Walcha Energy

Salisbury Solar Farm

Scoping Report

July 2019

Document control sheet

Salisbury Solar Farm

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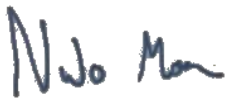
Signature		Signature	
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Contents

1 Introduction

1.1 Overview

Walcha Energy Pty Ltd (the Proponent) has prepared this scoping report (Scoping Report) for a proposed grid-connected 600MW_{AC} (700MW_{DC}) solar farm with associated grid connection and infrastructure and a battery storage facility (the Proposal) in Salisbury Plains, NSW.

1.2 Proposal Overview and Context

The Proponent proposes to develop a 600MW_{AC} (700MW_{DC}) photovoltaic (PV) solar farm, spread over smaller groups of solar arrays either side of the Uralla to Walcha Road in Salisbury Plains, NSW.

The proposed connection to the main transmission grid will be via a new substation, located adjacent to Thunderbolts Way approximately 7km south of Uralla and connecting to the existing 330kV TL 85 Tamworth to Armidale single circuit transmission line (Uralla Substation). The proposed Uralla Substation has been included in three recent grid planning assessments:

- The Australian Energy Market Operator's (AEMO) 2018 Integrated System Plan;
- TransGrid's 2019 Transmission Assessment Planning Report; and
- TransGrid and Powerlink's 2018 Project Specification Consultation Report Summary for Expanding the NSW Queensland Transmission Transfer Capacity.

The Proposal has an estimated capital investment of over $950 million.

The Proposal will form part of the broader Walcha Energy Project, the largest proposed renewable energy development in the National Energy Market combining solar and wind generation with battery and pumped hydro storage.

Once fully developed, the Walcha Energy Project will generate equivalent to half the output from the two upper Hunter Valley coal fired power stations, representing about 15% of NSW's electricity. The potential renewable energy resource of the Walcha Energy Project is in excess of 4,000MW_{AC}.

Once operating, the Proposal will generate up to 1,300,000MWh of electricity each year, which would be the equivalent to the electricity use of approximately 240,000 households in NSW. The Walcha Energy Project, and this Proposal, would each provide wide environmental benefits for the whole of the local community and a progressive benefit sharing scheme where the neighbours and the local community receive direct financial benefits from each part of the overall development. The Proposal includes the transmission corridors for the solar farm at Salisbury Plains but will be of a sufficient width to accommodate any future transmission infrastructure that may be required for subsequent stages of the Walcha Energy Project (to the extent that those further stages may overlap with the land the subject of this Proposal).

The Proposal constitutes a State Significant Development (SSD) under *State Environmental Planning Policy (State and Regional Development) 2011* (S&RD SEPP). Applications for SSD approval must be accompanied by an Environmental Impact Statement (EIS), prepared in accordance with Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Department of Planning and Environment (DP&E) on behalf of the Secretary.

The Proposal has been prepared in line with the NSW Department of Planning and Environment's Large-Scale Solar Energy Guideline for State Significant Development (December 2018).

The environmental and economic impacts and the project design of the Proposal will be refined through the development of the EIS.

1.3 Applicant

Founded in 2018, the Proponent is the master developer of the Walcha Energy Project. It is a partnership between Energy Estate Pty Ltd and MirusWind Pty Ltd.

The team at Walcha Energy understands the importance of working within the community and designing projects which seek to optimise the outcomes for all stakeholders. With this in mind, the approach taken with all stakeholders in the Walcha Energy Project is open and collaborative. The approach has fostered strong ties within the local community and includes an innovative benefit sharing scheme. The Proponent has structured and implemented one of the first broad local community ownership schemes in renewable energy in Australia.

The industry experts which are part of the Proponent project delivery team are able to develop and deliver high quality, innovative and technically and commercially robust projects. The team has over 100 years of combined experience developing and delivering energy projects in Australia and globally. With over 100 years of combined experience advising on the raising of equity and debt funding for hundreds of projects, the team members have worked with a broad range of domestic and international capital providers and major lenders.

1.4 Purpose of the submission

The purpose of this Scoping Report is to provide a preliminary assessment of the likely environmental impacts associated with the Proposal. The Scoping Report accompanies a request to DP&E for the SEARs for the Proposal.

The Scoping Report will provide:

- overview of the Proposal, including information of the site and its surroundings and applicant;
- justification of the Proposal;
- planning and statutory framework;
- description of a stakeholder management and community consultation;
- preliminary assessment of key potential environmental risks; and
- identification of further environmental assessments required.

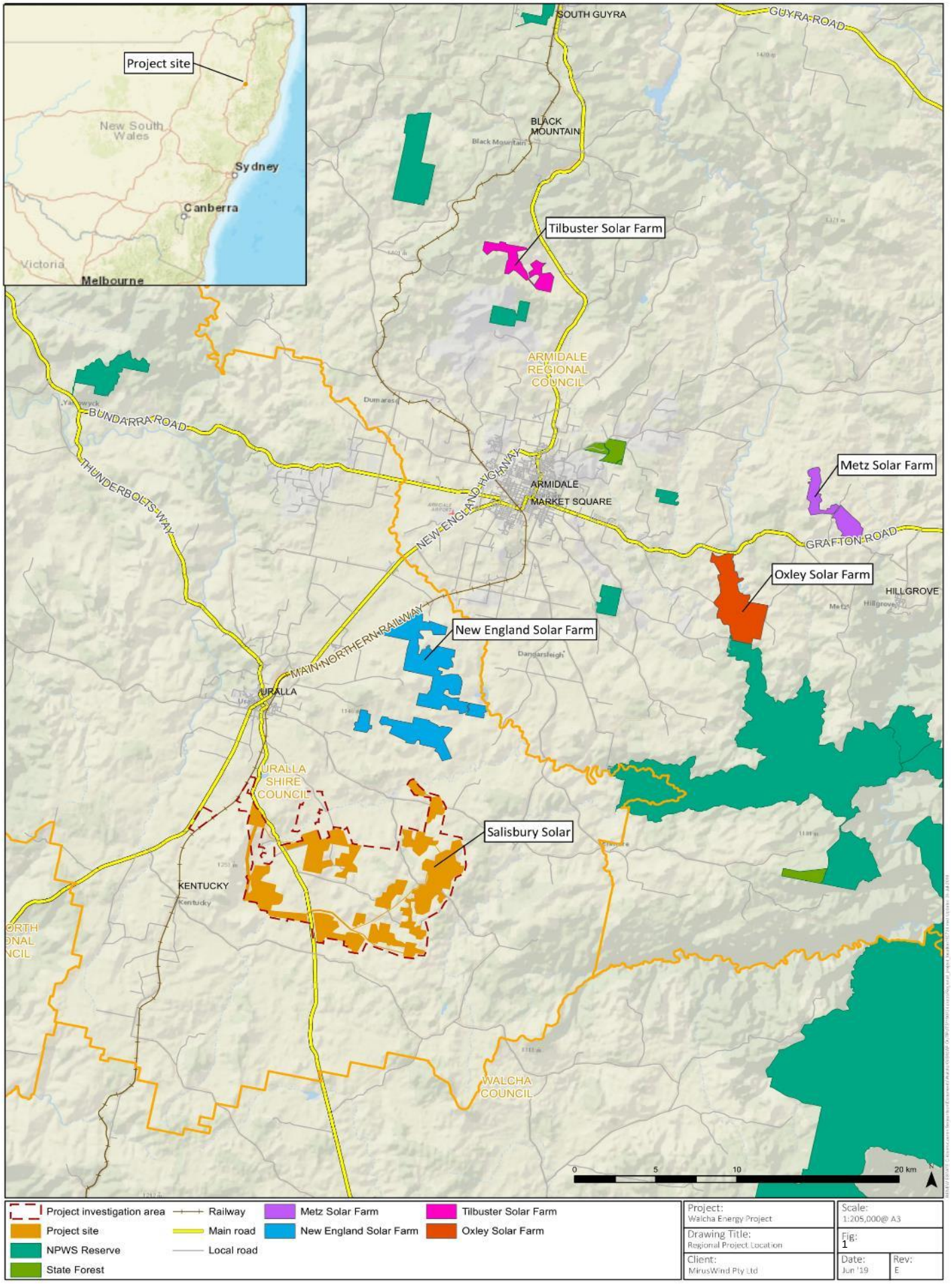

Figure 1: Site context

2 The Proposal

2.1 Site Location

The Proposal site is located within the Uralla Shire Local Government Area (Uralla Shire LGA), covering approximately 3,500 hectares. The nearest towns to the Proposal are Uralla (7 kilometres north from the Proposal site), Kentucky (4 kilometres west) and Walcha (22 kilometres south).

The Proposal site includes ten distinct land areas, separated by agricultural land, roads, residential areas and uneven or incompatible areas for solar PV development. The Proposal site area is located within the larger investigation area of approximately 8,500ha. The largest area within the Proposal site, located at the east of the investigation area, encompasses 860ha and the smallest area within the Proposal site, located south of the investigation area, encompasses 52ha. The total area of the Proposal site is 3,490ha.

The Proposal site consists of mainly open grassland, with some scattered trees, some watercourses, and some rocky areas. There is very little shading from nearby hills and the slopes are generally slightly towards the north. There are some areas of steeper and/or south-facing slopes.

The Proposal site is located, partly or fully, on the following lots (Figure 3):

Lot number	Deposited Plan (DP)	Label (refer Figure 3)
148	DP755836	1
126	DP755829	2
420	DP755829	3
224	DP755829	4
117	DP755829	5
128	DP755836	6
2	DP11311	7
35	DP755829	8
1	DP1030870	9
46	DP755829	10
183	DP755836	11
92	DP755836	12
206	DP755846	13
1	DP126202	14
1	DP127726	15
114	DP755829	16
189	DP755836	17
127	DP755829	18
147	DP755829	19
115	DP755829	20
1	DP11311	21
205	DP755846	22
94	DP755836	23
154	DP755836	24
135	DP755836	25
156	DP755836	26
132	DP755836	27
172	DP755836	28
133	DP755836	29
138	DP755836	30
99	DP755836	31
180	DP755836	32

Lot number	Deposited plan (DP)	Label (refer Figure 3)
205	DP755836	33
61	DP755836	34
139	DP755836	35
115	DP755836	36
111	DP755836	37
131	DP755836	38
216	DP755836	39
203	DP755835	40
225	DP755836	41
144	DP755836	42
198	DP755836	43
145	DP755836	44
9	DP1237026	45
116	DP755836	46
107	DP755836	47
153	DP755836	48
202	DP755836	49
160	DP755836	50
62	DP755836	51
98	DP755836	52
1	DP1241971	53
96	DP755836	54
117	DP755836	55
200	DP755836	56
146	DP755836	57
79	DP755836	58
155	DP755836	59
93	DP755836	60
B	DP403676	61
102	DP755836	62
181	DP755836	63
302	DP755836	64

Lot number	Deposited plan (DP)	Label (refer Figure 3)
158	DP755836	65
156	DP755820	66
4	DP11311	67
1	DP417051	68
1	DP523435	69
182	DP659988	70
1	DP105790	71
1	DP105789	72
83	DP755820	73
90	DP755820	74
204	DP755835	75
215	DP755835	76
2	DP970026	77
89	DP755836	78
95	DP755836	79
A	DP372668	80
1	DP105791	81
B	DP372668	82
1	DP970026	83
203	DP755836	84
1	DP184356	85
142	DP659987	86
3	DP665103	87
201	DP755836	88
6	DP1099058	89
5	DP1099058	90
137	DP1100781	91
142	DP1135106	92
168	DP755835	93
10	DP755835	94
150	DP755835	95
149	DP755835	96
187	DP755835	97
189	DP755835	98
188	DP755835	99
191	DP755835	100
148	DP755835	101
153	DP755835	102

Lot number	Deposited plan (DP)	Label (refer Figure 3)
223	DP755835	103
152	DP755835	104
190	DP755835	105
151	DP755835	106
192	DP755835	107
158	DP755820	108
84	DP755820	109
A	DP189172	110
196	DP755835	111
195	DP755835	112
1	DP1094265	113
3	DP1094265	114
1	DP1105811	115
1	DP1196055	116
1	DP1198344	117
82	DP755820	118
157	DP755820	119
155	DP755820	120
105	DP755836	121
199	DP755836	122
109	DP755836	123
2	DP1044027	124
303	DP755836	125
209	DP755836	126
204	DP755836	127
1	DP121903	128
1	DP1226382	129
122	DP755829	130
1	DP172254	131
129	DP755836	132
22	DP1236408	133
10	DP1237038	134
52	DP1212121	135
51	DP1212121	136
4	DP1122757	137
5	DP1239535	138
4	DP1239535	139
3	DP1238827	140

The majority of the Proposal site has been contracted under lease/licence agreements between the Proponent and the host landowners. Based on the indicative Proposal design and lease agreements between landholders and the Proponent, subdivision may be required within the Proposal site for:

- land required for the grid substation; and
- to allow for the registration of long term leases over parts of certain lots.

These subdivision requirements will be addressed in more detail in the EIS following consultation with Uralla Shire Council.

The Proposal site has been chosen with extensive consultation with the host landowners, taking into account grid connection potential and the need to minimise the areas prone to flooding or containing sensitive natural heritage features. Incompatible land areas and woodland areas are reduced within the Proposal site.

Figure 2: General condition in the western area of the Proposal site

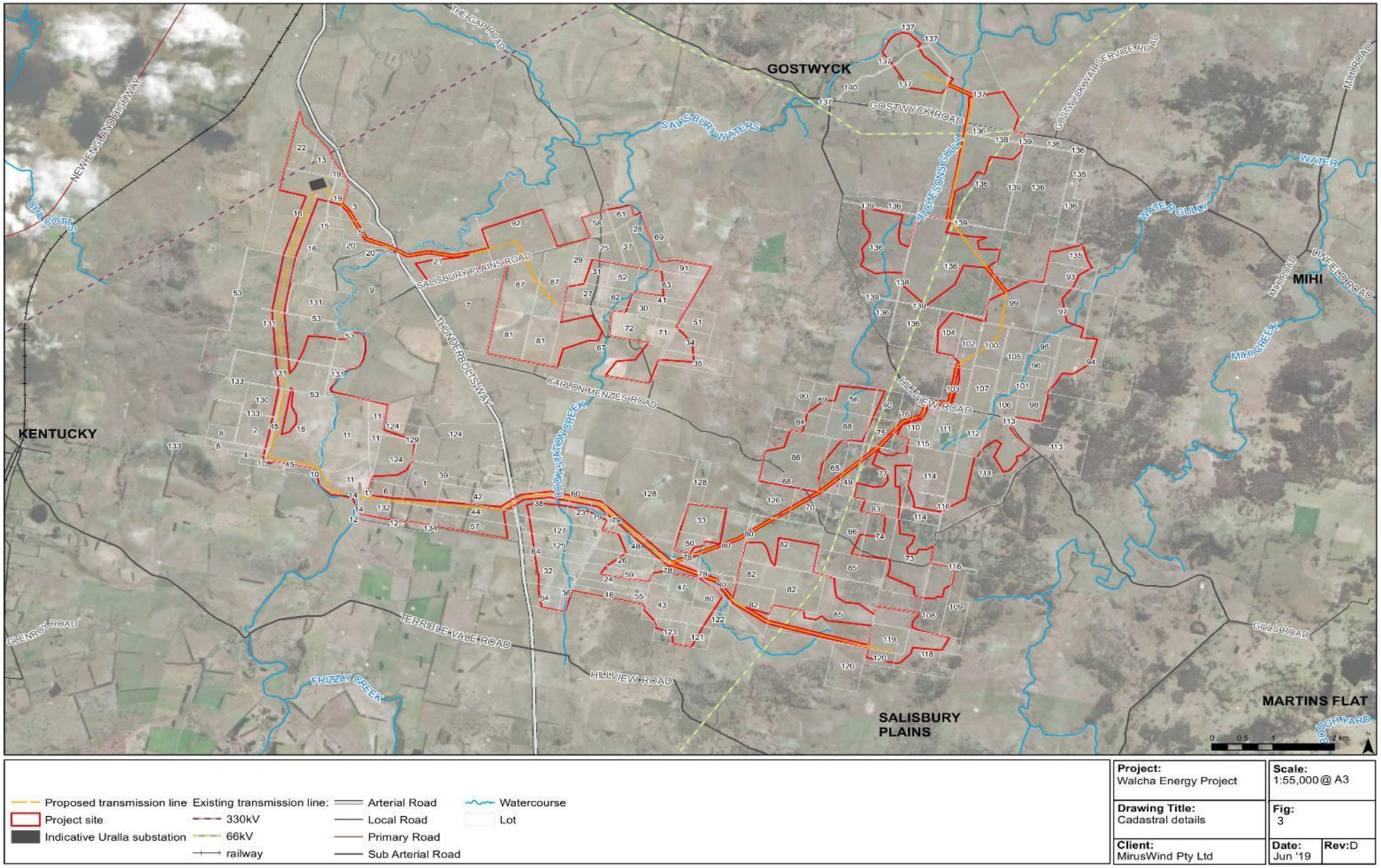

Figure 3: Cadastral details within the Proposal site

2.2 Local Context

Located approximately 545km north of Sydney on the New England Highway, 22km south of Armidale and 89km north of Tamworth, Uralla Shire LGA is a rural local government area with an area of 3,215 square kilometres. The population of Uralla Shire LGA was 6,058 people as of 2016 according to The Australian Bureau of Statistics.

The Uralla Shire LGA is part of the New England Tableland bioregion, a plateau and region of the Great Dividing Range in northern NSW and Queensland. Lying in between the North Coast and Nandewar bioregions, 95.2% of the New England Tableland bioregion is located in NSW and the remainder is in Queensland. The bioregion includes part of the Macintyre, Clarence, Gwydir, Macleay, Namoi and Manning River catchments. Characterised by the contrast of rolling hills and low-lying plains, the elevation ranges from 600 to 1500m (OEH, 2016).

The bioregion's climate ranges mainly from the temperate to cool temperate climate zones of NSW, characterised by warm, rainy summers. The bioregion's highest elevations are part of a montane climate and the north-eastern edge of the New England Tableland bioregion belongs to a warmer, sub-humid climate. The mean annual temperature ranges from 9-17 degrees Celsius with mean annual rainfall between 653mm and 1765mm (OEH, 2016). Average monthly solar exposure ranges from 9.9-25.2 megajoules/square metre (MJ/m^2), with an approximate annual average of 16 MJ/m^2 (BoM 2018).

The economy of Uralla Shire LGA is focused on resource-based agriculture, with an estimated 29% of the 1,418 jobs in the Uralla Shire LGA being within the Agriculture, Forestry & Fishing sector. Much of the service sector is based on the needs of agriculture. Declining rainfall caused by climate change in the area is a threat to the area's economy; along with the rest of NSW, Uralla Shire LGA has experienced prolonged high temperatures and minimal rainfall starting from the latter half of 2018, resulting in intense drought (DPI 2019).

2.3 Description of the Proposal

2.3.1 Overview

The Proposal involves the construction of:

- the Salisbury Solar Farm, which includes approximately 2,300,000 ground-mounted PV solar panels for electricity generation and ancillary infrastructure, such as inverters, transformers and cabling;
- high voltage electrical transmission lines;
- A switchyard and the substation for grid connection of the Salisbury Solar Farm to the transmission network (Uralla Substation)
- operations and maintenance facilities; and
- a Battery Energy Storage System (BESS), with capacity of 100MW/150MWh.

The Proposal is planned to be developed over two stages, being Salisbury East and Salisbury West, of approximately $300MW_{AC}$ ($350MW_{DC}$) each. The staging is indicative only and may change during the assessments to be undertaken as part of the EIS. The Proponent is seeking consent for the whole of the Proposal, however, it may be built in stages.

The solar array layout will be designed to avoid environmentally sensitive areas and reduce environmental impacts wherever possible.

PV modules will be installed in a series of rows to maximise the energy yield and minimize the area needed for electricity production. The PV modules will be typically 5 to 7 meters apart and will be supported by a ground-mounted framing structure. The framing structure will be supported by steel piles, which will be driven or screwed into the ground, and the framing structure will be installed on the top. Concreted foundations will be avoided if there is no geotechnical reason to do otherwise. The framing structure will be either holding modules in a fixed position or work as a single axis tracker (SAT). SAT systems track the daily movement of the sun to maximise the solar irradiation exposed to the module. The height of the modules will be no more than 4m.

The collector system will include direct current (DC) reticulation cabling running along each solar array and below ground to the inverter station. Inverters will convert the DC to alternating current (AC) with Medium Voltage and/or High Voltage transformers to be compatible for export to the grid. Approximately one inverter assembly is required for every 2.5MW_{AC} to 5MW_{AC} of installed capacity. The assemblies will be positioned adjacent to the block of modules. The cables needed for connecting the modules and inverter assemblies will be buried and covered according to Australian standards.

The Proposal is also for a BESS. The batteries will be stored in an enclosure the size of a shipping container. The total number of containers and proposed location of the BESS will be evaluated in the EIS, along with battery materials which could include lithium ion, lead acid, sodium sulphur, sodium or nickel hydride, electrochemical or mechanical technology. Australian standards and industry practices will be followed for handling and storing the batteries during installation, maintenance and decommissioning.

2.3.2 Transmission Line Infrastructure

Three new overhead transmission lines will be constructed to transport the electricity from Salisbury Solar Farm to the Uralla Substation, which is located approximately 1.4km northwest of the Proposal site.

The design of the overhead transmission lines would vary within the greater Walcha Energy Project with voltage ranging from 33kV to 330kV. Transmission lines will be either double or single circuit line design, depending on the line. The estimated combined length of the three transmission lines is approximately 34km. Easements required for each overhead transmission line would be 45m to 100m, depending on the structure of the transmission line.

A 100ha area for the proposed Uralla Substation has been identified and secured by an agreement between the Proponent and the landowner. The area is adjacent to TransGrid's existing 330kV TL 85 Tamworth to Armidale single circuit transmission line. The extent of additional information and work required for the Uralla Substation will be determined through the EIS process in consultation with TransGrid and will form part of any further development application for additional components of the Walcha Energy Project.

2.3.3 Ancillary Infrastructure

Ancillary infrastructure, such as access roads from Thunderbolts Way, Carlon Menzies Road, Hillview Road, Salisbury Plains Road and The Gap Road to the Proposal site, temporary construction site office with basic staff amenities, temporary car and bus parking areas and an operational and maintenance facility for ongoing operational needs will be required. The ancillary infrastructure will be outlined in more detail in the EIS.

2.3.4 Roads

The Proposal site can be accessed by sealed regional road Thunderbolts Way. The Proposal will require the construction of new roads from the surrounding existing roads to enable access to the Proposal site for the construction and the operation phases, as seen on Figure 14. Other existing and proposed access roads are deemed able to withstand the medium rigid truck traffic during the construction and decommissioning phases of the Proposal.

2.3.5 Construction

The Proposal is planned to be constructed in two phases:

- the construction of Salisbury West is proposed to commence by Q2 2021 with start of the commercial operations by Q3 2022; and
- the construction of Salisbury East is proposed to commence by Q2 2022 with start of the commercial operations by Q4 2023.

These timings are indicative only as the Proponent is seeking consent for the Proposal. More detail will be provided for the staging of construction, operation and decommissioning in the EIS.

The main construction activities will include:

- civil/earthworks;
- electrical services;
- environmental services;
- engineering services;
- fencing supply & installation;
- geotechnical;
- landscaping and rehabilitation services;
- security services;
- surveying; and
- traffic management.

The construction working hours are to be in line with the *Interim Construction Noise Guideline* (DECC 2009):

- Monday to Friday 7.00am to 6.00pm;
- Saturday 8.00am to 1.00pm; and
- no work on Sunday or public holidays.

2.3.6 Operation and Decommissioning

The operational lifespan of the Proposal is expected to be 25 years, starting from the commercial operations date of each of the stages. After operational lifespan, the Proposal can be decommissioned by removing ground infrastructure and returning the Proposal site to its pre-existing use or continuing the lifespan by upgrading the project infrastructure.

The Proponent has consulted with the landholders, local pasture experts and the University of New England in relation to continuing to use the Proposal site for grazing of sheep under the solar panels. A management plan will be developed based on analysis of the design and operation of the solar farm and the grazing practices to maximise the yield of the grazing activity. This analysis could involve wider spacing of the solar panels to encourage additional pasture growth.

3 Justification

3.1 National Policy context

Once constructed, the Proposal will make a significant contribution towards meeting Australia's international emission reduction obligations, including under the United Nations Paris Agreement on Climate Change (Paris Agreement).

Australia's emissions target is to reduce CO_2 emissions by 26-28 per cent on 2005 levels by 2030 under the Paris Agreement. The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by pursuing efforts to limit the global temperature increase below 2 degrees Celsius of pre-industrial levels (UNFCCC). To reach the emissions target, Australia must undertake rapid reductions of greenhouses gases (GHG) with best possible technologies and available science.

The Proposal will contribute significantly to meet Australia's broader international GHG emission reduction obligations by generating over 1,300GWh of clean, renewable electricity per annum.

3.2 Regional Policy context

In 2013, the NSW Government released the NSW Renewable Energy Action Plan to guide renewable energy development in NSW. The plan states three goals to most efficiently grow renewable energy generation in NSW (REAP 2013):

i. attract renewable energy investment and projects;
ii. build community support for renewable energy; and
iii. attract and grow expertise in renewable energy technology.

The NSW Government has also developed the NSW Climate Change Policy Framework to achieve net-zero emissions by 2050 and to increase resiliency to a changing climate. This policy framework underpins the NSW Government's commitment to renewable electricity production.

The Proposal would contribute to the NSW Renewable Energy Action Plan and NSW Climate Change Policy Framework by increasing diversity in electricity generation and adding clean, renewable electricity to the National Electricity Market (NEM).

3.3 Energy Market context

In July 2018, Australian Energy Market Operator (AEMO) released its Integrated System Plan (ISP) – an evaluation of the future NEM in the next 20 years. As a NEM system and market operator, AEMO's role is to promote efficiency and security of the power system network in Australia's eastern and south-eastern seaboard by planning, forecasting and providing power systems information to relevant stakeholders. In the ISP, AEMO states that approximately 70% of Australia's coal generation fleet, with generation capacity of 15GW, will reach the end of its operating life by 2040 and retire, including nearly 9GW in NSW with the closure of the Liddell, Vales Point, Eraring and Bayswater coal-fired power stations.

With closures of coal-fired power stations, new generation is needed for the energy security of the NEM (AEMO 2018). Due to the difference of capacity factors of the generating technologies, every MW of coal-fired energy generation has to be replaced by 2-3MW of wind and solar generation.

Figure 2 NEM coal-fired generation fleet operating life to 2040, by 50th year from full operation or announced retirement

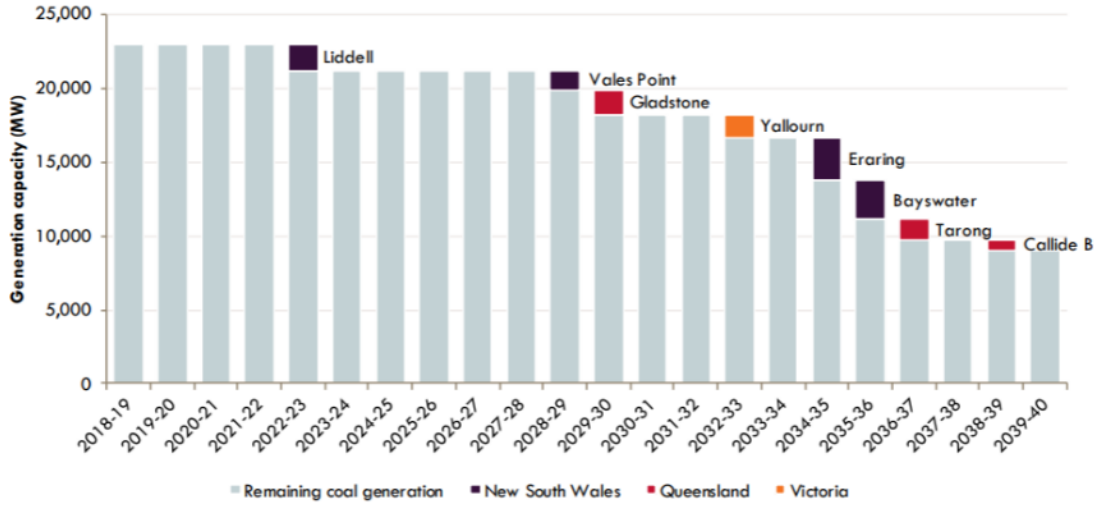

Figure 4: Retirement of coal generation fleet by 2040
(Source: AEMO 2018)

The Proposal is located within the Northern NSW Tablelands (Northern Tablelands REZ) identified by NSW Government and TransGrid in their response to the 2018 AEMO ISP. 2018 AEMO ISP outlined Northern Tablelands REZ with potential of 1,750MW of solar and 3,660MW of wind generation.

3.4 Local economic benefits

Uralla Shire LGA is part of the New England North West region. The NSW Government released a 20-year blueprint 'The New England North West Regional Plan' in 2017 where it expressed its vision for the region. The plan outlines the opportunities provided by natural resources and focuses on the following goals:

i. a strong and dynamic regional economy;
ii. a healthy environment with pristine waterways;
iii. strong infrastructure and transport networks for a connected future; and
iv. attractive and thriving communities.

The NSW Government intends to "promote… renewable energy generation" to achieve "strong and dynamic regional economy". Large-scale renewable energy projects, such as the Proposal, have the potential to generate new employment opportunities and investments for construction and operation of the Proposal. The plan also identifies Uralla Shire LGA as having excellent potential for wind and solar production and encourages "renewable energy opportunities" (NSW DP&E 2017).

It is anticipated that the Proposal will generate 400-800 direct and 200-400 indirect supply chain jobs in its construction phase. In the operations and management phase, the Proposal will employ 10-15 full time staff for a 30-year period. The socio-economic benefits of the Proposal for the community are discussed in section 6.13.

3.5 Alternatives to the Proposal

The Proponent has considered the following alternative options:

- alternative site locations; and
- the do-nothing approach.

Various alternative sites were considered based on land usage, connection to the grid and waterway flooding. The Proposal site was selected as it demonstrated the best possible combination of:

- community support and enthusiasm;

- low environmental constraints;
- flat site area;
- high solar irradiance;
- suitability for the broader Walcha Energy Project;
- road access; and
- proximity to transmission network.

The PV technology proposed is a proven and mature technology which is easily deployable in broad scale at the Proposal site.

The do-nothing approach would not advance any of the national and local policy objectives nor provide any of the economic benefits raised in sections 3.1 – 3.4.

4 Planning context

4.1 NSW legislation

4.1.1 Environmental Planning and Assessment Act 1979 (EP&A Act)

The EP&A Act, *Environmental Planning and Assessment Regulation 2000* and associated environmental planning instruments (including State Environmental Planning Policies and Local Environmental Plans) (EPIs) provide the framework for the assessment of environmental impacts and approval of development in NSW.

The EP&A Act authorises the making of EPIs including the S&RD SEPP. The EP&A Act also establishes the process for the assessment and approval of development which requires consent under Part 4.

Relevantly to this Proposal, section 4.36 of the EP&A Act provides for a process where development can be declared as SSD either by a SEPP or Ministerial order published in the Gazette. Section 4.5 of the EP&A Act provides that the Minister is the consent authority for SSD. Division 4.7 of the EP&A Act sets out provisions which apply to the assessment and determination of SSD.

4.1.2 State Environmental Planning Policy (State and Regional Development) 2011

Clause 20 of Schedule 1 of the S&RD SEPP declares the following development SSD:

Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that has a:

- *capital investment value of more than $30 million; or*
- *capital investment value of more than $10 million and is located in an environmentally sensitive area of State significance.*

The proposal is for electricity generating works and will have an estimated capital investment cost of greater than $30 million and is therefore classified as SSD under Part 4 of the EP&A Act.

The consent authority for SSD is the Minister for Planning and Environment (Minister), or their delegate, or the Independent Planning Commission (IPC),

Development applications (DAs) for SSD must be accompanied by an EIS which is prepared in accordance with the SEARs. In determining the SEARs, the Secretary must consult with relevant public authorities and have regard to the need to assess key issues raised by those public authorities.

4.1.3 State Environmental Planning Policy (Infrastructure) 2007

Clause 34(7) of *State Environmental Planning Policy (Infrastructure) 2007* ('ISEPP') provides that development for the purpose of a solar energy system may be carried out by any person with consent on any land (except land in a prescribed residential zone).

The proposal is located within a rural zone and is permissible with consent under the ISEPP.

4.2 Other relevant NSW legislation

4.2.1 Crown Land Management Act 2016

The *Crown Land Management Act 2016* (CL Act) contains provisions which regulate the occupation, use, sale, lease and licence of Crown land, along with its proper management having regard to the principles contained in the CL Act.

If there are potential impacts to Crown land, consultation will be undertaken with the NSW Department of Industry – Crown Lands to ensure all required consents are in place for the carrying out of the Proposal.

4.2.2 Roads Act 1993

The *Roads Act 1993* ('Roads Act') regulates the carrying out of various activities on public roads and provides for the declaration of Roads and Maritime Services ('RMS') and other public authorities including local Councils as roads authorities for different types of roads (classified and unclassified).

Under section 138 of the Roads Act, the consent of the appropriate roads authority (Council or RMS) is required before a person can, for example, erect a structure or carry out work in, on or over a public road, or dig up or disturb the surface of a public road.

The potential need for upgrade works on local roads is discussed in section 6.7 of this Scoping Report and will be further investigated during the design and preparation of the EIS. If required, approval from the relevant roads authority will be sought under section 138 of the Roads Act.

4.2.3 Local Land Services Act 2013

The *Local Land Services Act 2013* (LLS Act) regulates the clearing of native vegetation and land management in rural areas.

Under section 60O of the LLS Act, the clearing of native vegetation in a regulated rural area is authorised where that clearing is authorised by a development consent under Part 4 of the EP&A Act.

Development consent is sought for all clearing proposed as part of the Proposal. Further information the impacts of proposed clearing is contained in Section 6.2 of this Scoping Report.

4.2.4 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) contains provisions for the assessment of impacts on biodiversity values of a proposed development, calculating measures to offset those impacts and establishing market-based conservation measures, including biodiversity credits.

Biodiversity values within the Proposal site and the applicability of biodiversity certification is discussed in Section 6.2 of this Scoping Report.

4.2.5 National Parks and Wildlife Act 1974

Under the *National Parks and Wildlife Act 1974* (NP&W Act), the Director of National Parks is responsible for the care, control and management of all national parks, historic sites, nature reserves, Aboriginal areas and state game reserves. The Director is also responsible under this legislation for the protection and care of native fauna and flora, and Aboriginal places and objects throughout NSW.

A permit is required under section 90 of the NP&W Act before harming or desecrating an Aboriginal object; otherwise, such action is an offence under the NP&W Act. Despite this, under Section 4.41 of the EP&A Act, an Aboriginal Heritage Impact Permit is not required for SSD if the development consent granted for the SSD authorises the works that would otherwise need approval under the NP&W Act.

The closest national park is Oxley Wild Rivers National Park, 10km west of the Proposal site. No impacts to the Oxley Wild Rivers National Park are expected.

The potential impacts to Aboriginal heritage and native fauna and flora are discussed in Sections 6.4 and 6.2 of this Scoping Report respectively.

4.2.6 Heritage Act 1977

The Heritage Act 1977 (Heritage Act) aims to conserve heritage values. Heritage items are listed on the State Heritage Register which is established under the Heritage Act. Items of local heritage significance are also found in local environmental plans, which contain provisions to ensure the protection of such items.

Under Section 4.41 of the EP&A Act, an approval under Part 4 or an excavation permit under section 139 of the Heritage Act is not required for SSD if the development consent granted for the SSD authorises the works that would otherwise need approval under the Heritage Act.

The potential for impacts to heritage is discussed in section 6.5.

4.2.7 Water Management Act 2000

Water use approvals, water management work approvals and activity approvals are required under sections 89, 90 and 91 of the *Water Management Act 2000* (WM Act).

Pursuant to Section 4.41 of the EP&A Act, these approvals are not required for SSD if the development consent granted for the SSD authorises the works that would otherwise need approval under the WM Act.

4.2.8 Contaminated Land Management 1997

Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) imposes a duty on landowners to notify the Environmental Protection Authority (EPA), and potentially investigate and remediate land if contamination is above levels set by the EPA.

The CLM Act also contains provisions relating to the regulation of 'significantly contaminated land' by the EPA.

The potential for contamination at the Proposal site is discussed in Section 6.12.

4.2.9 Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) introduces a scheme to promote extended producer responsibility for the lifecycle of a product. The WARR Act outlines the resource management hierarchy principles of priority as:

- avoidance of unnecessary resource consumption;
- resource recovery (including reuse, reprocessing, recycling and energy recovery); and
- disposal.

4.3 Commonwealth Legislation

4.3.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environmental Protection Biodiversity and Conservation Act* 1999 (EPBC Act) aims to protect matters of national environmental significance (MNES), being:

- World Heritage properties;
- National Heritage places;
- wetlands of international importance (listed under the Ramsar Convention);
- listed threatened species and ecological communities;
- migratory species protected under international agreements;
- nuclear actions (including uranium mines);
- Commonwealth marine areas;
- the Great Barrier Reef Marine Park; and
- a water resource, in relation to coal seam gas development and large coal mining development.

Approval from the Commonwealth Minister for the Environment is required if an action is likely to have a significant impact on a MNES (a 'controlled action'). Assessments of significance are based on criteria listed in the Significant Impact Guidelines 1.1 issued by the Commonwealth (DoE, 2013).

A search of matters protected by the EPBC Act was undertaken in June 2019 using the EPBC Act Protected Matters Search Tool (PMST) (DEE 2019). The Proposal investigation area with an excess of 1km buffer was applied. The search returned the following results:

Matters of National Environmental Significance	
World Heritage Properties	None
National Heritage Places	None
Wetlands of International Importance	4 (note the closest Ramsar site is over 200km away)
Great Barrier Reef National Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	3
Listed Threatened Species	25
Listed Migratory Species	13
Other Matters Protected by the EPBC Act	
Commonwealth Land	None
Commonwealth Heritage Places	None
Listed Marine Species	10 (the Proposal site does not have any water bodies within the area)
Whales and other Cetaceans	None
Critical Habitats	None
Commonwealth Reserves Terrestrial	None
Australian Marine Parks	None

If further investigations identify that the Proposal is likely to have a significant impact on a MNES, a referral will be submitted to the Commonwealth Department of the Environment, which will then determine whether the proposal is a 'controlled action' requiring approval from the Commonwealth Minister for the Environment or their delegate.

4.3.2 Native Title Act 1993

The Native Title Act 1993 (Native Title Act) provides a legislative framework for the recognition and protection of native title rights. Native title is the recognition that, in certain circumstances, Indigenous people continue to hold rights to their land and waters, which come from their traditional laws and customs.

The Native Title Act sets up processes to determine whether native title exists, how future activity impacting upon native title may be undertaken, and to provide compensation where native title is impaired or extinguished.

When a native title claimant application is registered by the National Native Title Tribunal, the people seeking native title recognition gain a right to consult or negotiate with anyone who wants to undertake a project on the area claimed.

The National Native Title Tribunal has not identified any Native Title applications or determinations that affect the Proposal site. Further review of native title considerations will be undertaken during the EIS.

5 Stakeholder Consultation

Community and stakeholder consultation will be an integral and vital part of the Proposal. The Proponent is preparing a Community and Stakeholder Engagement Plan (CSEP), a comprehensive plan to ensure ongoing information and dialogue on the development of the Proposal. The CSEP will include the following stages:

I. Assessment – assess the stakeholder and community environment at the start of a project/activity, tailor engagement activities to achieve the Proposal's overall objectives, whilst understanding and addressing the needs of the stakeholders that are impacted by the Proposal.
II. Information stages – outlining key elements of the Proposal and identifying potential concerns and opportunities from stakeholders.
III. Detailed consultation stages – progressing stakeholders through the preliminary and substantive planning assessment stages.
IV. Community benefit sharing workshops – engaging stakeholders on potential benefit sharing opportunities and developing detailed proposals.
V. Ongoing engagement during development and operational stages, including establishment of standing consultative committee mechanisms.

The Proponent will take a proactive and comprehensive approach to stakeholder engagement, carefully identifying people and groups of interest and determining when and how best to communicate to minimise the risk of engagement issues impacting on project timelines and objectives. The Proponent will incorporate all community and stakeholder feedback at the early stage of project development and integrate this into the detailed engineering design. This is in line with the NSW Department of Planning and Environment's Large-Scale Solar Energy Guideline for State Significant Development (December 2018).

5.1 Identification of stakeholders and objectives of consultation

The Proponent has identified the likely stakeholders to the Proposal. The table below sets out those stakeholders and the objectives of consulting with them. The list of stakeholders will evolve throughout the life cycle of the Proposal.

The overarching objectives of the consultation with all of the stakeholders to this Proposal are to:

- Inform: Provide factual, timely and relevant information to stakeholders at key project milestones to assist them in understanding the challenges, opportunities and solutions;
- Interact: Establish two-way dialogue that provides opportunities to exchange views and information;
- Involve: Ensure that stakeholder concerns and aspirations are considered in decision making processes; and
- Index: Register and respond to all communications in an appropriate and timely manner.

Category	Stakeholder	Consultation objectives
Government: State (NSW)	Department of Planning and Environment (DPE)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Department of Planning and Environment (DPE) – Division of Resources and Geoscience	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline.

		Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Office of Environment and Heritage (OEH)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Environment Protection Authority (EPA)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Department of Industry	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Northern Tablelands Local Land Services (LLS)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Forestry Corporation of NSW (Forestry NSW)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline. Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Elected State MP	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline and the Proponent's community consultation ethos. Address any matters that arise during consultation.
	NSW Rural Fire Service	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location, and the Proponent's community consultation ethos. Address any concerns about the Proposal.
	Fire & Rescue NSW	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal.
Government: Commonwealth	Department of Environment and Energy (DoEE)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline.

		Address matters raised by each of the listed agencies in correspondence provided with the SEARs, as well as any other matters that arise during consultation.
	Elected Federal MP	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline and the Proponent's community consultation ethos. Address any matters that arise during consultation.
Government: Local	Uralla Shire Council (Council)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any matters that arise during consultation.
	Armidale Regional Council	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any matters that arise during consultation.
Immediate community	Host landowners	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Where relevant, request information about: - on-site agricultural operations (including historical and potential agricultural productivity); - aerial spraying; - weed and pest management practices; and - bushfire protection management measures. Demonstrate avoidance of highly productive agricultural land parcels. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Immediate neighbouring landholders	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Landholders within a 3km radius of the Proposal	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
Local community	Traditional owners, Registered Aboriginal Parties (RAPs) and aboriginal groups	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size

		and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process. Clearly define and illustrate the proposed Aboriginal cultural heritage assessment process and the proposed methodology.
	Local Aboriginal Land Councils	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process. Clearly define and illustrate the proposed Aboriginal cultural heritage assessment process and the proposed methodology.
	Uralla-Walcha Community for Responsible Solar/Wind Action Group (Action Group)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Unions	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential roles and services that will be supplied locally for the Proposal.
	Regional Development Agency (RDA)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential roles and services that will be supplied locally for the Proposal.
	Radio, television and newspaper	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Encourage media coverage of important project milestones and invite to all community events.
	Economic Groups and Business Chambers	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos.

		Address and encourage enquiries about potential roles and services that will be supplied locally for the Proposal.
	Local businesses, service providers and industry	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential roles and services that will be supplied locally for the Proposal.
	Tertiary Education Providers	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential training and scholarship initiatives and collaboration opportunities.
	Mining/mineral exploration licence holders, permit holders (apiary, grazing, firewood, hunting etc)	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location.
	Local airports	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Tourism operators	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Schools	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential sponsorship initiatives and collaboration opportunities. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Special Interest Groups and Recreationists	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the

		strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal. Clearly define and illustrate the planning approval process.
	Clubs	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address and encourage enquiries about potential sponsorship initiatives and collaboration opportunities.
	Emergency Services	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and the Proponent's community consultation ethos. Address any concerns about the Proposal.
National	AEMO – Electricity Regulator	Introduce the Proposal, including details as to the Proponent, a description of the Proposal and proposed location, commercial details to satisfy AEMO's prudential Requirements, details of the generator and electrical design, proposed generator performance standards and details of the Proposal's land right arrangements. Address any concerns about the Proposal.
	Network Operator	Introduce the Proposal, including details as to the Proponent, the preferred layout and timeline, the strategic justification for the Proposal, the proposed size and site location and all technical aspects of the Proposal's electrical design. Address any concerns about the Proposal.

5.2 Consultation with government agencies and other key stakeholders to date

The Proponent has undertaken the following consultations with relevant government agencies in relation to the Proposal and the Walcha Energy Project:

5.2.1 Meetings with Uralla Shire Council:

- 25 September 2017 - presentation to Uralla Shire Council Mayor in relation to the Walcha Energy Project; and
- 22 May 2019 – presentation to Uralla Shire Council, including the Mayor and the Acting General Manager, in relation to the Proposal.

5.2.2 Meetings with Walcha Council

- December 2004 - presentation to potential wind site landholders and councillors;
- 2009 - Walcha Environment and Planning on wind monitoring masts;
- 24 February 2010 – General update on the Walcha Energy Project;

- 27 September 2017 - Presentation to councillors in relation to the Walcha Energy Project, including the Proposal;
- 2018 - casual meetings with Walcha Mayor, Eric Noakes and councillors during 2018 in relation to the Walcha Energy Project, including the Proposal; and
- 28 November 2018 - letter of support from Walcha Council for the Walcha Energy Project. The issues raised by the Councils are set out below in section 5.4.

5.2.3 Consultations with TransGrid

The Proponent has met with the relevant network service provider (TransGrid) several times in 2019 in relation to the proposed connection point into the 300kV TL 85 Tamworth to Armidale single circuit transmission line, both specifically in relation to the Proposal and more generally in relation to the development of the proposed Uralla Substation for the benefit of the broader Walcha Energy Project and other developers situated in the New England REZ.

The proposed Uralla Substation has been included in three recent grid planning assessments:

- The Australian Energy Market Operator's (AEMO) 2018 Integrated System Plan;
- TransGrid's 2019 Transmission Assessment Planning Report; and
- TransGrid and Powerlink's 2018 Project Specification Consultation Report Summary for Expanding the NSW Queensland Transmission Transfer Capacity (PSCR),

The Proponent has provided submissions in respect of the PSCR (Walcha Energy, 2019).

The Proponent will continue to discuss and consult with TransGrid in relation to the Uralla Substation. It has submitted a connection enquiry in respect of the Walcha Energy Project generally and, following subsequent discussions with TransGrid, is now in consultation with TransGrid and preparing to submit a Master Application to Connect for the Proposal itself and certain additional parts of the Walcha Energy Project.

5.3 Other Community Consultation to date

The Proponent has discussed the Proposal through consultation with landholders and the local community as follows:

- 28 August 2017 - Information Evening with solar landholders;
- 3 December 2018 - Information Evening Walcha Sports Club Introducing members of Energy Estate and the new partnership of Walcha Energy Pty Ltd;
- January – July 2019 (various) – telephone calls and face to face meetings with those landowners who have a residence on their land and are within a 2 kilometre radius of the Proposal site;
- February and March 2019 (various) – Emails and telephone calls with the Action Group discussing the Proposal and offering to meet with the group face to face;
- 24 March 2019 - A face to face meeting with a representative group of the Action Group to discuss their concerns as to the Proposal before lodging this Scoping Report; and
- 11 April 2019 – meeting with Mark Fogerty, representative consultant of the Action Group.

In line with the Community and Stakeholder Engagement Plan (CSEP) outlined above, the Proponent will continue to proactively and regularly engage with the community.

At the meeting with the Action Group in March 2019 a number of concerns were raised (set out below in section 5.4). In response to that meeting the Proponent reduced the footprint for the Proposal site, as seen on Figure 8, including a setback from Thunderbolts Way.

5.4 Issues raised in consultation to date

The outcome of the consultation with all stakeholders to date including the community, the Uralla Shire Council and the Walcha Council, have raised the following issues as to the Proposal

- Impact on the value of land;
- Impact on visual amenity from neighbours and local residents' land;

- Visual impact from the proposed Uralla Substation from the road;
- Visual impact from Thunderbolts Way generally;
- Impact on the ambience of the district;
- Impact of electromagnetic fields on the local livestock;
- The location of the site generally including avoiding flood areas and identified Biophysical Strategic Agricultural Land;
- Prospective arrangements and costs of decommissioning or removal of the Proposal at the end of the project life or earlier;
- Economic impact assessment on the district should be undertaken;
- Ensuring environmental sustainability of the Proposal through all its stages;
- Preference for local contractors and workers;
- Upgrades and maintenance costs of new constructions should be met by the Proponent;
- Damage to council owned infrastructure;
- Protection of amenity of residents around the proposed Proposal site;
- Rehabilitation of worker accommodation;
- Removal of cabling and above ground infrastructure on decommissioning;
- Environmental Monitoring Plan to control heavy metals on and off site;
- Monitoring of impact of panels on migratory birds; and
- Traffic, water and waste management plans to be constituted.

6 Preliminary Environmental and Economic Assessment

This section provides a preliminary environmental assessment of the Proposal to identify key issues and risks that will require a more detailed assessment within the EIS and will inform the preparation of the SEARs. The section is informed by the Proponent's desktop study and preliminary constraints assessment of the wider Walcha plateau made by Eco Logical Australia.

The Proposal site can be seen at Figure 7. Minimisation of the native vegetation within the Proposal site and consultation with the local community has resulted in a reduced footprint for the Proposal site, as seen on Figure 8. This includes a setback from Thunderbolts Way.

6.1 Risk rating matrix

A risk rating is used to assess the likelihood and consequence of the impacts occurring as a result (or possible result) of the construction, operation and decommissioning phases of the Proposal (Figure 5). Risks rated 'High' to 'Extreme' require more consideration during the EIS phase than risks rated 'Low' to 'Medium'. An assessment of residual risk following the implementation of proposed mitigation measures will be undertaken as a part of the EIS.

		Consequence				
		Negligible	**Minor**	**Moderate**	**Major**	**Catastrophic**
Likelihood	Remote	Low	Low	Low	Medium	Medium
	Unlikely	Low	Low	Medium	High	High
	Possible	Low	Medium	High	Very High	Very High
	Likely	Medium	High	Very High	Very High	Extreme
	Almost certain	Medium	High	Very High	Extreme	Extreme

Figure 5: Risk Rating Matrix

The following table summarises the preliminary risk assessment. Key identified risks associated with the proposal are:

Environmental Impact	Likelihood	Consequence	Risk rating (unmitigated)
Biodiversity	Unlikely	Moderate	Medium
Land use	Unlikely	Minor	Low
Aboriginal Cultural Heritage	Unlikely	Minor	Low
Historic Heritage	Unlikely	Moderate	Medium
Water Resources	Unlikely	Minor	Low
Traffic & Transport	Possible	Minor	Medium
Air Quality	Remote	Minor	Low
Noise and vibration	Possible	Negligible	Low
Visual	Possible	Minor	Medium
Risks & Hazards	Unlikely	Minor	Low
Soil	Remote	Minor	Low

Figure 6: Preliminary Risk Assessment

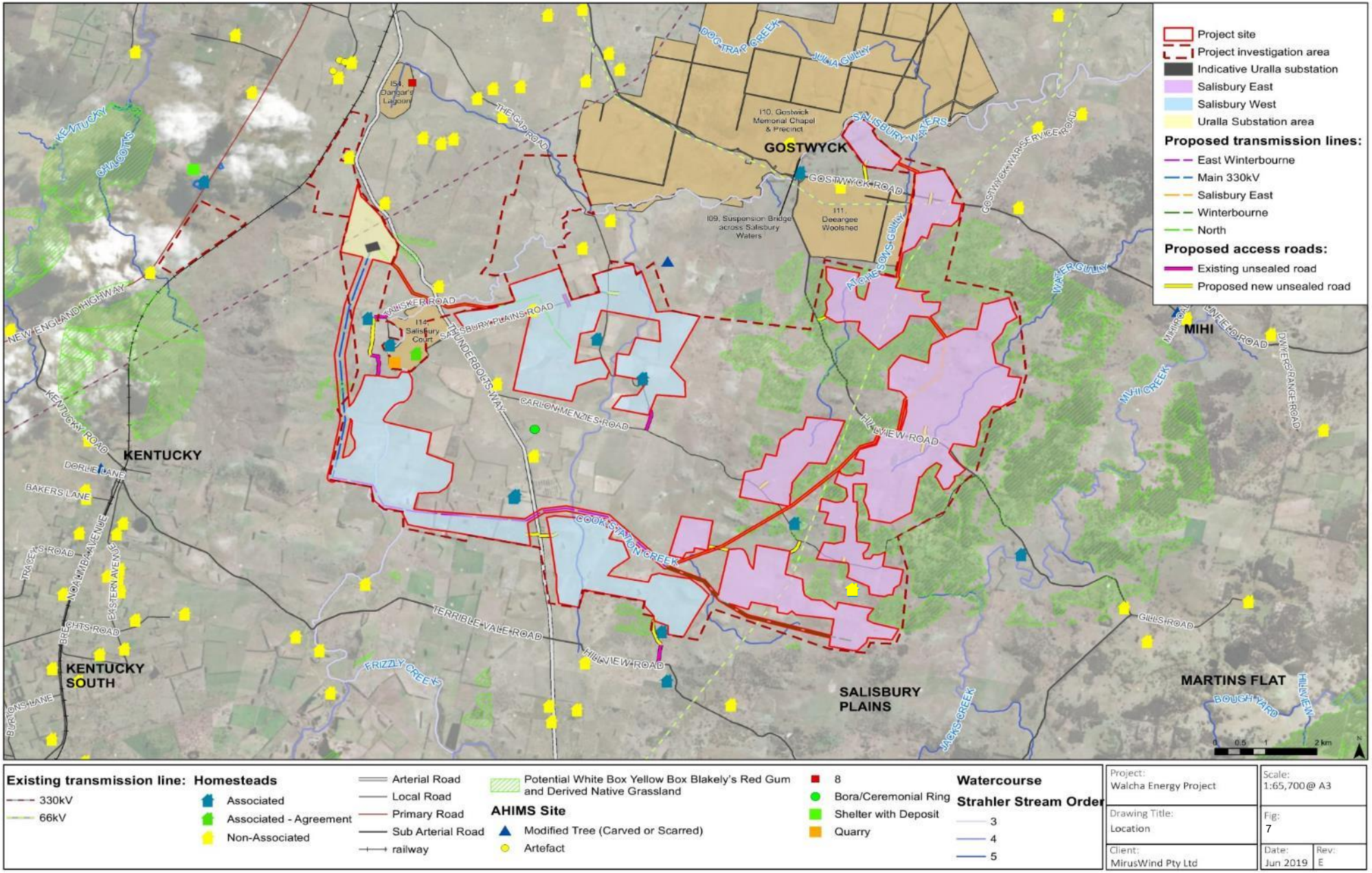

Figure 7: The Proposal site

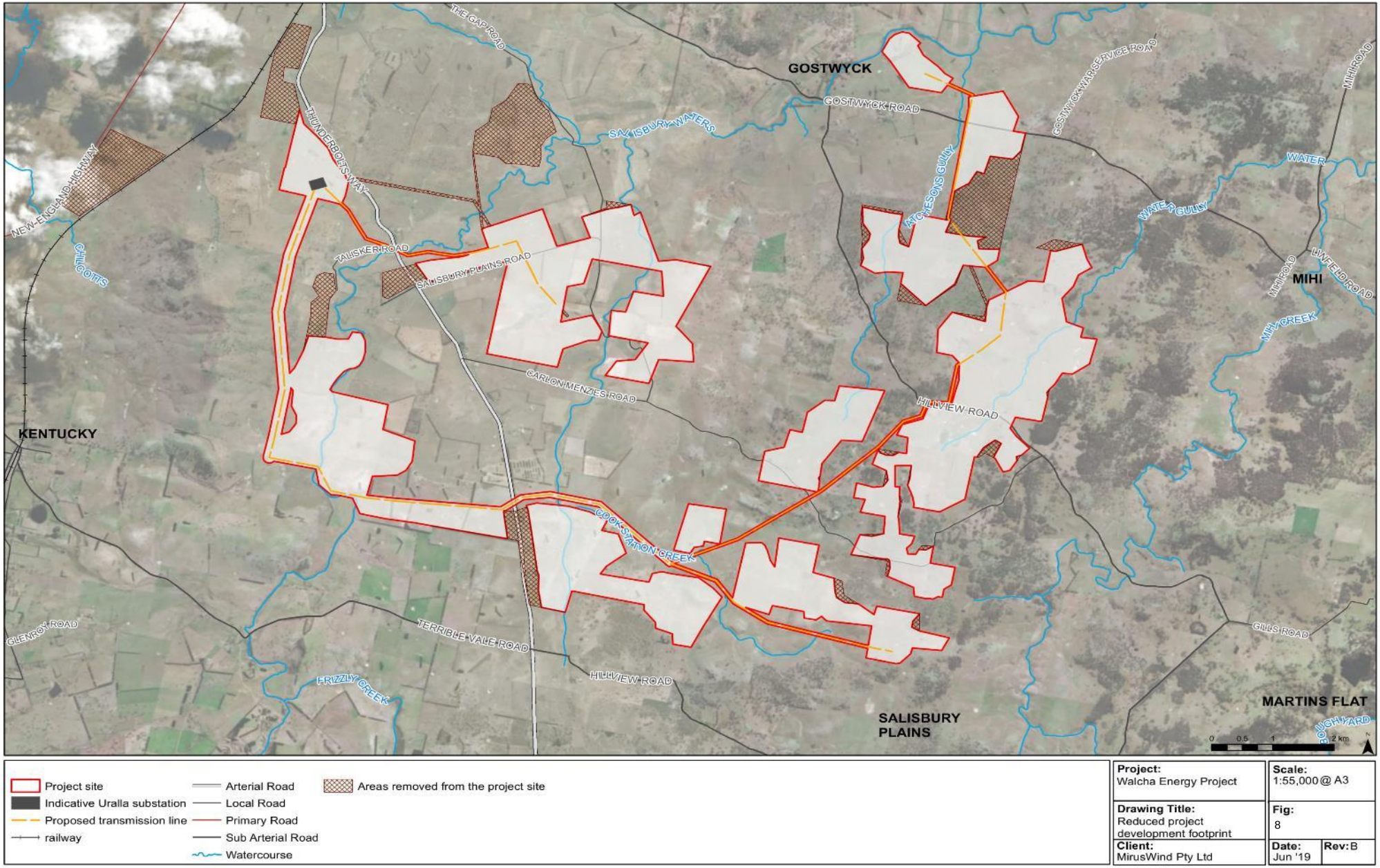

Figure 8: Areas removed from the Proposal site

6.2 Biodiversity

The majority of the Proposal site has been modified by historical land use practices. Historical land uses such as farming are associated with land clearing, cropping and livestock grazing. Destruction of habitat resulting in a loss of local populations of individual species, population fragmentation, disruption of ecological function and changes to soil biota are possible impacts from these historical land use practices (OEH, 2011). The Proposal site has been chosen to minimise areas of higher elevation, which tend to be less cleared and support native woodland communities.

Preliminary desktop regional vegetation mapping has been undertaken across the Proposal investigation area (Figure 9). The desktop analysis identified predominantly cleared vegetation classes.

In addition, the following searches have been used to undertake a preliminary environmental assessment of the biodiversity potential of the Proposal site:

- desktop searches of potential ecological constraints using the EPBC Act Protected Matters Report Search Tool (DEE, 2018);
- desktop searches using the Atlas of NSW Wildlife search tool (NSW BioNet, 2018); and
- a preliminary environmental constraints study prepared by Eco Logical Australia for the broader Walcha plateau area.

The Proposal site has been refined to avoid native vegetation within the site. As seen in Figure 9, the vegetation adjacent to the Proposal site is potentially White Box Yellow Box Blakely's Red Gum and Derived Native Grassland, which are classified as Critically Endangered under the EPBC Act. If native grasslands are found during the EIS, the mitigation hierarchy of prioritising avoidance and minimisation instead of offset measures will be followed.

The EPBC Act Protected Matters Report Search Tool of the Proposal site shows other listed threatened ecological communities that may occur within the Proposal site as follows:

- New England Peppermint (Eucalyptus nova-anglica) Grassy Woodlands; and
- Upland Wetlands of the New England Tablelands (New England Tableland Bioregion) and the Monaro Plateau (South Easter Highlands Bioregion).

Assessment of the likely biodiversity impacts resulting from the development of the Proposal will be addressed in the EIS. If further assessment of impacts identify that the Proposal is likely to have a significant impact on any MNES, the potential controlled action will be referred to the Commonwealth Minister for the Environment or their delegate for approval under the EPBC Act as early as possible.

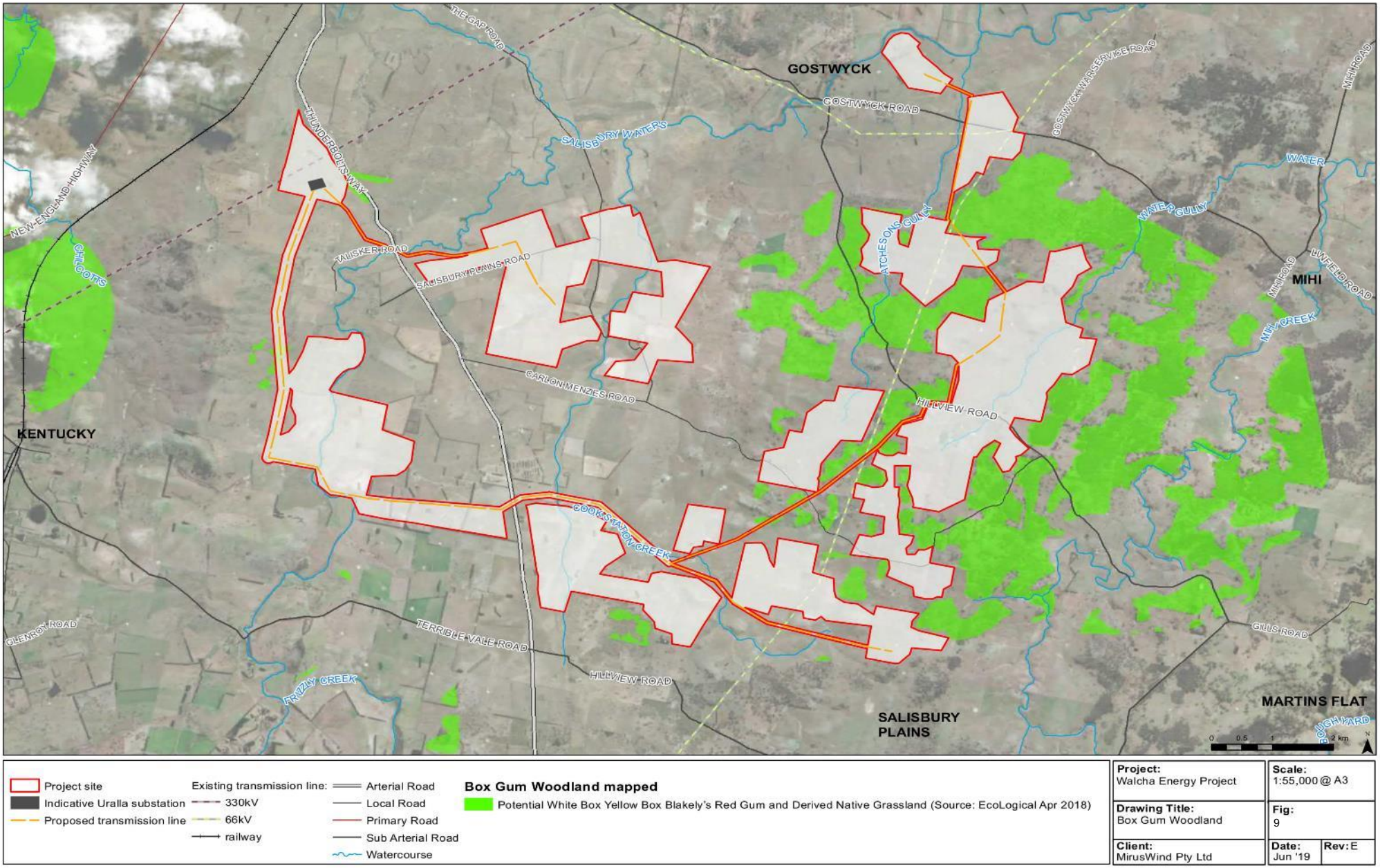

Figure 9: Potential White Box Yellow Box Blakely's Red Gum Woodland in the Proposal site

6.3 Land use

The Proposal site is in a rural setting, historically cleared for grazing activities. Grazing continues to be the main use of the Proposal site today - cattle and sheep grazing for wool and meat govern the land use in the Proposal site and the surrounding areas.

The Proposal investigation area is zoned RU1 Primary Production under the *Uralla Local Environmental Plan 2012*. Within the Proposal site, the land identified is predominately freehold, although some areas of Crown lands, such as roads, are included (Figure 10). Accordingly, the NSW Department of Industry will be consulted at the early stage of the EIS process in relation to the Crown lands.

Parts of the Proposal site are mapped as biophysical strategic agricultural land (BSAL) as identified in the Strategic Agricultural Land Map – New England North West regional mapping under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*. The BSAL map identifies areas of high agricultural value and was developed as a response to concerns regarding loss of productive agricultural land due to mining, oil and gas exploration and development. While not a formal barrier to development, the Proponent acknowledges the possible cumulative impact of development in BSAL areas from this Proposal as well as from other major project proposals in the same locality. BSAL areas are mapped in Figure 10.

No mining exploration licences were identified within the Proposal site using the NSW Planning & Environment MinView spatial database. The closest exploratory licences are 1.5km west and 9.5km east of the Proposal site at its closest point, held by Biacil Holdings Pty Ltd and Providence Gold and Minerals Pty Ltd, respectively.

Early consultation with the landholders identified potential flood prone land. These areas have been avoided in the Proposal. Further assessment of flood prone land will be undertaken during the preparation of the EIS.

A number of residences are located adjacent to the Proposal site. These residents are likely to be affected during the construction and operational periods by increased traffic, increased noise and possibly reduced visual amenity. The majority of these residents have entered into commercial agreements with the Proponent in relation to the Proposal, as seen in Figure 15.

6.3.1 Potential impacts and further assessment

The development will result in a change in the land use within the Proposal site from agricultural use to electricity generation using solar PV. With extensive consultation with the landholders, the Proposal site has been chosen to minimize the impact on the grazing and enable other land uses to continue around the Proposal site. The Proponent is also consulting with landholders to explore possibilities of *agrovoltaics*: using the land for both solar PV generation and farming. Although the development of the Proposal will reduce landholders' utilisation of the site for agricultural production, the development is not considered to have a significant impact on the overall agricultural production of the region.

An agricultural impact assessment (AIA) will be included in the EIS. The AIA will include consultation with landholders to develop an understanding of the productivity/capability of the agricultural land. This assessment will also include consultation with NSW Department of Primary Industries (DPI) to clarify potential issues and inform the assessment and mitigation measures.

A decommissioning and rehabilitation plan in accordance with relevant guidelines will be included in the EIS.

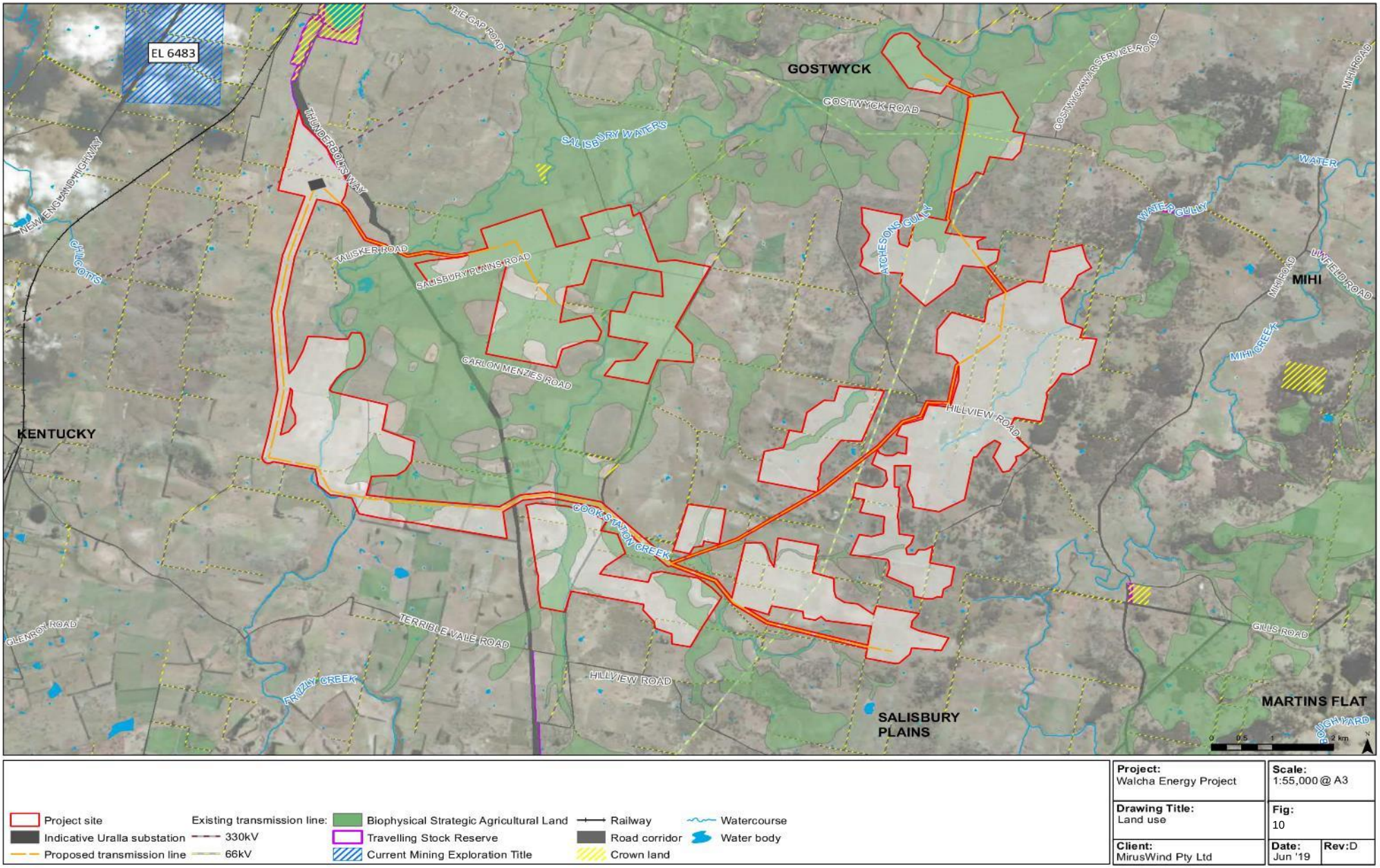

Figure 10: Land use

6.4 Aboriginal Cultural Heritage

The Anaiwan people of Anaiwan country are the traditional owners of the Uralla Shire LGA. Aboriginal people seasonally moved through the New England Tableland region through gorges, moving to coastal plains during the winter and to the tablelands during the summer. The region is known for its carved trees, ceremonial bora grounds and indigenous art sites, with the majority of sites located in and around gorges.

In November 2018, a search of the online NSW Aboriginal Heritage Information Management System (AHIMS) (OEH, 2018b) database was undertaken for the Proposal Site (Figure 11). The database did not reveal any Aboriginal sites within the Proposal site. Within 3km of the Proposal site boundary, 4 Aboriginal sites were identified: one quarry, one carved/scarred tree, one Bora/ceremonial ring and one shelter with deposit.

6.4.1 Potential impacts and further assessment

The main Aboriginal heritage constraints to the Proposal will be its potential impact to Aboriginal sites and objects. Although no sites were identified in this preliminary search, Aboriginal sites could be located in the Proposal site, likely to be concentrated in proximity of perennial watercourses. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (*DECCW 2010) identifies the following land as archaeologically sensitive areas:

- within 200m of waters; or
- located within a sand dune system; or
- located on a ridge top, ridge line or headland; or
- located within 200m below or above cliff face; or
- within 20m of or in a cave, rock shelter or a cave mouth; and
- is land that is not disturbed.

Sensitive areas along the waterways have been categorised with higher potential sensitivity, as are more permanent streams due to their reliable access to resources. The categories used are:

- low to moderate sensitivity: land within 200m of 1st and 2nd order streams;
- moderate sensitivity: land within 200m of 3rd order streams; and
- moderate to high sensitivity: land within 200m of 4th order streams and higher.

A Chance Find Protocol will be prepared and implemented during the construction phase should any Aboriginal sites be identified.

Potential impacts to Aboriginal heritage include damage to Aboriginal heritage items during construction or indirect impacts to Aboriginal heritage sites due to changes to the landscape.

Although the AHIMs did not identify Aboriginal sites within the Proposal site, this is not determinative of this issue. Accordingly, an assessment of potential impacts to Aboriginal heritage will be undertaken as part of the EIS including consultation with Registered Aboriginal Parties and other Aboriginal stakeholders.

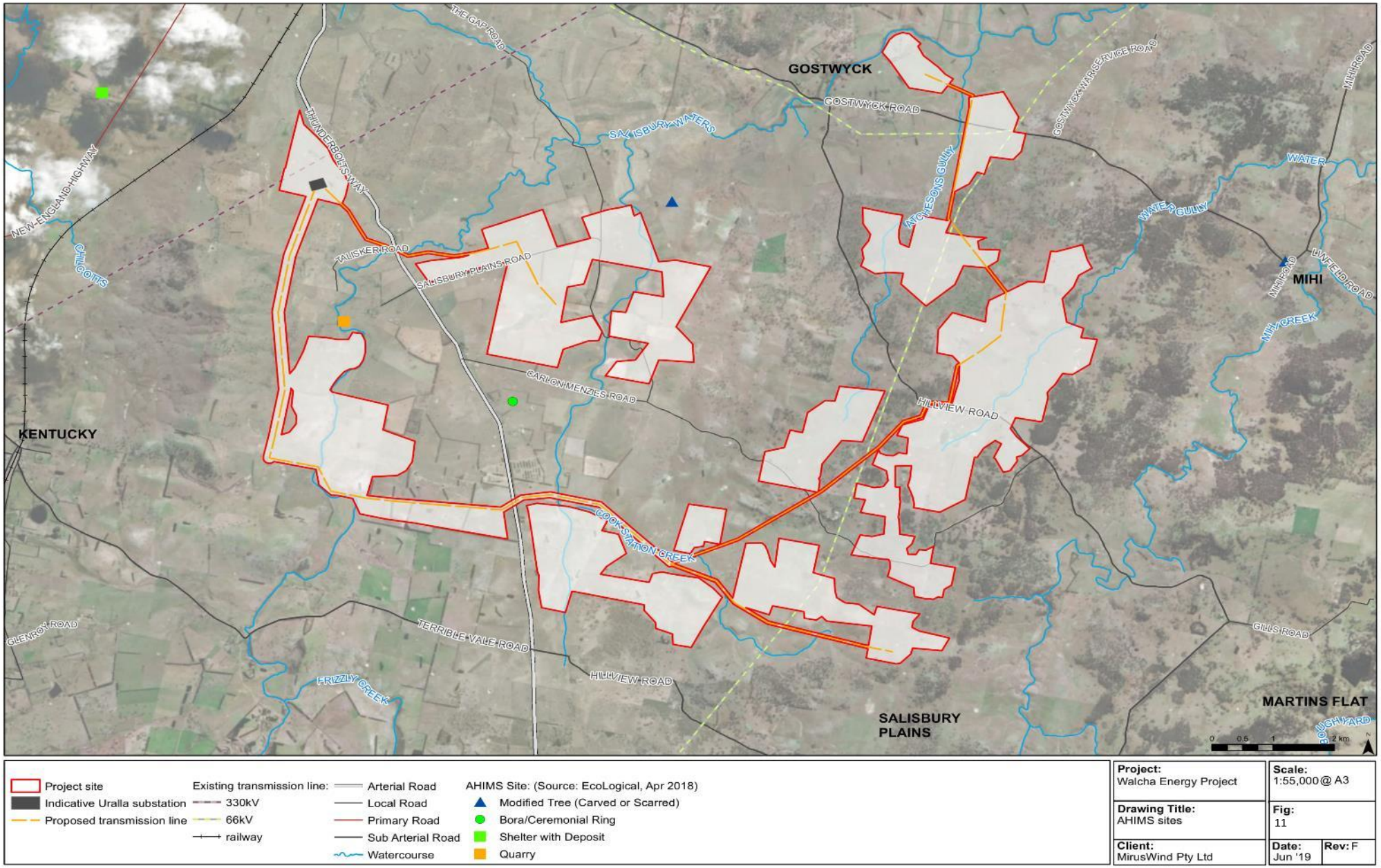

Figure 11: AHIMS Sites within the Proposal site

6.5 Historic Heritage

European occupation of the New England Tableland region began in the 1830s with seekers of suitable land for grazing. By 1861 the population of Armidale had grown to 4,200, becoming the regional capital of the New England Tableland. Gold was discovered at Rocky River, southwest of Armidale in 1851, and at its peak over 5,000 miners were searching for gold and other precious ores. Towns like Walcha, Armidale and Hillgrove gained an economic boost from the gold findings (OEH 2016b).

As a part of the constraints analysis, the following heritage items of local significance under the *Uralla Local Environmental Plan 2012 (***LEP**) were recorded within 2km of the Proposal site (Figure 12):

- I10 Gostwick: Memorial Chapel & Precinct;
- I11 Deeargee: Woolshed;
- I14 Salisbury: Court; and
- I54 Dangar's: Lagoon.

6.5.1 Potential impacts and further assessment

Potential direct and indirect impacts to the LEP heritage sites requires further assessment, particularly when consideration is given to the cumulative impact associated with other renewable energy developments in the immediate area.

Council and DP&E will be engaged early in the EIS process to seek input on the assessment of potential impacts to local heritage items within the Proposal site.

The EIS will include a historical summary of the region and the Proposal site, an assessment of the cultural landscape and its significance, an assessment of the heritage impact associated with the Proposal and mitigation and management measures to avoid potential impacts to know items of heritage significance.

6.6 Water Resources

The proposal site is located within the New England Tablelands IBRA bioregion and encompasses part of the Macintyre, Clarence, Gwydir, Macleay, Namoi and Manning River catchments (OEH 2016). The Proposal site is within the Macleay river catchment (OEH 2016). As seen on Figure 13, within the Proposal site there are four 5th order Strahler watercourses:

- Salisbury Waters;
- Cook Station Creek;
- Atchesons Gully; and
- Water Gully.

Water demands for the Proposal will be relatively small as solar PV construction is not water-intensive. Water will be brought by medium-rigid truck or similar vehicle and stored onsite for construction and operation purposes (including dust control, bushfire management and watering of landscaping).

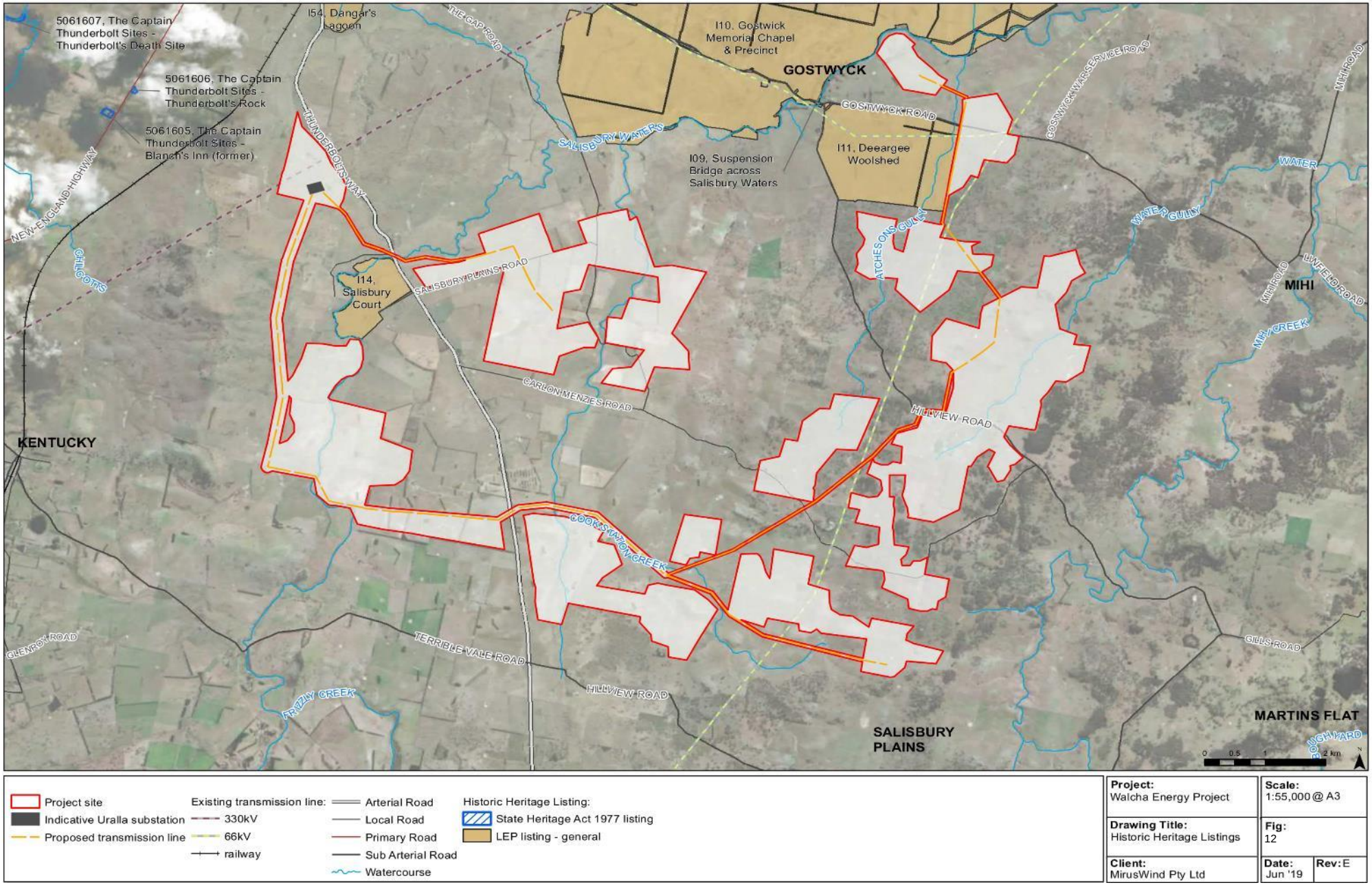

Figure 12: Historic Heritage within the Proposal site and surroundings

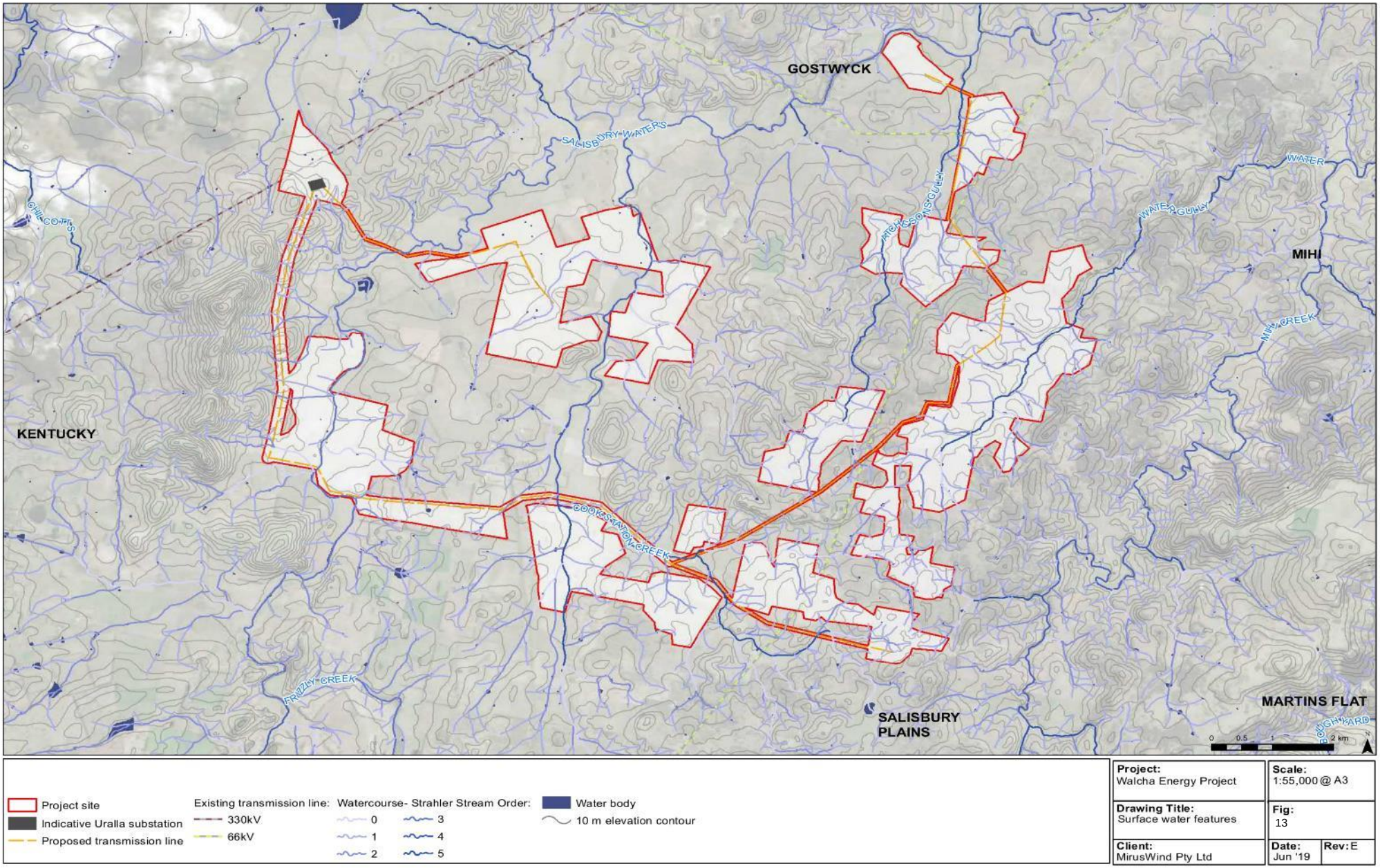

Figure 13: Surface water features in the Proposal site and surroundings

6.7 Traffic and Transport

The Proposal site is adjacent to and can be accessed via Thunderbolts Way. Thunderbolts Way is a regional road, passing across the Great Dividing Range, linking Gloucester to Uralla via Walcha and intersecting A15 New England Highway in Uralla and B56 Oxley Highway in Walcha. Close to the Proposal site, Thunderbolts Way is a sealed single carriageway.

The closest airport is Armidale Airport, approximately 20km north from the Proposal site.

A number of local roads traverse the Proposal site, as seen on Figure 14:

- Salisbury Plains Road;
- Carlon Menzies Road;
- Hillview Road; and
- smaller unnamed roads.

The Proposal will require the construction of new roads from the surrounding existing roads to enable access to the Proposal site for the construction and the operation phases, as seen on Figure 14. The road construction requirements and exact locations of the internal road network for the Proposal site will be determined during the EIS stage of the Proposal.

6.7.1 Potential impacts and further assessment

Peak traffic impacts will be during the construction and decommissioning periods, when construction workers will be travelling to the Proposal site each day. Traffic impacts could be diminished by accommodating some workers on camps on-site. During the operation period the traffic is lighter, limited to only a few site visits during the day.

Delivery trucks of materials and components would likely be medium rigid trucks. Trucks are not anticipated to be larger than typical trucks using the existing local roads and would not exceed 26 meters.

Early engagement and ongoing consultation with Uralla Shire Council, RMS and surrounding landholders will be required to identify potential impacts and address local concerns.

More detailed traffic impacts will be detailed in the traffic impact assessment (TIA) as a part of the EIS, assessing road capacity, possible causeway upgrades, traffic safety and site access. A Traffic Management Plan will be developed as a part of the Construction Environmental Management Plan (CEMP).

6.8 Air quality

The Proposal site is approximately 7km from the Uralla township. Due to its rural setting and lack of industrial pollution sources, the air quality is deemed to be good. Dust and vehicle, agricultural machinery and freight exhaust are the primary existing emissions sources.

6.8.1 Potential impacts and further assessment

During construction, potential impacts to local air quality include dust generation from excavation, earthworks and vehicle movements. Impacts to air quality during operations would be limited to potential minor dust creation.

The Proposal is not anticipated to generate significant air quality impacts during the operation phase. The CEMP will address the air quality impacts and mitigation measures during construction. The implementation of these mitigation measures will ensure that the Proposal will not generate significant air quality impacts during construction, operation or decommissioning.

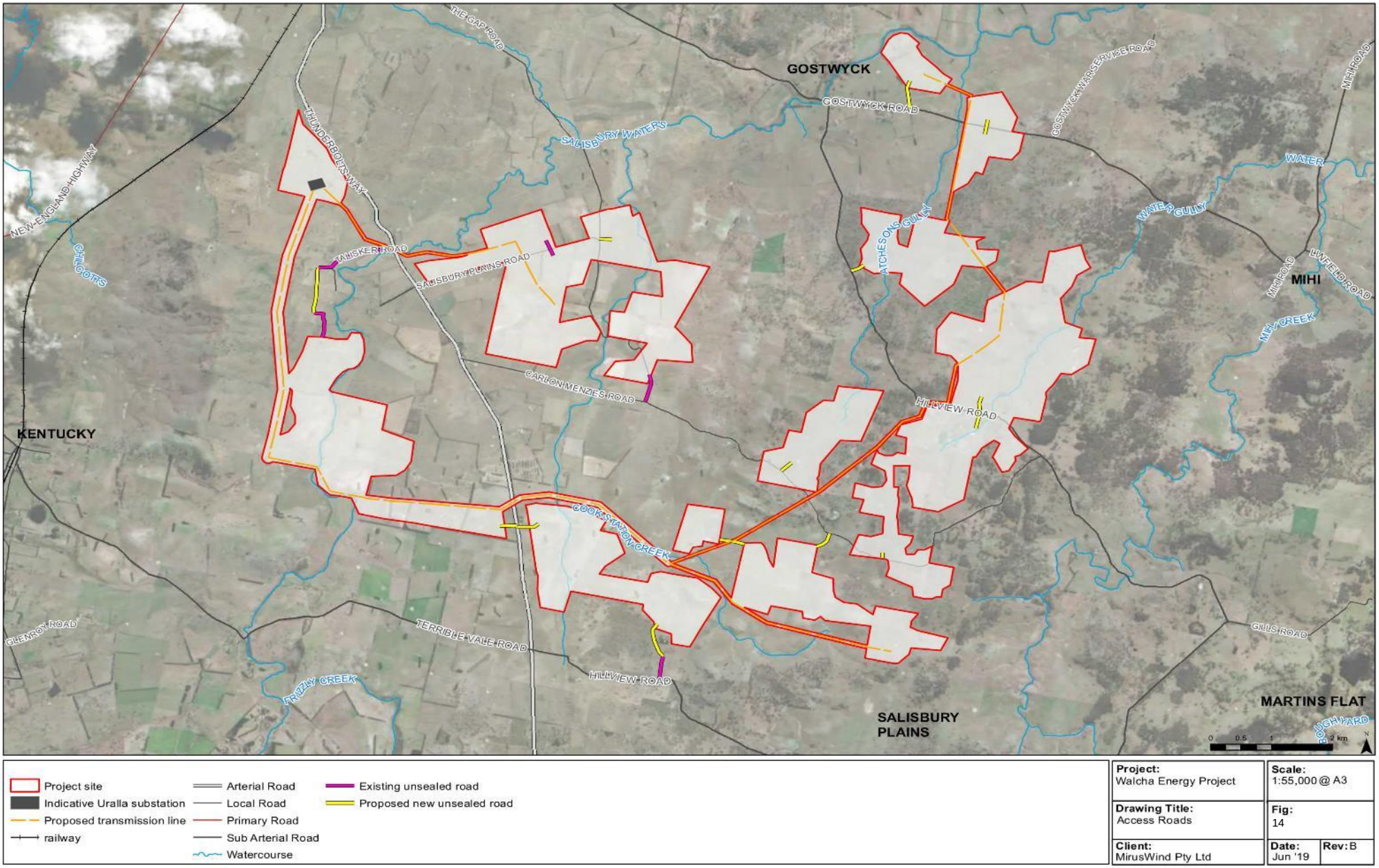

Figure 14: Proposed road access to the Proposal

6.9 Noise & Vibration

The land uses surrounding the Proposal site are primarily limited to grazing. Currently, noise generation at the Proposal site is intermittent including agricultural production activities and vehicles along the regional and local roads.

6.9.1 Potential impacts and further assessment

Construction of the Proposal will create construction and operational noise emissions which can impact rural residences adjacent to the Proposal site. Upon refinement of the Proposal development footprint, noise management and mitigation measures will be considered and finalised.

Noise management assessment and mitigation measures will be part of the EIS. The noise and vibration assessment in the EIS will consider the impact to nearby non-associated residents and provide mitigation measures for each impacted resident.

6.10 Visual

The Proposal will result in visual changes to the landscape within and outside the Proposal site as the project infrastructure will be visible from nearby agricultural land, rural residences and tourist drives.

The Proposal site's terrain is flat and undulating with intermittent hills and existing screening tree lines used as wind breaks. Small parts of the Proposal infrastructure will be visible to passing motorists along Thunderbolts Way (Figure 16). There are no public lookouts or layby viewing points along the Thunderbolts Way near the Proposal site.

The Proposal will be visible to nearby rural residences, the closest being within 100 metres from the Proposal site, however this a host landowner. There are a number of dwellings in the vicinity of the Proposal site, with 21 dwellings within 1 kilometre of the Proposal site, 35 dwellings within 2 kilometres of the Proposal site and 61 dwellings within 5-kilometres. The Proponent has identified 18 dwellings with a line of the sight to the Proposal, as seen on Figure 15.

6.10.1 Potential impacts and further assessment

A visual impact assessment (VIA) will be included in the EIS to determine likely impacts of the Proposal on surrounding residences, road corridors and vistas across the landscape. The VIA will be conducted having specific regard to any elevated areas and key locations for the community, such as Thunderbolts Way.

The VIA, ongoing consultation with impacted residents, the Uralla Shire Council and RMS will guide the exact location of the development within the Proposal site.

The Proponent will consider potential exclusion zones and/or landscaping and screening requirements around the perimeters of the properties of landholders as part of the EIS. The visual impact of the Proposal from Thunderbolts Way will be screened by existing and proposed vegetative screening and natural undulation within the landscape.

Potential glare and glint impacts on residents, road users and aviation are not anticipated to be significant, as PV modules are designed to absorb sunlight.

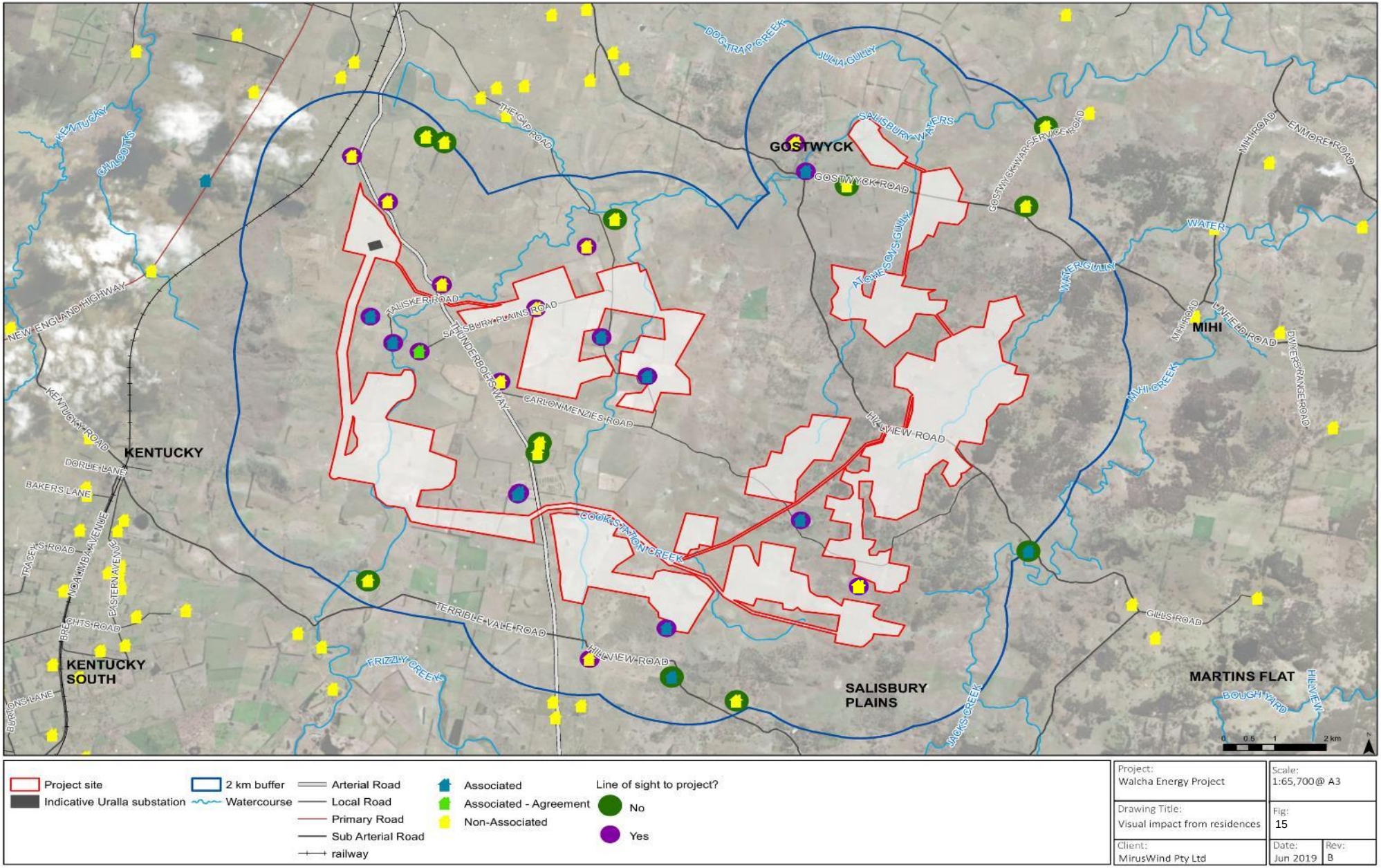

Figure 15: Line of sight to the Proposal

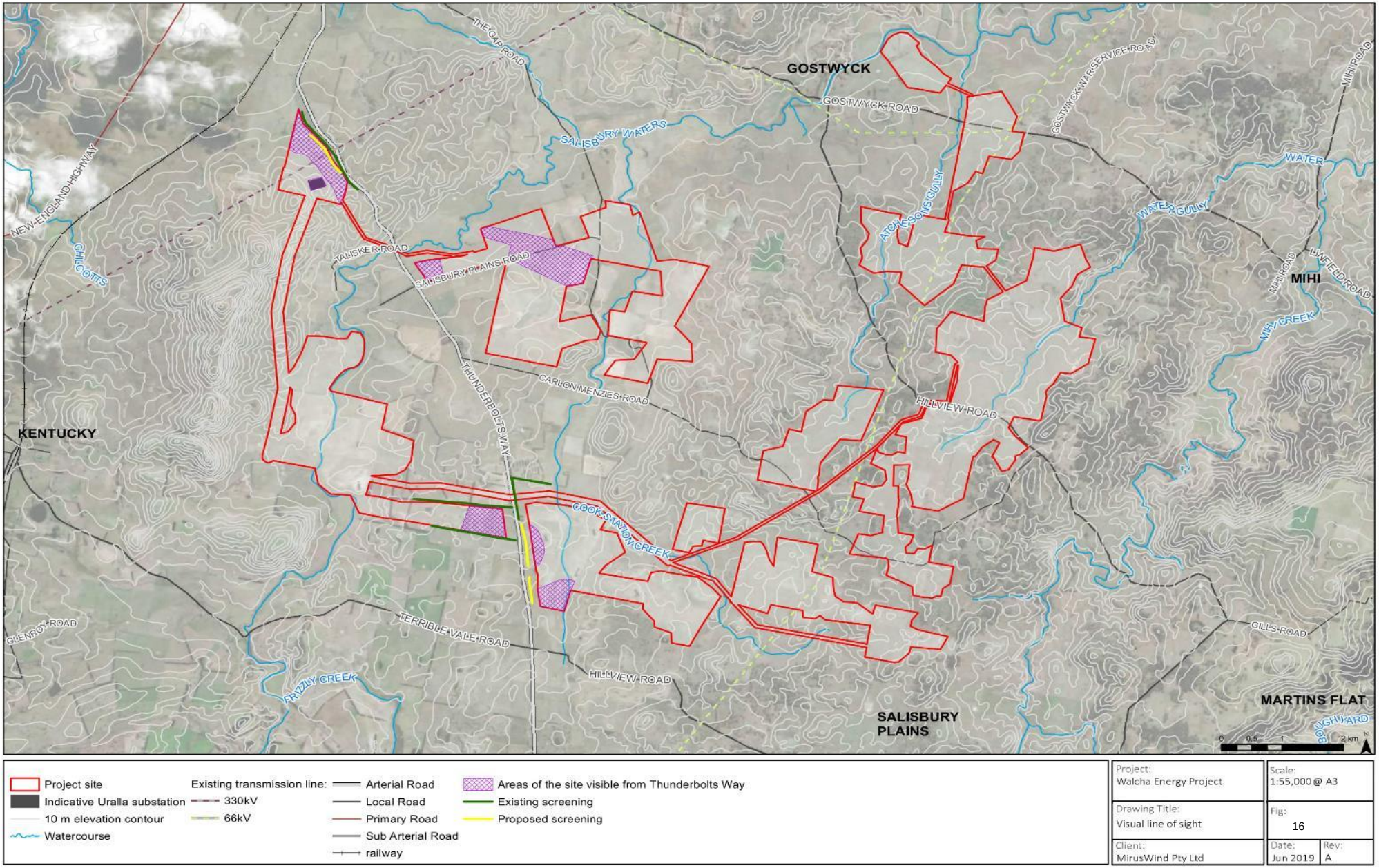

Figure 16: Areas of the Proposal visible from Thunderbolts Way

6.11 Hazards and Risks

Portions of the Proposal site are mapped as bushfire prone land and there is a risk of bushfires throughout the Proposal site, given the vegetation within and surrounding the Proposal site. The Proposal site itself is largely cleared of overstory vegetation with few scattered trees and rows of trees along fence lines.

Proposed electricity transmission lines traverse the Proposal site and surrounds, totalling 33.8km.

The Proposal is to include a BESS with a total aggregate capacity of 100MW/150MWh. Batteries will be stored in an enclosure the size of a shipping container. Australian standards and industry practices will be followed for handling and storing the batteries during installation, maintenance and decommissioning. As defined under *State Environmental Planning Policy No.33 - Hazardous and Offensive Development* (SEPP 33) a preliminary risk screening will be undertaken.

A preliminary hazard analysis will be included in the EIS.

6.11.1 Potential impacts and further assessment

The SEARs and consultation with NSW Rural Fire Service (RFS) will likely require consideration of the potential bush fire hazards and risks associated with the Proposal, including its potential to create a bushfire.

Consultation with NSW RFS will be undertaken to determine the location of Bush Fire Prone Land within the Proposal investigation area, and to discuss their expectations for appropriate bush fire control measures for solar farm developments. The EIS will include a bush fire assessment, in accordance with the relevant standards.

Asset protection zones will be incorporated in the final site layout, where required.

6.12 Soil

The Proposal site is generally flat to undulating. There is potential for erosion to occur from road construction, earthworks and increased vehicle movements during the construction period. A soil erosion assessment will be prepared to determine the potential for soil erosion within the Proposal site.

Land capability assessment scheme was developed by NSW Office of Environment and Heritage (NSW OEH) to assess land capability to sustain a range of land uses and practices to ensure the maintenance and conservation of the land. NSW OEH's classification system gives a numeral assessment on land capability, ranging from 1 (very slight to negligible limitations) to 8 (extreme limitations). Figure 17 shows land and soil capability of the Proposal area, with majority of the area classified between 3 and 5.

Risks associated with contamination at the Proposal site are considered low and therefore no detailed investigation is likely to be required in the EIS.

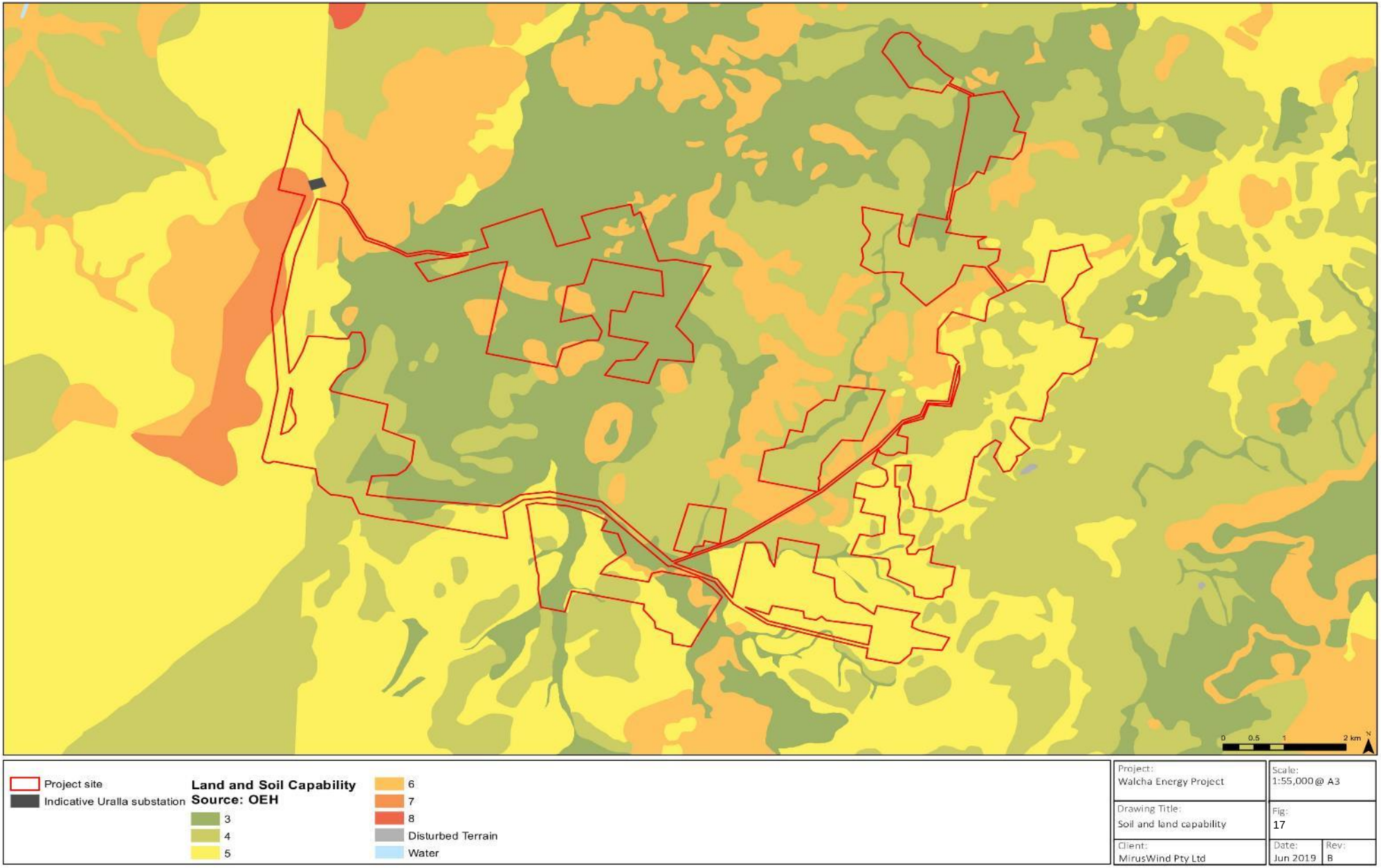

Figure 17: Land and Soil Capability

6.13 Socio-economic

The Proposal site is located in the Uralla Shire LGA. As per Australia Bureau of Statistics, 2016 Census of Population and Housing, Uralla Shire LGA has a total population of 6,048 with an unemployment rate of 5.2%, lower than the NSW average unemployment of 6.3%. The Uralla Shire LGA has a relatively low proportion of working-age residents, with 60.2% of the population aged 15 to 64, compared to the whole NSW population of 65.1% aged 15 to 64.

Agriculture is the predominant employing industry within the Uralla Shire LGA, with the main industry sectors in which usual residents were employed in 2016 being:

Industry of employment, top responses	Uralla Shire LGA (%)	New South Wales (%)
Beef Cattle Farming (Specialised)	5.4%	0.4%
Higher Education	5.0%	1.4%
Sheep-Beef Cattle Farming	4.5%	0.1%
Local Government Administration	3.9%	1.3%
Sheep Farming (Specialised)	2.9%	0.2%

The Parish of Salisbury, where the Proposal site is located, is facing 'Intense Drought' assessed by Combined Drought Indicator, with very low ground cover, exhausted soil moisture stores and minimal rainfall over the past 6-12 months (NSW DPI 2019). Prolonged drought conditions weaken the basis of the agriculture-focussed economy, with substantive negative economic and health impact on farmers and adverse employment outcomes in a drought-affected local economy (Edwards, Gray & Hunter 2018).

6.13.1 Potential impacts and further assessment

The Proposal will provide economic and social benefits from both construction and operation phases of the development to the Uralla Shire LGA and the broader region, including Tamworth Regional LGA and Armidale Regional LGA. The Proposal will bring an alternative, drought-proof income stream to the landholders, near neighbours and community. This will be delivered through a community company that holds a small proportion of the main holding company.

The aging population will present challenges for future labour supply and economic longevity of the community. Major investments – such as Salisbury Solar Farm – will provide short and long-term employment opportunities into the region and potentially attract new workers and their families to the area.

The EIS will include consideration of socio-economic impacts and benefits of the Proposal, including short and long-term impacts.

6.14 Cumulative impacts

There are numerous renewable energy developments in the New England region. The other four significant solar energy developments in the region are:

- New England Solar Farm, a proposed a 700MW solar farm, is located approximately 2 kilometres from the Proposal site. The solar farm is being developed by UPC Renewables Australia Pty Ltd (UPC). UPC submitted an EIS for the DP&E in February 2018. Following the public exhibition of the DA and EIS, over 100 submissions, including submissions from government agencies, other organisations and public feedback, were received. In July 2019 UPC responded to the submissions and released amended EIS. Currently the proposal is assessed by The Independent Planning Commission;
- Metz Solar at Argyle, NSW, is a proposed 115MW solar farm, located 30 kilometres north-east of the Proposal site. The solar farm is developed by Clenergy Australia and received a development consent in December 2018;
- Tilbuster Solar, a proposed 300MW solar farm near Tilbuster, NSW, is located approximately 32 kilometres north-west of the Proposal site. The project is being developed by Enerparc Australia Pty Ltd. The solar farm received SEARs on 12 October 2018 and is currently preparing an EIS; and

- Oxley Solar Farm is a proposed 300MW solar farm, located approximately 20 kilometres north west of the Proposal site. The project is being developed by Solar Megawatt Holdings Pty Ltd. In July 2019, the project requested SEARs for the development.

The solar farm developments are spread over a wide geographical area and are likely to be constructed at different times. The cumulative impact of the developments in the area on issues such as accommodation, traffic, work force supply and local services will be considered in the social impact and economic impact assessments in the EIS.

7 Conclusion

This Scoping Report has established the environmental and planning context of the proposed 600MW_{AC} (700MW_{DC}) solar farm in Salisbury Plains, NSW. It has been prepared to assist the development of SEARs for the Proposal, which will guide the preparation of the EIS.

The Proposal would be assessed under Part 4 of the EP&A Act and is classed as SSD under the S&RD SEPP.

Environmental and socio-economic issues considered in this preliminary assessment include:

- Biodiversity;
- Land Use;
- Aboriginal Cultural Heritage;
- Historic Heritage;
- Water resources;
- Traffic and transport;
- Air quality;
- Noise and vibration;
- Visual;
- Hazards and risks;
- Soil;
- Socio-economic; and
- Cumulative impacts.

This Scoping Report identifies that the key issues associated with the Proposal are likely to be non-Aboriginal heritage, with potential issues in biodiversity, traffic & transport and visual amenity. Risks associated with these issues are expected to be able to be effectively managed.

These key issues, along with other environmental risks identified in this report, will be detailed in the EIS prepared for the Proposal. The EIS will assess the potential impacts, identify appropriate mitigation measures and assess any residual risks following the implementation of the identified controls. The EIS will be developed in accordance with the SEARs issued by DP&E in relation to the Proposal.

If further assessment of impacts identify that the Proposal is likely to have a significant impact on any MNES, the Proposal may also need approval by the Commonwealth Minister for the Environment or their delegate under the EPBC Act.

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