Visual Impact Assessment

Turner River Solar Hub

Fortescue Ltd

Level 2, 87 Adelaide Terrace, East Perth WA 6004, Australia

Prepared by:

SLR Consulting Australia

Level 1, 500 Hay Street, Subiaco WA 6008, Australia

SLR Project No.: 675.072412.00001

10 January 2025

Revision: 4.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	19 July 2024	J. Mell	F. Bell	F. Bell
2.0	6 September 2024	J. Mell	F. Bell	F. Bell
3.0	15 November 2024	J. Mell	F. Bell	F. Bell
4.0	10 January 2025	J. Mell	F. Bell	F. Bell

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 Fortescue 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.

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Executive Summary

SLR Consulting, was commissioned by Pilbara Energy (Generation) Pty Ltd to conduct a Visual Impact Assessment (VIA) for seventeen Points of Interest (POIs) around the proposed Turner River Solar Hub with two key project areas, the northern area and the southern area (together the Project). The Project is located approximately 120 km southeast of Port Hedland and 25 km west of Iron Bridge, adjacent to the Roy Hill rail and wholly within the Kariyarra 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 March and April 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 five LCUs and 17 POI were assessed. The 17 POIs were further assessed to describe the existing landscape and predicted landscape.

Overall, implementation of the southern area was predicted to have a low visual impact as there was little visibility at most POI due to the screening effects of landforms and vegetation surrounding the southern area and thus negligible change to visual amenity and landscape character. The difference in visual impacts between the southern area and the northern area is considered to be due to their locations in different land systems resulting in more screening landforms and vegetation around the southern area, rather than being a reflection of the POI selected. The southern area was considered to have met the project specific Visual Management Objectives (VMOs).

The overall visual impact of the northern area was predicted to be minor to moderate due to its visibility at several POI. The northern area is expected to be generally more visible than the southern area due to its siting within a flatter landscape with fewer landforms and less vegetation to provide screening resulting in the VIA showing noticeable changes to visual amenity and landscape character from some POI. However, similar to the southern, the northern is considered to have met the project specific VMOs due to the following:

- The northern area does not result in a dominant change to high or moderate sensitivity POI >1 km from the development area
- The implementation of the northern area does not result in the removal of valued characteristics, nor does it result in significant alteration or disruption to views of these. Key landscape features surrounding the northern area include the isolated rounded hills to the south and the major waterways to the east and west.

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Glossary

Foreground, Mid-Ground, Background Elements	Different visual layers of a landscape. The foreground refers to the area closest to the viewer, mid-ground is the middle distance, and the background includes distant features
Landscape Character Unit (LCU)	Distinct areas within a landscape that have consistent physical, aesthetic, and socio-cultural characteristics.
Modified Elements	Human-made changes to the natural landscape, such as mining operations, roads, or infrastructure.
Naturalness	A landscape characteristic referring to the extent to which an area remains in its original, undisturbed state, free from human alterations. Higher degrees of naturalness are often associated with valued landscapes that exhibit minimal human alterations, such as unmodified vegetation, landforms, and ecosystems
Photomontage	A composite image that blends photographs of a real landscape with visual representations of proposed developments, used to assess potential visual impacts
Points of Interest (POI)	Specific locations and viewpoints within the study area that are identified for visual impact assessment. These sites were chosen based on use or estimated visibility of the project. POIs are often key viewpoints from which the landscape is experienced, and their sensitivity to changes in visual amenity is evaluated to determine potential impacts from the Project.
Preferred Indicators	Characteristics of natural landscapes that are highly valued for their visual amenity. These include a high degree of ‘naturalness’, variety in landforms and vegetation, the presence of water, distinctive colours, expansive landforms (such as deserts, beaches, and rolling hills), and other distinctive landscape features.
Screening	Natural or artificial features like vegetation, landforms, or structures that block or reduce visibility of certain elements, such as a project or development, from specific viewpoints
Viewer Motion	Describes the speed at which an observer is moving (e.g., walking, driving), which affects how long they are exposed to certain views and how they perceive changes in the landscape
Viewshed Analysis	A technique used to identify the areas that are visible from a specific location, often employing 3D models and topographic data to predict how a development might be seen from different points

14.0 Introduction

Pilbara Energy (Generation) Pty Ltd (PEG), a wholly owned subsidiary of Fortescue Ltd (Fortescue), is proposing to develop the Turner River Solar Hub with two key project areas, the northern and southern areas (together the Project). The Project will generate renewable energy to power Fortescue's Iron Bridge Project and potentially other operations in the Pilbara via the Pilbara Energy Connect (PEC) network. The Project will support Fortescue's aim to achieve carbon neutrality across its operations by 2030.

The Project is located approximately 120 km southeast of Port Hedland and 25 km west of Iron Bridge, adjacent to the Roy Hill rail and wholly within the Kariyarra Native Title Determination area (Figure **1**).

SLR Consulting, was commissioned by Fortescue to conduct a Visual Impact Assessment (VIA) for 17 points of interest (POIs) around the proposed Project (Figure 2).

14.1 Objectives

14.1.1 Visual Impact Assessment Objectives

The objectives of this VIA are to:

- Determine if Fortescue's activities have any direct or indirect impacts on the visual amenities at the 17 POI
- Enable Kariyarra, stakeholders and the general public to determine whether there are direct or indirect impacts on the visual amenity from Fortescue's proposed activities.

14.1.2 Visual Management Objectives

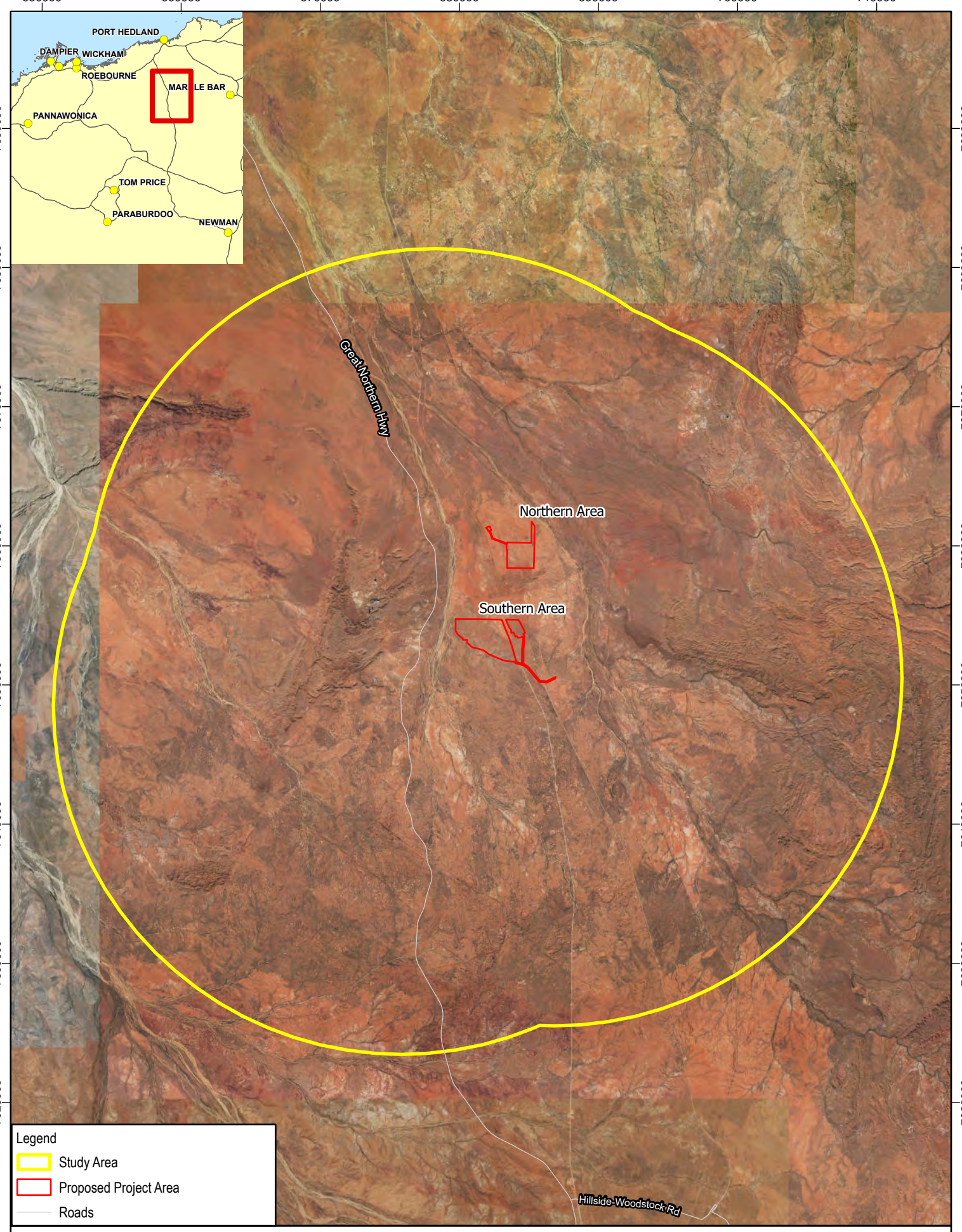
The Western Australian Planning Commission's (WAPC) Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting, and design (2007) adopts three broad Visual Management Objectives (VMOs):

- 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 POI that are located > 1 km from the Project Area.
- Minimise the impact of the Project on 'valued characteristics' as defined in Section 2.3.

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



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Drawn by:	JH
Reviewed by:	JM

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Fortescue

Turner River Solar Hub VIA

Project Location and Study Area

FIGURE 1

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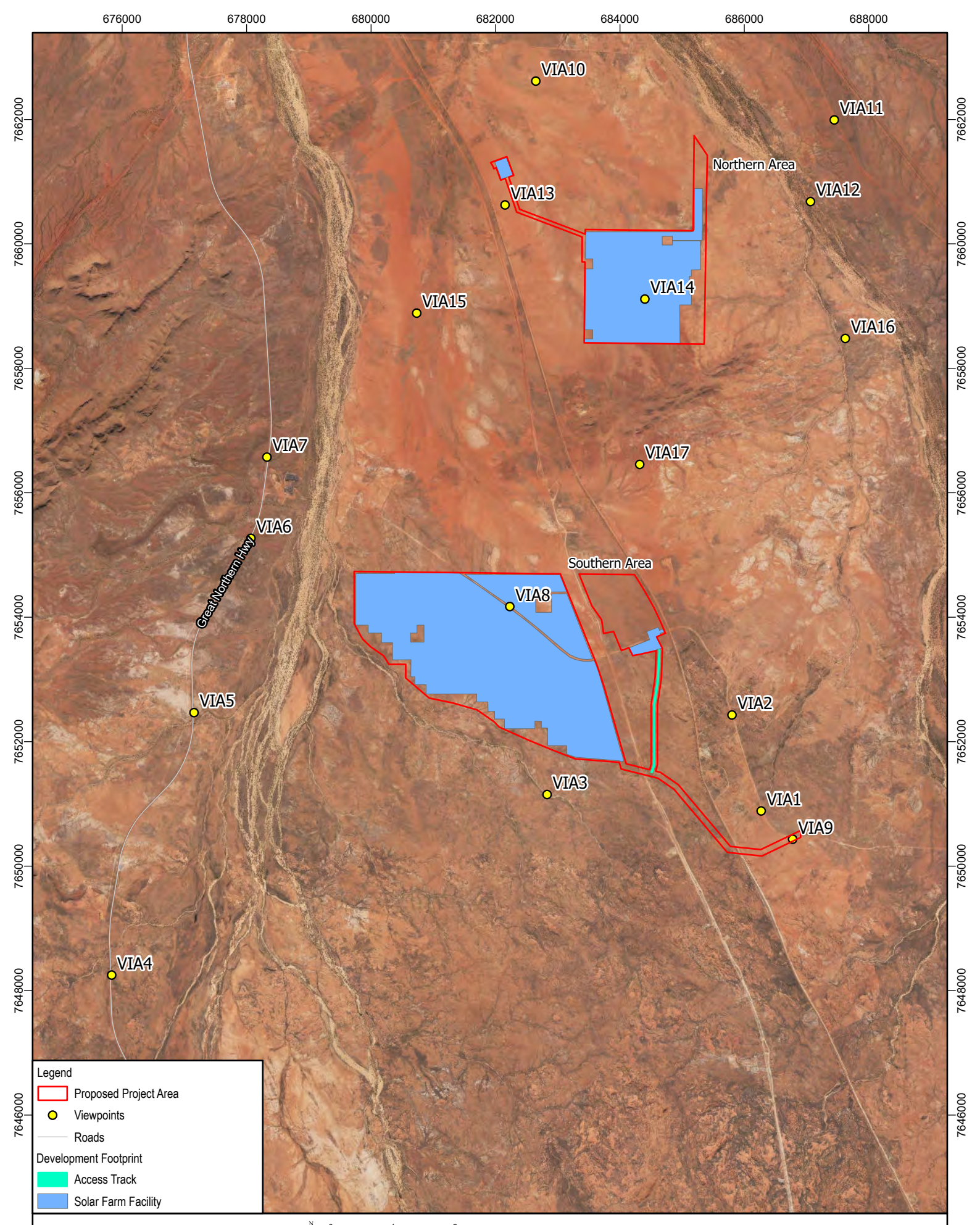

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Project Layout and Viewpoint Locations

FIGURE 2

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14.2 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.

14.3 Assessment Guidelines and Standards

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

- Environmental Protection Authority 2018, Environmental Factor Guideline – Landforms (EPA 2018)
- Environmental Protection Authority 2023, Environmental Factor Guideline – Social Surroundings (EPA 2023a)
- Environmental Protection Authority 2023, Statement of Environmental Principles, Factors and Objectives (EPA 2023b)
- Environmental Protection Authority 2023, Technical Guidance – Environmental impact assessment of Social Surroundings – Aboriginal cultural heritage (EPA 2023c)
- 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		
Environment Protection and Biodiversity Conservation Act 1999	Under Section 528 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the term 'environment' is defined as: a. Ecosystems and their constituent parts, including people and communities b. Natural and physical resources c. The qualities and characteristics of locations, places, and areas d. Heritage values of places e. 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.
Native Title Act 1993	The *Native Title Act 1993* 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, Kariyarra People (WCD2018/015).

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, *Mining Act 1978* 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		
Environmental Protection Act 1986 (EP Act)	Section 3(1) of the EP Act defines 'environment' as: *Environment, subject to subsection (2), means living things, their physical, biological, and social surroundings, and interactions between all of these.* Section 3(2) of the Act goes on to state: *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.* 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). The EPA's consideration of impacts to Landforms is distinctly separate from impacts to Social Surroundings. Where a	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
	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.	
Aboriginal Heritage Act 1972 (AH Act)	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.	No DPLH listed Aboriginal Heritage places are within the Development Envelope the Project. There are a number of Aboriginal Heritage places located around the Project, while none of these heritage places were assessed directly as part of this assessment, several POI were chosen nearby these sites. A number of heritage surveys have been undertaken across the greater Project Area with Kariyarra knowledge holders.
Non-Legislative Requirements		
Statement of Planning Policy No 2: Environment and Natural Resources Policy (2003)	The Western Australian Planning Commission's (WAPC) Statement of Planning Policy No. 2: *Environment and Natural Resource Policy* (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 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.	This assessment aims to meet the objectives of the Policy by identifying landscapes with high values and considers their capacity to absorb changes.

15.0 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 3.2.1 and the Study Area is defined via the methods described in Section 3.2.1 and is 275,912 ha in size (Figure **1**).

15.1 Social Surrounds

The Study Area falls partially within the Local Government Authorities (LGAs) of the Town of Port Hedland and the Shire of East Pilbara. These LGAs include the main towns of Port Hedland, Marble Bar, Shellborough, Shay Gap, Goldsworthy, Bamboo, Nullagine, Newman and several Aboriginal Communities. The mining sector dominates the economic landscape of the LGAs.

The Town of Port Hedland's population was 15,684 at the last reported census and the Shire of East Pilbara was 9,760 (Australian Bureau of Statistics [ABS] 2021).

15.1.1 Local Population

The closest major population centre is Port Hedland, approximately 72 km north of the Study Area. The last reported census recorded a population of 4,253, with 52.4% being male and 47.6% female and a median age of 34 years (ABS 2021). Aboriginal and Torres Strait Islander people made up 7.3% of the recorded population (ABS 2021). The Aboriginal population of Port Hedland was recorded as 309 in 2021 with 53.7% being male and 46.3% female and a median age of 29 (ABS 2021). Native Title determinations in the Study Area have been made by the Kariyarra people and Nyamal people (Figure **3**).

15.1.2 Existing Infrastructure

The Study Area is remote, and infrastructure is primarily limited to mines, haul roads, railways, a transmission line and Great Northern Highway which generally runs north to south through the middle of the Study Area. Additional infrastructure (e.g., towns and settlements) are located beyond the Study Area.

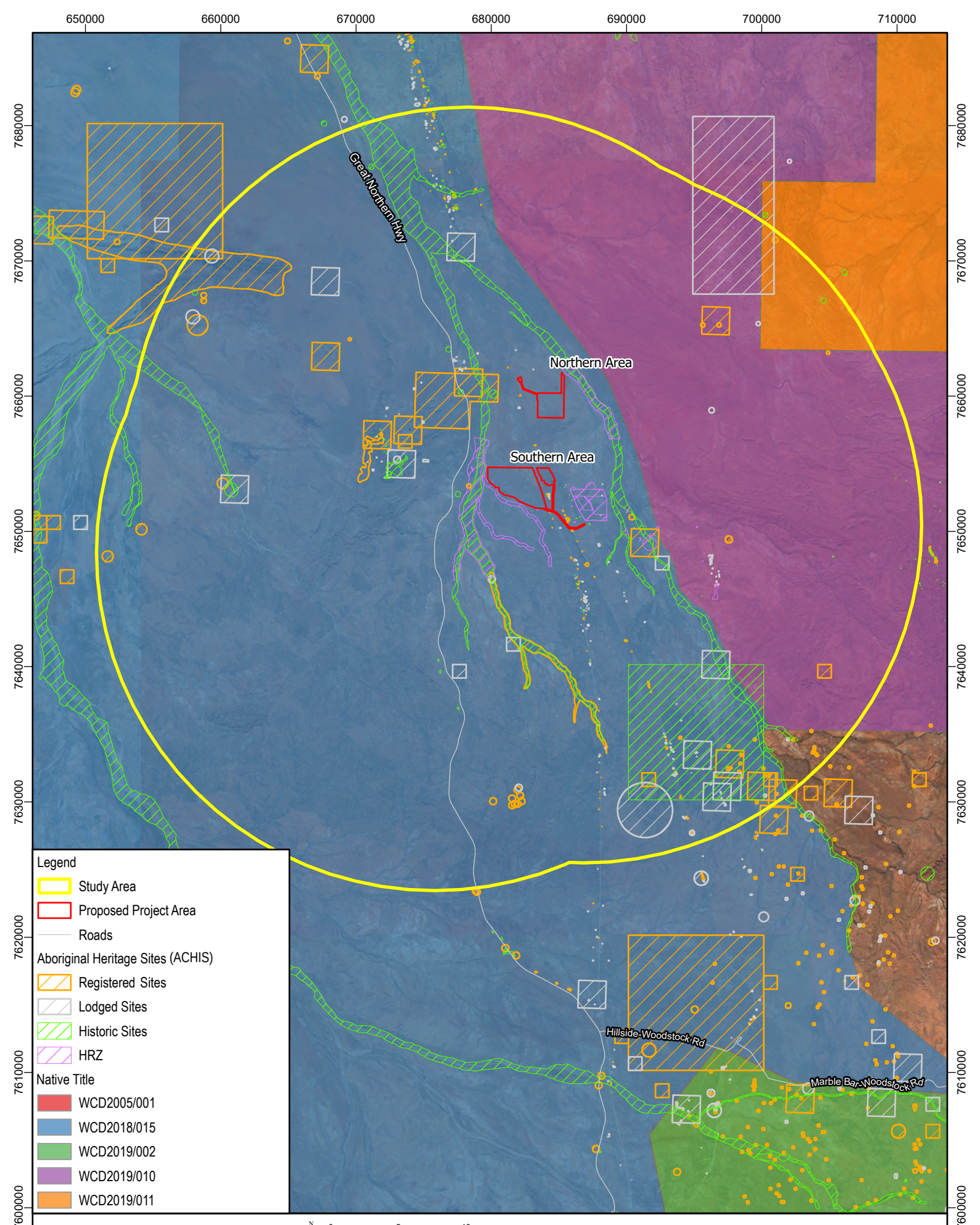
15.1.3 Land Use and Land Tenure

The Study Area represents a combination of various land use and land tenures. Most of the tenure is overlapping and is predominantly pastoral leases, mining tenements and native title determinations:

- Pastoral Lease:
  - Indee
  - Kangan
  - Strelley
  - Wallareenya.

- Mining Tenements, primary holders include:
  - Pilgangoora Operations Pty Ltd
  - Albemarle Wodgina Pty Ltd
  - FMG Magnetite Pty Ltd
  - Mt York Operations Pty Ltd
  - Pilbara Water and Power Pty Ltd.
- Native Title Determination:
  - Nyamal People #1 (WCD2019/010)
  - Nyamal People #10 (WCD26/2019/011)
  - Kariyarra (WCD2018/015).
- Indigenous Land Use Agreements (ILUA):
  - Kariyarra and State ILUA (WI2017/016)
  - FMG – Kariyarra Land Access ILUA (WI2016/013)
  - Alinta – Kariyarra Electricity Infrastructure ILUA (WI2018/009)
  - Strelly Nyamal ILUA (WI2020/012).

Figure 3 and Figure 4 illustrate the range of land tenure above in relation to the Study Area. Note that there is no formal conservation estate in the Study Area.



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Native Title

FIGURE 3

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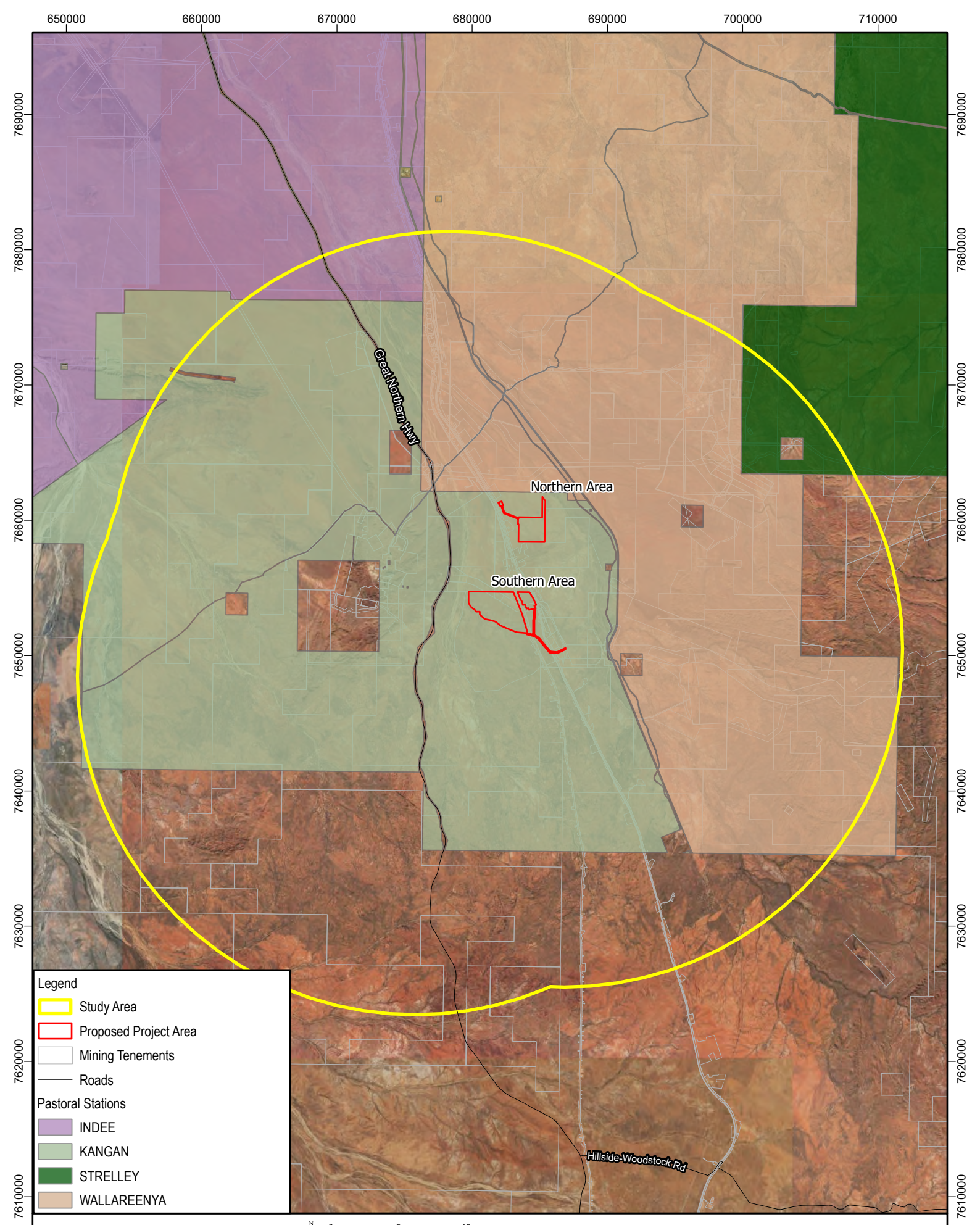

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Land Tenure

FIGURE 4

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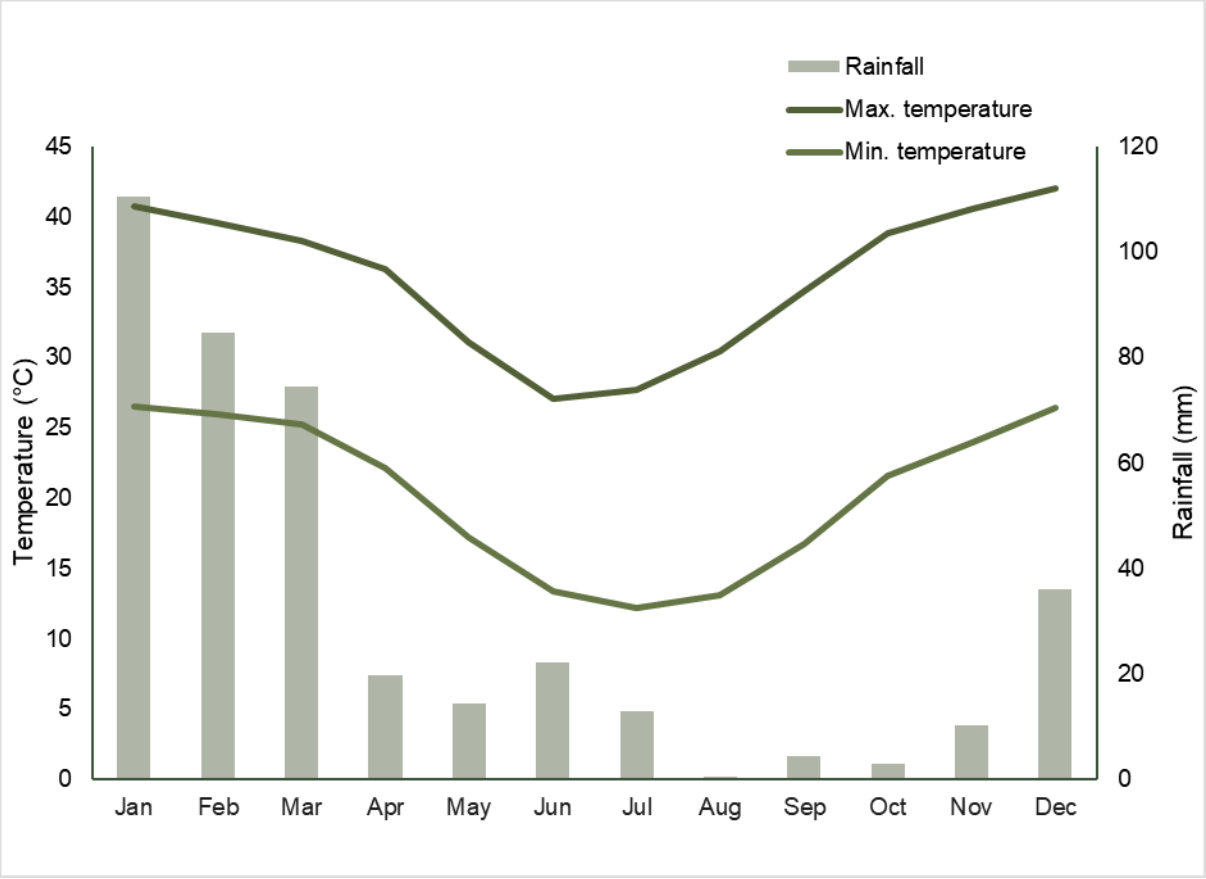
15.2 Physical Surrounds

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 mining sector), the inherent visual amenity or landscape value is defined by biotic and abiotic environmental factors.

15.2.1 Climate

The climate of the region is characterised by a dry desert climate, typically with higher temperatures and lower rainfall, and often up to 12 months of dry weather, with hot dry summers and mild winters. Climate data was obtained from the Marble Bar (004106), which is the closest data collection site (Graph 1). The annual mean maximum temperature is 35.6°C and the annual mean minimum temperature is 20.4°C (BoM 2024). The region receives an average of 399.9 mm of rainfall annually.

Rainfall in the Pilbara varies significantly across the year as well as between years. Tropical cyclones, many of which originate in the Timor Sea, along with local thunderstorms, produce much of the summer and early autumn rainfall. The driest months are in spring (September to November), and the wettest are in summer (January to March).



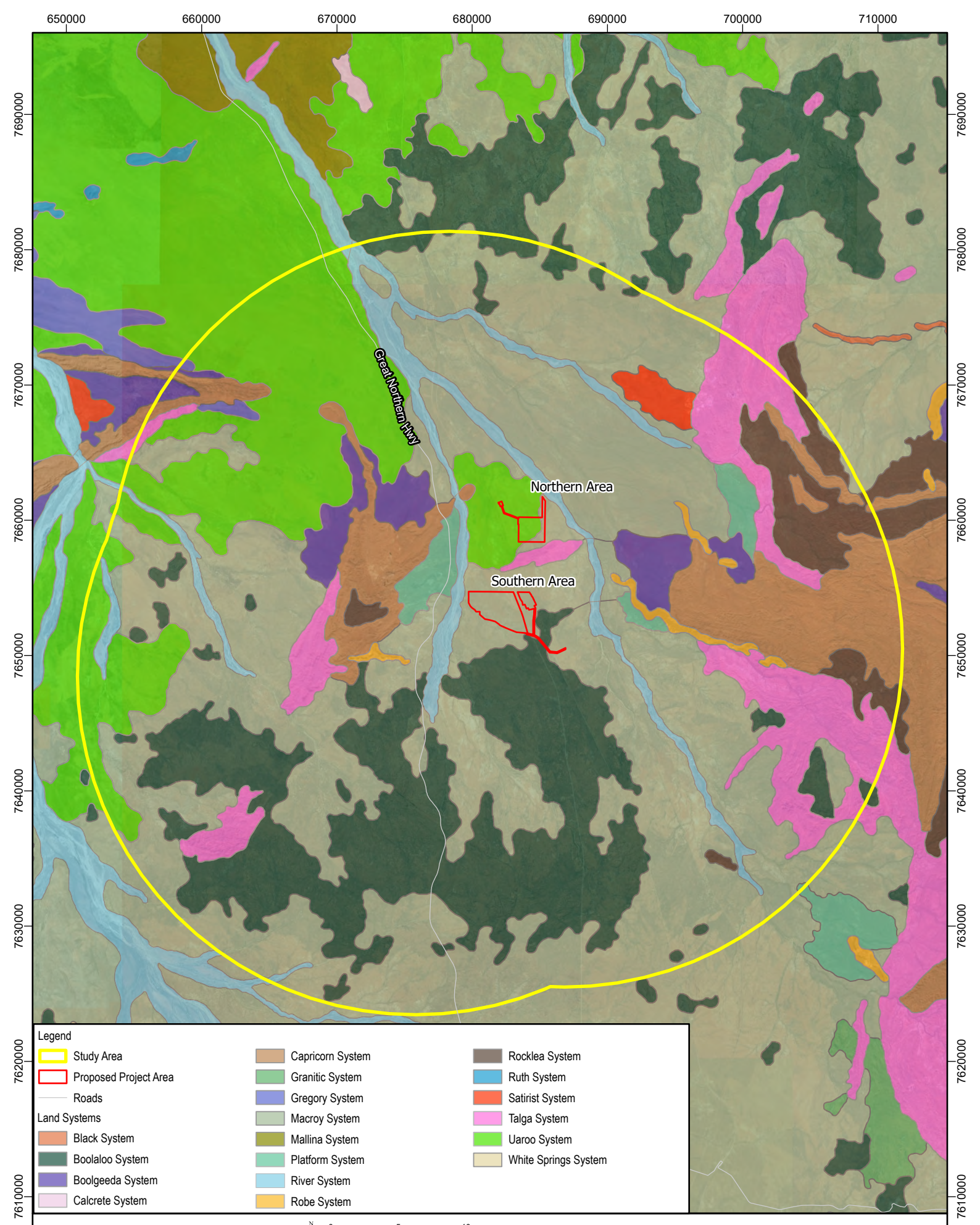
Graph 1: Marble Bar (004106; BoM 2024)

15.2.2 Land Systems

Land system mapping is based on regional patterns in topography, soils, and vegetation. Land system mapping classifies the Pilbara into 106 land systems and is captured across three studies (Payne et al. 1988; Payne & Tille 1992; Van Vreeswyk et al. 2004). The extent of these land systems within the Study Area are summarised in Table 2 and Figure 5 (note that percentages have been rounded to one decimal place). 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 (%)
Boolaloo system	Granite hills, domes, tor fields and sandy plains supporting spinifex grasslands with scattered shrubs	48,493	17.6%
Boolgeeda system	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands	6,827	2.5%
Capricorn system	Rugged sandstone hills, ridges, stony footslopes and interfluves supporting low acacia shrublands or hard spinifex grasslands with scattered shrubs	19,925	7.2%
Gregory system	Linear dunes and restricted sandplains supporting shrubby hard spinifex (and occasionally soft spinifex) grasslands	428	0.2%
Macroy system	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex shrubby grasslands	121,445	44.0%
Platform system	Dissected slopes and raised plains supporting shrubby hard spinifex grasslands	3,557	1.3%
River system	Narrow, seasonally active flood plains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex	10,150	3.7%
Robe system	Low plateaux, mesas and buttes of limonite supporting soft spinifex and occasionally hard spinifex grasslands	1,435	0.5%
Rocklea system	Basalt hills, plateaux, lower slopes, and minor stony plains supporting hard spinifex and occasionally soft spinifex grasslands with scattered shrubs	7,753	2.8%
Satirist system	Stony plains and low rises supporting hard spinifex grasslands, and gilgai plains supporting tussock grasslands	1,522	0.6%
Talga system	Hills and ridges of greenstone and chert and stony plains supporting hard and soft spinifex grasslands	19,085	6.9%
Uaroo system	Broad sandy plains, pebbly plains and drainage tracts supporting hard and soft spinifex hummock grasslands with scattered acacia shrubs	35,292	12.8%



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Land Systems

FIGURE 5

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15.2.3 Vegetation

15.2.3.1 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 Study Area is located across the Chichester subregion (PIL01) of the Pilbara bioregion. The Chichester subregion is dominated by tree and shrub steppe (hummock grassland) communities with *Eucalyptus* trees, *Acacia* shrubs and *Triodia pungens* and *T. wiseana* hummock grasslands (van Vreeswyk et al., 2004). Basalt plains and Archaean granite with predominantly hard alkaline red soils on the plains and pediments, with the ranges having shallow and skeletal soils (van Vreeswyk et al., 2004; Kendrick & McKenzie 2001). This subregion comprises the entirety of the Study Area.

15.3 Valued Landscape 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.

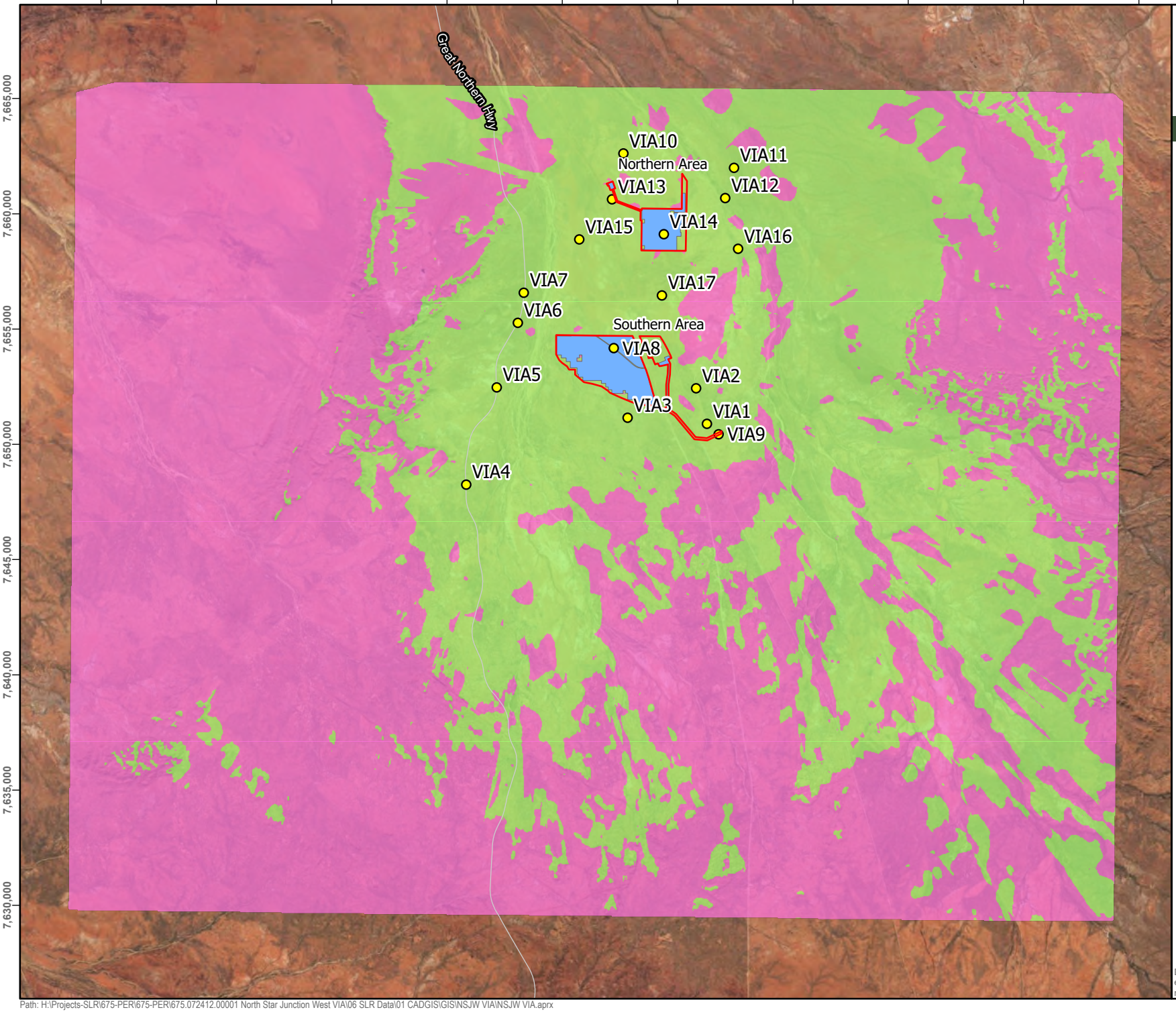
A ‘value’ is an implicitly subjective term, however combining the GLVIA’s description of importance of landscapes and VLPWA’s definition of preferred landscapes indicators, the term ‘value’ is considered to be a feature that positively contributes to the visual character of the landscape or a feature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

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

- Aboriginal heritage
- Rivers and major waterways
- Ranges.

15.4 Viewshed Analysis

The viewshed analysis results indicate the northern area and/or southern area may be visible from all POI and areas immediately surrounding the Project (Figure **7**). Generally, views of the Project from over 10 kilometres away were limited due to the surrounding topography.



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Viewshed

FIGURE 6

LEGEND

- Proposed Project Area
- Viewpoints
- Roads

Development Footprint

- Access Track
- Solar Farm Facility

Viewshed

- Not Visible
- Visible

The viewshed analysis performed based only on the solar arrays and excluded other infrastructure.

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16.0 Methods

16.1 Section Summary

This VIA follows the first three steps of the five-step 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

The remaining two steps of the DPI/WAPC (2007) relate to development of visual management measures and recommendations which are not covered in this VIA report.

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.

16.2 Desktop Assessment

16.2.1 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 (the 'Project Area')
- Encompasses the 17 Points of Interest (POI) identified by Fortescue in consultation with Kariyarra.

A radius of 25 km from all POI 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 275,912 ha in size covering the area shown in Figure 1.

16.2.2 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. Large, modified landscape elements such as mines were also broadly mapped based on satellite imagery captured by Google on 01/09/2023. The final LCUs are shown in Figure 6.

16.2.3 Identification of Points of Interest

POI were identified by Fortescue in consultation with Kariyarra or based on principles for potential use of the area. Each of the POIs were visited during the field assessment, with one POI captured from each (Figure **2**).

16.3 Field Assessment

16.3.1 Survey Timing

Visual amenity and landscape values in the Study Area were surveyed on 11 to 13 of March 2024 and 18th and 19th of April 2024 by a Project Consultant from SLR Consulting, along with a representative from Fortescue's Heritage Team and two Kariyarra representatives. The Study Area was traversed by vehicle, foot and helicopter. Each POI 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
POI 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

16.3.2 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.

16.4 Digital Analysis

16.4.1 3D Site Model

To allow for simulations of the predicted impact and generation of photomontages, the solar arrays were modelled using ArcGIS Pro and Autodesk 3ds Max. The ground surface was defined by a default elevation source layer. A generic 3D model of a solar array was purchased and modified to match the design details provided by Fortescue. Supporting infrastructure such as the transmission line was not included in the 3D site model as the design of the Project was not sufficiently progressed to enable inclusion.

16.4.2 Viewshed

To identify 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 Fortescue).

16.4.3 Photomontage Creation

The 3D model was positioned within a bare earth virtual software environment to emulate the aspect from which visibility of the Project from each of the POI was determined. Once an accurate representation of the terrain and development from a virtual location was obtained, a snapshot of the model was taken for all POI photographs with visibility of the Project then blended into a digital photograph from the site and rendered. This process accounts for vegetation screening as well as potential colouration and texture of site elements and is often used to evaluate impacts to visual amenity.

16.5 Visual Impact Analysis

16.5.1 Landscape Values and POI 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		
		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)
Rarity	**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.

POI sensitivity is derived from GLVIA3 and VLPWA 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 form the source of the effect, extent of screening / filtering of view.

POI in remote locations inaccessible by land-based vehicles but likely to be visited by Traditional Owners on an occasional basis are conservatively rated for their representativeness of local character or sense of place and rarity and/or uniqueness.

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 POI and magnitude of effects.

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

Table 5: POI Sensitivity/Value Ratings

Sensitivity	Definition
High	• Visitors to 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. • 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. • 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.

16.5.2 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. • 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:** • No memorable or rarely perceptible change to landscape character or key views

16.5.3 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 POI. It is the evaluation of the POI 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 POI sensitivity and magnitude of change inform the impact significance rating. The significance matrix is based on visual change in consideration of viewer interest in the environment, as aligned with VLPWA and GLVIA. 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.

16.6 Limitations and Assumptions of the Analysis

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

- 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.

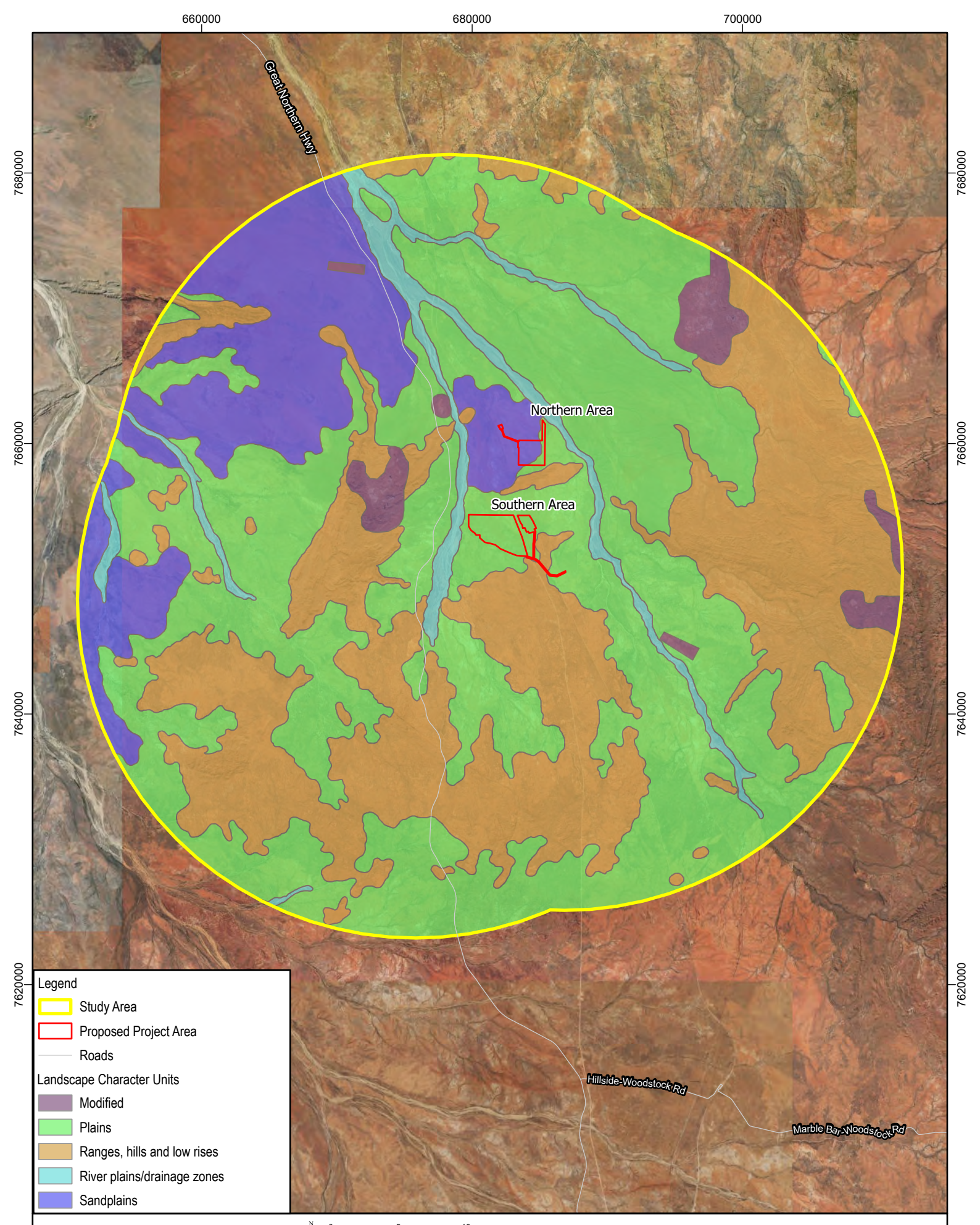
17.0 Results

17.1 Landscape Character Units

Five LCUs were identified within the Study Area (Figure **6**):

- Plains
- Ranges, hills and low rises
- River plains
- Sandplains
- Modified.

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 4.1.5.



N

0 5 10 Km

Coordinate System:	GDA 1994 MGA Zone 50
Scale:	1:345,000 at A4
Project Number:	675.072412.00002
Date Drawn:	05-Nov-2024
Drawn by:	JH
Reviewed by:	JM

Service Layer Credits: Landgate / SLIP

SLR

Fortescue

Turner River Solar Hub VIA

Land Character Units

FIGURE 7

Path: H:\Projects-SLR\675-PER\675-PER\675.072412.00001 North Star Junction West VIA\06 SLR Data\01 CADGIS\GIS\NSJW VIA\NSJW VIA.aprx

Table 8: Extent of LCUs in the Study Area

LCU	Area (ha)	% Study Area
Plains	131,960	48%
Ranges, Hills and Low Rises	91,691	33%
River Plains	10,148	4%
Sandplains	35,548	13%
Modified Elements	6,566	2%

17.1.1 Plains

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

Plate 1: Typical view of the Plains LCU

Plate 2: Typical view of the Plains LCU

Table 9: Details of the Plains LCU

Criteria	Characteristics
Extent in Study Area	131,960 ha (48%)
Direct Impact of Project Footprint	831.6 ha (0.63%)
Environmental Aspects	
Vegetation	Spinifex grasslands with or without scattered shrubs or shrublands
Landforms	Plains
Related Land Systems	Boolgeeda, Macroy, Platform and Satirist
Local Rarity	Not Rare (>20 % of Study Area)
Aesthetic Values	
Visual Elements	Stony to clayey plains with mix of blue sky, various hues of green / brown vegetation, and ochre to pale earth.
Socio-Cultural Values	
Land Uses	Mineral exploration, pastoralism, and transportation
Heritage Places	Based on desktop research Native Title determinations recognise the Nyamal People and Kariyarra People across the Plains LCU in the Study Area. Aboriginal Heritage Places are widespread across the Plains LCU.
Landscape Value and Impact	Not Rare x High Landscape Preference = Medium Value Medium Value x Low Magnitude of Change = Minor-moderate Impact

17.1.2 Ranges, Hills and Low Rises

The following plates and Table 10 provide a summary description of the Ranges, Hills and Low Rises LCU.

Plate 3: Typical view of the Ranges, Hills and Low Rises LCU

Table 10: Details of the Ranges, Hills and Low Rises LCU

Criteria	Characteristics
Extent in Study Area	91,691 ha (33%)
Direct Impact of Project Footprint	2.10 ha (<0.01%)
Environmental Aspects	
Vegetation	Spinifex grasslands with or without scattered shrubs
Landforms	Ranges, hills, ridges, low rises, plateaux
Related Land Systems	Boolaloo, Capricorn, Robe, Rocklea, and Talga
Local Rarity	Not Rare (>20 % of Study Area)
Aesthetic Values	
Visual Elements	Mostly rounded hills or slopes, ochre earth, contrasting mix of blue sky, various hues of green/ brown vegetation.
Socio-Cultural Values	
Land Uses	Mineral exploration, pastoralism, and transportation
Heritage Places	Based on desktop research Native Title determinations recognise the Nyamal People and Kariyarra People across the Ranges, Hills, and Low Rises LCU in the Study Area. Aboriginal Heritage Places are widespread across the Ranges, Hills, and Low Rises LCU.
Landscape Value and Impact	Not Rare x High Landscape Preference = Medium Value Medium Value x Low Magnitude of Change = Minor-Moderate Impact

17.1.3 River Plains

The following plates and Table 11 provide a summary description of the River Plains LCU.

Plate 4: Typical view of the River Plains LCU (midground)

Table 11: Details of the River Plains LCU

Criteria	Characteristics
Extent in Study Area	10,148 ha (4%)
Direct Impact of Project Footprint	0 ha (0%)
Environmental Aspects	
Vegetation	Tall shrublands or woodlands of acacias, fringing eucalypts
Landforms	Floodplains, major river channels
Related Land Systems	River
Local Rarity	Rare (<5% of Study Area)
Aesthetic Values	
Visual Elements	Plains or hills surrounding pools (or sandy riverbeds), flood plains, tall trees and a contrasting mix of blue sky and various hues of green, brown, and sometimes white vegetation.
Socio-Cultural Values	
Land Uses	Mineral exploration, pastoralism, and transportation
Heritage Places	Based on desktop research Native Title determinations recognise the Nyamal People and Kariyarra People across the River Plains LCU in the Study Area. Aboriginal Heritage Places cover much of the River Plains LCU Water is also a resource (when present).
Landscape Value and Impact	Rare x High Landscape Preference = High Value High Value x Negligible Magnitude of Change = Minor-Moderate Impact

17.1.4 Sandplains

The following plate and Table 12 provide a summary description of the Sandplains LCU.

Plate 5: Typical view of the Sandplains LCU

Table 12: Details of the Sandplains LCU

Criteria	Characteristics
Extent in Study Area	35,549 ha (13%)
Direct Impact of Project Footprint	261.5 ha (0.74%)
Environmental Aspects	
Vegetation	Spinifex and / or hummock grasslands with shrublands or scattered shrubs
Landforms	Broad or restricted sandplains, linear dunes
Related Land Systems	Gregory and Uaroo
Local Rarity	Somewhat Rare (>5% but <20% of Study Area)
Aesthetic Values	
Visual Elements	Linear red sand dunes and restricted sandplains supporting shrubby hard spinifex (and occasionally soft spinifex) grassland Linear red dunes or red sandy plains, low vegetation forming a contrasting mix of blue sky and various hues of green, brown and red.
Socio-Cultural Values	
Land Uses	Mineral exploration, pastoralism, and transportation
Heritage Places	Native Title determinations recognise the Kariyarra People across the Sandplains LCU in the Study Area. Aboriginal Heritage Places are widespread across the Sandplains LCU. Aboriginal Heritage Places are widespread across the Sandplains LCU.
Landscape Value and Impact	Somewhat Rare x High Landscape Preference = High Value High Value x Low Magnitude of Change = Moderate Impact

17.1.5 Modified

The following plates and Table 12 provide a summary description of the Modified LCU. Plate 6 to Plate 8 are representative of views of the Modified LCU however the modified elements shown in these photographs have not been mapped due to the scale of the element being too small or it not being present on the aerial imagery used to map the Modified LCU.

Plate 6: View of the Modified LCU (background)

Plate 7: View of the Modified LCU

Plate 8: View of the Modified LCU

Table 13: Details of the Modified LCU

Criteria	Characteristics
Extent in Study Area	6,566 ha (2%)
Direct Impact of Project Footprint	0 ha (0%) The Project will result in the increase of this LCU by up to 1,095 ha (0.40% of the Study Area)
Environmental Aspects	
Vegetation	Limited remnant vegetation or surrounding vegetation
Landforms	Varied, dominant feature is built form mostly related to mining
Related Land Systems	N/A, this is an anthropogenic LCU
Local Rarity	Rare (<5% of Study Area)
Aesthetic Values	
Visual Elements	Dominated by non-natural surfaces of built form and the disturbed or bare soils of various colours, often with vegetation in the foreground or background
Socio-Cultural Values	
Land Uses	Mineral exploration, mining, and pastoralism
Heritage Places	As this LCU has been broadly mapped, mapped Aboriginal Heritage Places are widespread across the Modified LCU with Native Title determinations recognise the Nyamal People and Kariyarra People.
Landscape Value and Impact	Rare x Low Landscape Preference = Low Value Low Value x Negligible = Minor-Negligible Impact

17.2 Descriptions of Surveyed POIs

A total of 17 POIs were assessed during the field assessments. The locations of these points are presented in Table 14 and are illustrated in Figure **2**. All POIs were further assessed to assess the potential visual impact. Assessment of POIs with visibility of the project is provided in Section 4.3 and bolded in Table 14; assessment of POIs without visibility of the project and therefore no visual impacts are provided in Appendix A.

Table 14: Surveyed POIs

POI	Easting	Northing	POI Sensitivity
VIA1	686270	7650887	Low
VIA2	685801	7652429	Low
VIA3	682830	7651151	Medium
VIA4	675832	7648249	Low
VIA5	677155	7652467	Low
VIA6	678070	7655268	Low
VIA7	678327	7656573	Low
VIA8	**682230**	**7654172**	**Low**
VIA9	686776	7650433	Low
VIA10	**682648**	**7662616**	**Medium**
VIA11	**687445**	**7661992**	**Low**
VIA12	687063	7660680	High
VIA13	**682154**	**7660626**	**Medium**
VIA14	**684401**	**7659113**	**Medium**
VIA15	680734	7658887	Medium
VIA16	687622	7658480	Medium
VIA17	684318	7656456	Medium

17.2.1 VIA1

The view from VIA1 is presented in Plate 9 and details are summarised in Table 15.

Plate 9: VIA1, facing northwest

Table 15: VIA1

Criteria	Characteristic
Location	Easting / Northing: 0686270/7650887
Date	13/03/2024
Site Code	VIA1
POI Setting	Junction Camp Access Road
Local Vegetation Type	Spinifex, small shrubs, stands of trees
Vegetation/Topography Screening Potential	100%
Foreground Elements	Access tracks, spinifex with small shrubs, mine vehicles
Mid-Ground Elements	Access tracks, transmission line, rail, spinifex, stands of trees, rocky hills, rock piles, mine camp
Background Elements	Transmission line, ranges largely screened by topography, vegetation and rail
Viewer Motion	<70km/h
Accessibility	Low (private road)
Usage Type	Low (private road)
Photography	Automatic exposure settings

Criteria	Characteristic
	Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: 360-degree view
After the field visit and in consideration of desktop assessment, VIA1 was rated as **low sensitivity** due to viewers predominantly being commuters or workers and the reduced scenic quality. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA1 is presented in Appendix A.	

17.2.2 VIA2

The view from VIA2 is presented in Plate 10 and details are summarised in Table 16.

Plate 10: VIA2, facing west

Table 16: VIA2

Criteria	Characteristic
Location	Easting / Northing: 0685801/7652429
Date	12/03/2024
Site Code	VIA2
POI Setting	Junction Camp Access Road
Local Vegetation Type	Spinifex, low shrubs, scattered tall shrubs
Vegetation/Topography Screening Potential	100%

Criteria	Characteristic
Foreground Elements	Access (unsealed) road, transmission line, water pipe, mine vehicles, spinifex, burnt area
Mid-Ground Elements	Transmission line, spinifex, shrubs, rockpiles, burnt area
Background Elements	Transmission line, spinifex, shrubs, rockpiles, communication tower, built form, burnt area
Viewer Motion	Up to 80 km/h
Accessibility	Low (private road)
Usage Type	Low (private road)
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: 360-degree view
After the field visit and in consideration of desktop assessment, VIA2 was rated as **low sensitivity** due to viewers predominantly being commuters or workers and the reduced scenic quality. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA2 is presented in Appendix A.	

17.2.3 VIA3

The view from VIA3 is presented in Plate 11 and details are summarised in Table 17.

Plate 11: VIA3, facing north

Table 17: VIA3

Criteria	Characteristic
Location	Easting / Northing: 0682830/7651151
Date	12/03/2024
Site Code	VIA3
POI Setting	Creek bed
Local Vegetation Type	Spinifex, tree, shrubs
Vegetation/Topography Screening Potential	100%
Foreground Elements	Rocky ground, bare dirt, creek
Mid-Ground Elements	Creek, rockpiles, spinifex, trees, shrubs
Background Elements	Predominantly screened by topography and vegetation. Ranges on the horizon.
Viewer Motion	Standing/Walking - <0 km/h
Accessibility	Low
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: 360-degree view
After the field visit and in consideration of desktop assessment, VIA3 was rated as **medium sensitivity** due to views being representative of local character but not rare or unique. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is largely not visible, distant glimpses of the southern area may occur in the gaps in vegetation and rocky outcrops. It therefore has an impact rating (Table 7) of **minor**. Further assessment of VIA3 is presented in Appendix A.	

17.2.4 VIA4

The view from VIA4 is presented in Plate 12 and details are summarised in Table 18.

Plate 12: VIA4, facing northeast

Table 18: VIA4

Criteria	Characteristic
Location	Easting / Northing: 0675832/7648249
Date	12/03/2024
Site Code	VIA4
POI Setting	Great Northern Highway
Local Vegetation Type	Spinifex, scattered trees, weeds
Vegetation/Topography Screening Potential	100%
Foreground Elements	Road, spinifex, rubbish, bare dirt
Mid-Ground Elements	Road, rockpiles, bare dirt, scattered trees
Background Elements	Ranges, hills
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Moderate

Criteria	Characteristic
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: NE (180-degree view)
After the field visit and in consideration of desktop assessment, VIA4 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 **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA4 is presented in Appendix A.	

17.2.5 VIA5

The view from VIA5 is presented in Plate 13 and details are summarised in Table 19.

Plate 13: VIA5, facing northeast

Table 19: VIA5

Criteria	Characteristic
Location	Easting / Northing: 0677155/7652467
Date	12/03/2024
Site Code	VIA5
POI Setting	Great Northern Highway
Local Vegetation Type	Spinifex, shrubs, trees
Vegetation/Topography Screening Potential	100%

Criteria	Characteristic
Foreground Elements	Spinifex, road, scattered trees, stony ground, rubbish
Mid-Ground Elements	Pale bare dirt, scattered trees, hills, road
Background Elements	Ranges and hills predominantly screened by topography and vegetation
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Moderate
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: E (180-degree view)
After the field visit and in consideration of desktop assessment, VIA5 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 **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA5 is presented in Appendix A.	

17.2.6 VIA6

The view from VIA6 is presented in Plate 14 and details are summarised in Table 20.

Plate 14: VIA6, facing south

Table 20: VIA6

Criteria	Characteristic
Location	Easting / Northing: 0678070/7655268
Date	12/03/2024
Site Code	VIA6
POI Setting	Great Northern Highway
Local Vegetation Type	Spinifex, shrubs, scattered trees
Vegetation/Topography Screening Potential	100%
Foreground Elements	Spinifex, bare stony ground, road, creek
Mid-Ground Elements	Road, spinifex, stony ground, scattered trees, hills
Background Elements	Hills and ranges predominantly obscured by vegetation and topography
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Moderate
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: SE (180-degree view)
After the field visit and in consideration of desktop assessment, VIA6 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 **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA6 is presented in Appendix A.	

17.2.7 VIA7

The view from VIA7 is presented in Plate 15 and details are summarised in Table 21.

Plate 15: VIA7, facing south-southwest

Table 21: VIA7

Criteria	Characteristic
Location	Easting / Northing: 0678327/7656573
Date	12/03/2024
Site Code	VIA7
POI Setting	Great Northern Highway
Local Vegetation Type	Spinifex, scattered trees, and shrubs
Vegetation/Topography Screening Potential	100%
Foreground Elements	Road batter, spinifex
Mid-Ground Elements	Stony hill, trees, road
Background Elements	Hills and ranges predominantly screened by vegetation and topography
Viewer Motion	<110 km/h
Accessibility	High
Usage Type	Moderate
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm)

Criteria	Characteristic
	Shots taken on lowest zoom setting (18mm) Facing: S (180-degree view)
After the field visit and in consideration of desktop assessment, VIA7 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 **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA7 is presented in Appendix A.	

17.2.8 VIA8

The view from VIA8 is presented in Plate 16 and details are summarised in Table 22.

Plate 16: VIA8, facing east

Table 22: VIA8

Criteria	Characteristic
Location	Easting / Northing: 0682230/7654172
Date	12/03/2024
Site Code	VIA8
POI Setting	North Star Access Road
Local Vegetation Type	Spinifex grassland, shrubs
Vegetation/Topography Screening Potential	0%
Foreground Elements	Spinifex grassland, access road, vehicles, pipeline

Criteria	Characteristic
Mid-Ground Elements	Spinifex grassland, with scattered shrubs and occasional trees, access road, topsoil stockpiles
Background Elements	Access road, spinifex with shrubs, hills and ranges, transmission line
Viewer Motion	<60 km/h
Accessibility	Low (private road)
Usage Type	Low (private road)
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: 360-degree view
After the field visit and in consideration of desktop assessment, VIA8 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 **high** as the southern area is visible and results in a dominant change in view. It therefore has an impact rating (Table 7) of **moderate**. Further assessment of VIA8 is presented in Section 4.3.	

17.2.9 VIA9

The view from VIA9 is presented in Plate 17 and details are summarised in Table 23.

Plate 17: VIA9, facing northwest

Table 23: VIA9

Criteria	Characteristic
Location	Easting / Northing: 0686776/7650433
Date	13/03/2024
Site Code	VIA9
POI Setting	Junction Camp Access Road
Local Vegetation Type	Spinifex, shrubs, stands of trees
Vegetation/Topography Screening Potential	100%
Foreground Elements	Access road, spinifex, shrubs
Mid-Ground Elements	Refuelling station and laydown area, mine camp, transmission line, substation, communication tower, spinifex, shrubs
Background Elements	Transmission line, rocky hills, ranges
Viewer Motion	<70 km/h
Accessibility	Low (private road)
Usage Type	Low (private road)
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: 360 degree view
After the field visit and in consideration of desktop assessment, VIA9 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 **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA9 is presented in Appendix A.	

17.2.10 VIA10

The view from VIA10 is presented in Plate 18 and details are summarised in Table 15.

Plate 18: VIA10, facing south

Table 24: VIA10

Criteria	Characteristic
Location	Easting / Northing: 0682648/7662616
Date	119/04/2024
Site Code	VIA10
POI Setting	Rocky outcrop
Local Vegetation Type	Spinifex, scattered shrubs, and trees
Vegetation/Topography Screening Potential	30%
Foreground Elements	Rocky outcrop, spinifex, scattered shrubs
Mid-Ground Elements	Spinifex, scattered trees, and shrubs
Background Elements	Transmission line, ranges
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm)

Criteria	Characteristic
	Shots taken on lowest zoom setting (18mm) Facing: 360 degree view
After the field visit and in consideration of desktop assessment, VIA10 was rated as **medium sensitivity** due to views that are representative of local character but are not rare or unique. The magnitude of change to the existing landscape was determined to be **medium** as northern area is visible and results in a considerable change in view. It therefore has an impact rating (Table 7) of **moderate**. Further assessment of VIA10 is presented in Section 4.3.	

17.2.11 VIA11

The view from VIA11 is presented in Plate 19 and details are summarised in Table 16.

Plate 19: VIA11, facing southwest

Table 25: VIA11

Criteria	Characteristic
Location	Easting / Northing: 0687445/7661992
Date	19/04/2024
Site Code	VIA11
POI Setting	Plain
Local Vegetation Type	Spinifex, scattered shrubs, stands of shrubs
Vegetation/Topography Screening Potential	80%
Foreground Elements	Access (unsealed) road, bare ground, scattered shrubs, spinifex, burnt area
Mid-Ground Elements	Helicopter, stands of shrubs, spinifex, scattered shrubs, and trees, burnt area

Criteria	Characteristic
Background Elements	Ranges
Viewer Motion	Up to 70 km/h
Accessibility	Low (private road)
Usage Type	Low (private road)
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm) Shots taken on lowest zoom setting (18mm) Facing: 360 degree view
After the field visit and in consideration of desktop assessment, VIA11 was rated as **low sensitivity** due to due to viewers predominantly being commuters or workers. The magnitude of change to the existing landscape was determined to be **negligible** as northern area is visible but the change is barely perceptible. It therefore has an impact rating (Table 7) of **minor-negligible**. Further assessment of VIA11 is presented in Section 4.3.	

17.2.12 VIA12

The view from VIA12 is presented in Plate 20 and details are summarised in Table 17.

Plate 20: VIA12, facing southeast

Table 26: VIA12

Criteria	Characteristic
Location	Easting / Northing: 0687063/7660680
Date	19/04/2024
Site Code	VIA12
POI Setting	Creek bed – heritage site
Local Vegetation Type	Scattered trees, shrubs, and spinifex. Trees along the banks of the creek.
Vegetation/Topography Screening Potential	100%
Foreground Elements	Rocky boulders, helicopter, sandy creek bed, scattered trees, spinifex, and shrubs
Mid-Ground Elements	Stands of shrubs and trees on creek bank, creek bed
Background Elements	Screened by creek bank and vegetation.
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
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: 360 degree view
After the field visit and in consideration of desktop assessment, VIA12 was rated as **high sensitivity** due to the view being of the River Plains LCU which is rare in the context of the Study Area. Additionally, VIA12 is located within a mapped heritage place (6653 Turner River (Tjirrlil)). The magnitude of change to the existing landscape was determined to be **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor moderate**. Further assessment of VIA12 is presented in Appendix A.	

17.2.13 VIA13

The view from VIA13 is presented in Plate 21 and details are summarised in Table 18.

Plate 21: VIA13, facing southwest

Table 27: VIA13

Criteria	Characteristic
Location	Easting / Northing: 0682154/7660626
Date	19/04/2024
Site Code	VIA13
POI Setting	Plain
Local Vegetation Type	Spinifex, scattered shrubs
Vegetation/Topography Screening Potential	30%
Foreground Elements	Access (unsealed) road, helicopter, spinifex, scattered shrubs
Mid-Ground Elements	Transmission line, scattered shrubs, spinifex
Background Elements	Ranges
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm)

Criteria	Characteristic
	Shots taken on lowest zoom setting (18mm) Facing: 360 degree view
After the field visit and in consideration of desktop assessment, VIA13 was rated as **medium sensitivity** due to views that are representative of local character. The magnitude of change to the existing landscape was determined to be **medium** as northern area is visible and results in a considerable change in view. It therefore has an impact rating (Table 7) of **moderate**. Further assessment of VIA13 is presented in Section 4.3. Note that the transmission line associated with the Project will be visible from this location however the design of the Project was not sufficiently progressed to be included in the photomontages.	

17.2.14 VIA14

The view from VIA14 is presented in Plate 22 and details are summarised in Table 19.

Plate 22: VIA14, facing north

Table 28: VIA14

Criteria	Characteristic
Location	Easting / Northing: 0684401/7659113
Date	19/04/2024
Site Code	VIA14
POI Setting	Plain
Local Vegetation Type	Spinifex (predominantly dead), shrubs, trees
Vegetation/Topography Screening Potential	0%

Criteria	Characteristic
Foreground Elements	Spinifex (dead), scattered trees and shrubs
Mid-Ground Elements	Helicopter, termite mound, stands of shrubs, scattered trees
Background Elements	Transmission line, ranges
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
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: 360 degree view
After the field visit and in consideration of desktop assessment, VIA14 was rated as **medium sensitivity** due to views that are representative of local character but not rare or unique. The magnitude of change to the existing landscape was determined to be **high** as the Project is visible and results in a dominant change in view. It therefore has an impact rating (Table 7) of **moderate-high**. Further assessment of VIA14 is presented in Section 4.3.	

17.2.15 VIA15

The view from VIA15 is presented in Plate 23 and details are summarised in Table 20.

Plate 23: VIA15, facing east

Table 29: VIA15

Criteria	Characteristic
Location	Easting / Northing: 0680734/7658887
Date	19/04/2024
Site Code	VIA15
POI Setting	Plain
Local Vegetation Type	Low shrubs, scattered trees, stands of tall shrubs
Vegetation/Topography Screening Potential	100%
Foreground Elements	Low shrubs, scattered trees
Mid-Ground Elements	Low shrubs, scattered trees, stands of tall shrubs
Background Elements	Ranges, transmission line
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
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: 360 degree view
After the field visit and in consideration of desktop assessment, VIA15 was rated as **medium sensitivity** due to views that are representative of local character but not rare or unique. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor**. Further assessment of VIA15 is presented in Appendix A.	

17.2.16 VIA16

The view from VIA16 is presented in Plate 24 and details are summarised in Table 21.

Plate 24: VIA16, facing northwest

Table 30: VIA16

Criteria	Characteristic
Location	Easting / Northing: 0687622/7658480
Date	19/04/2024
Site Code	VIA16
POI Setting	Slope
Local Vegetation Type	Spinifex, scattered low shrubs
Vegetation/Topography Screening Potential	100%
Foreground Elements	Rocky ground, spinifex, low shrubs
Mid-Ground Elements	Rocky outcrop, stands of tall thin shrubs
Background Elements	Rocky hills
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
Usage Type	Low
Photography	Automatic exposure settings Canon SLR Camera (DS126741) Canon EFS lens (18 to 55mm)

Criteria	Characteristic
	Shots taken on lowest zoom setting (18mm) Facing: 360 degree view
After the field visit and in consideration of desktop assessment, VIA16 was rated as **medium sensitivity** due to views that are representative of local character but not rare or unique. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is largely not visible, distant glimpses of the northern area in the gaps in vegetation may be possible. It therefore has an impact rating (Table 7) of **minor**. Further assessment of VIA16 is presented in Appendix A.	

17.2.17 VIA17

The view from VIA17 is presented in Plate 25 and details are summarised in Table 22.

Plate 25: VIA17, facing north

Table 31: VIA17

Criteria	Characteristic
Location	Easting / Northing: 0684318/7656456
Date	19/04/2024
Site Code	VIA17
POI Setting	Plain
Local Vegetation Type	Spinifex, scattered shrubs
Vegetation/Topography Screening Potential	100%
Foreground Elements	Spinifex, scattered shrubs, helicopter
Mid-Ground Elements	Spinifex, scattered shrubs, stands of shrubs

Criteria	Characteristic
Background Elements	Transmission line, hills/ranges
Viewer Motion	Standing/Walking - <10 km/h
Accessibility	Low
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: 360 degree view
After the field visit and in consideration of desktop assessment, VIA17 was rated as **medium sensitivity** due to views that are representative of local character but not rare or unique. The magnitude of change to the existing landscape was determined to be **negligible** as the Project is not visible. It therefore has an impact rating (Table 7) of **minor**. Further assessment of VIA17 is presented in Appendix A	

17.3 POI Assessment Results

The following sections and Appendix A present a view from the 17 POIs. Photomontage analysis was undertaken for five of the 17 POIs to depict operational, decommissioned and post-50 year view.

4.3.1 Assessment of VIA8

Plate 26: VIA8 – Current view (360-degree)

Plate 27: VIA8 – Current view, looking southeast toward the southern area

Plate 28: VIA8 – Operational view, looking southeast toward the southern area

Plate 29: VIA8 – Closure view, looking southeast toward the southern area

Plate 30: VIA8 – Post-50 years view, looking southeast toward the southern area

VIA8 captures a view from an existing unsealed private road within the southern area. The current view from VIA8 is partly a natural view and partly a modified view, with modified elements including an access and small pipeline. The predicted view is a modified view of cleared bare ground and the solar arrays. Due to the viewpoint's location within the southern area project area and the required clearing, the southern area is highly visible from VIA8 and the change in view is stark. The northern area will not be visible from VIA8. Immediately following closure of the

southern area, a large area of bare ground will be visible. Assuming revegetation of the southern area is successful, over time the view will return to one similar to that of the current view – one that is partly natural and partly modified.

4.3.2 Assessment of VIA10

Plate 31: VIA10 – Current View (360-degree)

Plate 32: VIA10 – Current view, looking south toward the northern area

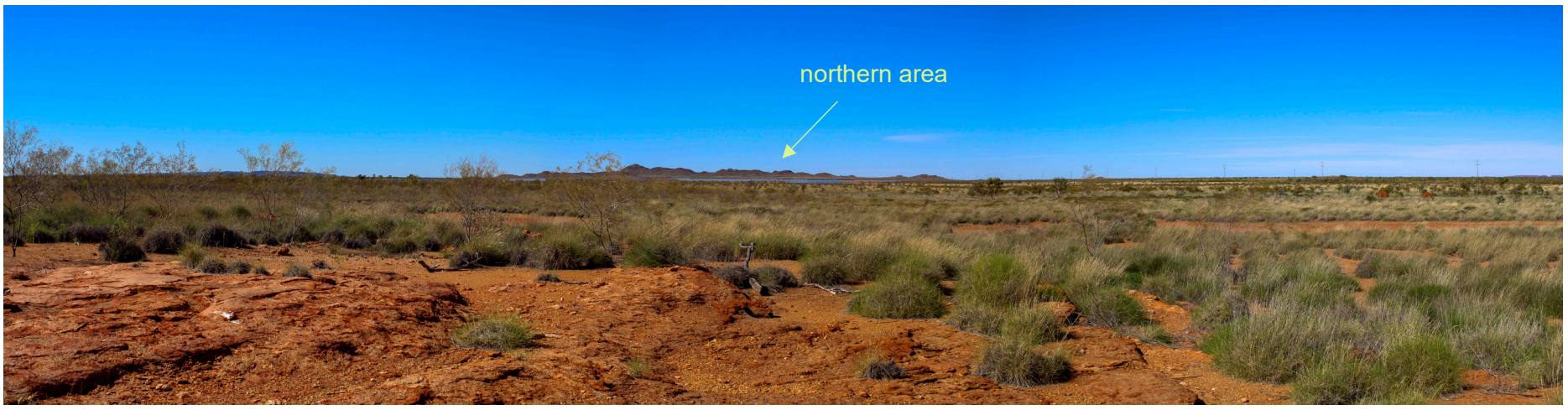


Plate 33: VIA10 – Operational view, looking south toward the northern area

Plate 34: VIA10 – Closure view, looking south toward the northern area

Plate 35: VIA10 – Post-50 years view, looking south toward the northern area

VIA10 captures a view 1.3 km north of the northern area. The current view from VIA10 is predominantly natural view, with modified elements in the background including a transmission line and mine. The predicted view remains a predominantly natural view, with modified elements including the northern area in the midground and a transmission line and mine in the background. Although the northern area is partly screened by vegetation, the solar panels are more apparent in the landscape than the existing modified elements resulting in a change in the character of the view from VIA10.The southern area will not be visible from VIA10. Immediately following closure of the northern area, an area of bare ground will be visible. Due to the bare ground present in the midground and foreground and the distance, the northern area blends with the surrounding natural landscape. Assuming revegetation of the northern area is successful, over time the view will return to one similar to that of the current view – one that is predominantly natural.

4.3.3 Assessment of VIA11

Plate 36: VIA11 – Current view (360-degree)

Plate 37: VIA11 – Current view, looking southwest toward the northern area

Plate 38: VIA11 – Operational view, looking southwest toward the northern area

Plate 39: VIA11 – Closure view, looking southwest toward the northern area

Plate 40: VIA11 – Post-50 years view, looking southwest toward the northern area

VIA11 captures a view 2.5 km northeast of the northern area. The current view from VIA11 is a predominantly natural view, with modified elements in the background including a transmission line and mine. The predicted view remains a predominantly natural view, with modified elements including the northern area, a transmission line and mine in the background. The northern area is predominantly screened by vegetation and due to the view distance are barely visible just below the horizon. Existing modified elements are more apparent than in the landscape than the northern area therefore there is no change in the existing character of the view from VIA11. The southern area will not be visible from VIA11. Immediately following closure of the northern area, an area of bare ground will be barely visible on the horizon, blending with the surrounding natural landscape. Assuming revegetation of the northern area is successful, over time the view will return to the current view – one that is predominantly natural.

4.3.4 Assessment of VIA13

Plate 41: VIA13 – Current view (360-degree)

Plate 42: VIA13 – Current view, looking southeast toward the northern area

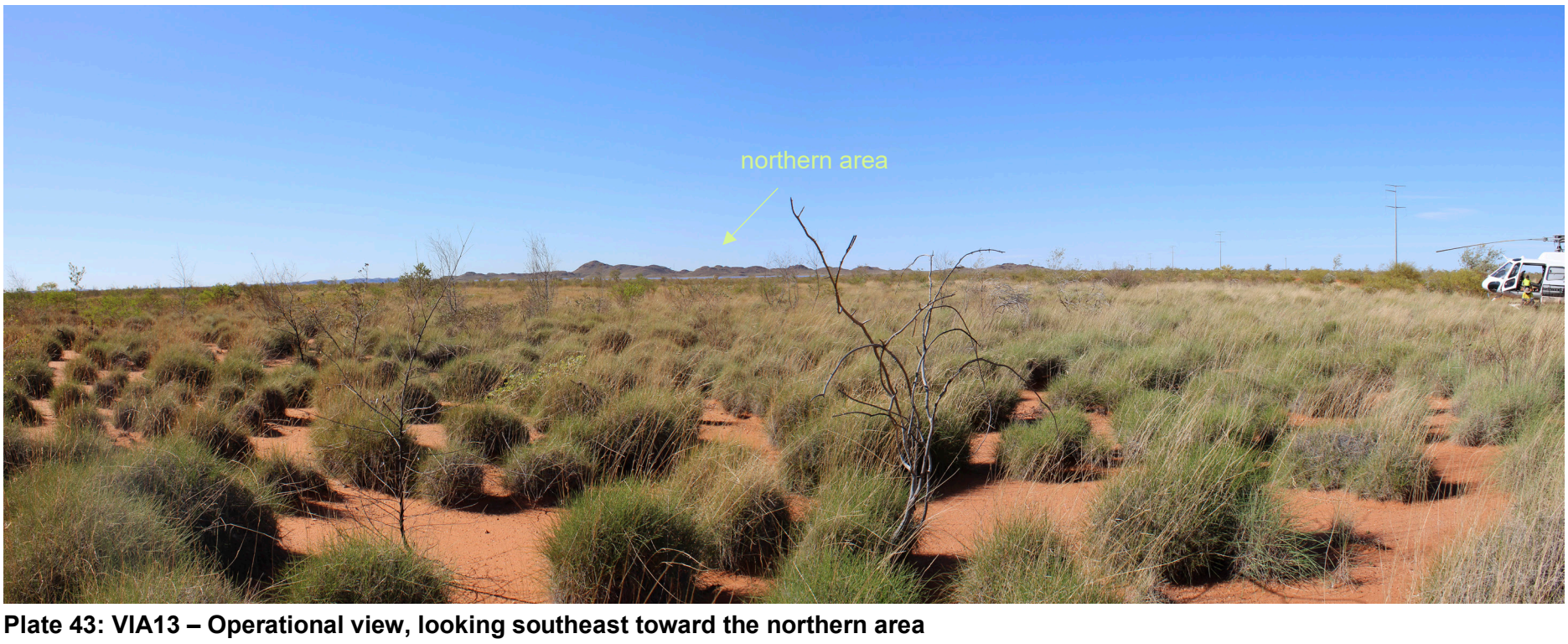


Plate 43: VIA13 – Operational view, looking southeast toward the northern area

Plate 44: VIA13 – Closure view, looking southeast toward the northern area

Plate 45: VIA13 – Post-50 years view, looking southeast toward the northern area

VIA13 captures a view 0.2 km west of the northern area and 1.5 km northwest from the main area of infrastructure. The current view from VIA13 is a predominantly natural view, with modified elements in the background including a transmission line. The predicted view remains a predominantly natural view, with modified elements including the northern area and a transmission line in the background. The northern area is partly screened by vegetation. Existing modified elements are more apparent in the landscape than the Wodgina area and although the northern area increases the modified characteristics of the view it does not significantly change the existing character, remaining a predominantly natural view from VIA13. The southern area will not be visible from VIA13. Immediately following closure of the northern area, an area of bare ground may be visible in the background, blending with the surrounding natural landscape. Assuming revegetation of the northern area is successful, over time the view will return to the current view – one that is predominantly natural.

4.3.5 Assessment of VIA14

Plate 46: VIA14 – Current view (360-degree)

Plate 47: VIA14 – Current view, looking north toward the northern area

Plate 48: VIA14 – Operational view, looking north toward the northern area

Plate 49: VIA14 – Closure view, looking north toward the northern area

Plate 50: VIA14 – Post-50 years view, looking north toward the northern area

VIA14 captures a view within the within the northern area. The current view from VIA14 is predominantly natural view, with modified elements in the background including a transmission line. The predicted view is a highly modified view of cleared bare ground and the solar arrays. Due to the viewpoint's location within the northern area, the northern area is highly visible from VIA14 and the change in view is stark. The southern area will not be visible from VIA14. Immediately following closure of the northern area, a large area of bare ground will be visible. Assuming revegetation of the northern area is successful, over time the view will return to one similar to that of the current view – one that is predominantly natural.

18.0 Discussion

18.1 Landscape Impacts

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

- Plains – medium value and minor-moderate impact
- Ranges, Hills and Low Rises – medium value and minor-moderate impact
- River Plains – high value and minor-moderate impact
- Sandplains – high value and moderate impact
- Modified – low value and minor-negligible impact.

Overall, the impact of the Project on landscape character is predicted to be low with the total direct impact of the project on natural LCUs being 0.79% of the Study Area. The higher impact rating for the Sandplains LCU was a result of the lower proportion of this LCU present in the Study Area. However, given the LCUs occur widely outside the Study Area, the actual impact from a broad LCU perspective is not considered to be significant.

18.2 Visual Impacts to Points of Interest

Seventeen POI were identified by Fortescue for assessment. The 17 POI were visited during the field assessment, with one viewpoint captured from each. These POIs were then further assessed to evaluate the potential visual impact from the southern area and northern area. Table 32 provides a summary of the visual impact assessment, POI with visibility of the project are bolded.

Table 32: Summary of Visual Impact Ratings

POI	POI Sensitivity	Magnitude of Change	Impact Rating
VIA1	Low	Negligible	Minor-negligible
VIA2	Low	Negligible	Minor-negligible
VIA3	Medium	Negligible	Minor
VIA4	Low	Negligible	Minor-negligible
VIA5	Low	Negligible	Minor-negligible
VIA6	Low	Negligible	Minor-negligible
VIA7	Low	Negligible	Minor-negligible
VIA8	**Low**	**High**	**Moderate**
VIA9	Low	Negligible	Minor-negligible
VIA10	**Medium**	**Medium**	**Moderate**
VIA11	**Low**	**Negligible**	**Minor-negligible**
VIA12	High	Negligible	Minor-moderate
VIA13	**Medium**	**Medium**	**Moderate**
VIA14	**Medium**	**High**	**Moderate-high**
VIA15	Medium	Negligible	Minor
VIA16	Medium	Negligible	Minor

POI	POI Sensitivity	Magnitude of Change	Impact Rating
VIA17	Medium	Negligible	Minor

Based on the outputs from the 3D model, five of the 17 POIs were predicted to have visibility of either the northern area or the southern area (VIA8, VIA10, VIA11, VIA13 and VIA14), the remaining 12 sites were predicted to have no visibility of the Project. No POIs were predicted to have visibility of both solar farm areas. The southern area is predicted to result in no change in view to assessed POIs surrounding the development area. One POI (VIA8) within the southern area was predicted to have a moderate impact rating. Implementation of the northern area is predicted to result in a minor-negligible to moderate impact to assessed POIs surrounding the development area. One POI (VIA14) within the northern area was predicted to have a moderate-high impact rating.

Overall, the alteration to visual amenity was limited as the height of the solar arrays resulted in them being screened from view by vegetation. Where the Project was visible, the significance of the change was limited due to modified elements already being present within most of the existing views. 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 Project was typically located in the mid to background of the view from the POI and / or the Project was partially screened by landforms or vegetation.

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. Excluding VIA8 and VIA14 which are within the project footprint, VIA10 will have the most visibility of the construction phase of the Project. However, given the existing disturbance within the view at VIA10 and the temporary nature of construction-related impacts, potential impacts are not expected to be significant. The construction phase of the Project is not anticipated to result in additional visual impacts that would elevate the overall visual impact rating. This is due to the distance of the POIs from the Project and the screening provided by landform and vegetation. Overall, visual impacts associated with the construction phase of the project are anticipated to be transient and limited primarily to dust emissions.

Assuming the Turner River Solar Hub is decommissioned and removed the visual impact of the Project will diminish over time with successful rehabilitation of the area. Initially, the closure phase will expose a large area of bare ground. This will gradually improve as revegetation begins, further reducing visual impacts. Once revegetation is complete and successful, there should be no significant changes to the visual landscape.

18.3 Cumulative Impacts

The Project forms part of Fortescue's decarbonisation pathway and as such is not isolated from other solar farm projects. An additional Fortescue solar farm, North Star Junction 100MW, is located 3.5 km southeast of the Project. Given the screening effects of topography and vegetation surrounding modified elements, particularly the solar farms, within the surrounding area, it is expected that the potential impact to visual amenity from the Project would be low.

In a broader context, modified elements are rare within the Study Area (2%) and the development of the Project will result in a 0.4% increase in this LCU across the Study Area. It is not expected that implementation of the Project would result in a significant change in the valued landscape characters of the Study Area.

18.4 Conclusion

Overall, implementation of the southern area was predicted to have a low visual impact as there was little visibility at most POIs due to the screening effects of landforms and vegetation surrounding the southern area and thus negligible change to visual amenity and landscape character. The difference in visual impacts between the southern area and the northern area is considered to be due to their locations in different land systems resulting in more screening landforms and vegetation around the southern area, rather than being a reflection of the POIs selected. The southern area was considered to have met the project specific Visual Management Objectives (VMOs).

The overall visual impact of the northern area was predicted to be minor to moderate due to its visibility at several POIs. The northern area is expected to be more visible than the southern area due to its siting within a flatter landscape with fewer landforms and vegetation to provide screening resulting in the VIA showing noticeable changes to visual amenity and landscape character from some POIs. However, similar to the southern area, the northern area is considered to have met the project specific VMOs due to the following:

- The northern area does not result in a dominant change to high or moderate sensitivity POIs >1 km from the development area
- The implementation of the northern area does not result in the removal of valued characteristics, nor does it result in significant alteration or disruption to views of these. Key landscape features surrounding the northern area include the isolated rounded hills to the south and the major waterways to the east and west.

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Appendix A POI Assessment: No Visibility

Visual Impact Assessment

Turner River Solar Hub

Fortescue Ltd

SLR Project No.: 675.072412.00001

10 January 2025

A.1 Assessment of VIA1

Plate 1: VIA1 – Current and predicted view (360-degrees)

Plate 2: VIA1 – Current and predicted view, looking northwest toward the southern area

VIA1 captures a view from the Junction Camp Access Road, 2.6 km southeast from the southern area. Junction Camp Access Road is an unsealed private road that runs generally to the east and parallel to Great Northern Highway and provides access to Fortescue's North Star Project. The current view from VIA1 is partly a natural view and partly a modified view, with modified elements including two access roads, a camp and a transmission line. Neither the southern area nor the northern area is expected to be visible from VIA1 due to the view distance and the screening from topography and vegetation.

A.2 Assessment of VIA2

Plate 3: VIA2 – Current view and predicted view (360-degree)

Plate 4: VIA2 – Current and predicted view, looking west toward the southern area

VIA2 captures a view from the Junction Camp Access Road, 2.6 km southeast from the southern area. Junction Camp Access Road is an unsealed private road that runs generally to the east and parallel to Great Northern Highway and provides access to Fortescue's North Star Project. The current view from VIA2 is partly a natural view and partly a modified view, with modified elements including two access roads, a camp and a transmission line. Neither the southern area nor the northern area is expected to be visible from VIA2 due to the view distance and the screening from topography and vegetation.

A.3 Assessment of VIA3

Plate 5: VIA3 – Current and predicted view (360-degree)

Plate 6: VIA3 – Current and predicted view, looking north toward the southern area

VIA3 captures a view from a creek, 0.7 km south from the southern area. The view from VIA3 is a natural view. The southern area is expected to be largely not visible from VIA3 due to the screening effects of topography and vegetation, distant glimpses of the southern area may occur in gaps in the rocky outcrops and vegetation. The northern area will not be visible from VIA3.

A.4 Assessment of VIA4

Plate 7: VIA4 – Current and predicted view, looking northeast toward the southern area

VIA4 captures a view from the Great Northern Highway, 6.8 km southwest from the southern area. The view from VIA4 is partly a natural view and partly a modified view, with modified elements including the highway. Neither the southern area nor the northern area is expected to be visible from VIA4 due to the view distance.

A.5 Assessment of VIA5

Plate 8: VIA5 – Current and predicted view, looking northeast toward the southern area

VIA5 captures a view from the Great Northern Highway, 3.0 km southwest from the southern area. The view from VIA5 is predominantly a natural view with modified elements including the highway. Neither the southern area nor the northern area is expected to be visible from VIA5 due to the view distance and the screening from topography and vegetation.

A.6 Assessment of VIA6

Plate 9: VIA6 – Current and predicted view, looking southeast toward the southern area

VIA6 captures a view from the Great Northern Highway, 1.8 km northwest from the southern area. The view from VIA6 is predominantly a natural view with modified elements including the highway. Neither the southern area nor the northern area is expected to be visible from VIA6 due to the view distance and the screening from topography and vegetation.

A.7 Assessment of VIA7

Plate 10: VIA7 – Current and predicted view, looking southeast toward the southern area

VIA7 captures a view from the Great Northern Highway, 2.4 km northwest from the southern area. The current view from VIA7 is partly a natural view and partly a modified view, with modified elements including a highway and soil stockpile. Neither the southern area nor the northern area is expected to be visible from VIA7 due to the view distance and the screening from topography and vegetation.

A.8 Assessment of VIA9

Plate 11: VIA9 – Current view (360-degree)

Plate 12: VIA9 – Current and predicted view, looking northwest toward the southern area

VIA9 captures a view from the Junction Camp Access Road, 3.8 km southeast from the southern area. Junction Camp Access Road is an unsealed private road that runs generally to the east and parallel to Great Northern Highway and provides access to Fortescue's North Star Project. The view from VIA9 is partly a natural view and partly a modified view, with modified elements including an access road, camp, transmission line, substation and refuelling station. Neither the southern area nor the northern area is expected to be visible from VIA9 due to the view distance and the screening from topography and vegetation.

1.1.1 Assessment of VIA13

Plate 17: VIA12 – Current and predicted view (360-degree)

Plate 18: VIA12 – Current and predicted view, looking southwest toward the northern area

VIA12 captures a view from the Turner River, 2 km northeast from the northern area. The view from VIA12 is a natural view. Neither the southern area nor the northern area is expected to be visible from VIA12 due to the screening effects of topography and vegetation.

1.1.2 Assessment of VIA15

Plate 17: VIA15 – Current and predicted view (360-degree)

Plate 18: VIA15 – Current and predicted view, looking east toward the northern area

VIA15 captures a view 2.7 km west from the northern area. The view from VIA15 is a predominantly natural view with a transmission line partly visible in the background. Neither the southern area nor the northern area is expected to be visible from VIA15 due to the screening effects of topography and vegetation.

1.1.3 Assessment of VIA16

Plate 17: VIA16 – Current and predicted view (360-degree)

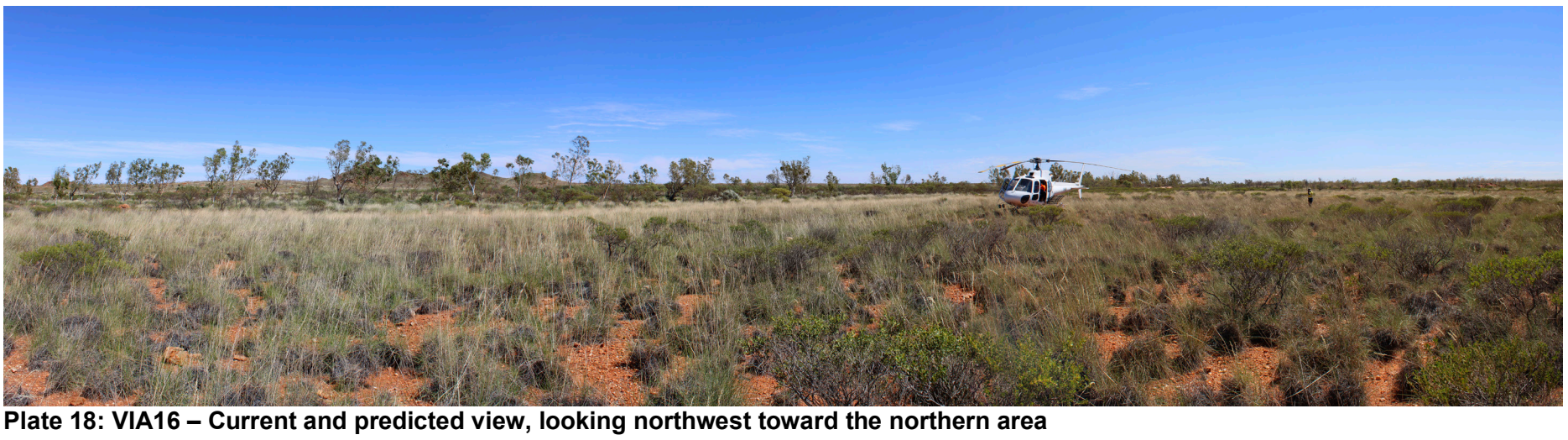


Plate 18: VIA16 – Current and predicted view, looking northwest toward the northern area

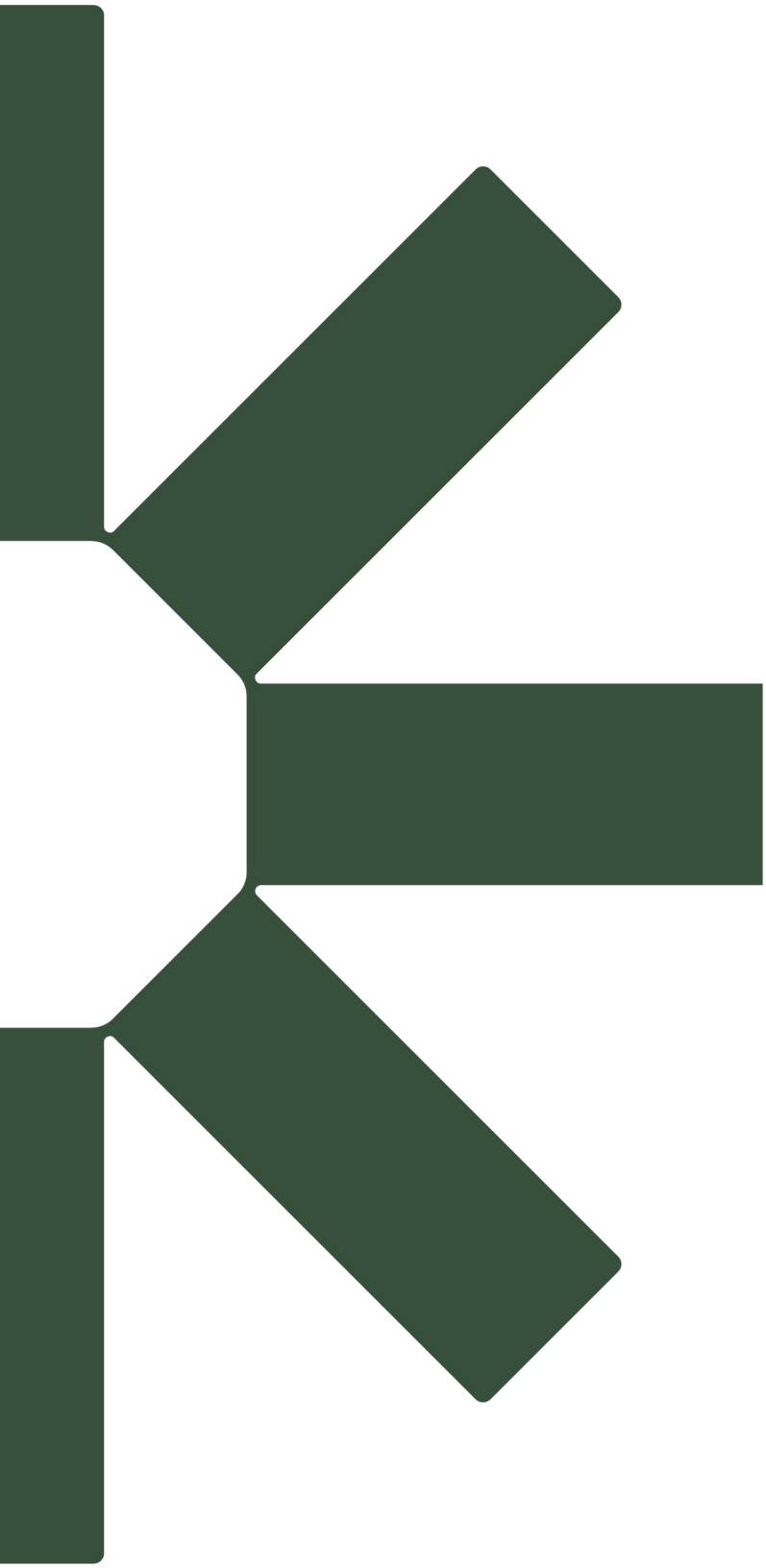
VIA16 captures a view 2.5 km east from the northern area. The view from VIA16 is a natural view. Neither the southern area nor the northern area is expected to be visible from VIA16 due to the screening effects of topography and vegetation.

1.1.4 Assessment of VIA17

Plate 17: VIA17 – Current and predicted view (360-degree)

Plate 18: VIA17 – Current and predicted view, looking north toward the northern area

VIA17 captures a view 2 km south from the northern area. The view from VIA17 is a predominantly natural view, with a transmission line partly visible in the background. Neither the southern area nor the northern area is expected to be visible from VIA17 due to the screening effects of topography.



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