**INTERNAL** 



# Traffic Strategy EnergyConnect (NSW – Western Section) Stage 2 45860-HSE-DOC-D-0008

REV	DATE	GENERAL DESCRIPTION	PREPARED	REVIEWED	VERIFIED	VERIFIED	APPROVED
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Sections of information in this plan are sensitive in nature and have been redacted for public use.



	Revision History
Rev.	Detailed Description
A	Issued for Transgrid review
В	Issued for both agency and Transgrid review
С	Updated following the receipt of agency comments and issued to the Environmental Representative
D	Updated following the receipt of comments from the Environmental Representative
E	Updated following meeting with Wentworth Shire Council and DPE. Removal of Red Hill Road

#### **Key Document Stakeholders**

To be communicated with during reviews and revisions of this document

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# Abbreviations

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PCTs Plant community types	PAD	Potential archaeological deposit
	PESCPs	Progressive Erosion and Sediment Control Plan
RAPs Registered Aboriginal Parties	PCTs	Plant community types
	RAPs	Registered Aboriginal Parties

Acronym	Definition
Response to DPIE Request for Information	The 'additional information letter dated 10 August 2021' in the definition section of the Infrastructure Approval; document is also titled EnergyConnect (NSW – Western Section) Response to DPIE Request for Information – 7 May 2021 and subsequent discussions
RMMs	Revised mitigation measures
RNP	NSW Road Noise Policy
ROP	Road Opening Permit
SA	South Australia
SAP	Sensitive area plans
SecureEnergy	Elecnor and Clough Projects Australia Pty Ltd have formed the SecureEnergy Joint Venture (SecureEnergy). SecureEnergy is the contractor who will be carrying out the project on behalf of TransGrid.
Strategy	Traffic Strategy (this document)
Submissions Report	EnergyConnect (NSW – Western Section) Submissions Report
Technical Paper 9 (Traffic and transport impact assessment)	EnergyConnect (NSW – Western Section) Technical Paper 9 – Traffic and transport impact assessment, prepared by WSP and dated 21 October 2020.
TCPs	Traffic Control Plans
TfNSW	Transport for New South Wales
TTMP	Traffic and Transport Management Plan

# 1 Introduction

# 1.1 Context

This Traffic Strategy (strategy) is for Stage 2 of EnergyConnect (NSW – Western Section). This Traffic Strategy has been prepared to address the relevant requirements of the Infrastructure Approval (SSI 10040).

# 1.2 Background

On 29 August 2019, the New South Wales (NSW) Minister for Planning and Public Spaces declared the NSW component of EnergyConnect to be critical State significant infrastructure (CSSI) under the *Environmental Planning and Assessment Act 1979* (EP&A Act) on the basis that it is critical to the State for environmental, economic or social reasons. Within NSW, EnergyConnect is therefore subject to assessment under Part 5, Division 5.2 of the EP&A Act.

Transgrid have two environmental planning approval applications for the sections within NSW:

- EnergyConnect (NSW Western Section) South Australia (SA)/NSW border to Buronga and Buronga to the NSW/Victorian border (the project); and
- EnergyConnect (NSW Eastern Section) Buronga to Wagga Wagga.

A referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was submitted on 27 May 2020. The Australian Department of Agriculture, Water and the Environment (DAWE) determined the project to be a controlled action on 26 June 2020 and thus, it would be assessed using the bilateral assessment process. As such, the project also requires approval from the Australian Minister for the Environment under the EPBC Act.

The *EnergyConnect (NSW – Western Section) Environmental Impact Statement* (EIS) was prepared for the project in October 2020 and was placed on public exhibition from 30 October 2020 to 10 December 2020. A total of 20 submissions were received, with 15 from government agencies, three from organisations and two from the public.

The *EnergyConnect (NSW – Western Section) Submissions Report* (Submissions Report) was prepared for the project in response to the submissions received during the public exhibition of the EIS. The Submissions Report was finalised on 14 April 2021.

Transgrid also prepared a separate *EnergyConnect (NSW – Western Section) Amendment Report* (Amendment Report) to document design changes and additional environmental assessment undertaken since exhibition of the EIS. The Amendment Report was also finalised on 14 April 2021.

On 7 May 2021, Department of Planning and Environment (DPE) requested additional information *(EnergyConnect (NSW – Western Section)(SSI-10040) Request for Additional Information)* to assist with the assessment of the project. In response Transgrid prepared and provided the additional information letter dated 10 August 2021 (Response to DPIE Request for Information), which included revised mitigation measures (RMMs) in Appendix G which are to be applied. The Response to DPIE Request for Information was dated 10 August 2021.

Approval for the project under the EP&A Act was granted by the NSW Minister for Planning and Public Spaces (Infrastructure Approval SSI 10040) on 28 September 2021. Approval for the project under the EPBC Act was granted by the Australian Minister for the Environment.

Transgrid have engaged SecureEnergy, a joint venture between Elecnor and Clough Projects Australia Pty Ltd to design and construct their portion of the EnergyConnect project.

# 1.3 Staging

Condition E2 allows preparation of plans on a staged basis, with the approval of the Planning Secretary. Where a plan is staged, the scope of works can be carried out without addressing particular requirements of conditions of approval that are not applicable to the particular stage. This strategy is staged in accordance with condition E2.

This strategy has been prepared specifically for EnergyConnect (NSW – Western Section) Stage 2 and will be implemented for the duration of Stage 2 of construction. The key project components of Stage 2 of construction include, but are not limited to, the activities provided in Table 1.1.

Table 1.1 - Key	project components of	of Stage 2 of construction
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Key activity	Description of key activity
Pre-construction minor works permitted in accordance with the Infrastructure Approval.	Key activities nominated in this stage will have already commenced as part of the pre-construction minor works permitted in accordance with the Infrastructure Approval.
	The definition of 'construction' within the Infrastructure Approval excludes these activities. They will therefore not be subject to the Stage 2 CEMP and CEMP sub- plans. Irrespective of this, these activities will occur in accordance with the relevant conditions of the Infrastructure Approval.
	Key activities include:
	<ul> <li>environmental investigations, including biodiversity and heritage protection, salvage and recordings;</li> </ul>
	<ul> <li>Aboriginal heritage assessment, mitigation (ie exclusion zones) and salvage activities including subsurface testing/test excavation, additional survey, and consultation with RAPs;</li> </ul>
	<ul> <li>other survey work, such as road dilapidation surveys, and surveys of the general alignment and existing utilities;</li> </ul>
	<ul> <li>installation of environmental management measures, fencing, enabling works; and</li> </ul>
	• connections and pre-commissioning of utilities (wastewater treatment plant, electrical power, lighting etc.).
Continuation of any outstanding Stage 1 construction activities	Construction activities undertaken during Stage 1 of the project will continue where required. This includes, but is not limited to continuation of the following activities:
	• any outstanding construction earthworks activity at the Buronga substation;
	• operation of the Buronga earthworks material site, including the crushing and screening plant, where required;
	operation of the Buronga construction compound including offices and laydown area; and
	use of access and egress points.
Establishment of Wentworth accommodation camp	The main activities that would be undertaken at the Wentworth accommodation camp and construction compound and the Anabranch South ancillary construction site include:
	clearing of vegetation within the disturbance area;
Establishment and operation of	<ul> <li>clearing and removal of topsoils. Topsoil would be stockpiled on site for later reuse;</li> </ul>
Wentworth construction compound	<ul> <li>establishing the Wentworth accommodation and associated facilities, site offices, amenities, wastewater treatment plant, power generators, hazardous material and fuel storage area, and internal roads;</li> </ul>
	<ul> <li>establishing and operating Wentworth construction including but not limited to amenities compound site offices, concrete batching plant, internal roads and other ancillary facilities; and</li> </ul>
Establishment and operation of Anabranch South ancillary construction site	<ul> <li>establishing and operating Anabranch South ancillary construction site laydown areas, vehicle and equipment storage, maintenance sheds, potential stockpile areas, demountable offices and parking.</li> </ul>
Buronga substation upgrade and expansion	The existing Buronga 220kV substation would be upgraded and expanded to add a new 330kV substation on the land parcel adjacent to the existing 220kV substation. The upgrade and expansion of the Buronga substation would consist of the following key activities in addition to the works undertaken during Stage 2 of construction:
	civil works including:
	<ul> <li>underground mesh installation (earthing grid);</li> </ul>
	<ul> <li>foundation and footing works for the electrical equipment; and installation of the symphronous condensor (SymCon) building slob</li> </ul>
	<ul> <li>installation of the synchronous condenser (SynCon) building slab.</li> </ul>

Key activity	Description of key activity
	mechanical works including:
	<ul> <li>erection of the SynCon, transformers, shunt reactor and capacitor banks;</li> <li>installation of oil treatment;</li> <li>gantry erection;</li> <li>installation of electrical equipment;</li> </ul>
	<ul> <li>installation of supporting steel structure;</li> <li>overhead HV cables and cable pulling;</li> <li>switchyard building installation (including control equipment); and</li> <li>construction of the SynCon building;</li> </ul>
	<ul> <li>electrical works including:</li> <li>LV cable pulling, cable dressing and terminations; and</li> <li>outdoor installation of the lighting system.</li> </ul>
Establishment ancillary facilities along the transmission line corridor	A number of minor staging, storage and laydown ancillary areas would be required within the project corridor for temporary storage of materials, plant and equipment required to construct the various elements of the proposal (in particular transmission line structures). Some temporary mobile batching plant locations may also need to be established to enable for easily access to concrete.
	Upon completion of works, these ancillary sites would be cleared of any temporary infrastructure and equipment, and rehabilitated. These sites would be in place for shorter periods at locations suitable to support the construction works as they move along the alignment.
Property adjustment work, including adjustments to property fencing	Installation or adjustment of gates and fences would be required at some locations along the alignment to enable access from the nearest roadway to construction areas. These would be constructed in consultation with the relevant council and/or affected landholder.
Water supply points – establishment and/or use	A series of water supply points have been identified as suitable connection points to existing water supply pipelines. The proposed water supply points which are to be established and / or used include:
	Alcheringa Drive, Buronga;
	Modica Crescent, Buronga;
	Fletchers Lake Drive, Dareton;
	Beverley Street, Wentworth; and
	690 Pomona Road, Pomona/Oxley Drive, Pomona.
Construct access points	The establishment of access points would include:
	<ul> <li>establishing vehicle access and egress points including adjustment of state and regional roads to ensure safe vehicle movements; and</li> </ul>
	establishing truck wheel wash or rumble grids.
	The definition of construction within the Infrastructure Approval does not include road upgrades (which includes access points). Road upgrade works are, however, incorporated within the Traffic and Transport Management Plan as required by condition D40 b).
Construct access tracks	Access to each tower would be required during construction. Access tracks would be required to be traversable by a range of vehicles. Access tracks would fall into two broad groups:
	<ul> <li>un-improved access tracks - using existing roads or tracks, or driving on existing soil or ground surface with minimal or no prior preparation; and</li> </ul>
	<ul> <li>constructed access tracks – around six metres wide and would generally follow the natural contour of the land as far as practicable to minimise the amount of cut and fill and soil disturbance. Access tracks would also include drainage control features such as table drains or cross banks to minimise erosion.</li> </ul>
	Constructed access tracks would be required in areas, outside identified heritage risk zones, where there are no existing roads or tracks, or where terrain conditions prevent continuous access along the line easement between road crossings.

Key activity		Description of key activity		
Temporary works		The project will require a significant quantity of temporary works during construction. Temporary works will be undertaken outside identified heritage risk zones. The temporary works will includes, but not limited to, the following:		
		<ul> <li>earthworks, including trenches, excavations, temporary slopes, stockpiles, and embankments;</li> </ul>		
		<ul> <li>structures, such as formwork, shoring, edge protection, temporary bridges, solid fencing/guardrails/barriers and signage, temporary scaffold; and</li> </ul>		
		<ul> <li>equipment/plant foundations, such as work platforms, crane, and piling platforms.</li> </ul>		
Transmission line construction	Earthworks and transmission tower footing construction	Excavation works and establishment of construction pads at each tower site would be required for the installation of foundations, levelling around the individual tower foundations, drainage and grading or preparation for construction at the tower site. Excavations would typically be up to five metres in depth. Construction of footings and foundation works for the new transmission line towers includes:		
		• piling. Typical transmission line tower piling depth would be generally up to 6- 15 metres below ground level and would depend on ground conditions (e.g. greater piling depths would be required where soft soil types are present). The foundation type would also vary (subject to detailed design) but would consist of either:		
		<ul> <li>bored pile (reinforced concrete);</li> </ul>		
		<ul> <li>driven or screw pile (concrete or steel); and</li> <li>helical screw anchor, or cast in-situ reinforced concrete.</li> </ul>		
		<ul> <li>excavation to create bench sites (stepped ground excavation) where required to provide a level platform for equipment setup, the erection of the tower and other construction activities. Benching would be constructed by use of earthing equipment such as graders and excavators;</li> <li>steel fabrication works; and</li> </ul>		
		<ul> <li>concrete pours.</li> </ul>		
	Assembly and erection of	The transmission line towers would typically be erected by assembling in sections on the ground and hoisting or lifting successive sections into place using cranes.		
	transmission line towers	Alternatively, towers may be erected in place on the footings by installing individual members. These towers would include infrastructure such as step bolts, climbing attachment plates, ladders, platforms, climbing barriers, identification plates, warning plates, other fixtures and fittings for the attachment of earthwires and insulators.		
	Stringing of transmission lines including	Following erection and securing of the tower, the transmission line would be strung by either a ground pulled draw wire (with brake/winch sites) or a line stringing drone.		
	conductors and overhead earth wires and optical ground wire	The area required for the construction of each tower would require access for tower assembly and stringing works. Where a transmission tower is proposed to allow for a direction change of the transmission line, a larger area would be required (to allow for brake and winching sites). At a typical site, this would include a temporary area of up around 60 metres by 80 metres at each transmission line tower location.		
		Stringing of transmission line would also be required across the following three major watercourses:		
		<ul> <li>the Great Darling Anabranch, Wentworth NSW;</li> </ul>		
		Darling River, Ellerslie NSW; and		
		Murray River, Monak NSW / Red Cliffs Victoria. The general construction methodology is to accomple and creat a transmission line.		
		The general construction methodology is to assemble and erect a transmission line structure on either side of each major river crossing. A drone would then be used to take a lead wire over the river to allow cables to then be pulled and strung tower to tower.		
	Installation of	The following key activities will be undertaken:		
	earthing conductors	<ul> <li>installation of earthing conductors at each of the transmission tower arms; and</li> </ul>		

Key activity	Description of key activity		
	<ul> <li>installation of earthing or isolation sections of fences and gates where the transmission line crosses or closely runs parallels to a metallic fence.</li> </ul>		
Utility adjustments and protection	Utility adjustment works would be required to convert several overhead distribution powerlines up to and including 66kV to underground cables.		
	The existing alignment of the Broken Hill transmission line would require relocation at two locations. This would comprise of:		
	• a permanent relocation of the existing transmission line in the vicinity of the Darling River. This would require the construction of two new monopoles, and the stringing of conductors/earth wires between the existing and new structures. The redundant tower would be decommissioned; and		
	<ul> <li>a temporary relocation of a section of the existing transmission line that currently passes through the existing Buronga substation. This would be temporarily relocated around 200 metres to the east of its current alignment (along the eastern boundary of the existing substation site). Once the construction works to upgrade the substation are completed, the alignment of the 220kV Broken Hill line would be restored in a location generally consistent with the original line location.</li> </ul>		
	General utility protection and adjustment works, where required, to allow for the Buronga substation expansion and upgrades works to occur, the establishment and operation of the construction compound and accommodation camps, and where else required.		
Decommissioning of existing	Decommissioning and removal of:		
infrastructure	<ul> <li>the existing 220 kV transmission line between Buronga substation and the NSW / Victoria border;</li> </ul>		
	<ul> <li>the temporary bypass transmission line infrastructure installed to allow construction of the new double circuit 220kV line; and</li> </ul>		
	<ul> <li>a single tower on the existing 220kV Broken Hill line in the vicinity of the Darling River.</li> </ul>		
Progressive site rehabilitation and landscaping	Site rehabilitation would be carried out progressively along completed sections of the transmission line as well as the expanded substation site. These activities include:		
	• removal of redundant environmental controls within the transmission tower easement; and		
	removal of temporary equipment and machinery.		

Some activities nominated in this stage will have already commenced as part of the pre-construction minor works permitted in accordance with the Infrastructure Approval. These works will remain excluded from the definition of 'construction' and will therefore not be subject to the Stage 2 Construction Environmental Management Plan (CEMP) and this strategy.

This strategy has been prepared specifically for EnergyConnect (NSW – Western Section) Stage 2 of construction.

# 1.4 Objective

The objective of this strategy is to identify and assess the potential impacts for any potential road upgrades including roads, intersections, crossing points and access points. The objective of this strategy is to also provide detail in relation to the use of water supply routes and secondary access routes and potential amenity impact to sensitive receivers along these routes.

This strategy will ensure that:

- the location and type of road upgrades are identified, including information in relation to whether they are temporary or permanent;
- implementation of the road upgrades are carried out to the satisfaction of the relevant road authorities;

- all proposed upgrades comply with *Austroads Guide to Road Design* (unless agreed otherwise with the relevant road authority);
- impacts associated with the road upgrades are assessed;
- appropriate mitigation measures to minimise impacts to affected stakeholders are explained; and
- measures are detailed for notifying, seeking feedback and addressing concerns of impacted residents along the associated routes.

For water supply routes:

- detailed usage of the routes including expected daily traffic volumes and approximate durations of use are identified; and
- assessment of potential dust impacts and road noise to residences along the routes are identified and mitigation measures to minimise any impacts are explained.

# 1.5 Principles

SecureEnergy will adopt a collaborative approach to meeting the goals of stakeholders including affected residences and road authorities. The placement of experienced, trained staff will enable SecureEnergy to monitor the systems and implement controls that promote free-flow of traffic and minimise impacts, particularly during the peak construction period where construction traffic volumes will be at their greatest.

Stakeholders including road users, residents and businesses will remain informed of pending changes with concise, timely and targeted notifications (refer to Section 5 for further detail). Control measures will be implemented to avoid and/or mitigate these impacts and maintain the level of service at all intersections and mid-blocks throughout the Stage 2 work areas.

SecureEnergy will apply the following key road safety and traffic management principles to manage the safety and amenity of all road users and the public:

- minimising the operational interruption to the road network and maintaining the desired operational speed;
- ensuring potentially affected road users and landowners are identified during the planning and construction phase;
- installing traffic controls that effectively inform and guide road users, and comply with relevant road authority requirements and the Australian Standards;
- plan and stage all works effectively to minimise road occupancy where possible thus reducing the impacts on road users and stakeholders;
- effective planning of all construction vehicle movements including the provision of safe ingress and egress points at the interface with the existing road network; and
- maximising the use of the State and regional road network to minimise impacts on local roads and residential areas.

# 1.6 Consultation

In accordance with condition D37 of the Infrastructure Approval, this strategy has been prepared in consultation with Transport for New South Wales (TfNSW) and Wentworth Shire Council. This strategy was issued to relevant stakeholders for review and comment. Comments from the consultation process have been incorporated into this strategy where appropriate.

Following consultation with TfNSW, TfNSW requested an assessment of the warrants for turn treatment as per Figure 3.25 of Austroads Guide to Traffic Management Part 6 for intersections with the State classified road network. This assessment for Sturt Highway and Silver City Highway has been undertaken and provided to TfNSW separately to this Traffic Strategy.

TfNSW also advised that a Works Authorisation Deed will be required for the intersection treatments proposed on the Silver City Highway and Sturt Highway. SecureEnergy has commenced the Work Authorisation Deed process and intents to resolve this matter separately to this Traffic Strategy.

Details of all consultation with the TfNSW and Wentworth Shire Council will be submitted to DPE along with the submission of this strategy.

#### 1.7 Submission and approval

Prior to submission to DPE, the strategy will be reviewed by the Environmental Representative (ER) to ensure that the strategy is consistent with the requirements of the Infrastructure Approval. A written statement to this effect will be prepared and submitted to DPE. This review will be undertaken in accordance with condition A19 of the Infrastructure Approval.

This strategy will be submitted to DPE for review, and for confirmation of the Planning Secretary's satisfaction.

# 2 Environmental requirements

# 2.1 Legislation

The most applicable legislation to this strategy is the Roads Act 1993.

Under the *Roads Act 1993*, consent of the appropriate road authority is required for the following activities:

- erect a structure or carry out a work in on or over a public road;
- dig up or disturb the surface of a public road;
- remove or interfere with a structure, work or tree on a public road; and
- pump water into a public road from any land adjoining the road.

Works under section 138 of the *Roads Act 1993* are addressed through Wentworth Shire Council's Road Opening Permit (ROP) system. SecureEnergy will obtain the required ROPs prior to commencing the associated Stage 2 works. Additionally, under section 138(2) of the *Roads Act 1993*, TfNSW also has the right to exercise authority over the proposed works on classified roads.

# 2.2 Conditions of Approval

The definition of construction within the Infrastructure Approval does not include road upgrades (which includes access points). The road upgrades can therefore occur prior to approval of the CEMP and Traffic and Transport Management Plan (TTMP) (subject to the relevant roads authorities approving design and issuing road occupancy licences, etc.).

The conditions of the Infrastructure Approval relevant to this strategy are presented in Table 2.1. A cross reference is also included to indicate where the condition is addressed within this strategy.

Condition no.	Requirement	Where addressed	How addressed
D37	Prior to commencing construction, the Proponent must prepare a Traffic Strategy, in consultation with the relevant roads authority, to the satisfaction of the Planning Secretary, which:	Section 1.6 Section 1.7	Section 1.6 outlines that this strategy has been prepared in consultation with the relevant roads authorities. Section 1.7 details the submission process for this strategy and the requirement to prepare this document to the satisfaction of the Planning Secretary.
	a) for all access routes:		
	<ul> <li>identifies the location and type of any necessary road upgrades (including roads, intersections, crossing points and access points), including consideration of relevant amenity impacts;</li> </ul>	Section 3.5 Section 4	The location and type of road upgrades required for Stage 2 is outlined in Section 4 and Appendix B and visually represented in Appendix C, D and E.
	<ul> <li>ensures that any road upgrades comply with the Austroads Guide to Road Design (as amended by TfNSW supplements), unless the relevant roads authority agrees otherwise;</li> </ul>	Section 4.1	SecureEnergy will obtain certification from the road designer that the road design drawings comply with the relevant standards.

#### Table 2.1 - Conditions of Approval relevant to this strategy

Condition no.	Requirement	Where addressed	How addressed
	<ul> <li>includes a detailed assessment of potential impacts of any necessary road upgrades (such as heritage and biodiversity impacts), including consideration of appropriate mitigation measures;</li> </ul>	Section 4.3 to 4.9	A detailed assessment of potential impacts as a result of the access points is outlined in Section 4.4to 4.9. Mitigation measures to minimise the impacts associated with the access points are also outlined in Section 4.4 to 4.9.
	<ul> <li>identifies whether intersections, crossing points and access points would be permanent or temporary; and</li> </ul>	Section 4	The access points used to access construction compounds, accommodation camps and the transmission easement throughout construction are temporary in nature and will be removed upon completion. The access point to Buronga
			Substation will be permanent. No crossing points or new intersections are proposed.
	<ul> <li>includes measures for notifying, seeking feedback from and addressing the concerns of impacted residents along the routes;</li> </ul>	Section 5 Section 5.1 Community Communication Strategy (CCS)	Sections 5 and 5.1 outline a process for notifying, seeking feedback and addressing concerns of impacted residents along the routes. For further detail on measures for notifying, seeking feedback and addressing concerns of impacted residents, refer to the CCS.
	<ul> <li>b) for Secondary Access Routes and Water Supply Routes:</li> </ul>		
	<ul> <li>provides detailed usage of the routes, including maximum daily numbers of heavy and light vehicles and approximate durations of use;</li> </ul>	Section 3.3 Section 3.4	Section 3.3 and 3.4 outline the anticipated construction traffic volumes on the secondary access routes and the water supply routes. The duration of use is anticipated to be for the entire duration of construction.
	<ul> <li>includes an assessment of dust impacts to any residences along the routes and identifies mitigation measures to minimise any impacts; and</li> </ul>	Section 3.3.3 Section 3.4.3	The majority of secondary access routes for Stage 2 works are located on unsealed roads (with the exception of Pooncarie Road/Wentworth Street and Milpara Road). The water supply routes for Stage 2 works are located on sealed roads. Section 3.3.3 and 3.4.3 outline the dust impacts and mitigation measures associated with the secondary access routes and water supply routes.
	• identifies any residences along the routes that would experience road traffic noise above the relevant assessment criteria from Table 3 in <i>NSW Road Noise</i> <i>Policy</i> (DECCW, 2011) due to project-related traffic and identifies mitigation measures to minimise impacts.	Section 3.3.2 Section 3.3.4 Section 3.4.2 Section 3.4.4	Section 3.3.2 and 3.4.2 identify the residential receivers located along the secondary access routes and the water supply routes. Section 3.3.4 and 3.4.4 provide an assessment of the noise levels generated from construction vehicles utilising the secondary access routes and water supply

Condition no.	Requirement	Where addressed	How addressed
			routes at the nearest identified sensitive receivers along the proposed route.
			Section 3.3.4 and 3.4.4 outline the mitigation measures to minimise the noise impacts associated with construction vehicle use of the secondary access routes and water supply routes.
D38	Prior to commencing construction, the proponent must implement the road upgrades and the mitigation measures identified in the Traffic Strategy in condition D37, to the satisfaction of the relevant roads authority and the Planning Secretary, respectively.	Section 4 Section 4.2	Section 4 outlines that road upgrades will be implemented to the satisfaction of the relevant roads authority and mitigation measures identified in this strategy will be implemented to the satisfaction of the Planning Secretary. Section 4.2 identifies the proposed scheduling of the installation of the access points and the areas in which construction may commence once the access point(s) achieves satisfaction of the roads authority and Planning Secretary.
			It is proposed to install and obtain satisfaction of the access points progressively to enable construction of the relevant sections of the easement (or other construction areas) to also commence progressively as access points are approved (subject to all conditions of Approval).

# 3 Access routes

The existing road network within the Wentworth Shire Local Government Area (LGA) consists of a combination of national, State, regional and local roads. Stage 2 construction will use State, regional and local roads which are identified in Appendix 2 of the Infrastructure Approval.

Appendix 2 of the Infrastructure Approval identifies three types of access routes (primary, secondary and water supply) that will be used by construction vehicles between work areas and the main construction compounds and accommodation camps. The routes include:

- primary access routes refer to the potential haulage routes and key access routes;
- secondary access routes refer to localised haulage routes that would be used to provide immediate access to the construction areas; and
- water supply routes refer to haulage routes that originate from nominated water supply.

The key roads to be used for Stage 2 of construction are detailed in Table 3.1. Figure 3.1 identifies the primary, secondary and water supply routes to be used for Stage 2 construction activities.

Name	Description	Classification	Relevant road authority		
Primary access routes					
Silver City Highway (B79)	<ul> <li>A 683 kilometre (km) long sealed highway with two lanes, which is a state road with the Gazetted Road Number of 22 that connect Buronga to Queensland Border.</li> <li>It runs in an east-west alignment between Wentworth and Buronga and north-south between Wentworth and Broken Hill. It has a general speed limit of 100km per hour and 60km per hour in larger town centres such as Buronga and Dareton.</li> <li>There are no dedicated pedestrian and cycling facilities within Wentworth Shire LGA, no pedestrian footpath or shoulder on Silver City Highway with pedestrians traversing along road verge and cyclists in traffic lanes. The speed along the highway and rural nature of the area (general lack of pedestrian destinations) results in minimal pedestrian and cycle activity.</li> </ul>	State	TfNSW		
Sturt Highway (A20)	A state road which is a major east-west highway that connects Buronga to Wagga Wagga, allows for passenger vehicles and heavy vehicles, is a sealed highway with one lane in each direction in a north-south alignment in Wentworth LGA. General speed limit of 100km per hour and 60km per hour in town centres. Has a dedicated cycling facility and a dedicated pedestrian footpath only on the West side on George Chaffey Bridge between Mildura and Buronga. A narrow road shoulder in both directions allows some room for cyclists but is deficient of minimum standard width, outside of town centres the speed of the traffic leads and rural nature of the area (general lack of pedestrian destinations) to minimal pedestrian and cycle activity.	State	TfNSW		
Arumpo Road	Sealed regional road with unsealed road shoulders, connects traffic from Silver City Highway and Sturt Highway to Lake Mungo, with a speed limit of 100km per hour and one lane in each direction.	Regional*	Wentworth Shire Council		
Renmark Road	Partially sealed regional road that connects South Australian border with Silver City Highway. Sealed from Silver City Highway for around 18km with unsealed road shoulders, where the rest of the road to South Australia border is unsealed. Has a speed limit of 100km per hour with one lane in each direction.	Regional*	Wentworth Shire Council		

#### Table 3.1 - Roads used for the delivery of Stage 2

Name	Description	Classification	Relevant road authority	
Secondary access	routes			
Anabranch Mail Road	Unsealed road, no line markings. Connects traffic from intersection with Renmark Road and extends north.	Local	Wentworth Shire Council	
Milpara Road	Sealed road. Connects traffic from Silver City Highway to Anabranch Mail Road.	Local	Wentworth Shire Council	
High Darling Road	A section of the road is sealed (approximately 7km) with the remaining section unsealed, no line markings. Connects traffic from Silver City Highway and extends north.	Local	Wentworth Shire Council	
Low Darling Road	Unsealed road, no line markings. Connects traffic from intersection with Red Hill Road and extends north.	Local	Wentworth Shire Council	
Pooncarie Road/Wentworth Street	Sealed regional road that connects the town of Wentworth to the village of Pooncarie. This road is sealed between Wentworth and Pooncarie, with a posted speed limit of 80km per hour and one lane in each direction.	Regional*	Wentworth Shire Council	
Dansons Road	Unsealed road, no line markings. Connects traffic from Sturt Highway and extends east.	Local	N/A (Private road)	
Nulla Road	Unsealed, no line markings. Connects traffic from the transmission line alignment to Renmark Road.	Local	Wentworth Shire Council	
Pine Camp Road	Unsealed road, no line markings. Connects traffic from the transmission line alignment to Renmark Road.	Local	Wentworth Shire Council	
Water supply rout	es			
Alcheringa Drive	Sealed local road	Local	Wentworth Shire Council	
Corbett Avenue	Sealed local road	Local	Wentworth Shire Council	
Modica Crescent	Sealed local road	Local	Wentworth Shire Council	
Arthur Street	Sealed road with sealed shoulders and concrete kerbs. Connects traffic from Darling Street to Beverley Street. Has a speed limit of 60km per hour with one lane in each direction.	Local	Wentworth Shire Council	
Beverley Street	Sealed road with sealed shoulders and concrete kerbs. Connects traffic from Darling Street to Beverley Street. Has a speed limit of 60km per hour with one lane in each direction.	Local	Wentworth Shire Council	
Sandwych Street	dwych Street Sealed road with sealed shoulders and concrete kerbs. Connects traffic from Darling Street to Beverley Street. Has a speed limit of 60km per hour with one lane in each direction.		Wentworth Shire Council	
Fletchers Lake Road	Lake Sealed road with unsealed shoulders. Connects traffic from Silver City Highway to Pooncarie Road. Speed limit of 80km per hour with one land in each direction.		Wentworth Shire Council	
Pomona Road	Sealed road with unsealed shoulders and line markings.	Local	Wentworth Shire Council	

concurrence pursuant to s138 of the Roads Act 1993 and reviews the safety aspects associated with proposed accesses to the regional classified road network.

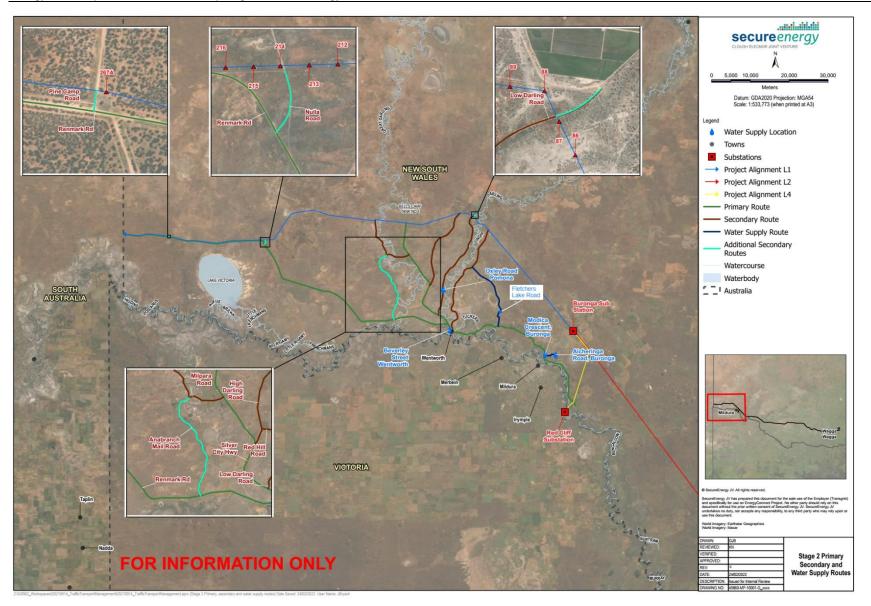


Figure 3.1 - Primary, secondary and water supply routes for Stage 2

# 3.1 Assessment methodology and metrics

TfNSW's *Guide to Traffic Generating Developments* demonstrates the indicative level of service and the corresponding theoretical peak hour traffic flows typically applied for urban roads which are subjected to interrupted flows (i.e. interruptions from turning traffic at minor intersections and access driveways) (refer to Table 3.2 below).

Level of service (LoS)	One lane (vehicle/hour)
А	200
В	380
C	600
D	900
E	1400

Table 3.2 - TfNSW Guide to Traffic Generating Developments (Oct 2002)

TfNSW's *Guide to Traffic Generating Developments* indicates a desirable traffic flow is maintained up to a Level of Service (LoS) C for weekday peak hour traffic, which equals to approximately 600 vehicles per hour for each lane. In recreational peak hours (i.e., peaks associated with tourist or recreational activity), traffic flow of up to LoS D is generally accepted, which translates to approximately 900 vehicles per hour.

## 3.2 Primary access routes assessment

## 3.2.1 Traffic impact and mitigation measures

The Technical Paper 9 (Traffic and transport impact assessment) of the EIS was prepared by WSP and is dated 21 October 2020, and provides the traffic volume data of the key roads identified for Stage 2. The available traffic volumes for this study were received from Wentworth Shire Council and TfNSW traffic volume viewer, which for the most part covered the period of 2010 to 2012. Traffic volumes are unlikely to have substantially changed since the data period.

Table 3.3 provides a summary of the existing daily traffic volumes, peak hourly traffic estimates and capacity of the primary access routes used for Stage 2 works.

Road name	Daily traffic volume (vehicles per day)	Peak hourly traffic estimates	Capacity (vehicles per hour)
Regional roads			
Arumpo Road	327	32 (in both directions)	3,600 (in both directions)
Renmark Road	<50	<10	-
State roads			
Silver City Highway			
Ellerslie – between Broken Hill and Wentworth (from Broken Hill to Perry Street)	358	35	3,600 (in both directions)
Within Wentworth Town Centre (from Perry Street in Wentworth to Delta Road in Wentworth)	2,559	255	2,000 (in both directions)
Mourquong – between Dareton and Buronga (from Fletchers Lake Road to Corbett Avenue)	2,228	222	3,600 (in both directions)
Within Buronga Town Centre (from Corbett Avenue to Sturt Highway)	5,478	547	2,000 (in both directions)

Table 3.3 - Summary of existing road information for primary access routes

Road name	Daily traffic volume (vehicles per day)	Peak hourly traffic estimates	Capacity (vehicles per hour)
Sturt Highway			
George Chaffey Bridge – between Mildura and Silver City Highway, Buronga	10,593	1,059	3,600 (in both directions)
Within Buronga (between Silver City Highway and Knights Road in Gol Gol)	2,730	273 (in eastern direction)	500 (in eastern directions)

Appendix E (Traffic and transport assessment memorandum) of the Response to DPIE Request for Information identifies the anticipated traffic volumes during the peak construction period for primary access routes for EnergyConnect (NSW – Western Section). Table 3.4 below outlines the anticipated and assessed construction traffic volumes for the primary access routes. The construction traffic numbers are based on construction of the entire project, which includes construction of the transmission line.

Access location	Road condition	Relevant road	Construction period vehicle movements per day (indicative)		Duration of use during
		authority	Peak	Typical	construction
Regional roads					
Arumpo Road between Silver City Highway and Buronga substation	Sealed road with centreline marking and unsealed shoulders Two-lane and two- way traffic configuration	Wentworth Shire Council	Light vehicles – 500 per day Heavy vehicles – 400 per day	Light vehicles – 280 per day Heavy vehicles – 280 per day	Duration of full construction program
Renmark Road between Silver City Highway and the South Australian border with SA	Partially sealed road with centreline marking and with unsealed road shoulders. Two-lanes and two-way.	Wentworth Shire Council	Light vehicles - 500 per day Heavy vehicles - 400 per day	Light vehicles - 280 per day Heavy vehicles - 280 per day	Duration of full construction program
State roads					
Silver City Highway (B79) between Sturt Highway and the transmission line alignment	Sealed highway with line-markings. No pedestrian footpath or road shoulder. Two-lanes and two- way between Town Centres. Four-lanes and two-way within Town Centres of Wentworth, Dareton and Buronga.	TfNSW	Light vehicles - 500 per day Heavy vehicles - 400 per day	Light vehicles - 280 per day Heavy vehicles - 280 per day	Duration of full construction program
Sturt Highway (A20) between Silver City Highway and Keens Road in Monak (near transmission line alignment)	Sealed highway with line-markings. Narrow road shoulder in both directions. Two-lanes and two-way.	TfNSW	Light vehicles - 500 per day Heavy vehicles - 400 per day	Light vehicles - 280 per day Heavy vehicles - 154 per day	Duration of full construction program

Appendix J (Traffic, transport and access impact assessment) of the Amendment Report identifies the additional construction traffic on the road network due to construction activities on the primary access routes for all the construction activities. Table 3.5 below compares the existing daily traffic volumes and LoS, with the numbers for the construction traffic volumes and resulting LoS.

	Existing		Construction (A	Construction (Amendment Report)		
Road name	Traffic volume (vehicle per day)	Initial volume/ capacity (LoS)	Traffic volume (vehicles per day)	Resulting volume/ capacity (LoS)		
Arumpo Road	327	0.9%	1,227	3.4%		
		(LoS A)		(LoS A)		
Renmark Road	<50	N/A	N/A	N/A		
Ellerslie – between Broken Hill and Wentworth (from Broken Hill to Perry Street)	358	1.0% (LoS A)	1,258	3.5% (LoS A)		
Wentworth Town Centre (from Perry Street in Wentworth to Delta Road in Wentworth)	2,559	12.8% (LoS A)	3,459	17.3% (LoS A)		
Mourquong – between Dareton and Buronga (from Fletchers Lake Road to Corbett Avenue)	2,228	6.2% (LoS A)	3,128	8.7% (LoS A)		
Within Buronga Town Centre (from Corbett Avenue to Sturt Highway)	5,478	27.4% (LoS B)	6,378	31.9% (LoS B)		
George Chaffey Bridge – between Mildura and Silver City Highway, Buronga	10,593	29.4% (LoS B)	11,493	31.9% (LoS B)		
Within Buronga (between Silver City Highway and Knights Road in Gol Gol)	2,730 (eastbound only)	54.6% (LoS C)	3,630	72.6% (LoS D)		

Overall, the increase in traffic volumes for all the construction activities is not likely to significantly impact the efficiency of the road network. The addition of construction traffic on the primary access routes will mostly maintain a LoS between A and C, which depicts satisfactory traffic conditions for Stage 2 construction. The Sturt Highway (between Knights Road, Gol Gol and Silver City Highway) will experience a decrease in the LoS (from LoS C to LoS D), but only at times when the full anticipated construction traffic volumes occur. LoS D is still well within road capacity.

Mitigation measures to minimise the traffic impact of construction vehicles on the primary access routes are based on those identified in Section 8 of the Technical Paper 9 (Traffic and transport impact assessment) and include:

- design access and egress points to minimise conflicts with vehicle movements on the road network and in accordance with relevant safety requirements;
- conduct a road dilapidation survey;
- obtain the required permits from road authorities;
  - for occupation of the road corridor; and
  - over size and over mass vehicle movements;

• maintain access for residents.

#### 3.3 Secondary access routes assessment

#### 3.3.1 Traffic impact and mitigation measures

Secondary access routes will provide intermediate access to the transmission line corridor and will only be required at certain times (for periods of less than one year) over the full construction program. These routes are required to ensure the efficient movement of construction equipment and materials via the public road network to sections of the transmission line corridor where:

- access points on primary access routes are considerably distanced from certain sections of the corridor; and
- where key waterways prevent access across the corridor.

Appendix E (Traffic and transport assessment memorandum) of the Response to DPIE Request for Information identifies the anticipated traffic volumes during the peak construction period for secondary access routes for EnergyConnect (NSW – Western Section).

Table 3.6 outlines the anticipated construction traffic volumes (peak and typical) for the secondary access routes. Peak construction traffic volumes along the secondary routes will occur during discrete construction activities. Any peak movements would therefore only occur for a short duration.

1	volumes)					
	Access location	Road condition	Relevant road authority	Construction p movement (indica	s per day	Indicative duration of use during
			aumonty	Peak	Typical	construction
	Regional roads					
	Wentworth Street	Sealed road with	Wentworth	Light vehicles -	Liaht	Less than one

Table 3.6 - Anticipated construction traffic volumes on secondary access routes (conservative volumes)

Regional roads	egional roads							
Wentworth Street between Silver City Highway and Pooncarie Road	Sealed road with centreline marking and no road shoulders. Two-lanes and two-way	Wentworth Shire Council (Regional Road)	Light vehicles - 60 per day Heavy vehicles - 100 per day	Light vehicles - 40 per day Heavy vehicles - 25 per day	Less than one year			
Pooncarie Road between Wentworth Street and the transmission line alignment	Sealed road with centreline marking and unsealed road shoulders. Two-lanes and two- way	Wentworth Shire Council (Regional Road)	Light vehicles - 60 per day Heavy vehicles - 100 per day	Light vehicles - 40 per day Heavy vehicles - 25 per day	Less than one year			
Local roads	1	1						
Anabranch Mail Road between Renmark Road and the transmission line alignment Milpara Road between Anabranch Mail Road and Silver City Highway	Unsealed road with no road shoulders. Two-way road	Wentworth Shire Council (Local Road)	Light vehicles - 100 per day Heavy vehicles - 50 per day	Light vehicles - 60 per day Heavy vehicles - 25 per day	Less than one year			
High Darling Road between Silver City Highway and the transmission line alignment	Mostly unsealed road with no road shoulders. Two-way road	Wentworth Shire Council (Local Road)	Light vehicles - 60 per day Heavy vehicles - 50 per day	Light vehicles - 40 per day Heavy vehicles - 25 per day	Less than nine months			

Access location	Road condition	Relevant road authority	Construction period vehicle movements per day (indicative)		Indicative duration of use during
		autionty	Peak	Typical	construction
Low Darling Road between Pomona Road and the access point located north of the transmission line	Mostly sealed road with unsealed road shoulders. Two-lanes and two- way	Wentworth Shire Council (Local Road)	Light vehicles - 60 per day Heavy vehicles - 50 per day	Light vehicles - 40 per day Heavy vehicles - 25 per day	Less than six months
Dansons Road between Sturt Highway and the transmission line alignment	Unsealed road with no road shoulders. Two-way road	Wentworth Shire Council (Local Road)	Light vehicles - 100 per day Heavy vehicles - 50 per day	Light vehicles - 60 per day Heavy vehicles - 25 per day	Less than one year
Nulla Road	Unsealed road with no road shoulders. Two-way road	Wentworth Shire Council (Local Road)	Light vehicles - 60 per day Heavy vehicles - 50 per day	Light vehicles - 40 per day Heavy vehicles - 25 per day	Less than one year
Pine Camp Road	Unsealed road with no line markings. Two-way road	Wentworth Shire Council (Local Road)	Light vehicles - 20 per day Heavy vehicles - 10 per day	Light vehicles - 20 per day Heavy vehicles - 10 per day	Less than one year

The highest amount of additional traffic on the identified secondary access routes generated from construction is 160 vehicle movements per day (along Pooncarie Road). This approximates to a peak hourly construction traffic rate of 16 vehicle movements per hour.

Considering the desired theoretical threshold (LoS C) of 600 vehicle movements per hour per traffic lane, an increase of 16 vehicles movements per hour is approximately three per cent of this threshold. Therefore, the impact of construction-related traffic along the secondary access routes are expected to be minimal and will maintain desirable road flow conditions.

The study in Appendix E (Traffic and transport assessment memorandum) of the Response to DPIE Request for Information did not initially include some roads for capacity assessments, as such no traffic counts are available on these roads for a detailed assessment. However, these roads are observed to have similar traffic, access and land use conditions as those observed on the local and regional roads included for the study. The addition of construction traffic on these roads is also likely to be negligible compared to the desired theoretical threshold (LoS C - 600 vehicle movements per hour).

The potential impacts of construction traffic along the secondary access routes are considered minimal and, therefore, no upgrades are proposed to the road network.

# 3.3.2 Sensitive receivers

Sensitive receivers are present along the secondary access routes for Stage 2. Potential impacts to these sensitive receivers due to the vehicle movements have been considered, as outlined below. The sensitive receivers near to the secondary access routes are outlined in Table 3.7 below.

Road name	Nearest residential receiver (estimated)
Pooncarie Road/ Wentworth Street (sealed road)	Residential sensitive receivers located adjacent to road. Pooncarie Road/Wentworth Street run through moderate areas of residential receivers. Nearest receiver around 15m from street frontage.
Anabranch Mail Road	Residential sensitive receivers located adjacent to road. Nearest receiver around 70m from street frontage.
Milpara Road (sealed road)	Residential sensitive receivers located adjacent to road. Nearest receiver around 250m from street frontage.
High Darling Road	No noticeable dwellings.
Low Darling Road	Residential sensitive receivers located adjacent to road. Nearest receiver around 330m from street frontage.
Danson Road	No noticeable dwellings.
Nulla Road	No noticable dwellings
Pine Camp Road	No noticeable dwellings.

Table 3.7 - Sensitive receivers along secondary access routes

Figure 3.2 provides an indicative representation of the sensitive residential receivers located along the secondary access routes. This was undertaken through a desktop study of the available GIS data.

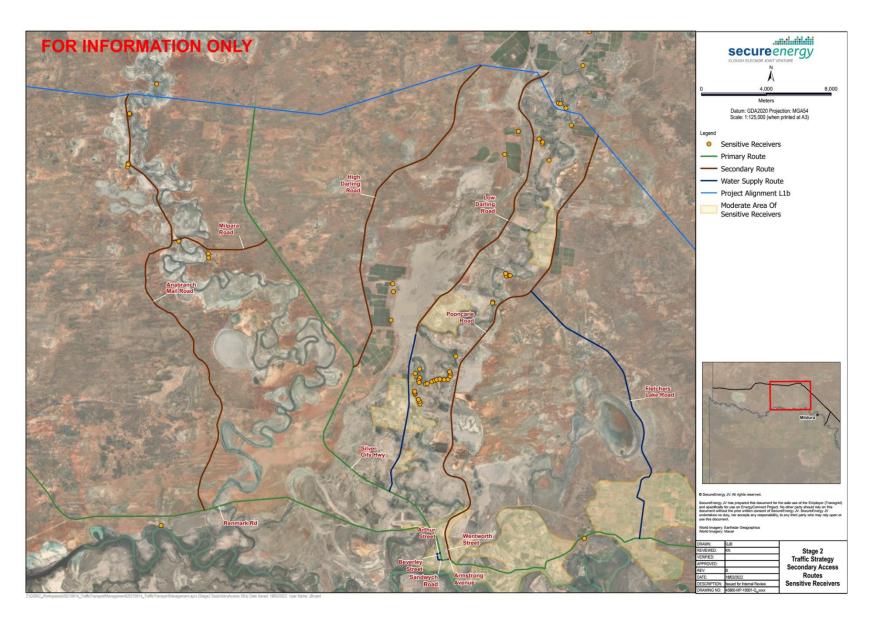


Figure 3.2 - Sensitive receivers adjacent to secondary access routes

# 3.3.3 Dust impacts and mitigation measures

The majority of secondary access routes for Stage 2 works are unsealed roads (e.g. Anabranch Mail Road, High Darling Road, Low Darling Road, Danson Road, Pine Camp Road and Nulla Road). As such, there is the potential for dust impacts to the sensitive residential receivers located along the unsealed secondary access routes.

The potential for dust impacts is greatest for the sensitive receivers (residents) located along the unsealed roads, with the risk increasing with proximity to the road frontage. The closest residence to an unsealed secondary access routes is located around 70m on Anabranch Mail Road.

The potential for dust impacts at nearby sensitive receivers due to project-related traffic on the secondary access routes will depend on the separation distance and the atmospheric conditions (for example wind direction and speed) at the time. The potential for construction-related traffic to generate dust and dust impacts will generally be temporary and of relatively short duration (i.e. while the route is in use to facilitate for construction). Mitigation measures to minimise dust impacts to sensitive residential receivers will be implemented throughout the construction.

On Anabranch Mail Road, the distance to the nearest sensitive receiver is approximately 70m. This separation distance is anticipated to reduce the risk of significant dust impacts to the residence due to construction-related traffic on Anabranch Mail Road. Nevertheless, SecureEnergy will visually monitor dust generation along Anabranch Mail Road in the vicinity of the residents due to construction-related traffic and liaise with the residents. In the event that concerns and complaints are raised in relation to dust impacts, and these are deemed to be due to the project works, SecureEnergy will implement the following mitigation measures:

- where safe to do so, exposed and disturbed surfaces in the vicinity of the residential premises, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority; and
- conduct visual monitoring of dust generated by construction-related traffic.

Pooncarie Road/Wentworth Street and Milpara Road are sealed roads. As such, it is not anticipated that dust impacts will occur on the sealed road as a result of vehicle movements.

# 3.3.4 Noise impacts and mitigation measures

Appendix F (Construction noise risk from secondary access routes and water supply access routes memorandum) of the Response to DPIE Request for Information completed an assessment to estimate noise level contributions from construction-related traffic on secondary access routes (with the exception of Nulla Road and Pine Camp Road).

The assessment indicated that the noise levels generated from construction vehicles utilising the secondary access routes for Stage 2 construction generally comply with relevant amenity-based noise criteria at the nearest identified sensitive receivers along each proposed route. Based on available information, noise levels contributed from construction traffic alone are predicted to comply with relevant amenity-based noise criteria at the nearest identified sensitive receivers along each proposed route. However, contributions are assumed to be above the 2 decibels relative increase, as the assumed existing traffic volumes are expected to be low (with the exception of Pooncarie Road/Wentworth Street). The estimated noise level contribution and the relevant NSW Road Noise Policy (RNP) criteria for the Stage 2 secondary access points are presented in Table 3.8.

Nulla Road and Pine Camp Road were not assessed in Appendix F (Construction noise risk from secondary access routes and water supply access routes memorandum) of the Response to DPIE Request for Information. However, there are no residential sensitive receivers located along the portions of Nulla Road and Pine Camp Road from the transmission line alignment to Renmark Road. As such, it is anticipated that noise impacts from construction-related traffic would be negligible. It is noted that the predicted road noise levels and associated increases will only occur during the day-time period and any noise impacts associated with construction-related traffic would be temporary.

The following noise mitigation and management measures will be implemented to manage potential exceedances of the relative increase criteria as a result of construction traffic:

- driver training in concurrence with the Driver's Code of Conduct (45860-HSE-PR-H-1009); and
- minimising traffic movements by ensuring full loads.

Location	Road classification	Construction period vehicle movements per day (indicative)		Duration	Nearest residential	Estimated noise level contribution	RNP criteria (dBA)		
Location		Peak	Typical	of use	receiver (estimated)	from construction traffic (dBA)	KNF CHIENA (UDA)		
Regional roads	Regional roads								
Pooncarie Road/ Wentworth Street	Dense graded asphalt (DGA), 50 km/h to 100 km/h	Light vehicles - 60 Heavy vehicles - 100	Light vehicles - 40 Heavy vehicles - 25	<1 year	Nearest receiver around 15m from street frontage.	54-57 L <sub>eq 15hr</sub>	60 dBA L <sub>eq 15hr</sub>		
Local roads				1					
Anabranch Mail Road and Milpara Road*	Unsealed, 60 km/h	Light vehicles - 100 Heavy vehicles - 50	Light vehicles - 60 Heavy vehicles - 25	<1 year	Nearest receiver around 70m from street frontage.	53 Leq 15hr	55 dBA L <sub>eq 15hr</sub>		
High Darling Road	Unsealed, 60 km/h	Light vehicles - 60 Heavy vehicles - 50	Light vehicles - 40 Heavy vehicles - 25	<9 months	No noticeable dwellings	N/A	55 dBA L <sub>eq 15hr</sub>		
Low Darling Road	Unsealed, 60 km/h	Light vehicles - 60 Heavy vehicles - 50	Light vehicles - 40 Heavy vehicles - 25	<6 months	Nearest receiver around 330m from street frontage (Low Darling Road).	<50 L <sub>eq 15hr</sub>	55 dBA L <sub>eq 15hr</sub>		
Danson Road	Unsealed, 60 km/h	Light vehicles - 60 Heavy vehicles - 50	Light vehicles - 40 Heavy vehicles - 25	<1 year	No noticeable dwellings.	N/A	55 dBA L <sub>eq 15hr</sub>		
Nulla Road	Unsealed, 60 km/h	Light vehicles - 60 Heavy vehicles - 50	Light vehicles - 40 Heavy vehicles - 25	<1 year	No noticeable dwellings.	N/A	55 dBA L <sub>eq 15hr</sub>		
Pine Camp Road	Unsealed	Light vehicles - 20 Heavy vehicles - 10	Light vehicles - 20 Heavy vehicles - 10	<1 year	No noticeable dwellings.	N/A	55 dBA L <sub>eq 15hr</sub>		

\*Milpara Road was assessed with Anabranch Mail Road in the Response to DPIE Request for Information. At the time of the assessment it was classified as an unsealed road. Since the submission of the Response to DPIE Request for Information, Milpara Road has been sealed. It is anticipated that the noise levels will be less than what was originally assessed (53 Leq 15hr) due to the sealed treatment applied to the road, resulting in a quieter surface for the vehicles to travel on.

## 3.4 Water supply routes assessment

Water supply routes provide connection between the water supply points and the primary and/or secondary access routes. Water supply locations proposed for Stage 2 include:

- Alcheringa Drive, Buronga;
- Modica Crescent, Buronga;
- Fletchers Lake Road, Dareton;
- Beverley Street, Wentworth; and
- 690 Pomona Road, Pomona/Oxley Drive, Pomona.

The water supply point on Alcheringa Drive will continue to be used to supply raw water for Stage 2 works. This site will be located at the point of the existing Buronga re-lift pump station. The proposed works will include installation of horizontal pipework and support.

The water supply point on Modica Crescent will be used to supply potable water for Stage 2 works. Water will be filled through a metered hydrant from the water main on the side of the road. No new infrastructure would be required to allow for access to this water supply point.

The water supply point at Fletchers Lake Road does not currently provide any existing aboveground water supply infrastructure. The proposed works would include installation of a new standpipe and connection to the existing Western Murray Irrigation pipeline. The area is currently not utilised (road reserve/verge) adjacent to Fletchers Lake Road.

The water supply point at Beverley Street includes an access road to an existing overhead fill point along Beverly Street, Wentworth. No new infrastructure would be required to allow for access to this water supply point.

The water supply point at 609 Pomona Road, Pomona currently includes an access road across private property (i.e. a private road) to an existing water pump out point within the property. No new infrastructure will be required to allow for access to this water supply point.

## 3.4.1 Traffic impact and mitigation measures

Appendix E (Traffic and transport assessment memorandum) of the Response to DPIE Request for Information identified anticipated traffic volumes during the peak construction period to and from the water supply points.

Table 3.9 outlines the anticipated construction traffic volumes (peak and typical) for the water supply routes. Table 3.9 conservatively assumes that each water supply point (and associated routes) would be used at the specified frequencies over the full duration of the construction phase.

Access location	Road condition	Relevant road	Construction period vehicle movements per day (indicative)		Duration of use during
		authority	Peak	Typical	construction
Alcheringa Drive between Melaleuca Street and Gol Gol N Road	Sealed road with unsealed road shoulders	Wentworth Shire Council	Heavy vehicles - 40 per day	Heavy vehicles - 30 per day	Full construction program
Corbett Avenue between Silver City Highway and Melaleuca Street	Two-lanes and two- way				

#### Table 3.9 - Anticipated construction traffic volumes on water supply routes (conservative volumes)

Access location	Road condition	Relevant road	Construction period vehicle movements per day (indicative)		Duration of use during
		authority	Peak	Typical	construction
Modica Crescent between Corbett Avenue Corbett Avenue between Silver City Highway and Melaleuca Street	Sealed road Two-lanes and two- way	Wentworth Shire Council	Heavy vehicles - 4 per day	Heavy vehicles - 2 per day	Full construction program
Sandwych Street between Silver City Highway and Beverly Street Beverly Street between Sandwych Street and Arthur Street Arthur Street between	Sandwych Street and Beverley Street are sealed roads with line-markings and road shoulders in both directions. Beverley Street also	Wentworth Shire Council	Heavy vehicles - 4 per day	Heavy vehicles - 2 per day	Full construction program
Silver City Highway and Beverly Street	has angled parking spots in the northbound direction. Arthur Street is a sealed road with unsealed road shoulders for kerbside parking. All roads have two- lanes and are two-				
Fletchers Lake Road between Silver City Highway and Pooncarie Road	way. Sealed road with centre-line marking and unsealed road shoulders.	Wentworth Shire Council	Heavy vehicles - 40 per day	Heavy vehicles - 30 per day	Full construction program
Pooncarie Road between Wentworth Street and the transmission line alignment	Two-lanes and two- way.				
Oxley Road between Pomona Road and Darling River Pomona Road between Silver City Highway and Low Darling Road	Oxley Road and Pomona Road are sealed roads with unsealed road shoulders. All roads have two-	Wentworth Shire Council	Heavy vehicles - 40 per day	Heavy vehicles - 30 per day	Full construction program
High Darling Road between Silver City Highway and the transmission line alignment	lanes and are two- way.				
Low Darling Road between Pomona Road and the transmission line alignment					

The highest amount of additional traffic generated from construction on the identified water supply route roads is 40 vehicle movements per day. Assuming that ten per cent of these movements occur during the peak hour, this approximates to a peak hourly construction traffic rate of four vehicle movements per hour, or one per cent of the desirable theoretical threshold (LoS C). The impacts of construction-related traffic along the nominated water supply routes are expected to be negligible.

SecureEnergy will ensure that the refilling of water supply vehicles is carried out off the carriageway adjacent to the destination. As such, the refilling process is not expected to interact with moving traffic on the road. As a result, no road upgrades along water supply routes are required to accommodate the additional construction-related traffic accessing the water supply points.

#### 3.4.2 Sensitive receivers

Sensitive receivers have been identified along the proposed water supply routes for Stage 2 which may be potentially impacted due to vehicle movements accessing the water supply points on Fletchers Lake Road, Pomona Road and Beverley Street. The sensitive receivers include the following:

- five residential sensitive receivers located along the water supply route for the Alcheringa Drive water supply point. The sensitive receivers are located on Corbett Avenue and Alcheringa Drive;
- three residential sensitive receivers located along the water supply route for the Modica Crescent water supply point. The sensitive receivers are located on Corbett Avenue and Modica Crescent;
- 11 residential sensitive receivers located along the water supply route for the Fletchers Lake Drive water supply point. The sensitive receivers are located on Fletchers Lake Road;
- five residential sensitive receivers located along the water supply route for the 609 Pomona Road, Pomona water supply point. The sensitive receivers are located on Pomona Road; and
- 19 residential sensitive receivers located along the water supply route for the Beverley Street, Wentworth water supply point. The sensitive receivers are located on Beverley Street, Wentworth.

Figure 3.3 to 3.6 presents the locality of the residential sensitive receivers for the water supply routes.

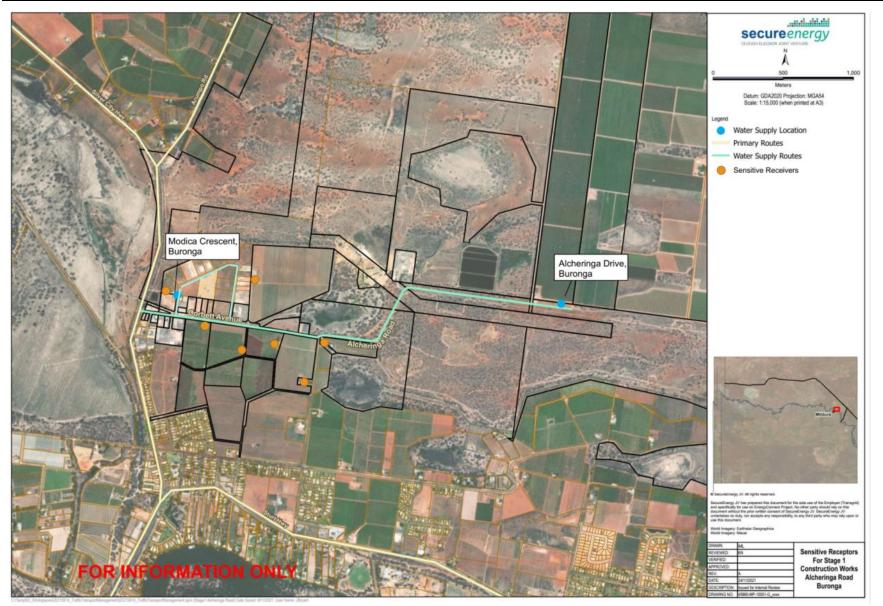


Figure 3.3 - Alcheringa Drive and Modica Crescent water supply route

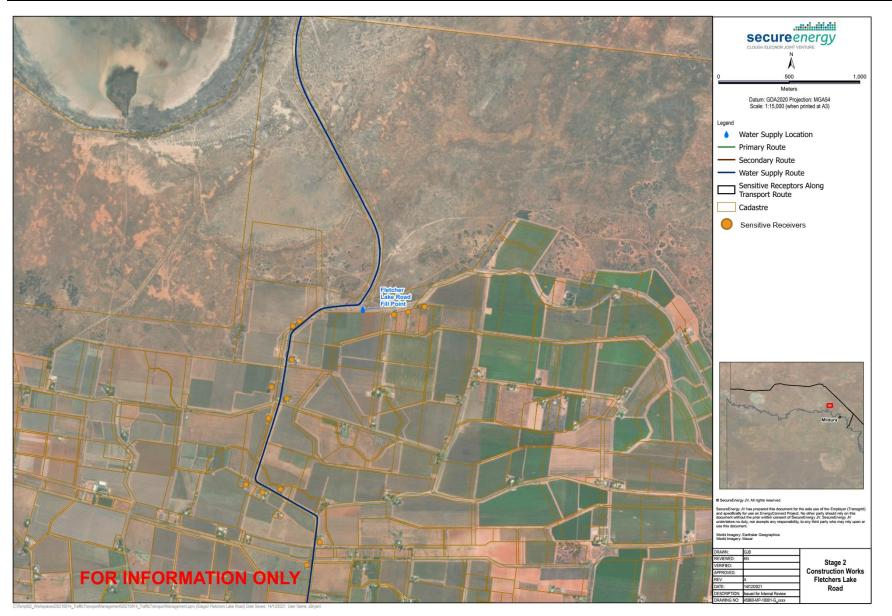
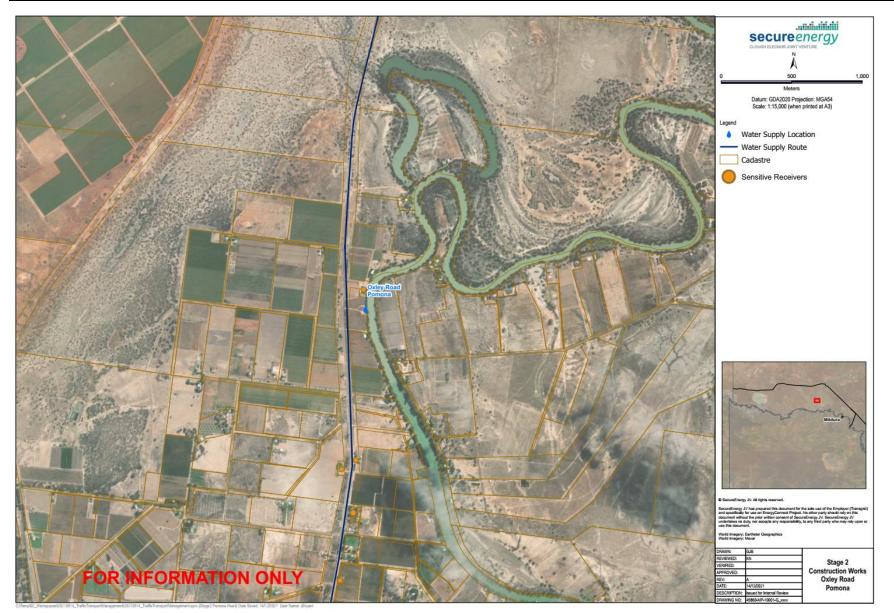


Figure 3.4 - Fletchers Lake Road water supply route



#### Figure 3.5 - Pomona Road water supply route

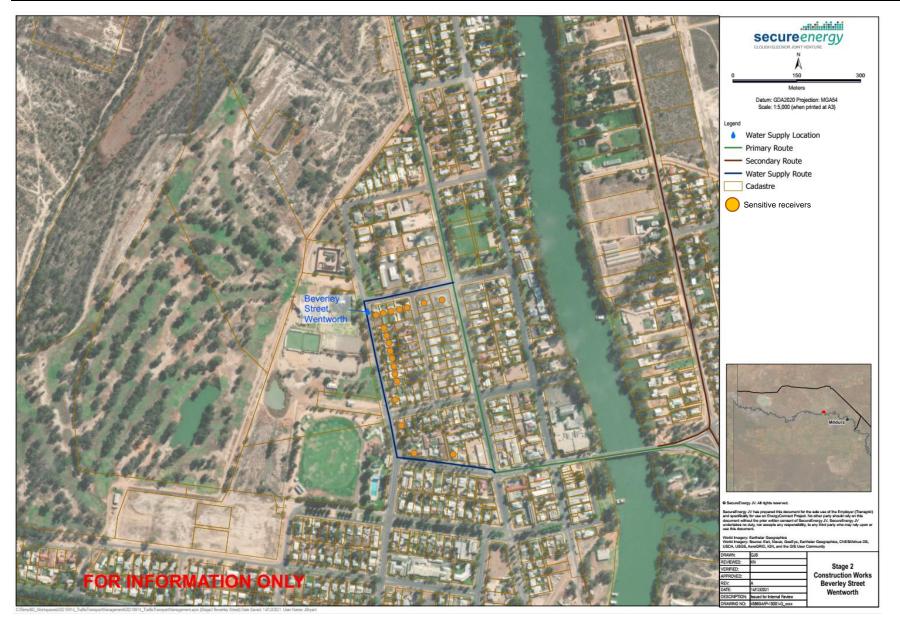


Figure 3.6 - Beverley Street water supply route

#### 3.4.3 Dust impacts and mitigation measures

The water supply routes for Stage 2 works are located on sealed roads. It is not anticipated that dust impacts will occur on the sealed roads as a result of vehicle movements on these water supply routes. However, SecureEnergy will monitor the generation of dust associated with the use of water supply routes.

The proposed access points at the Alcheringa Drive and Fletchers Lake Road water supply locations will be gravel with a sealed access. There is the potential for dust to be generated from vehicle movements when entering into or out of the water supply locations. In the event that concerns and complaints are raised in relation to dust impacts, and these are deemed to be due to the project works, SecureEnergy will implement mitigation measures to minimise the generation of dust from use of the water supply routes. Mitigation measures to minimise dust impacts from construction traffic utilising the proposed water supply routes for Stage 2 include:

- where safe to do so, exposed and disturbed surfaces trafficked by water supply vehicles, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants, especially during inclement weather conditions where required and appropriate. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority;
- where safe to do so, access points proposed within this strategy, will be cleaned if there is a build-up of dust-generating sediment, where required; and
- regularly conducting visual inspections of dust emissions and applying additional controls as required.

#### 3.4.4 Noise impacts and mitigation measures

Appendix F (Construction noise risk from secondary access routes and water supply access routes memorandum) of the Response to DPIE Request for Information completed an assessment to estimate noise level contributions from construction-related traffic on water supply access routes (except for Modica Crescent). The assessment indicated that the noise levels generated from construction vehicles utilising the water supply routes for Stage 2 construction comply with relevant amenity-based noise criteria at the nearest identified sensitive receivers along each proposed route.

The Roads and Maritime Services (now TfNSW) Noise Estimator tool was used to determine the estimated noise level contributions from construction-related traffic on the Modica Crescent water supply route. The assessment indicated that the noise levels generated from construction vehicles utilising this route comply with relevant amenity-based noise criteria at the nearest identified sensitive receivers along each proposed route.

The estimated noise level contribution and the relevant RNP criteria for Stage 2 water supply points is presented in Table 3.10. The road noise levels generated by construction traffic utilising the water supply routes will not exceed the *NSW Road Noise Policy* day-time criteria of 55 decibel (dBA) equivalent noise level ( $L_{eq \ 1hr}$ ) for local roads, and 60 dBA  $L_{eq \ 1hr}$  for regional roads.

It is noted that the predicted road noise levels and associated increases will only occur during the day-time period and any noise impacts associated with construction-related traffic would be temporary.

While no exceedances of RNP noise management levels are predicted, the following noise mitigation and management measures will be implemented to manage potential exceedances of the relative increase criteria as a result of construction traffic:

- driver training in concurrence with the Driver's Code of Conduct (45860-HSE-PR-H-1009); and
- minimising traffic movements by ensuring full loads.

Location	Affected roads	Road classification	vehicle m	tion period ovements ndicative)	Duration of	Nearest residential receiver (estimated)	Estimated noise level contribution from	RNP criteria (dBA)
		Classification	Peak	Typical	use	(estimated)	construction traffic (dBA)	(dbA)
Local roads								
Fletchers Lake Road, Dareton	Fletchers Lake Road, Dareton	Dense graded asphalt, 60km/hr	Heavy vehicles - 40	Heavy vehicles - 30	Duration of full construction program	Around 20 residential receivers along the route with frontage along the route.	54 L <sub>eq 1hr</sub>	55 L <sub>eq 1hr</sub>
						Nearest receiver around 10m from street frontage.		
Beverley Street,	Beverley Street, Sandwych Street,	Dense graded asphalt,	Heavy vehicles -	Heavy vehicles -	Duration of full construction	Less than 40 residential receivers along the route.	52 L <sub>eq 1hr</sub>	55 L <sub>eq 1hr</sub>
Wentworth	and Arthur Street	50km/hr	4	2	program	Nearest receiver around 5m from street frontage.		
Alcheringa Drive,	Alcheringa Drive and Corbett	Dense graded asphalt,	Heavy vehicles -	Heavy vehicles -	Duration of full construction	Estimate of 5 residential receivers along Corbett Avenue	52 L <sub>eq 1hr</sub>	55 Leq 1hr
Buronga	Avenue	60km/hr	40	30	program	Nearest approximately 15m from the street frontage		
Modica Crescent	Modica Crescent and Corbett Avenue	Dense graded asphalt, 50km/hr	Heavy vehicles - 4	Heavy vehicles - 2	Duration of full construction	Around three residential receivers along the route with frontage along the route	53 L <sub>eq 1hr</sub>	55 L <sub>eq 1hr</sub>
	Avenue	SOKII/III	4	2	program	Nearest receiver around 80m from street frontage		
Regional roads	5							
Silver City Highway intersection with Milpara Road, Anabranch South	Anabranch Mail Road and Milpara Road	Chip seal, 60 km/h Unsealed, 60 km/h	Heavy vehicles - 40	Heavy vehicles - 30	Duration of full construction program	Around 6 residential receivers. Nearest receiver around 70m from the Street frontage.	47 L <sub>eq 1hr</sub> (chip seal) 51 L <sub>eq 1hr</sub> (unsealed)	60 Leq 1hr

 Table 3.10 - Anticipated construction traffic noise levels on water supply routes

#### EnergyConnect (NSW – Western Section) Stage 2 Traffic Strategy

Location	Affected roads	Attected roads		Nearest residential receiver	Estimated noise level contribution	RNP criteria		
		classification	Peak	Typical	use	(estimated)	from construction traffic (dBA)	(dBA)
690 Pomona Road, Pomona	Oxley Road, Pomona Road and Low Darling Road	Dense graded asphalt, 60 km/h	Heavy vehicles - 10	Heavy vehicles - 6	Duration of full construction program	Around 30 residential receivers. Nearest receiver around 15m from street frontage.	52 L <sub>eq 1hr</sub> (DGA) 59 L <sub>eq 1hr</sub> (unsealed)	60 Leq 1hr
690 Pomona Road, Pomona	Red Hill Road and High Darling Road	Unsealed, 60 km/h	Heavy vehicles - 10	Heavy vehicles - 6	Duration of full construction program	Nearest receiver around 250m from street frontage on Red Hill Road and 330m on High Darling Road.	<45 L <sub>eq 1hr</sub>	60 L <sub>eq 1hr</sub>

#### 3.5 Conclusion

Condition D37 a) defines road upgrades as (new) roads, intersections, crossing points and access points.

Technical Paper 9 (Traffic and transport impact assessment) outlines the traffic and transport impacts associated with construction will generally be low. Any moderate impacts are manageable through the upgrade of the access points (which are identified in Section 4). Given that the Stage 2 works will utilise the existing heavy vehicle network and approved vehicle types, no further upgrades will be required.

Appendix E (Traffic and transport assessment memorandum) of the Response to DPIE Request for Information indicated that the additional vehicle movements along the water supply routes due to construction-related traffic would be unlikely to result in any significant changes in traffic flow and associated impacts. As a result, there is no need to upgrade the roads to increase capacity.

As per the Technical Paper 9 (Traffic and transport impact assessment), only upgrades of the access points are required to mitigate impacts to the road network as a consequence of construction traffic entering and exiting the Stage 2 construction areas.

The project does not propose to construct any new roads, intersections, or crossing points for Stage 2.

## 4 Road upgrades

As per condition D38 of the Infrastructure Approval, the road upgrades in this strategy must be implemented to the satisfaction of the relevant roads authority and the mitigation measures identified for the road upgrades (in accordance with condition D37 a)) implemented to the satisfaction of the Planning Secretary.

An assessment of the road upgrades relating to access points adjoining gazetted roads is provided within Section 4.3 to 4.9. This also includes access to the Wentworth accommodation camp and construction compound from Renmark Road. With the exception of the access points associated with the Buronga substation, the access points required to facilitate construction are temporary in nature and will be removed upon completion of construction of EnergyConnect (NSW – Western Section).

There are also access points proposed at the Alcheringa Drive and Fletchers Lake Road water supply locations. These access points will allow for the trucks to access the water supply points. The access points will consist of gravel with a sealed access.

## 4.1 Access points

## 4.1.1 Access design

SecureEnergy will upgrade the existing road shoulders in proximity to the proposed access points to facilitate safe access and egress for construction personnel, as well as minimise the impacts to public motorists. This will include construction of new pavements, upgrade of existing road pavements, and installation of traffic signs and devices (to the satisfaction of the relevant road authorities) to cater to all construction vehicle types.

SecureEnergy will develop detailed traffic and pavement designs (where applicable) for all changes within the road corridor. The designs will comply with the *Austroads Guide to Road Design* and *Austroads Guide to Traffic Management*. SecureEnergy will engage an experienced traffic designer to prepare these drawings. SecureEnergy will obtain certification from the road designer that the road design drawings comply with the relevant standards. This will be provided to the relevant road authorities for use during review.

SecureEnergy will seek endorsement of these detailed access designs from the relevant road authorities through their ROP application process. Construction of the proposed access points will not occur until the relevant road authority endorses the design through granting of the ROP.

#### 4.1.2 Access points

Access between existing roads and project access tracks and sites will require new temporary access points and upgrades to existing access points. In most instances, access for transmission tower construction areas will cater for low vehicle movements.

The list of access points required for connection from a gazetted road to the transmission line easement, or other construction areas such the Wentworth accommodation camp, is provided in Table 4.1. Access points may be subjected to refinement and changes as per Section 4.3. Appendix B provides further detail of the access points including the access point number.

Road	Proposal feature	Type of access point	Indicative number of access points
Renmark Road	Transmission towers	New access point	79
Nulla Road	Transmission tower	New access point	2
Anabranch Mail Road	Transmission towers	New access point	3
Silver City Highway	Transmission towers	Upgrade to existing access point	2

#### EnergyConnect (NSW – Western Section) Stage 2 Traffic Strategy

Road	Proposal feature	Type of access point	Indicative number of access points
Silver City Highway	Anabranch South construction compound and accommodation camp	New access point	1
High Darling Road	Transmission towers	Upgrade to existing access point	2
Low Darling Road	Transmission towers	New access point	2
Wentworth Pooncarie Road	Transmission towers	Upgrade to existing access point	1
Wentworth Pooncarie Road	Transmission towers	New access point	1
Renmark Road	Wentworth construction compound and accommodation camp	New access point	1
Arumpo Road*	Buronga construction compound and accommodation camp, transmission towers	New access point	1
Arumpo Road*	Buronga substation, transmission towers	Upgrade and relocate existing access point	1
Arumpo Road	Transmission towers	New access point	1
Dansons Road	Transmission tower	Upgrade to existing access point	2
Sturt Highway	Transmission tower	Upgrade to existing access point	1
Sturt Highway	Transmission tower	New access point	1
Alcheringa Drive*	Water supply point	New access point	1
Fletchers Lake Road	Water supply point	New access point	1

Addressed in Traffic Strategy Stage 1 (45860-G-70108-REP-G-00001)

The Stage 1 access points for the Buronga substation and camp on Arumpo Road, which were approved in the Traffic Strategy Stage 1 (45860-G-70108-REP-G-00001) will continue to be used for access to part of the easement. The access point associated with the Alcheringa Drive water supply point (also within the *Traffic Strategy Stage 1*) will also continue to be used during Stage 2.

#### 4.1.3 Access type

The type of access point has been determined with consideration to the type of road that is being impacted (e.g. minor paved road, major road or highway or gravel road). The site access and egress points will be designed to minimise conflicts with vehicle movements on the road network.

## Type 1

Type 1 access points for Stage 2 will be constructed at the following locations:

- Wentworth accommodation camp;
- Sturt Highway; and •
- Silver City.

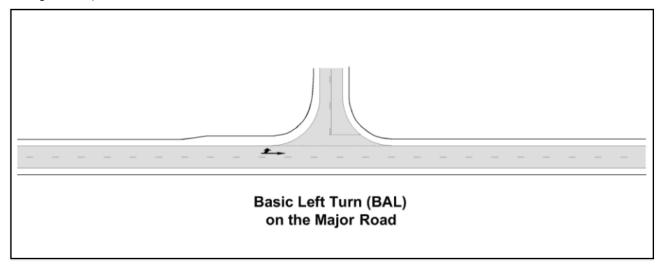
The following Type 1 access points will be implemented:

- rural basic right-turn (BAR) on the major road (two-lane undivided roads only); and •
- rural basic left-turn (BAL) on the major road (two-lane undivided roads and multi-lane roads).

The BAL/BAR are the road upgrade treatments prescribed by Austroads based on several traffic factors such as public/construction traffic volumes, speed zones, sight distance. The widened shoulders allow construction vehicles to safely decelerate to turn into the access as well as provide additional width for motorists to pass the construction vehicles.

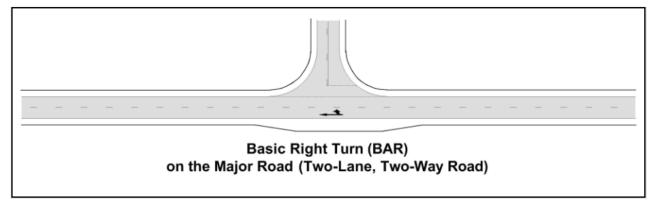
These treatments will provide sufficient trafficable carriageway width for motorists to pass construction vehicles as they turn into the construction gates. These access types consider the available sight distance, speed of the existing road, anticipated traffic volumes (public and construction) and design vehicle size.

BAL treatments consist of a shoulder widening to allow vehicles to safely turn left into a gate (refer to Figure 4.1).



#### Figure 4.1 - BAL treatment (source – AGRD – Part 4A)

Similar to the BAL, a BAR treatment provides additional pavement width for motorists to pass a vehicle waiting to turn right into the minor road (refer to Figure 4.2).



#### Figure 4.2 - BAR treatment (source – AGRD – Part 4A)

#### <u>Type 2, 3 and 4</u>

The remaining access points required for access from the access road to the transmission line easement or construction area will either be a Type 2, Type 3 or Type 4 access point.

The design of these access points will comply with the *Austroads Guide to Road Design* and *Austroads Guide to Traffic Management* based on factors such as public/construction traffic volumes, speed zones, safe intersection sight distance, access point dimensions and swept path requirement. The type 2, 3 and 4 access points do not require road widening like Type 1.

The difference between the Type 2, 3 and 4 access points is with the material of the access point is constructed of. A Type 2 access point is classified for a minor road, Type 3 for a gravel road and Type 4 for a minor gravel road.

#### 4.1.4 Construction methodology

The standard construction methodology for the installation of the access points would include (for example):

- traffic management set up;
- service location and protection (as required);
- topsoil strip;
- stormwater management / crossings installed (culverts and headwalls as required);
- gravel pavement placed, compacted and graded; and
- signage erected; and
- sealing connection from main road to access point (as required).

The indicative plant and equipment for the installation of the access points may include:

- large excavator (20-35T);
- grader;
- pozi track;
- truck and dog / bogie;
- smooth drum roller;
- padfoot roller;
- concrete agitator;
- generator;
- water cart;
- plate compactor; and
- whacker packer.

It is anticipated that for the most part, installation of the access points will be undertaken during standard construction hours. Works may however, be required outside of the standard construction hours to meet the requirements of the ROP (for example). If Out-of-Hours Works (OOHW) are required, the OOHW Protocol will be implemented. The OOHW Protocol is provided within Appendix A of the *Noise and Vibration Management Plan* (NVMP).

Noisy works will occur during the installation of the access points due to the use of noisy plant and equipment (i.e. vibratory roller, generator, excavator, etc.). However, any elevated noise levels will be temporary in nature.

#### 4.2 Scheduling and commencement of construction

The road upgrades outlined in Section 4.1 and listed in greater detail in Appendix B will be implemented and used on a progressive basis. This will allow construction to commence in different sections of the project site at different times. Refer to Table 4.2 for a schedule of road upgrades.

In accordance with condition D38, road upgrades must be implemented to the satisfaction of the relevant roads authority and mitigation measures identified in this Traffic Strategy, must be implemented to the satisfaction of the Planning Secretary.

Following completion and approval of the access point in accordance with condition D38, the relevant section of the easement or other construction area, which the access point provides access to, can commence, subject to any relevant conditions of the Infrastructure Approval. If the relevant section of the easement accessed by the access point is also a PAD site, then construction in that area can only commence once the mitigation measures, identified in the relevant updated Aboriginal Cultural Heritage Assessment Report, have been implemented for that relevant construction area.

The timing of road upgrades is dependent on managing heritage constraints in relevant sections. Therefore, not all access points associated with a particular area will be required to be installed and approved prior to commencement of construction in that area. At least one of the access points must be installed and approved in accordance with condition D38. For example, only access point 87 on High Darling Road or access point 88 on Low Darling Road must be installed and approved prior to commencing construction in the area between High Darling Road and Low Darling Road.

The construction section in Table 4.2 refers to transmission line 1 (L1) extending from the South Australian border to Buronga, and transmission line 4 (L4) extending from Buronga to the Victorian border. While referencing L1 or L4, the work undertaken may consist of any construction activities within that geographical area, including but not limited to construction of access tracks, transmission line construction and utility adjustments and protection.

In addition, the Stage 1 access points for the Buronga accommodation camp and construction compound, the Buronga substation, and the Alcheringa Road water supply point, which were approved in the *Traffic Strategy Stage 1* (45860-G-70108-REP-G-00001) will continue to be used for Stage 2 of the project. The Buronga substation access point (access point 100) has shifted west approximately 40m since the preparation of the Traffic Strategy Stage 1. The potential impacts associated with this access point have not changed. The new location of the Buronga substation access point is included in the figures in Appendix C, D and E.

Pre-construction minor works may commence in any area prior to the implementation and approval of the nominated road upgrades.

Construction section	Relevant road upgrades <sup>1</sup>	Timing
L1 between Renmark Road, including L1 towers 214 to 293.	At least one of the following access points from access point 1 to 78 – Renmark Road; or access point 79 – Nulla Road.	Prior to accessing the nominated area to undertake construction of the project.
L1 between Anabranch Mail Road and Nulla Road, including L1 towers 145 to 213.	<ul> <li>At least one of the following access points:</li> <li>Access point 80 – Nulla Road;</li> <li>Access point 82 – Anabranch Mail Road; or</li> <li>Access point 82A – Anabranch Mail Road.</li> </ul>	Prior to accessing the nominated area to undertake construction of the project.
L1 between Anabranch Mail Road and Great Darling Anabranch, including L1 towers 144 to 141.	Access point 83 – Anabranch Mail Road.	Prior to accessing the nominated area to undertake construction of the project.
L1 between Great Darling Anabranch and Silver City Highway, including towers 140 to 128.	Access point 84 – Silver City Highway.	Prior to accessing the nominated area to undertake construction of the project.
L1 between Silver City Highway and High Darling Road, including towers 127 to 97.	<ul> <li>At least one of the following access points:</li> <li>Access point 85 – Silver City Highway; or</li> <li>Access point 86 – High Darling Road.</li> </ul>	Prior to accessing the nominated area to undertake construction of the project.
L1 between High Darling Road and Low Darling Road, including towers 95 to 88.	<ul> <li>At least one of the following access points:</li> <li>Access point 87 – High Darling Road; or</li> <li>Access point 88 – Low Darling Road.</li> </ul>	Prior to accessing the nominated area to undertake construction of the project.

#### Table 4.2 - Schedule of road upgrades

Construction section	Relevant road upgrades <sup>1</sup>	Timing
L1 between Low Darling Road and Darling River, including L1 towers 87 to 81.	Access point 89 – Low Darling Road.	Prior to accessing the nominated area to undertake construction of the project.
L1 between Darling River and Pooncarie Road, including L1 towers 80 to 74.	Access point 90 – Pooncarie Road.	Prior to accessing the nominated area to undertake construction of the project.
L1 between Pooncarie Road and Arumpo Road, including L1 towers 73 to 1 and L4 tower 1.	<ul> <li>At least one of the following access points:</li> <li>Access point 91 – Pooncarie Road;</li> <li>Access point 93<sup>2</sup> – Buronga construction compound and accommodation camp; or</li> <li>Access point 100<sup>2</sup> - Buronga substation.</li> </ul>	Prior to accessing the nominated area to undertake construction of the project.
Buronga construction compound and accommodation camp <sup>2</sup>	<ul> <li>At least one of the following access points:</li> <li>Access point 93<sup>2</sup> – Buronga construction compound and accommodation camp; or</li> <li>Access point 100<sup>2</sup> - Buronga substation.</li> </ul>	Prior to access the nominated area to undertake construction of the project (Stage 1).
Buronga substation <sup>2</sup>	<ul> <li>At least one of the following access points:</li> <li>Access point 93<sup>2</sup> – Buronga construction compound and accommodation camp; or</li> <li>Access point 100<sup>2</sup> - Buronga substation.</li> </ul>	Prior to access the nominated area to undertake construction of the project (Stage 1).
L4 from Arumpo Road to Sturt Highway, including L4 towers 2 to 53.	<ul> <li>At least one of the following access points:</li> <li>Access point 94 – Arumpo Road;</li> <li>Access point 95 – Dansons Road;</li> <li>Access point 96 – Dansons Road; or</li> <li>Access point 97 – Sturt Highway.</li> </ul>	Prior to accessing the nominated area to undertake construction of the project.
L4 from Sturt Highway to Murry River, including towers 54 to 58.	Access point 98 – Sturt Highway.	Prior to accessing the nominated area to undertake construction of the project.
Wentworth compound and accommodation camp	Access point 92 – Renmark Road.	Prior to accessing the nominated area to undertake construction of the project.
Alcheringa Drive water supply point <sup>2</sup>	Alcheringa Drive water supply point access point <sup>2</sup> .	Installation and use of the water supply point may occur as pre-construction minor works.
Fletcher Lake Road water supply point	Fletcher Lake Road water supply point access point.	Installation and use of the water supply point may occur as pre-construction minor works.
Anabranch South compound	Anabranch South compound access point.	Prior to accessing the nominated area to undertake construction of the project.

1. The access point numbers may be adjusted as the project progresses, refer to Appendix C and Appendix D for the location of the relevant access points nominated in the column titled 'Relevant road upgrades'.

2. Access points included in Traffic Strategy Stage 1 (45860-G-70108-REP-G-00001) will continue to be used during Stage 2 of construction.

#### 4.3 General changes

There may be circumstances where refinements or changes to the location of an access point, or a new access point, will be required. These circumstances would include, for example:

• where changes in tower locations are required as part of the detailed design process and the location of the access point is affected by the movement of the tower; or

• due to the results of the heritage test excavation and outcomes reported in the updated Aboriginal Cultural Heritage Assessment Report.

As a result of a relocated or new access point, changed impacts may be introduced.

Proposed changes to the location of an access point will be communicated to the SecureEnergy Approvals team and/or the Environment team. The checklist included within Appendix A of this strategy will be completed prior to works commencing on the access point. This checklist provides a process to ensure that any changed or new access points are carried out in accordance with the conditions of the Infrastructure Approval.

It must be noted that consultation with the relevant roads authority will be carried out for any relocated or new access points. This will occur as part of the ROP application process with the design of new or changed access point provided as part of this application. In accordance with condition D38 of the Infrastructure Approval, the satisfaction of the relevant roads authority will also be sought following installation of the changed or new access point and the mitigation measures identified for the road upgrades (in accordance with condition D37 a)) implemented to the satisfaction of the Planning Secretary.

Further to this, a changed or new access point does not remove the requirement for the access point to comply with the mitigation measures listed within Section 4.4 to Section 4.9 of this Traffic Strategy. In line with condition D38, these mitigation measures will be implemented to the satisfaction of the Planning Secretary.

#### 4.4 Biodiversity impacts and mitigation measures

Biodiversity assessments were carried out to inform the EIS. The *Revised Biodiversity Development Assessment Report* (Final BDAR) identified and assessed the potential impacts of the project in relation to biodiversity. The main construction areas for Stage 2 were assessed in the Final BDAR.

The disturbance area of the proposed access points are located within areas that include native vegetation and plant community types (PCTs). The location of some proposed access points have been adjusted to minimise and/or avoid impacts to biodiversity. Further adjustments to access points may be required as the construction planning and design processes progress'. Any biodiversity impacts would be carried out in accordance with the Infrastructure Approval, and in particular condition D25 which provides restrictions on clearing and habitat.

In summary, the PCTs identified within the disturbance area for the Stage 2 access points include (indicative only):

- PCT 0 Miscellaneous/exotic;
- PCT 58 Black Oak Western Rosewood open woodland on deep sandy loams mainly in the Murray Darling Depression Bioregion;
- PCT 170 Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones;
- PCT 171 Spinifex linear dune mallee mainly of the Murray Darling Depression Bioregion;
- PCT 143 Narrow-leaved Hopbush Scrub Turpentine Senna shrubland on semi-arid and arid sandplains and dunes;
- PCT 154 Pearl Bluebush low open shrubland of the arid and semi-arid plains;
- PCT 153 Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones;
- PCT 15 Black Box open woodland wetland with chenopod understorey mainly on the outer floodplains in south-western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion); and
- PCT 19 Cypress Pine woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains.

Appendix B provides an indicative list of PCTs that are identified within the disturbance area for each Stage 2 access point. Appendix C provides the biodiversity mapping for the access points located along gazetted roads. Access points may be subjected to refinement and changes as per Section 4.3. Figure 4.3 outlines the native vegetation and threatened ecological communities identified in the vicinity of the Wentworth accommodation camp.

An area was previously identified in the Final BDAR for the water supply point at Alcheringa Drive. The area was identified as PCT15 - *Black Box open woodland wetland with chenopod understorey mainly on the outer floodplains in south-western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion*). However since the Final BDAR was undertaken, the disturbance area for the water supply point has changed due to consultation with the water supplier and further detailed design of the water supply point. However, the area has been subject to the same levels of past disturbance, and is located within the road reserve/verge of Alcheringa Drive.

A desktop search was undertaken using the NSW Government SEED database and determined PCT15 is identified in the disturbance area for the Alcheringa Drive water supply point. This is consistent with the assessment completed in the Final BDAR. The majority of works would occur within the existing disturbed road corridor which is classified as 'miscellaneous/exotic' and has minimal biodiversity value. A preliminary visual inspection indicates highly disturbed 'miscellaneous/exotic' vegetation (roadside grasses) occur at the revised Alcheringa Drive water supply point.

An area was previously identified in the Final BDAR for the water supply point at Fletchers Lake Road. The area was identified as PCT170 – *Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones* and PCT 153 - *Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones.* Since the Final BDAR was undertaken, the disturbance area for the water supply point has changed due to further detailed design of the water supply point. However, the area has been subject to the same levels of past disturbance, and is located within the road reserve/verge of Fletchers Lake Road.

A desktop search was also undertaken using the NSW Government SEED database and determined PCT 102 and PCT 87 is identified in the disturbance area for the Fletchers Lake Road water supply point.

## 4.4.1 Threatened ecological communities

Two PCTs (PCT 19 and PCT 21) confirmed within the project study area are considered likely to be associated with this threatened ecological community. These are:

- PCT 19 Cypress Pine woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains; and
- PCT 21 Slender Cypress Pine Sugarwood Western Rosewood open woodland on sandy rises mainly in the Riverina Bioregion and Murray Darling Depression Bioregion.

PCT 19 was found to be located near the proposed access points along Anabranch Mail Road (access point #82) and Sturt Highway (access point #98). There is the potential for this PCT to be impacted at these two locations during the construction of the proposed access points. The PCT is identified adjacent to the road corridor.

PCT 21 was not found in the areas of the proposed access points.

Two threatened ecological communities listed under the EPBC Act were considered likely to occur in the project area:

- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions; and
- Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt of South Bioregion.

Neither of these, or any other threatened ecological communities listed under the EPBC Act, were recorded during the detailed native vegetation survey.

#### 4.4.2 Threatened flora species

The biodiversity surveys carried out to inform the EIS did not identify any threatened flora in the locations of the proposed access points or Wentworth accommodation camp.

#### 4.4.3 Threated fauna species

The Final BDAR reported that a total of 18 threatened fauna species (species credit species) were considered to have potential habitat within the indicative disturbance area.

Of these, the project will directly affect one, *Polytelis anthopeplus monarchoides* (Regent Parrot (eastern subspecies)) which is listed as endangered under the BC Act and vulnerable under the EPBC Act. The project will involve the clearing of 6.91 hectares of habitat for the Regent Parrot, however construction of the access points will have no impact.

#### 4.4.4 Mitigation measures

The following mitigation measures for managing biodiversity impacts associated with the proposed access points include:

• access points will be designed to minimise vegetation removal where possible;

- all vegetation clearing will be undertaken in accordance with the *Pre-clearing and Clearing Procedure* (45860-HSE-PR-D-0004);
- the proposed disturbance footprint at the Alcheringa Drive and Fletchers Lake Road water supply point and the vegetation present will be confirmed by a suitably qualified ecologist prior to any to any vegetation clearing or ground disturbance associated with site access point installation;
- extent of clearing of native vegetation will be recorded to confirm actual impacts to biodiversity values to inform any final biodiversity offset requirements; and
- if any threatened species or threatened ecological communities are unexpectedly encountered during construction of the access points, the *Unexpected Threatened Species Finds Procedure* (45860-HSE-PR-D-0002) will be implemented.

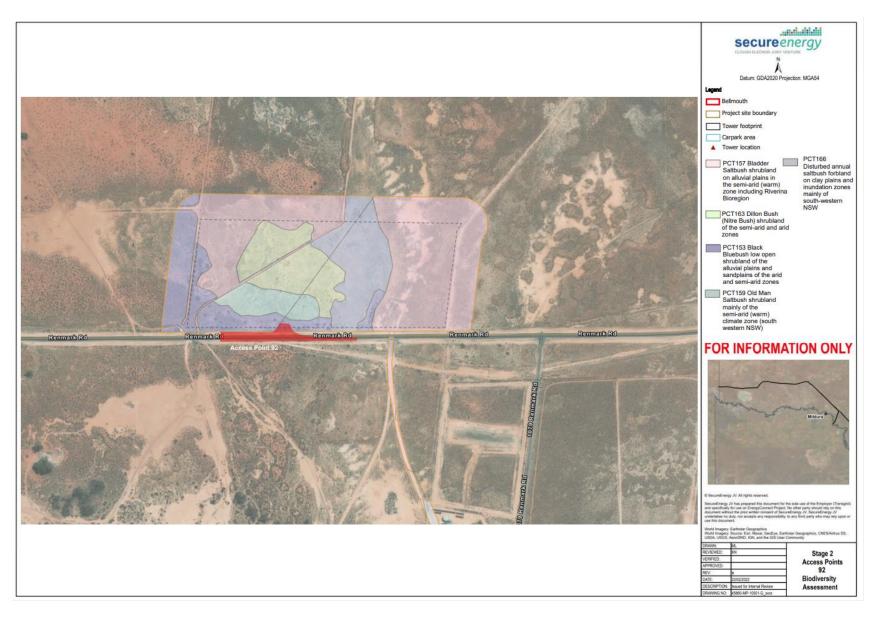


Figure 4.3 - Native vegetation at Wentworth accommodation camp access

#### 4.5 Heritage impacts and mitigation measures

## 4.5.1 Aboriginal heritage

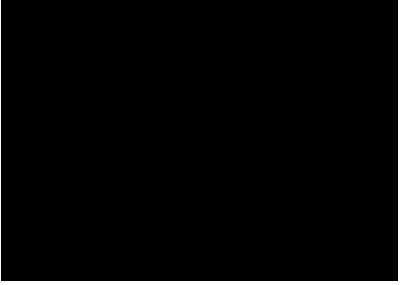
The areas that will be disturbed during installation of the proposed access points were subject to heritage survey either during the environmental impact assessment phase of the project, or during subsequent additional survey activities. The majority of the proposed locations of the access points were not located within areas of Aboriginal cultural heritage conservation significance. However, the following Aboriginal heritage items were identified within the proposed access points (indicative only):



The following Aboriginal heritage items were identified nearby to the proposed access points (indicative only):



The following potential archaeological deposit (PADs) extend over the proposed access points:



The water supply point at Alcheringa Drive was assessed as part of an Aboriginal and non-Aboriginal desktop assessment in Appendix E (Non-Aboriginal and Aboriginal Cultural Heritage Assessment Report) of the Amendment Report. The assessment noted that, from a desktop perspective, the location has moderate to high potential for archaeological items in a disturbed context, and recommended additional archaeological survey to confirm any features of or potential for Aboriginal heritage significance. A heritage survey was conducted in December 2021 and no Aboriginal sites or potential archaeological deposits were identified within the proposed access point at Alcheringa Drive.

An area immediately north of the proposed water supply point at Fletchers Lake Road was assessed as part of an Aboriginal and non-Aboriginal desktop assessment in Appendix E (Non-Aboriginal and

Aboriginal Cultural Heritage Assessment Report) of the Amendment Report. Although the area of the water supply point has changed since this desktop assessment, it is immediately adjacent to the assessed location and is representative of the proposed water supply point. The assessment noted that, from a desktop perspective, the location has moderate potential for archaeological items and deposits. A heritage survey was conducted in December 2021 and no Aboriginal sites or potential archaeological deposits were identified within the proposed access point at Fletchers Lake Road.

In the event that any new or relocated access points are within an area that has not been subject to heritage survey, additional survey will be undertaken.

Appendix D provides the heritage mapping for the access points located along the gazetted roads. Access points may be subjected to refinement and changes as per Section 4.3

#### 4.5.2 Non-Aboriginal heritage

The areas that will be disturbed during installation of the proposed access points were subject to heritage survey during the environmental impact assessment phase of the project, or during additional survey activities undertaken in December 2021. No non-Aboriginal heritage items were identified in the vicinity of the proposed locations of the access points.

The water supply point at Alcheringa Drive was assessed as part of an Aboriginal and non-Aboriginal desktop assessment in Appendix E (Non-Aboriginal and Aboriginal Cultural Heritage Assessment Report) of the Amendment Report. There are no non-Aboriginal heritage listed items at or near this location. A heritage survey was also conducted in December 2021 and no heritage items were identified within the proposed access point at Alcheringa Drive.

An area immediately north of the proposed water supply point at Fletchers Lake Road was assessed as part of an Aboriginal and non-Aboriginal desktop assessment in Appendix E (Non-Aboriginal and Aboriginal Cultural Heritage Assessment Report) of the Amendment Report. Although the area of the water supply point has changed slightly since this desktop assessment, it is immediately adjacent to the assessed location and is considered representative of the proposed water supply point. There are no non-Aboriginal heritage listed items at or near this location. A heritage survey was conducted in December 2021 and no heritage items were identified within the proposed access point at Fletchers Lake Road.

Appendix D provides the heritage mapping for the access points located along the gazetted roads. Access points may be subjected to refinement and changes as per Section 4.3

#### 4.5.3 Mitigation measures

The following mitigation measures for managing heritage impacts associated with the proposed site access points include:

- if items or sites of Aboriginal heritage conservation significance are identified during the additional Archaeological heritage survey, and they will be impacted, the items and sites will be managed:
  - as outlined in RMMs AH1 to AH12 (as applicable); and
  - in accordance with the requirements of condition D29 (the Aboriginal Cultural Heritage Strategy) and D30 to D33 in the Infrastructure Approval;
- test excavation will be undertaken where access points are located within areas of PADs as required in accordance with condition D29 and RMM AH4;
- known objects/features/items of heritage significance/PADs will be identified on sensitive area plans (SAPs) and/or the Geographical Information System (GIS) which will be communicated and made available to personnel working in the proximity of the relevant items;
- if at any time during construction of the access points, any potential Aboriginal objects, or human remains or any items of potential non-Aboriginal archaeological significance are discovered,

stop all work in the immediate vicinity of the find and notify the Site Supervisor and Environmental Manager; and

• the Environmental Manager (or delegate) is to notify TransGrid of the unexpected find. SecureEnergy will comply with Instructions from the Employer in proceeding in accordance with the Unexpected Heritage Finds Procedure (45860-HSE-PR-G-1003).

#### 4.6 Soil and water impacts and mitigation measures

The potential impacts to soil, water and contamination attributable to the installation of the access points might include:

- erosion and sedimentation due to surface and/or ground disturbance;
- reduction soil and/or water quality from spills or leaks;
- existing soil contamination; and
- health and safety impacts when encountering unexpected contamination finds.

A desktop contamination assessment was undertaken as part of the EIS. The majority of the land within the project corridor is agricultural land with no significant development and sparsely intersected by infrastructure such as roads and electrical easements. A search of the NSW EPA contaminated land database was also undertaken and identified no records were identified within the project corridor. As such, the EIS concluded there was no evidence to suggest gross contamination in the soils and groundwater within the project area.

There is a low risk of exposure to the surrounding environment and users (e.g. maintenance workers or farmers) to potentially contaminated soil or groundwater. This is due to minimal ground disturbance being required for the construction of the access points and the unlikely presence of contamination in the Stage 2 area. The construction of the proposed access points will require the temporary use of plant and equipment. There is the potential for minor hydrocarbon (fuels, diesel, oils) contamination of soil, surface water and groundwater arising from operation of plant and machinery. Spill volumes from such incidents would be expected to be minor.

Soil, water and contamination related management measures to address impacts associated with the access routes include:

- Progressive Erosion and Sediment Control Plans (PESCPs) will be prepared and implemented for the installation of the access points. The PESCPs will outline controls to be implemented to manage and aim to minimise soil erosion and movement of sediment and other pollutants to land and/or waters;
- promptly notify the Site Supervisor or Environmental Manager of any suspected or actual contamination exposed during construction activities. Cease all work activities within the vicinity of actual or suspected contaminated land. The *Unexpected Contamination Finds Procedure* (45860-HSE-PR-D-0003) is to be implemented;
- in the event of a spill incident of chemicals, fuels or other hazardous substances, the *Spill Response Procedure* (45860-HSE-PR-G-1004) will be followed; and
- weekly environmental inspections are to be undertaken, which includes inspection of any erosion and sediment controls present on-site, stockpiles and the site access point(s).

#### 4.7 Noise and vibration impacts and mitigation measures

The majority of the proposed access points are not located adjacent to residential sensitive receivers. However, there are three residential receivers located around 200m from the proposed access point #97.

Appendix B outlines the proposed access points that are located near to the sensitive receivers. Appendix E identifies the sensitive receivers located within 500m of an access point along a gazetted road. Appendix E also identifies the sensitive receivers that are located outside 500m of an access point along a gazetted road and are not anticipated to be impacted by the installation of the proposed access points.

#### 4.7.1 Noise

Three residential sensitive receivers are located around 200m west from proposed access point #97, which provides access to tower #51 on line #4. These properties consist of private dwellings, additional buildings and a swimming pool. There is the potential for noise impacts to this residential sensitive receiver as a result of the installation of the proposed access point.

Figure 4.4 identifies the residential sensitive receiver located near to proposed access point #97.

A noise estimator tool was used to determine the estimated noise levels from construction of the proposed access point #97. Table 4.2 outlines the predicted noise levels and Interim Construction Noise Guidelines (ICNG) for the installation of access point #97 for different periods.

Table 4.3 - Predicted noise levels near access point #97

Period	ICNG NML, Leq 15 min dB(A)	Predicted noise level, L <sub>eq 15 min</sub> dB(A)	Exceedance of ICNG NML, L <sub>eq 15 min</sub> dB(A)
Standard hours	45	59	3
OOHW Day	40	59	8
OOHW Evening/night	35	59	13

The results in Table 4.2 indicate that the installation of the access point has the potential to result in exceedances of NMLs. The noise estimator tool estimated that the proposed works would exceed the NML by 3dB(A) for standard hours.

Mitigation measures as outlined the OOHW Protocol will be implemented to minimise the impact of any out of hours works to the sensitive receiver located near to the proposed access point #97.

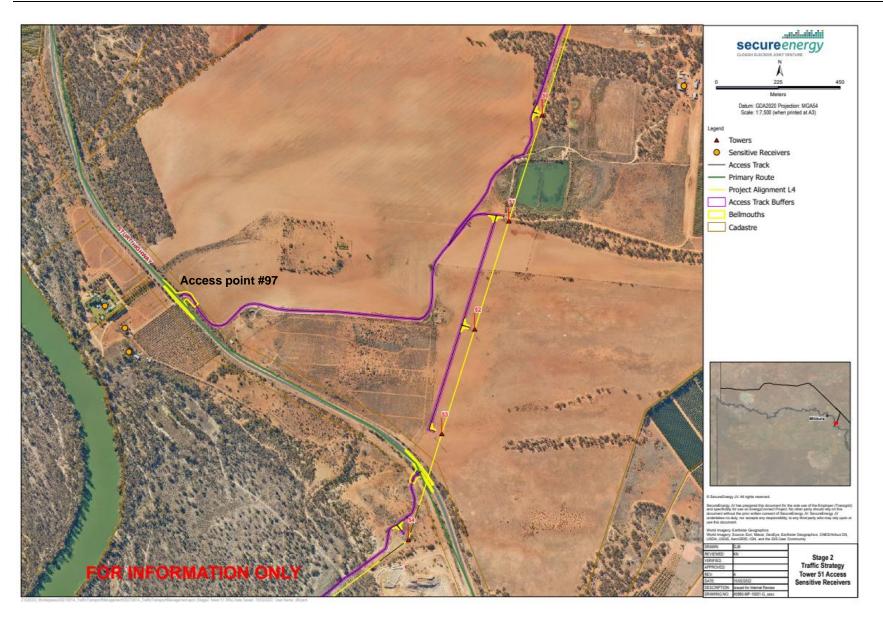


Figure 4.4 - Sensitive receivers located near to access point #97

Appendix I (Noise and vibration impact assessment) of the Amendment Report outlines that the nearest residential sensitive receiver to the Alcheringa Drive water supply location is 700m (receiver 3430). As such, minimal noise impact (<2 dBA) is anticipated due to the distance of the sensitive receiver from construction activities and vehicle movements. Refer to Figure 3.3 for the location of the residential sensitive receivers in relation to the Alcheringa Drive water supply point.

Appendix I (Noise and vibration impact assessment) of the Amendment Report outlines that the nearest residential sensitive receiver to the Fletchers Lake Road water supply location is 255m. However since assessment was undertaken, the disturbance area for the water supply point has changed due to further detailed design of the water supply point. The area has only moved directly south across Fletchers Lake Road. This does not change the distance separation to the residential sensitive receiver and remains around 250m to the east. The proposed works include installation of a new standpipe and connection to the existing Western Murray Irrigation pipeline. A minimal noise impact (<2 dBA) is anticipated due to the distance of the sensitive receiver from construction activities and vehicle movements.

There are also residential sensitive receivers near to Fletchers Lake Road water supply point, located around 350m to the west, and 300m and 400m to the east. It is not anticipated that there would be noise impacts to these residential sensitive receivers due to the larger separation distance of these residential sensitive receivers.

Figure 4.5 identifies the residential sensitive receivers located near to Fletchers Lake Road water supply point.

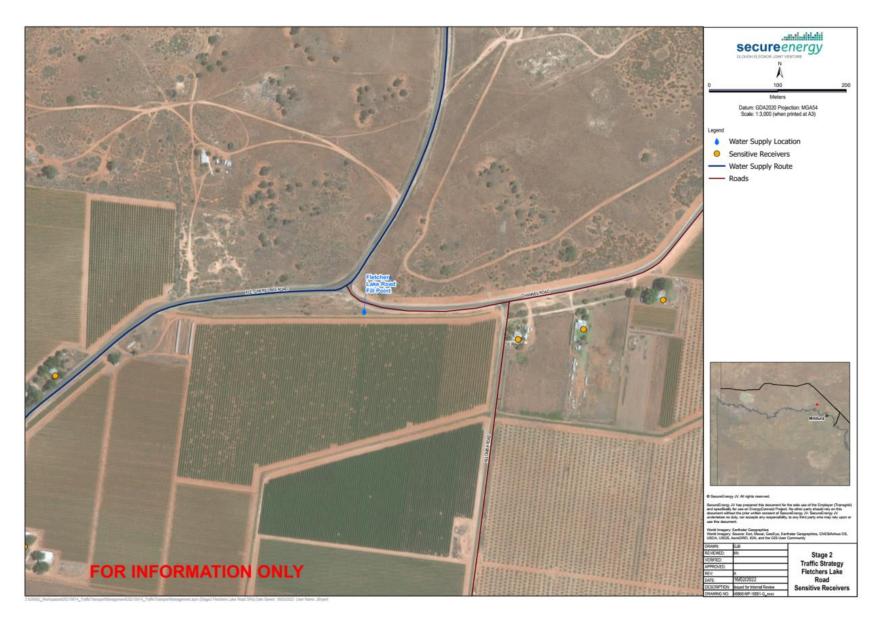


Figure 4.5 - Sensitive receivers located near to Fletchers Lake Road water supply point

Document No. 45860-HSE-DOC-D-0008

## 4.7.2 Vibration

A vibrating smooth drum and pad foot roller will be used for installation of the access points. Where vibration intensive plant such as vibratory rollers are used, vibration must be managed to minimise disturbance to building occupants and to avoid damage to buildings and other structures. Table 4.8 of the *Noise and Vibration Management Plan* (45860-HSE-PL-D-0019) summarises the relevant minimum working distances for certain vibration generating activities with regard to cosmetic damage and human comfort impacts. The minimum working distances for relevant equipment required for the construction of the access points are included in Table 4.3 below.

Table 4.3 indicates the minimum working distances for vibratory roller that may be used to construct the access points.

		Safe work distance				
Plant item	Rating/ description	Cosmetic damage (BS 7385)	Heritage (DIN 4150-3)	Human response (DECCW)		
	<50kN (typically 1-2t)	5m	11m	15m to 20m		
	<100kN (typically 2-4t)	6m	13m	20m		
Vibratory	<200kN (typically 4-6t)	12m	15m	40m		
roller	<300kN (typically 7-13t)	15m	30m	100m		
	>300kN (typically 13-18t)	20m	40m	100m		
	>300kN (> 18t)	25m	50m	100m		

Table 4.4 - I	Minimum v	working	distances	for	vibratory roller
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With regard to cosmetic damage, a minimum working distance buffer of 20m from sensitive receivers has been adopted for general construction activities. An additional minimum working buffer distance of 100m from sensitive receivers is also applicable for human response for construction works involving large vibratory rolling equipment. The minimum working distances relate to continuous vibration as it relates to human comfort impacts. For most construction activities, vibration emissions are intermittent in nature and for this reason, higher vibration levels, occurring over shorter periods are permitted. No works are proposed within the minimum working distances for cosmetic damage, human response and heritage sensitivity, based on the assessment of the safe working distances for vibration generating plant to relevant vibration sensitive receivers.

The following mitigation measures would be implemented to manage the noise and vibration impacts as a result of the access points:

- where sensitive receivers are expected to experience noise levels that exceed the noise management levels, consultation will be carried out to understand the affected receiver's preference for mitigation and management measures;
- any works outside of the hours will be undertaken in accordance with the *Out of Hours Work Protocol* (45860-HSE-PR-D-0001); and
- affected receivers will be notified prior to the commencement of relevant out of hours works.

#### 4.8 Traffic and transport impacts and mitigation measures

There is the potential for minor disruption to traffic on the primary and secondary access routes during the installation of the access points. The traffic impacts would be short term and minor in nature.

The following mitigation measures would be implemented to manage the traffic impacts as a result of the access points:

• Wentworth Shire Council will be involved in the consultation process regarding the installation of the access points;

- ROLs will be obtained for the installation of the access points, as required. The works would be • carried out in accordance with any issued Road Occupancy Licences;
- Traffic Control Plans (TCPs) will be developed and implemented for activities that impact traffic • conditions and the safety of road users on the external or internal road network. TCPs will be developed in accordance with the appropriate standards and developed in consultation with relevant road authorities; and
- temporary traffic controls, including detours and signage, will be identified in the TCPs and • implemented for the duration of works as stated in the TCP.

#### Air quality impacts and mitigation measures 4.9

There is the potential for dust to be generated from the installation of the access points.

It has been identified that the majority of the access points are not located to residential sensitive receivers. However, the closest residential sensitive receivers are located around 200m west from proposed access point #97. There is also a residential sensitive receiver located around 250m east of Fletchers Lake Road water supply point.

The potential for dust impacts at any nearby sensitive receivers due to access point installation will depend on the separation distances and the atmospheric conditions (for example wind direction and speed) at the time. Any dust generation during road upgrade activities would be temporary and for a relatively short duration (i.e. while the works are occurring). Considering the separation distance to the nearest sensitive receivers, the potential for dust impacts is very low to negligible. Dust generation during site access installation anywhere near sensitive receivers would be monitored visually by site personnel during the work. If required mitigation measures to minimise dust impacts to sensitive residential receivers will be implemented throughout the construction.

The following mitigation measures would be implemented, if required, to manage the air quality impacts as a result of the installation of the access points:

- where safe to do so, exposed and disturbed surfaces at the site access point installation location, will be watered using dust suppression techniques such as water sprays (from water carts) or dust suppression surfactants. Any application of water or surfactants onto a public road would only be carried out in consultation with the relevant road authority; and
- regularly conducting visual inspections of dust emissions and applying additional controls as required.

## 5 Community consultation

SecureEnergy will use a range of tools in accordance with the *Community Communication Strategy* (CCS) (45860-CM-PL-G-1001) to notify and facilitate ongoing consultation and communication with the community and stakeholders regarding the project.

Communication tools will be used by the project to inform impacted residents of periodic traffic related impacts, including proposed road network changes, movement of oversize overmass vehicles and access impacts. Communication tools include, but are not limited to, stakeholder briefings, project website, community drop-in sessions via the project's mobile van, door knocks and project factsheets.

Co-ordination of traffic management arrangements between major construction projects will occur in consultation with the relevant road authorities (TfNSW and local councils). This will consider any potential conflicts in relation to deliveries and identified haulage routes during the program.

In accordance with condition E12 a) of the Infrastructure Approval, project documents including the EIS, approved strategies, plans or programs required under the Infrastructure Approval will be publicly available on the project website. The project website is <u>https://www.projectenergyconnect.com.au</u>. A 24-hour toll-free telephone number (1800 560 577) is also available for any project enquiries.

## 5.1 Complaints management

Sensitive receivers are outlined in Section 3.3.2, Section 3.4.2 and Section 4 of this strategy. Complaints, including those from sensitive receivers, will be managed by the Community and Stakeholder Engagement Team with the use of the Consultation Manager database.

Complaints will be received via phone calls, emails and letters. Any complaint received is regarded as a high priority and will be recorded, tracked and responded to in accordance with the CCS. Complaints will be investigated and dealt with impartially. The key principles of the complaint management process include:

- acknowledge SecureEnergy staff should respect the communities' right to voice their concerns. All complaints received should be acknowledged to the complainant either by telephone or in writing;
- resolve SecureEnergy staff should aim at first contact, resolution for all community concerns. SecureEnergy staff should investigate community concerns in detail before negotiating a resolution. All SecureEnergy staff should use their relevant discretions to achieve a mutually acceptable resolution to complaints;
- escalate all SecureEnergy staff should aim to escalate the complaint if the community member remains dissatisfied with the investigation and/or resolution offered by their first point of contact at SecureEnergy. All complaints where community request to speak to a higher-level representative, should also be escalated;
- record SecureEnergy staff should aim through the Engagement Team at recording all relevant information, on the community account in Consultation Manager System, regarding customer concerns along with details of all discussions had with the community member in the process of investigating and/resolving the complaint. Detailed information on the resolutions offered to address community concerns should also be clearly recorded;
- communicate SecureEnergy staff should remain in constant touch with the community member while their concerns are being investigated. The community member should be informed of all steps of the investigation and the resulting outcome at appropriate times;
- report SecureEnergy should report on all complaints received to the SecureEnergy Management Team and Transgrid. The reporting should include information on the number as well as type of complaints being received, the status of these complaints from time to time and the resulting outcomes or resolutions offered to close them;

- feedback the SecureEnergy Engagement Team should aim at regular and intensive reviews to identify possible trends in the complaints being received. These reviews should be aimed at highlighting improvements required to avoid complaints being repeated;
- action SecureEnergy should aim at effective implementation of improvements suggested directly by the community or highlighted by complaint trends.

Wherever possible, concerns of impacted residents along the routes will be resolved directly between SecureEnergy and the stakeholder. If a complaints management process has been followed and the issue cannot be resolved, dispute resolution will be undertaken in accordance with the CCS. DPE may request the ER to assist in dispute resolution of community complaints.

# Appendix A – Refinement in road upgrade checklist

Re	finen	nent of access point che	cklist		secureenergy
Inst to th	ructio	<b>n</b> : This checklist is to be used w ithin the <i>Stage 2 Traffic Strategy</i>	here there / (45860-H	s is a changed location to an access point, or a new ISE-DOC-D-0008).	w access point required as compared
Acc	cess p	oint number:			
Nea	arest t	ower (and line):			
		road on which access			
Des	scripti	on of the change (initial desig	n compa	ared to revised design):	
lter			Y/N	Details	Guidance notes
Tra		nd Transport			1
1	A	Is consultation underway with the relevant road authority in relation to the changed access point (through the Road Occupancy Permit process)?			
	В	Have TCPs been developed for the installation of the access point?			
Her	ritage				
2	А	Is the access point within the NOHC survey extent?			If the answer to 2A is 'yes', no further heritage queries required. Access point cannot be within a PAD. If access point is in a PAD, go to question 2C. Installation of access point can occur subject to the implementation of all appropriate mitigation measures. If the answer to 2A is 'no', go to question 2B.
	В	Has the access point been surveyed by Everick Heritage?			If the answer to 2B is 'yes', go to question 2C. If the answer to 2B is 'no', speak to the Heritage Manager and arrange additional heritage survey.
	С	Is the access point within a PAD?			If the answer to 2C is 'yes', go to question 2E. If the answer to 2C is 'no', go to question 2D.

	D	Has a heritage 'clearance letter' been prepared OR has the Archaeological Survey Report (ASR) been prepared and consulted upon?	If the answer to 2D is 'yes' and no impacts will occur to any recorded sites, no further heritage queries required. Installation of access point can occur subject to the implementation of all appropriate mitigation measures. If the answer to 2D is 'no', speak to the Heritage Manager to arrange a heritage 'clearance letter' is possible or wait for the ASR.
	E	Has the Aboriginal Cultural Heritage Assessment Report (ACHAR) been prepared, consulted upon, and approved by DPE via the Aboriginal Cultural Heritage Strategy (ACHS)?	If the answer to 2E is 'yes', go to question 2F. If the answer to 2E is 'no', speak to the Heritage Manager to understand the timing for ACHAR/ACHS.
	F	Is salvage a required mitigation measure identified in the ACHAR/ACHS?	If the answer to 2F is 'yes', go to question 2G. If the answer to 2F is 'no', no further heritage queries required. Installation of access point can occur subject to the implementation of all appropriate mitigation measures.
	G	Has salvage been completed in the location of the access point?	If the answer to 2G is 'yes', installation of access point can occur subject to the implementation of all appropriate mitigation measures. If the answer to 2G is 'no', speak to the Heritage Manager to understand the timing for relevant salvage activities.
Bio	diver	sity	
3	A	Are there any threatened flora species or threatened ecological communities at the location of the proposed access point?	If 'yes', any impact resulting from the access point must be in accordance with the clearing limits detailed within condition D25 of the Infrastructure Approval. If this cannot occur, the access point must be relocated.
Noi	se ar	nd vibration	 1
4	A	Are there any nearby sensitive receivers within 500m of the access point?	If 'yes', go to question 4B. If 'no', go to question 5
	В	What are the predicted noise/vibration levels that the sensitive receivers may experience during the installation of the access point? Are there predicted exceedances to the NMLs?	If 'yes' to exceedances in the NMLs, go to question 4C. If 'no', go to question 5

	С	If exceedances of the NMLs are predicted, what management measures are proposed?		-
Air	quali	ity		
5		Is there potential for dust impact to any nearby sensitive receivers?		If 'yes' please consider mitigation measures which may be required.

# Appendix B – List of access points and associated environmental setting

Access Point	Line	Access	Biodiversity PCT	PCT description	Threatened species	Heritage items	Heritage PAD	Sensitive Receiver (located approx. 500 m or less)
1	L1	Renmark Rd	PCT58	Black Oak	No			No
2	L1	Renmark Rd	PCT58	Black Oak	No			No
3	L1	Renmark Rd	PCT58	Black Oak	No			No
4	L1	Renmark Rd	PCT58	Black Oak	No			No
5	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
6	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
7	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
8	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
9	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
10	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
11	L1	Renmark Rd	PCT58	Black Oak	No			No
12	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
13	L1	Renmark Rd	PCT143	Narrow-leaved Hopbush	No			No
14	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
15	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
16	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
17	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
18	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
19	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
20	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
21	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
22	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
23	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
24	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
25	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No

Table B.1 List of access points and associated environmental setting

Access Point	Line	Access	Biodiversity PCT	PCT description	Threatened species	Heritage items	Heritage PAD	Sensitive Receiver (located approx. 500 m or less)
26	L1	Renmark Rd	PCT171	Spinifex linear dune mallee	No			No
27AA	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
27	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
28	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
29	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
30	L1	Renmark Rd	PCT0	Miscellaneous/exotic	No			No
31	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
32	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
33	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
34	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
35	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
36	L1	Renmark Rd	PCT170 & 154	Chenopod Sandplain mallee woodland & Pearl Bluebush low open shrubland	No			No
37	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
38	L1	Renmark Rd	PCT170 & 154	Chenopod Sandplain mallee woodland & Pearl Bluebush low open shrubland	No			No
39	L1	Renmark Rd	PCT153 & 170	Black Bluebush and Chenopod Sandplain mallee woodland	No			No
40	L1	Renmark Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
41	L1	Renmark Rd	PCT153	Black Bluebush	No			No
42	L1	Renmark Rd	PCT58	Black Oak	No			No
43	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
44	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
45	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
46	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No

Access Point	Line	Access	Biodiversity PCT	PCT description	Threatened species	Heritage items	Heritage PAD	Sensitive Receiver (located approx. 500 m or less)
47	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
48	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
49	L1	Renmark Rd	PCT154	Pearl Bluebush low open shrubland	No			No
50	L1	Renmark Rd	PCT153	Black Bluebush	No			No
51	L1	Renmark Rd	PCT153	Black Bluebush	No			No
52	L1	Renmark Rd	PCT153	Black Bluebush	No			No
53	L1	Renmark Rd	PCT153	Black Bluebush	No			No
54	L1	Renmark Rd	PCT153	Black Bluebush	No			No
55	L1	Renmark Rd	PCT153	Black Bluebush	No			No
56	L1	Renmark Rd	PCT153	Black Bluebush	No			No
57	L1	Renmark Rd	PCT153	Black Bluebush	No			No
58	L1	Renmark Rd	PCT153	Black Bluebush	No			No
59	L1	Renmark Rd	PCT153	Black Bluebush	No			No
60	L1	Renmark Rd	PCT153	Black Bluebush	No			No
61	L1	Renmark Rd	PCT153	Black Bluebush	No			No
62	L1	Renmark Rd	PCT153	Black Bluebush	No			No
63	L1	Renmark Rd	PCT153	Black Bluebush	No			No
64	L1	Renmark Rd	PCT153	Black Bluebush	No			No
65	L1	Renmark Rd	PCT153	Black Bluebush	No			No
66	L1	Renmark Rd	PCT153	Black Bluebush	No			No
67	L1	Renmark Rd	PCT153	Black Bluebush	No			No
68	L1	Renmark Rd	PCT153	Black Bluebush	No			No
69	L1	Renmark Rd	PCT153	Black Bluebush	No			No
70	L1	Renmark Rd	PCT153	Black Bluebush	No			No

Access Point	Line	Access	Biodiversity PCT	PCT description	Threatened species	Heritage items	Heritage PAD	Sensitive Receiver (located approx. 500 m or less)
71	L1	Renmark Rd	PCT153	Black Bluebush	No			No
72	L1	Renmark Rd	PCT153	Black Bluebush	No			No
73	L1	Renmark Rd	PCT153	Black Bluebush	No			No
74	L1	Renmark Rd	PCT153	Black Bluebush	No			No
75	L1	Renmark Rd	PCT153	Black Bluebush	No			No
76	L1	Renmark Rd	PCT153	Black Bluebush	No			No
77	L1	Renmark Rd	PCT153	Black Bluebush	No			No
78	L1	Renmark Rd	PCT153	Black Bluebush	No			No
79	L1	Nulla Rd	PCT153	Black Bluebush	No			No
80	L1	Nulla Rd	PCT58	Black Oak	No			No
82	L1	Anabranch Mail Rd	PCT15	Black Box open woodland wetland	No			No
82A	L1	Anabranch Mail Rd	твс	ТВС	твс			ТВС
83	L1	Anabranch Mail Rd	PCT15	Black Box open woodland wetland	No			No
84	L1	Silver City Hwy	PCT21	Slender Cypress Pine	No			No
85	L1	Silver City Hwy	PCT21	Slender Cypress Pine	No			No
86	L1	High Darling Rd	PCT153	Black Bluebush	No			No
87	L1	High Darling Rd	PCT153	Black Bluebush	N/A			No
88	L1	Low Darling Rd	PCT15	Black Box open woodland wetland	No			No
89	L1	Low Darling Rd	PCT15	Black Box open woodland wetland	No			No
90	L1	Wentworth Pooncarie Rd	PCT15	Black Box open woodland wetland	No			No

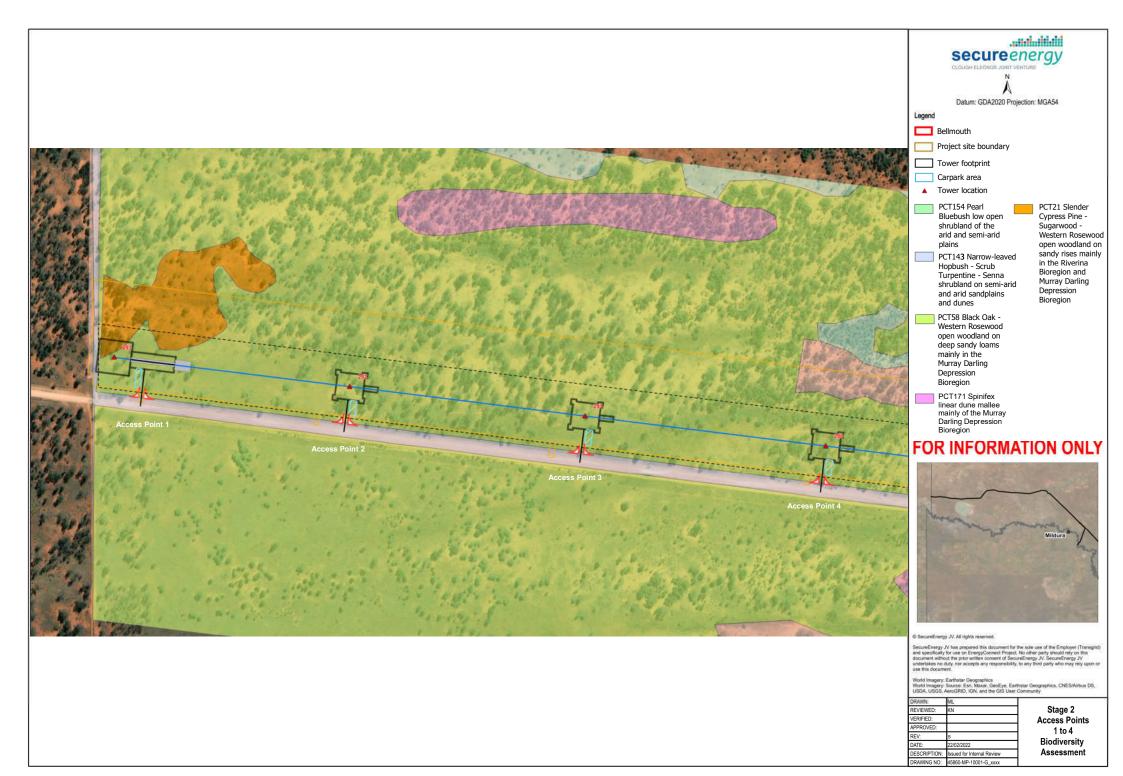
Access Point	Line	Access	Biodiversity PCT	PCT description	Threatened species	Heritage items	Heritage PAD	Sensitive Receiver (located approx. 500 m or less)
91	L1	Wentworth Pooncarie Rd	PCT15	Black Box open woodland wetland	No			No
92	L1	Renmark Rd	PCT91	Bladder Saltbush shrubland on alluvial plains	No			No
93 <sup>1</sup>	L1	Arumpo Rd	PCT170 & PCT0	Chenopod sandplain malllee woodland & Miscellaneous/exotic	No			No
94	L4	Arumpo Rd	PCT170	Chenopod sandplain malllee woodland	No			No
95	L4	Dansons Rd	PCT170	Chenopod Sandplain mallee woodland	No			No
96	L4	Dansons Rd	PCT0	Miscellaneous/exotic	Unknown			No
97	L4	Sturt Hwy	PCT170 & PCT0	Chenopod sandplain malllee woodland & Miscellaneous/exotic	Unknown			Yes
98	L4	Sturt Hwy	PCT19	Cypress Pine woodland	No			No
100 <sup>1, 3</sup>	-	Arumpo Road	PCT170	Chenopod Sandplain mallee woodland	No			No
-	-	Alcheringa Drive water supply point <sup>1</sup>	PCT15	Black Box open woodland wetland	No			No
-	-	Fletchers Lake Road water supply point	PCT87 & PCT102*	Black Bluebush low open shrubland & Chenopod sandplain mallee woodland/shrubland	No			Yes
-	-	Anabranch South Compound	PCT170	Chenopod sandplain malllee woodland	No			No

1. Addressed in Traffic Strategy Stage 1 (45860-G-70108-REP-G-00001)

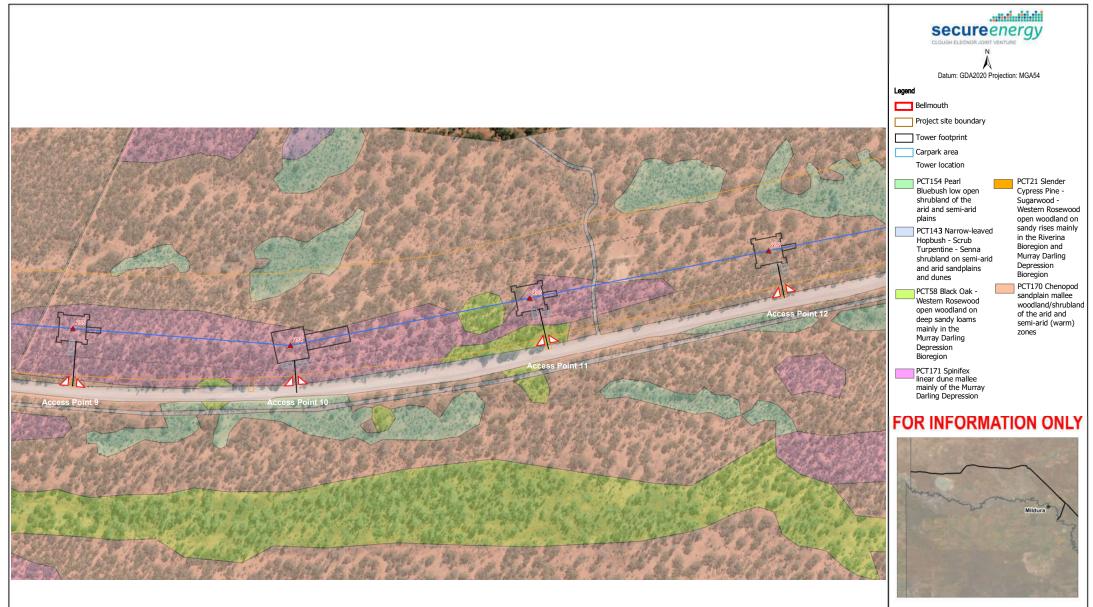
2. Subject to additional heritage survey due to movement/refinement of access point during detail design stage.

3. Location of access point 100 has shifted west approximately 40m since the preparation of the Stage 1 Traffic Strategy.

## Appendix C – Biodiversity mapping

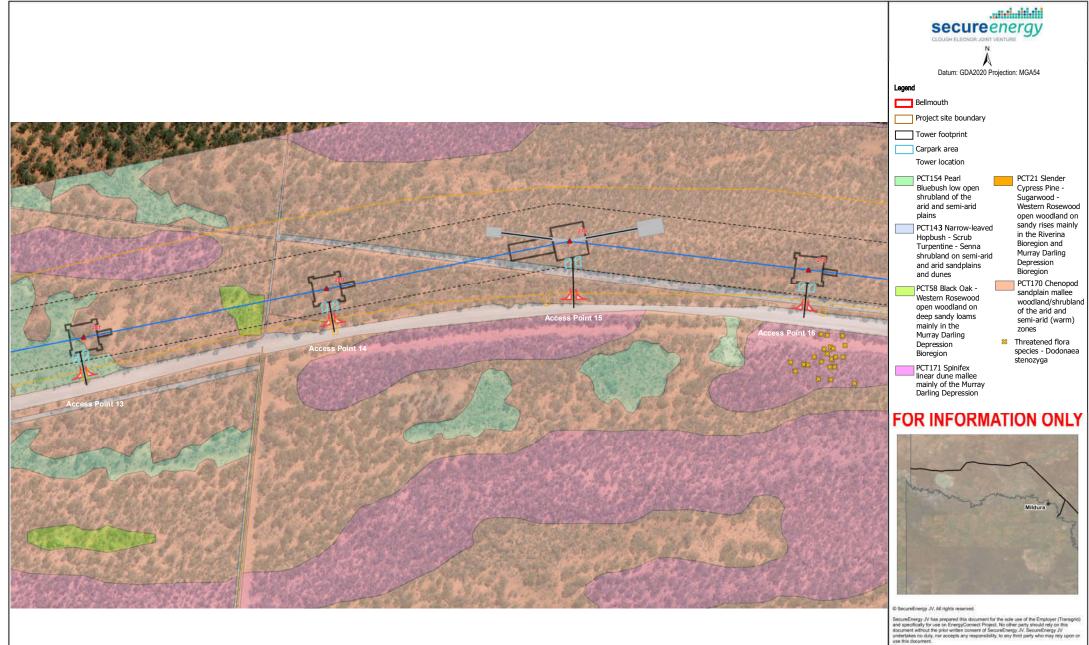






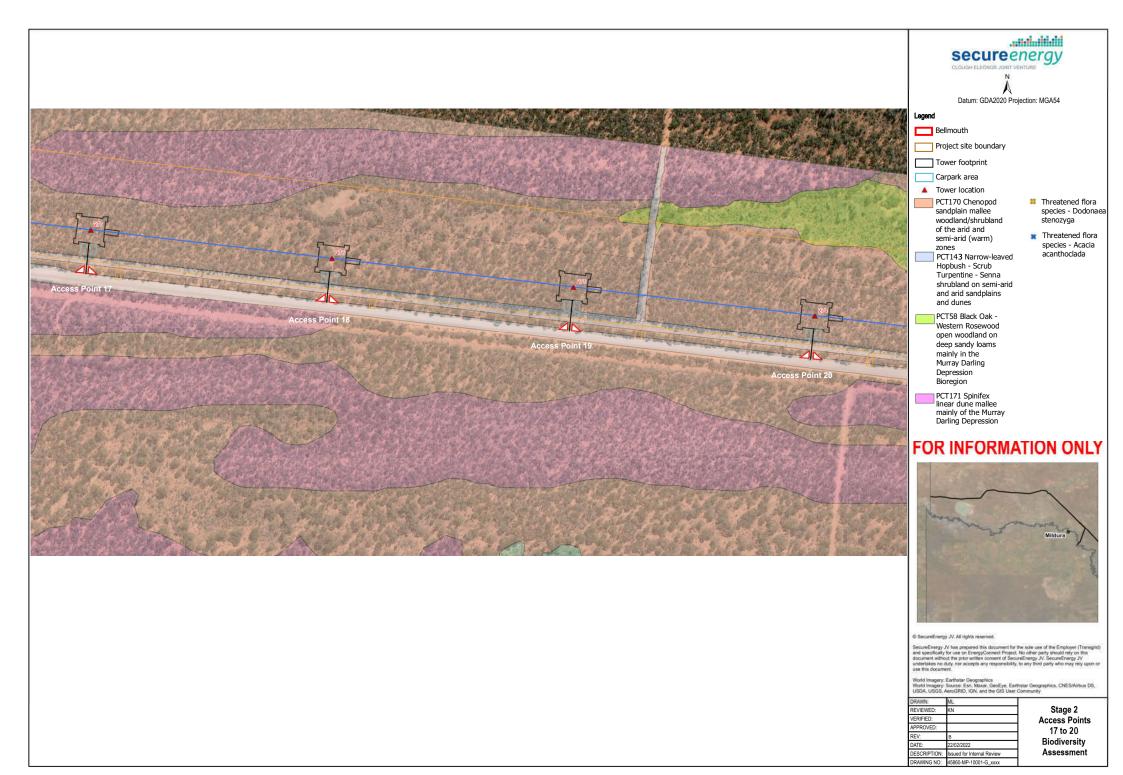
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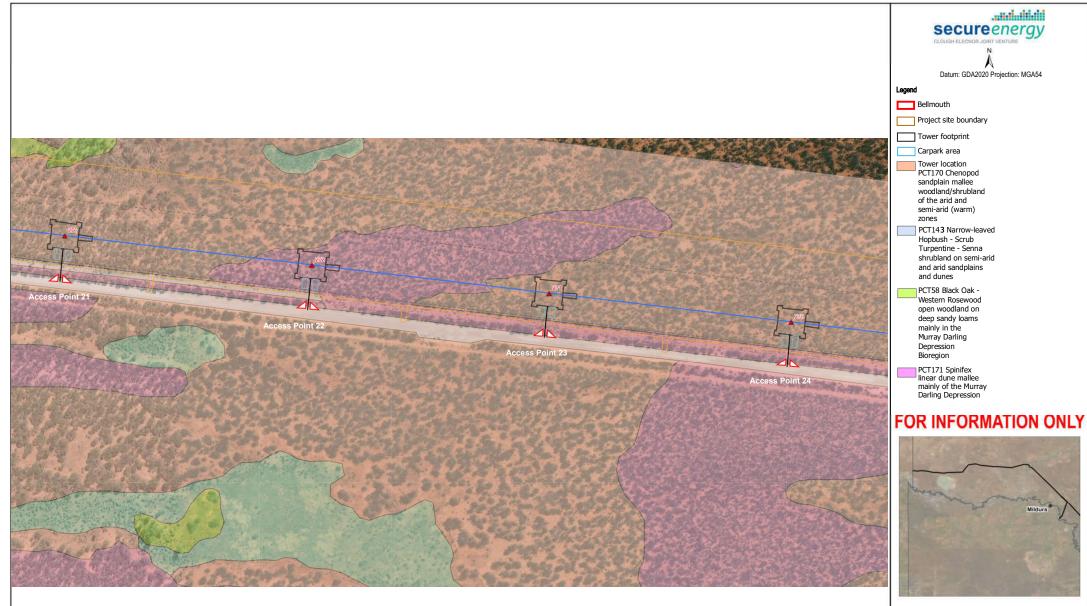
RAWN:	ML	
EVIEWED:	KN	Stage 2
ERIFIED:		Access Points
PPROVED:		9 to 12
EV:	В	
ATE:	22/02/2022	Biodiversity
ESCRIPTION:	Issued for Internal Review	Assessment
RAWING NO:	45860-MP-10001-G_xxxx	



World Imagery: Earthstar Geographics World Imagery: Source: Esri, Maxie, GeoEye, Earthstar Geographics. CNES/Airbus DS, USDA USGS. AmrGRID IGN and the GIS Usar Community

DRAWN:	ML	
REVIEWED:	KN	Stage 2
VERIFIED:		Access Points
APPROVED:		
REV:	В	13 to 16
DATE:	22/02/2022	Biodiversity
DESCRIPTION:	Issued for Internal Review	Assessment
DRAWING NO:	45860-MP-10001-G_xxxx	





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RAWN:	ML	
EVIEWED:	KN	Stage 2
ERIFIED:		Access Points
PPROVED:		
EV:	В	21 to 24
ATE:	22/02/2022	Biodiversity
ESCRIPTION:	Issued for Internal Review	Assessment
RAWING NO:	45860-MP-10001-G_xxxx	



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REVIEWED:	KN	Stage 2
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REV:	в	Biodiversity
DATE:	22/02/2022	
DESCRIPTION	: Issued for Internal Review	Assessment
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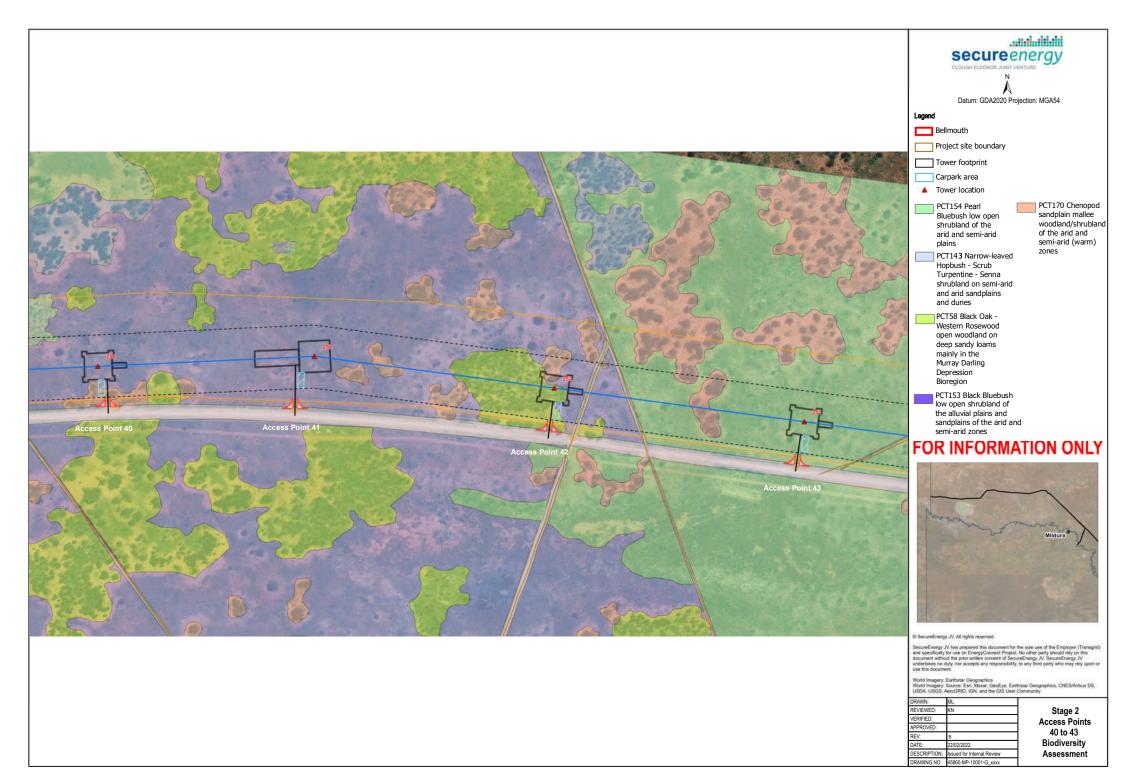
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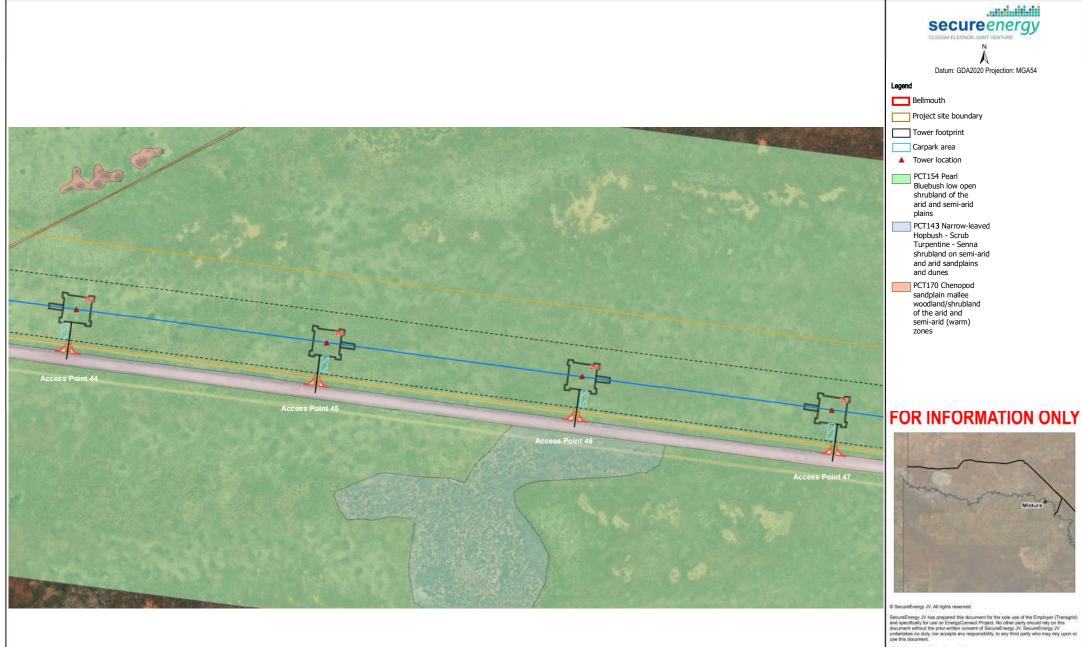
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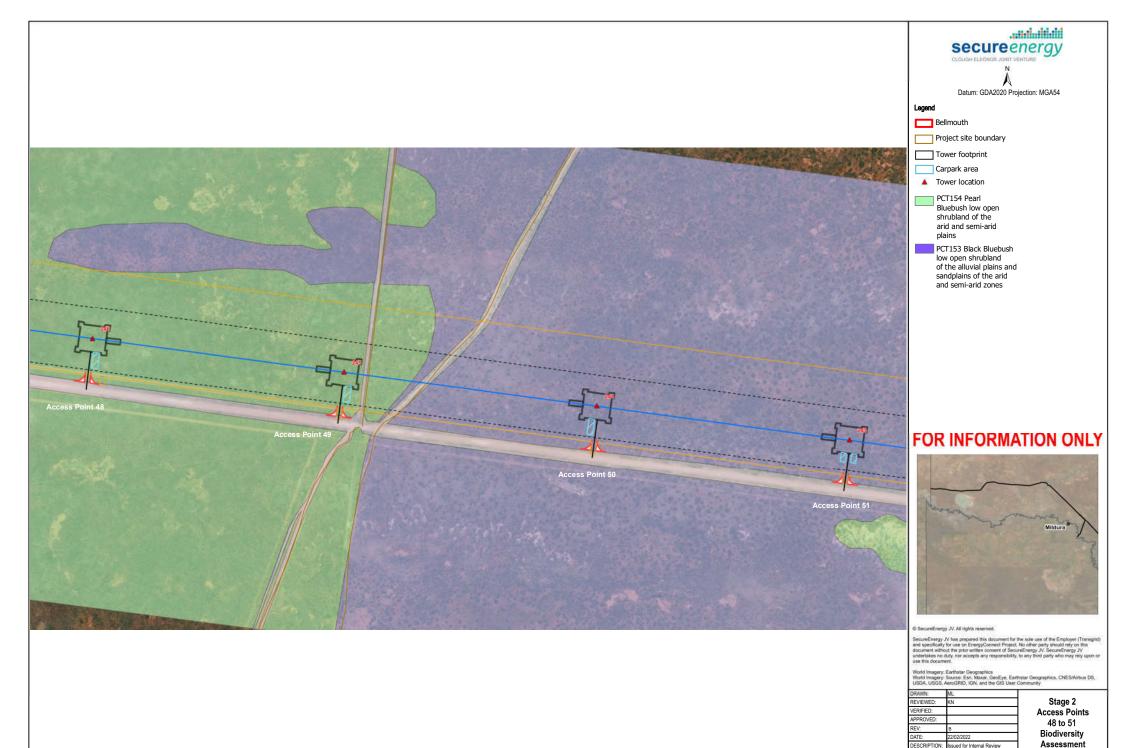
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Access Points 36 to 39 Biodiversity Assessment



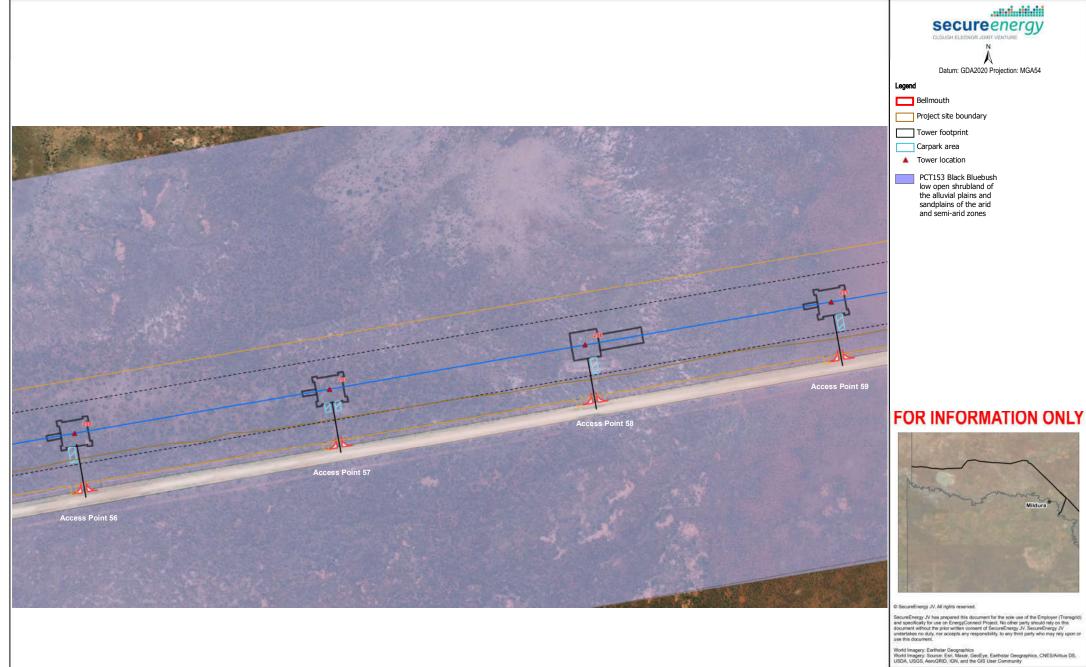


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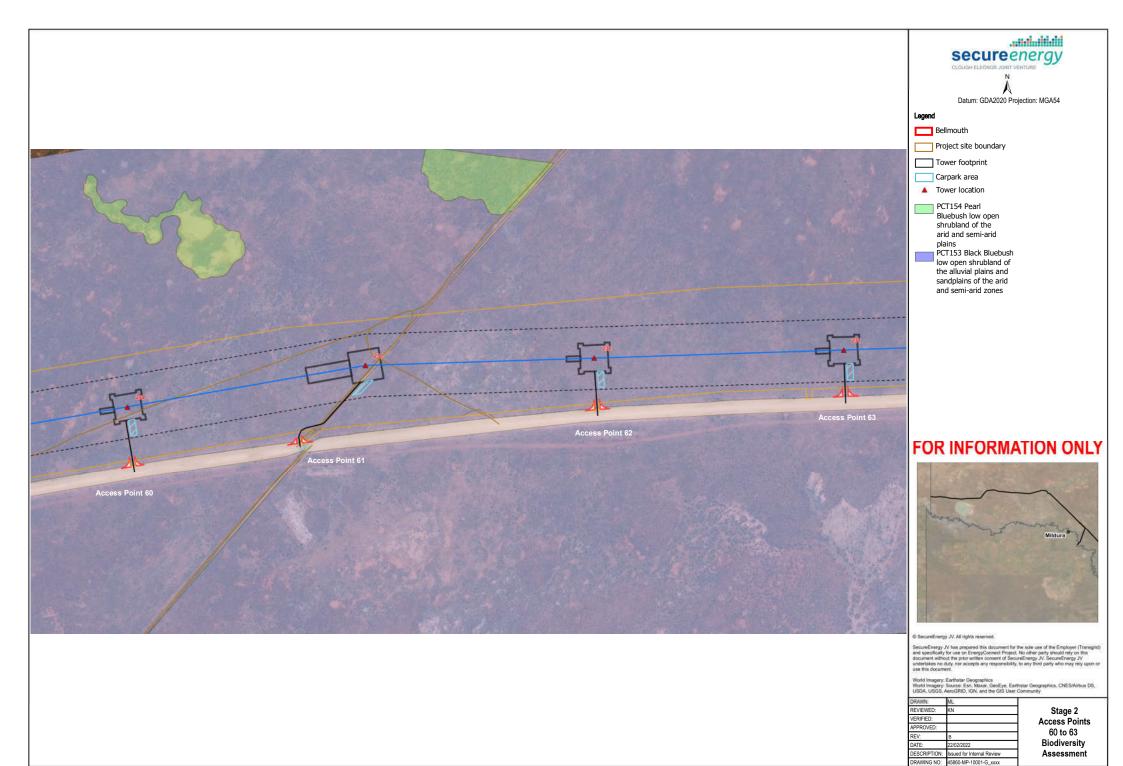


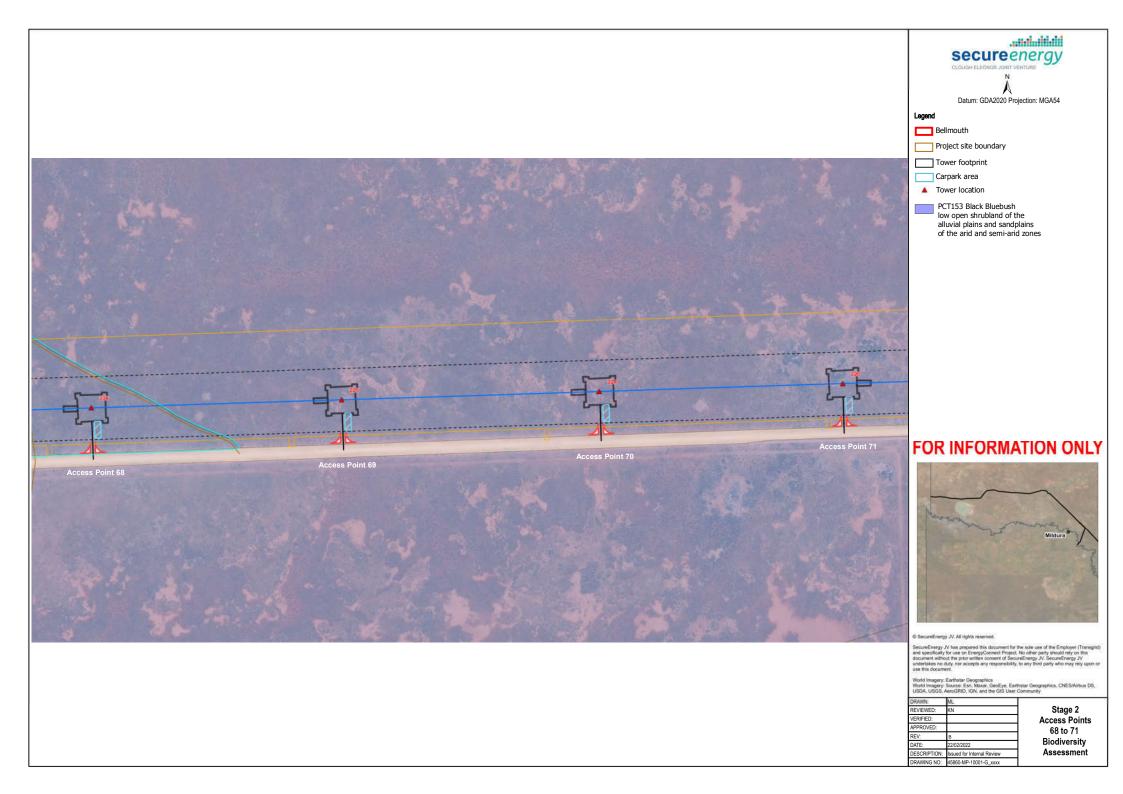
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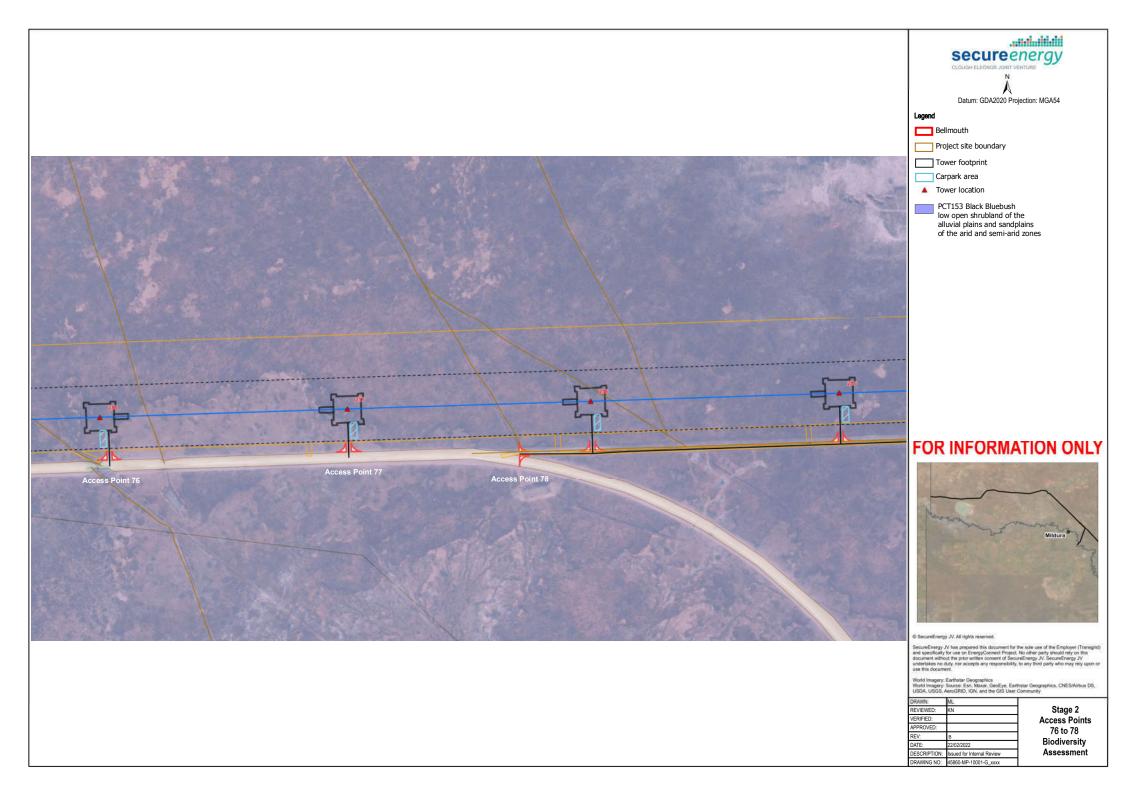
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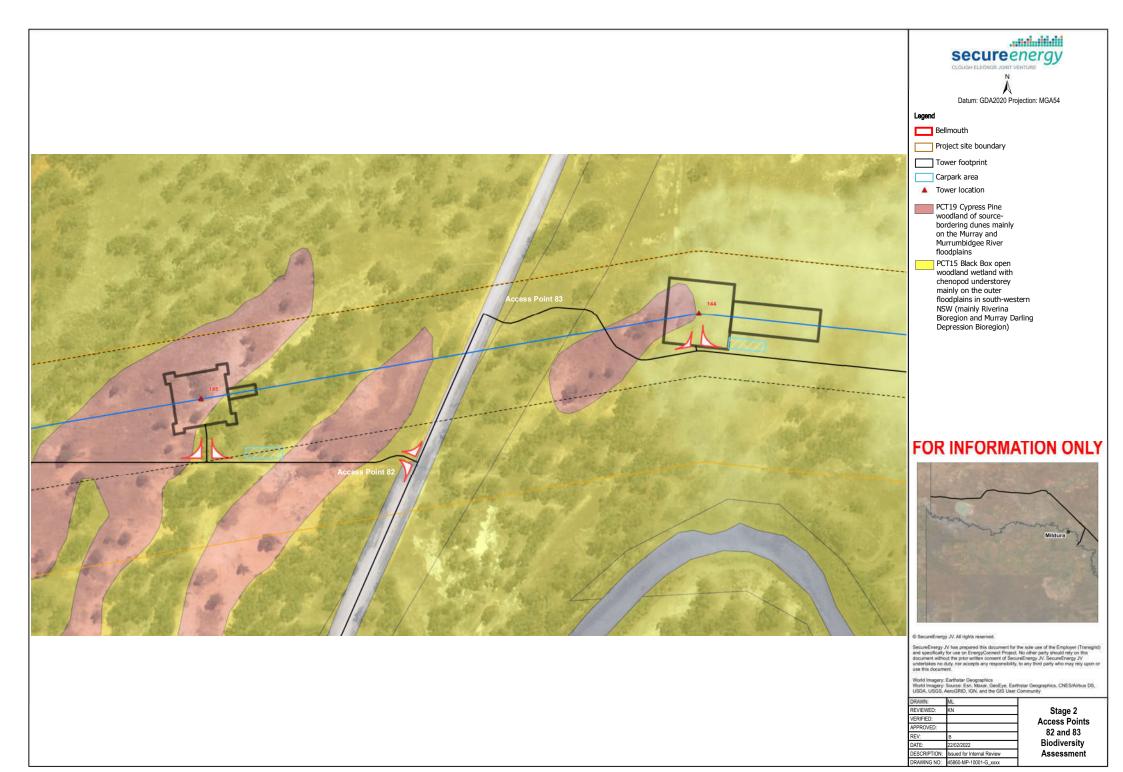






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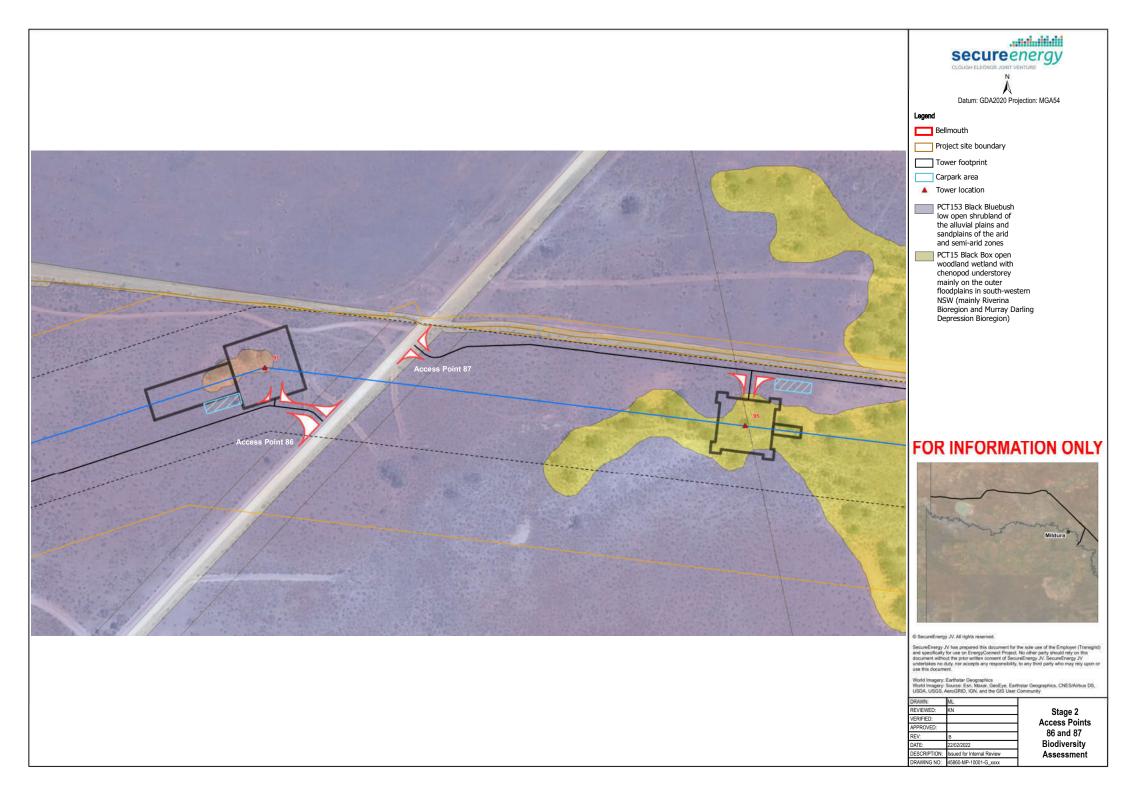
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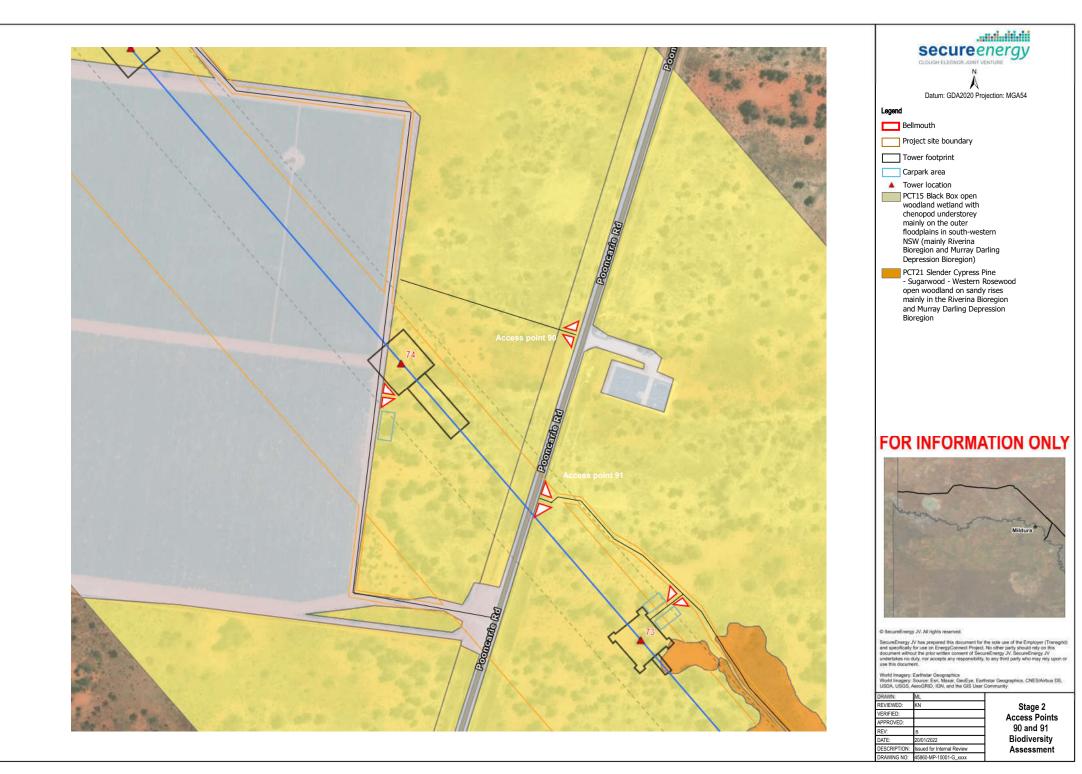


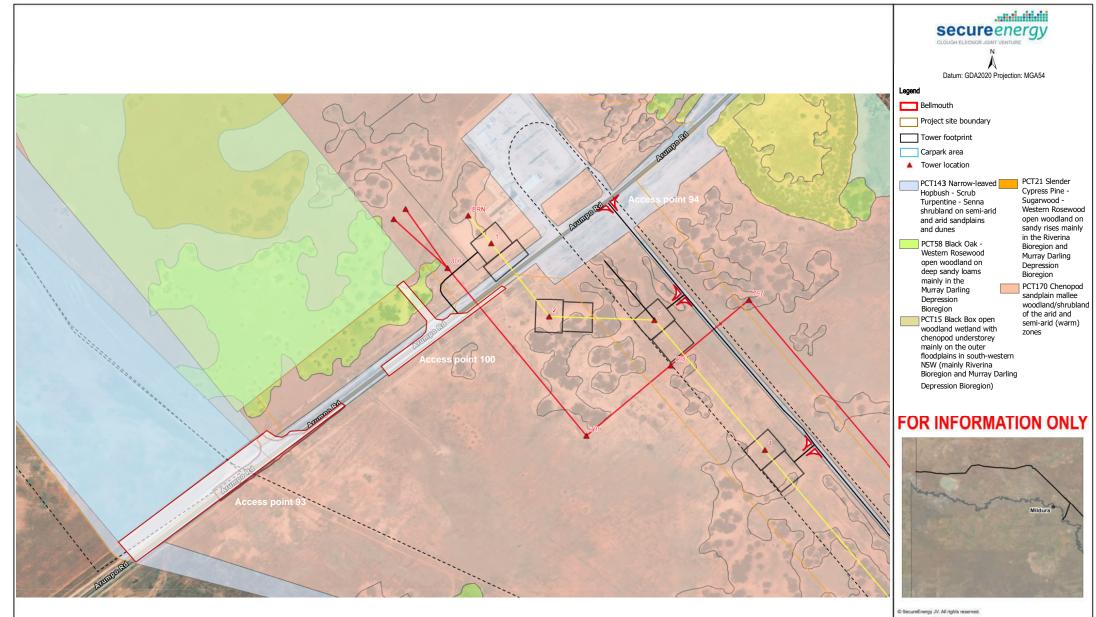
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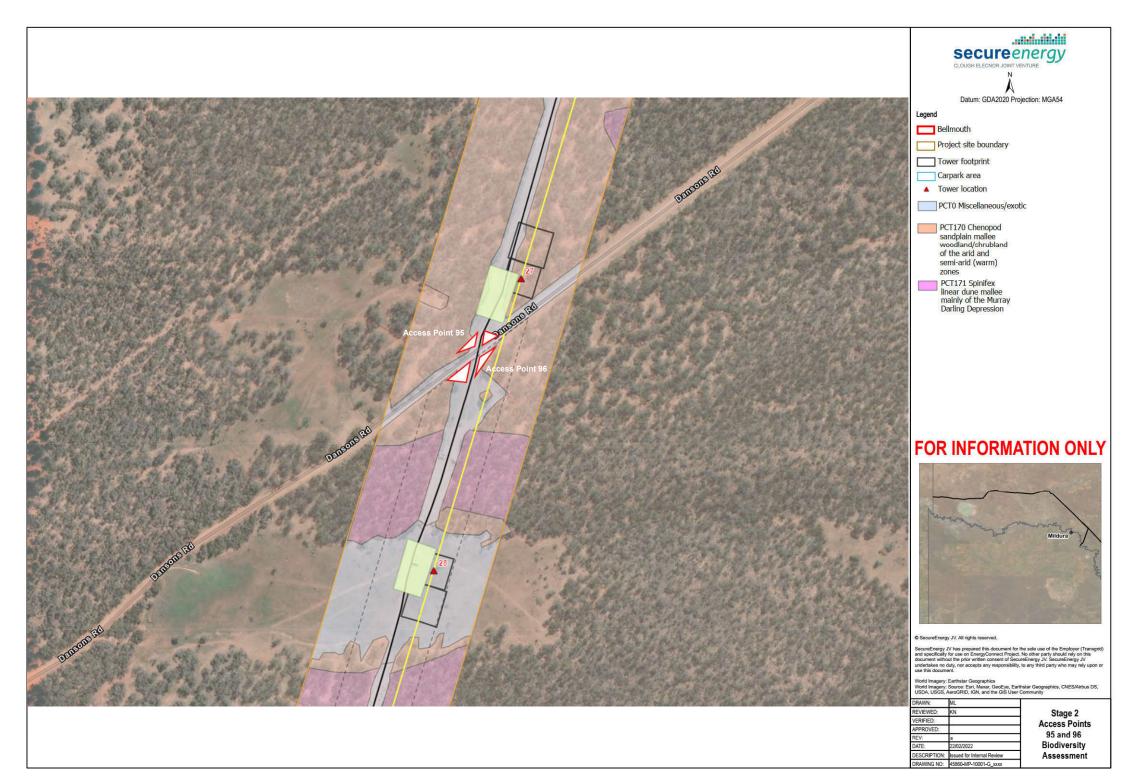




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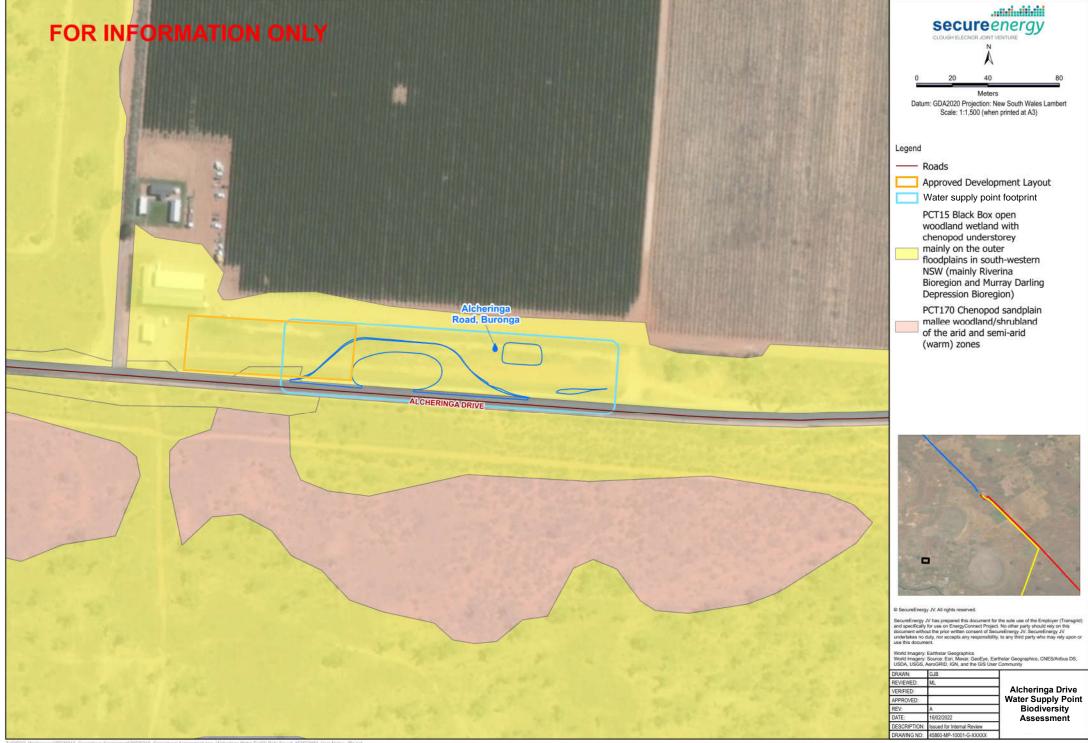
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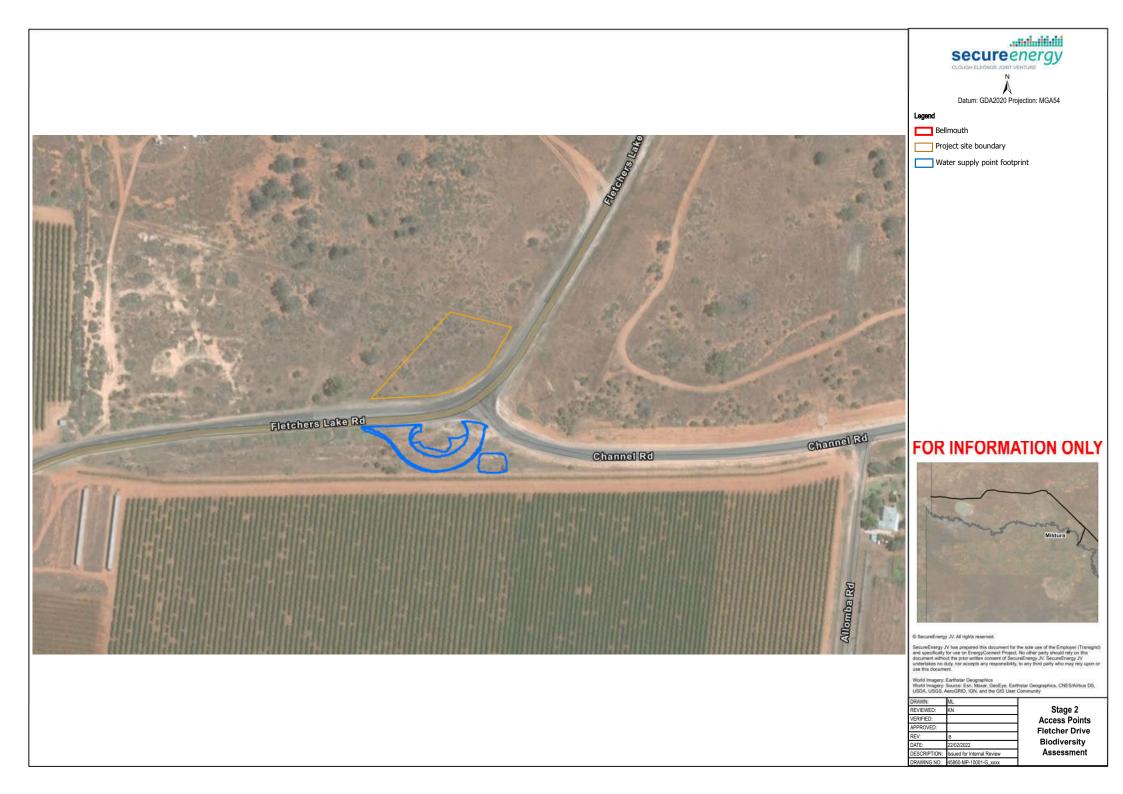






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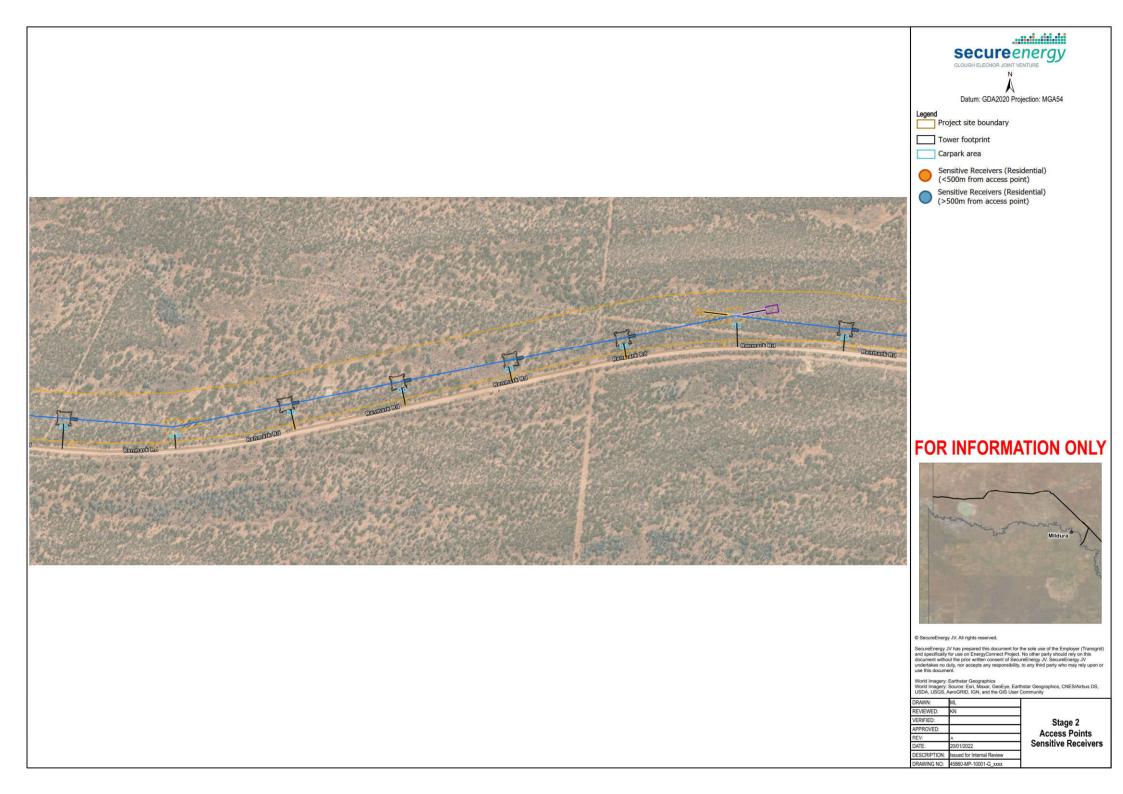


### Appendix D – Heritage mapping

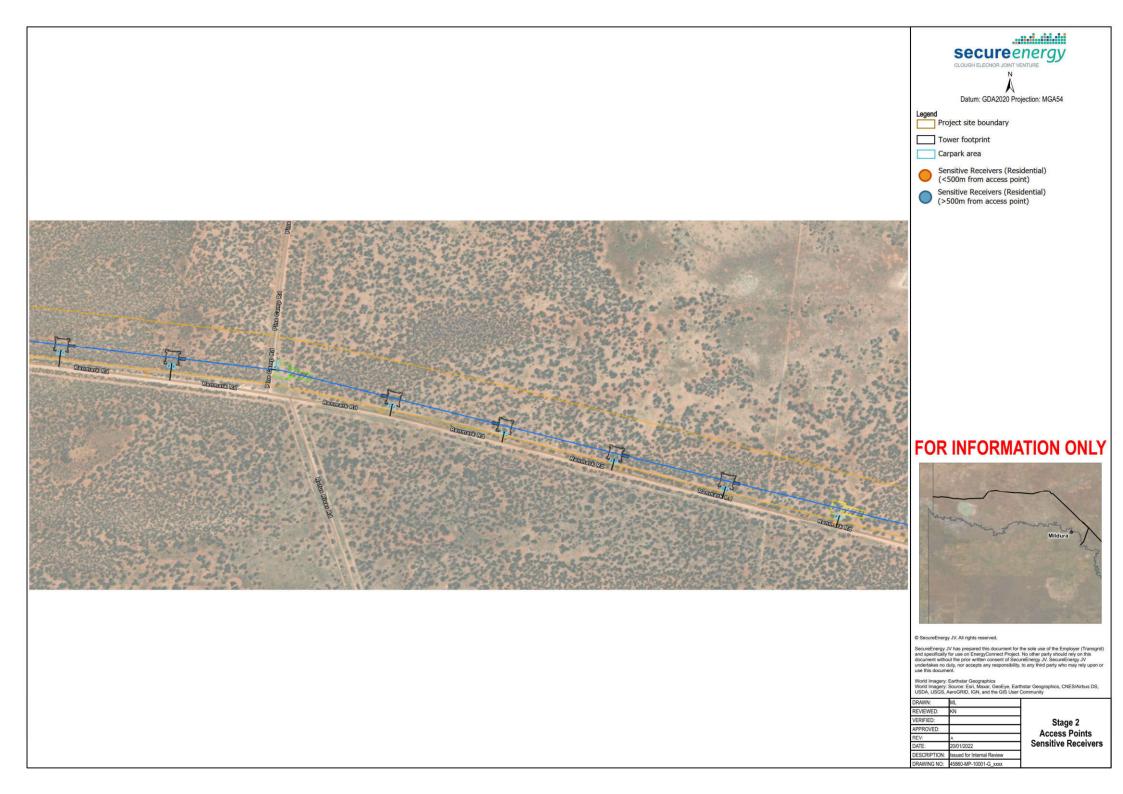
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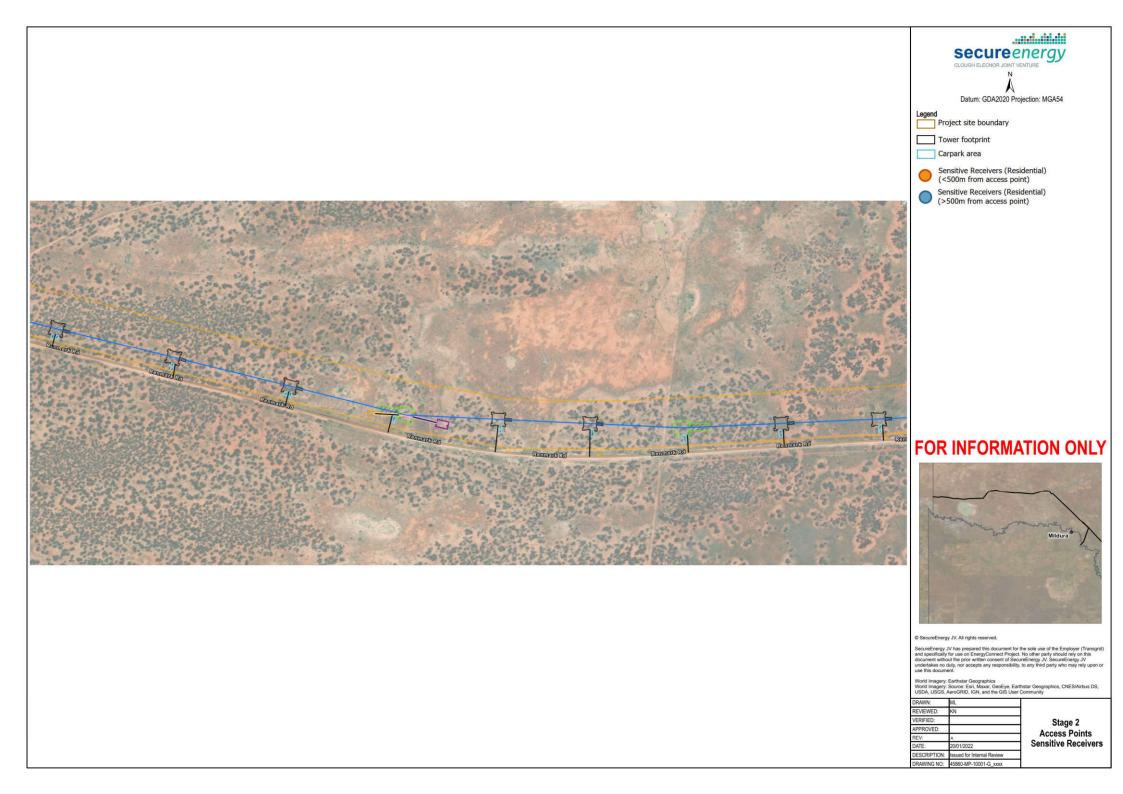
# Appendix E – Residential sensitive receivers mapping

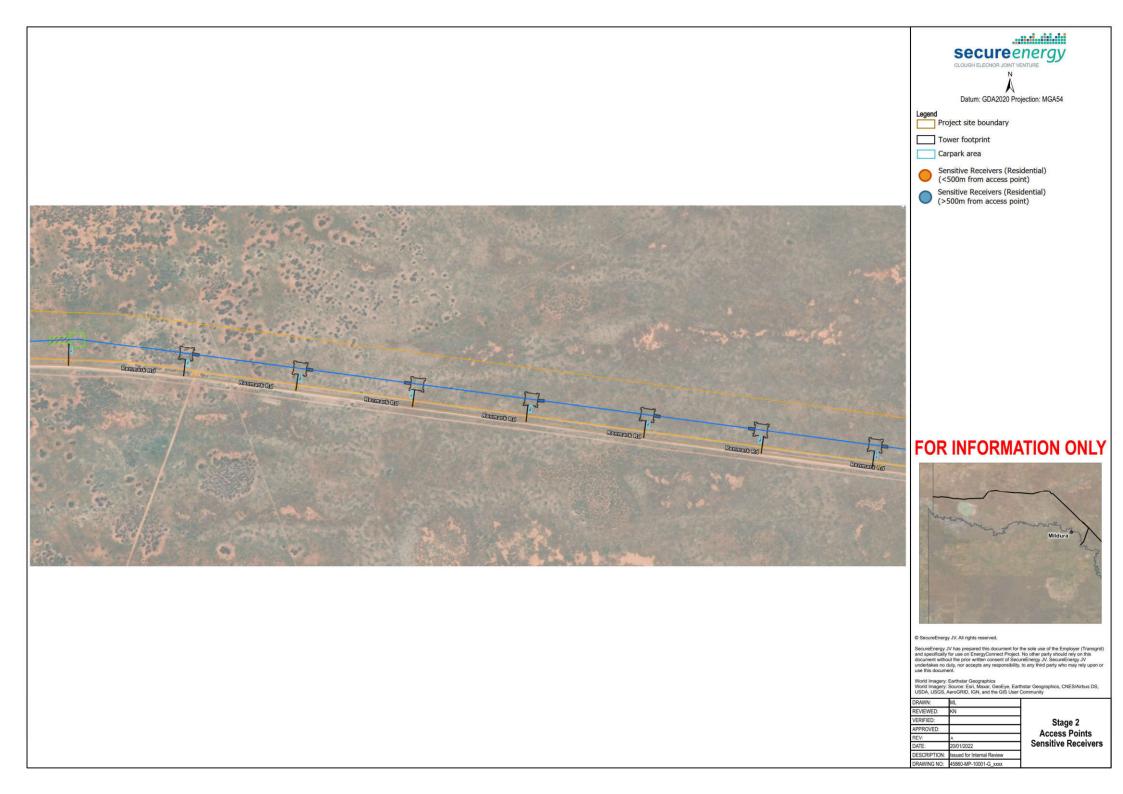


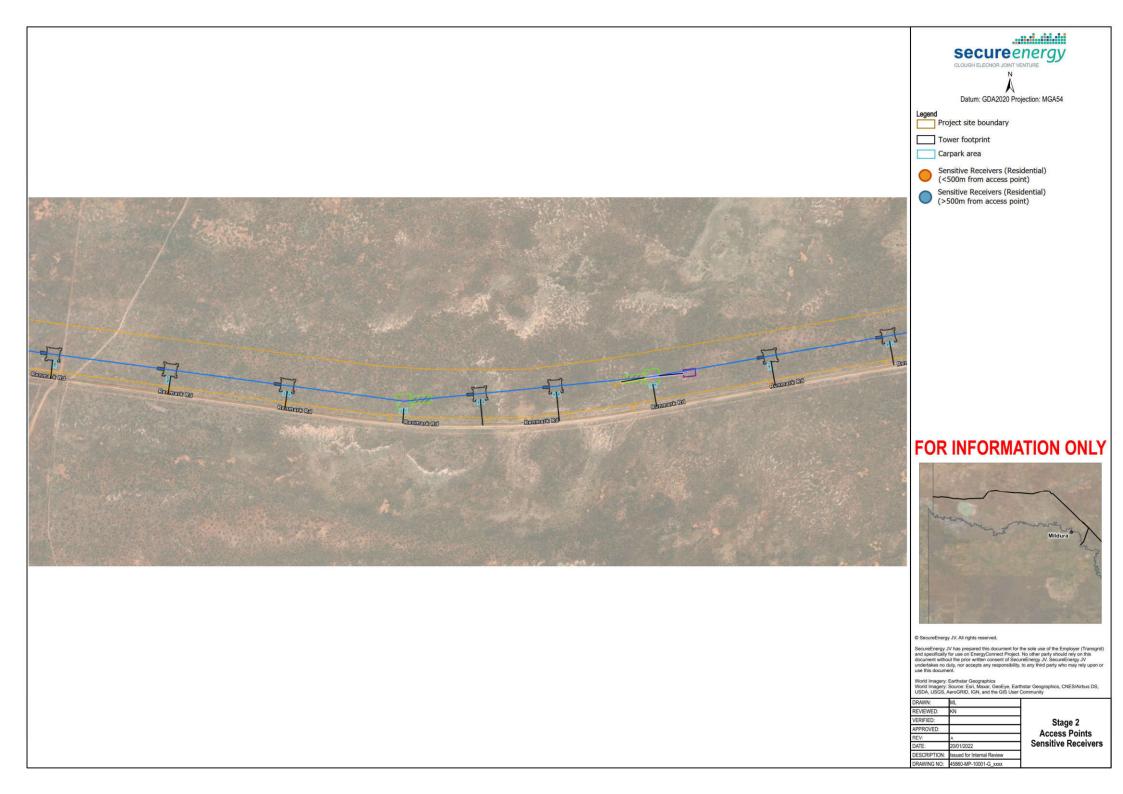














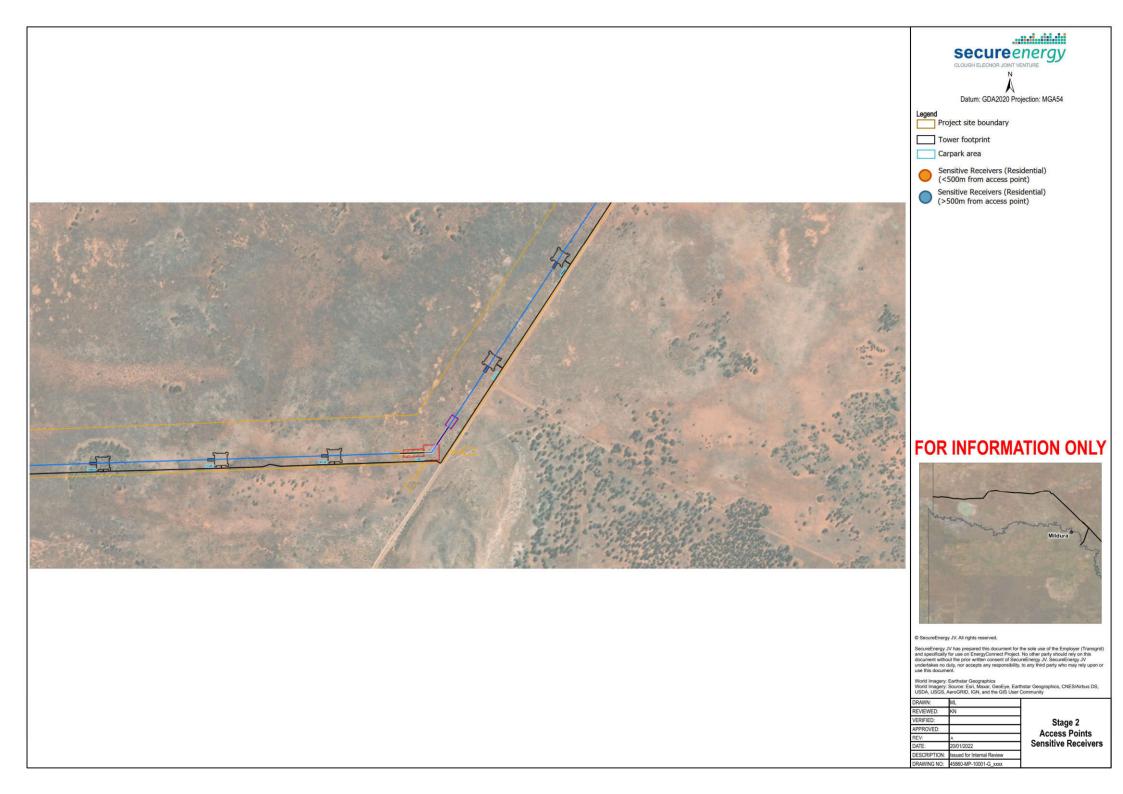
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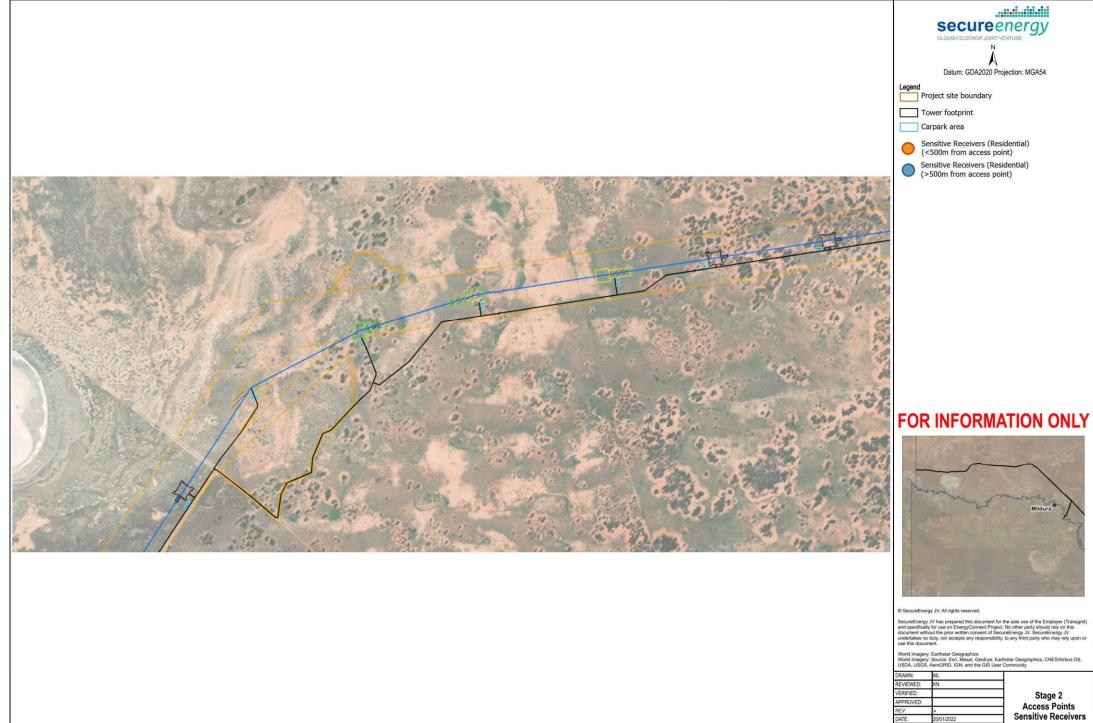


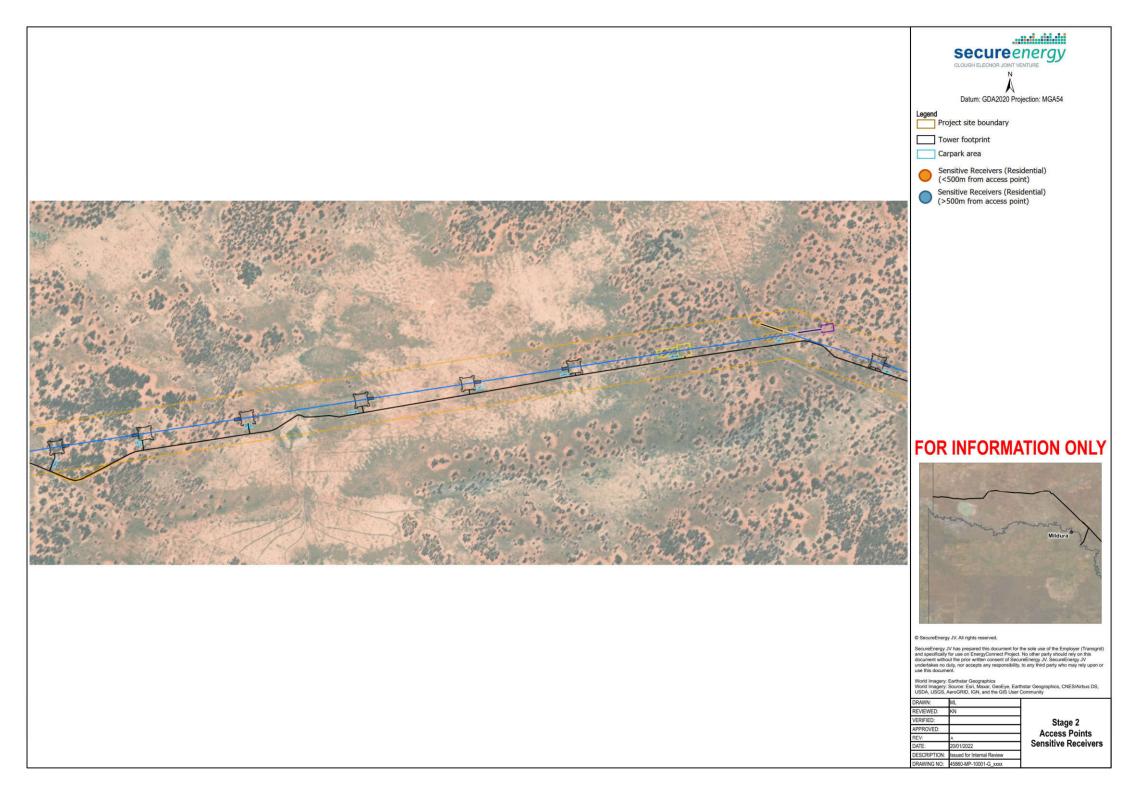


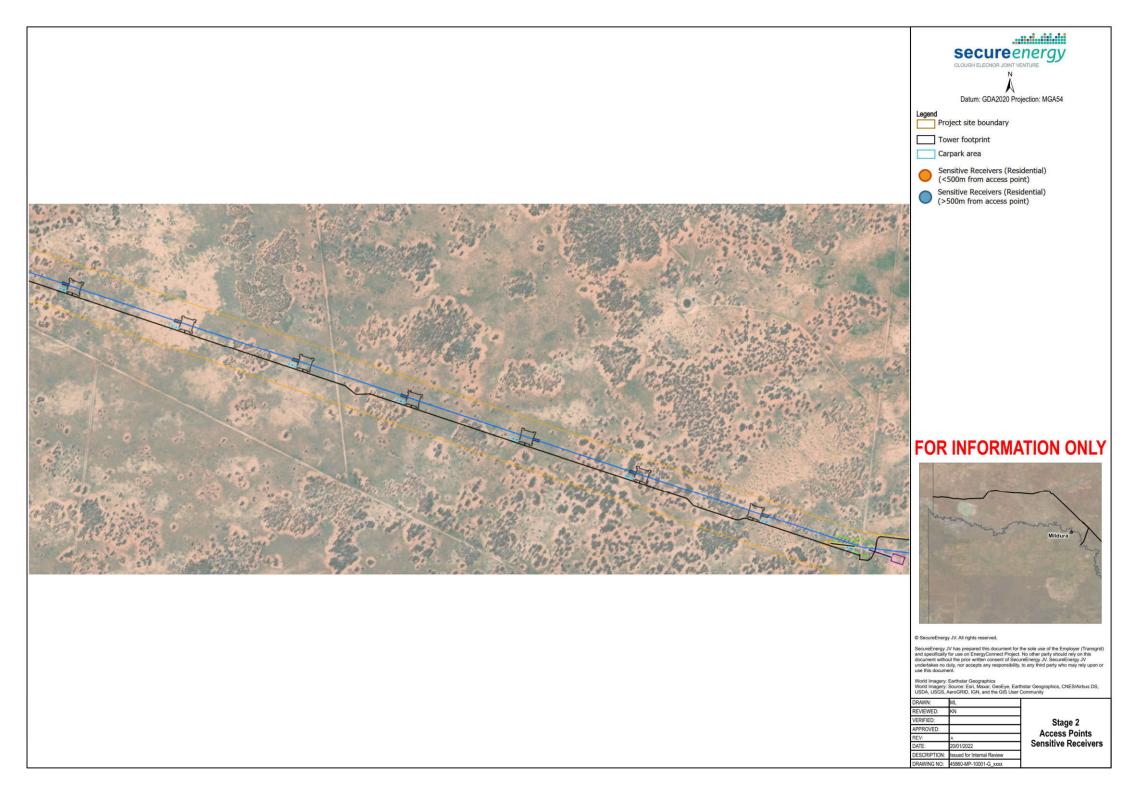


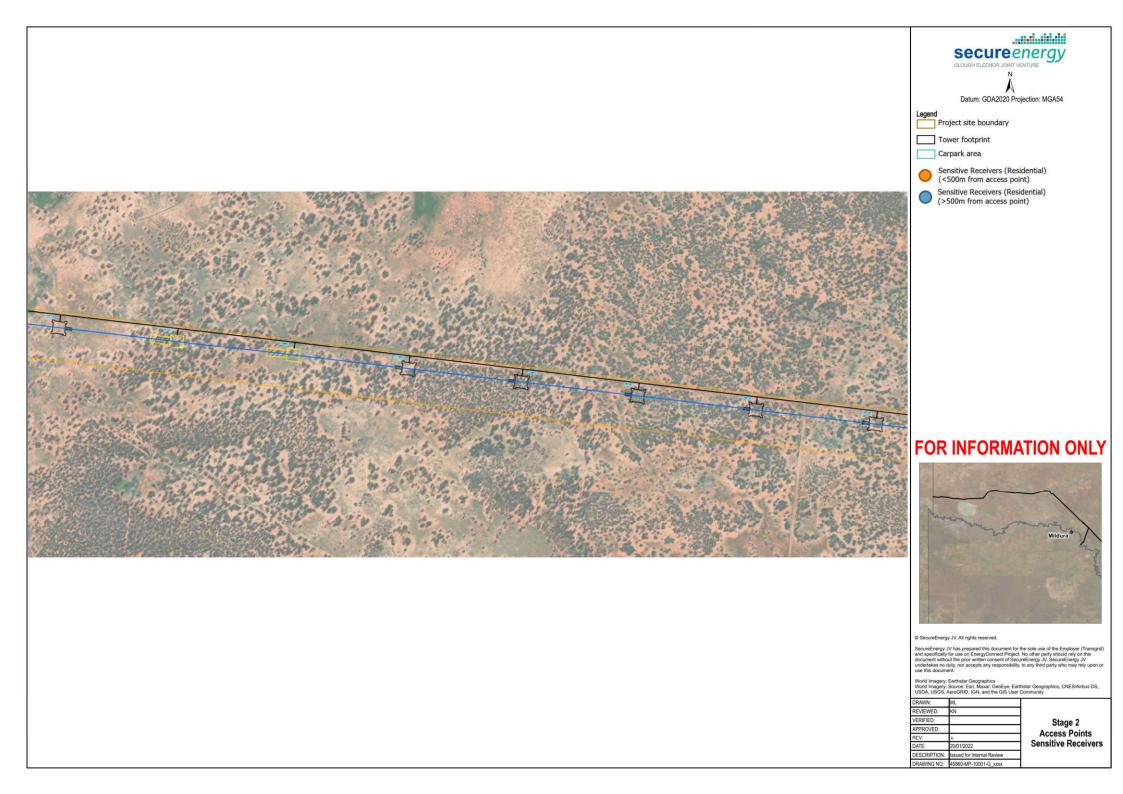
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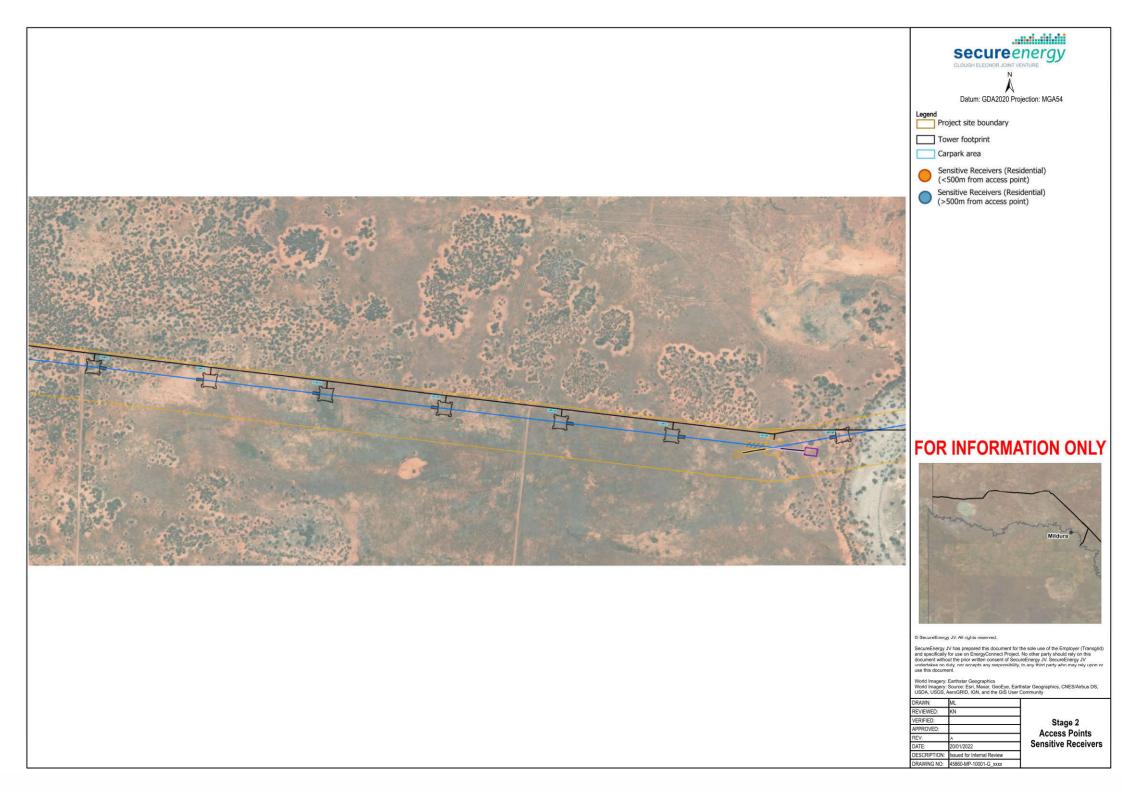


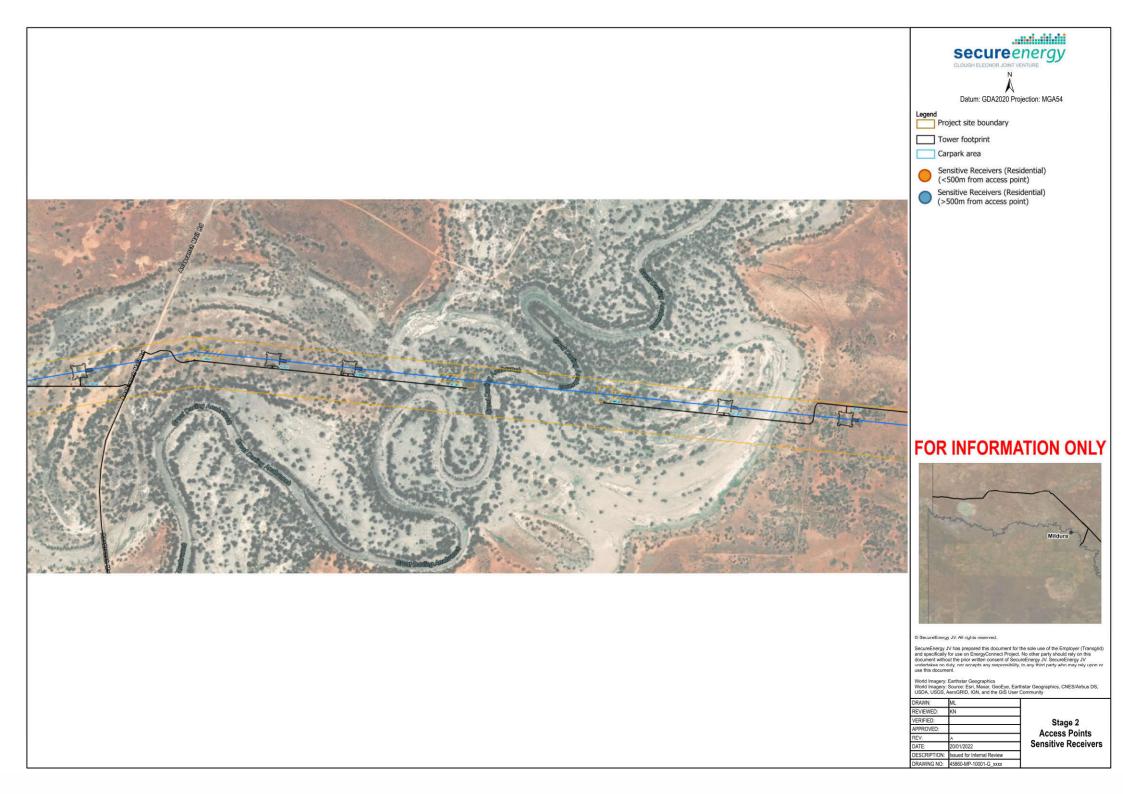




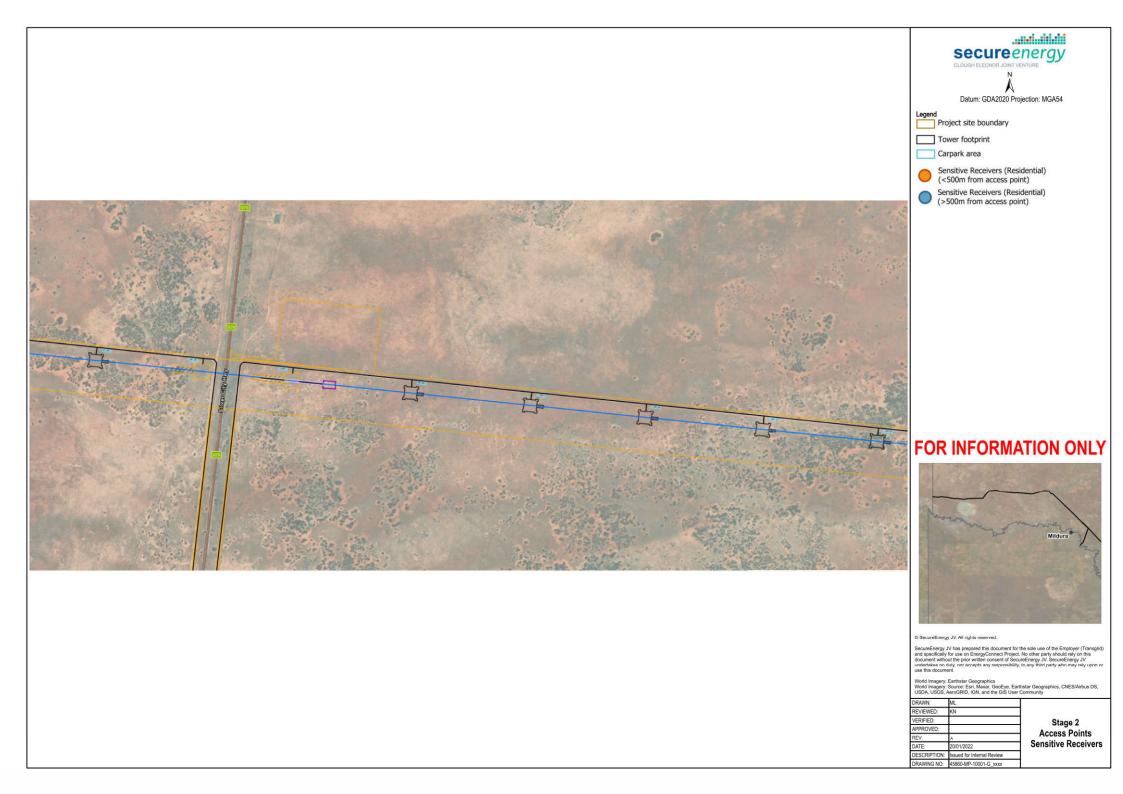




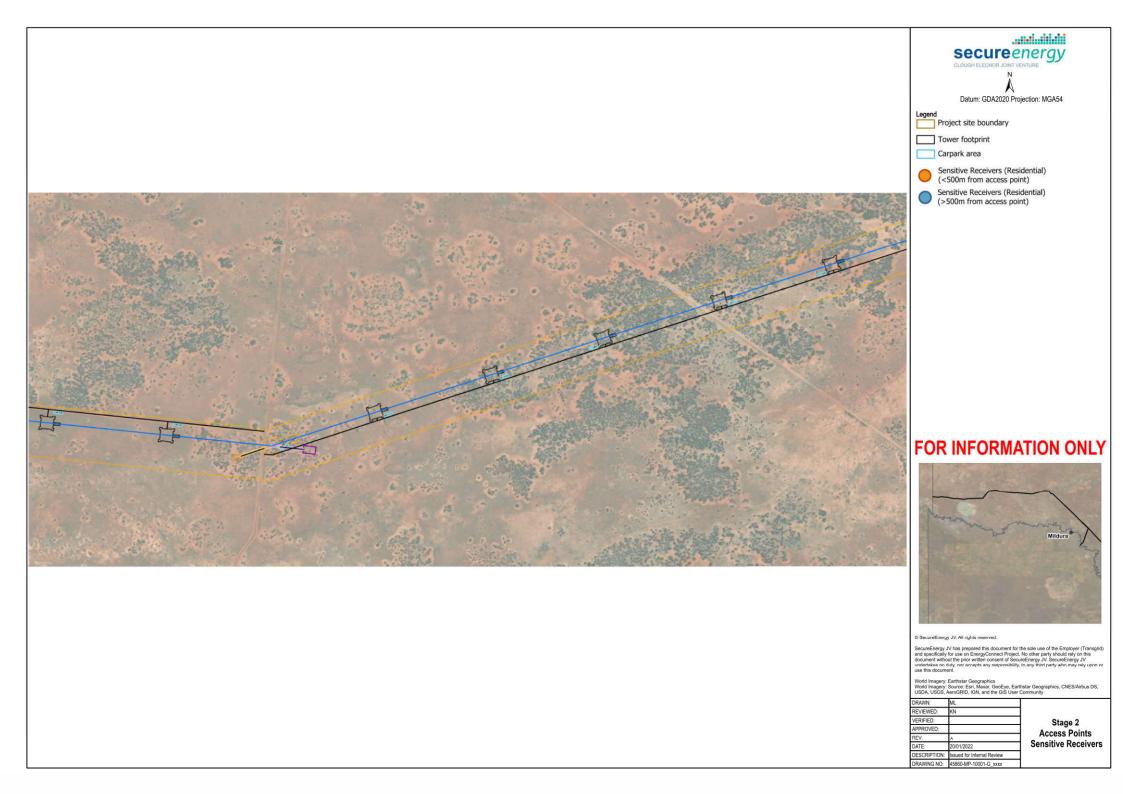


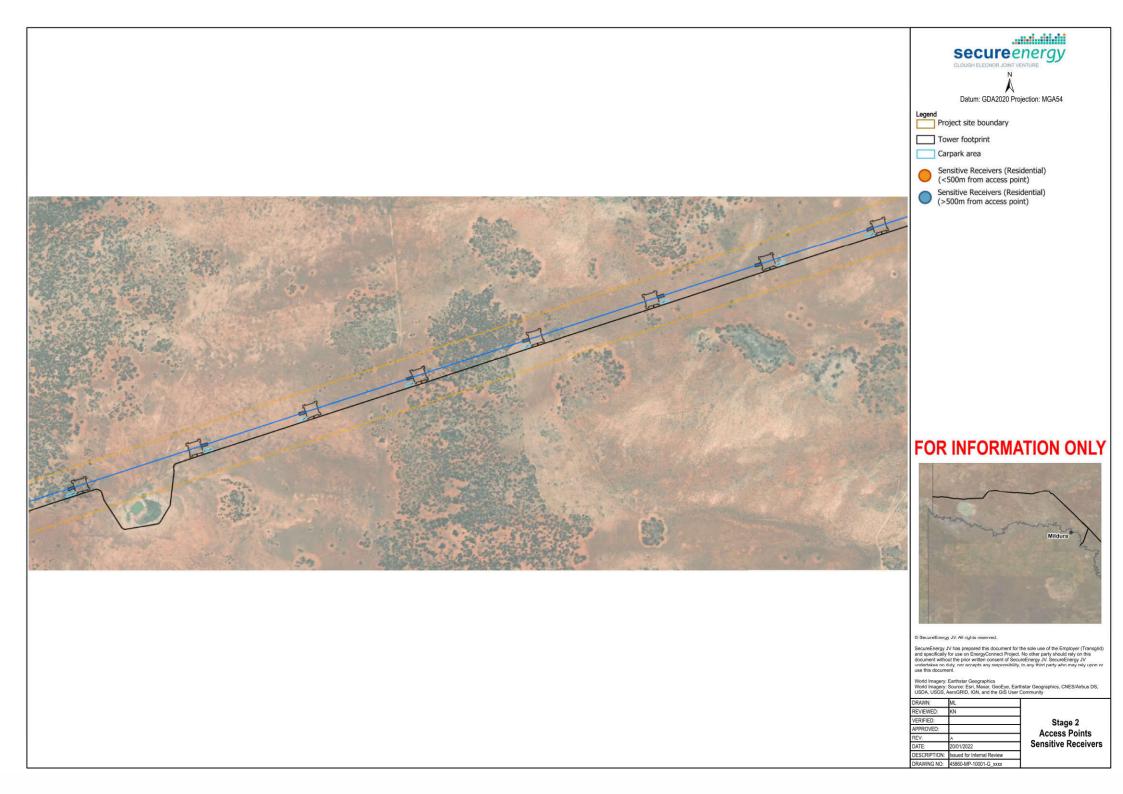


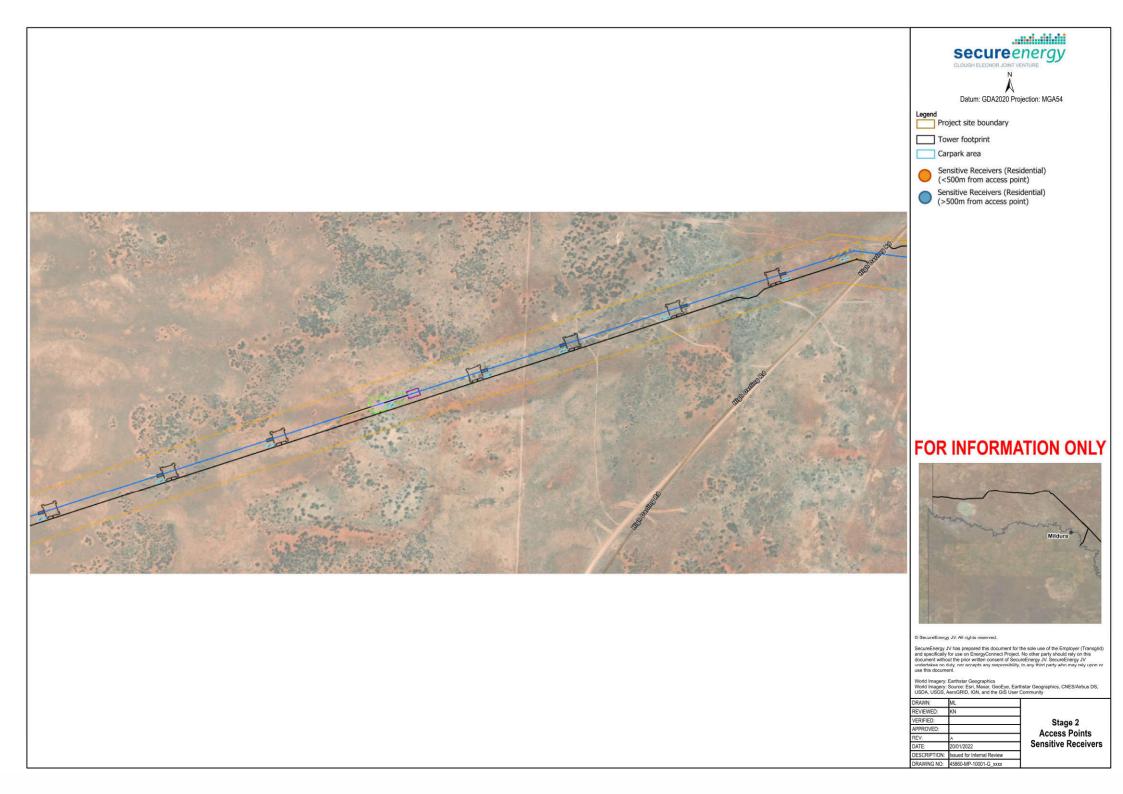


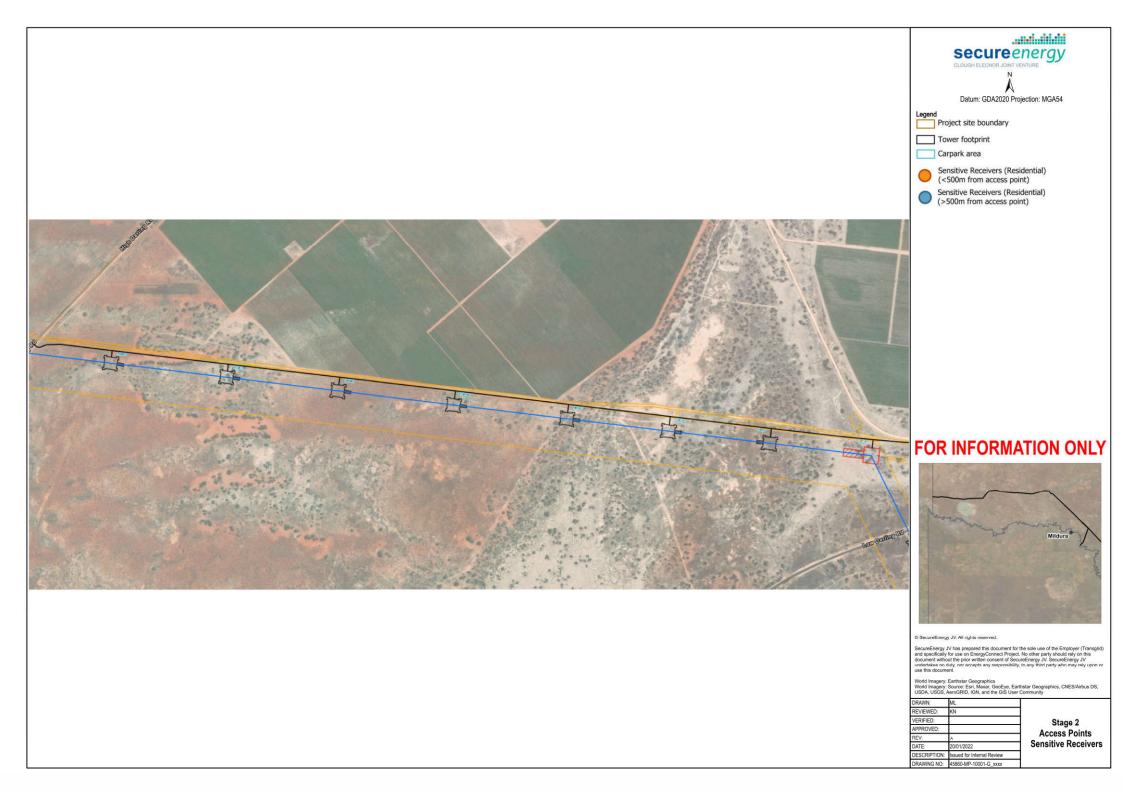


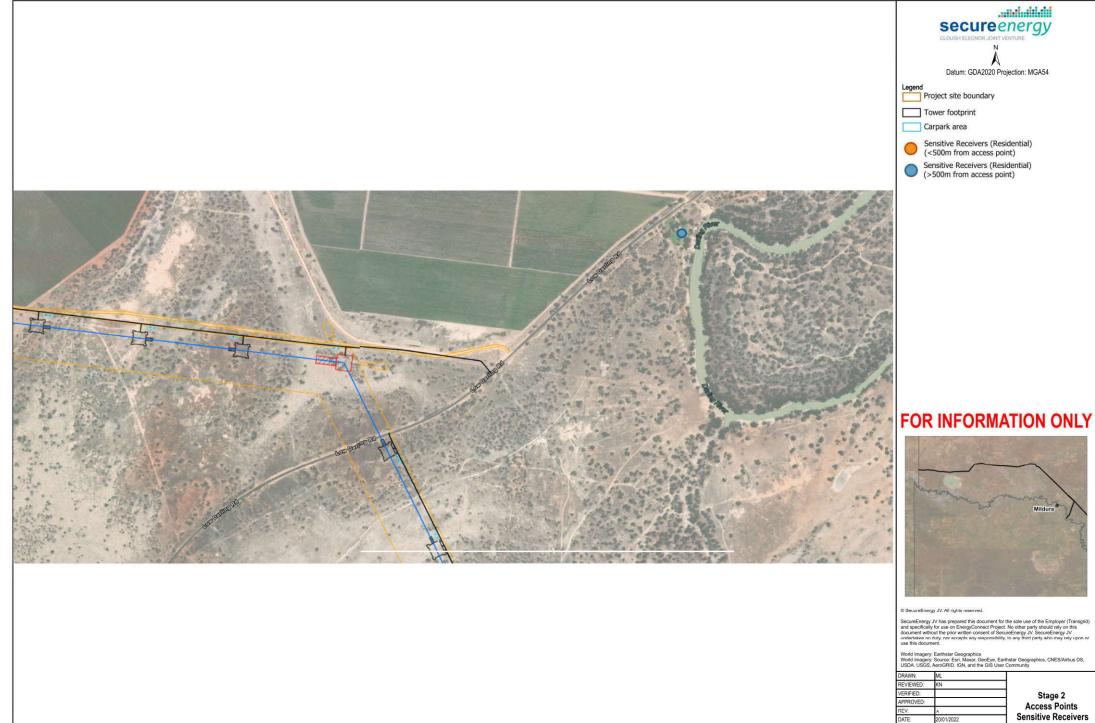


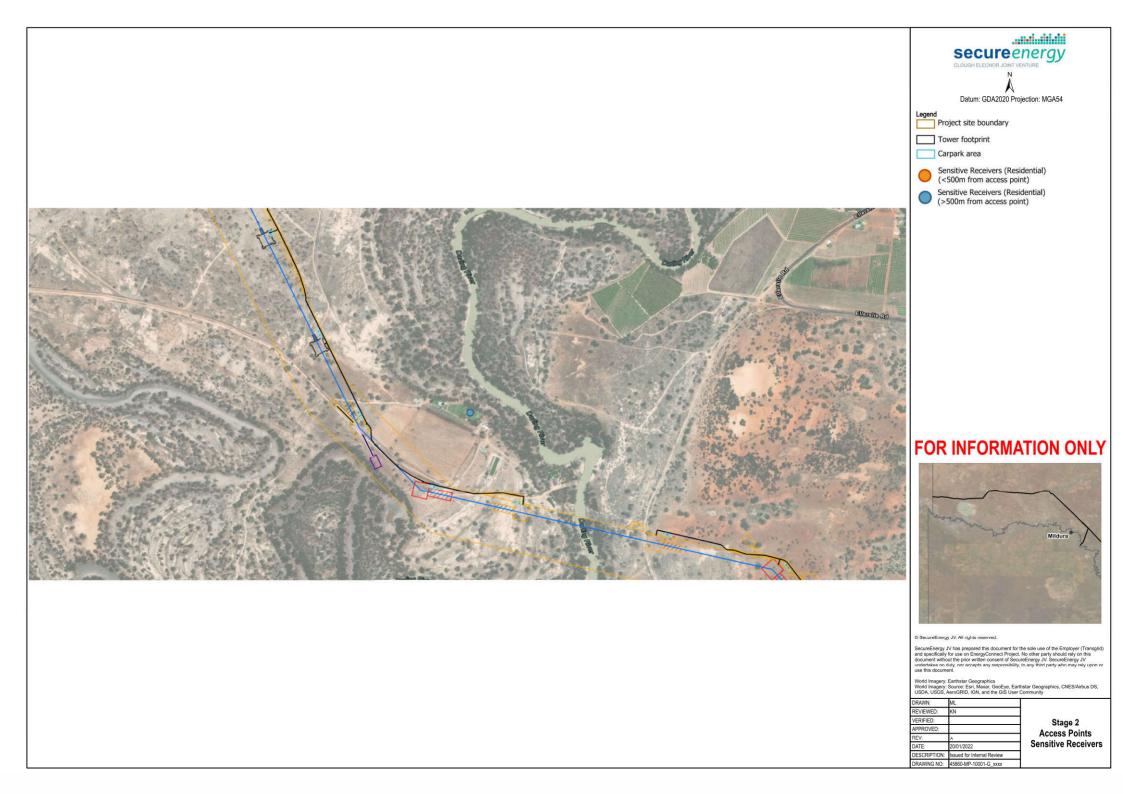


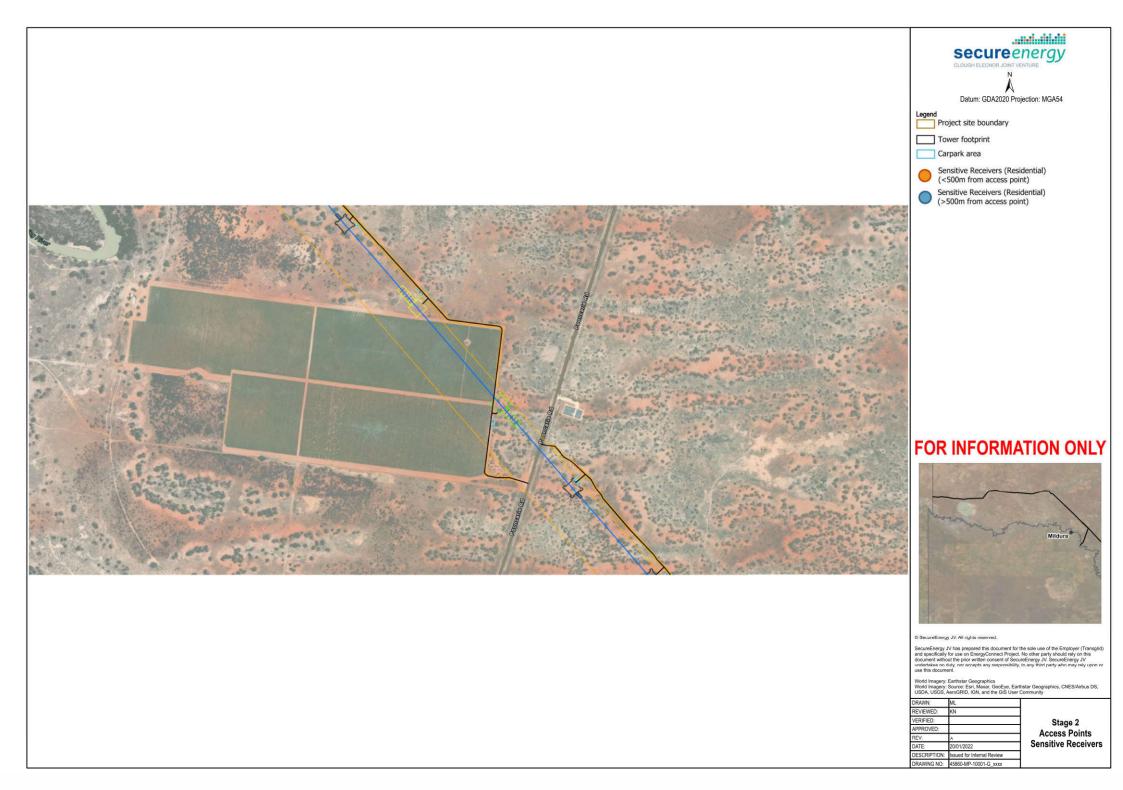












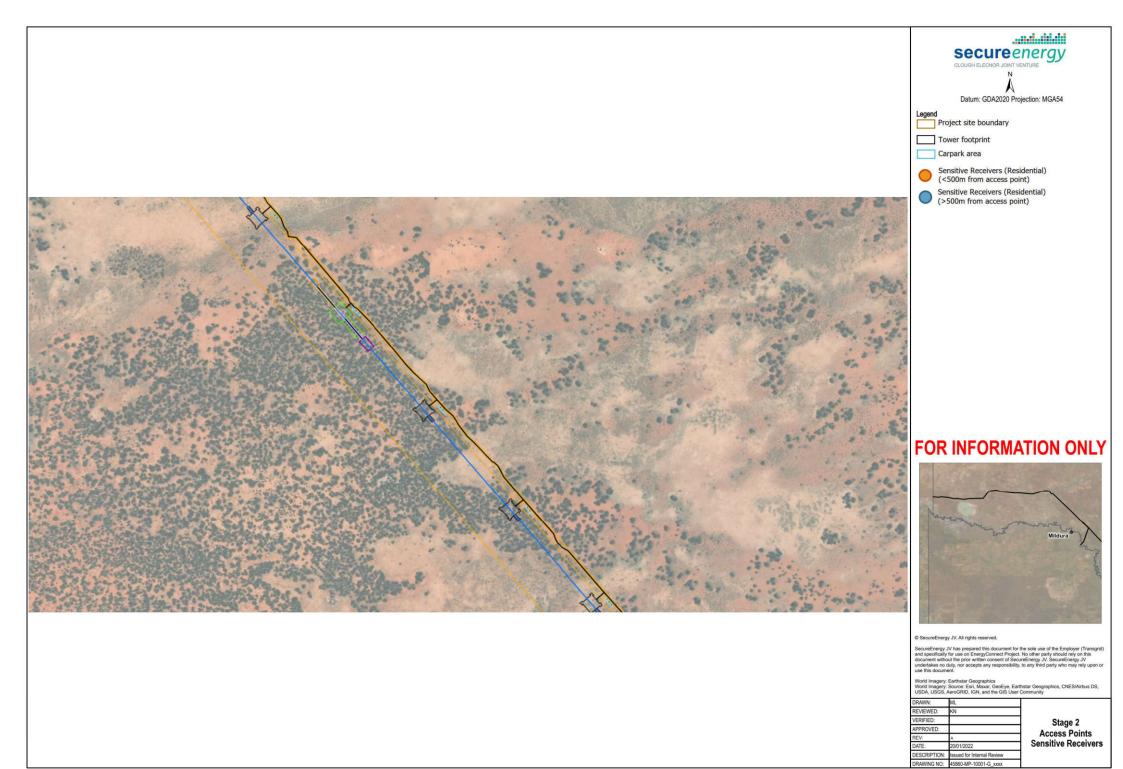


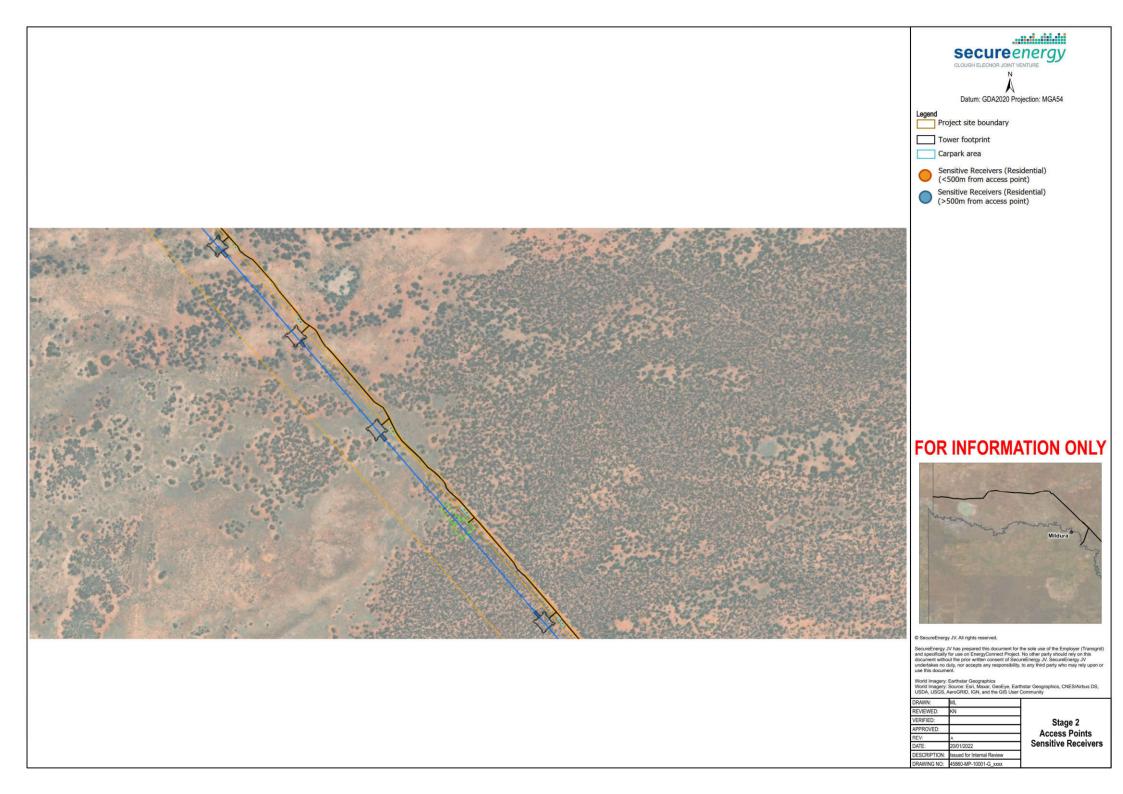




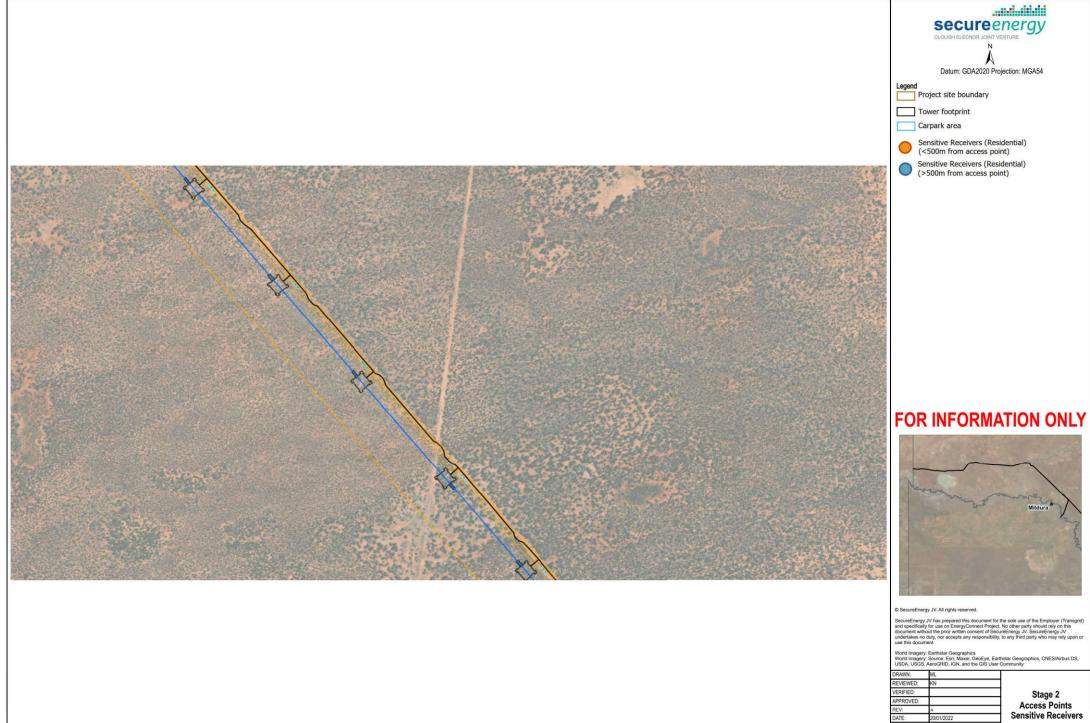


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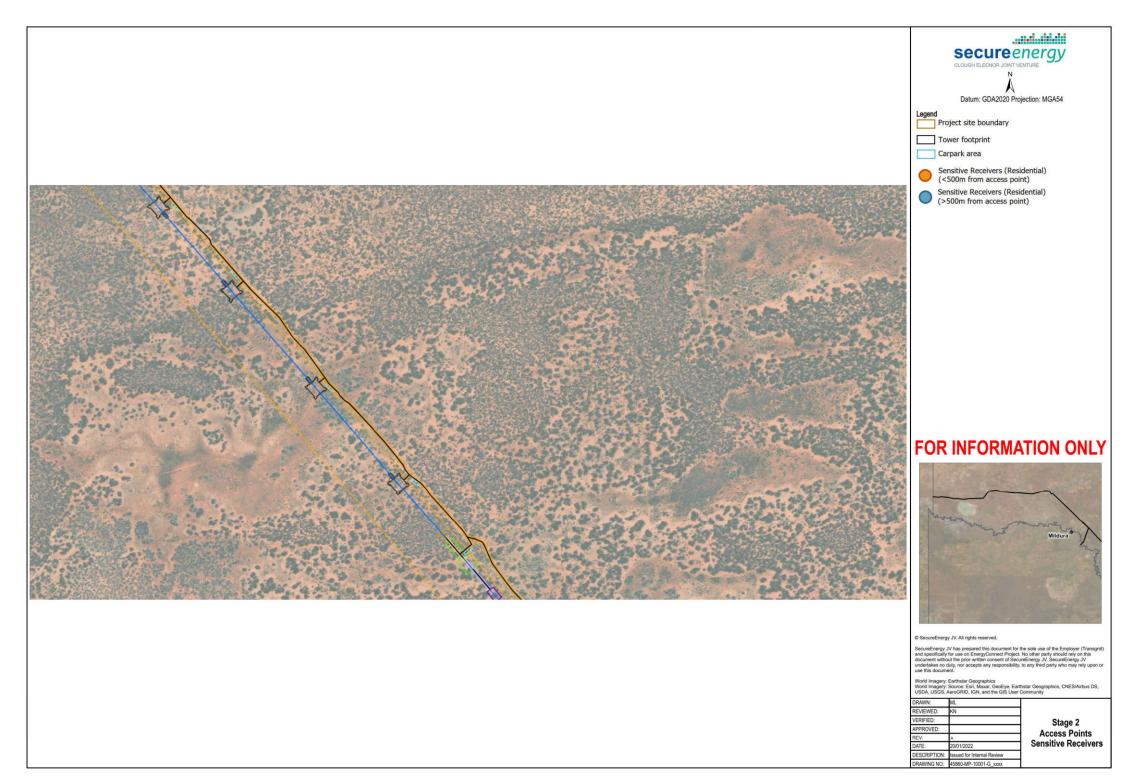








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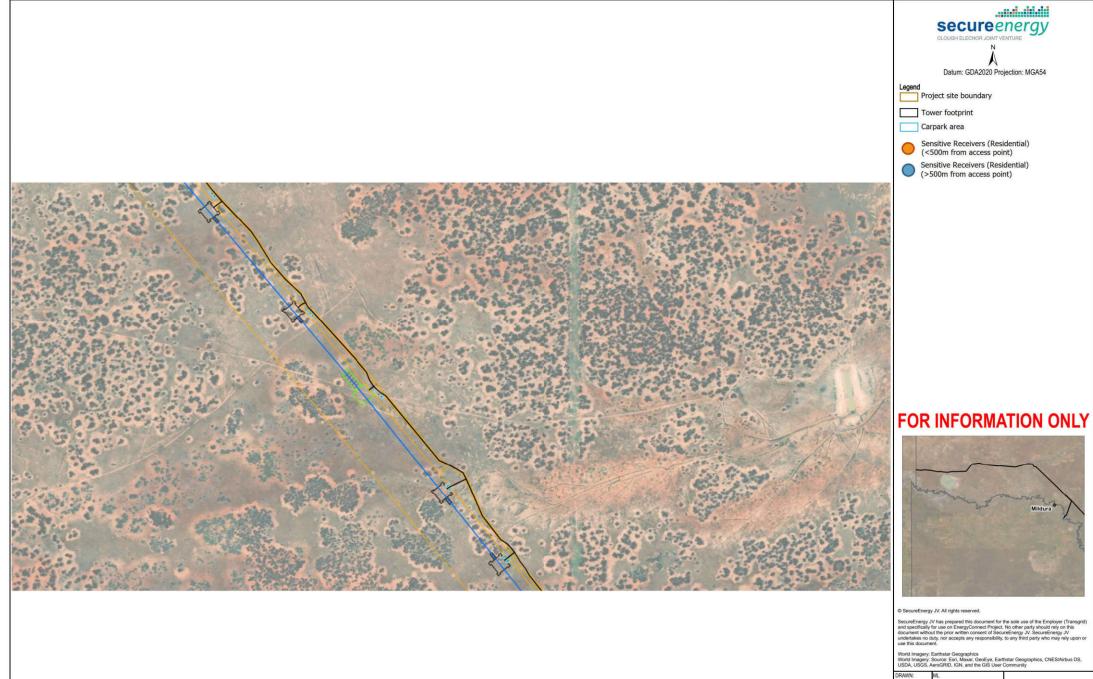




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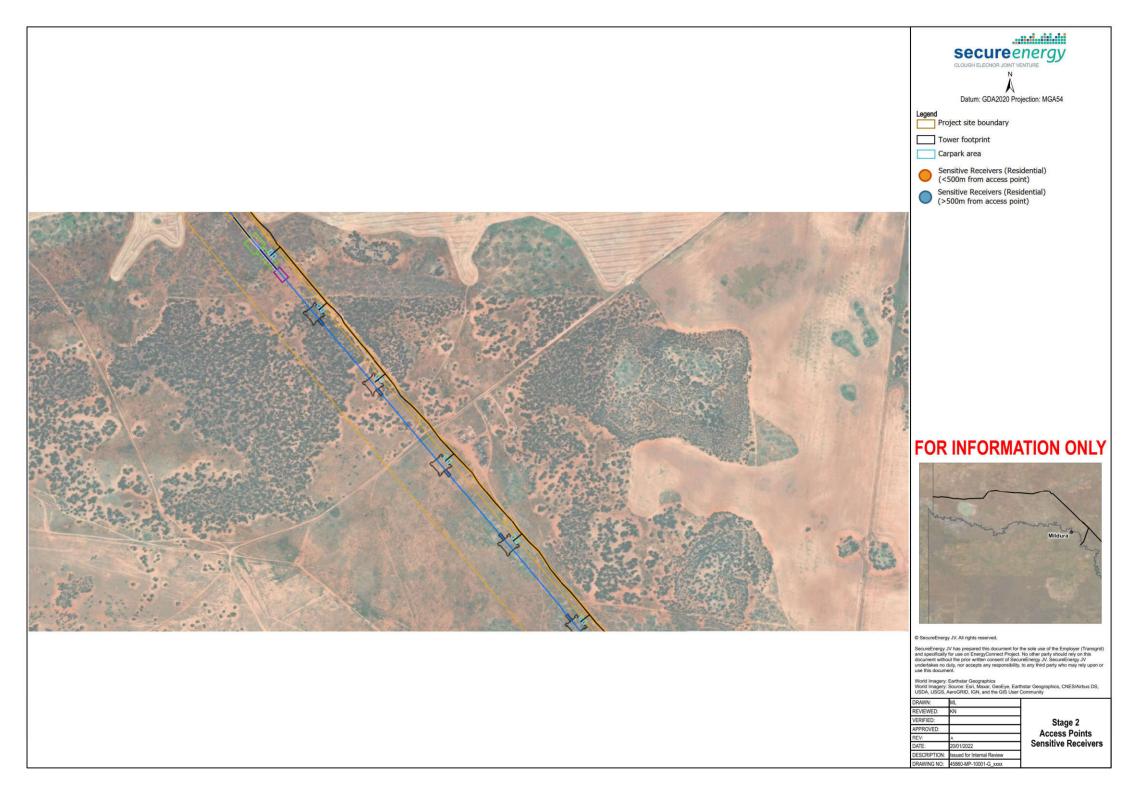
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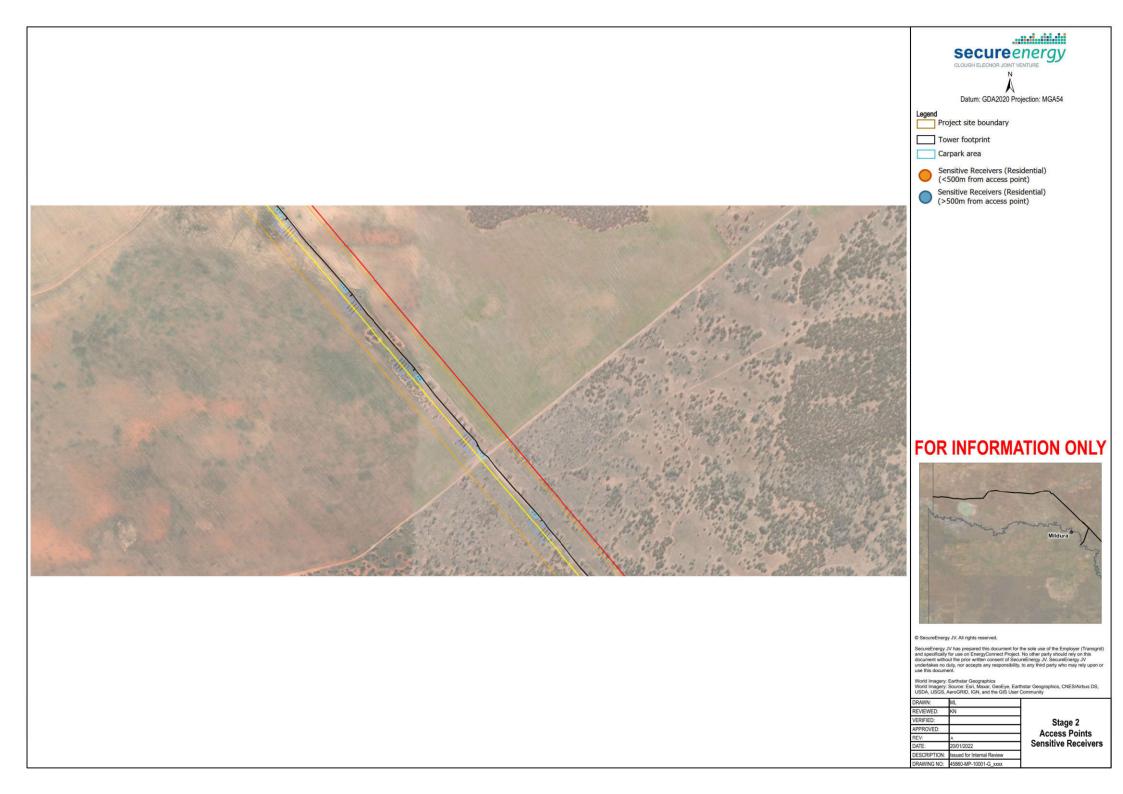








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