



Visual Impact Assessment

Mid West Wind Farm

Mid West Wind Farm Pty Ltd

c/- Vestas Development Australia
Level 8, 567 Collins Street, Melbourne Victoria
3000

Prepared by:

SLR Consulting Australia

SLR Project No.: 675.072296.00002

28 July 2026

Revision: 6.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
0.1	29 January 2025	MD	FJ	FJ
1.0	10 February 2025	MD	FJ	FJ
2.0	12 May 2025	EH	FJ	FJ
3.0	30 September 2025	EH	FJ	FJ
4.0	30 October 2025	EH	FJ	FJ
5.0	11 May 2026	EH	FJ	FJ
6.0	28 July 2026	EH	FJ	FJ

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Mid West Wind Farm Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



Executive Summary

SLR Consulting, was commissioned by Vestas Development Australia Pty Ltd (Vestas) to conduct a Visual Impact assessment (VIA) for sensitive receptors around the Mid West Wind Farm (the Project). The Project is located approximately 50 km east of Geraldton, Western Australia, and wholly within the Yamatji Nation Native Title Determination area.

The scope of work involved the characterisation of the existing landscape and the assessment of potential visual amenity and landscape impacts of the Project in relation to existing and potential future impacts.

A site visit was conducted to capture high-resolution photography from valued places and representative Landscape Character Units (LCUs). Photographs captured in August 2024 were used to confirm LCU mapping, as well as providing the basis for photomontage analysis, using a scaled 3D model of the Project.

Potential visual impacts to three LCUs and 10 viewpoints were assessed. Two viewpoints were determined to be visually impacted, these were further assessed through photomontage analysis to describe the existing landscape and predicted landscape.

As demonstrated in the assessment, implementation of the Project is predicted to result in a minor-moderate impact to two of the ten viewpoints. Overall, implementation of the Mid West Wind Farm was predicted to have a low visual impact as there was little visibility due to the screening effects of landforms and vegetation surrounding the Mid West Wind Farm and thus negligible change to visual amenity and landscape character. Mid West Wind Farm was considered to have met the Visual Management Objectives (VMOs) due to the following:

- The Project does not result in a dominant change in view for moderate to high sensitivity viewpoints that are located > 1 km from the Project.
- The Project does not result in the removal of valued characteristics, nor does it result in significant alteration or disruption to views of these valued characteristics.
- Turbines are visually apparent within the visual catchment area and in some views are a major element however the existing landscape character remains the dominant characteristic.



Table of Contents

Basis of Report	i
Executive Summary	ii
1.0 Introduction	1
1.1 Objectives	2
1.1.1 Visual Impact Assessment Objectives	2
1.1.2 Visual Management Objectives	2
1.2 Legislative and Policy Framework	3
1.3 Assessment Guidelines and Standards	3
2.0 Regional Context.....	8
2.1 Social Surrounds.....	8
2.1.1 Local Population.....	8
2.1.2 Existing Infrastructure.....	8
2.1.3 Land Use and Land Tenure.....	9
2.2 Physical Surrounds	9
2.2.1 Climate.....	9
2.2.2 Land Systems	10
2.2.3 Vegetation	12
2.3 Valued Characteristics.....	12
3.0 Methods	13
3.1 Section Summary	13
3.2 Desktop Assessment.....	13
3.2.1 Defining the Study Area.....	13
3.2.2 Identifying Landscape Character Units.....	13
3.2.3 Identification of Viewpoints	13
3.3 Field Assessment	14
3.3.1 Survey Timing	14
3.3.2 Site Photography Specifications	14
3.4 Digital Analysis	14
3.4.1 3D Site Model.....	14
3.4.2 Viewshed.....	15
3.4.3 Photomontage Creation.....	15
3.5 Visual Impact Analysis.....	15
3.5.1 Landscape Values and Viewpoint Sensitivity.....	15
3.5.2 Magnitude of Change	17
3.5.3 Impact Significance	18



3.6	Limitations and Assumptions of the Analysis	18
4.0	Results	19
4.1	Landscape Character Units	19
4.1.1	Agricultural Land	19
4.1.2	Remnant Vegetation LCU.....	22
4.1.3	Water Bodies LCU.....	23
4.2	Viewshed Analysis	25
4.3	Descriptions of Surveyed Viewpoints.....	25
4.3.1	Site 5 – Middle of Project Area (Walkaway-Nangetty Rd)	26
4.3.2	Site 9 – Holmes Road and Erangy Spring Road Intersection.....	27
4.4	Viewpoint Assessment Results.....	28
4.4.1	Assessment of Site 5 – Middle of Project Area	29
4.4.2	Assessment of Site 9 – Holmes Road and Erangy Spring Road Intersection.....	30
4.4.3	Example Viewpoints (No Visibility)	31
5.0	Discussion	32
5.1	Landscape Impacts	32
5.2	Visual Impacts to Viewpoints	32
5.3	Cumulative Impacts.....	33
5.4	Conclusion	33
6.0	References.....	35

Tables in Text

Table 1: Legislative and Policy Framework and Relevance to the Project.....	4
Table 2: Extent of Land Systems within the Study Area	10
Table 3: Field Assessment Criteria.....	14
Table 4: Evaluation Matrix for Landscape Value	15
Table 5: Viewpoint Sensitivity / Value Ratings.....	16
Table 6: Magnitude of Change	17
Table 7: Evaluation Matrix for Visual Impact Ratings	18
Table 8: Extent of LCUs in the Study Area.....	19
Table 9: Details of the Agricultural Land LCU.....	21
Table 10: Details of the Remnant Vegetation LCU	23
Table 11: Details of the Water Bodies LCU	24
Table 12: Surveyed Viewpoints.....	25
Table 13: Site 5 – Middle of Project Area (Walkaway-Nangetty Rd)	26
Table 14: Site 11 – Holmes Road and Erangy Spring Road Intersection.....	27



Table 15: Summary of Visual Impact Ratings.....	32
---	----

Graphs in Text

Graph 1: Geraldton Airport (008315; BoM 2024).....	10
--	----

Plates in Text

Plate 1: Typical view of the Agricultural Land LCU	20
Plate 2: Typical view of the Agricultural Land LCU	21
Plate 3: Typical view of the Remnant Vegetation LCU	22
Plate 4: Typical view of the Remnant Vegetation LCU	22
Plate 5: Typical view of the Water Bodies LCU	24
Plate 6: Site 5 – Middle of Project Area (Walkaway-Nangetty Rd).....	26
Plate 7: Site 11 – Holmes Road and Erangy Spring Road Intersection	27
Plate 8: Site 5 – current view, looking south-southwest toward the Mid-West Windfarm	29
Plate 9: Site 5 – predicted view, looking south-southwest toward the Mid-West Windfarm ..	29
Plate 10: Site 9 - current view looking southwest toward the Mid-West Windfarm	30
Plate 11: Site 9 - predicted view, looking southwest toward the Mid-West Windfarm.....	30

Figures Out of Text

- Figure 1: Project Location and Study Area
- Figure 2: Project Layout and Viewpoint Locations
- Figure 3: Native Title
- Figure 4: Land Systems
- Figure 5: Land Character Units
- Figure 6: Viewshed

Appendices

Appendix A Viewpoint Assessment: No Visibility



1.0 Introduction

Vestas Development Australia Pty Ltd (Vestas) is proposing to develop the Mid West Wind Farm (the Project) within a land development area of 16,498 hectares, approximately 50 km east of Geraldton, Western Australia within the Local Government Authority of the City of Greater Geraldton. To provide regional context, a wider regional study area has been considered during the impact assessment which also extends to Shire of Mingenew and Shire of Irwin.

The Project will involve the construction of up to 98 wind turbine generators (WTGs) with a total generation capacity of 700 MW supplemented by a battery energy storage system (BESS) with a storage capacity of 4,200 MWh and nominal rating of 700 MW plus associated infrastructure. The Project will be developed across land with tenure comprising freehold properties and road reserve. Total ground disturbance for the Project will be approximately 730 ha, with minimal clearing of native vegetation required.

The Project will connect into the transmission line owned and operated by Western Power and connected to the South West Interconnected System (SWIS) from the Project's collector substation. The wind turbine generators (WTGs) nominally selected for the Project are the EnVentus V172-7.2. This model range includes a new modular nacelle design that allows a range of models to be manufactured using the same base componentry, thereby reducing cost. The V162-7.2 model has the following technical features relevant to the environmental and social impact studies:

- Standard rated power = 7,200 kW
- Cut-in wind speed = 3 m/s
- Wind class = IEC S (user defined)
- Rotor diameter = 172 m (approximate blade length = 84 m)
- Rotor swept area = 23,235 m²
- Hub height (above ground) = 150 m (IEC S)
- Maximum sound power level = 106.9 dB(A).

The WTG foundation design will be based on local geotechnical and terrain characteristics. Concrete supply will be obtained from an onsite concrete batching plant. To facilitate WTG erection and maintenance, the nominal hard stand area required at each turbine location (for construction and major maintenance) is 65 m x 70 m.

One substation comprising 3-phase 33/330 kV step-up transformers, will be included for connection to local networks. High voltage electrical collector cabling from each turbine to the substation will all be underground, 33 kV nominal. The BESS will also be connected to the substation via high voltage cabling. Other electrical infrastructure will include Static Synchronous Compensators (STATCOMs).

The Project will be constructed over a 30-month period, with construction aiming to commence in 2028. Construction workforce is estimated to be up to 300 persons during the peak of construction, with the workforce predominantly coming from the Mid West region. Operational workforce is expected to include 15 full time staff throughout the 25+ year operational life of the Project.



The Port of Geraldton is a major transport hub and will be the landing point for larger site infrastructure e.g. turbine blades and transformers. Access to the site is provided by the local road network from Casuarinas Road, Kiely Road and Nangetty-Walkaway Road. These local roads connect to the regional arterial network, the Brand Highway and Geraldton-Mount Magnet Road. Airports or airfields are located at Geraldton, Dongara, Mullewa, Morawa, and Mingenew.

Office and workshop facilities to support the Project's construction, commissioning and long-term operation and maintenance will be included in the Project.

During the operational phase of the Project, WTGs, BESS and supporting infrastructure would require regular inspection and maintenance. During the initial operation years, operator attendance may be more regular while the wind farm operation is being optimised. Regular scheduled maintenance is required. It is possible that major unexpected or unscheduled maintenance could take place during the life of the wind farm.

The intended design life is 25+ years, with option for repowering and structural inspection to extend the life by an additional 10+ years. Decommissioning and rehabilitation will occur following the cessation of the operational life. The decommissioning phase is anticipated to be around 18 months and will involve dismantling and removing the above ground WTG components, removing related above-ground infrastructure and rehabilitating internal access roads, not requested to be retained by individual landowners.

1.1 Objectives

1.1.1 Visual Impact Assessment Objectives

The objectives of this VIA were to:

- Determine if Vestas' activities have any direct or indirect impacts on the visual landscape at key viewpoints.
- Understand mitigation measures that can be implemented to enable visual impacts from Vestas' activities are minimised.

1.1.2 Visual Management Objectives

The Western Australian Planning Commission's (WAPC) Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting, and design (2007) adopts three broad Visual Management Objectives (VMOs):

- Best practice siting and design
- Protection and enhancement
- Restoration of degraded character or enhancement opportunities.

New South Wales Department of Planning and Environment (2016) define visibility distance zones as they relate to view distance and relative visual magnitude, describing view distances of 1 km as the far foreground with the relative size of the development decreasing in apparent size with view distance. Based on this the following project-specific VMOs have been adopted for the Project:

- The Project should not result in a dominant change in view for moderate to high sensitivity viewpoints that are located > 1 km from the Project Area.



- Minimise the impact of the Project on 'valued characteristics'.
- The Project should not result in a significant modification to the visual catchment, turbines may be visually apparent and become a major element in the landscape but should not dominate the existing visual catchment

This VIA will help to demonstrate how the Project can meet these project-specific VMOs.

1.2 Legislative and Policy Framework

Legislative instruments exist at both Federal and State levels that directly or indirectly support the protection of landscapes and their associated visual amenity. These are outlined in Table 1.

1.3 Assessment Guidelines and Standards

This report was prepared with reference to the following guidelines and standards:

- Environmental Protection Authority 2023, Environmental Factor Guideline – Social Surroundings (EPA 2023a)
- Environmental Protection Authority 2018, Environmental Factor Guideline – Landforms (EPA 2018)
- Environmental Protection Authority 2023, Statement of Environmental Principles, Factors and Objectives (EPA 2023b)
- Western Australian Planning Commission 2007, Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting, and design (WAPC 2007)
- Landscape Institute 2013, GLVIA3 - Guidelines for Landscape and Visual Impact Assessment. Third edition. (Landscape Institute 2013).



Table 1: Legislative and Policy Framework and Relevance to the Project

Applicable Legislation	Relevance	Consideration Under this Assessment
Federal Law		
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Under Section 528 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act), the term 'environment' is defined as: - Ecosystems and their constituent parts, including people and communities - Natural and physical resources - The qualities and characteristics of locations, places, and areas - Heritage values of places - The social, economic, and cultural aspects of a thing mentioned in (a), (b), (c) or (d). While the Project has the potential to affect all aspects of the 'Environment' as defined under the EPBC Act, impacts to (c) and (d) are directly related to landscape and visual amenity values.	This assessment has been prepared using a methodology that assesses and documents the qualities, characteristics, and social importance of the receiving environment, and presents an estimated level of impact using a combination of professional judgement and mathematical methods.
<i>Native Title Act 1993</i>	The <i>Native Title Act 1993</i> recognises the traditional 'rights and interests' that certain groups of Aboriginal or Torres Strait Islander People have rights and interests to certain areas of land. These rights and interests may include: - The right to build shelters, live and camp on the area - The right to hunt, fish or collect food - The right to visit and protect places of cultural importance - The right to conduct ceremonies. Impacts to these rights and interests from Landscapes and Visual Amenity impacts may stem from: - Direct loss of mythological sites associated with specific or rare landforms (rock pools, outcrops etc.); and/or	The Project is located within one native title determination area, Yamatji Nation (WC2019/008).



Applicable Legislation	Relevance	Consideration Under this Assessment
	Loss of a sense of enjoyment or fulfilment when practicing Native Title rights or interests (access restrictions to high value areas, loss of camp sites etc.). Native Title can exist alongside the rights of other land holders (e.g., pastoral lessees, <i>Mining Act 1978</i> tenure). As Native Title is a legal recognition of traditional lands, it is important that the needs of Claimants and Determinants are considered when assessing visual and landscape impact.	
State Law		
<i>Environmental Protection Act 1986</i> (EP Act)	Section 3(1) of the EP Act defines 'environment' as: <i>Environment, subject to subsection (2), means living things, their physical, biological, and social surroundings, and interactions between all of these.</i> Section 3(2) of the Act goes on to state: <i>In the case of humans, the reference to social surroundings in the definition of environment in subsection (1) is a reference to aesthetic, cultural, economic, and other social surroundings to the extent to which they directly affect or are affected by physical or biological surroundings.</i> When a proposal is assessed under the EP Act, the EPA may consider a proposal's impacts to visual amenity under its guidance framework for environmental factors based on a number of environmental factors and protection objectives listed in the Statement of Environmental Principles, Factors and Objectives (EPA 2023b). The factors and objectives generally relevant to landscape and visual impacts are: - Landforms: "To maintain the variety and integrity of distinctive physical landforms so that environmental values are protected." (EPA 2018) - Social Surroundings: "To protect social surroundings from significant harm" (EPA 2023a).	Under the Landforms factor, the EPA considers possible impacts such as the removal or alteration of the landform's defining geology, morphology or abiotic processes and the level of dependent environmental values (EPA 2018). Similarly, under the Social Surroundings Factor, the EPA will consider activities that may impact the amenity of social surroundings or aesthetic values (EPA 2023a).



Applicable Legislation	Relevance	Consideration Under this Assessment
	The EPA's consideration of impacts to Landforms is distinctly separate from impacts to Social Surroundings. Where a landform and associated landscape may hold socio-cultural significance, assessment of potential impacts falls under the Social Surroundings factor. Typically, the significance of landforms is valued based on their variety, integrity, ecological importance, scientific importance, and rarity (EPA 2018). This VIA does not assess impacts to ecological function as these are assessed by other technical disciplines.	
<i>Aboriginal Heritage Act 1972 (AH Act)</i>	The AH Act provides for the identification and protection of places and objects of traditional importance to Aboriginal People in Western Australia, managing activities that may harm that heritage and promote an appreciation of Aboriginal cultural heritage. Aboriginal Heritage 'Sites' are typically divided into two overarching categories: • Mythological Sites: ethnographic sites with values that are not necessarily physical in form, often associated with the Dreamtime (e.g., rivers, waterholes, landforms); and • Archaeological Sites: sites with culturally important physical relics or artefacts (e.g., artefact scatter, middens, rock art).	There are two historic Aboriginal heritage sites, and one lodged Aboriginal heritage site within the Project Area.
Non-Legislative Requirements		
<i>Statement of Planning Policy No 2: Environment and Natural Resources Policy (2003)</i>	The Western Australian Planning Commission's (WAPC) Statement of Planning Policy No. 2: <i>Environment and Natural Resource Policy</i> (2003) states that the objective of the policy is to: • Identify and safeguard landscapes with high geological, geomorphological, or ecological values, as well as those of aesthetic, cultural or historical value to the community, and encourage the restoration of those that are degraded. • Consider the level or capacity of the landscape to absorb new activities and incorporate appropriate planning and building design and siting criteria to ensure that new	This assessment aims to meet the objectives of the Policy by identifying landscapes with high values and considers their capacity to absorb changes.



Applicable Legislation	Relevance	Consideration Under this Assessment
	development is consistent and sensitive to the character and quality of the landscape. • Consider the need for a landscape, cultural or visual impact assessment for land use or development proposals that may have a significant impact on sensitive landscapes.	



2.0 Regional Context

This section considers the social, economic, and environmental context in the areas surrounding the Project. This provides important insight into the overall visual quality and perception of an area that is, the overall 'View Experience' (WAPC 2007). While the elements that make a landscape are based on environmental and other physical factors, socioeconomics and demographics are largely responsible for how landscapes are experienced.

The Project Area is defined in Section 4.2.1 and the Study Area was defined via the methods described in Section 3.2.1 and is 365,909 ha in size (Figure 1). Ten viewpoints have been assessed in the field assessment of this VIA, of which two of the viewpoints (the 'key viewpoints') were further assessed to consider the potential visual impact to the sites (Figure 2).

2.1 Social Surrounds

The Study Area falls partially within the Local Government Authorities (LGAs) of the City of Greater Geraldton, the Shire of Mingenew, the Shire of Irwin, and the Shire of Chapman Valley. The Project Area falls within the City of Greater Geraldton. The town of Eradu is located within the Study Area.

The City of Greater Geraldton's population was 39,489 at the last reported census, and the Shire of Irwin's population was 3,680 (ABS, 2021). The Shire of Mingenew's population was 407 at the last reported census, and the Shire of Chapman Valley's population was 1,556 (ABS, 2021).

2.1.1 Local Population

The closest major population centre is Geraldton, approximately 18 km west of the Study Area. The last reported census recorded a population of 32,717, with 48.9% being male and 51.1% being female and a median age of 40 years (ABS, 2021). Aboriginal and Torres Strait Islander people made up 9.9% of the recorded population (ABS, 2021). The Aboriginal population of Geraldton was recorded as 3,254 in 2021 with 46.5% being male and 53.5% being female and a median age of 23 (ABS, 2021). Native title claims in the Study Area have been made by the Yamatji people (Figure 3).

2.1.2 Existing Infrastructure

The Study Area is located in a regional area, where existing infrastructure is primarily limited to roads and agricultural land and equipment. Additional infrastructure (e.g., towns and settlements) are located within the Study Area but beyond the Project Area.

There is an existing HV transmission line that runs through the Project Area, which is visible from some of the viewpoints. The Mungarra Power Station is also located within the Project Area along Walkaway-Nangetty Road. There is existing power infrastructure within the Project Area and Study Area.

Two wind farm facilities currently operate in close proximity to the Project, Mumbida Wind Farm located 40 km southeast of Geraldton and Walkaway Wind Farm located 30 km southeast of Geraldton. Both wind farms are located within the Study Area and have been operating in the region for many years, with Mumbida Wind Farm commencing operation in 2013 and Walkaway Wind Farm commencing operation in 2006. These wind farms are considered as part of the existing visual landscape within the region.



2.1.3 Land Use and Land Tenure

The Study Area represents a combination of various land use and land tenures. Land tenure in the Study Area is predominantly freehold utilised for agricultural land uses. Overlapping tenure include:

- Native Title Determination: Yamatji Nation (WCD2020/001)
- Indigenous Land Use Agreement (ILUA): Yamatji Nation Agreement (WI2020/002)
- Various petroleum tenements.

2.2 Physical Surrounds

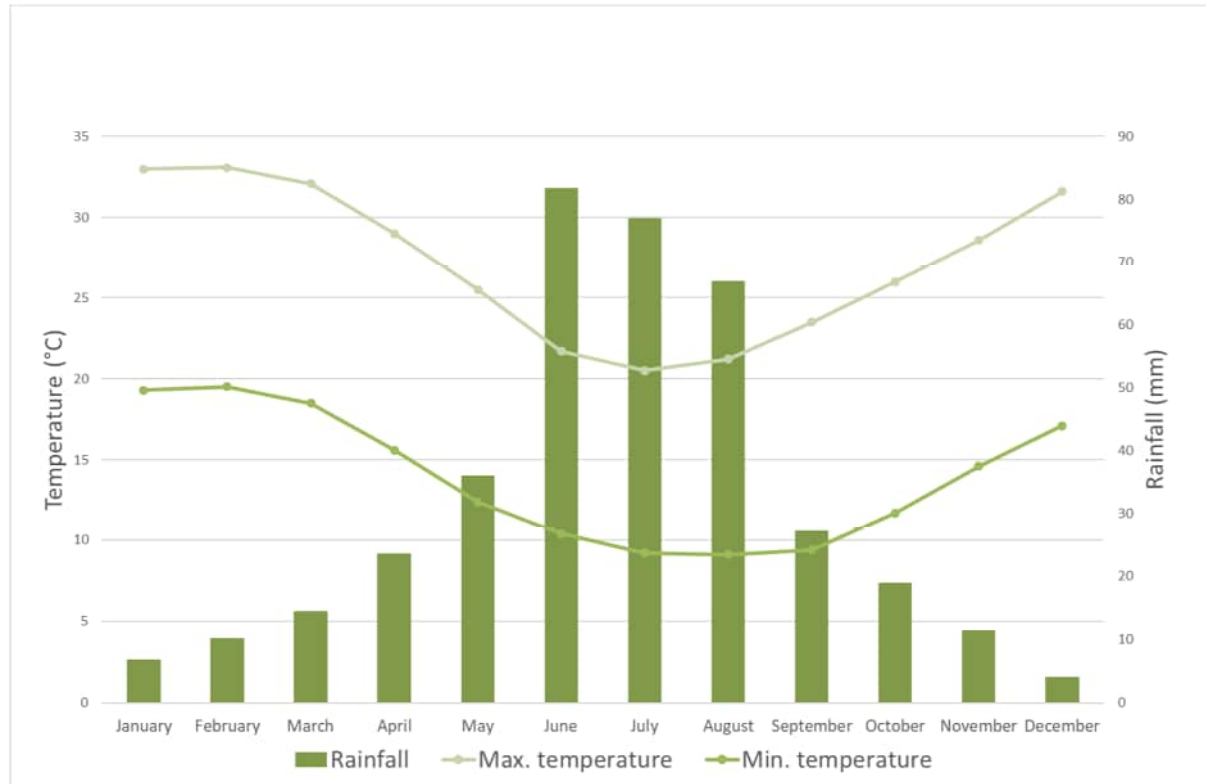
While socio-economic and demographic factors are largely responsible for view experiences (e.g., people may view the land in the context of recreation / tourism, or in the context in their role as an employee or contractor to the agricultural sector), the inherent visual amenity or landscape value is defined by biotic and abiotic environmental factors.

2.2.1 Climate

The climate of the Geraldton Sandplains region is a warm, semi-arid Mediterranean climate. Climate data was obtained from the Geraldton Airport (008315) station located 27 km west of the Project Area (Graph 1). The annual mean maximum temperature is 27.2°C and the annual mean minimum temperature is 13.9°C (BoM, 2025). The average annual rainfall for this station is 383 mm.

Rainfall in the Geraldton Sandplains region varies significantly across the year as well as between years. Due to the position on the coast, this bioregion experiences major climatic changes across relatively short distances between mediterranean and arid (Guthrie, 2010). The climate goes from a cooler, wetter Mediterranean climate near the coast to a warmer, drier Eremaean climate further inland (Guthrie, 2010). The driest months are in summer (December to February), and the wettest months are in Winter (June to August) (BoM, 2025).





Graph 1: Geraldton Airport (008315; BoM 2025)

2.2.2 Land Systems

Land system mapping is based on regional patterns in topography, soils, and vegetation. The extent of these land systems within the Study Area are summarised in Table 2 and Figure 4. All land systems are distributed beyond the Study Area.

Table 2: Extent of Land Systems within the Study Area

Land System	Description (DPIRD, 2018)	Extent within Study Area (ha)	Proportion Of Study Area (%)
Allanooka system	Level to very gently inclined flats and low dunes at low positions in the landscape; Grey deep sandy duplexes and pale deep sands.	2,226.92	0.61
Binnu East system	Gently undulating sandplain with numerous dune ridges. Alluvial valley slopes and sandplain remnants underlain by Permian sediments. Yellow deep sand and sandplain soils.	37,776.39	10.32
Casuarina system	Level to gently undulating sandplain; Yellow deep sand and sand over gravel, some pale deep sands, yellow sandy earths, and sandy gravels	70,365.54	19.23
Casuarina West system	Level to gently undulating sandplain; Yellow deep sand and sand over gravel, some pale deep sands, yellow sandy earths, and sandy gravels.	3,550.08	0.97



Land System	Description (DPIRD, 2018)	Extent within Study Area (ha)	Proportion Of Study Area (%)
Dartmoor system	Undulating plain with crests, slopes, dunes, and drainage lines. Weathered Permean sediments. Red-brown hardpan shallow loam and red earths, loams, sands, and duplexes.	8,176.17	2.23
Eradu system	Level to gently undulating sandplain. Drainage lines absent with a few soaks. Permian and Mesozoic sediments mainly formed insitu. Yellow deep sand and sandy earth.	78,585.88	21.48
Greenough Alluvium system	Level alluvial plain with areas of minor terracing.	3,808.40	1.04
Greenough system	Riverbeds, terraces and alluvial flats, includes dissected margins of relic alluvial plains.	3,723.90	1.02
Irwin System	Level to very gently inclined alluvial flats and terraces of the Irwin and Lockier Rivers.	959.80	0.26
Moresby System	Flat topped ranges and isolated mesas.	279.44	0.08
Mount Budd System	Isolated mesas and scarp faces with flat tops, steep side slopes and moderate to very gently inclined footslopes.	4.47	<0.01
Mount Horner system	Long gentle slopes broken by low gravel ridges and broad open depressions. Some lateritic breakaways with spillway sands.	101,626.89	27.7
Mt Horner North System	Lateritic breakaways and long gentle slopes broken by low gravel ridges and broad open depressions.	1,301.93	0.35
Nangetty System	Undulating to rolling rises and low hills with isolated mesas and scarp faces with eroded footslopes.	9,714.85	2.65
Quindalup Central System	Coastal dune system, including foredunes, beach ridge plains, parabolic dunes, deflation basins and flats. No fixed drainage. Calcareous deep and shallow sands. Coastal heathlands and scrub.	180.55	0.05
Sugarloaf System	Undulating to rolling rises with narrow valleys and an integrated drainage pattern.	29,964.25	8.19
Tamala South System	Rises and low hills with relict dunes and some limestone outcrop on coastal limestone north of Jurien Bay. Yellow deep sands common, with yellow/brown shallow sands and calcareous shallow and deep sands. Banksia woodlands and heathlands	13,664.02	3.73
Total		365,909.50	100



2.2.3 Vegetation

2.2.3.1 Vegetation

The Biogeographic Regionalization of Australia (IBRA) divides Australia into 89 bioregions based on major biological and geographical/geological attributes. These bioregions are subdivided into 419 subregions, as part of a refinement of the IBRA framework. The majority of the Study Area is located across the Geraldton Hills (GES01) subregion of the Geraldton Sandplains bioregion, and the very southern end of the Study Area is located in the Lesueur Sandplain (GES02) subregion of the Geraldton Sandplains bioregion. A portion of the Study Area to the southeast is located in the Merredin (AVW01) subregion of the Avon Wheatbelt bioregion.

The Geraldton Hills subregion is characterised by “*sand heaths with emergent Banksia and Actinostrobos, York Gum woodlands on alluvial plains, proteaceous heath and Acacia scrubs on limestones depending on depth of coastal-sand mantle, low closed forest of Acacia rostellifera on alluvial plains of Irwin River (behind beach dune system south of Geraldton)*” (Desmond & Chant, 2001). This bioregion is mostly overlain by sandplains, coastal limestones, and alluvial plains (Desmond & Chant, 2001).

2.3 Valued Characteristics

Importance is placed on landscape by individuals, communities and public bodies. GLVIA (Landscape Institute 2013) describes landscapes as important as they provide:

- A shared resource
- An environment for flora and fauna
- The setting for day to day lives — for living, working and recreation
- Opportunities for aesthetic enjoyment
- A sense of place
- Continuity with the past through its relative permanence and its role in acting as a cultural record of the past
- A source of memories and associations, which in turn may contribute to wellbeing
- Inspiration for learning, as well as for art and other forms of creativity.

In terms of visual value, VLPWA (WAPC 2007), identifies preferred natural landscape indicators as high degree of ‘naturalness’, landform and vegetation variety, presence of water, distinctive colours, seascapes, unusually expansive landforms (deserts, beach and dune fields, rolling hills), and distinctive landscape features.

A ‘value’ is an implicitly subjective term, however combining the GLVIA’s description of importance of landscapes and VLPWA’s definition of preferred landscapes indicators, the term ‘value’ is considered to be a feature that positively contributes to the visual character of the landscape or a feature that enables cultural pursuits.

The Study Area contains a variety of valued characteristics related to landscape. These primarily include:

- Aboriginal heritage
- Agricultural land
- Major rivers
- National Parks.



3.0 Methods

3.1 Section Summary

This VIA follows the methodology outlined in the DPI/WAPC (2007) Guidelines for Visual Impact Assessments:

- Step 1. Describe existing visual landscape character
- Step 2. Describe the proposed development
- Step 3. Describe and evaluate the potential visual impacts
- Step 4. Develop visual management measures
- Step 5. Prepare final recommendations.

The methods used are consistent with the current guidance for Landscape and Visual Impact Assessments. Impacts described in this report were determined from a combination of a Desktop Assessment, Field Assessment and Visual Impact Analysis. The methods are described below.

3.2 Desktop Assessment

3.2.1 Defining the Study Area

The selection of an appropriate Study Area was a key component of this assessment as it defined the area within which all impacts from the Project were assessed. When defining the Study Area, two key requirements needed to be met:

- Covers the entirety of the area of the Project's operations, i.e., the proposed disturbance footprint and proposed infrastructure such as turbines and access tracks (the 'Project Area')

A radius of 25 km from the Project Area was selected for this assessment for the following reasons:

- It is further than the human eye can reasonably see (given the curvature of the earth)
- It contains a variety of Landscape Character Units (LCUs, defined in 3.2.2).

The resultant Study Area is 365,909.50 ha in size covering the area shown in Figure 1.

3.2.2 Identifying Landscape Character Units

Landscape Character is typically defined by the combination of physical/environmental elements and aesthetic elements and socio-cultural elements. While it is possible to define the former using available data for environmental elements such as soil, geology and vegetation, the latter can only be defined through consultation and firsthand experience.

LCUs were initially based on Land Systems, as the physical component of landscapes are generally heavily influenced by the geomorphology and vegetation of an area. Review of Land System descriptions against local-scale vegetation mapping, aerial imagery and photographs taken of the region during the site visit showed the similarities between several Land Systems from a VIA perspective, enabling them to be considered together. The final LCUs are shown in Figure 5.

3.2.3 Identification of Viewpoints

Viewpoints were identified by SLR. Each of the viewpoints were visited during the field assessment, with one viewpoint captured from each (Figure 2).



A preliminary social surroundings assessment was undertaken by SLR prior to this VIA which addressed visual amenity and viewpoints which should be considered in the VIA.

3.3 Field Assessment

3.3.1 Survey Timing

Visual amenity and landscape values in the Study Area were surveyed on 15th to 16th of August 2024 by a Project Consultant from SLR Consulting. The Study Area was traversed by vehicle and foot. Each viewpoint was visited, and its Global Position System (GPS) coordinates recorded. Key information on the site was also recorded in the format detailed in Table 3.

Table 3: Field Assessment Criteria

Criteria	Characteristics
Location	Co-ordinates
Site Name	Unique identification given for each site
Viewpoint Setting	The location of the site assessment described (e.g., 'north east corner of lookout' or 'end of pier')
Local Vegetation Type	General classification of vegetation at a site (shrubs, grasses, trees etc.)
Vegetation Screening Potential	Potential of surrounding vegetation to obscure views of the Project
Foreground Elements	Elements that make up the landscape in the immediate vicinity of the observer
Mid-Ground Elements	Elements that make up the landscape in between the foreground and background
Background Elements	Elements that make up the landscape furthest away from the observer
Viewer Motion	Speed that an observer may be moving at (affects view duration)
Accessibility	Level of accessibility of the area by members of the public (major roads = high, minor/local roads and tracks = moderate, private roads/remote tracks = low)
Usage Type	Apparent level of usage (based on signs of human activity such as vehicle tracks, extinguished fires, visual observation of activity etc.)
Photography	Number of, direction, settings, and any notes on photography from the location

3.3.2 Site Photography Specifications

All digital photos were taken with a Canon SLR Camera (DS126741) and a Canon EFS lens (18 to 55 mm). Images were taken from a height of approximately 1.6 m above ground. All images were captured using automatic settings at the maximum resolution of the camera. No in/on camera filters or effects were used.

3.4 Digital Analysis

3.4.1 3D Site Model

To simulate the predicted visual impact and generate photomontages, key project elements were modelled using ArcGIS Pro, Blender, SketchUp, and Photoshop. The terrain was



defined using the 1-second SRTM Level 2 Derived Digital Elevation Model (DEM) v1.0, sourced from the ELVIS Elevation and Depth - Foundation Spatial Data platform. A 3D terrain model was constructed using the DEM as the input elevation surface. Turbine specifications, provided by the client, were scaled and modelled accurately in SketchUp.

3.4.2 Viewshed

To identify potential viewpoints and the theoretical visual catchment of the proposed Project, a Zone of Theoretical Visibility (ZTV) was prepared. This zone is generated by undertaking a viewshed analysis using a 3D model of the proposed development and the surrounding topography. The 3D model does not contain any existing vegetation due to the lack of data for these features which may reduce the visibility. The model inputs were obtained using available data including the proposed development and elevation data (provided by Vestas).

3.4.3 Photomontage Creation

The 3D turbine models were positioned within both a SketchUp model and an ArcGIS 3D scene to simulate the bare-earth environment and provide an unobstructed view of the proposed project from designated viewer locations. For each location, snapshots of the modelled environment were overlaid onto site photographs to create realistic photomontages. This blending process considered vegetation screening, coloration, and texture of site elements to enhance accuracy and effectively assess the impact on visual amenity.

3.5 Visual Impact Analysis

3.5.1 Landscape Values and Viewpoint Sensitivity

The finalised LCUs were evaluated based on a visual landscape character preference and in the context of their rarity in the Study Area using the matrix shown in Table 4.

Visual landscape character preference was defined as per Appendix 7 of VLPWA (WAPC 2007), which identifies 'most preferred' natural landscape indicators and includes characteristics such as high degree of 'naturalness', landform and vegetation variety, presence of water, distinctive colours, seascapes, unusually expansive landforms (deserts, beach and dune fields, rolling hills), and distinctive landscape features. Less preferred characteristics include evidence of reduced quality or condition such as disturbance, weed infestation, erosion, and degraded water bodies.

Table 4: Evaluation Matrix for Landscape Value

Visual Landscape Character Preference				
Rarity		Low (Little to no 'preferred' indicators; low quality/ condition)	Moderate (Some 'preferred' indicators; average to good quality/ condition)	High (Many 'preferred' indicators; very high quality/ condition)
	Not Rare (>20% Study Area)	Negligible	Low	Medium
	Somewhat Rare (>5% but <20% Study Area)	Low	Medium	High
	Rare (<5% Study Area)	Low	High	High



As described in VLPWA, significance of viewer experience and views increases with:

- Importance of views, including type, features and rarity
- Volume of use of roads, trails and navigable waterways
- Degree of sensitivity of viewers
- Degree to which experiencing the landscape is integral to enjoyment of a travel route or site
- Length of duration of a view.

Viewpoint sensitivity is derived from GLVIA3 and WAPC (2003) using a combination of factors including:

- Viewer interest in the visual environment (high, medium, low, or negligible) interest in their everyday visual environment and the duration of the affect.
- Viewing opportunity (prolonged, regular viewing opportunities).
- Number of viewers and their distance / angle of view from the source of the effect, extent of screening / filtering of view.

Whilst the assessment of the visual values and effects is largely measured on a qualitative basis, assessment against scale enables a more objective evaluation and comparison of sensitivity of receptors and magnitude of effects.

The viewpoint sensitivity rating is High, Medium, Low or Negligible and is described below in Table 5.

Table 5: Viewpoint Sensitivity / Value Ratings

Sensitivity	Definition
High	• Visitors to heritage sites, regionally important locations, scenic routes / regional gateways, lookouts within 2-3 km (or closer) with quality views, important views of the site and surrounding areas where landscape is the specific focus. • High numbers of visitors • Views to landscape that are rare and / or unique and are possibly vulnerable to change. • Views from residences within 1 km of the site and are representative of high-quality views
Medium	• Travellers / visitors along roads or rail routes that are not scenic routes but offer quality views of significant landscape features. • Recreational users / viewers beyond 2-3 km from the site with moderate interest in their surrounds. • Medium numbers of visitors / residents (suburban and rural residents). • Views that are representative of local character or sense of place but are not rare or unique. • Views from residences within 3 km buffer of the site or are representative of moderate quality views.
Low	• Travellers / visitors along roads or rail routes that are not scenic routes but offer reasonable views of significant landscape features. • Neighbourhood gateways that characterise the rural residential and residential visual quality of the area • Recreational users not dependent on views or scenic quality of landscape.



Sensitivity	Definition
	- View experienced take in broad context with which site is visible but not an important element. - Small numbers of visitors with passing interest in their surroundings (those travelling along mid-level roads). - Viewers whose interest is not specifically focused on landscape or scenic qualities (local residents, commuters, and workers).
Negligible	- Very occasional or low level of users with passing interest in their surrounds (those travelling along minor roads or views from the air). - Travellers / visitors along roads offering views greater than 1 km of the site.

3.5.2 Magnitude of Change

The magnitude of change to the landscape character depends on the nature, scale, intensity, extent, and duration of the impacts / change due to the development proposal. The magnitude of change also depends on the loss, change or addition of any features to the existing landscape and is based on the landscape character type that is most likely to be impacted by the project prior to the addition of any mitigation measures.

The magnitude of change is rated as High, Medium, Low or Negligible as described below in Table 6.

Table 6: Magnitude of Change

Magnitude	Definition
High	Dominant Change: - Major change in view at close distances, affecting substantial part of the view continuously visible for a long duration or obstructing a substantial part or important elements of the view. - Overwhelming loss or additional features in the view such as the nature of view or landscape character fundamentally changed. - Views to key landscape features affected. - Substantial change to the landscape due to loss of and / or change to elements, features or characteristics of the landscape creating an overall worsening of visual quality of the landscape character
Moderate	Considerable Change: - Clearly perceptible changes in views at intermediate distances resulting in either distinct new element in a significant part of the view or a more widely ranging, less concentrated change across a wider area. - Significant loss or addition of features in the view, such that the nature of view or character of landscape is altered. - Considerable contrast of any new features that the nature of the view or landscape character is changed. - Noticeable contrast of any new features or changes compared to existing landscape. - Views to key landscapes partially obstructed but views remain intact.
Low	Noticeable Change: - Minor memorable change to the landscape or views. - Temporary or reversible impact.



Magnitude	Definition
	- Landscape dominant element and built form / development well integrated within it. - Little permanent change or no fundamental change to local landscape character
Negligible	Barely perceptible change: Change to landscape character or key views is rarely perceptible and/or not memorable
None	No change: - The Project is not visible - No change to landscape character or views

3.5.3 Impact Significance

The impact significance refers to the rate of effect that the proposed development will have on the visual landscape when viewed from key vantage point locations. It is the evaluation of the receptor sensitivity and magnitude of change that identifies the extent to which the proposed changes will alter the existing landscape character.

Using impact statistics for determining landscape impacts in isolation of other human elements is not considered to be best practice under GLVIA3. At present, there are no standard categories for significance in consideration of all landscape components. GLVIA3 recommends that any method used is clear and consistent.

As outlined below in Table 7 the impact significance is determined via the lookup matrix where the ratings previously determined for receptor sensitivity and magnitude of change inform the impact significance rating.

It is important to note that this matrix does not explicitly account for the cultural significance of views and landscape features, which may hold unique values and meanings that could influence the perceived impact on certain viewers or communities.

The impact significance is rated as High, Moderate-High, Moderate, Minor-Moderate, Minor, Minor-Negligible and Negligible

Table 7: Evaluation Matrix for Visual Impact Ratings

Sensitivity/Value/Rarity	Magnitude of Change				
		Negligible (Barely Perceptible Change)	Low (Noticeable Change)	Moderate (Considerable Change)	High (Dominant Change)
	Negligible	Negligible	Minor-Negligible	Minor	Minor-Moderate
	Low	Minor-Negligible	Minor	Minor-Moderate	Moderate
	Medium	Minor	Minor-Moderate	Moderate	Moderate-High
	High	Minor-Moderate	Moderate	Moderate-High	High

The above matrix was used to rate potential visual impacts to all surveyed sites.

3.6 Limitations and Assumptions of the Analysis

There are several limitations to consider when interpreting the results of the assessment. Most notably:



- The accuracy of the 3D Site Model, Viewshed and Photomontage are dependent on the accuracy of the available topographical data for the Study Area.
- Viewsheds are generated through a Zone of Theoretical Visibility (ZTV) using a 3D model of the proposed development and surrounding topography, but do not account for existing vegetation due to the lack of available data, which may reduce visibility.
- Photomontages are prepared by blending a visual representation of the proposed development with photographs of the actual landscape. Photomontages are intended to provide a representation of the predicted view as a tool for assessing potential visual impact. As such, there may be minor differences between the depiction in the photomontage and the actual development.
- Interpretation of photomontages is generally a subjective matter that is dependent on professional judgement. Where possible, a framework for clear and consistent impact judgement has been provided; and
- Characterisation of landscapes is largely based on professional judgement. The experiences and values often differ between individuals.

4.0 Results

4.1 Landscape Character Units

Three LCUs were identified within the Study Area (Figure 5):

- Agricultural Land
- Remnant Vegetation
- Water Bodies.

The extent of these LCUs in the Study Area are summarised in Table 8 and descriptions of each LCU are summarised in Sections 4.1.1 to 4.1.3.

Table 8: Extent of LCUs in the Study Area

LCU	Area (ha)	% Study Area
Agricultural Land	341,870.06	93.43
Remnant Vegetation	16,445.20	4.49
Water Bodies	7,594.24	2.07
Total	365,909.50	100

4.1.1 Agricultural Land

The following plates and Table 9 provide a summary description of the Agricultural Land LCU.





Plate 1: Typical view of the Agricultural Land LCU





Plate 2: Typical view of the Agricultural Land LCU

Table 9: Details of the Agricultural Land LCU

Criteria	Characteristics
Extent in Study Area	341,870.06 ha (93.43%)
Environmental Aspects	
Vegetation	Paddocks of crop – grains, predominantly wheat
Landforms	Plains, low rises
Related Land Systems	Occurs across all land systems
Local Rarity	Not Rare (>20 % of Study Area)
Aesthetic Values	
Visual Elements	Expanses of green, yellow, light brown vegetation against a blue sky.
Socio-Cultural Values	
Land Uses	Agriculture
Landscape Value	Medium Not Rare x High Landscape Preference
Magnitude of Change	Low No fundamental change to landscape character
Landscape Impact	Minor-moderate



4.1.2 Remnant Vegetation LCU

The following plates and Table 10 provide a summary description of the Remnant Vegetation LCU.



Plate 3: Typical view of the Remnant Vegetation LCU



Plate 4: Typical view of the Remnant Vegetation LCU



Table 10: Details of the Remnant Vegetation LCU

Criteria	Characteristics
Extent in Study Area	16,445.29 ha (4.49%)
Environmental Aspects	
Vegetation	Mixed heath, scattered tall shrubs
Landforms	Plains, low rises, breakaways
Related Land Systems	Mount Horner, Mount Horner North, Sugarloaf, Casuarina, Casuarina West, Eradu, Tamala South, Allanooka, Beharra, Greenough Alluvium, Binu East, Nangetty.
Local Rarity	Rare (<5% of Study Area)
Aesthetic Values	
Visual Elements	Sandplains with yellow and pale sands, low hills or slopes, narrow valleys, contrasting mix of blue sky and green/brown vegetation.
Socio-Cultural Values	
Land Uses	Recreation, conservation, tourism This LCU may be used for traditional activities such as hunting and camping by native title holders.
Landscape Value	High Rare x Moderate Landscape Preference
Magnitude of Change	Low No fundamental change to landscape character
Landscape Impact	Moderate

4.1.3 Water Bodies LCU

The following plate and Table 11 provide a summary description of the Water Bodies LCU.





Plate 5: Typical view of the Water Bodies LCU

Table 11: Details of the Water Bodies LCU

Criteria	Characteristics
Extent in Study Area	7,594.23 ha (2.07%)
Environmental Aspects	
Vegetation	Mixed heath with scattered shrubs, open woodland
Landforms	Lowest point of the landscape and intersects most land systems. Subject to ephemeral surface water flow, including overbank flooding from major channels and watercourses. Includes creek beds, banks and overbank areas associated with major waterways and drainage lines.
Related Land Systems	Greenough, Greenough Alluvium, Nangetty, Irwin, Binnu East, Dartmoor
Local Rarity	Rare (<5% of Study Area)
Aesthetic Values	
Visual Elements	Rivers, riverbeds, major waterways, blue sky and red-brown earth.
Socio-Cultural Values	
Land Uses	Recreation, conservation, tourism This LCU may be used for traditional activities such as hunting and camping by native title holders.
Landscape Value	High Rare x High Landscape Preference
Magnitude of Change	Negligible Rarely perceptible change to landscape character
Landscape Impact	Minor-Moderate



4.2 Viewshed Analysis

The viewshed results indicated the Project was highly visible within a 5 km radius of the Project (Figure 6). Generally, views of the Project over 10 km away are more limited due to surrounding topography.

4.3 Descriptions of Surveyed Viewpoints

A total of ten viewpoints were assessed during the field assessments. The locations of these points are presented in Table 12 and are illustrated in Figure 2. Two of the viewpoints, the key viewpoints, were further assessed to consider the potential visual impact to the sites based on these viewpoints having visibility of the Project, which was determined by the 3D scenes that were created prior to the photomontages. These key viewpoints are shown in bold font in Table 12. Additionally, 3D scenes were developed for all remaining viewpoints, following assessment of these 3D scenes and mock-up photomontages it was determined that the Project was not visible from eight of the 10 viewpoints. Assessment of key viewpoints and examples of viewpoints with no visibility are provided in Section 4.3. Descriptions for viewpoints that were not further assessed are provided in Appendix A.

Table 12: Surveyed Viewpoints

Site Code	Viewpoint	Easting	Northing	Viewpoint Sensitivity
1	Piggery Lane	0310054	6779487	High
2	Depot Hill	0339546	6774960	High
3	Depot Hill (path)	0339640	6774963	High
4	Mingenew – Mullewa Road	0346338	6781146	Medium
5	Middle of Project Area (Walkaway-Nangetty Rd)	0323819	6800649	Low
6	Ellendale Pool	0302342	6805782	High
7	Eradu	0308656	6824116	Medium
8	Indarra Spring Reserve	0336957	6822964	Low
9	Holmes Road and Erangy Spring Road Intersection	0330600	6816583	Low
10	Allanooka Springs Road	308096	6785196	Medium



4.3.1 Site 5 – Middle of Project Area (Walkaway-Nangetty Rd)

The view from Site 5 is presented in Plate 6 and details are summarised in Table 13.



Plate 6: Site 5 – Middle of Project Area (Walkaway-Nangetty Rd)

Table 13: Site 5 – Middle of Project Area (Walkaway-Nangetty Rd)

Criteria	Characteristic
Location	Easting / Northing: 0323819/6800649
Date	15/08/2024
Site Code	Site 5
Viewpoint Setting	Middle of Project Area (Walkaway-Nangetty Rd)
Local Vegetation Type	Roadside shrubs, road
Vegetation/Topography Screening Potential	10%
Foreground Elements	Road, track, roadside shrubs
Mid-Ground Elements	Scattered eucalyptus, fields
Background Elements	Fields, slopes/low hills, scattered vegetation
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm)



Criteria	Characteristic
	Facing: SSW
After the field visit and in consideration of desktop assessment, Site 5 was rated as low sensitivity due to viewers predominantly being commuters or workers. The magnitude of change to the existing landscape was determined to be moderate as the infrastructure associate with the Project is more apparent in the landscape than the existing modified elements and results in an alteration of the nature of the view due to the clearly perceptible change in the mid-background of the view. It therefore has an impact rating of minor-moderate . Further assessment of Site 5 is presented in Section 4.4.	

4.3.2 Site 9 – Holmes Road and Erangy Spring Road Intersection

The view from Site 9 is presented in Plate 7 and details are summarised in Table 14.



Plate 7: Site 11 – Holmes Road and Erangy Spring Road Intersection

Table 14: Site 11 – Holmes Road and Erangy Spring Road Intersection

Criteria	Characteristic
Location	Easting / Northing: 0330600/6816583
Date	16/08/2024
Site Code	Site 9
Viewpoint Setting	Holmes Road and Erangy Spring Road intersection
Local Vegetation Type	Paddock, roadside vegetation/trees
Vegetation/Topography Screening Potential	30%
Foreground Elements	Paddock, fence
Mid-Ground Elements	Paddock, roadside trees, power pole/line



Criteria	Characteristic
Background Elements	Canola paddock, trees on horizon
Viewer Motion	80 km/h
Accessibility	High
Usage Type	Medium
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm) Facing: SW
After the field visit and in consideration of desktop assessment, Site 9 was rated as low sensitivity due to viewers predominantly being workers; views are representative of local character or sense of place but are not rare or unique. The magnitude of change to the existing landscape was determined to be moderate as the implementation of the Project results in an alteration of the nature of the view due to the clearly perceptible change in the midground to background of the view. It therefore has an impact rating of minor-moderate. Further assessment of Site 9 is presented in Section 4.4.	

4.4 Viewpoint Assessment Results

The following section presents a pre and post development view from the two key viewpoints with visibility of the Project and examples of two viewpoints with no visibility of the Project.



4.4.1 Assessment of Site 5 – Middle of Project Area



Plate 8: Site 5 – current view, looking south-southwest toward the Mid West Wind Farm



Plate 9: Site 5 – predicted view, looking south-southwest toward the Mid West Wind Farm

Site 5 captures a view from Walkaway-Nangetty Road which is located in the middle of the Project Area. The current view from Site 5 is a predominantly natural view of canola fields and native vegetation, with modified elements including Walkaway-Nangetty Road and power poles in the background. The predicted view is a partly modified view and a partly natural view, with modified elements including the road, power poles and direct view of the Project's wind turbines in the midground and background. The bright white colour of the turbines results in the introduction of a distinct contrasting element in comparison to the natural colouring of the native vegetation across the landscape. Through the introduction of distinct new elements into the landscape, the Project is anticipated to result in major changes to views at close distances and therefore could align with a high magnitude of change. However, the introduced elements are not considered to obstruct or result in an overwhelming loss to the nature of the view and therefore, a moderate magnitude of change has been applied. Although multiple existing modified elements are present within the view, the proposed infrastructure associated with the Project is considered to be more apparent in the landscape than the existing modified elements and results in a significant alteration to the nature of the view. Through the introduction of multiple contrasting new elements into the landscape, the view from this location is considered to be dominantly changed, however, the Project does not result in an overwhelming loss or fundamental change to the existing landscape character.



4.4.2 Assessment of Site 9 – Holmes Road and Erangy Spring Road Intersection



Plate 10: Site 9 - current view looking southwest toward the Mid West Wind Farm



Plate 11: Site 9 - predicted view, looking southwest toward the Mid West Wind Farm

Site 9 captures a view from the intersection of Holmes Road and Erangy Spring Road, located approximately 5 km northeast of the Mid West Wind Farm Project Area. The current view is a predominantly natural view, with modified elements including power poles and powerlines, fencing and access roads. The predicted view is a partly natural view and a partly modified view with modified elements including power poles and powerlines, fencing, access roads, and the Project's wind turbines in the midground and background of the view. The bright white colour of the wind turbines appears distinct in comparison to the surrounding natural colouring of the landscape. Although the view has existing modified elements present, the Project's wind turbines are more apparent in the landscape than the existing modified elements and therefore result in an alteration of the nature of the view. The introduction of the Project results in clearly perceptible changes and partial obstruction to key landscapes, however, the alteration to the landscape is not considered substantial to the point of fundamental change to the landscape character.



4.4.3 Example Viewpoints (No Visibility)



Plate 12: Site 1 - predicted view, looking north toward the Mid West Wind Farm



Plate 13: Site 7 - predicted view, looking southeast toward the Mid West Wind Farm



5.0 Discussion

5.1 Landscape Impacts

Based on the results of the desktop and field assessments, a total of three LCUs were identified. Landscape value and impact for the LCUs were determined to be:

- Agricultural Land – low value and minor-moderate impact
- Remnant Vegetation – high value and moderate impact
- Water Bodies – high value and minor-moderate impact.

Overall, the impact of the Project on landscape character is predicted to be minor-moderate to moderate. The impact rating for the Water Bodies and Remnant Vegetation LCUs were a result of the high value of these LCUs, however, the magnitude of change to these LCUs is low to negligible and are therefore not considered to be significant. The LCUs occur widely outside the Study Area, and there is existing power infrastructure, including other wind farms, transmission lines and power stations in the Study Area, so the actual impact from a broad LCU perspective is not considered to be significant.

5.2 Visual Impacts to Viewpoints

Ten viewpoints were identified for assessment. The 10 viewpoints were visited during the field assessment, with one viewpoint captured from each. Following the field assessment, 3D scenes were created for these 10 viewpoints to determine which sites had potential visibility of the Project, which resulted in two key viewpoints requiring further assessment.

Table 15 provides a summary of the visual impact assessment.

Table 15: Summary of Visual Impact Ratings

Viewpoint	Viewpoint Sensitivity	Magnitude of Change	Impact Rating
Piggery Lane	High	Low	None
Depot Hill	High	None	None
Depot Hill (path)	High	None	None
Mingenew – Mullewa Road	Medium	None	None
Middle of Project Area (Walkaway-Nangetty Rd)	Low	Moderate	Minor-moderate
Ellendale Pool	High	None	None
Eradu	Medium	Negligible	None
Indarra Spring Reserve	Low	Negligible	None
Holmes Road and Erangy Spring Road Intersection	Low	Moderate	Minor-moderate
Allanooka Springs Road	Medium	None	None



Overall, the alteration to visual amenity was limited as the topography of the land and vegetation in the area resulting in the wind turbines being largely screened from view. Where the Project was visible, higher impact ratings were assigned where the Project introduced a new element into the view of the landscape or was highly visible, altering the character of the view. Although there is a change in visual amenity to some of the views, it is not considered to be significant as the implementation of the Project did not result in the landscape character of the view being fundamentally changed and/or the Project was mostly screened by landforms or vegetation. Factors affecting the degree of visual impact include the distance from the viewpoints to the turbines and the accessibility of the viewpoints.

The Project does not result in the alteration or disruption to valued landscape characteristics of heritage, major rivers or national parks. These key features remain physically unaffected and largely visually unaffected. However, the Project does result in a slight visual disruption to the valued landscape characteristic of agricultural land as the Project is located on agricultural land and is visible from five viewpoints within the Study Area.

During the construction phase of the Project, visual impacts are temporary and predominantly associated with dust. High dust levels may result in haze, reducing the visibility of environmental values in the landscape. The construction phase of the Project is not anticipated to result in additional visual impacts that would elevate the overall visual impact rating. Overall, visual impacts associated with the construction phase of the Project are anticipated to be transient and limited primarily to dust emissions and partially erected turbines/blades.

5.3 Cumulative Impacts

There are several existing wind farms in the area, including:

- Mumbida Wind Farm, located approximately 40 km southeast of Geraldton. The Mumbida Wind Farm consists of 22 wind turbines and has been operating since 2013.
- Walkaway Wind Farm, located approximately 30 km southeast of Geraldton and 12 m inland from the Indian Ocean. The Walkaway Wind Farm consists of 53 Vestas V82 turbines and has been operating since 2006.

The Project is located approximately 50 km east of Geraldton and will consist of up to 98 turbines. Implementation of the Project is not expected to result in a significant cumulative change in the valued landscape. Combined views of the Project and either Mumbida Wind Farm or Walkaway Wind Farm are expected to be rare, therefore the Project is unlikely to result in a combined visual effect.

5.4 Conclusion

As demonstrated in the assessment, implementation of the Project is predicted to result in minor-moderate impacts to two of the 10 assessed viewpoints.

Overall, implementation of the Mid West Wind Farm was predicted to have a minor-moderate visual impact as there was little visibility at most viewpoints due to the screening effects of landforms and vegetation surrounding the Mid West Wind Farm. There is expected to be no visibility of the Project at eight of the viewpoints. Of the two viewpoints that are expected to have visibility of the Project, both are expected to have a minor-moderate impact. The Project is considered to have met the project-specific VMOs due to the following:

- The Project does not result in a dominant change in view for moderate to high sensitivity viewpoints that are located > 1 km from the Project.



- The Project does not result in the removal of valued characteristics, nor does it result in significant alteration or disruption to views of these valued characteristics.
- Turbines are visually apparent within the visual catchment area and in some views are a major element however the existing landscape character remains the dominant characteristic.



6.0 References

Australian Bureau of Statistics (ABS), 2021. 2021 Census Data. Available from <http://www.abs.gov.au/>. Government of Western Australia.

Bureau of Meteorology (BoM), 2025. Climate Statistics. Commonwealth of Australia.

Desmond, A. & Chant, A. (2001). Geraldton Sandplains 2 (GS2 – Geraldton Hills subregion). A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002; DBCA. Available from: <https://library.dbca.wa.gov.au/static/FullTextFiles/021927.020.pdf>

Environmental Protection Authority (EPA), 2023a. Environmental Factor Guideline – Social Surroundings. Government of Western Australia.

Environmental Protection Authority (EPA), 2023b. Statement of Environmental Principles, Factors and Objectives. Government of Western Australia.

Environmental Protection Authority (EPA), 2018. Environmental Factor Guideline – Landforms. Government of Western Australia.

Guthrie, N. (2010). Regional and Local Ecological Linkages for the Geraldton Local Biodiversity Strategy. Department of Environmental and Conservation; Perth Biodiversity Project. Available from: <https://library.dbca.wa.gov.au/static/FullTextFiles/071368.pdf>

Landscape Institute, 2013. Guidelines for Landscape and Visual Impact Assessment. Third Edition.

Western Australian Planning Commission (WAPC), 2007. Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting, and design. Department for Planning and Infrastructure. Government of Western Australia.

Western Australian Planning Commission (WAPC), 2003. Statement of Planning Policy No. 2: Environment and Natural Resource Policy. Government of Western Australia.





Figures

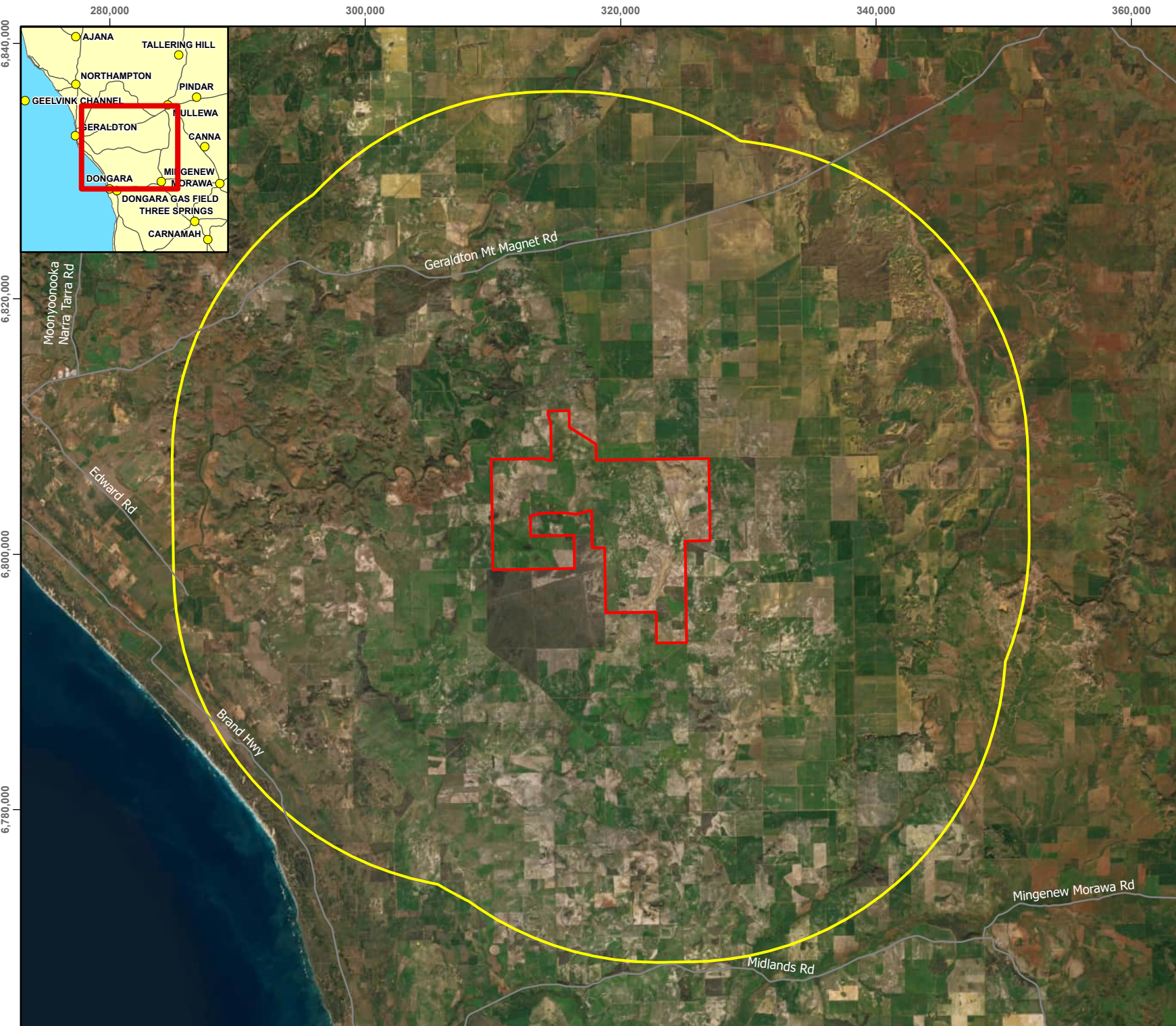
Visual Impact Assessment

Mid West Wind Farm

Mid West Wind Farm Pty Ltd

SLR Project No.: 675.072296.00002

28 July 2026



Vestas

Mid-West Windfarm VIA

Project Location and Study Area

FIGURE 1

LEGEND

-  Study Area
-  Stage 1 Project Area
-  Major Roads

Service Layer Credits:
Earthstar Geographics, SLIP



Coordinate System:	GDA2020 MGA Zone 50
Scale:	1:400,000 at A4
Project Number:	675.072296.00001
Date Drawn:	05-May-2026
Drawn by:	JH
Reviewed by:	MD



DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

Vestas

Mid-West Windfarm VIA Project Layout and Viewpoint Locations

FIGURE 2

LEGEND

-  Study Area
-  Stage 1 Project Area
-  Total Ground Disturbance Area
-  Proposed Wind Turbines
-  Viewpoints
-  Major Roads

Service Layer Credits:
Earthstar Geographics, SLIP



Coordinate System: GDA 1994 MGA Zone 50

Scale: 1:400,000 at A4

Project Number: 675.072296.00001

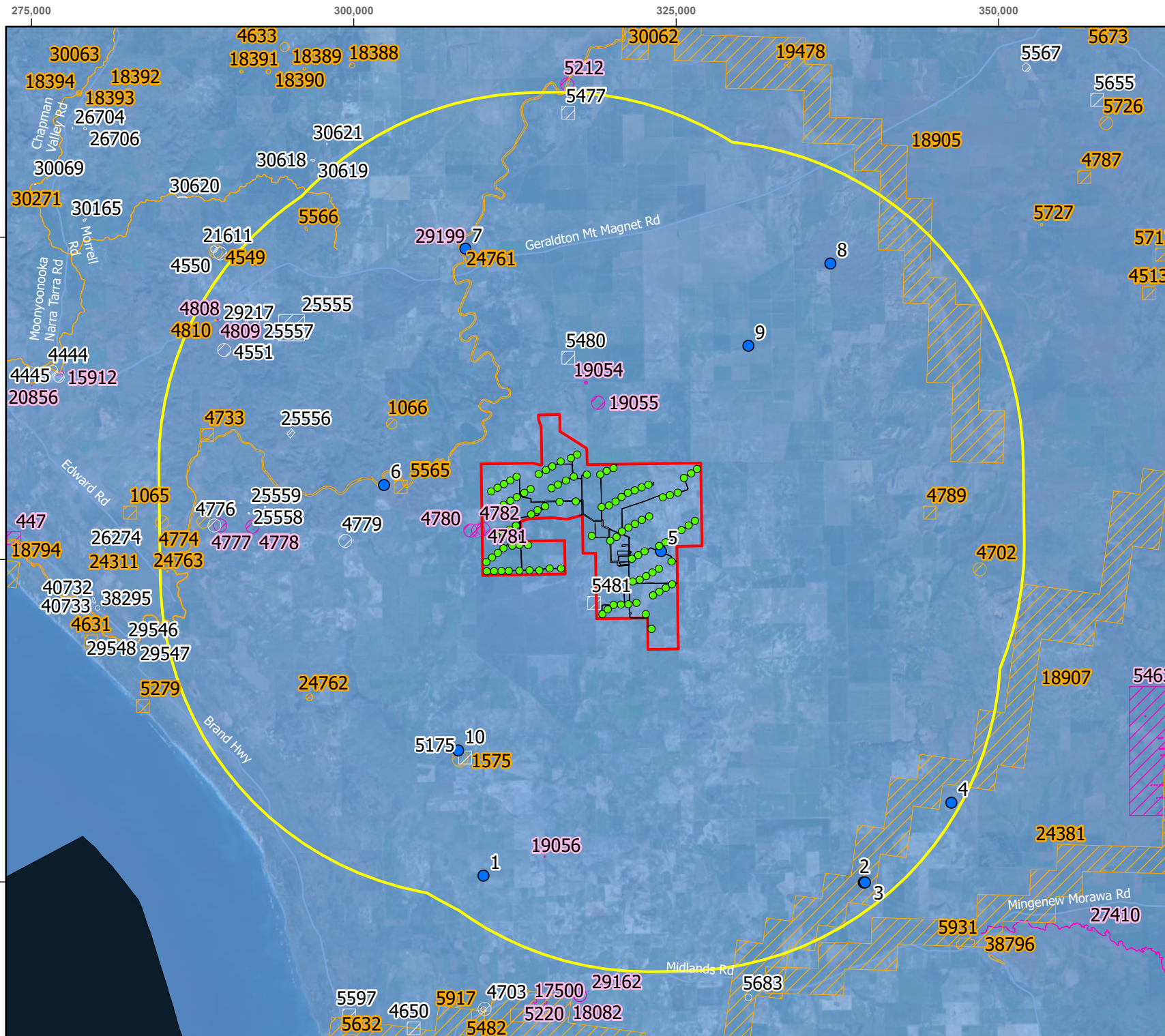
Date Drawn: 29-Jul-2026

Drawn by: JH

Reviewed by: MD



DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.



Vestas

Mid-West Windfarm VIA

Native Title and Aboriginal Heritage Sites

FIGURE 3

LEGEND

- Study Area
- Stage 1 Project Area
- Total Ground Disturbance Area
- Proposed Wind Turbines
- Viewpoints
- Major Roads
- Native Title (Determination)
- YAMATJI NATION
- Aboriginal Heritage Places
- Historic Sites
- Registered Sites
- Lodged Sites

Service Layer Credits:
Earthstar Geographics, SLIP

N 0 7.5 15 Km

Coordinate System: GDA 1994 MGA Zone 50

Scale: 1:400,000 at A4

Project Number: 675.072296.00001

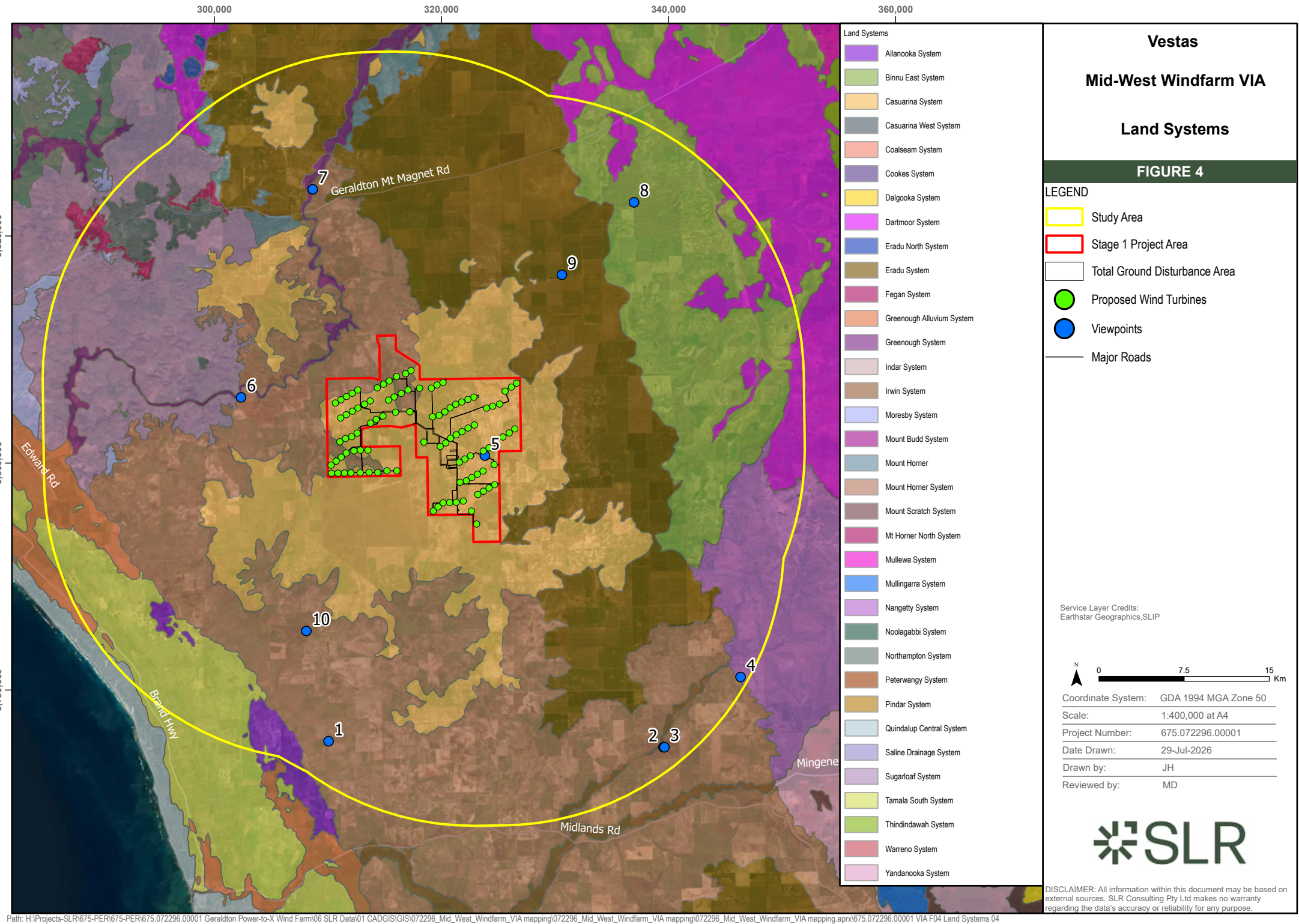
Date Drawn: 29-Jul-2026

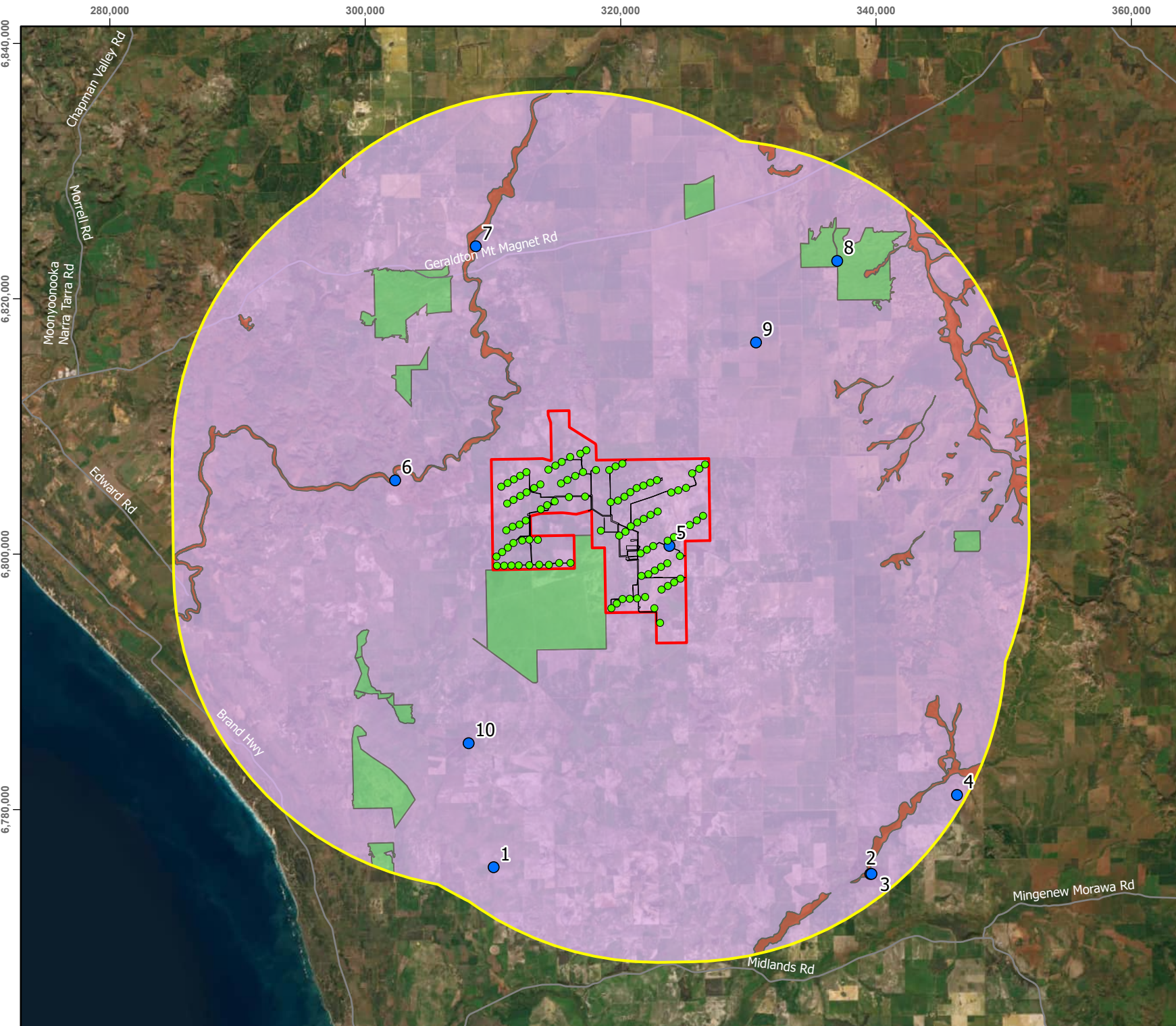
Drawn by: JH

Reviewed by: MD

SLR

DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.





Vestas

Mid-West Windfarm VIA

Land Character Units

FIGURE 5

- LEGEND**
- Study Area
 - Stage 1 Project Area
 - Total Ground Disturbance Area
 - Proposed Wind Turbines
 - Viewpoints
 - Major Roads
 - Landscape Character Units**
 - Agriculture
 - Remnant Vegetation
 - Water Bodies

Service Layer Credits:
Earthstar Geographics, SLIP



Coordinate System:	GDA 1994 MGA Zone 50
Scale:	1:400,000 at A4
Project Number:	675.072296.00001
Date Drawn:	29-Jul-2026
Drawn by:	JH
Reviewed by:	MD



DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.

Vestas

Mid-West Windfarm VIA

Viewshed

FIGURE 6

LEGEND

- Study Area
- Stage 1 Project Area
- Total Ground Disturbance Area
- Proposed Wind Turbines
- Viewpoints
- Major Roads
- Viewshed
- Visible

Service Layer Credits:
Earthstar Geographics, SLIP



Coordinate System: GDA 1994 MGA Zone 50

Scale: 1:400,000 at A4

Project Number: 675.072296.00001

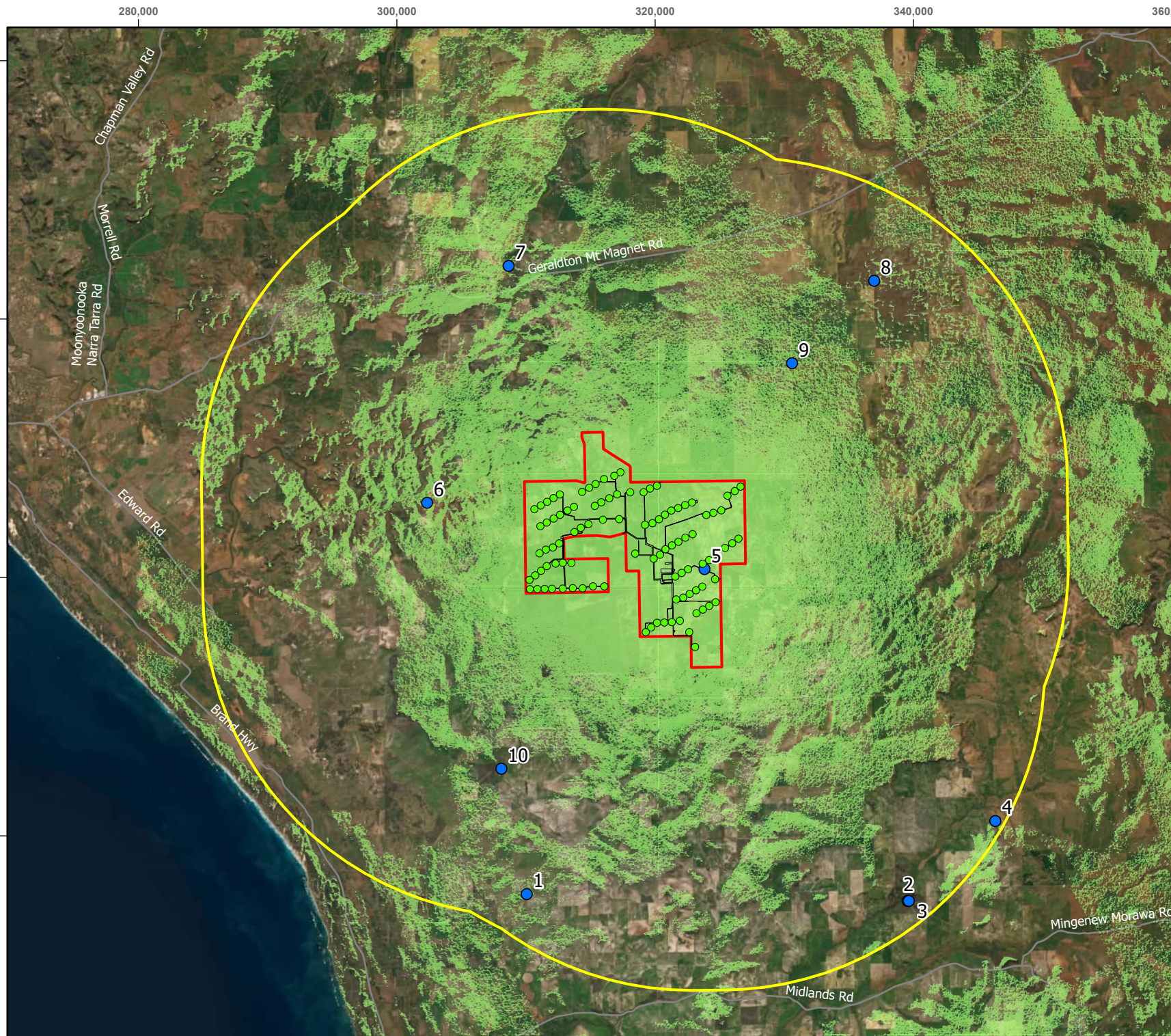
Date Drawn: 29-Jul-2026

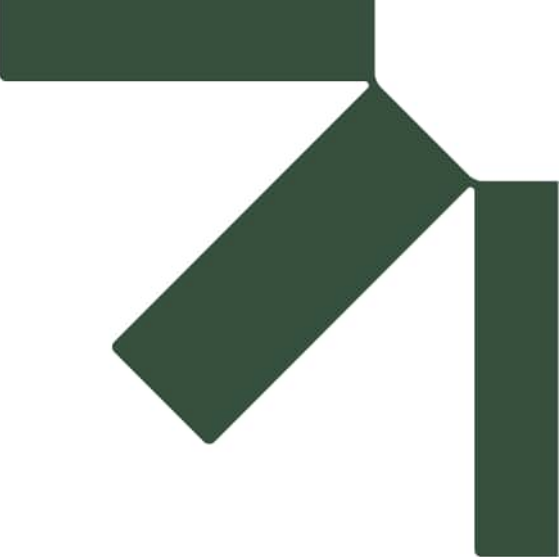
Drawn by: JH

Reviewed by: MD



DISCLAIMER: All information within this document may be based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose.





Appendix A Viewpoint Assessment: No Visibility

Visual Impact Assessment

Mid West Wind Farm

Mid West Wind Farm Pty Ltd

SLR Project No.: 675.072296.00002

28 July 2026

A.1 Site Descriptions for Sites Not Requiring Further Assessment

A.1.1 Site 1 – Piggery Lane

The view from Site 1 is presented in Plate A1 and details are summarised in Table A1.



Plate A1: Site 1 – Piggery Lane

Table A1: Site 1 – Piggery Lane

Criteria	Characteristic
Location	Easting / Northing: 0310054/6779487
Date	15/08/2024
Site Code	Site 1
Viewpoint Setting	Piggery Lane
Local Vegetation Type	Crop fields
Vegetation/Topography Screening Potential	90%
Foreground Elements	Field of crops, slopes
Mid-Ground Elements	Field of crop, rows of trees, slopes
Background Elements	Fields, rows of trees, slopes, patches of remnant vegetation
Viewer Motion	60 km/h
Accessibility	High
Usage Type	Low



Criteria	Characteristic
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm) Facing: E
After the field visit and in consideration of desktop assessment, Site 1 was rated as high sensitivity due to the site being a heritage site and viewers are predominantly workers and residents of the area. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none .	

A.1.2 Site 2 – Depot Hill

The view from Site 2 is presented in Plate A1 and details are summarised in Table A1.



Plate A1: Site 2 – Depot Hill

Table A1: Site 2 – Depot Hill

Criteria	Characteristic
Location	Easting / Northing: 0339546/6774960
Date	15/08/2024
Site Code	Site 2
Viewpoint Setting	Depot Hill
Local Vegetation Type	Weeds, woodland
Vegetation/Topography Screening Potential	100%



Criteria	Characteristic
Foreground Elements	Road, native vegetation
Mid-Ground Elements	Road, native vegetation, river
Background Elements	Screened by foreground and midground
Viewer Motion	<10 km/h
Accessibility	High
Usage Type	Medium
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: W
After the field visit and in consideration of desktop assessment, Site 2 was rated as high sensitivity due to the site being within an Aboriginal heritage site – Irwin River (ACH-00018907). Site 2 is also a tourist location for wildflowers. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none .	

A.1.3 Site 3 – Depot Hill (path)

The view from Site 3 is presented in Plate A2 and details are summarised in Table A2.



Plate A2: Site 3 – Depot Hill (Path)



Table A2: Site 3 – Depot Hill (Path)

Criteria	Characteristic
Location	Easting / Northing: 0339640/6774963
Date	15/08/2024
Site Code	Site 3
Viewpoint Setting	Depot Hill (path)
Local Vegetation Type	Native vegetation over weeds
Vegetation/Topography Screening Potential	100%
Foreground Elements	Native vegetation, gravel path
Mid-Ground Elements	Native vegetation, gravel path, car park, hill
Background Elements	Screened by midground
Viewer Motion	<10 km/h
Accessibility	Medium
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: W
After the field visit and in consideration of desktop assessment, Site 3 was rated as high sensitivity due to the site being within an Aboriginal heritage site – Irwin River (ACH-00018907). Site 3 is also a tourist location for wildflowers. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none .	

A.1.4 Site 4 – Mingenew-Mullewa Road

The view from Site 4 is presented in Plate A4 and details are summarised in Table A4





Plate A3: Site 4 – Mingenew-Mullewa Road

Table A3: Site 4 – Mingenew-Mullewa Road

Criteria	Characteristic
Location	Easting / Northing: 0346338/6781146
Date	15/08/2024
Site Code	Site 4
Viewpoint Setting	Mingenew – Mullewa Road
Local Vegetation Type	Fields, crop – canola
Vegetation/Topography Screening Potential	80%
Foreground Elements	Yellow fields
Mid-Ground Elements	White soil hills, rolling green/yellow fields
Background Elements	Hills, fields of crop
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm) Facing: W
After the field visit and in consideration of desktop assessment, Site 4 was rated as medium sensitivity due to this site being a main road used by commuters and recreational users, the view is	



Criteria	Characteristic
	scenic and representative of local character but is not rare or unique. The magnitude of change is none as the Project is not visible from Site 4 and therefore does not result in an overall change to the character of the view. It therefore has an impact rating of none .

A.1.5 Site 6 – Ellendale Pool

The view from Site 6 is presented in Plate A4 and details are summarised in Table A4.



Plate A4: Site 6 – Ellendale Pool

Table A4: Site 6 – Ellendale Pool

Criteria	Characteristic
Location	Easting / Northing: 0302342/6805782
Date	15/08/2024
Site Code	Site 6
Viewpoint Setting	Ellendale Pool
Local Vegetation Type	Remnant trees, weeds
Vegetation/Topography Screening Potential	100%
Foreground Elements	BBQ / park area, trees
Mid-Ground Elements	Cars, trees, river
Background Elements	Screened by midground
Viewer Motion	<10 km/h
Accessibility	High
Usage Type	High



Criteria	Characteristic
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: ESE
After the field visit and in consideration of desktop assessment, Site 6 was rated as high sensitivity due to Ellendale Pool being a popular recreational location. The magnitude of change to the existing landscape was determined to be none as the Project is not visible. It therefore has an impact rating of none .	

A.1.6 Site 7 – Eradu

The view from Site 7 is presented in Plate A6 and details are summarised in Table A6.



Plate A6: Site 7 – Eradu

Table A6: Site 7 - Eradu

Criteria	Characteristic
Location	Easting / Northing: 0308656/6824116
Date	15/08/2024
Site Code	Site 7
Viewpoint Setting	Eradu
Local Vegetation Type	Weeds, scattered vegetation
Vegetation/Topography Screening Potential	100%



Criteria	Characteristic
Foreground Elements	Weeds, scattered trees
Mid-Ground Elements	Road, native vegetation, fields, house, sheds
Background Elements	Hills, fields
Viewer Motion	<80 km/h
Accessibility	High
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm) Facing: S
After the field visit and in consideration of desktop assessment, Site 7 was rated as medium sensitivity due to the site being a local heritage site but with a low number of visitors. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none .	

A.1.7 Site 8 – Indarra Spring Reserve

The view from Site 8 is presented in Plate A7 and details are summarised in Table A7.



Plate A7: Site 8 – Indarra Spring Reserve

Table A7: Site 8 – Indarra Spring Reserve

Criteria	Characteristic
Location	Easting / Northing: 0336957/6822964



Criteria	Characteristic
Date	16/08/2024
Site Code	Site 8
Viewpoint Setting	Indarra Spring Reserve
Local Vegetation Type	Bush/medium trees
Vegetation/Topography Screening Potential	90%
Foreground Elements	Gravel road, bush
Mid-Ground Elements	Bush
Background Elements	Bush, mostly screened by mid-ground
Viewer Motion	80 km/h
Accessibility	Medium/High
Usage Type	Medium
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on highest zoom setting (55mm) Facing: SW
After the field visit and in consideration of desktop assessment, Site 8 was rated as low sensitivity due to viewers predominantly being workers; views are representative of local character or sense of place but are not rare or unique. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none .	

A.1.8 Site 10 – Allanooka Springs Road

The view from Site 10 is presented in Plate A8 and details are summarised in Table A8.





Plate A5: Site 10 – Allanooka Springs Road

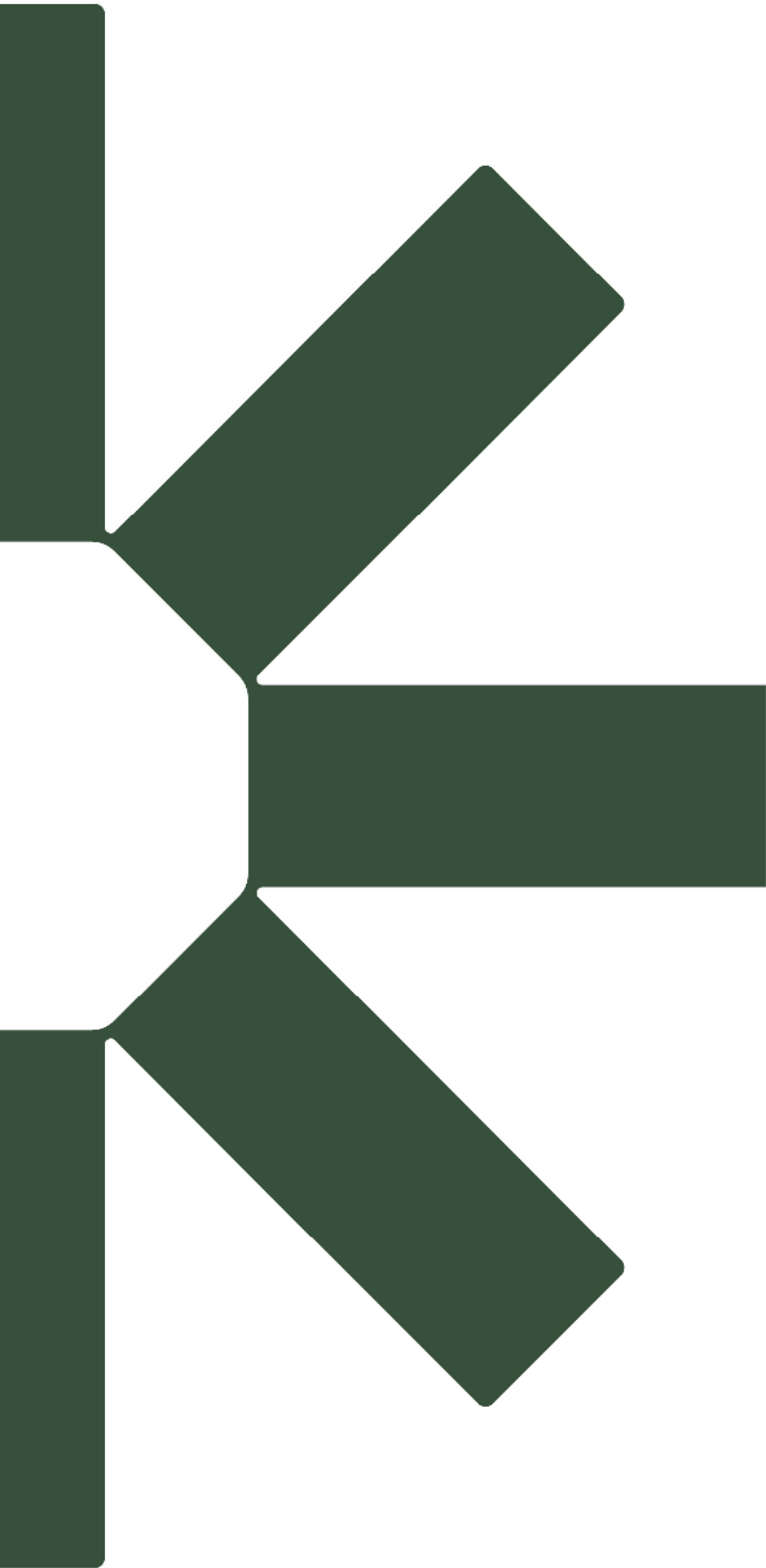
Table A5: Site 10 – Allanooka Springs Road

Criteria	Characteristic
Location	Easting / Northing: 0330599/6816580
Date	16/08/2024
Site Code	Site 10
Viewpoint Setting	Allanooka Springs Road
Local Vegetation Type	Roadside vegetation/trees, Paddock/weeds
Vegetation/Topography Screening Potential	100%
Foreground Elements	Paddock/weeds, roadside trees, fence, power poles/lines
Mid-Ground Elements	Fence, paddock/weeds, powerlines, trees in paddock
Background Elements	Trees on horizon, power poles/line, pipeline
Viewer Motion	80 km/h
Accessibility	High
Usage Type	Medium/High
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm)



Criteria	Characteristic
	Facing: NE
This site was not chosen for further assessment as the Project is not visible from Site 10. After the field visit and in consideration of desktop assessment, Site 10 was rated as medium sensitivity due to the site being approximately 50 m from two Aboriginal heritage sites. The magnitude of change is none as the Project is not visible. It therefore has an impact rating of none.	





Making Sustainability Happen