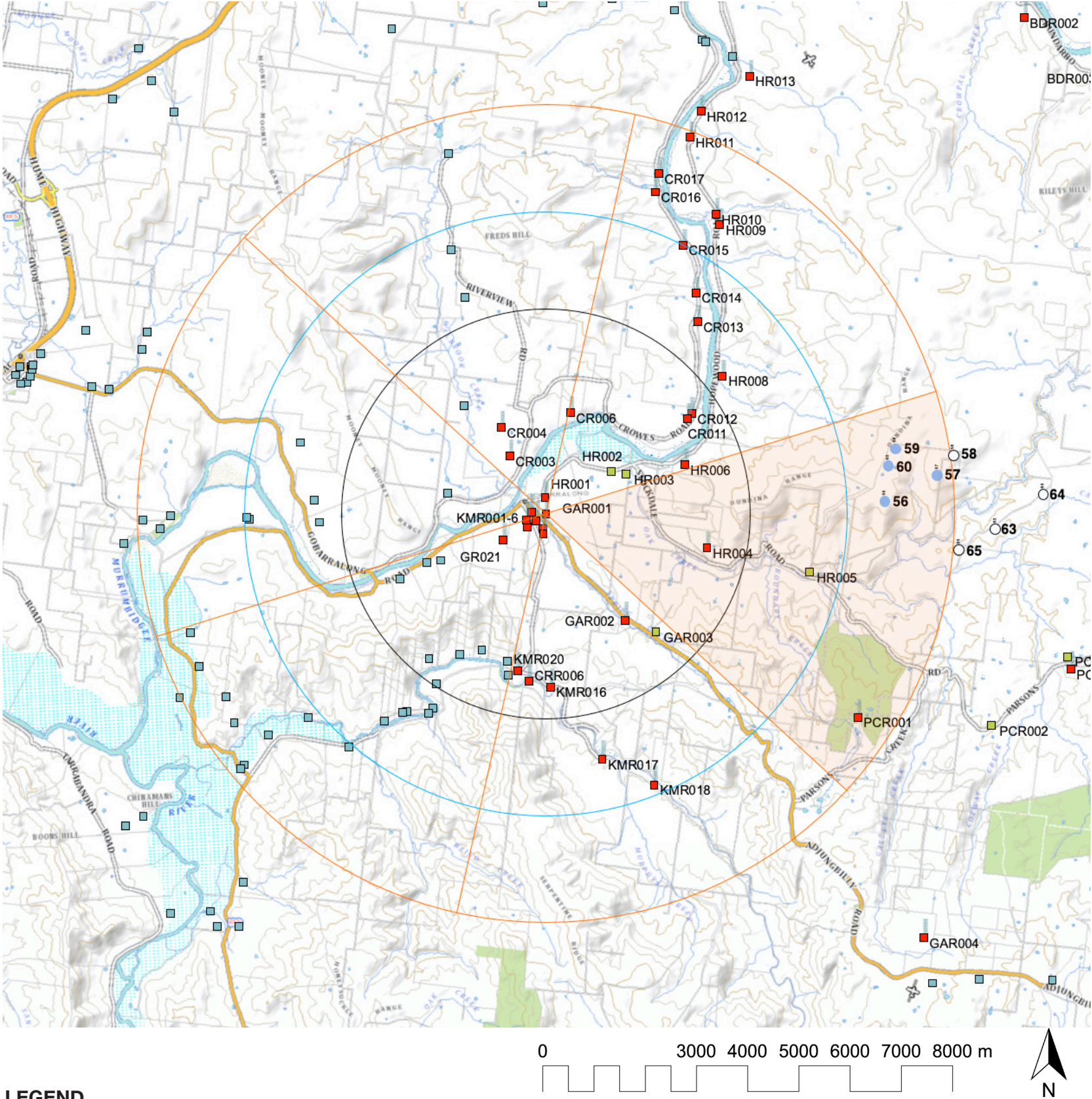
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.29km (T59)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



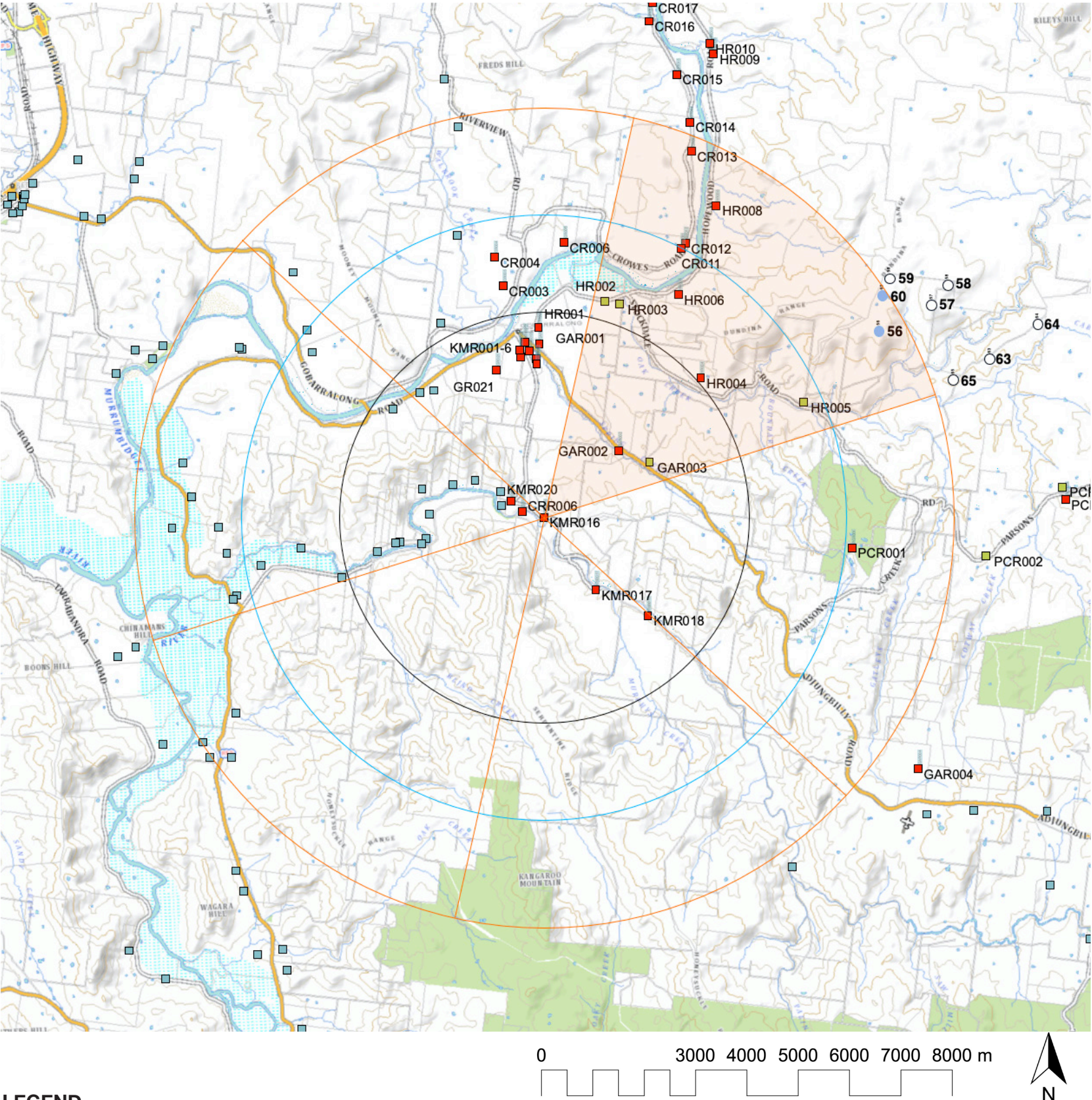
Desktop Dwelling Assessment **GAR001**



Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	6.63km (T56)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



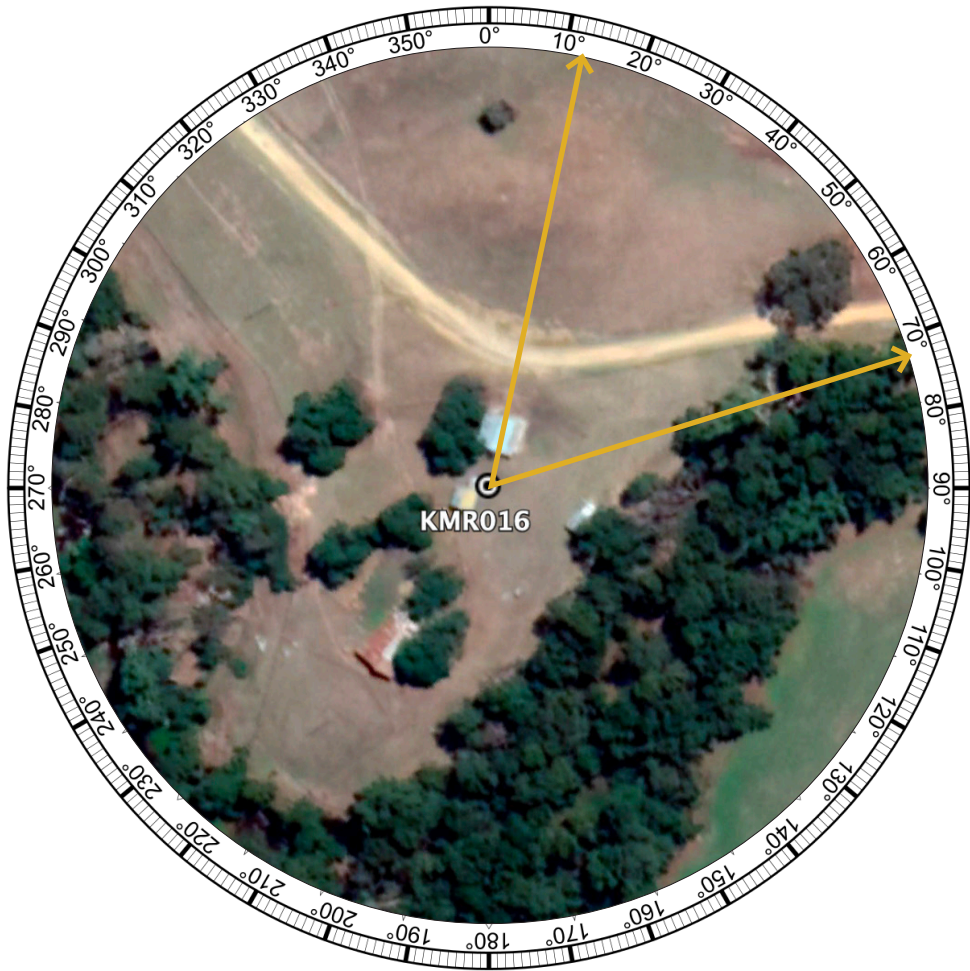
Desktop Dwelling Assessment **KMR016**



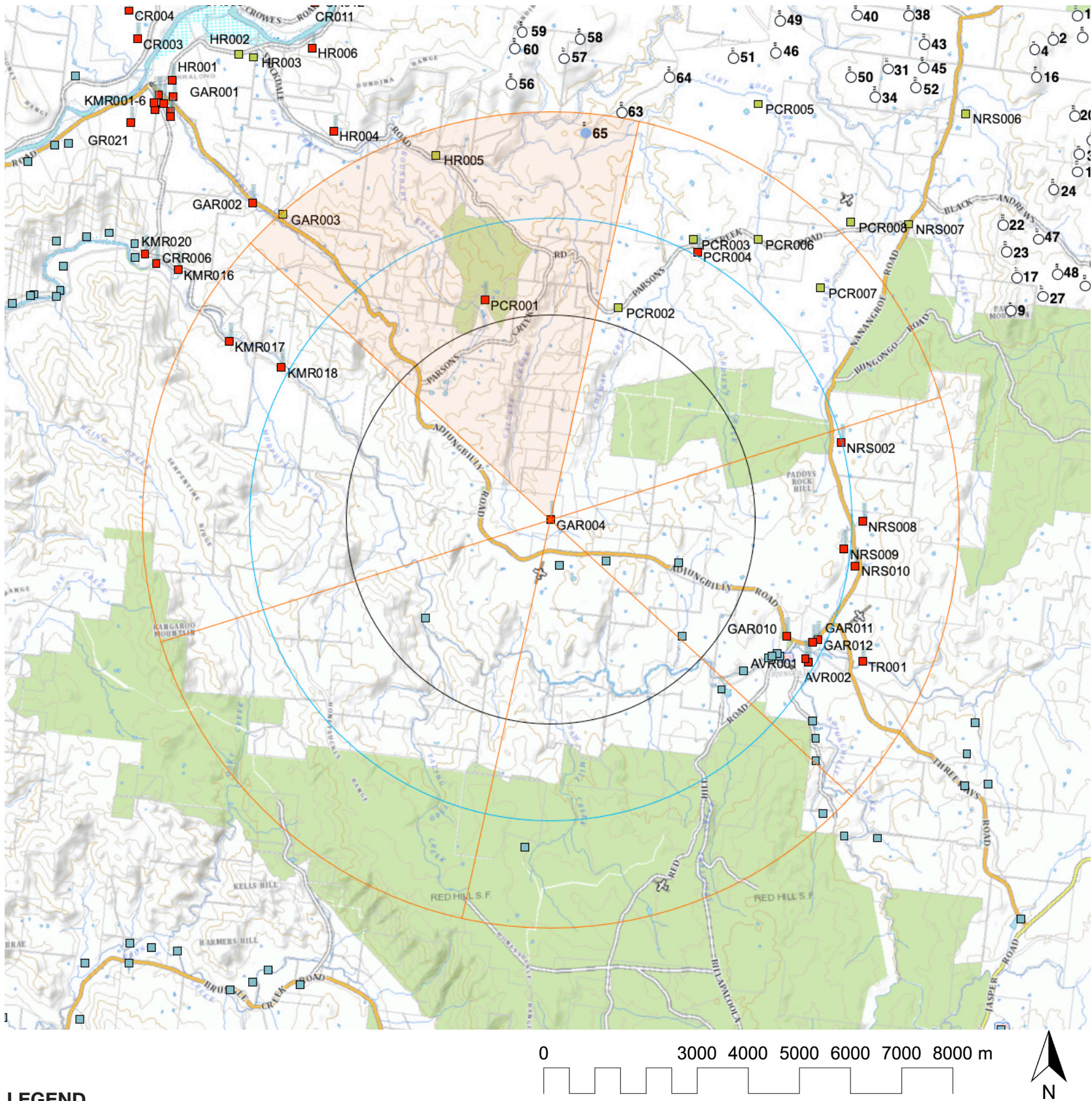
LEGEND

- Proposed Turbine Location
- Turbine in excess of 8000m
- Involved Dwelling
- Non-involved Dwelling
- 4000m from nearest turbine (Black Line)
- 5900m from nearest turbine (Blue Line)
- 8000m from nearest turbine
- 60° sector with turbine
- 60° sectors

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.47km (T56)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **GAR004**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

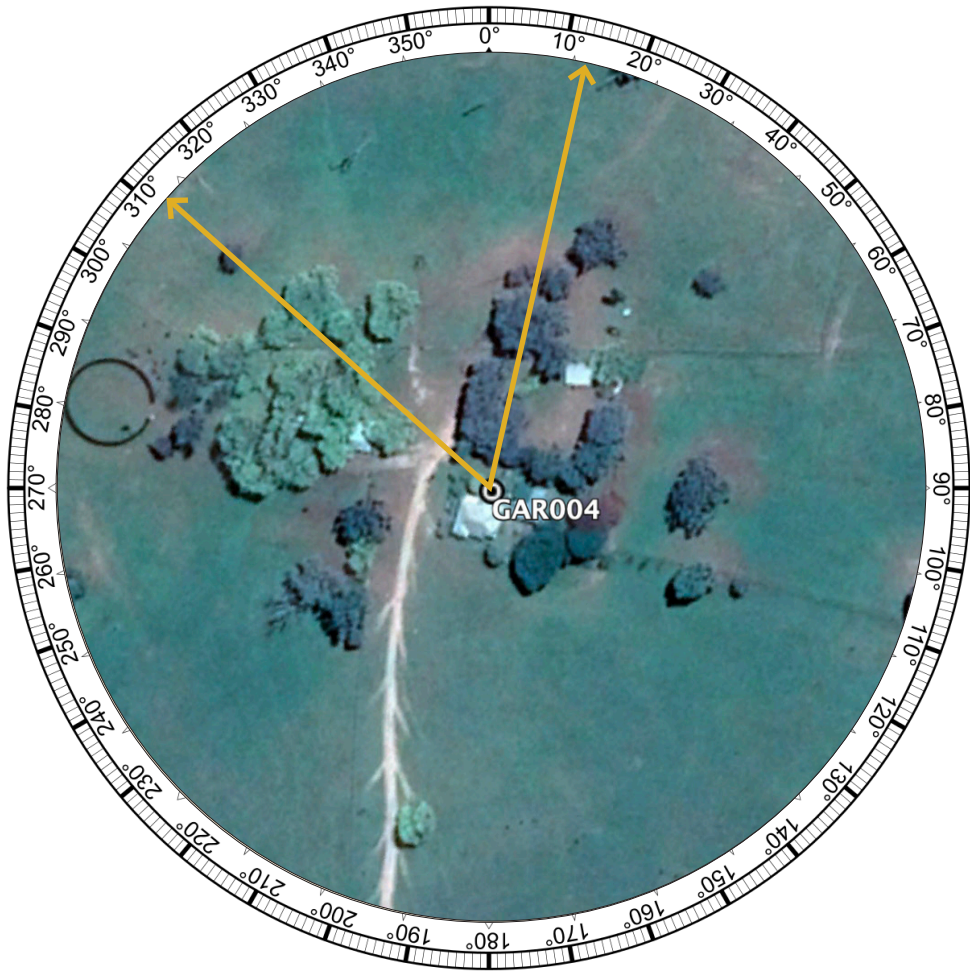
8000m from nearest turbine

60° sectors

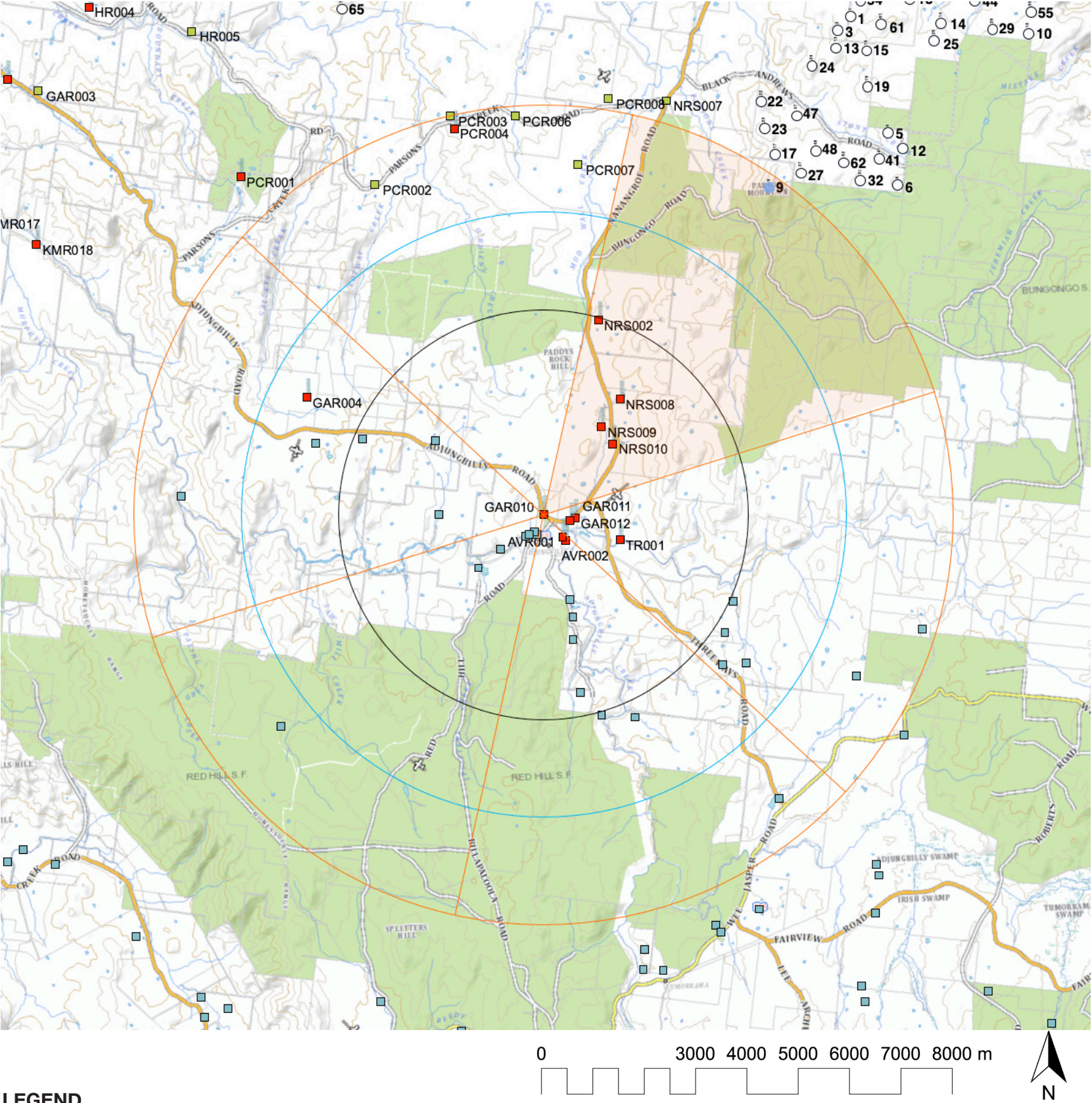
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.60km (T00)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **GAR010**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sectors

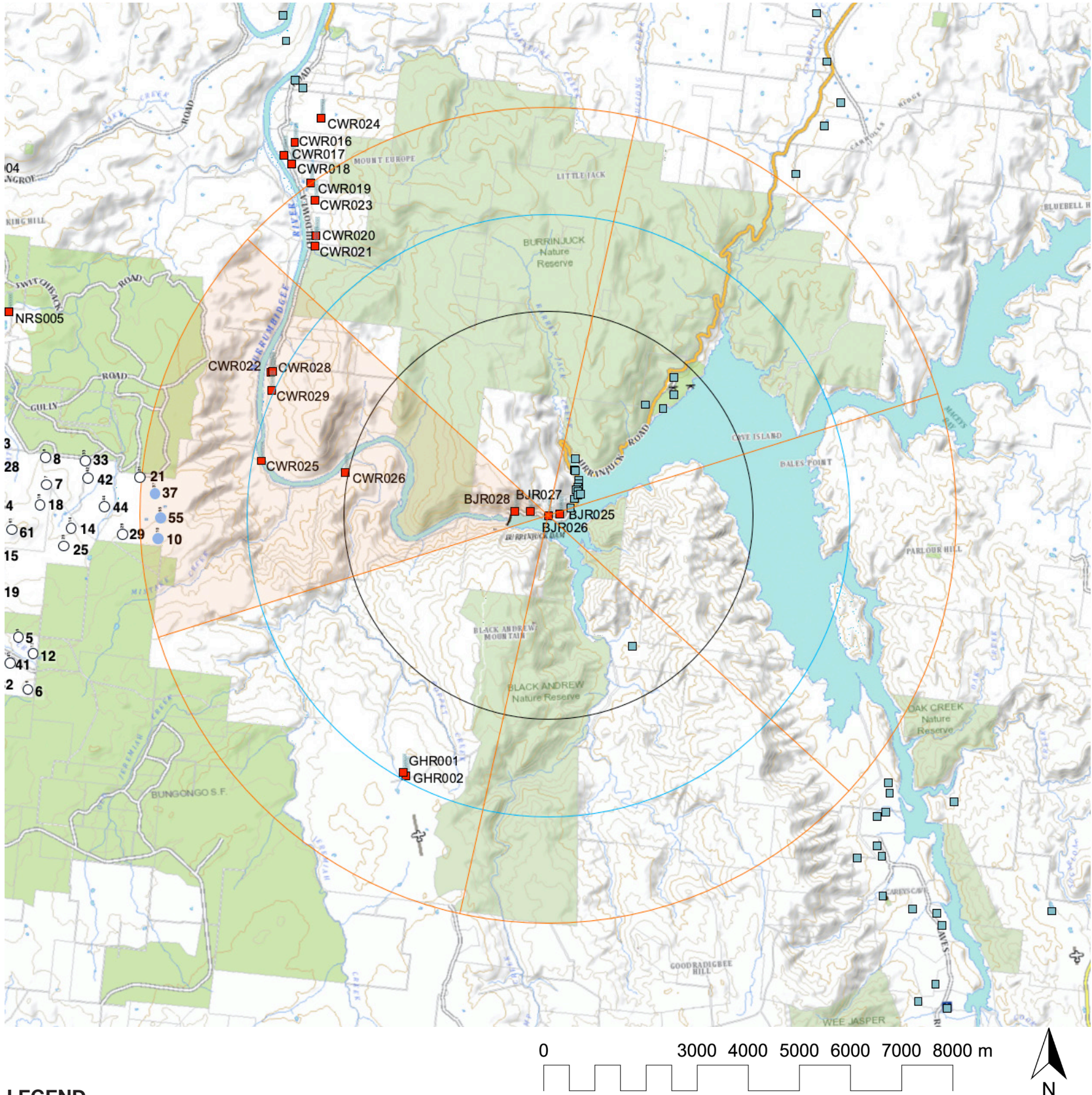
■

60° sector with turbine

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.75km (T09)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	1-15



Desktop Dwelling Assessment **BJR026**



LEGEND

●

Proposed Turbine Location

○

Turbine in excess of 8000m

■

Involved Dwelling

■

Non-involved Dwelling

4000m from nearest turbine (Black Line)

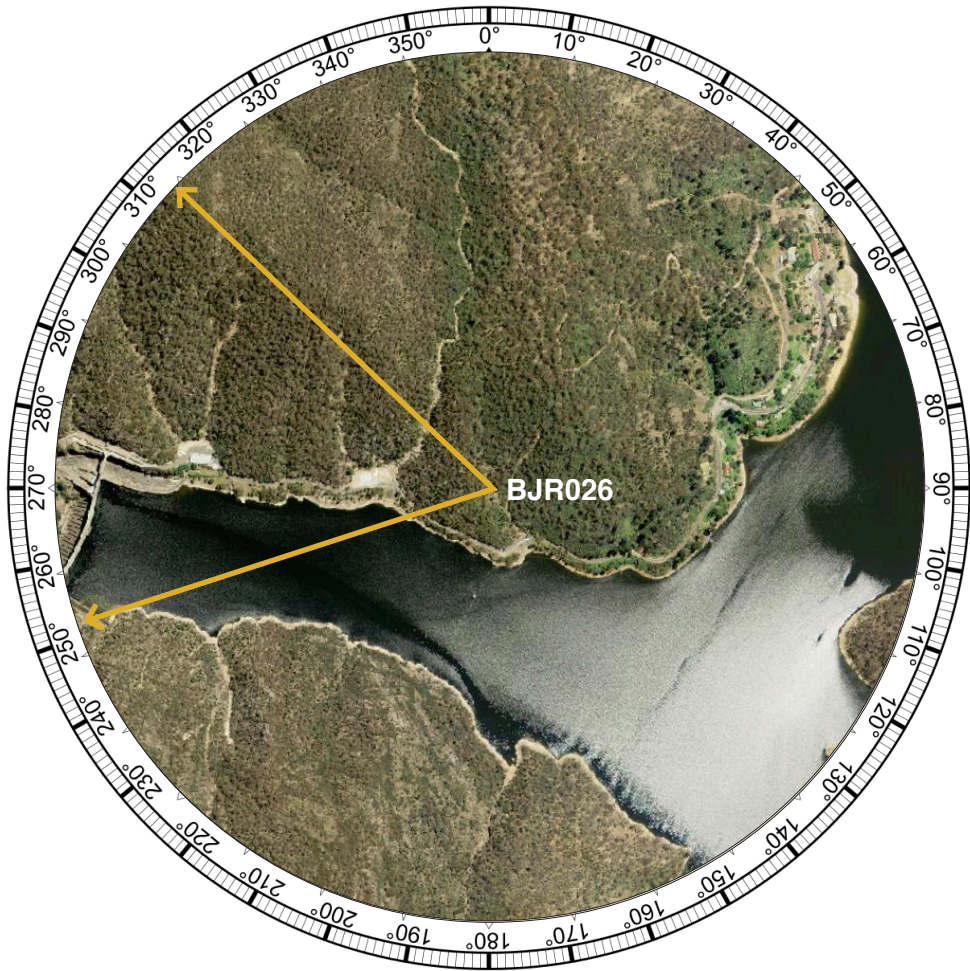
5900m from nearest turbine (Blue Line)

8000m from nearest turbine

60° sector with turbine

60° sectors

Summary of Preliminary Assessment Tools:	
Nearest proposed turbine (km):	7.59km (T55)
Number of proposed turbines within Black Line (4000m):	0
Number of theoretical 60° Sectors (Based on 2D Assessment):	1 (Up to 60°)
Number of potentially visible turbines (Based on ZVI assessment)	35-45





Appendix D

Community Consultation Questionnaire

JEREMIAH WIND FARM

Community Survey



Name: _____

Gender: _____

Are you involved in the project?

- ☐ Yes
☐ No

If Yes, please detail your involvement

Where do you reside:

- ☐ Adjungbilly
☐ Gobarralong
☐ Burrinjuck
☐ Wee Jasper
☐ Coolac
☐ Darbalara
☐ Gundagai
☐ Other (Please specify)

Based on your current understanding of renewable energy, what do you believe are the most positive benefits of the project?
(Please select one or more)

- ☐ Job creation
☐ Investment in the local community
☐ Land use diversification
☐ Clean energy
☐ Increase in tourism
☐ Road upgrades
☐ Visual appeal
☐ Other (Please specify)

Age Group:

- ☐ 12-18 ☐ 18-29 ☐ 30-44
☐ 45-60 ☐ 61+ ☐ Prefer not to say

What do you value the most about your local area?

- ☐ Local history
☐ Farming
☐ Recreation opportunities
☐ Employment opportunities
☐ Community / Family
☐ Cultural Heritage
☐ Other (Please specify)

Based on your current understanding of renewable energy and the project, what are your main concerns? *(Please select one or more)*

- ☐ Noise
☐ Traffic
☐ Visual
☐ Effects on land use
☐ Effects on flora and fauna
☐ Health impacts
☐ No concerns
☐ Other (Please specify)

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JEREMIAH WIND FARM



In your opinion what are the key landscape features in the area?

(Note: these can include natural features such as a distinct mountain peak, or cultural features such as an iconic church)

What are the best lookouts / public viewing locations within the study area and its surrounds?

(If you have a visitor, where do you take them to showcase your local area?)

What do you value about the existing natural and built environment?

What concerns do you have (if any) in relation to how the Project might impact on the current aesthetic value and amenity?

Additional comments and/or concerns:

Thank you for your participation!

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Question 4: In your opinion what are the key landscape features in the area?
The uninterrupted, natural views of the Valley
Beautiful undulating Hills and mountains, peace and quiet very relaxing.
The Murrumbidgee river and surrounding landscape has unique beauty with the rock formations and tree lines. I paddle along the river regularly and the area is unique without any industrial and built structures. We clean up rubbish from floods and the industrial rubbish that ends up in the river is significant after flooding. I walk and paddle in the Burrinjuck Nature Reserve and I have observed many bird species including eagles. I fear for the safety of these birds and the eagles that circle the ridge lines and hint in the river and surrounding areas.
The river valley, the mountains on either side of the river eg. Mt Europe, Black Andrew, the river itself, the natural bush land surrounding the area.
The Valley and the surrounding hills and ridges.
The Murrumbidgee Valley and the surrounding hills
The Murrumbidgee River, Black Andrew Nature Reserve, Lake Burrinjuck
The Murrumbidgee River Valley
The Murrumbidgee River valley (ie the river plus the U/V shaped valley in which it flows, up to the ridge line some 300 metres above the river), and especially the western/southern wall of the valley and ridge line (since this is what you see most from the eastern side)
Mt Europe. Wee Jasper caves and environs. Wee Jasper township. Burrinjuck Dam. The valley scenery below Burrinjuck Dam.
Natural Features
Natural Landscape

Question 5: What do you value about the existing natural and built environment?
The presence of natural wildlife and vegetation. Only farm buildings or shacks dotted around the landscape being the only unnatural features of the area
Natural is always best!
The eagles and other bird life are the true value of the area. I value the wilderness and the river. I am extremely concerned that the Indigenous culture and values have not been appropriately engaged by the project.
I value the beauty of the bushland, the hills and the river.
The ability to escape from the any built environment. The peace and quiet with only noise coming from the trees and birds.
I value the river and the natural surroundings, The animals that the land is home to. There is not a single industrial structure in the area except a few farm houses or sheds.
Being able to come to the area and feel so far removed from the every day world.
I value the the quietness and serenity of the area. There is no man made building or structures apart from a few huts by the river. Kayaking up the river and only hearing the crickets, the fish jumping out and the birds chirping. It is escape from the man made world we live in each day. The animals the reside on the land, the landscape of greenery and mountains, the river winding through all of this.
I value very highly the complete absence of any built environment whatsoever visible from my house/ surrounds and from elsewhere on my property, the presence of nothing other than a few shacks/ farm buildings. I value the absence of any man-made noise, apart from the occasional vehicle or aircraft. As I write I can hear only birds. I value the river, the rugged terrain, and the flora and fauna inhabiting it.
The valley is home to large Raptors such as Wedge Tail Eagles and Sea Eagles. The built Environment has existed for 90 years (the Dam)

Question 6: What are the best lookouts / public viewing locations within the study area and its surrounds?
Kayaking along the river or Childowla Road. Burrinjuck Nature Reserve.
Beautiful Scenery on the private property we frequent for camping, relaxation and fishing, swimming during summer. See cattle and sheep in their natural environment, the Wind Turbines will have an immense impact to the environment to the fauna and flora not to mention the effect of the domestic animals, cattle, sheep and goats as well as the wild animals running free.
The best outlook is on the river as we paddle. Platypuses and birds are observed and the absence of the built environment is the greatness view of the area. My understanding from the very limited information provided so far about the project is that the towers are extremely tall and I fear for the bird life and the potential rubbish that will enter the river.
Highest point on my property (good view of the upstream river and valley), to the river, along Childowla Rd.
The river it self.
Of course the Murrumbidgee River itself by boat, canoe and Kayak. The Valley riverbank to camp and Burrinjuck Nature Reserve
Burrinjuck Nature Reserve but the most common area would have to be the river itself. Many people come to boat, fish, canoe and camp across the river bank.
The most common public viewing locations are from the river itself (ie canoe/kayak/boat), the river bank or Childowla Rd. Best is from the Burrinjuck Nature Reserve, but this takes some effort to access.
The best views will be from private property.

Question 7: What concerns do you have (if any) in relation to how the Project might impact on the current aesthetic value and amenity?
The towers will be visible from most of the valley and the noise that they can create will impact on the serenity that the area currently enjoys.
A HUGE Impact on the environment not to mention the noise of the Wind Turbines which will have an immense impact on the human side as well, emotional, mental illness and deafness that's just some of the down side
The project will destroy the aesthetic value and amenity of the area. Moreover I am intensely fearful for the bird life in the area. Also the impact of run off into the river and the potential rubbish from the build phase of the towers. The ongoing risk of rubbish and other pollutants entering the river and the impact on the native fish and platypuses.
I am concerned that the eastern end of the line of turbines will detract from the natural beauty of the valley.
The noise created by the towers and the complete eye sore that they are. We need to hold onto what little peace of natural areas we have left. Adding the towers with such size and not to mention noise completely takes away the natural state of the area.
The possibility that these structures will be visible from the river bank and valley. This area has been renowned as a beautiful spot from hundreds of years. People come to explore, camp, fish and enjoy being in nature where there is no visible sign of any industrial structures.
These towers will be visible from all points of this natural beauty. It will completely destroy what people love most about coming here.
The towers will be visible from the surrounding land. There are no industrial structures anywhere in the area which is what makes the landscape and environment so serene and beautiful. It is what we all come to the area for. The height of these structures of 300+ m will be visible across the River Valley. It will permanently and significantly change the whole area.
Towers 21, 37, 10, and possibly others - you haven't provided enough information to be sure - will be visible from the River valley. Childowla has been considered a "beauty spot" for nearly 200 years, where one can enjoy nature without any consciousness of industrial presence. If these towers were to be constructed, the natural serenity of the environment would be permanently and substantially disfigured: I note the height of the towers is approximately the same as the height of the river valley itself! The towers would be visible from the northern approach to Glendale south ie including the whole of that part of Childowla Rd which is next to the river, and they would be impossible to ignore.
We will have front row seats from our property and will see a number of towers. This will destroy the natural view we have of the valley.

Question 8: Additional comments and/or concerns:
The visual and audible impact of the towers will no doubt affect the value of the properties in the immediate area and people who have purchased these properties would have done so mostly due to the absence of industrial activity affecting the natural beauty of the area.
As previous question.
I am totally opposed to this project.
In the most part I am in favour of renewable energy and can accept that they may need to be placed in my neighbourhood, but it would be a shame if a small number of them destroyed the outlook from my property and the surrounding area. I would like to see the end of this line, close to the river, taken out of the project as I believe there can be towers put in the location without destroying the natural beauty of the area.
I believe having these structures will substantially decrease the amount of people that come to take in the surroundings and decrease the value of the land for the property owners.
I'm also concerned about the wild life in the area - destroying their habitat and particularly the birds.
The owners in the area have all bought their properties for their natural beauty and serenity of the river valley. The proposed wind farm will obstruct views and cause a substantial loss of value to these properties.
For people coming to the area to camp, fish and take in the landscape this will again drastically change what they have always come to see and experience.
All the land owners on the river near the proposed wind farm bought their properties for the natural beauty of the river valley. Turbines towering over the valley has got to have a substantial adverse effect on property values, and suitability for uses such as adventure tourism (fishing, walking, camping, kayaking etc). I'm also concerned about bird kill.
We also believe this structure will decimate the birdlife as well as nocturnal birds and bats. The construction phase may well be threat to Endangered plants such as the Wee Jasper Grevillea which is only found in this area and nowhere else! We believe it poses a direct threat to the Powerful owl (an endangered species) and all other Owls. We also have concerns on the threat to the native bat colony from Wee Jasper caves.