

# Planning and Development (EIS Exemption Application – 132KV Powerlines at Williamsdale) Public Consultation Notice 2017

## Notifiable Instrument NI2017–4

Made under the

Planning and Development Act 2007, s 211C (EIS Exemption Application – Public Consultation)

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### 1 Name of instrument

This instrument is the *Planning and Development (EIS Exemption Application – 132KV Powerlines at Williamsdale) Public Consultation Notice 2017*.

### 2 Commencement

This instrument commences on the day after its notification day.

### 3 EIS exemption application – Concurrent Development Application

Essential Energy is the proponent (proponent) of the proposed 132KV Powerlines at Williamsdale located within blocks 1674, 1675 & 119 Tuggeranong (proposal).

The proponent has applied for an EIS exemption for the proposal under section 211B of the *Planning and Development Act 2007* (the Act). This EIS exemption application is in the schedule.

**EIS** means environmental impact statement, see section 208 of the Act.

**EIS exemption** see section 211 of the Act.

**EIS exemption application** see section 211B of the Act.

### 4 Public consultation

The public consultation period (consultation period) on the EIS exemption application commences on the day this instrument commences and ends 35 working days later. Anyone may give a written representation to the Chief Planning Executive (delegate) about the EIS exemption application. Representations may be given only during the consultation period.

## 5 Making of representation

Representations should be addressed to the Chief Planning Executive and sent by:

- email to [EPDCustomerServices@act.gov.au](mailto:EPDCustomerServices@act.gov.au);
- mail to:  
Environment, Planning & Sustainable Development Directorate  
Customer Service  
GPO Box 158  
Canberra ACT 2601; or
- hand to the Environment, Planning and Sustainable Development Directorate's Customer Service Centre at 16 Challis Street, Dickson.

Representations should include the application reference number (DA201600052) and the name and contact details of the person making the representation.

*Note 1: Printed copies of the EIS exemption application and background documents are available for inspection and purchase at the Environment, Planning and Sustainable Directorate Customer Service Centre, 16 Challis Street, Dickson. The Customer Service Centre is open Monday to Friday (except public holidays) between 8:30am and 4:30pm. Please call 6207 1923 to arrange a copy for purchase.*

*Note 2: As required by s 211F and s 147AC of the Act copies of representations will be made publicly available on the planning and land authority website until the consultation period ends or the submission is withdrawn. Also, copies of representations will be provided to the proponent. Published representations will include the name and contact details of the person making the representation as well as the content of the representation. A request for exclusion of information from publication can be made under section 411 or 412 of the Act. A request for exclusion under these sections must be made in writing, clearly identifying what exclusions are sought and how the request satisfies the exclusion criteria in sections 411 and 412 of the Act.*

*Note 3: This is a concurrent EIS Exemption Application. The proposal includes a Development Application and an EIS Exemption Application. In accordance with S147AA of the Act, the time period for notification for the proposal is 35 working days.*

*Note 4: The EIS exemption application is also available at:  
[http://www.planning.act.gov.au/topics/design\\_build/da\\_assessment/environmental\\_assessment/exemption\\_from\\_requiring\\_and\\_eis\\_s211](http://www.planning.act.gov.au/topics/design_build/da_assessment/environmental_assessment/exemption_from_requiring_and_eis_s211)*

Gary Rake  
A/g Chief Planning Executive  
(delegate of the Minister)  
9 January 2017

**Schedule**  
(see s3)



**ACT**  
Government

Environment and Planning

Planning and Development Act 2007, s425

**APPLICATION FOR:**

**SCOPING DOCUMENT**

**ENVIRONMENTAL SIGNIFICANCE OPINION S211**

**EXEMPTION FROM EIS**

**Form 1M**

**1. Type of Application**

☐ Request for Scoping Document OR

☒ Request for Exemption to Provide Environmental Impact Statement  
Section 211 Planning and Development Act 2007 OR

☐ Application for Environmental Significance Opinion  
Section 138AA Planning and Development Act 2007 OR

☐ Additional Information as requested by the planning and land  
authority for any application for Scoping, EIS, or ESO

If you attended a pre-application meeting or written pre-application advice in relation to the proposal that is the subject of this  
application please provide proposal number **Proposal Number 20** \_\_\_\_\_

Project Name

**WILLIAMSDALE 132KV ELECTRICAL CONNECTION**

Project Description

**CONSTRUCTION OF APPROXIMATELY 580m OF 132KV  
SUB-TRANSMISSION LINE CONNECTING THE EXISTING  
TRANSCRID WILLIAMSDALE SUBSTATION WITH THE EXISTING  
QUEANBEYAN-COOMA SUB-TRANSMISSION LINE (LOCATED IN NSW).**

**2. Lease/Site Details Please Print**

Provide the following details for each lease/site:

**Site 1**

Block:

**1674**

Section:

Suburb:

**TUGGERANONG**

Street Address (if applicable)

**7701 MONARO HIGHWAY, WILLIAMSDALE**

Land Use Zone/s applicable to  
this site

**NUZ 2 - RURAL**

**Site 2**

Block:

**1675**

Section:

Suburb:

**TUGGERANONG**

Street Address (if applicable)

**7739 MONARO HIGHWAY, WILLIAMSDALE**

Land Use Zone/s applicable to  
this site

**NUZ 2 - RURAL**

**Site 3**

Block:

**119**

Section:

Suburb:

**TUGGERANONG**

Street Address (if applicable)

**MONARO HIGHWAY, WILLIAMSDALE**

Land Use Zone/s applicable to  
this site

**NUZ 2 - RURAL**

If more than three sites please provide details on separate page



**3. Applicant Details** *Please Print*

Surname	FITZPATRICK	First Name	TREVOR
Name of Company/Department/ Government Agency	PURDON PLANNING P/L		
Position held in Company/Department/ Government Agency	ASSOCIATE DIRECTOR		
Australian Company/Business Number (ACN/ABN)	ABN 14 659 841 354		
Postal Address	UNIT 2 COOYONG CENTRE, 1 TORRENS ST		
Suburb	BRADDON	State	ACT
		Postcode	2612
Phone Number Business Hours	6257 1511	Mobile	
EMAIL ADDRESS	purdons@purdon.com.au + trevor.fitzpatrick@purdon.com.au		

**4. Lessee (Property Owners) or Government Land Custodian Details** *Please Print***SITE 1****1<sup>st</sup> Lessee or Land Custodian Details**

Full Name:	
Company Name:	TRANSGRID
Position Held in Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

**2nd Lessee or Land Custodian Details**

Full Name:	
Company Name:	
Position Held in Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

**SITE 2****1<sup>st</sup> Lessee or Land Custodian Details**

Full Name:	JOHN KNOX
Company Name:	ACTEW CORPORATION LTD
Position Held In Company:	MANAGING DIRECTOR
ACN Number:	069 381 960
Postal Address:	GPO Box 366 CANBERRA ACT 2601
Telephone BH:	02 6248 3111
Mobile:	N/A
Email Address:	talkto us@iconwarr.com.au

**2nd Lessee or Land Custodian Details**

Full Name:	
Company Name:	
Position Held In Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

**SITE 3****1<sup>st</sup> Lessee or Land Custodian Details**

Full Name:	LOCKE STEPHEN
Company Name:	
Position Held In Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

**2nd Lessee or Land Custodian Details**

Full Name:	
Company Name:	
Position Held In Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

All lessees **must** sign authorising the lodgement of this application. In doing so the lessee gives authority to the applicant to negotiate any dealings in relation to the application through to its determination. If there are more than two lessees please ensure that the details and authorisation are attached to the application.

If a lessee signature **can not be obtained** and either a land acquisition or lease withdrawal is underway to facilitate the project to which the EIS Scope relates then the applicant **must** submit documentary evidence that such land acquisition or lease withdrawal is occurring and that the lessee is aware of the project to which the EIS Scope relates.

## 5. EIS Requirements – complete this part for Application for Scoping Document ONLY

Please identify why your proposal requires an Environmental Impact Statement and include applicable references to the *Planning and Development Act 2007 (P&D Act)*.

- ☐ The proposal is a type listed under schedule 4 of the P&D Act. Please list item numbers: \_\_\_\_\_
- ☐ The proposal is not an EXEMPT, CODE, or MERIT track development where the development is allowed under an existing lease
- ☐ The proposal is permissible under the National Capital Plan but listed as prohibited in the relevant development table
- ☐ The proposal has been declared under section 124 and section 125 of the P&D Act
- ☐ The proposal is not listed anywhere in the relevant development table (in-nominate use)

## 6. Complete this part for Application for Environmental Significance Opinion ONLY S138AA Planning and Development Act 2007

Are you seeking an Environmental Significance Opinion?

☐ YES

☐ NO

IF YES - identify the item(s) for opinion under Schedule 4 of the *Planning and Development Act 2007*

☐ Section 4.2 Item 3 (c)

☐ Section 4.2 Item 3 (d)

☐ Section 4.3 Item 1

☐ Section 4.3 Item 2 (a)

☐ Section 4.3 Item 2 (b)

☐ Section 4.3 Item 3

☐ Section 4.3 Item 6

**Note:** Applications for Environmental Significance Opinion from the ACT Heritage Council must be accompanied by a Statement of Heritage Effects prepared by a suitably qualified heritage professional regarding the potential impacts of the proposal.

## 7. Complete this part for Request for Exemption to Provide Environmental Impact Statement ONLY S.211 Planning & Development Act 2007

The Minister may exempt a development proposal from a requirement to include an EIS if satisfied that the expected environmental impact of the development proposal has already been sufficiently addressed by another study, whether or not the study relates to the particular development proposal.

If the proposal is a type listed under Schedule 4 of the P&D Act, please list the item numbers: <sup>ITEM 2</sup> ~~4-2~~ <sup>ITEMS 1+2</sup> ~~4-3~~ .

Please supply supporting documentation to justify s211 consideration and a statement as to how the supporting documentation satisfies the requirement of s.211 and s50A of the P&D Regulation.

☒ Documentation Attached

## 8. Environment Protection and Biodiversity Conservation Act 1999

Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?

☒ NO

☐ YES

If YES - attach copies of the Commonwealth Department of the Environment "Notification of Referral Decision" and "Decision on Assessment Approach"

**NOTE:** Copies of these documents must be attached to this application form before it can be accepted for processing by the planning and land authority.

IF NO - Have you had meetings/discussions with the Department of the Environment?

☒ NO

☐ YES

If YES - Please provide the contact details of the Department of the Environment officer

Name: \_\_\_\_\_

Contact No. \_\_\_\_\_

## 9. Your Proposal – Required for ALL application types

Please attach to this application form a document that provides sufficient detail to enable prescribed entities to obtain an understanding of the full extent of your proposal and any associated works, including:

- ✓ 1. a statement outlining the objectives of the project and why it is needed;
- ✓ 2. a description of the nature/type of project proposed by providing location map(s) of the project site(s), preliminary design drawings and satellite/aerial photographs;
- ✓ 3. a preliminary risk assessment (PRA) based on the guidance document attached to this form (not required for an ESO application);
- ✓ 4. a description of the natural conservation values of the site based on the considerations listed in the "Preparation of an application for scoping and preparation of an ESO" guideline available from the EPD website;
- ✓ 5. a description of measures within the proposal that seek to avoid and minimise (and as a last resort offset) impact on identified conservation values (for ESO and Section 211 applications only);
- ✓ 6. any decision made under the EPBC Act in relation to this proposal.
- 7. **For s211 applications only**, the following additional information is required:
  - ✓ • details of qualifications, expertise and experience of the person(s) who conducted previous studies supporting the application;
  - ✓ • details of public consultation undertaken, as part of statutory requirement, for projects or previous studies included as supporting documentation undertaken. Details of public consultation not required for a statutory process should also be included;
  - ✓ • verification from a qualified person that the information in the previous studies supporting the application is still current.

## 10. Prescribed Entities

Have you had any meetings/discussions with relevant prescribed entities?

☐ NO  
☒ YES

IF YOU ANSWERED YES TO THE QUESTION – please complete the following table and provide meeting minutes:

ENTITY (please tick)	DATE/s OF MEETING/s	ENTITY CONTACT
<input checked="" type="checkbox"/> ACTEW Corporation Ltd	N/A	
<input type="checkbox"/> ACTEWAGL Distribution		
<input type="checkbox"/> Conservator Flora & Fauna		
<input type="checkbox"/> Emergency Services		
<input type="checkbox"/> Environment Protection		
<input type="checkbox"/> Heritage Council		
<input type="checkbox"/> Health Policy		
<input type="checkbox"/> Territories & Municipal Services		
<input type="checkbox"/> Custodian of the Land		
<input type="checkbox"/> Other: _____ Please specify		

## 11. Conflict of Interest Declaration

Does the applicant or lessee have any association with EPD staff?

☒ NO  
☐ YES

If YES please provide details:

**NOTE:** There are penalties for deliberately giving false and misleading information. The planning and land authority or Minister may revoke an approval if satisfied that the approval was obtained by fraud or misrepresentation.

## 12. Other Application Requirements

### DOCUMENTATION AND PLANS

All required documentation must be provided in an electronic format on compact disc/DVD or via email and meet the following requirements (Form can be submitted in hardcopy if lodged over the counter)

- Each document must be saved as a PDF and named in accordance with the naming convention as detailed on the EPD website.
- All plans must be to scale.
- All plans must be rotated to the correct orientation i.e. they are the right way up when opened
- All plans are to be clear and concise and generally consistent with Australian Standard 1100.301 - 1985 and Australian Standard 1100.301 supplementary - as updated from time to time.
- The documentation provided on CD/DVD either over the counter or via an electronic lodgment process (email or internet) will be considered to be the relevant documentation associated with this application.

### HARDCOPY DOCUMENTATION REQUIREMENTS FOR ALL APPLICATION TYPES

In addition to the documentation being provided on CD/DVD **one bound and one unbound hard copy must also be provided.**

## 13. Applicant and Lessee Declaration

I/we the undersigned, declare that this application is accompanied by all of the required information and or documents and understand that the documentation provided on CD/DVD or via electronic lodgment process (email or internet) will be considered to be the relevant documentation associated with this application; and understand that the information submitted with this application form will undergo a documentation check. I/we understand that this application will be considered lodged once the relevant application fees have been paid;

I/we hereby authorise ACT Government officers to access the subject property(s) for the purpose of evaluating the proposal;

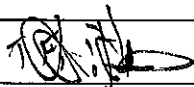
I/we the undersigned (lessee) appoint the applicant whose name and signature appear below to act on my/our behalf in relation to this application. This authorises the applicant to pay for all application fees, bonds, and securities, liaise with the planning and land authority when required, alter amend or provide further information as necessary and receive any communications relating to this application;

I/we declare that all the information given on this form and its attachments is true and complete;

**If signing on behalf of a company, organisation or Government agency: -**

I/we the undersigned, declare I/we have the appropriate delegation or authority to sign on behalf of the company, organisation or Government agency.

Applicant Signature (s)



Date

SITE 1

(TRANSARID)

1<sup>st</sup> Lessee Signature

Date

2<sup>nd</sup> Lessee Signature

Date

Govt Land Custodian Signature  
(unleased land only)

Date

Delegate of the planning and land  
authority  
(unleased land only)

Date

**SITE 2**

(ACTEW CORP)

1st Lessee Signature JK [Signature] Date 7/6/20162nd Lessee Signature JS [Signature] Date 7/6/16Govt Land Custodian Signature  
(unleased land only) N/A Date Delegate of the planning and land  
authority  
(unleased land only) N/A Date **SITE 3**

(S. LOCKE)

1st Lessee Signature  Date 2nd Lessee Signature  Date Govt Land Custodian Signature  
(unleased land only)  Date Delegate of the planning and land  
authority  
(unleased land only)  Date **Privacy Notice**

The personal information on this form is provided to the Environment and Planning Directorate (EPD) to enable the processing of your application. The collection of personal information is authorised by the *Planning and Development Act 2007*. If all or some of the personal information is not collected EPD cannot process your application. The Planning and Development Act 2007 requires the details of applications, decisions and orders to be kept on a register and made available for public inspection. Information and documentation relevant to a development application may be made available via the Internet. The personal information you provide may be disclosed to Australian Bureau of Statistics, ACT Revenue Office, the Registrar General's Office, ACTEW Corporation, ActewAGL, Territory and Municipal Services Directorate and other Government agencies with a direct interest in the development assessment process. The information may also be disclosed where authorised by law or court order, or where the Directorate reasonably believes that the use or disclosure of the information is reasonably necessary for enforcement-related activities conducted by, or on behalf of, an enforcement body. EPD's Information Privacy Policy contains information about how you may access or seek to correct your personal information held by EPD, and how you may complain about an alleged breach of the Territory Privacy Principles. The EPD Information Privacy Policy can be found at [www.environment@act.gov.au](http://www.environment@act.gov.au)

**Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?**

The EPBC came into operation on 16 July 2000. It establishes an environmental assessment and approval system that is separate and distinct from the ACT system. It does not affect the validity of ACT development assessment and approval processes, but may affect the assessment track. The ACT cannot provide preliminary advice on whether a proposal falls within the definition of a controlled action, or requires referral to the Commonwealth. You should consult with the Commonwealth to determine if your proposal is a controlled action before seeking any approvals under the *Planning and Development Act 2007*. For information about the EPBC, including the referral process and when a referral should be made, contact the Commonwealth Department of the Environment [www.environment.gov.au](http://www.environment.gov.au)

**Contact Details:**

Environment and Planning Directorate  
Customer Service Centres  
GPO Box 158, Canberra City 2601  
8 Darling Street Mitchell, ACT 2911  
16 Challis Street Dickson ACT 2602  
Business Hours: 8.30am to 4.30pm weekdays (excluding Public Holidays)  
Phone: (02) 6207 1923 TTY: (02) 6207 2622  
Email: [epdcustomerservices@act.gov.au](mailto:epdcustomerservices@act.gov.au) Website: [www.environment@act.gov.au](http://www.environment@act.gov.au)



**ACT**  
Government

Environment and Planning

Planning and Development Act 2007, s425

**APPLICATION FOR:**

**SCOPING DOCUMENT**

**ENVIRONMENTAL SIGNIFICANCE OPINION S211**

**EXEMPTION FROM EIS**

**Form 1M**

**1. Type of Application**

☐ Request for Scoping Document **OR**

☒ Request for Exemption to Provide Environmental Impact Statement  
Section 211 Planning and Development Act 2007 **OR**

☐ Application for Environmental Significance Opinion  
Section 138AA Planning and Development Act 2007 **OR**

☐ Additional Information as requested by the planning and land  
authority for any application for Scoping, EIS, or ESO

If you attended a pre-application meeting or written pre-application advice in relation to the proposal that is the subject of this application please provide proposal number

Proposal Number 20 \_\_\_\_\_

Project Name

WILLIAMSDALE 132KV ELECTRICAL CONNECTION

Project Description

CONSTRUCTION OF APPROXIMATELY 580m OF 132KV  
SUB-TRANSMISSION LINE CONNECTING THE EXISTING  
TRANSCRID WILLIAMSDALE SUBSTATION WITH THE EXISTING  
QUEANBEYAN-COOMA SUB-TRANSMISSION LINE (LOCATED IN NSW).

**2. Lease/Site Details** *Please Print*

Provide the following details for each lease/site:

Site 1

Block:

1674

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

7701 MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

Site 2

Block:

1675

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

7739 MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

Site 3

Block:

119

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

If more than three sites please provide details on separate page

**3. Applicant Details** *Please Print*

Surname	FITZPATRICK	First Name	TREVOR
Name of Company/Department/Government Agency	PURDON PLANNING P/L		
Position held in Company/Department/Government Agency	ASSOCIATE DIRECTOR		
Australian Company/Business Number (ACN/ABN)	ABN 14 659 841 354		
Postal Address	UNIT 2 COOYONG CENTRE, 1 TORRENS ST		
Suburb	BRADDON	State	ACT
		Postcode	2612
Phone Number Business Hours	6257 1511	Mobile	
EMAIL ADDRESS	purdons@purdon.com.au + trevor.fitzpatrick@purdon.com.au		

**4. Lessee (Property Owners) or Government Land Custodian Details** *Please Print***SITE 1****1<sup>st</sup> Lessee or Land Custodian Details**

Full Name:	
Company Name:	TRANSGRID
Position Held in Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

**2<sup>nd</sup> Lessee or Land Custodian Details**

Full Name:	
Company Name:	
Position Held In Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	



## SITE 2

### 1<sup>st</sup> Lessee or Land Custodian Details

Full Name:	<input type="text"/>
Company Name:	<input type="text" value="ACTEW CORPORATION LTD"/>
Position Held in Company:	<input type="text"/>
ACN Number:	<input type="text"/>
Postal Address:	<input type="text"/>
Telephone BH:	<input type="text"/>
Mobile:	<input type="text"/>
Email Address:	<input type="text"/>

### 2nd Lessee or Land Custodian Details

Full Name:	<input type="text"/>
Company Name:	<input type="text"/>
Position Held in Company:	<input type="text"/>
ACN Number:	<input type="text"/>
Postal Address:	<input type="text"/>
Telephone BH:	<input type="text"/>
Mobile:	<input type="text"/>
Email Address:	<input type="text"/>

## SITE 3

### 1<sup>st</sup> Lessee or Land Custodian Details

Full Name:	<input type="text" value="LOCKE STEPHEN"/>
Company Name:	<input type="text"/>
Position Held in Company:	<input type="text"/>
ACN Number:	<input type="text"/>
Postal Address:	<input type="text" value="Po box 1877&lt;br/&gt;Tuggeranong DC&lt;br/&gt;A.C.T 2901"/>
Telephone BH:	<input type="text"/>
Mobile:	<input type="text" value="0407507150"/>
Email Address:	<input type="text" value="Steve.locke@wurth.com.au"/>

### 2nd Lessee or Land Custodian Details

Full Name:	<input type="text"/>
Company Name:	<input type="text"/>
Position Held in Company:	<input type="text"/>
ACN Number:	<input type="text"/>
Postal Address:	<input type="text"/>
Telephone BH:	<input type="text"/>
Mobile:	<input type="text"/>
Email Address:	<input type="text"/>

All lessees **must** sign authorising the lodgement of this application. In doing so the lessee gives authority to the applicant to negotiate any dealings in relation to the application through to its determination. If there are more than two lessees please ensure that the details and authorisation are attached to the application.

If a lessee signature **can not be obtained** and either a land acquisition or lease withdrawal is underway to facilitate the project to which the EIS Scope relates then the applicant **must** submit documentary evidence that such land acquisition or lease withdrawal is occurring and that the lessee is aware of the project to which the EIS Scope relates.

## 5. EIS Requirements – complete this part for Application for Scoping Document ONLY

Please identify why your proposal requires an Environmental Impact Statement and include applicable references to the *Planning and Development Act 2007 (P&D Act)*.

- ☐ The proposal is a type listed under schedule 4 of the P&D Act. Please list item numbers: \_\_\_\_\_
- ☐ The proposal is not an EXEMPT, CODE, or MERIT track development where the development is allowed under an existing lease
- ☐ The proposal is permissible under the National Capital Plan but listed as prohibited in the relevant development table
- ☐ The proposal has been declared under section 124 and section 125 of the P&D Act
- ☐ The proposal is not listed anywhere in the relevant development table (in-nominate use)

## 6. Complete this part for Application for Environmental Significance Opinion ONLY S138AA Planning and Development Act 2007

Are you seeking an Environmental Significance Opinion?

☐ YES

☐ NO

IF YES - identify the item(s) for opinion under Schedule 4 of the *Planning and Development Act 2007*

☐ Section 4.2 Item 3 (c)

☐ Section 4.2 Item 3 (d)

☐ Section 4.3 Item 1

☐ Section 4.3 Item 2 (a)

☐ Section 4.3 Item 2 (b)

☐ Section 4.3 Item 3

☐ Section 4.3 Item 6

**Note:** Applications for Environmental Significance Opinion from the ACT Heritage Council must be accompanied by a Statement of Heritage Effects prepared by a suitably qualified heritage professional regarding the potential impacts of the proposal.

## 7. Complete this part for Request for Exemption to Provide Environmental Impact Statement ONLY S.211 Planning & Development Act 2007

The Minister may exempt a development proposal from a requirement to include an EIS if satisfied that the expected environmental impact of the development proposal has already been sufficiently addressed by another study, whether or not the study relates to the particular development proposal.

If the proposal is a type listed under Schedule 4 of the P&D Act, please list the item numbers: <sup>ITEM 2</sup> ~~4-2~~ <sup>ITEMS 1+2</sup> ~~4-3~~ .

Please supply supporting documentation to justify s211 consideration and a statement as to how the supporting documentation satisfies the requirement of s.211 and s50A of the P&D Regulation.

☒ Documentation Attached

## 8. Environment Protection and Biodiversity Conservation Act 1999

Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?

☒ NO

☐ YES

If YES - attach copies of the Commonwealth Department of the Environment "Notification of Referral Decision" and "Decision on Assessment Approach"

**NOTE:** Copies of these documents must be attached to this application form before it can be accepted for processing by the planning and land authority.

IF NO - Have you had meetings/discussions with the Department of the Environment?

☒ NO

☐ YES

If YES - Please provide the contact details of the Department of the Environment officer

Name: \_\_\_\_\_

Contact No. \_\_\_\_\_

## 9. Your Proposal – Required for ALL application types

Please attach to this application form a document that provides sufficient detail to enable prescribed entities to obtain an understanding of the full extent of your proposal and any associated works, including:

- ✓ 1. a statement outlining the objectives of the project and why it is needed;
- ✓ 2. a description of the nature/type of project proposed by providing location map(s) of the project site(s), preliminary design drawings and satellite/aerial photographs;
- ✓ 3. a preliminary risk assessment (PRA) based on the guidance document attached to this form (not required for an ESO application);
- ✓ 4. a description of the natural conservation values of the site based on the considerations listed in the "Preparation of an application for scoping and preparation of an ESO" guideline available from the EPD website;
- ✓ 5. a description of measures within the proposal that seek to avoid and minimise (and as a last resort offset) impact on identified conservation values (for ESO and Section 211 applications only);
- ✓ 6. any decision made under the EPBC Act in relation to this proposal.
7. **For s211 applications only**, the following additional information is required:
  - ✓ • details of qualifications, expertise and experience of the person(s) who conducted previous studies supporting the application;
  - ✓ • details of public consultation undertaken, as part of statutory requirement, for projects or previous studies included as supporting documentation undertaken. Details of public consultation not required for a statutory process should also be included;
  - ✓ • verification from a qualified person that the information in the previous studies supporting the application is still current.

## 10. Prescribed Entities

Have you had any meetings/discussions with relevant prescribed entities?

☐ NO  
☒ YES

IF YOU ANSWERED YES TO THE QUESTION – please complete the following table and provide meeting minutes:

ENTITY (please tick)	DATE/s OF MEETING/s	ENTITY CONTACT
<input checked="" type="checkbox"/> ACTEW Corporation Ltd	N/A	
<input type="checkbox"/> ACTEWAGL Distribution		
<input type="checkbox"/> Conservator Flora & Fauna		
<input type="checkbox"/> Emergency Services		
<input type="checkbox"/> Environment Protection		
<input type="checkbox"/> Heritage Council		
<input type="checkbox"/> Health Policy		
<input type="checkbox"/> Territories & Municipal Services		
<input type="checkbox"/> Custodian of the Land		
<input type="checkbox"/> Other: _____ Please specify		

## 11. Conflict of Interest Declaration

Does the applicant or lessee have any association with EPD staff?

☒ NO  
☐ YES

If YES please provide details:

**NOTE:** There are penalties for deliberately giving false and misleading information. The planning and land authority or Minister may revoke an approval if satisfied that the approval was obtained by fraud or misrepresentation.

## 12. Other Application Requirements

### DOCUMENTATION AND PLANS

All required documentation must be provided in an electronic format on compact disc/DVD or via email and meet the following requirements (Form can be submitted in hardcopy if lodged over the counter)

- Each document must be saved as a PDF and named in accordance with the naming convention as detailed on the EPD website.
- All plans must be to scale.
- All plans must be rotated to the correct orientation i.e. they are the right way up when opened
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- The documentation provided on CD/DVD either over the counter or via an electronic lodgment process (email or internet) will be considered to be the relevant documentation associated with this application.

### HARDCOPY DOCUMENTATION REQUIREMENTS FOR ALL APPLICATION TYPES

In addition to the documentation being provided on CD/DVD **one bound and one unbound hard copy must also be provided.**

## 13. Applicant and Lessee Declaration

I/we the undersigned, declare that this application is accompanied by all of the required information and or documents and understand that the documentation provided on CD/DVD or via electronic lodgment process (email or internet) will be considered to be the relevant documentation associated with this application; and understand that the information submitted with this application form will undergo a documentation check. I/we understand that this application will be considered lodged once the relevant application fees have been paid;

I/we hereby authorise ACT Government officers to access the subject property(s) for the purpose of evaluating the proposal;


I/we the undersigned (lessee) appoint the applicant whose name and signature appear below to act on my/our behalf in relation to this application. This authorises the applicant to pay for all application fees, bonds, and securities, liaise with the planning and land authority when required, alter amend or provide further information as necessary and receive any communications relating to this application;

I/we declare that all the information given on this form and its attachments is true and complete;

**If signing on behalf of a company, organisation or Government agency: -**

I/we the undersigned, declare I/we have the appropriate delegation or authority to sign on behalf of the company, organisation or Government agency.

Applicant Signature (s)



Date

**SITE 1**

(TRANSARIO)

1<sup>st</sup> Lessee Signature

Date

2<sup>nd</sup> Lessee Signature

Date

Govt Land Custodian Signature  
(unleased land only)

Date

Delegate of the planning and land  
authority  
(unleased land only)

Date



**SITE 2**

(ACTEW CORP)

1st Lessee Signature  Date 2nd Lessee Signature  Date Govt Land Custodian Signature  
(unleased land only)  Date Delegate of the planning and land  
authority  
(unleased land only)  Date **SITE 3**

(S. LOCKE)

1st Lessee Signature  Date 24/05/ 20162nd Lessee Signature  Date Govt Land Custodian Signature  
(unleased land only)  Date Delegate of the planning and land  
authority  
(unleased land only)  Date **Privacy Notice**

The personal information on this form is provided to the Environment and Planning Directorate (EPD) to enable the processing of your application. The collection of personal information is authorised by the *Planning and Development Act 2007*. If all or some of the personal information is not collected EPD cannot process your application. The Planning and Development Act 2007 requires the details of applications, decisions and orders to be kept on a register and made available for public inspection. Information and documentation relevant to a development application may be made available via the Internet. The personal information you provide may be disclosed to Australian Bureau of Statistics, ACT Revenue Office, the Registrar General's Office, ACTEW Corporation, ActewAGL, Territory and Municipal Services Directorate and other Government agencies with a direct interest in the development assessment process. The information may also be disclosed where authorised by law or court order, or where the Directorate reasonably believes that the use or disclosure of the information is reasonably necessary for enforcement-related activities conducted by, or on behalf of, an enforcement body. EPD's Information Privacy Policy contains information about how you may access or seek to correct your personal information held by EPD, and how you may complain about an alleged breach of the Territory Privacy Principles. The EPD Information Privacy Policy can be found at [www.environment@act.gov.au](http://www.environment@act.gov.au)

**Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?**

The EPBC came into operation on 16 July 2000. It establishes an environmental assessment and approval system that is separate and distinct from the ACT system. It does not affect the validity of ACT development assessment and approval processes, but may affect the assessment track. The ACT cannot provide preliminary advice on whether a proposal falls within the definition of a controlled action, or requires referral to the Commonwealth. You should consult with the Commonwealth to determine if your proposal is a controlled action before seeking any approvals under the *Planning and Development Act 2007*. For information about the EPBC, including the referral process and when a referral should be made, contact the Commonwealth Department of the Environment [www.environment.gov.au](http://www.environment.gov.au)

**Contact Details:**

Environment and Planning Directorate  
Customer Service Centres  
GPO Box 158, Canberra City 2601  
8 Darling Street Mitchell, ACT 2911  
16 Challis Street Dickson ACT 2602  
Business Hours: 8.30am to 4.30pm weekdays (excluding Public Holidays)  
Phone: (02) 6207 1923 TTY: (02) 6207 2622  
Email: [epdcustomerservices@act.gov.au](mailto:epdcustomerservices@act.gov.au) Website: [www.environment@act.gov.au](http://www.environment@act.gov.au)

**ACT**

Government

Environment and Planning

Planning and Development Act 2007, s425

APPLICATION FOR:

SCOPING DOCUMENT

ENVIRONMENTAL SIGNIFICANCE OPINION S211

EXEMPTION FROM EIS

Form 1M

**1. Type of Application**☐ Request for Scoping Document OR☒ Request for Exemption to Provide Environmental Impact Statement  
Section 211 Planning and Development Act 2007 OR☐ Application for Environmental Significance Opinion  
Section 138AA Planning and Development Act 2007 OR☐ Additional Information as requested by the planning and land  
authority for any application for Scoping, EIS, or ESOIf you attended a pre-application meeting or written pre-application advice in relation to the proposal that is the subject of this  
application please provide proposal number Proposal Number 20 \_\_\_\_\_

Project Name

WILLIAMSDALE 132KV ELECTRICAL CONNECTION

Project Description

CONSTRUCTION OF APPROXIMATELY 580m OF 132KV  
SUB-TRANSMISSION LINE CONNECTING THE EXISTING  
TRANSCRID WILLIAMSDALE SUBSTATION WITH THE EXISTING  
QUEANBEYAN-COOMA SUB-TRANSMISSION LINE (LOCATED IN NSW).**2. Lease/Site Details** Please Print

Provide the following details for each lease/site:

Site 1

Block:

1674

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

7701 MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

Site 2

Block:

1676

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

7739 MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

Site 3

Block:

119

Section:

Suburb:

TUGGERANONG

Street Address (if applicable)

MONARO HIGHWAY, WILLIAMSDALE

Land Use Zone/s applicable to  
this site

NUZ 2 - RURAL

If more than three sites please provide details on separate page

### 3. Applicant Details *Please Print*

Surname	FITZPATRICK	First Name	TREVOR
Name of Company/Department/Government Agency	PURDON PLANNING P/L		
Position held in Company/Department/Government Agency	ASSOCIATE DIRECTOR		
Australian Company/Business Number (ACN/ABN)	ABN 14 659 841 354		
Postal Address	UNIT 2 COOYONG CENTRE, 1 TORRENS ST		
Suburb	BRADDON	State	ACT
		Postcode	2612
Phone Number Business Hours	6257 1511	Mobile	
EMAIL ADDRESS	purdons@purdon.com.au + trevor.fitzpatrick@purdon.com.au		

### 4. Lessee (Property Owners) or Government Land Custodian Details *Please Print*

#### SITE 1

#### 1<sup>st</sup> Lessee or Land Custodian Details

Full Name:	
Company Name:	Electricity Transmission Ministerial Holding Corporation
Position Held in Company:	
ACN Number:	ABN 19 622 755 774
Postal Address:	c/o TransGrid PO Box A1000 Sydney South NSW 1235
Telephone BH:	9228 3598
Mobile:	
Email Address:	

#### 2<sup>nd</sup> Lessee or Land Custodian Details

Full Name:	
Company Name:	
Position Held in Company:	
ACN Number:	
Postal Address:	
Telephone BH:	
Mobile:	
Email Address:	

## SITE 2

### 1<sup>st</sup> Lessee or Land Custodian Details

Full Name:

Company Name:

Position Held in Company:

ACN Number:

Postal Address:

Telephone BH:

Mobile:

Email Address:

### 2nd Lessee or Land Custodian Details

Full Name:

Company Name:

Position Held in Company:

ACN Number:

Postal Address:

Telephone BH:

Mobile:

Email Address:

## SITE 3

### 1<sup>st</sup> Lessee or Land Custodian Details

Full Name:

Company Name:

Position Held in Company:

ACN Number:

Postal Address:

Telephone BH:

Mobile:

Email Address:

### 2nd Lessee or Land Custodian Details

Full Name:

Company Name:

Position Held in Company:

ACN Number:

Postal Address:

Telephone BH:

Mobile:

Email Address:

*All lessees must sign authorising the lodgement of this application. In doing so the lessee gives authority to the applicant to negotiate any dealings in relation to the application through to its determination. If there are more than two lessees please ensure that the details and authorisation are attached to the application.*

*If a lessee signature can not be obtained and either a land acquisition or lease withdrawal is underway to facilitate the project to which the EIS Scope relates then the applicant must submit documentary evidence that such land acquisition or lease withdrawal is occurring and that the lessee is aware of the project to which the EIS Scope relates.*



## 5. EIS Requirements – complete this part for Application for Scoping Document ONLY

Please identify why your proposal requires an Environmental Impact Statement and include applicable references to the *Planning and Development Act 2007 (P&D Act)*.

- ☐ The proposal is a type listed under schedule 4 of the P&D Act. Please list item numbers: \_\_\_\_\_
- ☐ The proposal is not an EXEMPT, CODE, or MERIT track development where the development is allowed under an existing lease
- ☐ The proposal is permissible under the National Capital Plan but listed as prohibited in the relevant development table
- ☐ The proposal has been declared under section 124 and section 125 of the P&D Act
- ☐ The proposal is not listed anywhere in the relevant development table (in-nominate use)

## 6. Complete this part for Application for Environmental Significance Opinion ONLY S138AA Planning and Development Act 2007

Are you seeking an Environmental Significance Opinion?

☐ YES

☐ NO

IF YES - identify the item(s) for opinion under Schedule 4 of the *Planning and Development Act 2007*

☐ Section 4.2 Item 3 (c)

☐ Section 4.2 Item 3 (d)

☐ Section 4.3 Item 1

☐ Section 4.3 Item 2 (a)

☐ Section 4.3 Item 2 (b)

☐ Section 4.3 Item 3

☐ Section 4.3 Item 6

**Note:** Applications for Environmental Significance Opinion from the ACT Heritage Council must be accompanied by a Statement of Heritage Effects prepared by a suitably qualified heritage professional regarding the potential impacts of the proposal.

## 7. Complete this part for Request for Exemption to Provide Environmental Impact Statement ONLY S.211 Planning & Development Act 2007

The Minister may exempt a development proposal from a requirement to include an EIS if satisfied that the expected environmental impact of the development proposal has already been sufficiently addressed by another study, whether or not the study relates to the particular development proposal.

If the proposal is a type listed under Schedule 4 of the P&D Act, please list the item numbers: <sup>ITEM 2</sup> ~~4-2~~ <sup>ITEMS 1+2</sup> ~~4-3~~ .

Please supply supporting documentation to justify s211 consideration and a statement as to how the supporting documentation satisfies the requirement of s.211 and s50A of the P&D Regulation.

☒ Documentation Attached

## 8. Environment Protection and Biodiversity Conservation Act 1999

Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?

☒ NO

☐ YES

If YES - attach copies of the Commonwealth Department of the Environment "Notification of Referral Decision" and "Decision on Assessment Approach"

**NOTE:** Copies of these documents must be attached to this application form before it can be accepted for processing by the planning and land authority.

IF NO - Have you had meetings/discussions with the Department of the Environment?

☒ NO

☐ YES

If YES - Please provide the contact details of the Department of the Environment officer

Name: \_\_\_\_\_

Contact No. \_\_\_\_\_

## 9. Your Proposal – Required for ALL application types

Please attach to this application form a document that provides sufficient detail to enable prescribed entities to obtain an understanding of the full extent of your proposal and any associated works, including:

- ✓ 1. a statement outlining the objectives of the project and why it is needed;
- ✓ 2. a description of the nature/type of project proposed by providing location map(s) of the project site(s), preliminary design drawings and satellite/aerial photographs;
- ✓ 3. a preliminary risk assessment (PRA) based on the guidance document attached to this form (not required for an ESO application);
- ✓ 4. a description of the natural conservation values of the site based on the considerations listed in the "Preparation of an application for scoping and preparation of an ESO" guideline available from the EPD website;
- ✓ 5. a description of measures within the proposal that seek to avoid and minimise (and as a last resort offset) impact on identified conservation values (for ESO and Section 211 applications only);
- ✓ 6. any decision made under the EPBC Act in relation to this proposal.
- 7. **For s211 applications only**, the following additional information is required:
  - ✓ • details of qualifications, expertise and experience of the person(s) who conducted previous studies supporting the application;
  - ✓ • details of public consultation undertaken, as part of statutory requirement, for projects or previous studies included as supporting documentation undertaken. Details of public consultation not required for a statutory process should also be included;
  - ✓ • verification from a qualified person that the information in the previous studies supporting the application is still current.

## 10. Prescribed Entities

Have you had any meetings/discussions with relevant prescribed entities?

☐ NO  
☒ YES

IF YOU ANSWERED YES TO THE QUESTION – please complete the following table and provide meeting minutes:

ENTITY (please tick)	DATE/s OF MEETING/s	ENTITY CONTACT
<input checked="" type="checkbox"/> ACTEW Corporation Ltd	N/A	
<input type="checkbox"/> ACTEWAGL Distribution		
<input type="checkbox"/> Conservator Flora & Fauna		
<input type="checkbox"/> Emergency Services		
<input type="checkbox"/> Environment Protection		
<input type="checkbox"/> Heritage Council		
<input type="checkbox"/> Health Policy		
<input type="checkbox"/> Territories & Municipal Services		
<input type="checkbox"/> Custodian of the Land		
<input type="checkbox"/> Other: _____ Please specify		

## 11. Conflict of Interest Declaration

Does the applicant or lessee have any association with EPD staff?

☒ NO  
☐ YES

If YES please provide details:

*NOTE: There are penalties for deliberately giving false and misleading information. The planning and land authority or Minister may revoke an approval if satisfied that the approval was obtained by fraud or misrepresentation.*

## 12. Other Application Requirements

### DOCUMENTATION AND PLANS

All required documentation must be provided in an electronic format on compact disc/DVD or via email and meet the following requirements (Form can be submitted in hardcopy if lodged over the counter)

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- All plans are to be clear and concise and generally consistent with Australian Standard 1100.301 - 1985 and Australian Standard 1100.301 supplementary - as updated from time to time.
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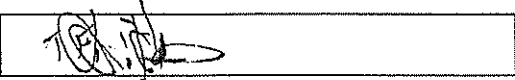
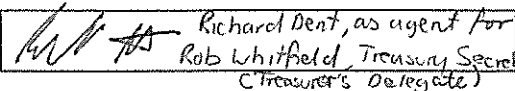
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I/we declare that all the information given on this form and its attachments is true and complete;

*If signing on behalf of a company, organisation or Government agency: -*

I/we the undersigned, declare I/we have the appropriate delegation or authority to sign on behalf of the company, organisation or Government agency.

Applicant Signature (s)		Date	<input type="text"/>
<b>SITE 1</b>			
1 <sup>st</sup> Lessee Signature	 Richard Dent, as agent for Rob Whitfield, Treasury Secretary (Treasury's Delegate)	Date	10/6/16
2 <sup>nd</sup> Lessee Signature	<input type="text"/>	Date	<input type="text"/>
Govt Land Custodian Signature (unleased land only)	<input type="text"/>	Date	<input type="text"/>
Delegate of the planning and land authority (unleased land only)	<input type="text"/>	Date	<input type="text"/>

**SITE 2**

(ACTEW CORP)

1st Lessee Signature	<input type="text"/>	Date	<input type="text"/>
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2nd Lessee Signature	<input type="text"/>	Date	<input type="text"/>
----------------------	----------------------	------	----------------------

Govt Land Custodian Signature (unleased land only)	<input type="text"/>	Date	<input type="text"/>
---	----------------------	------	----------------------

Delegate of the planning and land authority (unleased land only)	<input type="text"/>	Date	<input type="text"/>
--	----------------------	------	----------------------

**SITE 3**

(S. LOCKE)

1st Lessee Signature	<input type="text"/>	Date	<input type="text"/>
----------------------	----------------------	------	----------------------

2nd Lessee Signature	<input type="text"/>	Date	<input type="text"/>
----------------------	----------------------	------	----------------------

Govt Land Custodian Signature (unleased land only)	<input type="text"/>	Date	<input type="text"/>
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Delegate of the planning and land authority (unleased land only)	<input type="text"/>	Date	<input type="text"/>
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**Does the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC) affect your proposal?**

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**Contact Details:**

Environment and Planning Directorate  
Customer Service Centres  
GPO Box 158, Canberra City 2601  
8 Darling Street Mitchell, ACT 2911  
16 Challis Street Dickson ACT 2602  
Business Hours: 8.30am to 4.30pm weekdays (excluding Public Holidays)  
Phone: (02) 6207 1923 TTY: (02) 6207 2622  
Email: [epdcustomerservices@act.gov.au](mailto:epdcustomerservices@act.gov.au) Website: [www.environment@act.gov.au](http://www.environment@act.gov.au)

# Briefing Note

11/08/16

**To:** Electricity Transmission Ministerial Holding Corporation  
c/o NSW Treasury

**From:** Heather Wagland  
Property & Environment Asset Manager  
Property & Environment Asset Strategy  
TransGrid

## Subject

Essential Energy requires the attached Development Application form to be signed by the Electricity Transmission Ministerial Holding Corporation (ETMHC), as the affected ACT lease holder (equivalent to land owner).

## Background

Essential Energy proposes a new transmission line connection into TransGrid's substation at Williamsdale in the Australian Capital Territory. The Williamsdale substation property is registered in the name of TransGrid, which is now ETMHC, and directly sub-leased to NSW Electricity Network Operations Pty Ltd.

To support Essential Energy's application to the ACT Planning & Land Authority concerning the proposal, signatures from each affected lease holder are required on various forms. ETMHC has previously signed a S211 form (by Richard Dent, 10 June 2016) regarding this matter.

Essential Energy have now requested lease holder signature on their Development Application form.

Essential Energy has also advised that ACT Planning & Land Authority have raised concerns regarding the relationship between Richard Dent, ETMHC, and TransGrid as a registered lease holder. ACT Planning & Authority have requested provision of a letter explaining the relationship, to enable the signatures to be accepted.

## Request

TransGrid requests:

- 1) ETMHC to sign Attachment 1 *Form 4 – Letter of Authorisation* as 1<sup>st</sup> Lessee.
- 2) To provide a letter explaining the relationship between Richard Dent, ETMHC, and the TransGrid registered as the lease holder.

## Consent

Approved by:



Signed on behalf of Lessor

*Richard Dent, as agent for Rob Whitfield,  
NSW Treasury Secretary (NSW Treasurer's  
delegate under delegation dated  
24 November 2015)*

**Attachment 1 – Form 4 – Letter of Authorisation**



ACT Government Environment and Planning Electorate  
Customer Service Centre  
CANBERRA ACT

To whom it may concern,

**Long-term lease of NSW Electricity Transmission Network**

I write to advise of the long-term lease arrangements for the NSW Electricity Transmission Network and the administrative arrangements for the State-owned lessor entity, the Electricity Transmission Ministerial Holding Corporation (ETMHC).

On 16 December 2015, the State of NSW entered a 99-year lease of the electricity transmission system of the State-owned Corporation TransGrid to NSW Electricity Networks Assets Pty Ltd, as trustee of the Electricity Networks Assets Trust (Lessee) (Transmission Networks Lease). The Lessee also entered a sublease agreement with NSW Electricity Networks Operations Pty Limited, as Trustee of the Electricity Networks Operations Trust (now trading as TransGrid).

Also on 16 December 2015, the NSW State-owned Corporation TransGrid was subject to a corporate conversion pursuant to the *Electricity Network Assets (Authorised Transactions) Act 2015* (NSW) (The Act) and is now known as the ETMHC. The ETMHC is the same legal entity as the former State-owned Corporation TransGrid and is the lessor under the Transmission Networks Lease.

Pursuant to clauses 6(3) and 9(3) of Schedule 7 of the Act, the affairs of the ETMHC are managed by the NSW Treasurer. On 24 November 2015, the NSW Treasurer delegated authority to the NSW Treasury Secretary pursuant to section 53 of the Act in relation to (among other things) managing the affairs of the ETMHC. The NSW Treasury Secretary has provided written authorisation to certain NSW Treasury employees to act as the Secretary's agent for, and on behalf of, the ETMHC in relation to routine operational and administrative matters. A copy of this authorisation is attached for your reference (attachment A).

If you require further information regarding this matter, please contact Angelo Kriketos.

Yours sincerely



Peter Wade  
Director

22/8/16

## Schedule

**Authorisation to act as the Treasury Secretary's agent for routine operational and administrative matters of the Electricity Transmission Ministerial Holding Corporation**

I, Robert Whitfield, Treasury Secretary (the Treasurer's delegate under delegation dated 24 November 2015) hereby duly authorise the following NSW Treasury officers (solely whilst in their employment with NSW Treasury) to act as my agent for routine operational and administrative matters regarding the affairs of the Electricity Transmission Ministerial Holding Corporation:

- Tim Spencer, Deputy Secretary, Commercial Group
- Jim Dawson, Executive Director, Commercial Group
- Philip Gardner, Executive Director, Commercial Group
- John Mackay, Director, Commercial Group
- Stasha Prnjatovic, Director, Commercial Group
- Peter Wade, Director, Commercial Group
- Angelo Kriketos, Principal Financial Analyst, Commercial Group
- Richard Dent, Senior Financial Analyst, Commercial Group



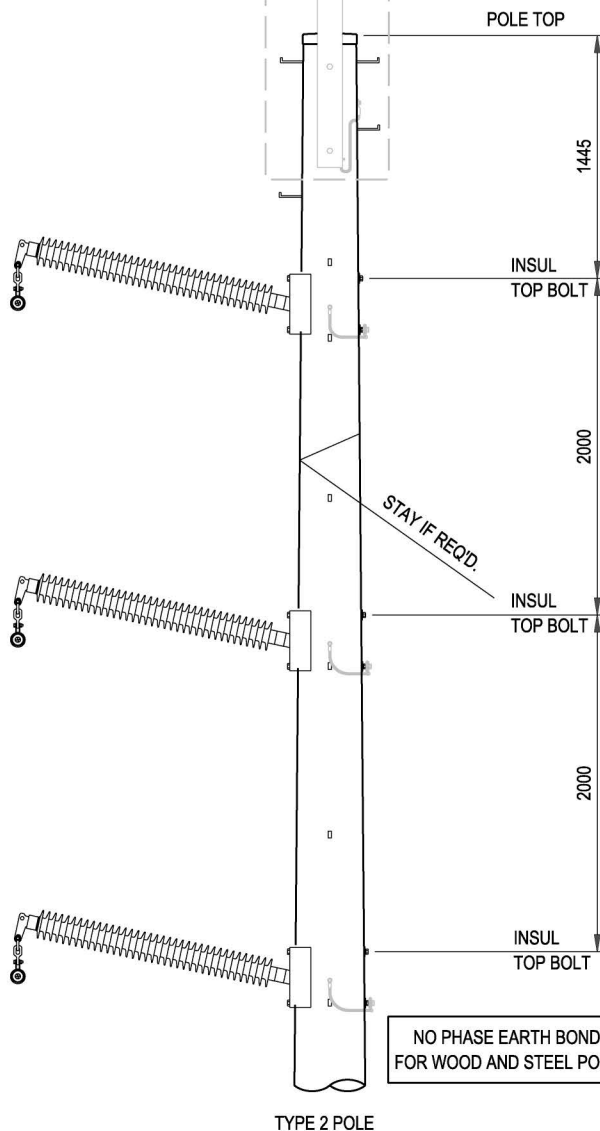
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Robert Whitfield  
Treasury Secretary

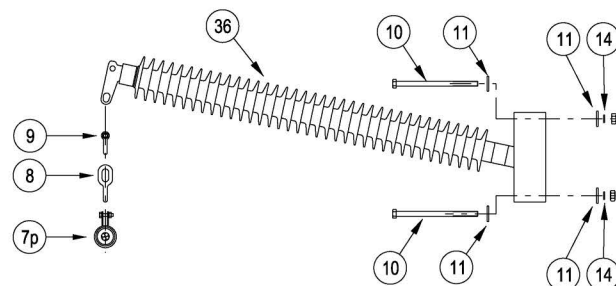
---

18/3/2016  
Date

OHEW / OPGW RISER  
ARRANGEMENT  
SEE NOTE 7 & 8



NO PHASE EARTH BONDING REQUIRED  
FOR WOOD AND STEEL POLES. SEE NOTE 6.



PHASE ASSEMBLY

#### NOTES

##### Earthing

1. All steel work to be earthed.
2. Refer to Line Schedule & Earthing Section CEOM7408 for earthing detail.
3. For pole earth procedures refer to CEOM7051.25.

##### General

1. Pole steps to be fitted at approximately 450mm centres on alternative sides of the pole to within 6.0m of ground level.
2. All dimensions in millimetres.
3. For pole foundation details refer to Drg. No. CEOM7405.01
4. For pole details refer to Pole Schedule section CEOM7404.
5. For stay details refer to Drg. Nos. CEOM7405.02 - CEOM7405.18
6. No phase earth bonding required for wood and steel poles. If phase earth bonding required refer to CEOM7408.07.
7. OPGW / OHEW arrangements may vary refer to CEOM7406.19.
8. Riser bracket arrangements may vary refer to CEOM7406.18.

40	37	POLE STEP SCREW IN	275790
36	3	INSULATOR 132kV HORIZ LINE POST BENDABLE BASE - 2 HOLE LONG PALM - CEOM7410.40	
14	6	M20 SPRING WASHER - S/STEEL	110455
11	12	M20 SQUARE WASHER 65mm - GALV	109470
10	6	M20 BOLT & NUT - GALV (Lengths to suit pole) Drg CEOM7410.40	
9	3	SHACKLE BOW 120kN (AS1154)	603453
8	3	TWISTED EYE TONGUE 120kN (AS1154)	111230
7p	3	AGS SUSPENSION UNIT C/W ARMOUR ROD (to suit phase conductor) CEOM7410.40	
Item	Qty Total	Description	Cat. No

#### AMENDMENT DETAILS

**3** DRWN SG  
CHCKD D.O'BRIEN  
DATE 05/05/2014

Qty/ASS COLUMN REMOVED.  
EARTHING NOTE 3 REVISED.  
NOTE 7 REVISED. NOTE 8  
ADDED. SHEET 2 REMOVED.  
CONSTRUCTION DRAWING  
REVISED.

**2** DRWN W.GATLEY  
CHCKD D.O'BRIEN  
DATE 14/07/2011

NOTE 7 ADDED TO GENERAL  
NOTES. DRAWING BORDER  
UPDATED TO ESSENTIAL  
ENERGY BORDER. CE REMOVED  
FROM CAT NO.



SCALE NTS  
ISSUED 01/12/2009  
DRAWN BY SJR  
CHECKED BY PRS

AUTHORISED BY

**Deepak Pais**  
PRINCIPAL ENGINEER OVERHEAD  
CONSTRUCTION STANDARDS

DATE 06/05/2014

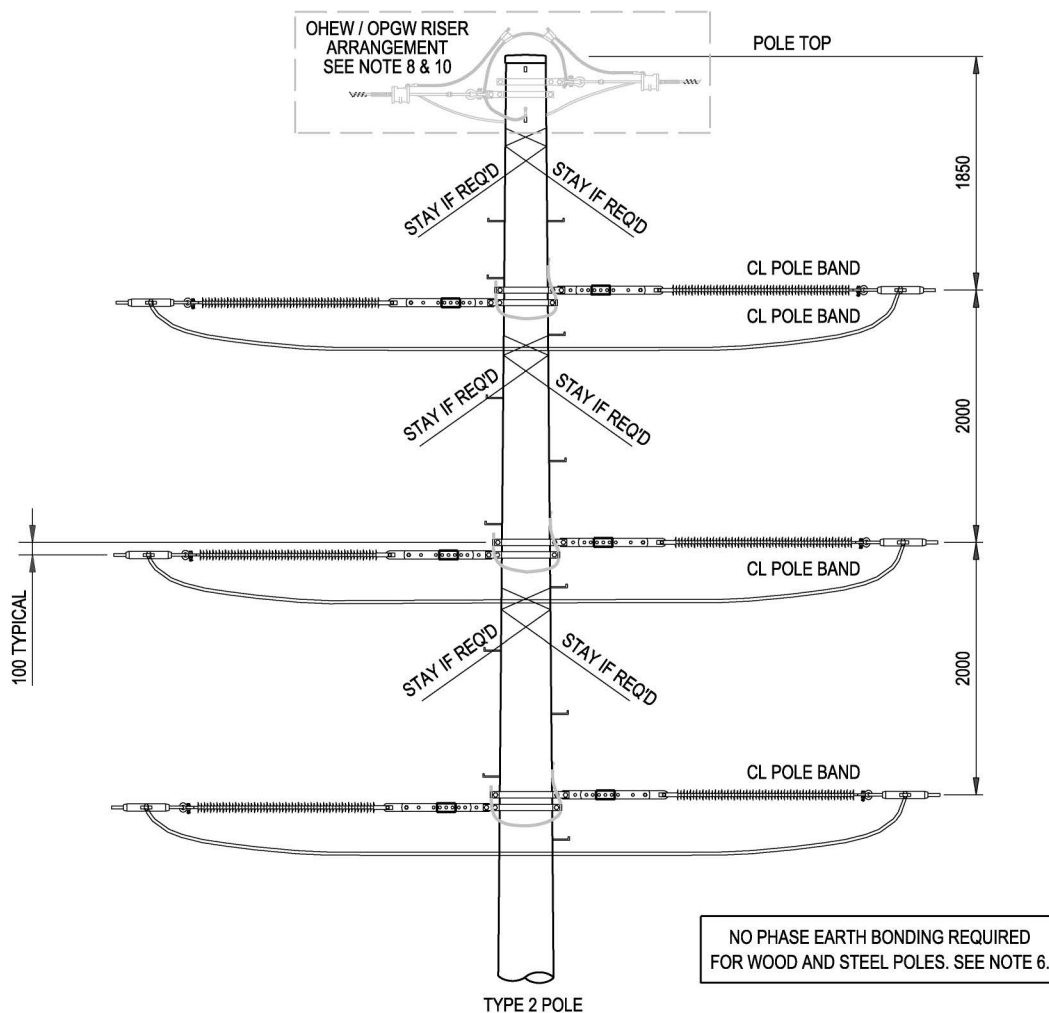
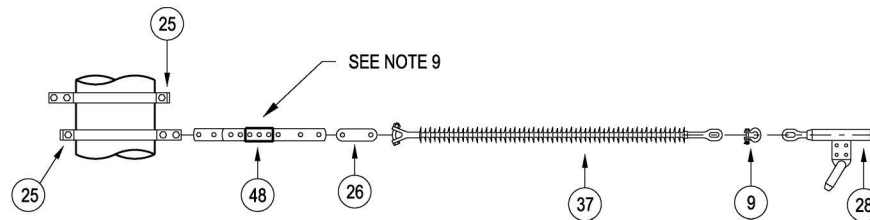
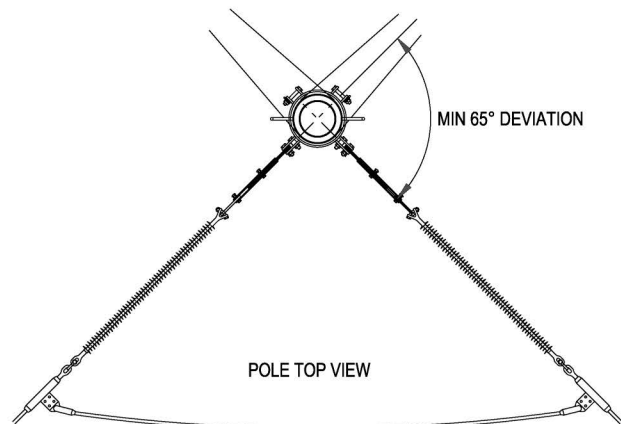
**CEOM7402.33**

# 1 of 1 A4

132kV  
INTERMEDIATE  
VERTICAL  
CONSTRUCTION  
(FULL or LIVE LINE)  
PSV or QSV







#### NOTES

##### Earthing

1. All steel work to be earthed.
2. Refer to Line Schedule & Earthing Section CEOM7408 for earthing detail.
3. For pole earth procedure refer to CEOM7051.25.

##### General

1. Pole steps to be fitted at approximately 450mm centres on alternative sides of the pole to within 6.0m of ground level.
2. All dimensions in millimetres.
3. For pole foundation details refer to Drg. No. CEOM7405.01.
4. For pole details refer to Pole Schedule section CEOM7404.
5. For stay details refer to Drg. Nos. CEOM7405.02 - CEOM7405.18
6. No phase earth bonding required for wood and steel poles. If phase earth bonding required refer to CEOM7408.07.
7. For OPGW splicing box details refer to CEOM7406.24.
8. Riser bracket arrangements may vary refer to CEOM7406.18.
9. Adjustable link plate optional. If installed place in centre position unless otherwise stated in the construction schedule.
10. OHEW / OPGW arrangements may vary refer to CEOM7406.19.

48	6	ADJUSTABLE LINK PLATE - GALV 120kN (450 min - 784 max) (optional)	272361
40	37	POLE STEP SCREW IN	275790
37	6	INSULATOR 132kV LONG ROD - Y CLEVIS - EYE	261962
28	6	COMPRESSION DEAD END & LUG (to suit conductor) Drg CEOM7410.40	
26	6	LINK PLATE 160kN - 150mm CTRS 22mm HOLES - GALV	272363
25	6	POLE BAND - 3 BOLT - 120kN (to suit pole dia) Drg CEOM7410.40	
9	6	SHACKLE BOW 120kN (AS1154)	603453
Item	Qty Total	Description	Cat. No

#### AMENDMENT DETAILS

4	DRWN	SG
	CHCKD	D. O'BRIEN
	DATE	05/05/2014

DRAWING WAS AUTHORISED BY WAYNE JOHNSON. Qty/ASS COLUMN REMOVED. ITEM 8a AND 9a ON OPGW ARRANGEMENT WERE ITEMS 8 AND 9 ITEM 8a AND 9a ADDED TO MATERIAL LIST, NOTE 9 REVISED

3	DRWN	SG
	CHCKD	D. O'BRIEN
	DATE	25/07/2301

Qty/ASS COLUMN REMOVED. EARTHING NOTE 3 REVISED. NOTES 6, 8 & 9 REVISED. NOTE 10 ADDED. CONSTRUCTION DRAWING REVISED. SHEET 2 REMOVED. VERTICAL STRAIN PHASE ASSEMBLY DRAWING ADDED



SCALE	NTS
ISSUED	01/12/2009
DRAWN BY	SJR
CHECKED BY	PRS

AUTHORISED BY

**Deepak Pais**

PRINCIPAL ENGINEER OVERHEAD  
CONSTRUCTION STANDARDS

DATE	06/05/2014
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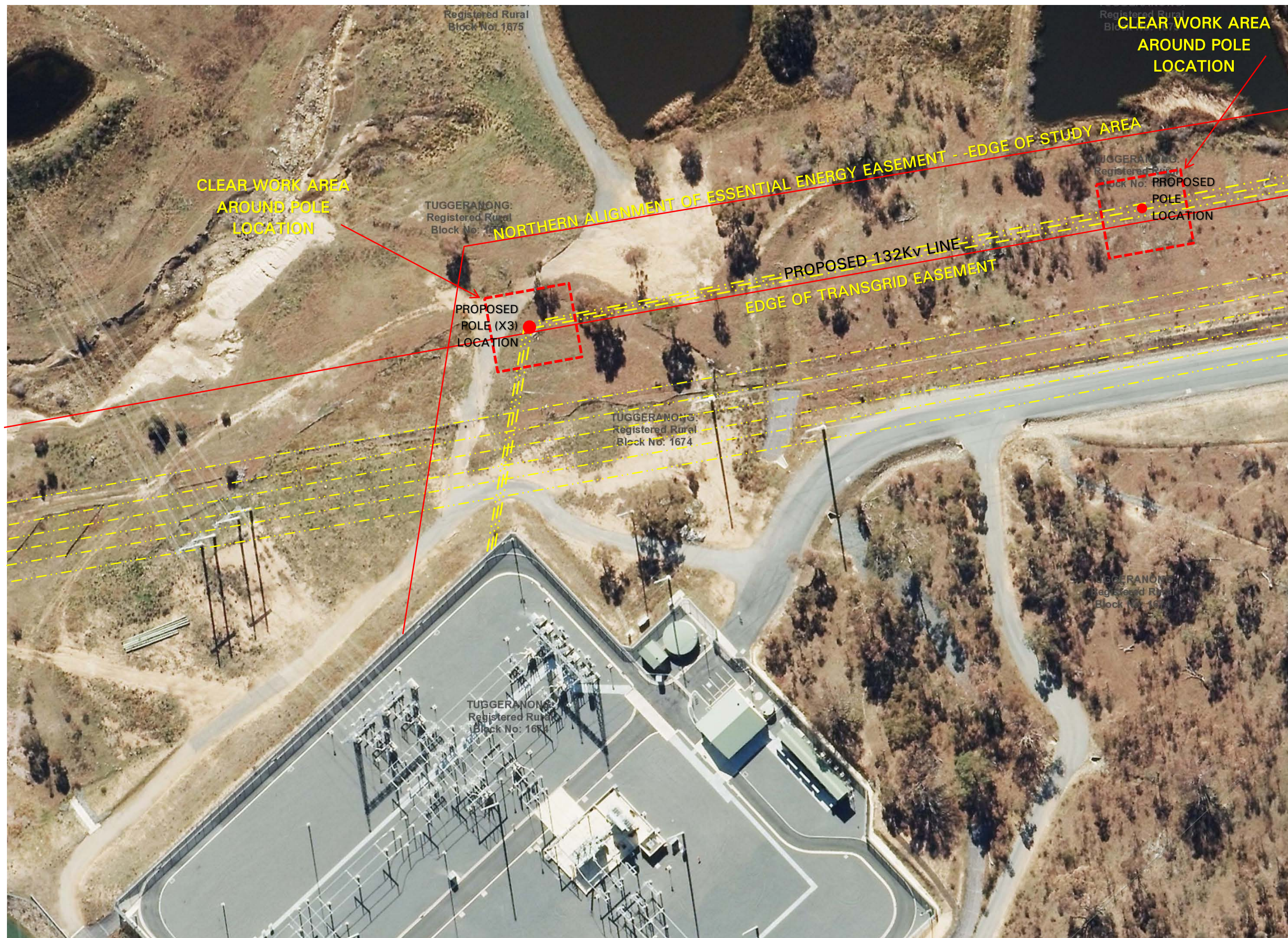
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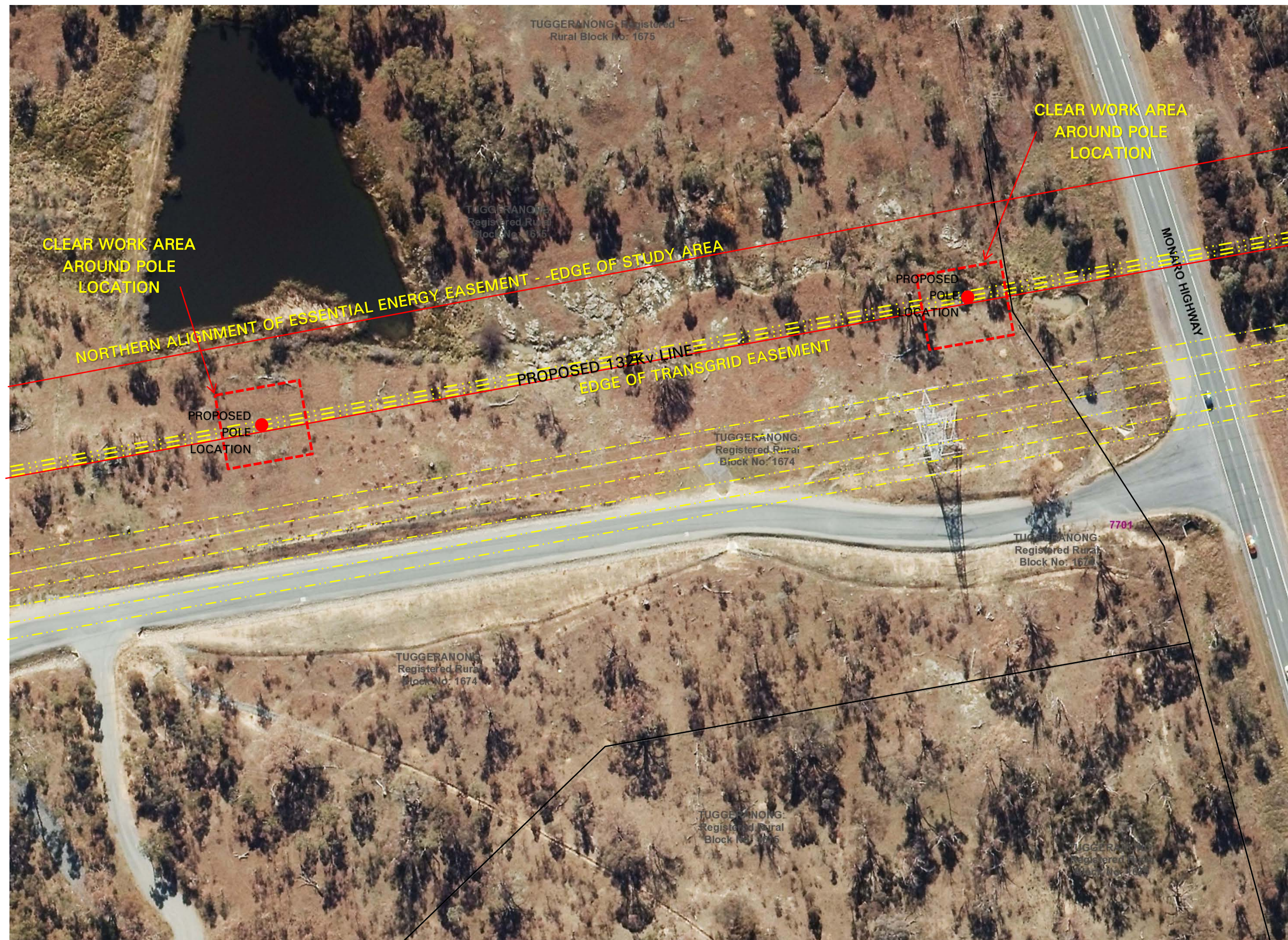
132kV STRAIN  
VERTICAL  
CONSTRUCTION  
> 65° DEVIATION  
(FULL)  
PTW







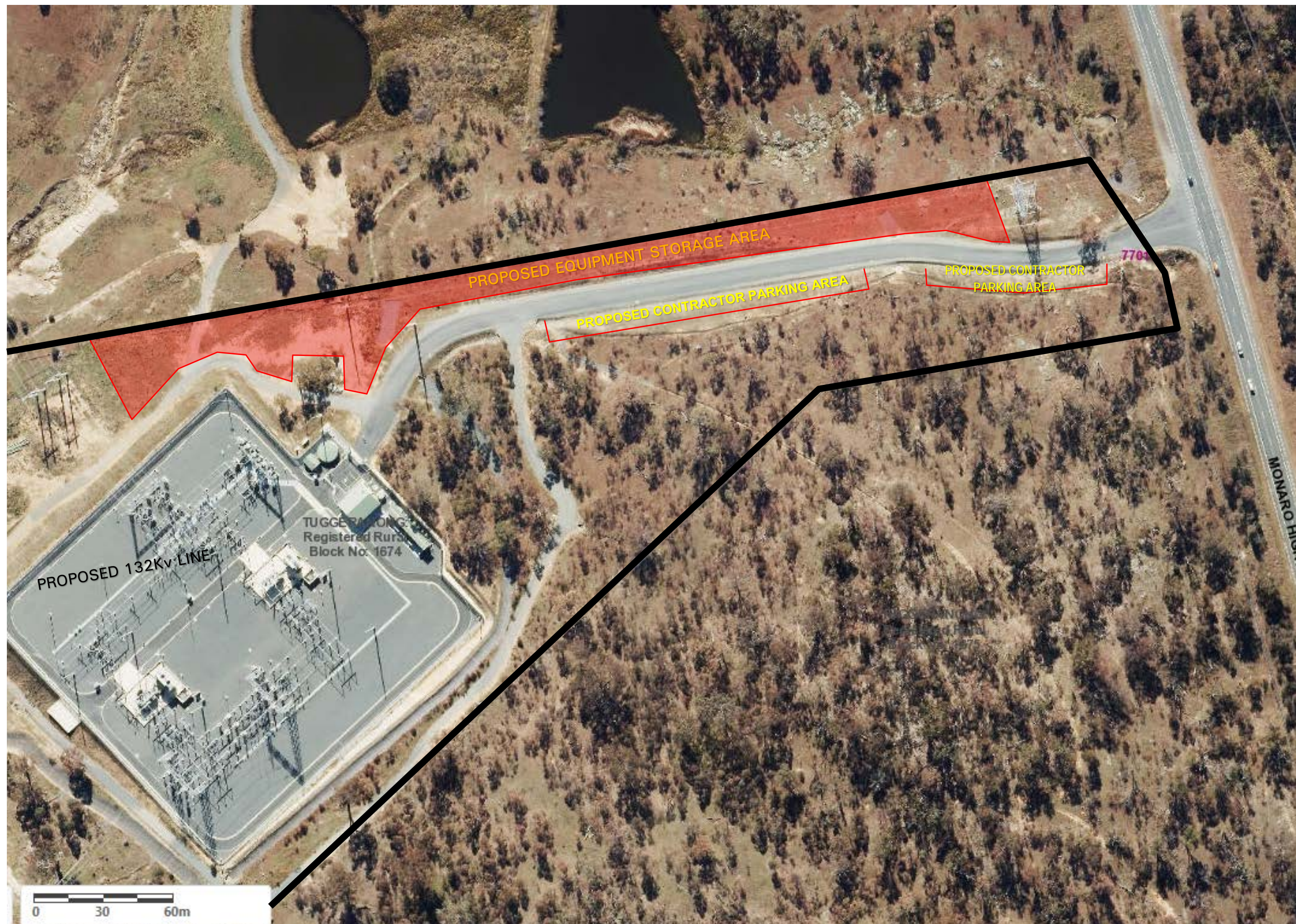








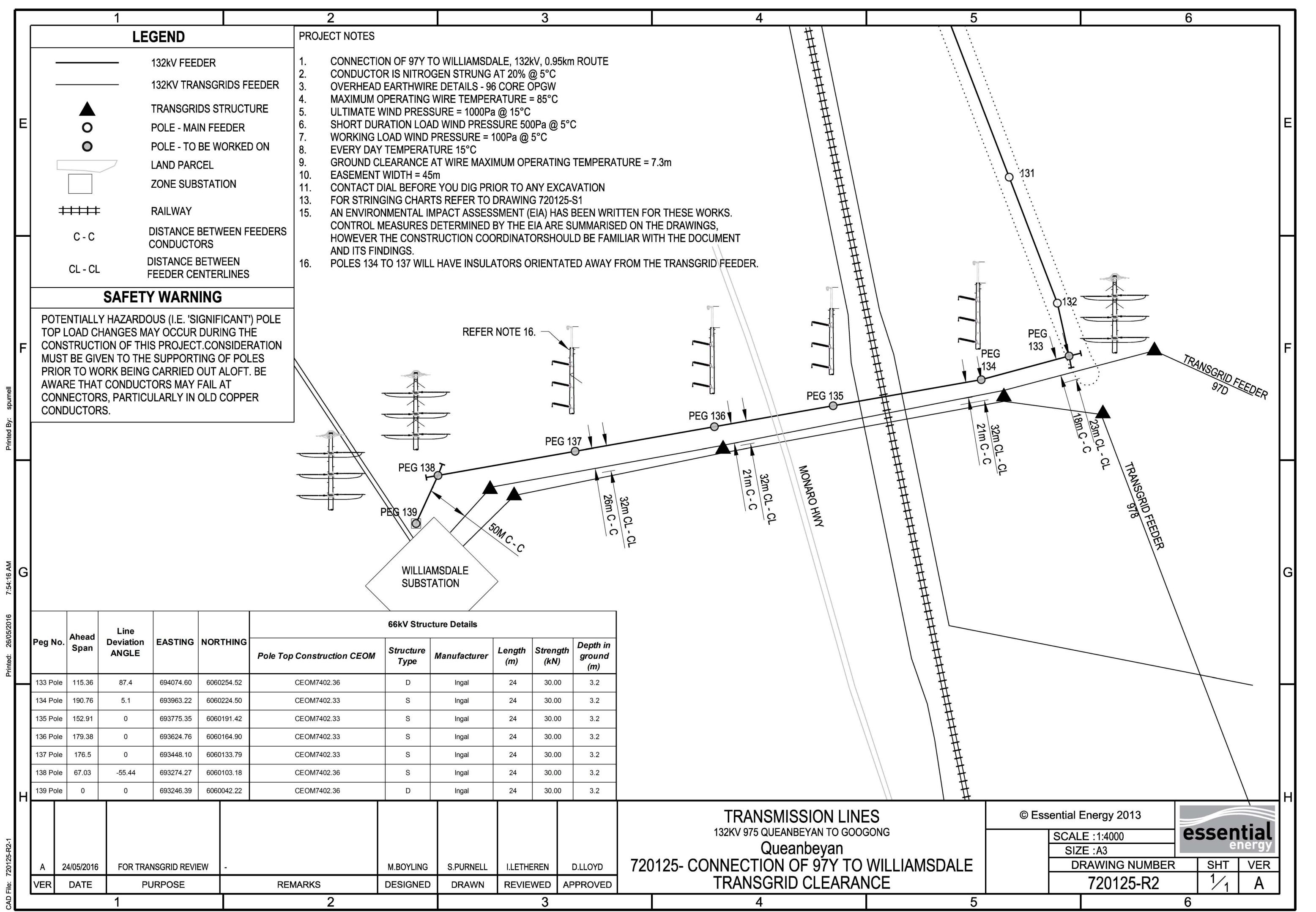














# Electrical Transmission Line Williamsdale 132kV Connection

Application for EIS Exemption  
under Section 211 of the  
*Planning and Development Act 2007*

Rural Blocks 1674, 1675 & 119 Tuggeranong  
Monaro Highway Road Reserve  
Williamsdale, ACT

25 August 2016





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*Document Tracking*

REVISION No.	ISSUE DATE	COMMENT
0	N/A	Report Template
1	25 May 2016	Draft Report
2	1 July 2016	Final Report
2A	25 August 2016	Final Report - Residual Risk Additions

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Attachment B:	Laydown Zones and Construction Compound Plan (Purdon Planning)
Attachment C:	Ecological Assessment Report (Capital Ecology)
Attachment D:	Aboriginal Cultural Heritage Assessment (Past Traces)

## Glossary of Terms

The following terms and acronyms occur within this document

AAAC	All Aluminium Alloy Conductor
AHD	Australian Heritage Database
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
BCA	Building Code of Australia
BSP	Bulk Supply Point
CEMP	Construction Environmental Management Plan
CEEC	'critically endangered' listed ecological community
DCP	Development Control Plan
DoE	Department of Environment
DP	Deposited Plan
EAR	Environmental Assessment Report
EE	Essential Energy
EEC	Endangered Ecological Community
EMF	Electric and Magnetic Fields
EMS	Environmental Management System:
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESCP	Erosion and Sediment Control Plan
EWP	Elevated Work Platforms
GHG	Greenhouse Gas
GIS	Gas Insulated Switchgear
Ha	Hectare
kV	Kilovolts
LALC	Local Aboriginal Land Council
MNES	Matters of National Environmental Significance
MSDS	Material Safety Data Sheet
mG	Milligauss
MVA	Mega Volt Amps
NES	National Environmental Significance
PAD	Potential Archaeological Deposit
P&D Act	Planning and Development Act 2007
RAO	Representative Aboriginal Organisations
REF	Review of Environmental Factors
SAA	Standards Association of Australia
SWMP	Soil and Water Management Plan
TEC	Threatened Ecological Community
VUE	Value of Unserved Energy
WMP	Waste Management Plan
WMS	Work Method Statement
ZS	Zone Substation

## 1.0 Introduction

### 1.1 Introduction

Essential Energy (EE) proposes to connect the existing 132kV powerline (Queanbeyan to Cooma #975 line) to TransGrid's (TG) 330/132kV substation in Williamsdale, ACT. Originally, the 975 line was owned and operated by TransGrid to supply Cooma. Over recent years the line was only used as a backup supply and the tee connection at Williamsdale was disconnected.

The ownership of the 975 line has now passed from TransGrid to Essential Energy. Essential Energy proposes to use the 975 line to supply the new Googong Substation and any future supply to the Tralee (South Jerrabomberra) area.

### 1.2 Purpose

The purpose of this submission is to seek exemption under section 211 of the *Planning and Development Act 2007* (the P&D Act) from the requirement for the development application (DA) to include an Environmental Impact Statement (EIS).

### 1.3 Project Objective

The objective of the proposed development is to provide a connection from the TransGrid Williamsdale Sub-station to the Essential Energy Queanbeyan-Cooma sub-transmission line.

### 1.4 Summary Project Description

EE proposes to construct approximately 1,000m of overhead 132kV powerline from the old 'tee-off point' on the Cooma/Queanbeyan line in NSW to the new TransGrid 330/132kV Substation at Williamsdale within the ACT. Part of the works will occur within NSW's boundary, but 600m of the new line will be within the ACT.

The Works will include the following:

- Install new infrastructure (poles, wires, stays)
- Civil earthworks (pole and stay footings, tracks, benching of pads around poles)
- Connection to existing TransGrid sub-station including installation of HV plant and equipment, extension of gantry, conduits and metering services.

Part of the works involved in the project will include survey for easements 40m wide and variable width depending on the requirement for stays.

### 1.5 S211 Exemption Request

An exemption under section 211 of the P&D Act from the requirement for an EIS is sought on the grounds that the impact of the proposed development has been sufficiently addressed in relevant studies and associated commitments by the Proponent to implement appropriate mitigation measures and that the proposal is not likely to have a significant adverse environmental impact.

The 'triggers' under the P&D Act are outlined in "*Schedule 4 Development proposals in impact track because of need for EIS*". The triggers are outlined below.



#### ***Part 4.2 Development proposals requiring EIS—activities***

**Item 2:** A proposal that involves “*electricity transmission line construction, including additions or realignment works, outside an existing easement or exceeding 500m in length, that are intended to carry underground or above-ground transmission lines with a voltage of 132kV or more*”.

#### ***Part 4.3 Development proposals requiring EIS—areas and processes***

**Item 1:** A proposal that is *likely to have a significant adverse environmental impact on 1 or more of the following, unless the conservator of flora and fauna provides an environmental significance opinion indicating that the proposal is not likely to have a significant adverse environmental impact:*

- |   |                                       |
|---|---------------------------------------|
| a) a critically endangered species;           | f) a listed migratory species;        |
| b) an endangered species;                     | g) a threatened ecological community; |
| c) a vulnerable species;                      | h) a protected native species;        |
| d) a conservation dependent species;          | i) a Ramsar wetland;                  |
| e) a provisionally listed threatened species; | j) any other protected matter.        |

In addition to the above two ‘triggers’ the proposal could possibly be subject to a third trigger, being:

#### ***Part 4.3 Development proposals requiring EIS—areas and processes***

**Item 2:** A proposal involving “*the clearing of more than 0.5ha of native vegetation in a native vegetation area, other than on land that is designated as a future urban area under the territory plan, unless the conservator of flora and fauna produces an environmental significance opinion that the clearing is not likely to have a significant adverse environmental impact*”.

The application of the above trigger is uncertain as it is considered that the proposed development will not require the clearing of more than 0.5 ha of native vegetation on land that is not designated as a future urban area. This conclusion is based on the definition of ‘native vegetation’ under the Nature Conservation Act. The proposed development will result in the modification (removal of mid and overstorey species) of 7,330m<sup>2</sup> (0.73 ha) of native vegetation. However the maximum extent of ‘clearance’ of native vegetation will be restricted to the three defined Pole Installation Disturbance Areas, the combined area of the native vegetation within these is 1,159m<sup>2</sup> (0.12 ha). On this basis, the project would not be subject to the requirements of Item 2 of Part 4.3.

The submission is lodged on behalf of Essential Energy as the Proponent for the project and includes:

- ACTPLA Form 1M
- a section 211 document including a statement of objectives for the project, a description of the nature of the project, a preliminary risk assessment, a description of the natural conservation values of the site, mitigation measures and a relevant EPBC decision
- maps and plans of the proposed development
- other material requested by ACTPLA
- reports, assessments and studies conducted to date in relation to the proposed development site.

A detailed risk assessment has been undertaken by the consultant team in accordance with *Australian Standard AS/NZS IOS 31000:2009 Risk Management – Principles and Guidelines* for all actions associated with the proposed development in the study area.

The risk assessment process is described in Section 6.0 below, and includes an overall summary risk assessment for the proposed development and the rationale for each assessment.

A series of plans form part of this submission. These plans include location of the transmission lines and poles, threatened species locations and habitat areas.

It should be noted that the following documentation is based on concept design at this stage, with final design being resolved for consideration at the DA stage. However, it is not considered that there will be any significant changes to the final DA design plans.

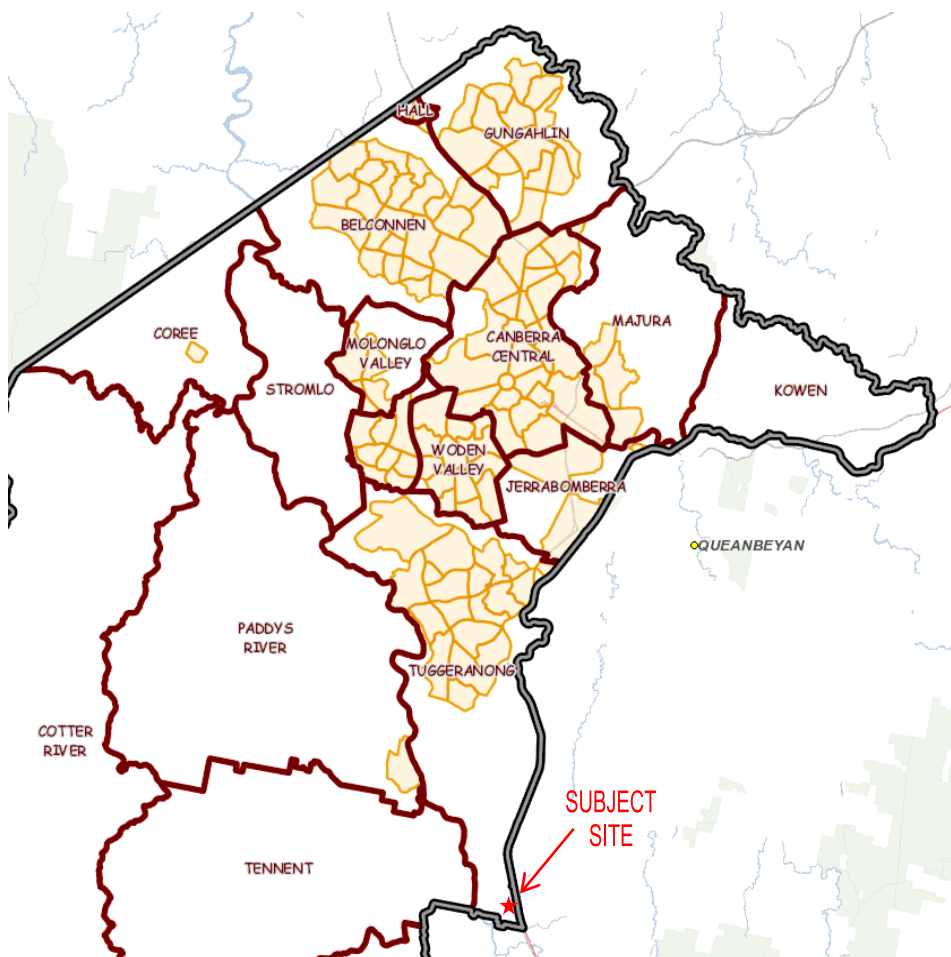
## 1.6 Recent Studies

The site of the proposed new sub-transmission line has been the subject of two studies specifically for the project, being:

- ***Ecological Assessment Report***, by Capital Ecology Pty Ltd, May 2016
- ***Cultural Heritage Desktop Assessment*** by Past Traces Pty Ltd, 23 May 2016

This report draws on the findings and conclusions of the above two studies. and

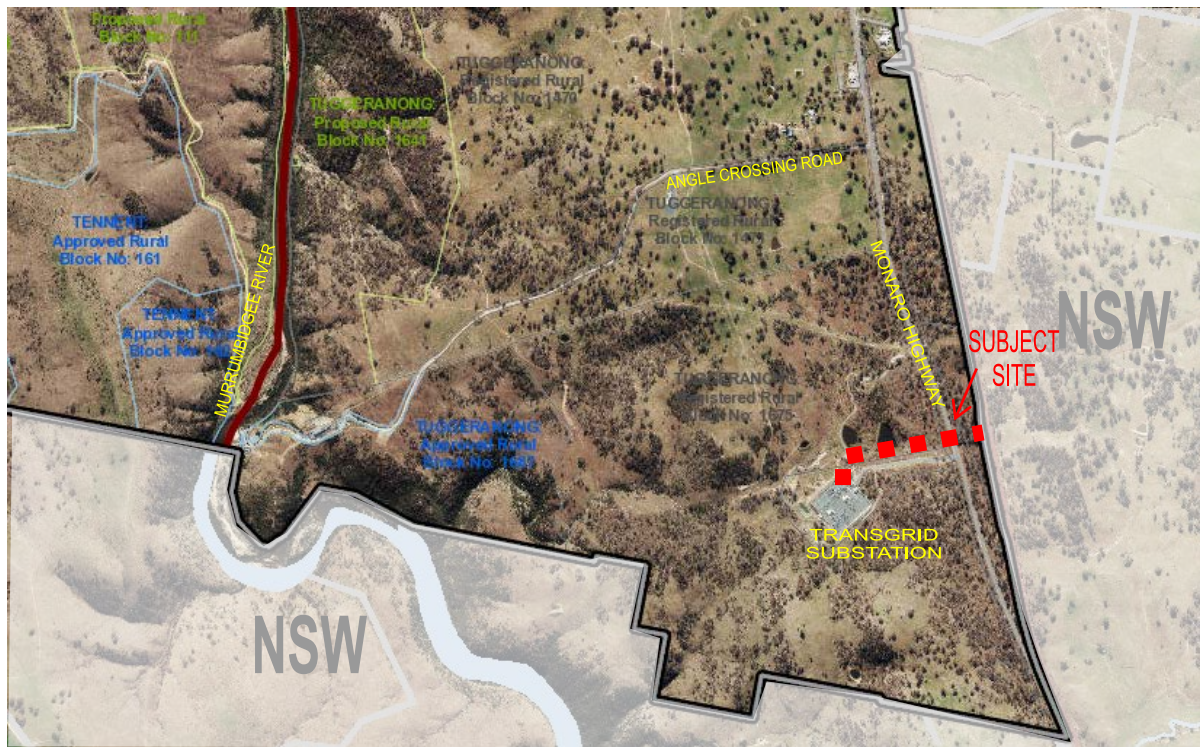
Figure 1-1: ACT Context



Source: ACTMAPI

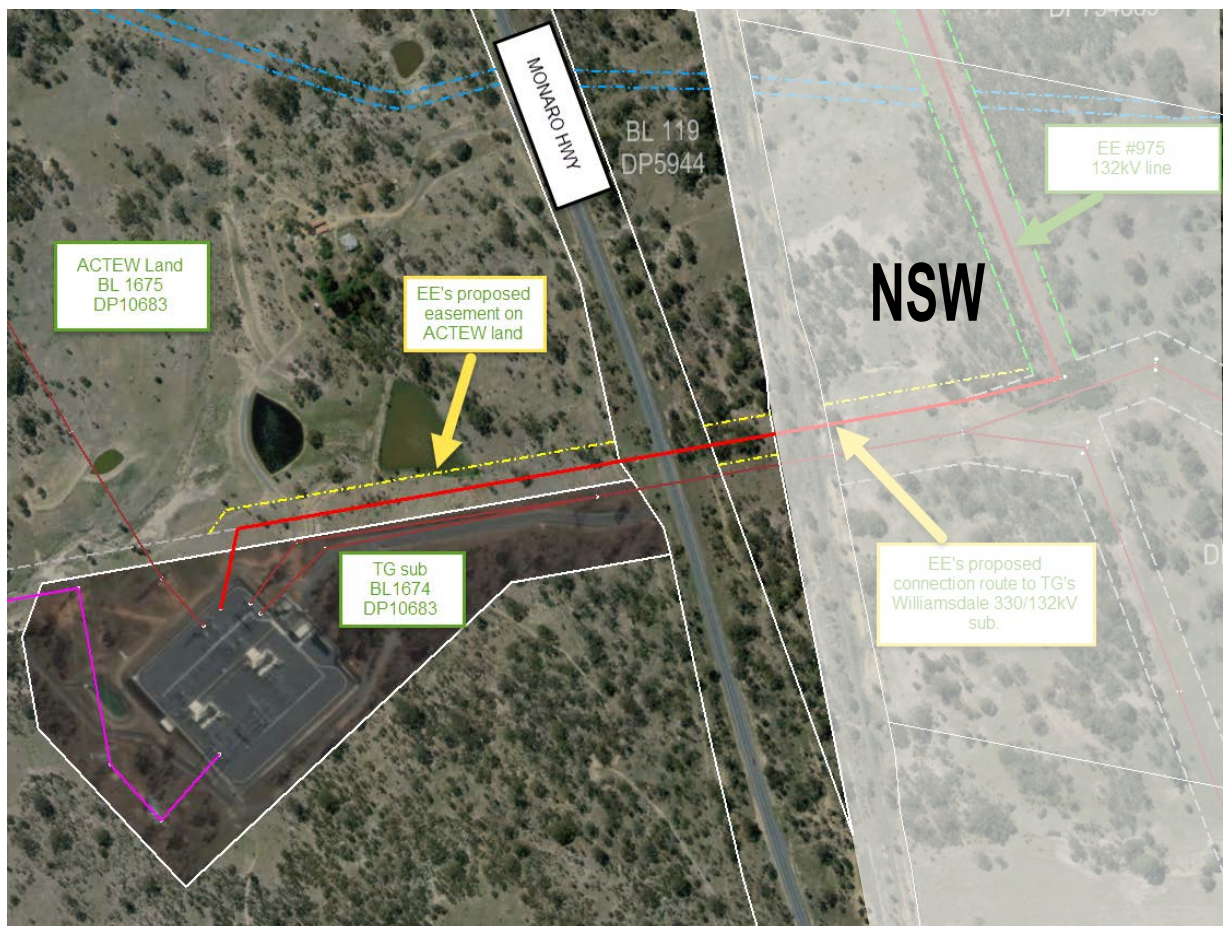


Figure 1-2: Local Area



Source: ACTMAPi

Figure 1-3: Location of Proposed Transmission Lines



Source: Essential Energy

## **1.7 Proponent**

Essential Energy is a NSW Government-owned corporation with responsibility for building, operating and maintaining Australia's largest electricity network that spans 95 per cent of New South Wales' land mass and parts of southern Queensland.

Essential Energy delivers essential electricity network services to more than 800,000 homes and businesses in 1,500 regional, rural and remote communities. Responsible for building and maintaining almost 200,000 kilometres of powerlines, 1.4 million power poles, 136,000 distribution substations and 326 zone substations that span a diverse geographical area.

Funding of Essential Energy's electricity distribution network is through a five-yearly distribution network revenue determination made by the Australian Energy Regulator in accordance with the National Electricity Law and National Electricity Rules economic regulatory framework.

Essential Energy's three key priority areas are continuously improving safety performance for employees, contractors and the community, ensuring the reliability, security and sustainability of the network, while striving to contain average increases in network charges to CPI or below.



## 2.0 Description of the Proposed Development

### 2.1 Need for the Proposed Development

The primary need for the development is to provide a 132kv line connection to the TransGrid substation for the ACT as part of an upgraded supply for the new Googong township and future development, such as South Jerrabomberra (Tralee).

The need to connect the 132kV line #97Y to the Williamsdale substation was included as part of the recommended option to supply the new Googong and Tralee development areas in November 2012.

EE prepared a Route Options Report as part of preliminary planning work for this project. The study assessed the most viable options in depth and nominated an OH 132kV line, parallel to the existing TG 132kV Cooma lines, as the preferred route and construction.

The strategy included construction of the Googong Town Zone Substation which initially would be supplied over the line from Queanbeyan until an alternative supply was required, at which time the southern section of the line (now referred to as #97Y) would be connected to the Williamsdale Zone Substation.

The timing of this work is influenced by the need to provide a second supply the Googong ZS based on Value of Unserved Energy (VUE) calculation and the needs of the future 'town centre' area within the new Googong town to be clear of overhead high voltage electrical infrastructure. The existing town centre electrical infrastructure needs to be relocated by early 2018. This timeframe is consistent with the timeframe required for the second supply from Williamsdale based on the VUE calculation.

The southern end of the existing line #97Y currently terminates in NSW approximately 1km east of the Williamsdale ZS which is situated across the border in the ACT.

### 2.2 Type of Development

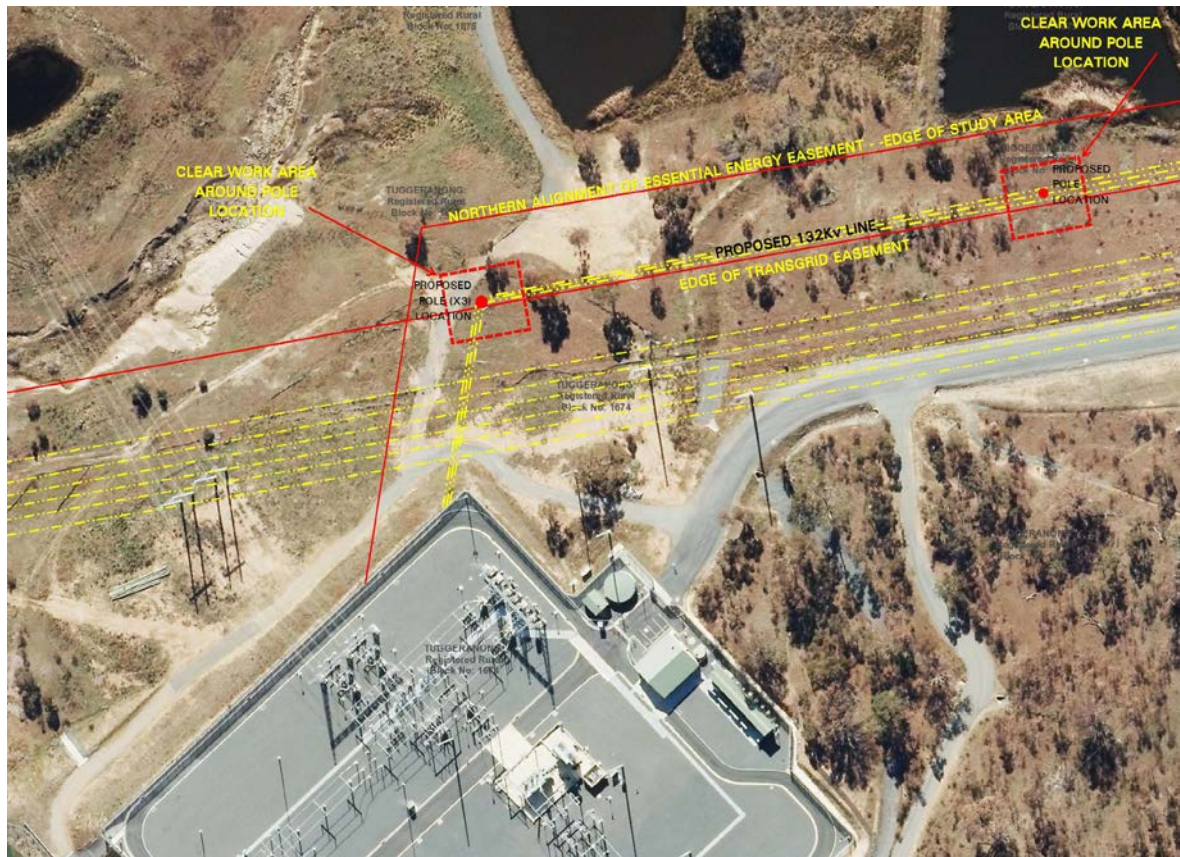
EE propose to construct a single 132kV sub-transmission line having 220 MegaVolt Amps (MVA) continuous capacity from the proposed TransGrid substation at Williamsdale to a connection with the existing 132kV Cooma to Queanbeyan sub-transmission lines, approximately 280m east of the railway line, within NSW..

The proposed transmission line will be constructed using steel poles (rather than steel towers) of 29m length (24m height above ground). The required easement width for the proposed transmission line is 45m, however, 20m of this easement width will overlap with the existing TransGrid easement (refer Figure 2-4). Therefore, the new easement is an additional 25m width. Management and ownership of the new 132kV sub-transmission lines will be EE responsibility.

During construction, access along the transmission line will be required for heavy vehicles for the delivery of poles plus boring and excavation of pole foundations, large cranes and vehicles for the stringing of the line conductors.

Access to the route will be provided along the existing TransGrid substation access road. This road is a bitumen sealed road and no roadwork is required to provide access to the new transmission lines.

Figure 2-1: Project Area (ACT Western Section)



Source: Purdon Planning (Concept only); ACTMAPi Base

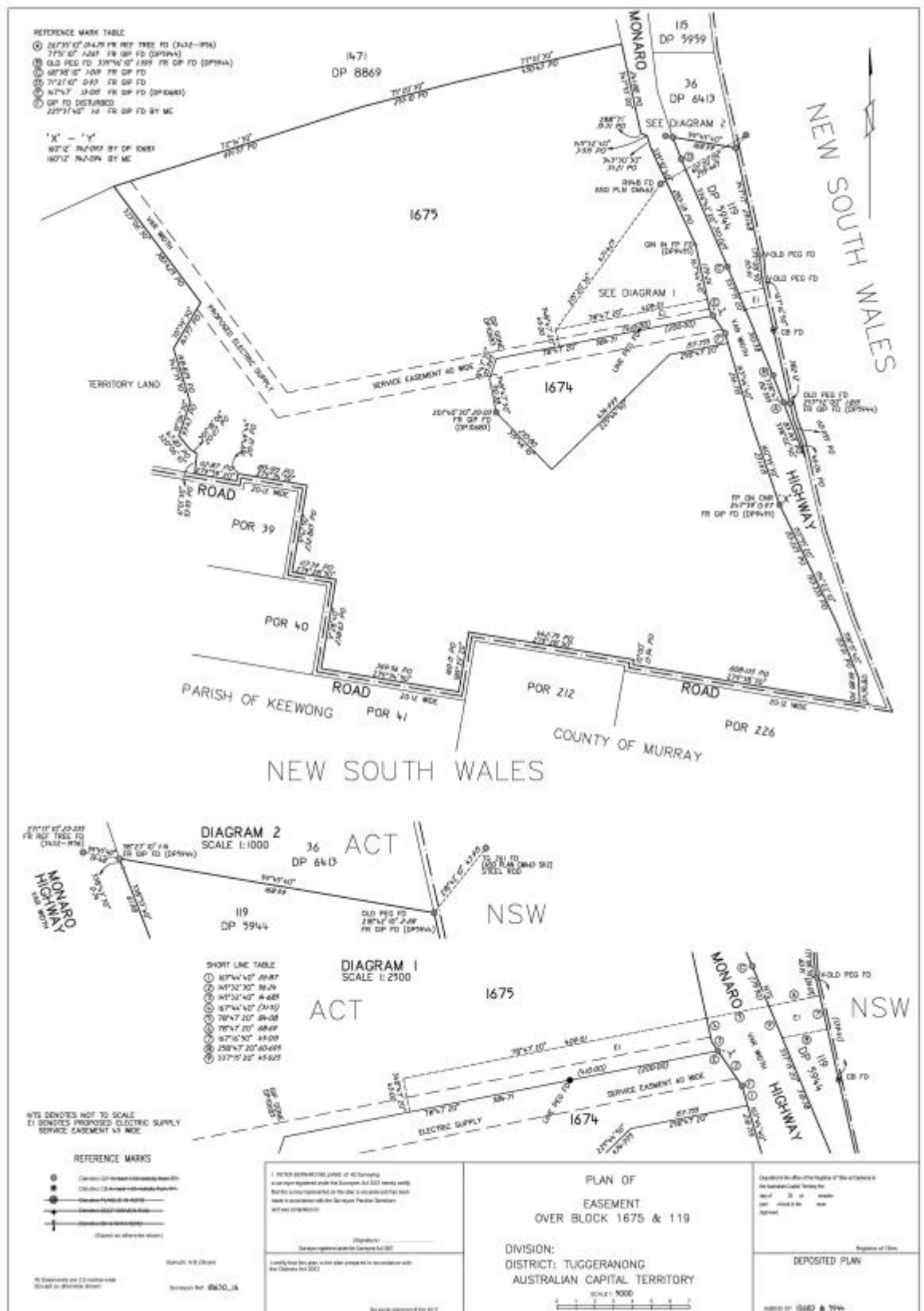
Figure 2-2: Project Area (ACT Eastern Section)



Source: Purdon Planning (Concept only); ACTMAPi Base



Figure 2-3: Proposed Easements



Source: 4D Surveying

### 2.2.1 Support Structures (Poles)

The location and number of support structures required is a primary function of the following variables which reflect industry and safety standards:

- minimum ground clearance
- easement width (which governs horizontal movement of conductors).

The preliminary design provides for three (3) poles to be erected within the ACT section of the route. Each of these poles are 'suspension' poles. Suspension poles support the weight of the conductors in straight sections of the alignment. ('Tension' poles are stronger, generally located at changes in alignment direction and are intended to support the full conductor tension in addition to the weight of conductors and the effects of the wind).

The average height of the poles would be approximately 24m above the ground with an average span of 200-210m. However, the span length and the height of the conductors may vary due to site specific factors such as topography.

Figure 2-4: Examples of similar sub-transmission lines



Source: [www.polesandunderground.com.au](http://www.polesandunderground.com.au) (Essential Energy – Bega to Cooma Project)

### 2.2.2 Conductors (Wires)

Each pole would support two circuits, with each circuit comprising three sets of 37/3.00 All Aluminium Alloy Conductor (AAAC) 'Nitrogen' conductor.

The conductors would be configured in a vertical arrangement. The vertical separation between the top and bottom conductors would be approximately 2.5m. The conductors would be aluminium with the overall diameter approximately 27mm. The conductors would be separated at approximately 50m intervals by aluminium alloy spacers to reduce the likelihood of shorting.

During manufacture, the conductors would be subjected to a sand-blasting technique known as 'shadow-lining' to produce an aged finish with a very dull sheen. The conductors would be attached to the support poles by polymer insulators.

Overhead earth wire (being either AAAC 'Hydrogen' OHEW or OPGW) would be provided at the top of each pole, approximately 2.5m above the upper conductor phase. The overall diameter of each earth wire would be approximately 18mm and is comprised of a fibre optic core surrounded by aluminium-alloy wire strands. The fibre optic core provides a high speed telemetric link enabling the real-time monitoring of network integrity and the rapid



#### **2.2.4 Operation Maintenance**

EE inspects all transmission lines annually. These inspections involve a detailed examination of the condition of the line and associated assets, usually from ground level with the use of visual aids such as binoculars. In some cases inspections are carried out by aerial patrols. A registered vehicle would generally be used to access each support structure for ground based inspections. In addition to the ground inspection, all support structures are climbed every 6 years to confirm their structural integrity.

Maintenance work is generally only required if routine patrols reveal a potential problem or if a circuit sustains an electrical fault. Should EE need to return to the site with heavy vehicles to undertake more extensive maintenance work, lessees would be notified in advance. Under emergency conditions it may not be possible to give such notification, in which case EE would contact lessees at the first available opportunity. Any disturbance to properties caused during maintenance would be repaired at the completion of work.

#### **2.2.5 Overview of Construction Methodology**

Construction activities would be completed by an accredited construction contractor engaged by EE. Construction works would broadly involve the following activities;

1. Clearing activities, where required (this is expected to be limited to vegetation at the location of crane pads, within the 'work area' adjacent to each new pole as shown on Figure 2-1 and Figure 2-2).
2. Minor levelling/excavation for crane pads (where required).
3. Excavation (auguring) for transmission pole installation.
4. Installation of new pole structure.
5. "Stringing" of new cables to the new pole structure.
6. Connection to sub-station, including works within the sub-station compound.
7. Rehabilitation of crane pads.
8. Site clean-up (removal of equipment and site rehabilitation).

The overall time frame for construction works is likely to be approximately six months but activities would not be continuous on each property for all of this period.

It is expected that the general hours of construction would be 7am to 6pm Monday to Saturday.

### **2.3 Summary of Mitigation Measures**

The following is a summary of the proposed mitigation measures to address the potential risks and impacts associated with the project:

- Minimisation of Disturbance:
  - Identify the pole disturbance areas.
  - Limit vehicle/plant movement.
  - Establish site erosion and sediment controls.
  - Limit vegetation removal.
  - Communication of the significance and sensitivities of the ecological values to contractors.



- Vehicle parking/storage sites along the TransGrid entry road.
- **Weed Management**
  - Appropriate vehicle hygiene will be maintained.
  - Only low fertility soils sourced on site will be used to fill excavations.
  - Only sterile materials used for soil stabilisation.
- **Avoidance and protection of any populations of threatened or rare flora species recorded during spring surveys**
  - targeted survey for threatened and rare flora to be undertaken in spring, prior to the proposed works commencing.
- **Protection of rocky habitat**
- **Protection of nesting birds**
  - Vegetation clearance and power pole installation works undertaken outside of the August-December breeding season
- **Minimising visual impact**
  - Use of poles rather than 'lattice' towers
  - conductors configured in a vertical arrangement
  - crossing of highway immediately adjacent to existing conductors
  - aluminium conductors subjected to a sand-blasting technique known as 'shadow-lining' to produce an aged finish with a very dull sheen
  - The line will be designed to achieve a minimum ground clearance of 7m



*Existing TransGrid Transmission Line – Looking west from Monaro Highway.*

## 3.0 Site Characteristics

### 3.1 Key Site Features

The following is a 'snapshot' of key site features. Further details are provided in Section 3.0.

Location	The site is located at Williamsdale adjacent to the ACT/NSW border and approximately 40km south of the Canberra City Centre, via the Monaro Highway.
Current Use	The site is adjacent to the existing TransGrid sub-station and associated transmission lines. The area has been used for general grazing purposes over many years.
Zoning	The land is within the Non-Urban NUZ2 (Rural) Zone, under the Territory Plan, except for the section crossing the Monaro Highway (which is Designated Area under the National Capital Plan).
Site Area	The overall area that is the subject of the proposed works is approximately 2.52ha. The area is 560m long by 45m wide.
Adjacent Land Use	<p>The proposed transmission line links Williamsdale substation and existing NSW EE electricity network. Major land uses adjacent to the sub-transmission line include:</p> <ul style="list-style-type: none"> <li>– rural uses including grazing</li> <li>– Monaro Highway</li> </ul>
Existing Access	Access to the site will be via the existing sealed access road to the TransGrid sub-station, off the Monaro Highway.
Vegetation	<p>The study area was assessed as supporting the ACT Plant Community Type PCT ACT16: Yellow Box-Red Gum Tableland Grassy Woodland. The study area was further categorised into the following three discernible vegetation zones:</p> <ul style="list-style-type: none"> <li>– woodland – moderate to high diversity;</li> <li>– native dominated derived grassland of woodland, moderate to high diversity;</li> <li>– highly modified/non-natural communities, mapped as exotic groundstorey, planted native trees over exotic groundstorey, and recent revegetation groundstorey plantings.</li> </ul>
Threatened Flora	One EPBC Act endangered listed flora species, Hoary Sunray <i>Leucochrysum albicans</i> var. <i>tricolor</i> , was recorded within the study area. The study area was also determined to constitute potential habitat for 12 other threatened species. The study area may also support plant species listed as 'rare or uncommon' by the ACT Government Conservation Research unit. Targeted survey for threatened, rare or uncommon flora is required in spring to determine whether such species occur within the study area.
Threatened Fauna	No threatened fauna species were recorded during the field survey



Heritage	No registered Aboriginal or historical heritage sites are located within the project area. No areas of potential archaeological deposits or scarred trees have been identified within the development area and the potential for unidentified Historical or Aboriginal heritage objects within the development area has been assessed as low.
Easements	The site is adjacent to the existing 40m wide TransGrid Electrical easement.
Topography	The route of the new sub-transmission line commences at approximately RL 705m at the western end (adjacent to the TransGrid sub-station). The ground levels rise gently towards the east at an average of 3% until the Monaro Highway. East of the Monaro Highway the ground rises more sharply at an average gradient of 7%. The overall gentle slopes do not present a constraint to the development of the sub-transmission lines.

## 3.2 Land Tenure

Table 2-1 identifies land tenure along the line.

Table 2-1: Land Tenure

District	Block No.	Lessee (or Custodian)
Tuggeranong	1674	TransGrid
Tuggeranong	1675	ACTEW Corp (ICON Water)
Tuggeranong	119	Private Lessee
Tuggeranong	Monaro Highway	NCA / Roads ACT



*Monaro Highway looking south – TransGrid access road to the right.*

### 3.3 Natural Conservation Values

Capital Ecology Pty Ltd were engaged to undertake ecological surveys and prepare an Ecological Assessment Report (EAR) to identify and assess the significance of the impacts that the proposed development may have upon the biodiversity values of the subject land and surrounds. The following tasks were undertaken by Capital Ecology:

- A desktop review of databases and relevant literature.
- A field survey over 22 and 24 March 2016 to assess and map the vegetation and habitat for threatened species within the study area.
- The preparation of a Likelihood of Occurrence Assessment which addresses all threatened ecological communities, threatened flora species and threatened fauna species with the potential to occur within the study area.
- An assessment of the potential for impacts, and the likely significance of these impacts, upon the listed significant biota identified as occurring or potentially occurring within the study area.
- Preparation of advice and recommendations regarding the impact avoidance, minimisation, mitigation, and/or offset measures that may be required to facilitate approval of the proposed works by the ACT Government.

The study concluded that the area was supporting the ACT plant community type *PCT ACT16: Yellow Box-Red Gum Tableland Grassy Woodland*. The study area was further categorised into the following three discernible Vegetation Zones (refer Figure 3-1):

- Zone 1 – Woodland – moderate to high diversity;
- Zone 2 – Native dominated derived grassland of woodland, moderate to high diversity; or
- Zone 3 – Highly modified/non-natural communities, mapped as exotic groundstorey, planted native trees over exotic groundstorey, and recent revegetation groundstorey plantings.

Zones 1 and 2 were determined to be consistent with the definition of the Box-Gum Woodland threatened ecological community as listed pursuant to the Commonwealth EPBC Act and ACT NC Act.

One EPBC Act endangered listed flora species, Hoary Sunray *Leucochrysum albicans* var. *tricolor*, was recorded within the study area. The study area was also determined to constitute potential habitat for 12 other threatened species.

The study area may also support plant species listed as 'rare or uncommon' by the ACT Government Conservation Research unit. Targeted survey for threatened, rare or uncommon flora is required in spring to determine whether such species occur within the study area.

No threatened fauna species were recorded during the field survey.

Figure 3-1: Vegetation Survey – Mapping

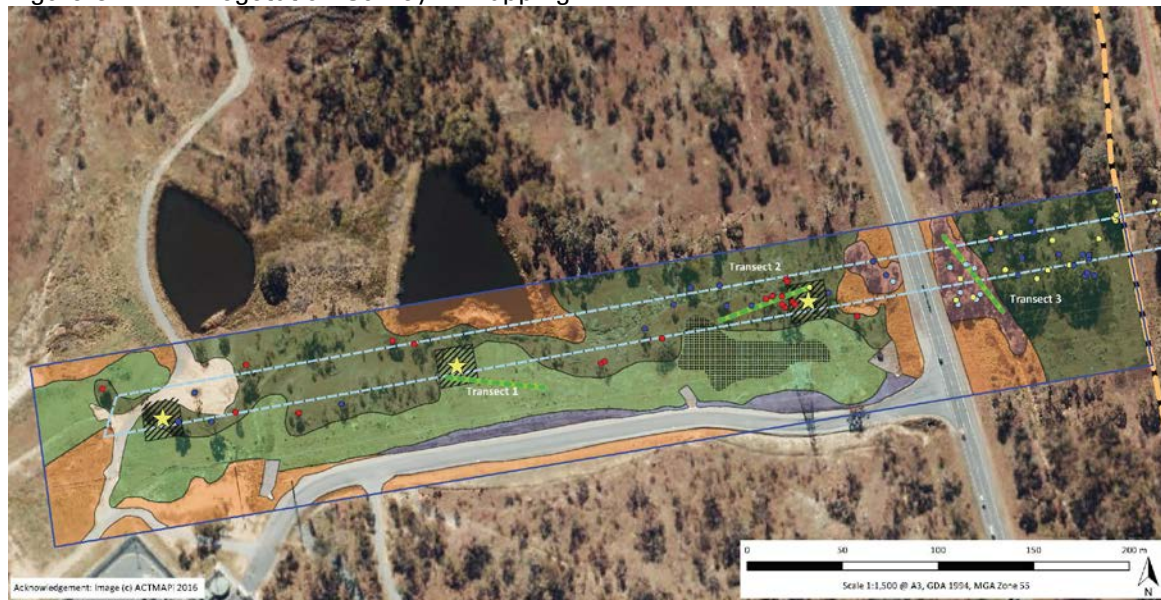


Figure 3. Vegetation Surveys



Source: Capital Ecology

The following provides a summary assessment against the key requirements outlined in the ACTPLA Guide to Preparation of an Application for an Environmental Significance Opinion:

- **Existing Processes or Natural Systems of the ACT** – The site is not considered important in maintaining existing processes or natural systems of the ACT. The area of the proposed works do not comprise places of importance to maintaining hydrological and nutrient cycles or to a species' life cycle processes of breeding, feeding, nursery and habitat. The local area provides some potential for habitat linkages facilitating species movements/migration routes and corridors. However, the proposed transmission line will not prevent movement of local fauna. The corridor will not disturb habitat values, other than the immediate work area around each new pole, which will be restored post-construction works.
- **Richness of Diversity of Flora, Fauna or Landscapes** – The site does not exhibit unusual richness of diversity of flora, fauna or landscapes. As described in the EAR, a total of 64 flora species were recorded comprising 44 native species and 20 exotic species. In addition, a total of 17 native vertebrate fauna species were recorded from the study area during the field survey, comprising 15 birds, 1 mammal and 1 reptile. This is not considered an "unusual" richness of species diversity.
- **Uncommon, Rare or Endangered Flora, Fauna, Communities, Natural Landscapes or Phenomena** – Details on flora and fauna are provided above.
- **Principal Characteristics of Landscapes, Environments or Ecosystems** – The site of the proposed sub-transmission lines are not considered to exhibit any special landscape or landform characteristics.
- **ACT Natural History** – Due to the small area involved, it is considered that the site is not important having regard to the potential for the site to contribute to the wider understanding of the ACT's natural history, by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.

### 3.4 Heritage Values

Past Traces Pty Ltd were commissioned to prepare a desktop heritage review for the proposed construction of the 132kV electricity transmission line from the Williamsdale substation to the Queanbeyan-Cooma line.

The purpose of the desktop review was to investigate the presence of any heritage sites and to assess the impacts and management strategies that may mitigate any impact.

No Aboriginal or historical heritage sites or areas of Potential Archaeological Deposit (PAD) were identified within the project area from the desktop review. Recorded Aboriginal heritage sites are present in the locality, but located outside of areas of impact and the project area.

A site visit was undertaken to confirm the findings of the desktop assessment which located no surface sites or indications of potential archaeological deposits based on landforms present within the project area.

The Heritage Assessment concluded that:

- No registered Aboriginal or historical heritage sites are located within the project area.
- No areas of potential archaeological deposits or scarred trees have been identified within the development area and the potential for unidentified Historical or Aboriginal heritage objects within the development area has been assessed as low.
- The desktop assessment finds that the potential to impact on heritage sites within the confined impact areas of the pole locations is assessed as low.

As a result of the desktop assessment the following findings and recommendations apply for the project:

- If the project area should be enlarged or further impacts anticipated progression to a Cultural Heritage Assessment with the participation of the Aboriginal community will be required.
- All Aboriginal objects are protected under the ACT Heritage Act 2004. It is an offence to disturb an Aboriginal site without approvals granted by ACT Heritage.
- Approvals should be sought for the project either through a Development Application or approval of a Statement of Heritage Effects prior to works commencing. Under the ACT Heritage Act 2004, this report does not constitute a defence against harming any Aboriginal heritage sites. Further studies may be requested by the relevant agency.
- Should any Aboriginal objects be encountered during works then works must cease immediately in the vicinity of the find, and the find should not be moved until assessed by a qualified archaeologist. Adherence to an Unexpected Discovery Plan (UDP) is required



## 4.0 Statutory Context

This section outlines key elements of Commonwealth and ACT legislation relevant to the proposed development.

### 4.1 Commonwealth EPBC Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), actions that have, or are likely to have, a significant impact on a matter of National Environmental Significance (NES) require approval of the Commonwealth Minister. Approval from the Commonwealth is in addition to any approvals under ACT legislation.

Based on the assessment presented in the attached Ecological Assessment Report (refer Attachment D), it is concluded that, with the implementation of the proposed measures to avoid, minimise and mitigate impacts upon biodiversity values, the proposed development:

1. is unlikely to significantly impact upon any MNES as listed pursuant to the Commonwealth EPBC Act, and therefore referral of the proposed action to the Commonwealth Minister for the Environment is unwarranted; and
2. is unlikely to have a significant adverse environmental impact upon any threatened species, population or ecological community listed pursuant to the NC Act.

*The works do not trigger the requirement for a referral under the EPBC Act.*

### 4.2 Australian Capital Territory (Planning and Land Management) Act 1988

The *Australian Capital Territory (Planning and Land Management) Act 1988* (PaLM Act) establishes the National Capital Authority (NCA) and the National Capital Plan (NCP).

#### 4.2.1 National Capital Plan

The National Capital Plan applies to land within Designated Areas.

The National Capital Authority have confirmed that a Works Approval will be required for the new conductors crossing over the Monaro Highway. The Works Approval application will need to address the visual impact of the new conductors.

*Works Approval under the Australian Capital Territory (Planning and Land Management) Act 1988 will be obtained prior to any works commencing.*

### 4.3 Nature Conservation Act 1980

The *Nature Conservation Act 1980* makes “provision for the protection and conservation of native animals and native plants, and for the reservation of areas for those purposes”.

The following two ecological communities are listed as endangered pursuant to the ACT NC Act.

- Natural Temperate Grassland - As noted above, there is no potential for this community to occur within the study area as the entire study area would have supported lowland woodland.

- White Box – Yellow Box – Blakely's Red Gum Woodland – Zones 1 and 2 identified in the Ecological Assessment Report meet the criteria for this community under the NC Act.

*The proposed works are considered to be consistent with the provisions of the Nature Conservation Act, provided that the proposed avoidance, minimisation and mitigation measures are implemented.*

#### **4.4 Heritage Act 2004**

The *ACT Heritage Act 2004* outlines provisions for places or objects to be determined as having heritage significance.

No Aboriginal or historical heritage sites or areas of Potential Archaeological Deposit (PAD) were identified within the project area from the desktop review. Recorded Aboriginal heritage sites are present in the locality, but located outside of areas of impact and the project area.

*The proposal is consistent with the provisions of the Heritage Act 2004.*

#### **4.5 Tree Protection Act 2005**

The *Tree Protection Act 2005* outlines provisions for 'Protected Trees' which include:

- Registered Trees - are trees on the 'Tree Register' that have been identified as being exceptional for natural or cultural heritage values; landscape and aesthetic values; or scientific values
- Regulated Trees - located on leased Territory land in an area declared as a Tree Management Precinct and is either:
  - 12m or more in height; or
  - greater than 1.5m in circumference (approx. 0.5 m in diameter) or more at 1m above ground level; or
  - with two or more trunks and the total circumference of all the trunks, 1m above ground level, is 1.5m or more; or
  - 12m in crown width or more.

The Act applies to land within a "Tree Management Precinct". The subject site is outside a tree management precinct and therefore, the provisions of the Act do not apply.

*The provisions of the Act do not apply to the subject site. Notwithstanding this, no trees that would meet the definition of a protected tree (regulated or registered) are affected by the works.*

#### **4.6 Environment Protection Act 1997**

Under Schedule 1 (Section 1.2) of the *Environment Protection Act 1997* (EPA Act), the proposed works do not trigger the requirements for Environmental Authorisation from the Environment Protection Authority.

*The proposal is consistent with the provisions of the Environment Protection Act 1997.*

#### 4.7 Water Resources Act 2007

Under Section 42 of the *Water Resources Act 2007*, the carrying out of a “waterway work” (constructing or altering a water structure; or doing other work in or on a waterway) requires a licence. This includes situations where infrastructure or utility services cross a waterway. A “Waterway” is the bed that the water in the waterway normally flows over or is covered by; and the banks that the water in the waterway normally flows between or is contained by. However, waterway does not include land normally not part of the waterway that may be covered from time to time by floodwaters from the waterway. As such, the existing overland flow paths would not be considered waterways.

*There is no requirement for any “waterway works” as part of the project, as such; the proposal is consistent with the provisions of the Water Resources Act 2007*

#### 4.8 Pest Plants and Animal Act 2005

A species may be declared a pest species under the *Pest Plants and Animal Act 2005*. Under the Act, weed species are defined by declaration of the Minister.

Twenty exotic plant species were recorded within the study area during the survey. Whilst the majority of the exotic species are common and/or considered low-risk species in the ACT and region, the following species are listed as Weeds of National Significance (Commonwealth) and/or as pest plant species in the ACT:

- Paterson's Curse *Echium plantagineum*
- African Love Grass *Eragrostis curvula*
- St John's Wort *Hypericum perforatum*
- Serrated Tussock *Nassella trichotoma*
- Briar Rose *Rosa rubiginosa*
- Blackberry *Rubus fruticosus*
- Willow *Salix sp.*

No exotic fauna species were recorded during the field survey, however European Rabbit *Oryctolagus cuniculus*, Feral Pig *Sus scrofa*, and Red Fox *Vulpes vulpes* are listed as declared pest species and are likely to occur within the study area and surrounds. Pest fauna do not appear to be having a significant negative impact upon the study area – the level of infestation of these species appears to be consistent with that present across much of the agricultural land in the locality.

*The proposed works are considered to be consistent with the provisions of the Pest Plans and Animals Act, provided that the proposed avoidance, minimisation and mitigation measures are implemented.*



## 4.9 Planning and Development Act 2007

The Planning and Development Act defines ‘development’ and sets out circumstances where development may be exempt from the need to gain development approval. Where development approval is required, the Act establishes assessment tracks (i.e. Code, Merit, Impact) for the assessment of any development application (DA).

### 4.9.1 Territory Plan

Figure 5-1 shows the route traverses the Rural (NUZ2) Zone as well as the Designated Area across the Monaro Highway.

The objectives for the NUZ2 Zone include:

- a) Conserve the distinctive rural landscape setting of Canberra and maintain its ecological integrity*
- b) Conserve sufficient wildlife habitats to adequately protect native plant and animal species*
- c) Make provision for the productive and sustainable use of land for agriculture*
- d) Make provision for other uses which are compatible with the use of the land for agriculture*
- e) Ensure that land parcels are appropriate in size for their approved uses*
- f) Offer leases for time periods which reflect planning intentions for the locality*
- g) Reinforce a clear definition between urban and rural land*

The proposal falls under the “umbrella” definition of Major Utility Installation. This definition includes a range of infrastructure projects including:

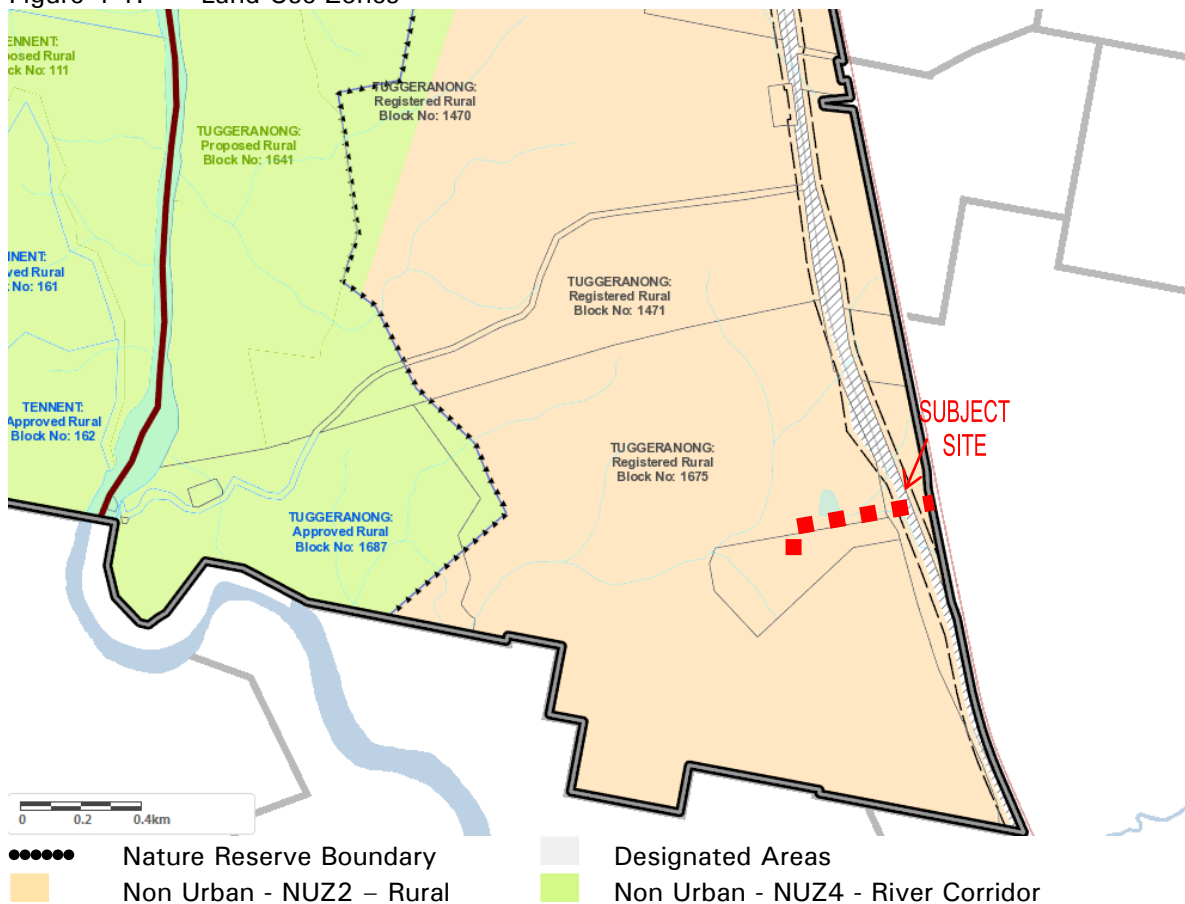
- Distribution reservoir
- Major electrical sub-station
- Major pump station
- Major service conduits
- Power generation station
- Treatment plant
- Tunnel
- Urban lake, pond and/or retardation basin
- Water storage dam

The project is a “**Major Service Conduit**”. The Territory Plan defines a Major service conduit as *major bulk water supply and reticulation mains having a diameter equal to or greater than 675mm, trunk sewers having a diameter equal to or greater than 750mm, stormwater main drains having a diameter equal to or greater than 900mm or comprising open drains or waterways, **transmission lines having a voltage greater than 66kV**, gas mains having a diameter greater than 100mm, and major telecommunication cable ducts having a width equal to or greater than 1000mm, coaxial cables, and optical fibre cables.*

A Major Utility Installation, is permissible within the applicable zone and is consistent with the zone objectives.

*The proposal is considered to be consistent with the provisions of the Territory Plan.*

Figure 4-1: Land Use Zones



Source: Actmap

#### 4.9.2 EIS Triggers

Under clause 123 of the *Planning and Development Act 2007* (ACT) (the Act), developments listed in Schedule 4 are development proposals likely to have significant adverse environmental impacts which could potentially trigger an EIS. The triggers are outlined below.

- **Part 4.2 Development proposals requiring EIS—activities Item 2:** the proposal involves construction of electricity transmission line construction, including additions or realignment works, outside an existing easement or exceeding 500m in length, that are intended to carry underground or above-ground transmission lines with a voltage of 132kV or more
- **Part 4.3 Development proposals requiring EIS—areas and processes Item 1 -:** the project may have a significant adverse impact on a threatened ecological community and an endangered species

In addition, the proposal could be subject to the following trigger:

- **Part 4.3 Development proposals requiring EIS—areas and processes Item 2:** the proposal involves the modification of more than 0.5ha of native vegetation, although the actual 'clearing' is limited to approximately 0.12ha. This matter was addressed in more detail in Section 1.3.

This S211 submission concludes that:

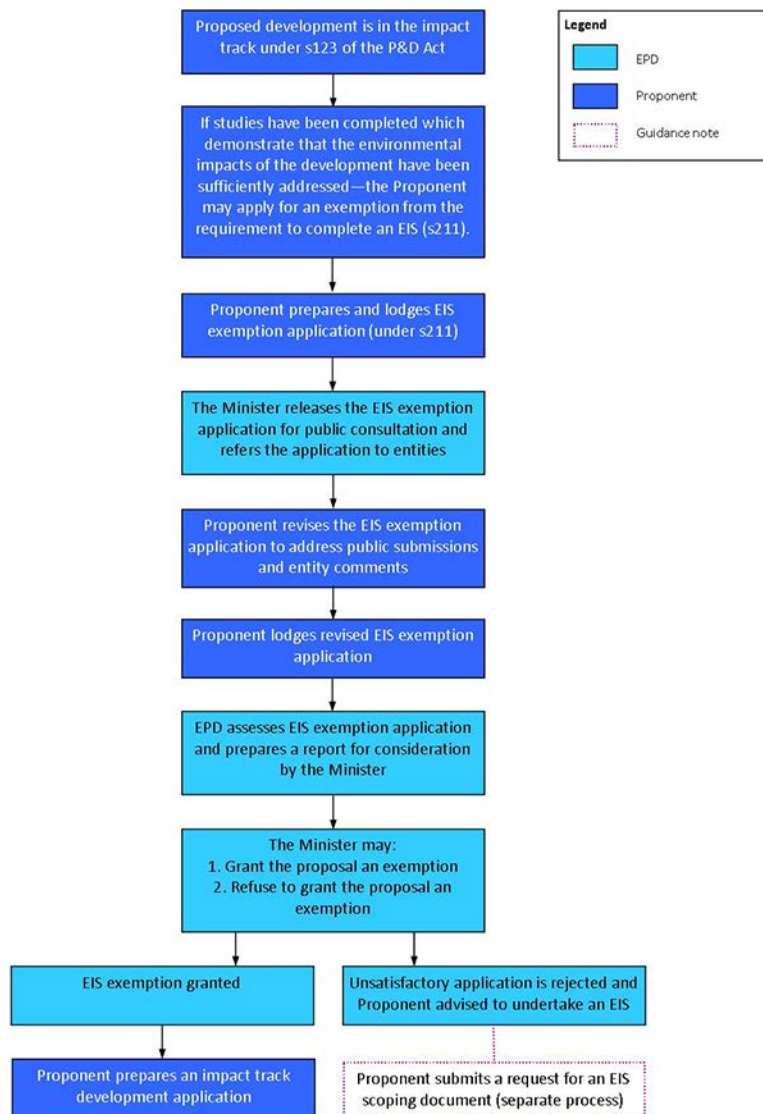
- there is sufficient information provided to identify and assess the impacts of the proposed activity on the environment
- the necessary clearance of native vegetation is unlikely to have a 'significant adverse environmental impact'.

These conclusions are based on the following considerations:

- the thoroughness of the Ecological Assessment Report and Heritage Report plus other appended documents
- the mostly low-to-moderate risk of impact assessed in Section 6.0
- the mitigation measures detailed in Section 7.0.

An exemption under section 211 of the P&D Act from the requirement for an EIS is sought on the grounds that the impact of the proposed development has been sufficiently addressed in relevant studies and associated commitments by the Proponent to implement appropriate mitigation measures and that the proposal is not likely to have a significant adverse environmental impact.

Figure 4-2: S211 Process



Source: ACTPLA

## 5.0 Preliminary Risk Assessment

This section completes an assessment of risk to elements of the environment considered to be potentially affected by the proposed development.

### 5.1 Risk Assessment Methodology

A *Request for Exemption to Provide an Environmental Impact Statement* under section 211 of the Act requires the a Preliminary Risk Assessment (PRA) to be undertaken in a manner consistent with the guidance document *Preparation of an Application for Scoping - Preparation of an Application for an Environmental Significance Opinion* produced by ACTPLA.

The elements used to perform the preliminary risk assessment are shown in the tables below:

- risk assessment (likelihood of impact)
- risk assessment (consequence)
- risk assessment matrix (likelihood and consequence).

Table 6-1: Risk Assessment Matrix (Likelihood of Impact)

Likelihood	Description	Probability	Community attitude
Remote	May occur, but only in exceptional circumstances	< 1%	Few people interested
Unlikely	Not expected to occur in most circumstances	1-20%	Some people affected
Possible	May Occur	21-49%	Many people affected
Likely	Probably will occur	50-85%	Most people affected
Almost Certain	Expected to occur	> 85%	Almost everyone affected

Source: *Preparation of an Application for an Environmental Significance Opinion (ACTPLA) – Table 1*

Table 6-2: Evaluating consequence (Criteria used are examples)

Consequence	Minimal	Minor	Moderate	Major	Catastrophic
<b>Magnitude</b>					
Spatial	A single pool	A reach or river or part of a catchment	Multiple reaches or whole catchment	Multiple catchments	Whole of basin
Intensity	Low level behavioural, lifespan or condition effect	Acute impacts on some species	Moderate impacts on growth, recruitment or survival rates	Lethal impacts on some species	Lethal for individuals or communities
<b>Temporal</b>					
Duration	Single incident or transient event	Short term impact, single generation	Medium term	Long term, multiple generations	Permanent
Timing	Occurs outside breeding times	Occasional interruption of feeding or breeding	Interrupts one life cycle	Regularly interrupts life cycle	Permanent interruption of life cycle
<b>Ecological</b>					
Values	Previously disturbed areas	Parkland	Nature conservation area	Conservation area, listed species or other conservation feature of ACT significance	Wilderness, nationally threatened species or other conservation feature of national significance
Sensitivity	Will recover completely	Will recover with some changes	Moderate change to ecosystem functioning	Significant change to ecosystem functioning	Will not recover
<b>Social</b>					
Number of people	Some people indirectly impacted	Some people directly impacted or several indirectly	Several people directly impacted or many indirectly	Large number of people directly impacted	Loss of life
Heritage	Impact on item of minimal significance	Impact on multiple items of low significance	Impact on significant item	Impact on multiple significant items	Major impact on protected item
Political	Single negative press article	Multiple negative press articles	Significant public interest	Leads to an inquiry	Change of government
Economic	Minimal losses	Several thousand dollars lost revenue or remediation costs	Half million dollars in lost revenue or remediation costs	One million dollars in lost revenue or remediation costs	Several million dollars in lost revenue or remediation costs

Source: Preparation of an Application for an Environmental Significance Opinion (ACTPLA) – Table 1

Table 6-3: Risk Assessment Matrix (Likelihood and Consequence)

Consequence	Minimal	Minor	Moderate	Major	Catastrophic
<b>Likelihood</b>					
Remote	Negligible	Negligible	Very Low	Low	Medium
Unlikely	Negligible	Very Low	Low	Medium	High
Possible	Very Low	Low	Medium	High	Very High
Likely	Low	Medium	High	Very High	Significant
Almost Certain	Medium	High	Very High	Significant	Significant

Source: Preparation of an Application for an Environmental Significance Opinion (ACTPLA) – Table 4



## 5.2 Preliminary Risk Assessment Table (Impact and Risk Category)

This section provides details of the assessment of likelihood, consequence and risk associated with identified impacts on ecology and other environmental factors, following the models identified from *Preparation of an Application for Scoping - Preparation of an Application for an Environmental Significance Opinion*.

Table 6-4 below summarises the risk assessment for impacts identified with the proposed development, noting the above assessment about the relevant triggers to be assessed in the Section 211 submission.

The risk assessment describes the potential risks of the proposed development *prior* to the implementation of any mitigation measures.

A detailed discussion of potential risks is presented in Section 6.3. Section 7.0 identifies and assesses proposed mitigation measures.

Table 6-4: Risk Assessment Table

No.	Potential Impact	Risk Assessment		
		Likelihood	Consequence	Risk prior to mitigation
1	Loss of threatened ecological community	Almost Certain	Minimal	Medium
2	Loss of habitat of threatened species	Possible	Moderate	Medium
3	Loss of fauna	Remote	Minor	Negligible
4	Impacts on Migratory Fauna	Possible	Minor	Low
5	Loss of Rare and Uncommon Flora	Possible	Minor	Low
6	Loss of 'Native Vegetation'	Almost Certain	Minimal	Medium
7	Weed invasion	Possible	Minimal	Very Low
8	Loss of Aboriginal Cultural Heritage Items	Unlikely	Minor	Very Low
9	Loss/Damage to Historical Item	Unlikely	Minor	Very Low
10	Traffic / Access Impacts	Unlikely	Minimal	Negligible
11	Water contamination	Unlikely	Minor	Very Low
12	Erosion and Sedimentation	Unlikely	Minor	Very Low
13	Impact on Waterways	Unlikely	Minor	Very Low
14	Bushfire	Possible	Minor	Low
15	Air quality	Remote	Minimal	Negligible
16	Noise	Possible	Minimal	Very Low
17	Visual Impact	Almost Certain	Minimal	Medium
18	Soil contamination	Unlikely	Minor	Very Low
19	Electromagnetic radiation	Possible	Minimal	Very Low

Source: Purdon Planning

### 5.3 Discussion of Potential Risks

This section addresses the rationale for each of the assessments of Likelihood, Consequence and Risk for each of the impacts identified above (refer to Table 6-4 above).

Table 6-4 above highlights that there are no elements associated with the project that result in a High, Very High or Significant risk. In addition, only four elements result in a Medium risk assessment. These elements being: loss of habitat of threatened species, loss of native vegetation and visual impact.

The discussion draws on the third party reports, studies and assessments that have been commissioned by the Proponent in relation to the proposed development and are attached to this submission.

#### 5.3.1 *Loss of threatened ecological community (TEC)*

The Ecological Assessment (refer Attachment D) investigated two threatened ecological communities (TECs) identified on Department of the Environment's EPBC Act Protected Matters Search Tool as having the potential to occur within the study area, being:

- Natural Temperate Grassland of the South Eastern Highlands and New England Tablelands.
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

Both above ecological communities are listed as critically endangered pursuant to the EPBC Act.

The field research undertaken by Capital Ecology confirmed that the study area does not contain natural temperate grassland. However, the study confirms that patches of the climax community of the woodland TEC, in its woodland and derived grassland forms, remain within the study area (and throughout much of the surrounding area).

The proposed sub-transmission lines involve creating a 'work area' of approximately 400m<sup>2</sup> around three new poles, plus modification of vegetation along the route to ensure the trees do not present a risk to the transmission lines. As such, the possible removal of 1,200m<sup>2</sup>, together with the modification of a further 7,500m<sup>2</sup>, of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland from the local area is to have a minimal consequence on the overall extent of the threatened ecological community in the broader area.

*While it is almost certain the project will result in the loss of a small area of woodland vegetation, the overall risk is considered medium.*

#### 5.3.2 *Loss of habitat of threatened species*

The Ecological Assessment Report included an assessment of the likelihood of occurrence of threatened species. Table 6-5 lists the threatened species or populations considered to have a moderate or high likelihood of occurrence within the study area.

**Table 6-5: Likelihood of Threatened Species**

Table 6-6: Likelihood of Threatened Species				
Name	Status		Likelihood of Occurrence	Type/value of habitat within study area
	Commonwealth	ACT		
Birds				
<i>Anthochaera phrygia</i> Regent Honeyeater	E	E	Moderate	Foraging habitat only – low significance given the extensive habitat in the locality.
<i>Climacteris picumnus victoriae</i> Brown Treecreeper (eastern subspecies)	-	V	High	Foraging habitat with a small potential for breeding to occur within or adjacent to the study area. Survey for nesting activity recommended prior to clearance of vegetation.
<i>Daphoenositta chrysoptera</i> Varied Sittella	-	V	High	Foraging habitat with a very low potential for breeding within or adjacent to the study area.
<i>Grantiella picta</i> Painted Honeyeater	V	V	Moderate	Potential foraging habitat only.
<i>Hieraaetus morphnoides</i> Little Eagle	-	V	High	Foraging habitat. Unlikely to breed within the study area.
<i>Lathamus discolor</i> Swift Parrot	E	V	Moderate	Potential foraging habitat only.
<i>Melanodryas cucullata cucullata</i> Hooded Robin (south-eastern form)	-	V	High	Potential foraging and breeding habitat.
<i>Petroica boodang</i> Scarlet Robin	-	V	High	Potential foraging and breeding habitat.
<i>Lalage sueurii</i> White-winged Triller	-	V	High	Potential foraging and breeding habitat.
Mammals				
<i>Dasyurus maculatus maculatus</i> Spot-tailed Quoll	E	V	Moderate	May pass through but unlikely to be significant habitat for this species. Prefers large undisturbed natural areas.
<i>Pteropus poliocephalus</i> Grey-headed Flying Fox	V	-	Moderate	Potential foraging habitat only – low significance given the extensive habitat in the locality.
Plants				
<i>Leucochrysum albicans</i> var. <i>tricolor</i> Hoary Sunray	E	-	Confirmed	Recorded within Zone 2 – Derived Grassland. It is unknown whether the plants present are naturally occurring or from seed dispersing from the many plants planted in the revegetation areas in the TransGrid easement.

Source: Capital Ecology

In addition to the species in the above table, a number of plant species classified as ‘rare or uncommon’ have been recorded in the locality. Specifically two species, Grey Parrot-pea *Dillwynia cinerascens* and Showy Copper-wire Daisy *Podolepis jaceioides*, were recorded approximately 50 m to the north of the study area.

The EAR recommends that a targeted flora survey in spring be undertaken to further determine whether these species are present in the study area as the majority of these flora species are cryptic groundstorey plants which are generally only conspicuous when in flower.

The small areas of clearing required to carry out the works could result in a minor loss of habitat for the species listed in Table 6-5. The further survey work to be undertaken in spring will better assess the impact of the proposed development upon the identified threatened species. The implementation of recommendations (if any) arising from the spring survey will be implemented to mitigate potential impacts on the habitat of threatened species.

At this time (ahead of the spring survey work), the available information suggests that the majority of the threatened species with potential breeding or high quality foraging habitat within the study area are threatened woodland birds likely to occur throughout much of the broader locality.

*Given the extent of potential foraging and breeding habitat in the locality, the proposed development is unlikely to significantly impact these species, provided they are not utilising the habitat for breeding at the time the works are undertaken.*

### **5.3.3 Loss of Fauna**

The EAR highlights that the areas of rocky habitat may support some fauna. It is not proposed to remove these rocky areas. The impact on fauna has been detailed above.

*It is considered that, apart from some impact on local habitat, the likelihood of actual loss of fauna is considered remote and the overall risk is negligible.*

### **5.3.4 Impacts on Migratory Fauna**

As outlined in Section 6.3.2, the available information suggests that the study area supports foraging habitat for threatened woodland birds. However, these species are likely to occur throughout much of the broader locality.

*There is a possibility of impact on migratory fauna although the consequences are considered to be minor and the overall risk is considered to be low.*

### **5.3.5 Loss of Rare and Uncommon Flora**

As outlined in Section 6.3.2, the EAR indicated that a number of plant species classified as 'rare or uncommon' have been recorded in the general locality, with Grey Parrot-pea *Dillwynia cinerascens* and Showy Copper-wire Daisy *Podolepis jaceioides* recorded approximately 50 m to the north of the study area.

The EAR recommends that a targeted flora survey in spring be undertaken to further determine whether these species are present in the study area as the majority of these flora species are cryptic groundstorey plants which are generally only conspicuous when in flower

*Overall, there is a possibility of loss of rare and uncommon flora, although the consequences are considered to be minor and the overall risk is considered to be low. This conclusion is reinforced through the mitigation measure of further survey work in Spring and implementation of any recommendations arising from that survey work.*

### **5.3.6 Loss of 'Native Vegetation'**

The proposed works involve the removal of approximately 1,200m<sup>2</sup> of native vegetation plus modification of a further 7,500m<sup>2</sup>. This matter has been addressed in detail in Section 6.3.1 above.

*The removal of some native vegetation is almost certain, but the consequence is considered minimal resulting in a Medium risk.*

### **5.3.7 Weed Invasion**

The existing electrical corridor contains a number of areas with weed infestation. The movement of trucks onto and through the transmission easement has the potential to transport weeds into the area. For this reason, best practice weed management will be implemented during all works to ensure that weeds (notably St John's Wort) are not spread further within the easement and surrounding locality.

*With the proposed level of management of truck hygiene and materials, it is unlikely that weeds will be imported to the site. The consequences of such an occurrence, while possible, would be minimal due to the weed management controls which will limit the duration and intensity of impact is considered minor. The risk is therefore very low.*

### **5.3.8 Loss of Aboriginal Cultural Heritage Items**

The Heritage Assessment undertaken by Past Traces P/L concluded that:

- No registered Aboriginal or historical heritage sites are located within the project area.
- No areas of potential archaeological deposits or scarred trees have been identified within the development area and the potential for unidentified Historical or Aboriginal heritage objects within the development area has been assessed as low.
- The desktop assessment finds that the potential to impact on heritage sites within the confined impact areas of the pole locations is assessed as low.

*It is considered that the likelihood of loss of cultural heritage items is considered remote and the overall risk is negligible.*

### **5.3.9 Loss and/or Damage to an Historical Item**

As outlined above, the Heritage Assessment concluded that the potential to impact on heritage sites within the confined impact areas of the pole locations is assessed as low. Notwithstanding this, an Unanticipated Discovery Plan will be implemented for the project.

*It is considered that the likelihood of loss or damage to historical items is considered remote and the overall risk is negligible.*

### **5.3.10 Traffic / Access / Circulation Impacts**

The project will involve some traffic movement during construction works to facilitate delivery of materials and machinery to the site, as well as contractor/staff vehicles. Access to each of the pole locations can be achieved directly off the existing TransGrid access road. This is an existing sealed road with established access to the Monaro Highway. The traffic post-construction for ongoing maintenance work will be negligible.

*The risk associated with traffic impacts of the proposed development is considered negligible.*

Figure 5-1: Site Access/Egress Points



*Access to the site for construction works will be via the existing access road to the TransGrid Sub-station.*



### 5.3.11 Water contamination

During construction works, water may be contaminated as a result of:

- Carriage of spoil on the tyres of vehicles which may be washed into local watercourses
- Erosion from minor earth works / track construction
- Accidental spills/leaks of fuels, chemicals and other pollutants into nearby watercourses.

To reduce the likelihood of such contamination,

*The consequence of contamination of the local watercourse is considered minor, depending on the scale and location of the event. There is therefore a very low risk.*

### 5.3.12 Erosion and Sedimentation

During works, soil erosion and sedimentation may be initiated as a result of:

- removal of vegetation and earthworks
- compaction of soil by equipment and vehicles
- lengthy exposure of soil to weather.

However, erosion and sedimentation is expected to be minimal because the work involves no major earthworks. It is anticipated that cut and fill will be in balance and kept to a minimum, and therefore soil will not leave the subject area.

*The unlikely occurrence of erosion or sediment consequences from line construction creates a very low risk.*

### 5.3.13 Impact on waterway

The impact on the environmental value of the creekline running westward from the Monaro Highway and parallel to the TransGrid access road could result from:

- Changes to water quality due to impacts detailed above (Water contamination).
- Changes to water quantity, due to clearance of vegetation, reshaping of some of the land and/or blockage of creekline.

The creek is not a permanent waterway and surface flows are already interrupted by the existing farm dams.

Figure 5-2: Existing 'creek-line'



Source: ACTMAPI

*The remote possibility of an impact upon the waterway could produce a minor impact, resulting in a negligible risk.*

#### **5.3.14 Bushfire risk**

The distribution of electricity via high voltage sub-transmission lines has the potential to cause ignition of bushfire fuels either within or adjoining the easement corridor. Whilst unlikely, ignition sources include:

- equipment malfunction – broken power line due to wind storm, lightning strike
- mechanical damage (e.g. aircraft strike)
- arc to ground caused by dense bushfire smoke
- human error – (e.g. faulty installation).

The incidence of these ignition sources is rare or remote. In terms of a potential risk of bushfire impact on the Transmission Line, the proposed poles are to be constructed from concrete (or steel), are non-combustible and are high enough above the ground so that fires occurring within the grassland and woodland vegetation will not generate sufficient height to directly affect the conductors with flame contact.

*Bushfire resulting from transmission lines is possible, however, the location of the site adjacent to an existing access road and the Monaro Highway means the consequence of a bushfire is minor and the risk is negligible.*

#### **5.3.15 Air quality**

As a result of the works proposed, air quality could be affected by:

- Dust generation through earthworks; and
- Emissions from vehicles and machinery during construction and maintenance.

If no mitigation measures are taken, the probability of upgrade works creating impacts on air quality is likely, although the extent and potential impact is minimal. Notwithstanding, it is proposed to implement mitigation measures including:

- A water cart or similar spray application to be used on-site to suppress dust during periods of high wind
- Activities within areas susceptible to dust generation to be minimised, where possible, particularly during periods of high wind
- Trucks hauling loose materials (e.g. soil) to and from the site to be covered at all times,
- No burning activities to be undertaken.

As a result of these measures, and given the remoteness of the line from urban areas, the probability of works creating impacts on air quality is remote. The consequence of such dust and vehicle emissions is minimal, because of the remoteness of the line from residential dwellings and the short term duration of impacts.

*In summary, the risk of air quality having a noticeable impact is negligible based on the implementation of the above mitigation measures.*

#### **5.3.16 Noise**

As a result of the works proposed, noise levels in the area could be affected by:

- Trucks entering and leaving the Monaro Highway; and

- Noise from vehicles and machinery during construction.

Even if no mitigation measures are taken, the probability of upgrade works creating acoustic impacts on the nearest residences is negligible. The nearest dwellings are approximately 1 ½ km (both north and south) from the site.

No vibration impacts are expected because of the anticipated type of plant involved and the limited amount of excavation work.

Because of the low volume of earthworks, the small number of truck movements proposed and the prevailing traffic volumes along the Monaro Highway, it is anticipated that construction traffic noise will be minimal.

*In summary, the risk of the works having a noticeable acoustic impact is negligible.*

### **5.3.17 Visual Impact**

The new route alignment will be at right-angles to the travelling public along the Monaro Highway and will cross the highway at the point where there are existing electrical conductors crossing the highway. As such, the visual impact from the Monaro Highway is not a new impact but rather the impact from additional wires across the highway.

The proposed works within the existing TransGrid sub-station are consistent with the visual amenity of the existing substation. The visual impact of the works on the surrounding area is expected to be minimal given the current visual dominance of the existing sub-station and associated transmission line network. Overall, there would be minimal change to the existing external view of the sub-station site and negligible visual impact from the road or neighbouring properties is anticipated.

*Although additional visual impact is almost certain, the limited views from the Monaro Highway and the existence of existing transmission lines and major sub-station means that the consequence is considered minimal and the risk of visual impact is considered medium.*





*View along Monaro Highway looking north from the TransGrid access road*

#### **5.3.18 Soil contamination**

Soil on and adjoining the site may be contaminated due to:

- waste materials leaching out
- sedimentation of and erosion of soil
- incorrect choice of fill.

These issues have been addressed individually. The risk of waste materials being incorrectly stored or disposed of is low. It is concluded that the unlikely occurrence of a moderate impact of erosion or sediment consequences creates a low risk. There will be no importation of soil or fill.

*In summary, the unlikely possibility of soil contamination with minor consequences, is a very low risk.*

#### **5.3.19 Electromagnetic radiation**

Electric fields are created by differences in voltage: the higher the voltage, the stronger will be the resultant field. An electric field will exist even when there is no current flowing. Magnetic fields are created when electric current flows: the greater the current, the stronger the magnetic field.

The route is almost 1 ½ km from the nearest house and is outside areas used frequently for recreation or intensive activities. This distance substantially reduces the likelihood of increased exposure to electric and magnetic fields generated by the sub-transmission lines.

The EMF levels must meet the requirements of the existing National Health Medical Research Council guidelines.

*The possibility that the 132kV transmission line could have any consequence creates a very low risk.*

#### **5.3.20 Safety & Security**

Climbing bars will be provided for maintenance access but will be at least 3m from the ground to prevent unauthorised access.

The following measures would be undertaken in accordance with industry standards to provide safety and security:

- warning signage indicating the dangers in climbing support structures
- construction methods to eliminate the possibility of support structure failure
- appropriate conductor connections to eliminate the possibility of wires loosening or collapsing.

*In summary, the remote possibility that the 132kV transmission line could have any consequence creates a negligible risk.*

## 6.0 Mitigation Measures

This section describes the measures that will be implemented in order to avoid and/or minimise any impact on identified conservation values. They are derived from the recommendations of attached reports. These measures relate to a number of the matters identified in the Risk Assessment and are summarised below:

1. Protection of threatened ecological community
2. Revegetation of native vegetation
3. Weed management
4. Unanticipated Discovery Plan for cultural heritage items
5. Traffic and access management
6. Water quality management
7. Erosion and Sediment Control Plan
8. Measures for Site storage/stockpiling
9. Bushfire risk management
10. Noise management
11. Visual Impact.

The following sections provide more details on mitigation measures.

### 6.1 Protection of threatened ecological community

In order to reduce potential impacts upon the ecological values within the study area a number of measures will be implemented during and following the proposed development. These are described below.

- **Minimisation of Disturbance** - Disturbance associated with the proposed development will be minimised to the extent necessary to carry out the works. Specific measures that will be implemented to prevent unnecessary disturbance include the following.
  - The defined Pole Installation Disturbance Areas will be established and demarcated (using surveyors pegs and high visibility flagging) at each power pole site prior to works commencing.
  - Vegetation removal and soil disturbance will be limited to the fullest extent practicable – only woody vegetation that is required to be removed for the easement and pole locations will be removed, and the groundstorey will not be disturbed except within the 20x20 m Pole Installation Disturbance Areas, within which disturbance will be minimised.
  - Relevant information regarding the significance and sensitivities of the relevant ecological values, particularly Box-Gum Woodland, will be communicated to contractors via toolbox talks and inductions.
- **Avoidance and protection of any populations of threatened or rare flora species recorded during spring surveys** - Although no threatened or rare flora species were recorded during the field survey, numerous such species may be present which were not identifiable at the time of survey. As such, a targeted survey for threatened and rare flora is required to be undertaken in spring, prior to the proposed works commencing. It is understood that Essential Energy wishes to proceed with the ACT approvals process prior to the spring survey season. For this reason, measures are provided below to be implemented should



threatened or rare flora be recorded during the survey, such that regulators can assess the impact of the proposed development without a survey having yet been undertaken.

Should a population of a threatened or rare species be detected during the survey, the following will be undertaken.

- The population will be mapped in detail by an ecologist.
- The works will be adjusted to avoid the population such that no physical disturbance of the population will occur. If this cannot be achieved, a separate impact assessment will be completed for the species and the works will not commence until approval is granted.
- If the population can be avoided, a temporary exclusion fence will be erected around the population with a buffer to be determined by an ecologist in consultation with the ACT Government and Essential Energy. No works or disturbance, including vegetation removal, shall occur within the exclusion fence. No vehicles or plant shall enter the fenced area.
- Relevant information regarding the location and significance of the threatened or rare flora species will be communicated to contractors via toolbox talks and inductions.
- Appropriate sediment and erosion control will be installed to ensure that no overland flow of soils or other materials occurs upslope of the population.
- Prior to works commencing, a pre-clearing survey will be undertaken by an ecologist to determine whether native birds are nesting within vegetation to be cleared or threatened birds are nesting within the area adjacent to the works (to 100 m).
- In the event that a nest or nests of a threatened species is identified within 100 m of the works, works will be delayed until the young fledge (are no longer dependent upon the nest).
- Should the study area or adjacent land appear to be of particular significance as nesting habitat for a threatened bird species, a separate impact assessment will be completed for the subject species, and the works will not proceed until approval is granted. Note: this is preliminarily considered to be unlikely, given the generally sparse nature of the woodland and the expanses of less disturbed potential nesting habitat in the locality.

## **6.2 Revegetation of native vegetation**

A revegetation program will be implemented for the site. The scope of works will include revegetation involving seed collection / propagation from locally indigenous species, particularly grasses. The areas disturbed during construction works will be revegetated with the native grass species which are dominant or associate species of the ground-storey along the corridor.

Due to the on-going maintenance of the corridor as a 132kV powerline easement, trees and mid-storey species will not be re-established within the corridor.

The species used and proportion of the seeding mix comprised by each species will need to be determined depending upon availability at the time required. .

No later than one (1) month following the completion of construction on any pole disturbance zone, all clearance areas (other than access tracks) will be reinstated and rehabilitated.

## **6.3 Weed management**

The weed management measures that will be implemented to prevent the introduction and/or spread of weeds include the following.

- Appropriate vehicle hygiene will be maintained. Vehicles and machinery (including tools for vegetation removal) entering the work site will be clean of weed seed or propagules.

- Only low fertility soils sourced on site will be used to fill excavations, no top-soil or other potentially weed seed laden organic material will be imported from elsewhere.
- Only sterile materials such as hessian/jute or rice straw will be used for soil stabilisation or similar purposes.

## **6.4 Protection of Aboriginal Cultural Heritage**

The recommendations of the Heritage Assessment will be implemented, including:

- If the project area should be enlarged or further impacts anticipated progression to a Cultural Heritage Assessment with the participation of the Aboriginal community will be required.
- All Aboriginal objects are protected under the NSW National Parks and Wildlife Act 1974 and ACT Heritage Act 2004. It is an offence to disturb an Aboriginal site without a consent permit issued by the NSW Office of Environment and Heritage (OEH) or approvals granted by ACT Heritage.
- Approvals should be sought for the project either through a Development Application or approval of a Statement of Heritage Effects prior to works commencing. Under the ACT Heritage Act 2004, this report does not constitute a defence against harming any Aboriginal heritage sites. Further studies may be requested by the relevant agency.
- Should any Aboriginal objects be encountered during works then works must cease immediately in the vicinity of the find, and the find should not be moved until assessed by a qualified archaeologist. Adherence to the Unexpected Discovery Plan (UDP) attached at Appendix 1 is required.

### ***6.4.1 Unanticipated Discovery Plan for cultural heritage items***

All Aboriginal and significant historical heritage places or objects are protected under the Heritage Act 2004. Offence provisions (Section 74 and Section 75) of the Act apply to impacting heritage sites.

If any items are uncovered during the course of works, which are considered to possibly be of Aboriginal or historical significance the process outlined below will be followed to avoid breaching obligations under the Act. However, the unanticipated discovery plan will form part of the Construction Environment Management Plan but will not be undertaken until it has been endorsed by the ACT Heritage Council.

### **Unexpected Discovery of Aboriginal Cultural Heritage**

If suspected Aboriginal Heritage items (isolated stone artefacts, artefact scatters, archaeological deposits or scarred trees are found then the following management process must be implemented:

1. Work must immediately stop in the area within a buffer zone of 10 metres from the primary grid coordinate.
2. ACT Heritage (132281) must be informed of the suspected find within 5 working days.
3. A suitably qualified heritage advisor and the Representative Aboriginal Organisation (RAOs) must be engaged to assess the potential site.
4. If the items are not considered to be Aboriginal, activity may recommence.
5. If the items are considered to be Aboriginal, the Proponent, RAOs and the Cultural Heritage Advisor, will discuss the possibility of avoiding and minimising harm to the

Aboriginal cultural heritage, and the Proponent must avoid or minimise harm to the Aboriginal cultural heritage, where possible.

6. If the items are considered to be Aboriginal, an assessment report will need to be prepared and submitted to the Heritage Council. After approval from the Heritage Council, the artefacts should be recorded and salvaged in accordance with the approved methodology.
7. After approval of the salvage report, works can recommence.

### **Unexpected Discovery of Historical Cultural Heritage**

If suspected historical items are found then the following management process must be followed:

1. Work must immediately stop in the area within a buffer zone of 10 metres from the primary grid coordinate.
2. ACT Heritage must be contacted on 13 22 81 for advice.
3. A suitably qualified heritage advisor needs to be engaged to assess the potential site.
4. If the items are not considered to be historically significant, activity may recommence.
5. If the items are considered to be historically significant, a management recommendation should be given by the heritage advisor.
6. Following approval by ACT Heritage Council and completion of the management recommendation, the activity may then recommence.

### **Unexpected Discovery of Human Remains**

If any suspected human remains are discovered during any works, all activity in the areas must cease immediately. The following contingency plan describes the actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the activity area must follow these steps.

#### ***Discovery:***

- If any suspected human remains are found during any activity, works in the vicinity must cease.
- All personnel should leave the area immediately
- The remains must be left in place, and protected from harm or damage.

#### ***Notification:***

- The ACT Federal Police must be notified immediately. All details of the location and nature of the human remains must be provided to the relevant authorities.
- If there are reasonable grounds to believe that the remains are Aboriginal, ACT Heritage must be contacted immediately on 13 22 81.
- The Project Manager must be contacted immediately.

#### ***Process:***

- If the remains are considered to be Aboriginal by the AFP an appropriate management and mitigation, or salvage strategy will be implemented following consultation with the RAOs and ACT Heritage.

## **6.5 Traffic and access management**

Vehicular/plant movement within the study area will be limited to that which is necessary to complete the works.

Vehicle and equipment parking/storage sites will be established in previously disturbed areas (e.g. along the Transgrid entry road and areas already cleared of vegetation in all strata or those identified as Exotic Vegetation).

## **6.6 Erosion and Sediment Control Plan**

Although the risk of erosion and sedimentation is minimal, where required, erosion and sediment controls will be established in accordance with the Environment Protection Guidelines for Construction and Land Development in the ACT (ACT Government 2011).

## **6.7 Measures for Site Storage/Stockpiling**

The following mitigation measures are proposed:

- Appropriate storage containers and bunded areas will be provided for all chemicals, fuels and other potentially contaminating products. Containers and bunds will be made of high quality material that will withstand the chemical being contained (i.e. will not corrode or warp). Containers will be fitted with an effective cap and suitably labelled.
- Spill response kits will be provided at the construction site where chemicals and hazardous materials are stored and used. Staff will be sufficiently trained in their use and restocking.
- Designated areas for parking of construction equipment and vehicles will be provided to prevent potential contamination of surface soils.
- All construction equipment will be inspected and operational prior to commencing site works. Equipment will be maintained in accordance with the manufacturer's specifications.
- Chemical and fuel storage will be kept to a minimum throughout the duration of construction works.
- Where on-site refuelling activities are necessary, these will take place within bunded areas or drip trays will be used to prevent spills impacting the environment.
- Chemical spill response kits will be accessible at all construction sites. Staff will be sufficiently trained in their use and restocking.
- Fuel, oil, chemicals and herbicides will be stored in accordance with Australian Standard 1940 – The Storage and Handling of Flammable and Combustible Liquids. This includes storage and handling within designated bunded areas to prevent the release of spilt substances to the environment.
- Chemical and fuel spill containment and clean up material will be kept on-site at all times. Site personnel will be trained to respond to chemical and fuel spills within the appropriate equipment.

With regard to soil and stockpiling and pole laydown areas:

- Excavated material will be levelled and spread within the easement area prior to rehabilitation of the site. Where this is not possible, the material will be removed from the site and taken to an approved landfill site. Any temporary stockpiles will be covered and erosion control measures installed down gradient.

- Stockpiling of soil will only occur within designated areas within the construction area and outside of drainage lines.
- Soil stockpiles will be no greater than 2m in height.

It is anticipated that cut and fill will be in balance and kept to a minimum, and therefore soil will not leave the subject area.

## **6.8 Bushfire Risk Management**

The fuel management program for the existing TransGrid transmission line aims to reduce the accumulated litter loadings along the easement corridor. The access track will be retained permanently as it is required for access to the sub-station.

In terms of bushfire hazard risk to the proposed poles, they are to be constructed from concrete (or steel), are non-combustible and are high enough above the ground so that fires occurring within the grassland and woodland vegetation, beyond the easement corridor, will not generate sufficient height to directly affect the conductors with flame contact.

## **6.9 Noise Management**

To mitigate potential for unacceptable levels of noise from vehicles and machinery during construction and maintenance and from trucks entering and leaving on Monaro Highway, the following measures are proposed:

- Construction works will be limited to the times permitted under the ACT Noise Environment Protection Policy (i.e. between 7am and 6pm, six days a week). No work is permitted for Sundays.
- The volume of reversing alarms will be adjusted to a minimum value that can be heard as a warning by workers in close proximity to the machine.

## **6.10 Visual Impact**

The new route alignment will be at right-angles to the travelling public along the Monaro Highway and will cross the highway at the point where there are existing electrical conductors crossing the highway. As such, the visual impact from the Monaro Highway is not a new impact but rather the impact from additional wires across the highway.

The following measures are proposed to mitigate visual impact, in regards to the new transmission lines:

- Use of poles rather than 'lattice' towers
- Conductors configured in a vertical arrangement
- Crossing of highway immediately adjacent to existing conductors
- The line will be designed to achieve a minimum ground clearance of 7m

The proposed works within the existing TransGrid sub-station are consistent with the visual amenity of the existing substation. Overall, there would be minimal change to the existing external view of the sub-station site and negligible visual impact from the road or neighbouring properties is anticipated.



## 7.0 Residual Risk Assessment

Table 7-1 provides details of the residual risk assessment of likelihood, consequence and risk associated with identified impacts after the implementation of related mitigation measures.

A detailed discussion of potential risks is presented in Section 5.3. Section 6.0 identified and assessed proposed mitigation measures.

Table 7-1: Residual Risk Assessment Table

No.	Potential Impact	Risk Assessment After Mitigation		
		Likelihood	Consequence	Risk AFTER mitigation
1	Loss of threatened ecological community	Possible	Minimal	Very Low
2	Loss of habitat of threatened species	Unlikely	Moderate	Low
6	Loss of 'Native Vegetation'	Likely	Minimal	Low
17	Visual Impact	Likely	Minimal	Low

Source: Purdon Planning

## 8.0 Conclusion

This submission has described a proposed transmission line from an existing substation extending eastward across the Monaro Highway and ACT border as part of a new regional network connection.

The project is an important segment of the regional electricity network managed by Essential Energy.

The submission seeks exemption from an EIS under S211 of the P&D Act because the nature of the development and the proposed mitigation measures combine to minimise or offset a number of minor environmental impacts identified as part of the risk assessment in the study.

In addition, the exemption is based upon technical environmental and heritage studies that have been undertaken for the project and are attached to this S211 submission.

It is understood that proposed mitigation measures will form the basis of conditions of development consent.

It is therefore **recommended** that EPD and the Minister endorse the section 211 exemption sought by this submission.

**Purdon Planning**  
**25 August 2016**

## **Attachments**

Attachment A: Route Plans (Purdon Planning)

Attachment B: Laydown Zones and Construction Compound Plan (Purdon Planning)

Attachment C: Ecological Assessment Report (Capital Ecology)

Attachment D: Aboriginal Cultural Heritage Assessment (Past Traces)









**Attachment A**  
**Route Plans**  
**(Purdon Planning)**





**Attachment B**

**Laydown Zones and Construction Compound Plan**  
**(Purdon Planning)**



**Attachment C**  
**Ecological Assessment Report**  
**(Capital Ecology)**





**Attachment D**

**Aboriginal Cultural Heritage Assessment**

**(Past Traces)**







## **Lyn O'Brien details**

### **Past Traces – Heritage Consultants**

**Phone – 0403 021296**

Past Traces provides a personalised approach to heritage approvals based on each project's individual requirements and consistently clear communication.

With over 15 years' experience in the heritage profession, Lyn O'Brien, Past Traces director, provides effective solutions to heritage issues and ensures successful consultation with the Aboriginal community.

Since completing her BA (Hons) in Archaeology at the Australian National University (ANU) in 1996, Lyn has held a variety of consulting positions, from field assistant through to regional manager/ senior archaeologist, accumulating skills and experience in field techniques, project management and liaison, negotiation and consultation.

For 5 years, Lyn held a research position at the ANU's Research School of Pacific Studies investigating the colonisation of the Australasia/ Pacific region, resulting in several publications. As a senior heritage consultant for several major consulting firms, Lyn gained extensive experience managing major and small scale projects, conducting numerous field surveys and excavations and authoring reports across both Aboriginal and Historical archaeology.

Specialising in Aboriginal cultural heritage, she has extensive experience working with Indigenous and other community stakeholder organisations throughout NSW and the ACT. Her depth of knowledge and experience enables her to apply a detailed understanding of the varied legislative requirements at Commonwealth and State or Territory levels to your project and to work within the cultural sensitivities of Aboriginal stakeholders.



## Curriculum Vitae - Robert Speirs

### Position

Director / Principal Ecologist



### Qualifications and Training

Bachelor of Applied Science (Ecology & Environmental Science), University of Canberra, 2004

Majors: Natural Resource and Environmental Management, Vegetation and Wildlife Management

Minor: Cultural Heritage Management

Diploma in Project Management, Australian College of Project Management, 2015

Certified Environmental Practitioner (CEnvP) – Reg. No. 565

Senior First Aid, St Johns

Advanced Four Wheel Drive Training Course, Great Divide Tours Pty Ltd

### Professional Memberships and Affiliations

Full member of the Environment Institute of Australia and New Zealand (EIANZ)

Ecological Consultants Association of New South Wales (ECANSW)

Australian Institute of Project Management (AIPM)

Friends of Grasslands (FoG)

ACT Grasslands Working Group

### Employment Profile

August 2015 – Present	Director / Principal Ecologist, Capital Ecology Pty Ltd, Canberra.
2011 – August 2015	Senior Ecologist – Biosis Pty Ltd, Canberra.
2010 – 2011	Consultant Ecologist – Biosis Pty Ltd, Canberra.
2007 – 2010	Ecologist - Cardno Environment, Cardno Limited, Brisbane.
2004 – 2006	Bush Regeneration Supervisor, Seeds & Plants Australia, Canberra.

## Professional Experience

Robert has undertaken a diverse range of projects for both public and private sector clients, including urban developments, quarry extensions/remediation and linear (pipeline, electricity, telecommunications and transport) infrastructure. He is highly experienced in the design, implementation and management of complex ecological surveys, habitat assessments and vegetation mapping programs and has developed particular expertise in the ecology of the lowland woodlands and grasslands of the ACT and Southern Tablelands, Riverina and Southwest Slopes of NSW.

Robert is experienced with vertebrate trapping and handling protocols and the identification of evidence of fauna presence. With his extensive experience in assessing habitat potential and quality for threatened species, Robert has been engaged by both government and private clients to design and implement numerous large-scale targeted surveys for threatened species. His knowledge regarding the threatened reptiles of the ACT region has led him to advise both the Commonwealth and ACT governments with strategic direction for the conservation of these species and assist with the preparation of recovery plans.

Robert has written and reviewed hundreds of scientific reports, including flora and fauna impact assessments and management plans prepared in accordance with the relevant Commonwealth and State/Territory legislation. He has also prepared numerous offset strategies, vegetation management plans, weed management plans and natural area remediation plans. Robert has provided expert witness testimony at Commonwealth Public Works Committee hearings and prepared evidence for judicial proceedings in the NSW Land and Environment Court and Queensland Planning and Environment Court.

Robert has recently completed his Diploma in Project Management, further strengthening the project management skills he employs on each Capital Ecology project. Robert is a Certified Environmental Practitioner (CEnvP) and an active member of the ACT branch of the Environment Institute of Australia and New Zealand (EIANZ).

## Fields of Competence

- Project management and report preparation
- Native flora survey, identification and mapping
- Native vegetation community classification and mapping
- Weed survey, identification and mapping
- Native fauna survey and monitoring, identification and habitat assessment
- Threatened flora and fauna species assessment (including EECs)
- Threatened species management
- Koala habitat assessment and management
- Bushland management and habitat restoration
- Monitoring of natural area remediation and rehabilitation
- Development of ecological values and constraints assessments
- Advice on route selection for linear infrastructure developments
- Development of offset strategies



# Williamsdale 132kV Connection Ecological Assessment Report

**May 2016**

**Prepared for Purdon Planning**



## Document Information

**Report for:** Purdon Planning Pty Ltd  
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**Capital Ecology project no.:** 2701

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- ACT Government, Conservation Research: Jennifer Smits.

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# 1 Executive Summary

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Essential Energy proposes to construct a new 132kV powerline between the Transgrid 330/132kV substation in Williamsdale, ACT, and the existing 132kV alignment, located in NSW. Capital Ecology Pty Ltd has been commissioned by Purdon Planning Pty Ltd to undertake ecological surveys and prepare this ecological assessment report to identify and assess the significance of the impacts that the proposed development may have upon the biodiversity values of the subject land and surrounds.

The following was undertaken.

- A desktop review of databases and relevant literature.
- A field survey over 22 and 24 March 2016 to assess and map the vegetation and habitat for threatened species within the study area.
- The preparation of a Likelihood of Occurrence Assessment which addresses all threatened ecological communities, threatened flora species and threatened fauna species with the potential to occur within the study area.
- An assessment of the potential for impacts, and the likely significance of these impacts, upon the listed significant biota identified as occurring or potentially occurring within the study area.
- Preparation of advice and recommendations regarding the impact avoidance, minimisation, mitigation, and/or offset measures that may be required to facilitate approval of the proposed works by the ACT Government.

## Results

The study area was assessed as supporting the ACT Plant Community Type *PCT ACT16: Yellow Box-Red Gum Tableland Grassy Woodland*. The study area was further categorised into the following three discernable Vegetation Zones:

- Zone 1 – Woodland – moderate to high diversity;
- Zone 2 – Native dominated Derived Grassland of woodland, moderate to high diversity; or
- Zone 3 – Highly modified/non-natural communities, mapped as Exotic Groundstorey, Planted Native Trees over Exotic Groundstorey, and Recent Revegetation Groundstorey Plantings.

Zones 1 and 2 were determined to be clearly consistent with the definition of the Box-Gum Woodland threatened ecological community as listed pursuant to the Commonwealth EPBC Act and ACT NC Act.

No threatened fauna species were recorded during the field survey, however one EPBC Act endangered listed flora species, Hoary Sunray *Leucochrysum albicans* var. *tricolor*, was recorded within the study area. The study area was also determined to constitute potential habitat for 12 other threatened species. The study area may also support plant species listed as 'rare or uncommon' by the ACT Government Conservation Research unit. Targeted survey for threatened, rare or uncommon flora is required in spring to determine whether such species occur within the study area.

## Assessment against Biodiversity Conservation Legislation and Policy

The below table provides a summary of the results of the completed assessment with regard to the current relevant biodiversity conservation legislation and government policy

Legislation/Policy	Relevant Biodiversity Values	Assessment Results and Requirements
<b>Commonwealth</b>		
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<p>White Box – Yellow Box – Blakely's Red Gum grassy woodland and derived native grassland (EPBC Act Box-Gum Woodland).</p> <p>Potential habitat for threatened fauna species.</p>	<p>The proposed development is unlikely to significantly impact upon any MNES, however the proposed avoidance, minimisation and mitigation measures (Section 6) are essential in assuring this. As such, provided the measures are implemented, referral of the development for consideration under the provisions of the EPBC Act is not considered warranted.</p>
<b>Australian Capital Territory</b>		
<p><i>ACT Nature Conservation Act 2014</i></p> <p>and</p> <p><i>ACT Planning and Development Act 2007</i></p>	<p>White Box – Yellow Box – Blakely's Red Gum Woodland (NC Act Box-Gum Woodland).</p> <p>Potential habitat for threatened flora and fauna species.</p> <p>Native Vegetation.</p>	<p>The proposed development is unlikely to have a significant adverse environmental impact upon any species or ecological communities listed under the NC Act, provided that the proposed avoidance, minimisation and mitigation measures (Section 6) are implemented.</p> <p>The proposed development will result in the modification (removal of mid and overstorey species) of 7,330 m<sup>2</sup> (0.73 ha) of native vegetation, however the maximum extent of 'clearance' of native vegetation will be restricted to the three defined Pole Installation Disturbance Areas, the combined area of the native vegetation within these is 1,159 m<sup>2</sup> (0.12 ha). As such, the proposed development will not require the clearing of more than 0.5 ha of native vegetation on land that is not designated as a future urban area.</p>
<i>Pest Plants and Animals Act 2005</i>	Significant weeds.	<p>The occupier of the subject land (Icon Water and rural lessees), is required under the <i>Pest Plants and Animals Act 2005</i> to implement measures to control listed weeds. The relevant weeds and threat level of each are listed in Section 5.6.</p> <p>Essential Energy will work collaboratively with the occupiers of the study area to ensure that the proposed development does not adversely impact upon the implementation of measures to control listed weeds.</p>

## Conclusion

Based on the completed assessment presented in this EAR, it is concluded that, with the implementation of the proposed measures to avoid, minimise and mitigate impacts upon biodiversity values (as detailed in Section 6), the proposed development:

1. is unlikely to significantly impact upon any MNES as listed pursuant to the Commonwealth EPBC Act, and therefore referral of the proposed action to the Commonwealth Minister for the Environment is unwarranted; and
2. is unlikely to have a significant adverse environmental impact upon any threatened species, population or ecological community listed pursuant to the NC Act.

## 2 Introduction

---

Essential Energy proposes to construct a new 132kV line between the Transgrid 330/132kV substation in Williamsdale, ACT, and the existing 132kV alignment, located in NSW (the 'proposed development'). This line will be used to supply the new Googong Substation and ensure future supply to the Tralee area as required.

Capital Ecology Pty Ltd (Capital Ecology) has been commissioned by Purdon Planning Pty Ltd to undertake ecological surveys and prepare this ecological assessment report (EAR) to identify and assess the significance of the impacts that the proposed development may have upon the biodiversity values of the subject land and surrounds. A separate flora and fauna assessment report is being prepared by Capital Ecology to assess the impacts of the component of the proposed development located in NSW.

The location of the study area for this assessment is shown in Figure 1.

### 2.1 Objective of this Ecological Assessment

Although general biodiversity values are identified and considered, the primary objective of this EAR is to provide a thorough investigation into the currently listed significant biodiversity values (i.e. threatened flora and fauna species and threatened ecological communities) that occur, or have the potential to occur, within the study area.

The results of this investigation inform an assessment of the likely type and degree of the impacts that the proposed development may have upon the identified biodiversity values, as required in accordance with the:

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- ACT *Nature Conservation Act 2014* (NC Act); and
- ACT *Planning and Development Act 2007* (P&D Act).

### 2.2 Project Scope

The scope of this EAR includes all of the elements and matters for consideration in a standard EAR in the ACT. This includes the following.

1. A desktop database and literature review to identify all of the currently EPBC Act and/or NC Act listed significant biota (i.e. threatened species, population and ecological communities) known to occur, or considered to have the potential to occur, within the study area.
2. Use of the results of the desktop review to inform and develop:
  - detailed survey and GIS mapping of the vegetation present within the study area, employing survey methods and classification currently recognised by the ACT Government; and



- detailed survey and mapping of the habitat features present of specific relevance to one or more of the threatened species identified during the desktop review.
3. The preparation of a Likelihood of Occurrence Assessment which addresses all threatened ecological communities, threatened flora species and threatened fauna species with the potential to occur within the study area.
  4. An assessment of the potential for impacts, and the likely significance of these impacts, upon the listed significant biota identified as occurring or potentially occurring within the study area.
  5. Advice and recommendations regarding the impact avoidance, minimisation, mitigation, and/or offset measures that may be required to facilitate approval by the ACT Government.

## 3 Background

---

### 3.1 Study Area and History of Land Management

The study area for this EAR comprises a 5.8 ha rectangular area (100 m wide by approximately 580 m long), encompassing part of Blocks 1675, 1674, 119, and the Monaro Highway corridor, Tuggeranong, ACT. The eastern edge of the study area abuts the ACT/NSW border. The NSW component of this project (not assessed in this report) continues to the east of the ACT/NSW border for approximately 300 m to the connection with the existing 132kV powerlines (refer Figure 2).

As illustrated in Figure 2, the study area for this assessment incorporates the proposed power pole locations, the proposed new powerline easement, as well as a buffer to provide context and allow for detailed design of the proposed development to incorporate impact avoidance and minimisation measures.

The study area and surrounding locality has been used for agriculture since the late 1820s and much of the study area would have been selectively cleared to 'open up' the area for grazing. The portion of the study area that occurs within the existing TransGrid easement is currently managed to minimise woody vegetation beneath the power lines. The study area is not currently grazed by stock and appears to have been subject to a history of generally low grazing intensity. Consequently, the majority of the study area supports native vegetation in moderate to good condition, characterised by a relatively intact groundstorey with or without the canopy and midstorey strata.

### 3.2 Previous Studies

The report entitled *Preliminary Flora & Fauna Assessment for the Proposed Transgrid Substation Site (part Block 1653)*, completed by Geoff Butler and Associates and Vertego Environmental Consultants (2007), provided an ecological assessment of the study area and surrounds. The report presents the assessment of three potential sub-station sites, recommending the present site as the least ecologically constrained. A copy of this report was provided to Capital Ecology to inform this assessment.

The above described report identified the presence of a threatened ecological community (Yellow Box Red Gum Grassy Woodland) and a NSW-listed threatened flora species (Silky Swainson-pea *Swainsona sericea*) in the vicinity of the study area. Several threatened bird species were either recorded or considered likely to occur in the locality.

### 3.3 Proposed Development

As illustrated in Figure 2, the proposed development (ACT component only) involves the following.

- Establishment of the new 132kV powerline easement 545 m long and 20 m wide.
- Clearance of woody vegetation, particularly trees and shrubs over four metres in height, within the new easement.

- Installation of three power poles to support the 132kV powerlines. A 20x20 m 'Pole Installation Disturbance Area' will be established centred on the pole location, demarcating the maximum area within which groundstorey disturbance is expected to occur during installation of the pole.

It is understood that practicable alternatives to the proposed development are limited, however there is some flexibility regarding the precise placement of poles along the powerline alignment.

No establishment of permanent or temporary tracks will be required to access the pole locations, although some temporary disturbance is likely to result from machinery accessing the Pole Installation Disturbance Areas (refer Section 6).

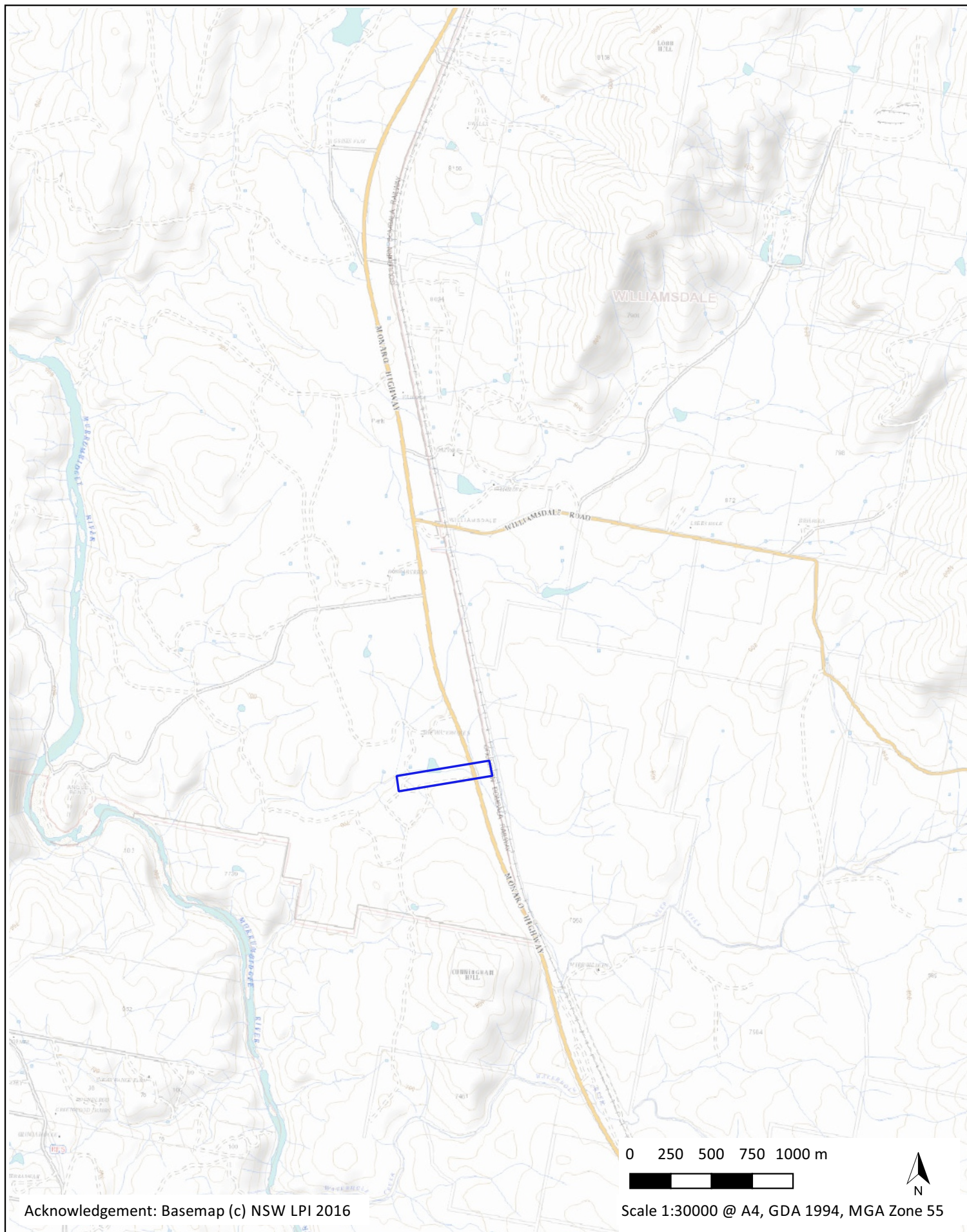


Figure 1. Locality Plan

#### Legend

Study Area - ACT



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Date: 27 April 2016



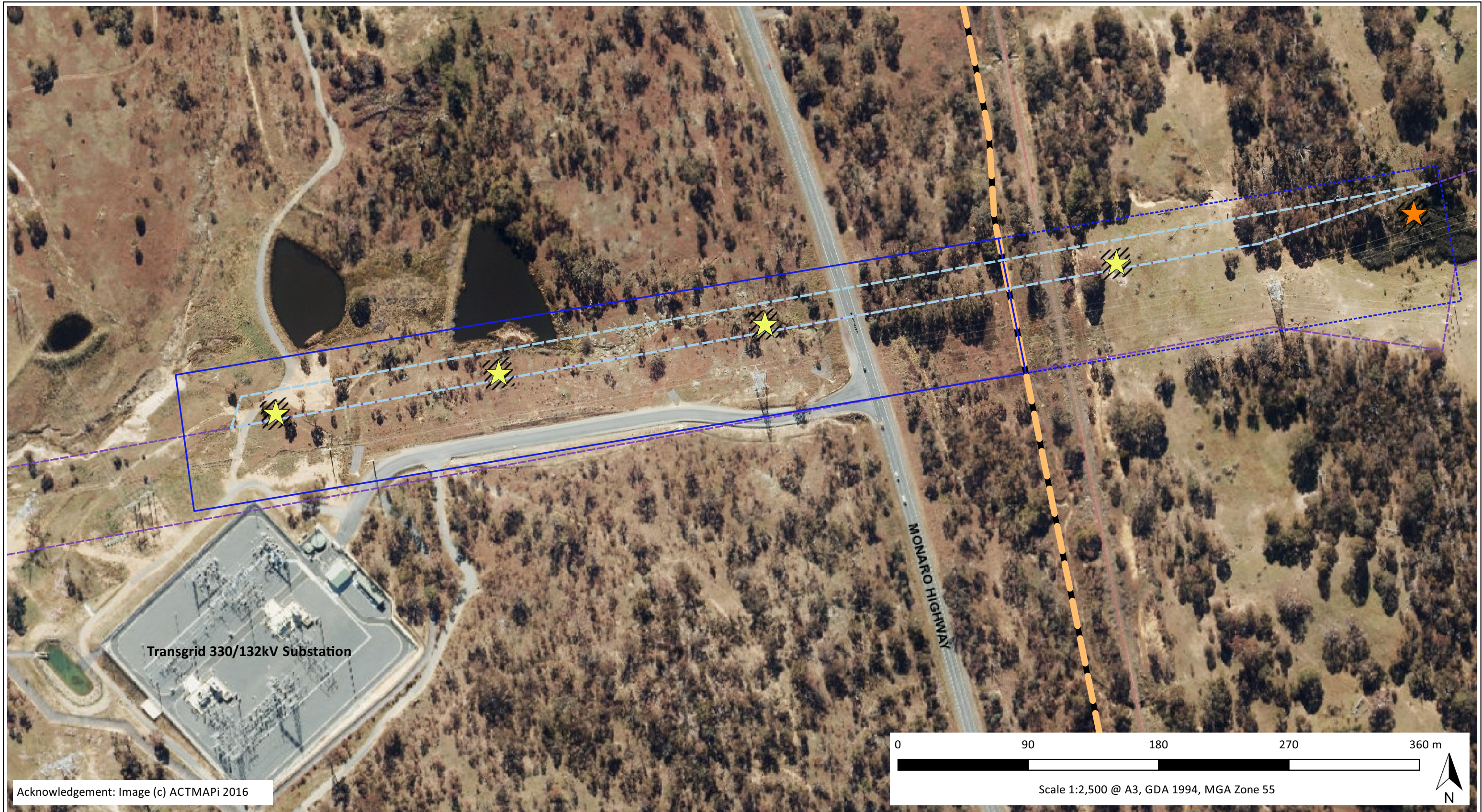


Figure 2. Study Area and Proposed Development

Legend

- ACT-NSW Border
- Study Area - ACT
- - - Study Area - NSW
- - - Existing Transgrid Easement
- - - Proposed New 132kV Powerline Easement
- /// Proposed Pole Installation Disturbance Area
- ★ Proposed New Pole Location
- ★ Proposed Pole Replacement-Refurbishment Location

Capital Ecology Project No: 2701  
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 Date: 27 April 2016





## 4 Methods

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### 4.1 Taxonomy

The most current scientific and common names for plant species have been determined using recently published field guides on the native and/or exotic flora of the ACT and region (Cosgrove 2014, Eddy *et al.* 2011, Sharp *et al.* 2015, Richardson *et al.* 2011, Wood and Wood 2005).

The naming convention used for vertebrate fauna follows the Census of Australian Vertebrates (CAVs) maintained by the Commonwealth Department of the Environment.

In the body of this report flora and fauna species are referred to by both their common and scientific names when first mentioned. Subsequent references to these species cite the common name only.

### 4.2 Database and Literature Review

The References section of this report lists the literature referred to during the conduct of the surveys for this study and/or during the preparation of this report.

A list of threatened species (flora and fauna), threatened populations and threatened ecological communities (TECs) listed pursuant to the EPBC Act with the potential to occur within the study area was obtained using the Department of the Environment's online EPBC Act Protected Matters Search Tool (PMST) on 22 April 2016.

Point data of rare or threatened species was also obtained from the ACT Wildlife Atlas maintained by ACT Government Conservation Research unit.

### 4.3 Definitions of Conservation Significance

The conservation significance of a species, population or community is determined by its current listing pursuant to Commonwealth and/or Territory legislation and associated policy, more specifically:

- National – Listed as threatened (critically endangered, endangered, vulnerable or conservation dependent) pursuant to the EPBC Act.
- Territory (ACT) – Listed as threatened (endangered or vulnerable) pursuant to the NC Act.

Consideration is also given to flora species classified by the Conservation Research Unit of the ACT Government as 'rare or uncommon flora species of the ACT'.

### 4.4 Likelihood of Occurrence Assessment

The Likelihood of Occurrence Assessment for threatened flora and fauna species is a categorisation used to determine the likelihood that the subject species occurs within a study area. The results of the Likelihood of Occurrence Assessment are based on the findings of completed desktop studies and field surveys, expert opinion and consideration of the species' currently recognised distribution and preferred habitat.

Threatened species and populations included in the Likelihood of Occurrence Assessment include all of those identified during the database and literature review as potentially occurring within five kilometres of the study area. Also included are threatened species listed pursuant to the NC Act only and considered by Capital Ecology to have some potential to occur within the study area.

The likelihood of a species occurring within the study area is categorised as either negligible, low, moderate or high. A species that has been identified within the study area during the surveys for this study or by other confirmed records is expressed as confirmed.

The completed Likelihood of Occurrence Assessment is provided as Appendix 4. Species assigned a moderate or higher likelihood of occurrence are considered in more detail in Section 5.5 of this EAR.

## 4.5 Field Surveys

### 4.5.2 Vegetation Survey and Mapping

The vegetation within the entire study area (i.e. ACT and NSW components) was surveyed and mapped over two days, 22 and 24 March 2016. Vegetation was mapped using a methodology based upon the *Survey guidelines for determining lowland vegetation classification and condition in the ACT* (the 'vegetation survey guidelines', ACT Government 2012). This involved the use of transects to characterise and assess the vegetation against the criteria for threatened ecological communities under the EPBC Act and NC Act. The transect locations are shown in Figure 3.

The vegetation survey and mapping involved the three-staged process outlined below.

#### 4.5.2.1 Plant Community Type (PCT) mapping

The on-ground boundaries of each of the Plant Community Types (PCTs) present within the study area were accurately mapped using either hand-held GPS or by marking boundaries directly onto high resolution orthorectified aerial photograph field maps. The PCTs are described in the Vegetation Types Database which is provided on the ACT Environment and Planning Directorate website as a resource accompanying the *ACT Environmental Offsets Calculator Assessment Methodology* (ACT Government 2015).

The PCT boundaries were defined based on the:

- presence, species, growth form and density of remnant canopy trees and/or stags or stumps of these;
- presence and species of midstorey shrubs and trees;
- floristic composition of the groundstorey; and
- the landscape position and other geographical features (elevation, aspect soils, apparent hydrology).

#### 4.5.2.2 Vegetation Zone definition and mapping

Only one PCT was identified within the study area. This mapped PCT was divided into Vegetation Zones based on the structure, floristic composition and overall condition ('intactness') of the vegetation. The Vegetation Zones were mapped using GIS which allows for accurate calculations of the total area of each Vegetation Zone within the study area.

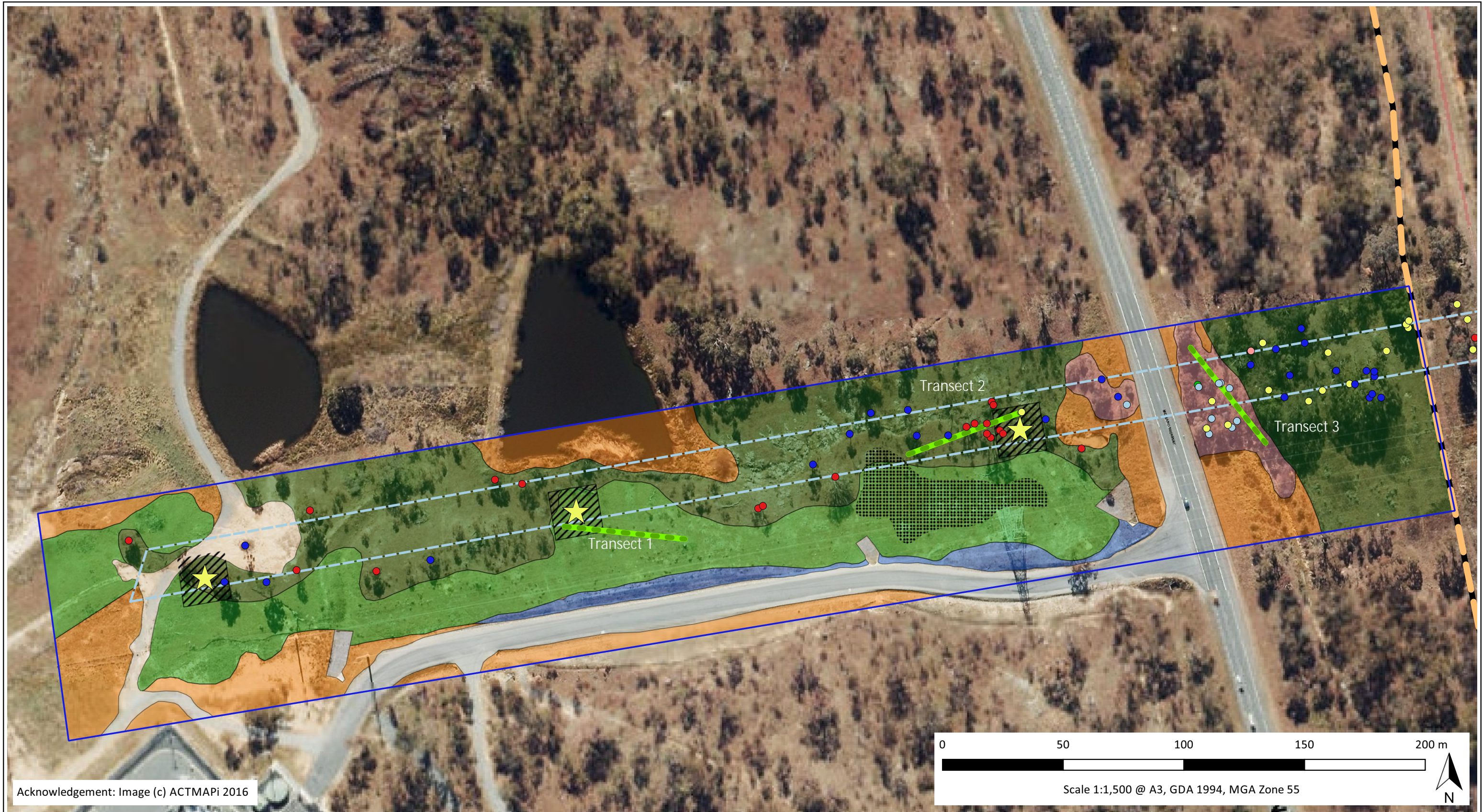
The following three Vegetation Zones were identified:

- Zone 1 – Woodland – moderate to high diversity;
- Zone 2 – Native dominated Derived Grassland of woodland, moderate to high diversity; or
- Zone 3 – Highly modified/non-natural communities, mapped as Exotic Groundstorey, Planted Native Trees over Exotic Groundstorey, and Recent Revegetation Groundstorey Plantings.

#### 4.5.2.3 Transects

Within each Vegetation Zone, one 50 m vegetation assessment transect was completed in a location considered to be representative of the Vegetation Zone. For each transect, the groundcover component was recorded at each footfall (i.e. a step-point transect), and a species list was completed. The locations of completed transects are shown in Figure 3.





Acknowledgement: Image (c) ACTMAPi 2016

Figure 3. Vegetation Surveys

#### Legend

- |   |  |  |
|---|--|--|
| ACT-NSW Border                              | Woodland-Forest 50m Transect                             | Apple Box ( <i>E.bridgesiana</i> )                 |
| Study Area - ACT                            | PCT-ACT16 Yellow Box - Red Gum Grassy Woodland           | Blakely's Red Gum ( <i>E.blakelyi</i> )            |
| Proposed New 132kV Powerline Easement       | PCT-ACT16 Zone1 - Woodland - Mod-High Diversity          | Yellow Box ( <i>E.melliodora</i> )                 |
| Proposed New Pole Location                  | PCT-ACT16 Zone2 - Derived Grassland - Mod-High Diversity | Candlebark ( <i>E.rubida</i> )                     |
| Proposed Pole Installation Disturbance Area | Exotic Groundstorey                                      | Red Box ( <i>E.polyanthemos</i> )                  |
| Scattered Surface Rock                      | Planted Native Trees over Exotic Groundstorey            | Cherry Ballart ( <i>Exocarpos cupressiformis</i> ) |
|   | Recent Revegetation Groundstorey Plantings               |  |

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 Date: 27 April 2016





### 4.5.3 Tree Habitat Assessment

During the field survey, all trees over 20 cm in diameter at breast height (DBH) were assessed for their value to native fauna. Each tree was recorded via hand-held GPS. Data collected for each tree included:

- tree number;
- species;
- DBH (cm);
- approximate height (m);
- approximate crown diameter (m);
- age category (Juvenile, Mature, or Old); and
- presence of any hollows and other habitat values such as nests, mistletoe etc.

### 4.5.4 Opportunistic Flora and Fauna Observations

All notable observations of flora and fauna made during the surveys were recorded. A fauna species inventory is included as Appendix 2 and incidental flora observations (i.e. flora species additional to those recorded along the transects) are included as part of Appendix 1).

## 4.6 Study Limitations

### 4.6.2 Survey Limitations

No degree of survey effort can ensure that all species likely to be present or utilise the study area are detected during a survey. Numerous factors can impact upon the detection of some species, including seasonal conditions, species dormancy, the impacts of grazing/herbivory, the ephemeral nature of waterbodies (i.e. creeks, farms dams etc.) and the breeding, migratory and other behaviours of some fauna.

The survey was undertaken in March which is suboptimal for detection of many of the threatened species which may occur in the locality, particularly for cryptic groundstorey flora species. As such, this study is considered to be subject to significant survey limitations regarding species detectability. This is taken into account in the Likelihood of Occurrence Assessment and in the recommendations made in this report.

### 4.6.3 Spatial Data Limitations

Conclusions on the likelihood of some species occurring within the study area are reliant, at least in part, upon external data sources and information managed by third parties.

Vegetation community mapping data, tree survey data and threatened species point data were collected using a hand-held (uncorrected) GPS unit and interpretation of high resolution aerial photography. The accuracy of the mapping presented in the resulting figures is therefore subject to the

accuracy of the GPS unit (up to  $\pm 4$  metres) and the rectification and registration limitations of the ACT Government's ACTMAPi aerial imagery data.

The figures presented in this report have been prepared using a Geographic Information System (GIS). Electronic files (.shp) of all data presented in the figures can be provided for incorporation in third party plans and documents. It must be noted however that this data may not be sufficiently precise for detailed survey or design purposes.

## 5 Results

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### 5.1 Vegetation Survey and Mapping

#### 5.1.2 Plant Community Type (PCT) mapping

The study area supports the following PCT as shown in Figure 3.

##### **PCT-ACT16 - Yellow Box-Red Gum Tableland Grassy Woodland**

Historically, PCT-ACT16 is likely to have occurred across the entirety of the study area. This community occurs on soils of moderate to high fertility and generally moderate depth. In its climax form, this community would have been characterised by an open canopy, sparse or absent mid and shrubstorey, together with a defined grassy groundstorey, supporting a high diversity of native forbs.

Much of the study area supports PCT-ACT16 in a relatively intact form, retaining a clearly native groundstorey with moderate forb diversity.

#### 5.1.3 Vegetation Zone Definition, Mapping, and Transects

The study area was found to support three discernible Vegetation Zones, as detailed in Table 1 and illustrated in Figure 3. Plates 1 to 3 provide representative photographs of each of the Vegetation Zones. The results of the three floristic assessment transects are provided in Appendix 1.

No transects were completed in the patches of 'Exotic Groundstorey' and the 'Recent Revegetation Groundstorey Plantings'. The areas of Exotic Groundstorey, predominantly comprised of exotic perennial pasture grasses and weeds, were deemed to lack sufficient ecological value to warrant detailed survey and assessment. The Recent Revegetation Groundstorey Plantings, consisting of groundstorey plantings of Hoary Sunray and local common native species (i.e. Yellow Buttons *Chrysocephalum apiculatum*, Narrow Leaf New Holland Daisy *Vittadinia muelleri*, Sticky Everlasting *Xerochrysum viscosum* etc.), are highly unlikely to support naturally occurring threatened flora or fauna and are unlikely to be impacted by the proposed development.



**Table 1. Vegetation Zones within the study area, described from transect locations**

	<b>PCT-ACT16 Zone 1: Woodland – moderate to high diversity</b>	<b>PCT-ACT16 Zone 2: Native dominated derived grassland, moderate to high diversity</b>	<b>PCT-ACT16 Zone 3: Highly modified/non-natural communities – planted native trees over exotic groundstorey</b>
<b>Transect Number</b>	2	1	3
<b>Description</b>	Fairly intact and diverse woodland. Some significant weeds present.	Derived grassland of Box-Gum Woodland in good condition with moderate-high diversity. Some significant weeds present.	Roadside plantings, approx. 20 yrs old. Likely to be revegetation plantings following road upgrade works. Some significant weeds present.
<b>Canopy</b>	8-15 m high, average 15% percentage foliage cover (PFC). Dominated by Blakely's Red Gum <i>Eucalyptus blakelyi</i> west of the Monaro Highway and Yellow Box <i>E. melliodora</i> east of the Highway. Apple Box <i>E. bridgesiana</i> is present as a subdominant species.	Absent	7-11 m with a 35% PFC. Mostly Candlebark <i>E. rubida</i> with some Yellow Box.
<b>Midstorey</b>	3-7 m, average 5% PFC comprising juvenile canopy species.	Absent	Natural recruitment of Candlebark from planted trees. 3-6 m, 10% PCF.
<b>Shrubstorey</b>	0.5-2 m, average 5% PFC, comprising canopy species as saplings, as well as Silver Wattle <i>Acacia dealbata</i> , Burgan Kunzea <i>ericoides</i> , and Sweet Briar <i>Rosa rubiginosa</i> .	Scattered Blakely's Red Gum saplings to 1.5 m.	0.5-2 m, 5% PCF. Mature acacias which appear to have been planted, including Silver Wattle and Red-leaf Wattle <i>A. rubida</i> ,
<b>Groundstorey</b>	Groundstorey dominated by Kangaroo Grass <i>Themeda triandra</i> . Substantial cover of African Lovegrass <i>Eragrostis curvula</i> . High diversity of forbs.	Derived grassland dominated by Kangaroo Grass. High diversity of forbs. Some African Lovegrass and St John's Wort <i>Hypericum perforatum</i> present.	Exotic dominated and weedy, with thick leaf litter from Candlebark. Species include Paspalum <i>Paspalum dilatatum</i> , African Lovegrass and other roadside weeds. Some native grasses present.
<b>Total Areas</b>	New easement: 7,330 m <sup>2</sup> . Combined total of Pole Installation Disturbance Areas: 696 m <sup>2</sup> .	New easement: 791 m <sup>2</sup> . Combined total of Pole Installation Disturbance Areas: 463 m <sup>2</sup> .	New easement: 816 m <sup>2</sup> .



**Plate 1. Photograph taken at Transect 2 of PCT-ACT16 Zone 1: Woodland – moderate to high diversity**



**Plate 2. Photograph taken at Transect 1 of PCT-ACT16 Zone 2: Native dominated derived grassland, moderate to high diversity**





**Plate 3 Photograph taken at Transect 3 of PCT-ACT16 Zone 3: Planted native trees over exotic groundstorey**

## 5.2 Threatened Ecological Community Assessment

### 5.2.2 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The following two threatened ecological communities (TECs) were identified on Department of the Environment's EPBC Act Protected Matters Search Tool as having the potential to occur within the study area.

#### **Natural Temperate Grassland of the South Eastern Highlands and New England Tablelands – listed as critically endangered pursuant to the EPBC Act.**

Description – The Natural Temperate Grassland TEC is characterised by grassy vegetation dominated by moderately tall (25–50cm) to tall (50–100cm), dense to open tussock grasses in the genera *Rytidosperma*, *Austrostipa*, *Bothriochloa*, *Poa* and *Themeda*. Up to 70% of all plant species may be forbs. The community may be treeless or contain up to 10% cover of trees, shrubs or sedges. Natural Temperate Grassland occurs within the geographical region of the Southern Tablelands of NSW and the ACT at altitudes between 560m in central and northern parts of its distribution and 1200m in the south, in valleys influenced by cold air drainage and in broad plains (link to the EPBC Act listing advice <http://www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=152&status=Critically+Endangered>).

Presence within the study area – None. The entirety of the study area would have supported woodland (i.e. PCT ACT16 – Yellow Box-Red Gum Tableland Grassy Woodland is the climax community for the entire study area).

#### **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – listed as critically endangered pursuant to the EPBC Act.**

Description – The White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland TEC is characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs (where shrub cover comprises less than 30% cover), and a dominance or prior dominance of White Box and/or Yellow Box and/or Blakely's Red Gum trees. This TEC occurs along the western slopes and tablelands of the Great Dividing Range from southern Queensland through New South Wales and the Australian Capital Territory to Victoria (link to the EPBC Act listing advice <http://www.environment.gov.au/node/14495>).

Presence within the study area – Confirmed. It is evident that the entirety of the study area would have once supported the climax community of this TEC (i.e. PCT ACT16 – Yellow Box-Red Gum Tableland Grassy Woodland), and patches of this community in its woodland and derived grassland forms remain within the study area (and throughout much of the surrounding area).

Assessments of structure and floristic composition were undertaken within each of the three discernible condition categories (Vegetation Zones) of PCT-ACT16 present within the study area. The purpose of these assessments was to determine whether the patches of each Vegetation Zone support characteristics sufficient to meet the listing criteria for the EPBC Act listed TEC. The assessment process follows that provided in the Commonwealth *EPBC Act Policy Statement 3.5 – White Box – Yellow Box – Blakely's Red Gum grassy woodlands and derived native grasslands* (DEH 2006). The results of this



assessment are provided in Table 2. As detailed in Table 2, the area mapped as PCT-ACT16 - Zones 1 and 2 clearly meet the criteria for the EPBC Act listed TEC in its woodland and derived grassland forms respectively. None of the highly modified communities (i.e. Zone 3) meet the criteria for the TEC.

**Table 2. Assessment against the listing criteria for the EPBC listed TEC – White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.**

Criterion		Assessment Results		
		PCT-ACT16 - Zone1	PCT-ACT16 - Zone2	PCT-ACT16 - Zone3 – modified communities
1.	<i>Is, or was previously, at least one of the most common overstorey species White Box, Yellow Box or Blakely's Red Gum?</i>	Yes  Yellow Box and Blakely's Red Gum are dominant throughout this zone.	Yes  Yellow Box and Blakely's Red Gum are expected to have been dominant or co-dominant throughout this zone historically, although no overstorey species remain.	Yes  Yellow Box and Blakely's Red Gum are expected to have been dominant or co-dominant throughout this zone historically. Some planted Yellow Box occur in the patches of Planted Native Trees over Exotic Groundstorey.
2.	<i>Does the patch have a predominantly native understorey?</i>	Yes  The transect completed in this Zone (Transect 2) recorded 80% native vegetation.	Yes  The transect completed in this Zone (Transect 1) recorded 86% native vegetation.	No  The groundstorey was clearly predominantly exotic at the time of survey. The transect completed in the Roadside plantings recorded only 32% native vegetation. The Recent Revegetation Groundstorey Plantings, although native, do not constitute native vegetation for the purpose of this definition.
3.	<i>Is the patch 0.1 ha (1000 m<sup>2</sup>) or greater in size with 12 or more native understorey species present (excluding grasses)? There must be at least one important species.</i>	Yes  The patch of Zone 1 within the study area is considerably larger than 0.1 ha and comprises a small portion of the entire patch which extends across the land to the north of the study area.  A total of 17 native non-grasses were recorded within the transect including several important species.	Yes  The patches of Zone 2 within the study area are considerably larger than 0.1 ha.  A total of 21 native non-grasses was recorded within the transect, including several important species.	N/A  Refer Criterion 2 results.

Criterion		Assessment Results		
		PCT-ACT16 - Zone1	PCT-ACT16 - Zone2	PCT-ACT16 - Zone3 – modified communities
	<i>Or</i>			
	<i>Is the patch 2 ha or greater in size with an average of 20 or more mature trees per hectare, or is there natural regeneration of the dominant overstorey eucalypts?</i>	<b>Yes</b> Zone 1 occurs as a generally contiguous patch with a total area of approximately 2.3 ha within the study area alone. The patch has an average of 47 mature trees per hectare and there is regeneration of overstorey eucalypts.	<b>No</b> Zone 2 has an average of less than 20 mature trees per hectare and minimal regeneration of overstorey eucalypts.	<b>N/A</b> Refer Criterion 2 results.
	<b>Does the patch meet the criteria for the listed TEC?</b>	<b>Yes – in its woodland form</b>	<b>Yes – in its derived grassland form</b>	<b>No</b>

### 5.2.3 Australian Capital Territory – Nature Conservation Act 2014

The following two ecological communities are listed as endangered pursuant to the ACT NC Act.

#### Natural Temperate Grassland

As noted above, there is no potential for this community to occur within the study area as the entire study area would have supported lowland woodland.

#### White Box – Yellow Box – Blakely's Red Gum Woodland

As noted above, the entirety of the study area would have once supported the climax community of this TEC (i.e. PCT ACT16 – Yellow Box-Red Gum Tableland Grassy Woodland). PCT-ACT16 Zones 1 and 2 currently support this community, as per the assessment below.

#### Consistency with the Action Plan 10 and Action Plan 27 definition

Woodland meeting the NC Act listed community was defined in Action Plan 10 (ACT Government 1999) and Action Plan 27 (ACT Government 2004) as any polygon in which:

1. more than 40% of the trees are or were Yellow Box and/or Blakely's Red Gum; and
2. there is greater than 50% cover of native ground layer species.

Polygons within which most or all of the trees have been cleared (described as secondary grassland) also constitute the NC Act listed community, provided:

1. Yellow Box and/or Blakely's Red Gum are estimated to have previously been the dominant or co-dominant species;

2. the groundstorey is predominately native; and
3. a moderate diversity of native groundstorey species is present.

As per this definition, PCT-ACT 16 Zones 1 and 2 meet the criteria for this community under the NC Act.

#### Consistency with an alternative definition applied by ACT Government, Conservation Research

Box-Gum Woodland in the ACT - Technical Report 25, a study undertaken by Maguire and Mulvaney (2011), introduced the following alterations to the criteria provided in Action Plan 10 and Action Plan 27:

- areas with a greater than 30% shrub cover were excluded;
- the 'greater than 50% cover of native ground layer species' was changed to '50% or more of the perennial ground cover must be native'; and
- patches containing at least 20 mature Yellow Box or Blakely's red Gum trees that have a continuous canopy cover, but may have an exotic understorey, were included.

The extent of the study area considered to constitute the NC Act listed TEC with the application of the above altered definition remains unchanged (i.e. PCT-ACT 16 Zones 1 and 2).

## 5.3 Fauna Habitat

### 5.3.2 Fauna Habitat Features

The fauna habitat features within the study area include scattered and outcropping rock, native and exotic grassland/pasture, remnant and planted eucalypts, scattered shrubs, the ephemeral creek and constructed dams. These fauna habitat features are detailed in Table 3.

**Table 3. Fauna habitat features**

Habitat Feature	Description	Relevant Native Fauna Species/Assemblages
Rock scatters and outcrops	Small outcrops of rocks of volcanic origin occur within the study area. The degree of embedment of the rocks varies however the rocks are predominantly deeply embedded.	Patches of the rock scatter with small to medium plate-like rocks surrounded by native grasses are low quality potential habitat for the Pink-tailed Worm-lizard <i>Aprasia parapulchella</i> (EPBC Act and NC Act vulnerable listed). This is addressed in the Likelihood of Occurrence Assessment (Appendix 4). The rocky habitat within the study area is likely to support several common reptiles, frogs and invertebrates.

Habitat Feature	Description	Relevant Native Fauna Species/Assemblages
Grassland	As described in Section 5.1, the study area supports grassy vegetation communities in the form of grassy woodland, derived grassland, and exotic pasture. The value of these areas to native fauna, particularly threatened species, depends largely on the degree of modification.	<p>The grassy woodland and derived grassland (i.e. the less modified grassy areas) would provide foraging resources for the numerous woodland birds occurring in the study area.</p> <p>Grassy areas (the majority of the study area) would provide grazing resources for common herbivores such as the Eastern Grey Kangaroos <i>Macropus giganteus</i>, Swamp Wallaby <i>M. bicolor</i> and Common Wombat <i>Vombatus ursinus</i>.</p> <p>Open areas provide hunting resources for raptors and other predatory birds.</p>
Remnant eucalypts	Only two hollows were recorded in the trees located within the study area. The mature eucalypts support some Mistletoe <i>Amyema</i> spp. plants and the eucalypts, particularly the Yellow Box, provide a nectar resource when in flower.	<p>The hollows within the study area may be utilised by native fauna. Tree hollows are a limiting habitat feature for many native fauna species, some of which are now listed threatened species.</p> <p>The flowering eucalypts and Mistletoe, are likely to provide feeding resources for a broad variety of birds.</p>
Scattered shrubs	<p>The midstorey and shrubstorey strata are sparse within the woodland in the study area, and absent within the derived and exotic grassland.</p> <p>These strata are more dense to the east of the Monaro Highway.</p>	The few scattered native shrubs, particularly east of the Monaro Highway, would provide limited nesting and refuge resources for the small native birds likely to occur within the study area and surrounds.
Ephemeral creek and constructed dams	One large dam occurs immediately north of the study area and one occurs partially within the study area. An ephemeral creek runs through the central portion of the study area before running into the higher of the two dams. These dams support a mix of native and exotic fringing vegetation. The ephemeral creek contains scattered native sedges and rushes (notably Tall Sedge <i>Carex appressa</i> ) and a significant infestation of African Love Grass.	The dams are likely to provide foraging, drinking and/or breeding resources for common native fauna. These include common waterfowl, frogs and Eastern Long-necked Turtles <i>Chelodina longicollis</i> . The ephemeral creek is likely to provide a drinking resource for native fauna and may provide habitat connectivity between dams.

### 5.3.3 Tree Habitat Assessment

During the survey the 70 trees present within the study area with a DBH  $\geq 20$  cm were assessed for their ecological values. The tree assessment results are provided as Appendix 3 and the trees recorded are shown on Figure 3.

Only two hollow-bearing trees were recorded within the study area, both Blakely's Red Gums located to the west of the Monaro Highway. One tree contained a stick nest likely to have belonged to a Magpie *Cracticus tibicen* or Australian Raven *Corvus coronoides*.



None of the trees within the study area are listed as registered trees under the ACT *Tree Protection Act 2005* (TP Act). Nineteen of the 70 trees meet the criteria for ‘regulated trees’ under the TP Act as their height was estimated to be 12 metres or greater and/or their crown diameter was estimated to be 12 metres or greater. Advice should be sought from the Tree Protection Unit and/or the Conservator of Flora and Fauna regarding the proposed removal of these trees.

## 5.4 Flora and Fauna Species

### 5.4.2 Recorded Flora

A total of 64 flora species were recorded within the study area during the completed transect surveys and incidentally, comprising 44 native species and 20 exotic species. The full species list is included in Appendix 1.

One species listed as endangered pursuant to the EPBC Act, Hoary Sunray *Leucochrysum albicans* var. *tricolor*, was recorded within the study area.

### 5.4.3 Recorded Fauna

A total of 17 native vertebrate fauna species were recorded within the study area during the completed surveys. These comprised 15 birds, one mammal and one reptile. A list of the vertebrate fauna species recorded within the study area is provided in Appendix 2.

No exotic fauna species were recorded and no threatened fauna species were recorded within the study area during the field survey.

## 5.5 Likelihood of Occurrence Assessment Summary and Habitat Assessment

A Likelihood of Occurrence Assessment for threatened flora and fauna species was undertaken as described in Section 4.4. Table 4 lists those threatened species or populations assigned a moderate or higher likelihood of occurrence within the study area, and assesses the type and value of habitat for the species within the study area. Table 4 also provides recommendations for further survey required to better assess the impact of the proposed development upon the identified threatened species. The full Likelihood of Occurrence Assessment is provided as Appendix 4.

The majority of the threatened species with potential breeding or high quality foraging habitat within the study area are threatened woodland birds likely to occur throughout much of the broader locality. Given the extent of potential foraging and breeding habitat in the locality, the proposed development is unlikely to significantly impact these species, provided they are not utilising the habitat for breeding at the time the works are undertaken.

In addition to the species in the below table, a number of plant species classified as ‘rare or uncommon flora species of the ACT’ by the ACT Government Conservation Research unit have been recorded in the locality, two of which, Grey Parrot-pea *Dillwynia cinerascens* and Showy Copper-wire Daisy *Podolepis jaceioides*, were recorded approximately 50 m to the north of the study area. The majority of these flora species are cryptic groundstorey plants which are generally only conspicuous when in flower. As such, a targeted flora survey in spring is required to determine whether these species occur within the study

area. Several threatened flora species have a low likelihood of occurring within the study area (refer Appendix 4), and should be added to the list of target species for spring survey.

**Table 4. Species with a moderate or higher likelihood of occurrence within the study area.**

Name	Status		Likelihood of Occurrence	Type/value of habitat within study area
	Commonwealth	ACT		
Birds				
<i>Anthochaera phrygia</i> Regent Honeyeater	E	E	Moderate	Foraging habitat only – low significance given the extensive habitat in the locality.
<i>Climacteris picumnus victoriae</i> Brown Treecreeper (eastern subspecies)	-	V	High	Foraging habitat with a small potential for breeding to occur within or adjacent to the study area.  Survey for nesting activity recommended prior to clearance of vegetation.
<i>Daphoenositta chrysoptera</i> Varied Sittella	-	V	High	Foraging habitat with a very low potential for breeding within or adjacent to the study area.
<i>Grantiella picta</i> Painted Honeyeater	V	V	Moderate	Potential foraging habitat only.
<i>Hieraaetus morphnoides</i> Little Eagle	-	V	High	Foraging habitat. Unlikely to breed within the study area.
<i>Lathamus discolor</i> Swift Parrot	E	V	Moderate	Potential foraging habitat only.
<i>Melanodryas cucullata</i> <i>cucullata</i> Hooded Robin (southeastern form)	-	V	High	Potential foraging and breeding habitat.
<i>Petroica boodang</i> Scarlet Robin	-	V	High	Potential foraging and breeding habitat.
<i>Lalage sueurii</i> <i>White-winged Triller</i>	-	V	High	Potential foraging and breeding habitat.
Mammals				
<i>Dasyurus maculatus</i> <i>maculatus</i> <i>Spot-tailed Quoll</i> (SE mainland population)	E	V	Moderate	May pass through but unlikely to be significant habitat for this species. Prefers large undisturbed natural areas.
<i>Pteropus poliocephalus</i> <i>Grey-headed Flying Fox</i>	V	-	Moderate	Potential foraging habitat only – low significance given the extensive habitat in the locality.

Name	Status		Likelihood of Occurrence	Type/value of habitat within study area
	Commonwealth	ACT		
Plants				
<i>Leucochrysum albicans</i> var. <i>tricolor</i> <b>Hoary Sunray</b>	E	-	Confirmed	Recorded within Zone 2 – Derived Grassland. It is unknown whether the plants present are naturally occurring or from seed dispersing from the many plants planted in the revegetation areas in the Transgrid easement.

## 5.6 Significant Weeds

As listed in in Appendix 1, 20 exotic plant species were recorded within the study area during the survey. Whilst the majority of the exotic species are common and/or considered low-risk species in the ACT and region, the species detailed in Table 5 are listed as Weeds of National Significance (Commonwealth) and/or as pest plant species in the ACT.

**Table 5. Significant weed occurrence**

### Key for below table

- WoNS - (Commonwealth) Weed of National Significance
- Declared pest plant species in the ACT listed pursuant to the *Pest Plants and Animals (Pest Plants) Declaration 2015, under the Pest Plants and Animals Act 2005*
  - Must be suppressed
  - Must be contained
  - Prohibited
  - Notifiable

Name	Growth Form	Status	Description of Occurrence	Threat Level
<i>Echium plantagineum</i> Paterson's Curse	Forb <1.2m	Must be contained	Few scattered plants located in Vegetation Zone 1.	Low
<i>Eragrostis curvula</i> African Love Grass	Tussock <1.2m	Must be contained	Large patches present across the study area.	Very High – In the absence of concerted control this currently small infestation will rapidly proliferate throughout the study area. Threatens the integrity of the Box-Gum Woodland.
<i>Hypericum perforatum</i> St John's Wort	Forb <1m	Must be contained	Recorded in patches across the study area.	Moderate

Name	Growth Form	Status	Description of Occurrence	Threat Level
<i>Nassella trichotoma</i> Serrated Tussock	Tussock <0.6m	WoNS, Must be contained + Prohibited	Few scattered plants located in Vegetation Zone 1.	High – In the absence of concerted control this currently small infestation will rapidly proliferate throughout the study area. Threatens the integrity of the Box-Gum Woodland.
<i>Rosa rubiginosa</i> Briar Rose	Shrub <3m	Must be suppressed + Prohibited	Scattered plants occur, particularly in Vegetation Zones 1 and 3.	Moderate – Control of this species is recommended.
<i>Rubus fruticosus</i> Blackberry	Shrub/bramble <3m	WoNS, Must be contained + Prohibited	Scattered brambles occur, particularly in Vegetation Zone 3.	Low-moderate – The infestation is currently at low levels but should be controlled to maintain this.
<i>Salix sp.</i> Willow	Tree	Must be suppressed + Prohibited	A single Willow tree is growing where the ephemeral creek runs into the eastern dam.	Low-moderate – The Willow should be removed to prevent it from seeding around the around the dam and further down the catchment.

## 5.7 Pest Animals

No exotic fauna species were recorded during the field survey, however the exotic pest fauna European Brown Hare *Lepus europaeus*, Feral Cat *Felis catus*, European Rabbit *Oryctolagus cuniculus*, Feral Pig *Sus scrofa*, and Red Fox *Vulpes vulpes* are likely to occur within the study area and surrounds. The latter three species are listed as declared pest species in the ACT under the *Pest Plants and Animals (Pest Animals) Declaration 2005* and are species which are the cause of or key contributor toward a Key Threatening Process declared under the EPBC Act. Pest fauna do not currently appear to be having a significant negative impact upon the study area – the level of infestation of these species appears to be consistent with that present across much of the agricultural land in the locality.



## 6 Proposed Measures to Avoid, Minimise and Mitigate Impacts on Biodiversity

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In order to reduce potential impacts upon the ecological values within the study area (notably upon the Box-Gum Woodland TEC), a number of measures will be implemented during and following the proposed development. These are described below.

### Minimisation of Disturbance

Disturbance associated with the proposed development will be minimised to the extent necessary to carry out the works. Specific measures that will be implemented to prevent unnecessary disturbance include the following.

- The defined Pole Installation Disturbance Areas will be established and demarcated (using surveyors pegs and high visibility flagging) at each power pole site prior to works commencing.
- Vehicular/plant movement within the study area will be limited to that which is necessary to complete the works.
- Although the risk of erosion and sedimentation is minimal, where required, erosion and sediment controls will be established in accordance with the *Environment Protection Guidelines for Construction and Land Development in the ACT* (ACT Government 2011).
- Vegetation removal and soil disturbance will be limited to the fullest extent practicable – only woody vegetation that is required to be removed for the easement and pole locations will be removed, and the groundstorey will not be disturbed except within the 20x20 m Pole Installation Disturbance Areas, within which disturbance will be minimised.
- Relevant information regarding the significance and sensitivities of the relevant ecological values, particularly Box-Gum Woodland, will be communicated to contractors via toolbox talks and inductions.
- Vehicle and equipment parking/storage sites will be established in previously disturbed areas (e.g. along the Transgrid entry road and areas already cleared of vegetation in all strata or those identified in Figure 3 as Exotic Vegetation).

### Weed Management

The weed management measures that will be implemented to prevent the introduction and/or spread of weeds include the following.

- Appropriate vehicle hygiene will be maintained. Vehicles and machinery (including tools for vegetation removal) entering the work site will be clean of weed seed or propagules.
- Only low fertility soils sourced on site will be used to fill excavations, no top-soil or other potentially weed seed laden organic material will be imported from elsewhere.

- Only sterile materials such as hessian/jute or rice straw will be used for soil stabilisation or similar purposes.

### **Avoidance and protection of any populations of threatened or rare flora species recorded during spring surveys**

Although no threatened or rare flora species were recorded during the field survey, numerous such species may be present which were not identifiable at the time of survey. As such, a targeted survey for threatened and rare flora is required to be undertaken in spring, prior to the proposed works commencing. It is understood that Essential Energy wishes to proceed with the ACT approvals process prior to the spring survey season. For this reason, measures are provided below to be implemented should threatened or rare flora be recorded during the survey, such that regulators can assess the impact of the proposed development without a survey having yet been undertaken.

Should a population of a threatened or rare species be detected during the survey, the following will be undertaken.

- The population will be mapped in detail by an ecologist.
- The works will be adjusted to avoid the population such that no physical disturbance of the population will occur. If this cannot be achieved, a separate impact assessment will be completed for the species and the works will not commence until approval is granted.
- If the population can be avoided, a temporary exclusion fence will be erected around the population with a buffer to be determined by an ecologist in consultation with the ACT Government and Essential Energy. No works or disturbance, including vegetation removal, shall occur within the exclusion fence. No vehicles or plant shall enter the fenced area.
- Relevant information regarding the location and significance of the threatened or rare flora species will be communicated to contractors via toolbox talks and inductions.
- Appropriate sediment and erosion control will be installed to ensure that no overland flow of soils or other materials occurs upslope of the population.

### **Protection of rocky habitat**

Although considered to have only a low likelihood of occurrence within the study area, the Pink-tailed Worm-lizard may occur in the areas of rocky habitat marked on Figure 3. Regardless of the presence of the Pink-tailed Worm-lizard, the rocky habitat is likely to be of value to many common reptile and invertebrate species, and impacts to these areas should be avoided to the fullest extent practicable.

### **Protection of nesting birds**

Vegetation clearance and power pole installation works will be undertaken outside of the August-December breeding season of the majority of the woodland birds with the potential to breed within the study area. Should works within this period be unavoidable, the following will be undertaken.

- Prior to works commencing, a pre-clearing survey will be undertaken by an ecologist to determine whether native birds are nesting within vegetation to be cleared or threatened birds are nesting within the area adjacent to the works (to 100 m).
- In the event that a nest or nests of a threatened species is identified within 100 m of the works, works will be delayed until the young fledge (are no longer dependent upon the nest).
- Should the study area or adjacent land appear to be of particular significance as nesting habitat for a threatened bird species, a separate impact assessment will be completed for the subject species, and the works will not proceed until approval is granted. Note: this is preliminarily considered to be unlikely, given the generally sparse nature of the woodland and the expanses of less disturbed potential nesting habitat in the locality.
- If common/non-listed native birds are nesting within the study area, works will be delayed until the young have fledged if practicable, or commenced only after a licence to remove the nest is granted from ACT Territory and Municipal Services.

## 7 Assessment against Biodiversity Conservation Legislation and Policy

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This section provides an assessment of the proposed development against the current biodiversity conservation legislation and government policy.

### 7.1 Commonwealth

#### Summary of the legislation

The EPBC Act is the key Commonwealth Government legislation for the protection and conservation of Australia's environment and biodiversity. The EPBC Act provides the legislative framework for the assessment and approval mechanism requiring that proposed 'actions' to be assessed in terms of their potential to impact upon 'Matters of National Environmental Significance' (MNES). MNES currently listed under the EPBC Act are:

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

Where a potential impact on a MNES may occur as a result of a proposed action, the significance of that impact must be assessed. Guidelines for determining whether an impact is significant are provided by the Department of the Environment (DoE 2013). If it is determined that a proposed action will, or is likely to, have a significant impact on a MNES, the action must be referred to the Commonwealth Minister for the Environment. The Department of the Environment will then consider the referred action and the Minister (of his/her Delegate) will make a determination regarding whether the action requires approval under the EPBC Act and associated conditions and controls.

#### Application to the proposed development

The MNES of relevance to the proposed development are described in Table 6. Table 6 also provides an assessment of the potential for the proposed development to significantly impact the MNES. As detailed in Table 6, referral of the proposed development is not warranted, provided that the avoidance,



minimisation, and mitigation measures detailed in Section 6 are implemented. Although not considered to be required, the project could be referred for legal certainty if desired.

**Table 6. Assessment of the potential for significant impacts upon MNES**

MNES	Occurrence/Relevance	Assessment
Threatened species and ecological communities	<p>The portions of the study area mapped as PCT-ACT 16 – Zones 1 and 2 are consistent with the definition of the critically endangered listed ecological community Box-Gum Woodland).</p> <p>Six EPBC Act listed threatened species have a moderate or higher likelihood of occurring within the study area.</p>	<p>The <i>EPBC Act Matters of National Environmental Significance - Significant Impact Guidelines 1.1</i> (DEWHA 2009) provide a number of criteria for use in determining whether an 'action' will have, or is likely to have, a significant impact upon an EPBC Act listed 'critically endangered or endangered ecological community'. An assessment of the potential impact upon Box-Gum Woodland is included as Appendix 5. As determined through this assessment, provided that the measures proposed in Section 6 are implemented, the proposed works are unlikely to have a significant impact upon Box-Gum Woodland.</p> <p>The Hoary Sunray is the only EPBC Act listed threatened species considered likely to occur within the study area, and therefore potentially subject to impacts associated with the proposed development. It is noted however that the Hoary Sunray is a moderately common species throughout the locality and the potential loss or disturbance of a few plants within the study area would not significantly impact upon the conservation of the species.</p> <p>Notwithstanding the above, the potential for significant impacts remains should EPBC Act listed threatened species be present which were not recorded during the survey. Targeted survey for threatened flora is proposed to occur in spring, and measures are proposed in Section 6 to avoid impacts upon threatened or rare flora (if present), and threatened birds.</p>
Migratory species	<p>Eleven terrestrial migratory species may occur in the locality, as per the EPBC Act PMST.</p>	<p>An area of 'important habitat' for a migratory species is defined by the Department of the Environment (DoE 2013) as:</p> <ul style="list-style-type: none"> <li>• habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species; and/or</li> <li>• habitat that is of critical importance to the species at particular lifecycle stages; and/or</li> <li>• habitat utilised by a migratory species which is at the limit of the species range; and/or</li> <li>• habitat within an area where the species is declining.</li> </ul> <p>While some of the relevant listed migratory species may visit the study area, the study area does not provide important habitat for an ecologically significant proportion of any migratory listed species.</p>

MNES	Occurrence/Relevance	Assessment
Wetlands of international importance (Ramsar wetlands)	<p>The study area is located in the catchment of four Ramsar wetlands:</p> <ul style="list-style-type: none"> <li>Banrock Station Wetland Complex;</li> <li>Coorong and Lakes Alexandrina and Albert; and</li> <li>Riverland</li> <li>Hattah-kulkyne lakes</li> </ul>	<p>The study area is remote from each of these Ramsar wetlands and, as such, none will be significantly impacted by the proposed development.</p> <p>Some changes to the hydrology of this study area are possible, but any changes are likely to be minor and localised.</p>

## 7.2 Australian Capital Territory

### *Planning and Development Act 2007*

Pursuant to the ACT *P&D Act*, the requirement to prepare an Environmental Impact Statement (EIS) for a proposed development is triggered for ecological impacts if:

- the development will require the clearing of more than 0.5 ha of native vegetation on land that is not designated as a future urban area; and/or
- the development is likely to have a significant adverse environmental impact upon a species or community listed as vulnerable or endangered under the NC Act.

As per the Commonwealth significant impact assessment undertaken for Box-Gum Woodland (Appendix 5), the proposed development is unlikely to have a significant impact upon the community. In addition, provided that the proposed measures to avoid, minimise and mitigate impacts are implemented (Section 6), it is unlikely that the proposed development will have a significant impact upon any threatened species. Given the extensive high quality habitat in the locality, and the small scale of mid and overstorey vegetation clearance proposed, the proposed development is unlikely to reduce the foraging/breeding habitat for the NC Act threatened birds likely to occur within the study area and surrounding locality.

According to the definition of 'native vegetation' under the NC Act, Vegetation Zones 1 and 2 constitute native vegetation, whilst Vegetation Zone 3 is too highly modified. The proposed development will result in the modification (removal of mid and overstorey species) of 7,330 m<sup>2</sup> (0.73 ha) of native vegetation, however the maximum extent of 'clearance' of native vegetation will be restricted to the three defined Pole Installation Disturbance Areas, the combined area of the native vegetation within these is 1,159 m<sup>2</sup> (0.12 ha). As such, the proposed development will not require the clearing of more than 0.5 ha of native vegetation on land that is not designated as a future urban area.

### **Pest Plants and Animals Act 2005**

Several plant species listed as ‘pest plants’ under the ACT *Pest Plants and Animals Act 2005* were recorded within the study area. The requirements from the explanatory statement accompanying the *Pest Plants and Animals (Pest Plants) Declaration 2015* for control of the different categories of weeds are detailed below.

- (a) notifiable – in which case its presence must be notified to the Director General within 2 working days. The intention of declaring a pest plant as notifiable is to control new pest incursions; or*
- (b) must be suppressed – all infestations on a premises must be controlled; or*
- (c) must be contained – infestations must be prevented from spreading to neighbouring premises; or*
- (d) prohibited – supply and propagation is not allowed.*

Control as per the above listed requirements is highly recommended to maintain the integrity of the Box-Gum Woodland and associated flora and fauna habitat values within and adjacent to the study area.

## **7.3 Summary of Assessment Results and Requirements**

This EAR provides an investigation into the currently listed significant biodiversity values that occur or have the potential to occur within the study area. An assessment has then been undertaken to assess the likely type and significance of any impacts that the proposed development may have upon the identified biodiversity values, as required in accordance with the EPBC Act, P&D Act and NC Act.

Table 7 provides a summary of the results of this assessment and the corresponding requirements of the current relevant biodiversity conservation legislation and government policy.

**Table 7. Summary of assessment results and corresponding requirements**

Legislation/Policy	Relevant Biodiversity Values	Assessment Results and Requirements
<b>Commonwealth</b>		
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<p>White Box – Yellow Box – Blakely's Red Gum grassy woodland and derived native grassland (EPBC Act Box-Gum Woodland).</p> <p>Potential habitat for threatened fauna species.</p>	The proposed development is unlikely to significantly impact upon any MNES, however the proposed avoidance, minimisation and mitigation measures (Section 6) are essential in assuring this. As such, provided the measures are implemented, referral of the development for consideration under the provisions of the EPBC Act is not considered warranted.

Legislation/Policy	Relevant Biodiversity Values	Assessment Results and Requirements
<b>Australian Capital Territory</b>		
<p><i>ACT Nature Conservation Act 2014</i></p> <p>and</p> <p><i>ACT Planning and Development Act 2007</i></p>	<p>White Box – Yellow Box – Blakely's Red Gum Woodland (NC Act Box-Gum Woodland).</p> <p>Potential habitat for threatened flora and fauna species.</p> <p>Native Vegetation.</p>	<p>The proposed development is unlikely to have a significant adverse environmental impact upon any species or ecological communities listed under the NC Act, provided that the proposed avoidance, minimisation and mitigation measures (Section 6) are implemented.</p> <p>The proposed development will result in the modification (removal of mid and overstorey species) of 7,330 m<sup>2</sup> (0.73 ha) of native vegetation, however the maximum extent of 'clearance' of native vegetation will be restricted to the three defined Pole Installation Disturbance Areas, the combined area of the native vegetation within these is 1,159 m<sup>2</sup> (0.12 ha). As such, the proposed development will not require the clearing of more than 0.5 ha of native vegetation on land that is not designated as a future urban area.</p>
<p><i>Pest Plants and Animals Act 2005</i></p>	<p>Significant weeds.</p>	<p>The occupier of the subject land (Icon Water and rural lessees), is required under the <i>Pest Plants and Animals Act 2005</i> to implement measures to control listed weeds. The relevant weeds and threat level of each are listed in Section 5.6.</p> <p>Essential Energy will work collaboratively with the occupiers of the study area to ensure that the proposed development does not adversely impact upon the implementation of measures to control listed weeds.</p>



## 8 Conclusion

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This EAR presents the results of an investigation undertaken by Capital Ecology into the currently listed significant biodiversity values that occur or have the potential to occur within the study area. The results of this study, together with information obtained from a review of relevant databases and literature, have informed this assessment of the significance of the impacts that the proposed development is likely to have upon the identified biodiversity values.

Based on the completed assessment presented in this EAR, it is concluded that, with the implementation of the proposed measures to avoid, minimise and mitigate impacts upon biodiversity values (as detailed in Section 6), the proposed development:

1. is unlikely to significantly impact upon any MNES as listed pursuant to the Commonwealth EPBC Act, and therefore referral of the proposed action to the Commonwealth Minister for the Environment is unwarranted; and
2. is unlikely to significantly affect any threatened species, population or ecological community listed pursuant to the NC Act.

## References

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## Appendices

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## Appendix 1. Vegetation Assessment Results

Table 1. Step point transect results.

	Transect 1 (Zone 2)	Transect 2 (Zone 1)	Transect 3 (Zone 3)
Cryptogams (Moss/Lichen)	2	1	0
Bare Earth	2	1	0
Rocks	3	4	0
Litter/Dead Vegetation	0	0	31
Annual Exotic Grass	1	0	0
Perennial Exotic Grass	2	5	8
Exotic Broadleaf	3	4	5
Perennial Native Grass	33	29	4
Other native	4	6	2
<b>Total</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Total native % of vegetative cover</b>	<b>86</b>	<b>80</b>	<b>32</b>



**Table 2. Species recorded along transects**

Species Name	Common Name	Transect 1	Transect 2	Transect 3	Incidental
<b>Exotic</b>					
<i>Avena barbata</i>	Wild Oats			x	
<i>Centaureum erythraea</i>	Common Centaury	x	x		
<i>Conyza bonariensis</i>	Hairy Fleabane	x	x		
<i>Cynodon dactylon</i>	Couch			x	
<i>Echium plantagineum</i>	Paterson's Curse		x		
<i>Eragrostis curvula</i>	African Lovegrass	x	x	x	
<i>Hypericum perforatum</i>	St John's Wort	x	x		
<i>Hypochaeris glabra</i>	Cat's Ear	x			
<i>Hypochaeris radicata</i>	Cat's Ear	x	x		
<i>Nassella trichotoma</i>	Serrated Tussock				x
<i>Paspalum dilatatum</i>	Paspalum			x	
<i>Plantago lanceolata</i>	Ribwort Plantain		x	x	
<i>Rosa rubiginosa</i>	Sweet Briar				x
<i>Rubus fruticosus</i>	Blackberry				x
<i>Salix sp.</i>	Willow				x
<i>Salvia verbenaca</i>	Wild Sage			x	
<i>Sanguisorba minor</i>	Salad Burnet		x	x	
<i>Setaria parviflora</i>	Marsh Bristlegrass				x
<i>Tragopogon dubius</i>	Yellow Goat's Beard				x
<i>Trifolium sp.</i>	Clover				x

Native					
<i>Aristida ramosa</i>	Three-awn Grass		x	x	
<i>Asperula conferta</i>	Common Woodruff		x		
<i>Austrostipa bigeniculata</i>	Tall Speargrass			x	
<i>Austrostipa scabra</i>	Corkscrew				x
<i>Bothriochloa macra</i>	Redleg Grass			x	
<i>Bursaria lasiophylla</i>	Sweet Bursaria				x
<i>Calocephalus citreus</i>	Lemon Beautyheads				x
<i>Carex appressa</i>	Tall Sedge				x
<i>Cheilanthes austrotenuifolia</i>	Rock Fern	x	x		
<i>Chrysocephalum apiculatum</i>	Yellow Buttons	x	x		
<i>Chrysocephalum semipapposum</i>	Clustered Everlasting				x
<i>Clematis leptophylla</i>	Skeleton Vine				x
<i>Cymbonotus lawsonianus</i>	Bear's Ear				x
<i>Cymbopogon refractus</i>	Barbed Wire Grass	x			
<i>Desmodium varians</i>	Slender tick trefoil		x		
<i>Dianella revoluta</i>	Black-anther Flax-lily			x	
<i>Enneapogon nigricans</i>	Blackheads	x	x		
<i>Eryngium ovium</i>	Blue Devil	x			
<i>Euchiton sp.</i>	Native Cudweed	x			
<i>Exocarpos cupressiformis</i>	Cherry Ballart				x
<i>Geranium solanderi</i>	Native Geranium		x		
<i>Gonocarpus tetragynus</i>	Common Raspwort		x		

<i>Hypericum gramineum</i>	Small St John's Wort		x		
<i>Hypoxis hygrometrica</i>	Golden Weather Grass		x		
<i>Juncus subsecundus</i>	Finger Rush		x		
<i>Kunzea ericoides</i>	Burgan				x
<i>Leptorhynchus squamatus</i>	Hairy Buttons	x	x		
<i>Leucochrysum albicans</i>	<b>Hoary Sunray (EPBC Act Endangered)</b>	x			
<i>Lomandra filiformis</i>	Wattle Mat Rush	x	x		
<i>Lomandra multiflora</i>	Many-flowered Mat Rush	x			
<i>Melichrus urceolatus</i>	Urn Heath	x	x		
<i>Panicum effusum</i>	Hairy Panic	x	x		
<i>Poa labillardierei</i>	Common Tussock-grass		x	x	
<i>Plantago varia</i>	Variable Plantain	x	x		
<i>Pultenaea procumbens</i>	Heathy Bush-pea	x			
<i>Rumex brownii</i>	Swamp Dock	x			
<i>Solenogyne dominii</i>	Smooth Solenogyne	x			
<i>Themeda australis</i>	Kangaroo Grass	x	x	x	
<i>Tricoryne elatior</i>	Yellow Rush Lily		x		
<i>Typha sp.</i>	Cumbungi				x
<i>Vittadinia cuneata</i>	Fuzzy New Holland Daisy	x			
<i>Vittadinia muelleri</i>	Narrow Leaf New Holland Daisy	x	x		
<i>Wahlenbergia sp.</i>	Bluebells	x	x		
<i>Xerochrysum viscosum</i>	Sticky Everlasting	x			

## Appendix 2. Vertebrate Fauna Species Recorded

Species Name	Common Name
<b>Mammals</b>	
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna
<b>Birds</b>	
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill
<i>Artamus cyanopterus</i>	Dusky Woodswallow
<i>Climacteris affinis</i>	White-browed Treecreeper
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Corvus coronoides</i>	Australian Raven
<i>Falco berigora</i>	Brown Falcon
<i>Falco cenchroides</i>	Nankeen Kestrel
<i>Grallina cyanoleuca</i>	Magpie-lark
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater
<i>Malurus cyaneus</i>	Superb Fairy-wren
<i>Manorina melanocephala</i>	Noisy Miner
<i>Philemon corniculatus</i>	Noisy Friarbird
<i>Platycercus elegans</i>	Crimson Rosella
<i>Rhipidura leucophrys</i>	Willie Wagtail
<b>Reptiles</b>	
<i>Pogona barbata</i>	Eastern Bearded Dragon



### Appendix 3. Tree Habitat Assessment Results

Tree Number	Species	DBH cm	Height m	Crown Diameter m	Age Category O = Old, M = Mature, J = Juv	Hollows Other Habitat Values (nests, mistletoe etc.)
1	<i>E. blakelyi</i>	27	6	5	M	
2	<i>E. bridgesiana</i>	33/32	9	8	M	
3	<i>E. bridgesiana</i>	65	11	5	M	
4	<i>E. blakelyi</i>	23	9	3	J	
5	<i>E. bridgesiana</i>	60	12	9	M	
6	<i>E. blakelyi</i>	23	9	3	J	
7	<i>E. blakelyi</i>	29	5	4	J	
8	<i>E. bridgesiana</i>	25	8	5	J	
9	<i>E. blakelyi</i>	40	9	6	M	
10	<i>E. blakelyi</i>	33	9	6	M	
11	<i>E. blakelyi</i>	37	10	3	M	
12	<i>E. blakelyi</i>	36	11	3	M	
13	<i>E. bridgesiana</i>	44	8	4	M	
14	<i>E. blakelyi</i>	88	12	11	O	
15	<i>E. bridgesiana</i>	22	5	3	J	
16	<i>E. bridgesiana</i>	20	4	5	J	
17	<i>E. bridgesiana</i>	34	7	5	J	

Tree Number	Species	DBH cm	Height m	Crown Diameter m	Age Category O = Old, M = Mature, J = Juv	Hollows Other Habitat Values (nests, mistletoe etc.)
18	<i>E. bridgesiana</i>	26	8	5	J	
19	<i>E. bridgesiana</i>	22	6	2	J	
20	<i>E. blakelyi</i>	42	11	5	M	Medium hollow
21	<i>E. blakelyi</i>	23/24/32	8	10	M	
22	<i>E. blakelyi</i>	34	11	3	M	
23	<i>E. blakelyi</i>	29	4	3	M	
24	<i>E. blakelyi</i>	34	8	4	M	
25	<i>E. blakelyi</i>	25	5	3	M	Dead, Small hollow
26	<i>E. blakelyi</i>	79	13	7	O	
27	<i>E. blakelyi</i>	28	7	4	M	
28	<i>E. blakelyi</i>	22	6	2	J	
29	<i>E. melliodora</i>	24	7	3	J	
30	<i>E. bridgesiana</i>	34	6	6	M	Planted
31	<i>E. blakelyi</i>	49	10	6	M	Planted
32	<i>E. bridgesiana</i>	22	5	4	J	Planted
33	<i>E. rubida</i>	43	7	4	M	Planted
34	<i>E. rubida</i>	35	8	5	M	Planted
35	<i>E. bridgesiana</i>	26/25	6	4	J	Planted
36	<i>E. melliodora</i>	24/22	8	4	J	Planted

Tree Number	Species	DBH cm	Height m	Crown Diameter m	Age Category O = Old, M = Mature, J = Juv	Hollows Other Habitat Values (nests, mistletoe etc.)
37	<i>E. rubida</i>	34	6	5	J	Planted
38	<i>E. melliodora</i>	25/22	9	5	J	Planted
39	<i>E. rubida</i>	23	8	7	J	Planted
40	<i>E. polyanthemos</i>	22/22	7	5	J	Planted
41	<i>E. rubida</i>	30	8	5	J	Planted
42	<i>E. rubida</i>	23	9	4	J	Planted
43	<i>E. rubida</i>	23	5	5	J	Planted
44	<i>E. rubida</i>	30	8	4	J	Planted
45	<i>E. melliodora</i>	24	7	4	J	
46	<i>E. melliodora</i>	72	17	13	M	
47	<i>E. bridgesiana</i>	90	16	10	O	
48	<i>Exocarpus cupressiformis</i>	25	5	5	M	
49	<i>E. melliodora</i>	41	16	11	M	
50	<i>E. bridgesiana</i>	25	14	7	M	
51	<i>E. bridgesiana</i>	28/28	13	6	M	
52	<i>E. bridgesiana</i>	51	16	12	M	
53	<i>E. melliodora</i>	28/64	17	14	O	
54	<i>E. melliodora</i>	21	16	4	J	
55	<i>E. melliodora</i>	26	8	6	J	

Tree Number	Species	DBH cm	Height m	Crown Diameter m	Age Category O = Old, M = Mature, J = Juv	Hollows Other Habitat Values (nests, mistletoe etc.)
56	<i>E. bridgesiana</i>	25	6	5	J	
57	<i>E. bridgesiana</i>	22	7	4	J	
58	<i>E. bridgesiana</i>	22/24/45	8	5	M	
59	<i>E. melliodora</i>	26	6	3	J	
60	<i>E. bridgesiana</i>	49/33/32	18	12	O	
61	<i>E. bridgesiana</i>	36/34/35	16	18	O	
62	<i>E. bridgesiana</i>	40	7	4	O	
63	<i>E. bridgesiana</i>	29/30	9	7	M	
64	<i>E. bridgesiana</i>	48/49	20	16	O	
65	<i>E. bridgesiana</i>	49	18	9	O	
66	<i>E. bridgesiana</i>	32/50/41	19	12	O	
67	<i>E. melliodora</i>	22/23	9	4	J	
68	<i>E. melliodora</i>	31	18	2	J	
69	<i>E. melliodora</i>	33	18	3	J	
70	<i>E. melliodora</i>	29	17	2	J	



## Appendix 4. Likelihood of Occurrence Assessment

### Key for the below table:

- 1) Listed pursuant to the EPBC Act as Critically Endangered (CE), Endangered (E), or Vulnerable (V)
- 2) Listed pursuant to the NC Act as Endangered (E) or Vulnerable (V)

Note: The brief descriptions of species distribution and habitat are paraphrased from or based on information sourced from the threatened species profiles, recovery plans and listing determinations prepared for each species by the Commonwealth and ACT governments. These resources and their references can be found on the relevant government websites.

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
<b>Birds</b>				
<i>Anthochaera phrygia</i> Regent Honeyeater	E	E	A semi-nomadic species occurring in temperate eucalypt woodlands and open forests. Most records are from box-ironbark eucalypt forest associations and wet lowland coastal forests. Key eucalypt species include Mugga Ironbark, Yellow Box, Blakely's Red Gum, White Box and Swamp Mahogany. Also utilises a number of other eucalypt species. Nectar and fruit from the mistletoes <i>Amyema miquelii</i> , <i>A. pendula</i> , and <i>A. cambagei</i> are also eaten during the breeding season. Regent Honeyeaters usually nest in horizontal branches or forks in tall mature eucalypts and sheoaks as well as within mistletoe haustoria (section of the root which connects with the host tree). An open cup-shaped nest is constructed by the female of bark, grass, twigs and wool.	<b>Moderate</b> The species may visit the study area to feed on flowering eucalypts and mistletoe.
<i>Calyptorhynchus lathamii</i> Glossy Black-cockatoo	-	V	The Glossy Black-cockatoo has a patchy distribution, having once been widespread across most of the south-east of Australia. The species is now distributed throughout an area which extends from the coast near Eungella in eastern Queensland to Mallacoota in Victoria. Glossy black-cockatoos feed on casuarina seeds, however they occasionally consume seeds from eucalypts, angophoras, acacias and hakeas, as well as insect larvae. In the ACT region the species feeds almost exclusively on	Low The species may visit the study area to forage, however the potential foraging habitat is of low quality. The species is unlikely to breed within the study area.

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			Drooping Sheoak <i>Allocasuarina verticillata</i> . Pairs mate for life and nest in the hollows of large, old living or dead eucalypt trees. Breeding takes place between March and August.	
<i>Climacteris picumnus victoriae</i> Brown Treecreeper (eastern subspecies)	-	V	In the ACT region, Brown Treecreepers occur in dry woodlands and open forest below 1,000 metres. The species is relatively common along the Clear Range and along the Lower Naas River. Other populations occur at Mulligans Flat Reserve, Campbell Park, Burbong and former quarries south of the airport in the northern part of the ACT, and at Castle Hill, north of Tharwa. Brown Treecreepers also frequent paddocks and grasslands where there are sufficient logs, stumps and dead trees nearby. The species prefers relatively undisturbed woodland and dry open forest where the native understorey, especially grasses, has been preserved. The species usually prefers predominantly rough-barked trees such as Stringybarks and rough barked Boxes.	<b>High</b> The species was recorded in the vicinity of the study area during surveys for the Transgrid substation site options (Geoff Butler & Associates and Vertego Environmental Consultants 2007). The species is likely to forage within the study area and may breed within or nearby the study area.
<i>Daphoenositta chrysoptera</i> Varied Sittella	-	V	In the ACT region, the Varied Sittella occurs in a wide variety of woodland and forest habitats, particularly in lowland areas. The species prefers areas with a dominance of rough barked trees, notably Red Stringybark at relatively high density. The species is rarely recorded in sparsely treed areas.	<b>High</b> The species is likely to forage within the study area.
<i>Grantiella picta</i> Painted Honeyeater	V	V	The Painted Honeyeater is found in Queensland and New South Wales west of the Great Dividing Range, through to northern Victoria. The species displays some migratory movement and is occasionally found in the Northern Territory and is a vagrant to South Australia and the ACT. The species frequents eucalypt forests and woodlands, particularly those that are infested heavily with mistletoes. In the ACT, the species' primary habitat is River Oak ( <i>Casuarina cunninghamiana</i> ) along river systems, especially the Murrumbidgee River.	<b>Moderate</b> The species may visit the study area to forage.
<i>Hieraaetus morphnoides</i> Little Eagle	-	V	The Little Eagle is distributed throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment, and occupies habitats rich in prey within open eucalypt	<b>High</b> The study area is likely to be part of the large foraging range of a pair of Little Eagles. No

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			forest, woodland or open woodland. The species is sensitive to human disturbance.	indications of breeding activity (i.e. large stick nests) were observed within the study area.
<i>Lathamus discolor</i> Swift Parrot	E	V	The Swift Parrot occurs in woodlands and forests of NSW from May to August, where it feeds on eucalypt nectar, pollen and associated insects. The Swift Parrot is dependent on flowering resources across a wide range of habitats in its wintering grounds in NSW. This species is migratory, breeding in Tasmania and also nomadic, moving about in response to changing food availability.	<b>Moderate</b> The species may forage within the study area.
<i>Melanodryas cucullata cucullata</i> Hooded Robin (southeastern form)	-	V	The Hooded Robin occupies drier eucalypt forest, woodland and scrub, grasses and low shrubs, as well as cleared paddocks with regrowth or stumps. The species uses stumps, posts or fallen timber from which to locate prey on the ground. In the ACT region, the species is found in woodland, often with scattered Yellow Box and/or Blakely's Red Gum, with long grass and low shrubs, or fallen logs.	<b>High</b> The species is likely to regularly occur within the study area and surrounds.
<i>Petroica boodang</i> Scarlet Robin	-	V	The Scarlet Robin is found in south-eastern Australia (extreme south-east Queensland to Tasmania, western Victoria and south-east South Australia) and south-west Western Australia. In NSW it occupies open forests and woodlands from the coast to the inland slopes, breeding in drier eucalypt forests and temperate woodlands.	<b>High</b> The species is likely to regularly occur within the study area and surrounds.
<i>Polytelis swainsonii</i> Superb Parrot	V	V	Found mainly in open, tall riparian River Red Gum forest or woodland. Often found in farmland including grazing land with patches of remnant vegetation. Breeds in hollow branches of tall eucalypt trees within nine kilometres of feeding areas.	<b>Negligible</b> The species is not known to occur in the locality and is generally not known to occur south of the Molonglo River in the ACT region.
<i>Rostratula australis</i> Australian Painted Snipe	V	-	Usually found in shallow inland wetlands including farm dams, lakes, rice crops, swamps and waterlogged grassland. The species prefers freshwater wetlands, ephemeral or permanent, although it has been recorded in brackish waters.	<b>Low</b> The dams within and adjacent to the study area provide only low quality potential habitat for this species.
<i>Lalage sueurii</i>	-	V	The White-winged Triller is most common in the south-east of Australia, the far north of Northern Territory and in the Kimberleys and the west of	<b>High</b>

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
White-winged Triller			<p>Western Australia. The White-winged Triller is generally found in lightly timbered country with an open shrub layer and grassy ground-cover, usually open woodlands and forest, tree-lined waterways in semi-arid regions and the nearby scrub.</p> <p>The White-winged Triller is a breeding migrant to southern Australia in summer (August to March). It overwinters in the inland and northern Australia.</p>	The species is likely to occur within the study area and surrounds.
<b>Fish and Crustacea</b>				
<i>Maccullochella peelii</i> Murray Cod	V	-	The Murray Cod's natural distribution extends throughout the Murray-Darling basin ranging west of the divide from south east Queensland, through NSW into Victoria and South Australia. The species is found in the waterways of the Murray– Darling Basin in a wide range of warm water habitats that range from clear, rocky streams to slow flowing turbid rivers, billabongs and large deep holes. Murray Cod is entirely a freshwater species and will not tolerate high salinity levels.	<p>Negligible</p> <p>There is no potential habitat within the study area for the species.</p>
<i>Macquaria australasica</i> Macquarie Perch	E	E	Macquarie Perch are found in the Murray-Darling Basin (particularly upstream reaches) of the Lachlan, Murrumbidgee and Murray rivers, and parts of south-eastern coastal NSW, including the Hawkesbury and Shoalhaven catchments. Macquarie perch are found in both river and lake habitats, especially the upper reaches of rivers and their substantial tributaries.	<p>Negligible</p> <p>There is no potential habitat within the study area for the species.</p>
<b>Frogs</b>				
<i>Litoria aurea</i> Green and Golden Bell Frog	V	-	The species is found in marshes, dams and stream sides, particularly those containing bullrushes or spikerushes. Preferred habitat contains water bodies that are unshaded, are free of predatory fish, have a grassy area nearby and have diurnal sheltering sites nearby such as vegetation or rocks, although the species has also been recorded from highly disturbed areas including disused industrial sites, brick pits, landfill areas and cleared land.	<p>Negligible</p> <p>The species is not known to occur in the locality.</p>



Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
<i>Litoria castanea</i> Yellow-spotted Tree Frog	E	-	The Yellow-spotted Tree Frog previously had a disjunct distribution, being recorded on the New England Tablelands and on the Southern Tablelands from Lake George to Bombala. The species has only recently (2010) been rediscovered on the Southern Tablelands. Prior to this the species had not been recorded on the Southern Tablelands since the 1970s. Found in large permanent ponds, lakes and dams with an abundance of bulrushes and other emergent vegetation, it shelters during autumn and winter under fallen timber, rocks, other debris or thick vegetation.	Negligible The species is not known to occur in the locality.
<b>Plants</b>				
<i>Calotis glandulosa</i> Mauve Burr-daisy	V	-	Occurs at higher altitudes between Eden and Dubbo where it grows in grassland and sclerophyll forest. The main distribution is in the Monaro and Kosciuszko regions. The species is found in montane grasslands in the Australian Alps and subalpine grassland (dominated by <i>Poa</i> spp.), Natural Temperate Grassland and Snow Gum Woodlands on the Monaro and Shoalhaven area. The species appears to be a coloniser of bare ground, which explains why it is often seen on roadsides. Apparently common on roadsides in parts of the Monaro but does not persist in heavily-grazed pastures. Dispersed by the sticky burrs.	Low The species may occur within the study area however the study area does not contain Natural Temperate Grassland or Snow Gum Woodlands (primary habitat).
<i>Eucalyptus aggregata</i> Black Gum	V	-	Black Gum occurs on the central and southern tablelands of NSW, and in a small disjunct population in Victoria. In NSW, it occurs predominantly in the South Eastern Highlands Bioregion. The species is a small to medium-sized woodland tree which grows in grassy woodlands on alluvial soils in moist sites along creeks on broad, cold and poorly-drained flats and hollows. It commonly occurs with Candlebark <i>Eucalyptus rubida</i> , Ribbon Gum <i>E. viminalis</i> , and Snow Gum <i>E. pauciflora</i> , with a grassy understorey of River Tussock <i>Poa labillardieri</i> . Most populations are located on private land or road verges and travelling stock routes.	Negligible This species is not present within the study area.
<i>Lepidium hyssopifolium</i>	E	-	This species is known from a few populations in NSW, Victoria and Tasmania. The Basalt Pepper-cress is known to establish on open, bare	Low

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
Basalt Peppercress			ground with limited competition from other plants. It was previously recorded from eucalypt woodland with a grassy ground cover, low open Casuarina woodland with a grassy ground cover and tussock grassland, however recently recorded localities have predominantly been in weed-infested areas of heavy modification, high degradation and high soil disturbance such as road and rail verges, on the fringes of developed agricultural land or within small reserves in agricultural land. Many populations are now generally found amongst exotic pasture grasses and beneath exotic trees.	The species is not known to occur in the locality.
<i>Leucochrysum albicans</i> var. <i>tricolor</i> Hoary Sunray	E	-	The Hoary Sunray occurs from Queensland to Victoria and in Tasmania. In the ACT the species can be seen in spring in abundance on the roadside along Fairbairn Avenue and into Mt Ainslie Nature Reserve, on the western slopes of Mt Majura and adjacent to the Federal Highway road easement. In NSW it is distributed on the inland slopes and plains including grasslands and woodlands on the Monaro and is quite a common species along Old Cooma Road and other less modified areas south of Queanbeyan. The species is usually found in ungrazed and lightly grazed areas, along roadsides in particular. It appears to be very sensitive to grazing, but responds to disturbance as a coloniser and appears to tolerate mowing. Flowers spring to summer.	<b>Confirmed</b> Recorded within Zone 2 - Derived Grassland. The population of this species should be mapped during the recommended spring.
<i>Pelargonium</i> sp. <i>Striatellum</i> Omeo Stork's-bill	E	-	An undescribed species of <i>Pelargonium</i> , Omeo Stork's Bill is a tufted perennial herb threatened by grazing, recreational activities, and exotic species. It is known to occur just above the high water level of ephemeral lakes in NSW and Victoria.	Negligible There is no potential habitat for this species in the study area.
<i>Pomaderris pallida</i> Pale Pomaderris	V	-	Pale Pomaderris has been recorded from near Kydra Trig, north-west of Nimmitabel, Tinderry Nature Reserve, and the Queanbeyan River. A record from Byadbo in Kosciuszko National Park has not been relocated. The main distribution is along the Murrumbidgee in the ACT. It was recorded recently in eastern Victoria. This species usually grows in shrub communities surrounded by Brittle Gum <i>Eucalyptus mannifera</i> and Red	Negligible This species is not present within the study area.

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			Stringybark <i>E. macrorhynca</i> or Black Cypress <i>Callitris endlicheri</i> woodland.	
<i>Prasophyllum petilum</i> Tarengo Leek Orchid	E	E	<p>When first described in 1991, the Tarengo Leek Orchid was known only from the Hall Cemetery in the ACT. It has since been found at four sites in New South Wales: Captains Flat Cemetery, Ilford Cemetery, Steves Travelling Stock Route (TSR) at Delegate and the Tarengo TSR near Boorowa.</p> <p>The Tarengo Leek Orchid occurs on relatively fertile soils in grassy woodland or natural grassland. The three cemetery sites originally contained grassy woodland, dominated by Snow Gum <i>Eucalyptus pauciflora</i> and Black Gum <i>E. aggregata</i> at Captains Flat, and Blakely's Red Gum <i>E. blakelyi</i> and Yellow Box <i>E. melliodora</i> at Hall and Ilford. Both Tarengo TSR and Steves TSR are natural grasslands.</p> <p>The species is intolerant of grazing and this is considered to be the key reason it has been found only within cemeteries and TSRs, land from which grazing has been restricted.</p>	<p>Low</p> <p>The species has not been recorded in the vicinity of the study area, however potential habitat occurs. Although the likelihood of the species being present is low, it should be included in the list of species surveyed for in spring.</p>
<i>Swainsona recta</i> Small Purple-pea	E	E	<p>The Small Purple-pea occurs in the grassy understorey of woodlands and open forests dominated by Blakely's Red Gum, Yellow Box, Candlebark and Bundy. The species grows in association with understorey dominants that include Kangaroo Grass, Poa tussocks and spear-grasses. Plants die back in summer, surviving as rootstocks until they shoot again in autumn. The species is intolerant of grazing but generally tolerant of fire, which also enhances germination by breaking the seed coat and reducing competition from other species.</p>	<p>Low</p> <p>Potential habitat for the species occurs within the study area, and the species is known from numerous nearby sites in the Williamsdale/Royalla locality. It should be included in the list of target species for spring surveys.</p>
<i>Thesium australe</i> Austral Toadflax	V	-	<p>Found in very small to large populations scattered across eastern NSW, along the coast, and from the Northern to Southern Tablelands. Austral Toadflax is a root parasite that takes water and some nutrients from other plants, especially Kangaroo Grass. It is often found in damp sites in association with Kangaroo Grass but it is also found on other grass</p>	<p>Low</p> <p>Low quality potential habitat occurs within the study area. The species should be included on the list of target species surveyed for spring surveys.</p>

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			species at inland sites. Occurs on clay soils in grassy woodlands or coastal headlands.	
<b>Mammals</b>				
<i>Dasyurus maculatus maculatus</i> Spot-tailed Quoll (SE mainland population)	E	V	The Spot-tailed Quoll occurs along the east coast of Australia and the Great Dividing Range. The species uses a range of habitats including sclerophyll forests and woodlands, coastal heathlands and rainforests. Occasional sightings have been made in open country, grazing lands, rocky outcrops and other treeless areas. Habitat requirements include suitable den sites, including hollow logs, rock crevices and caves, an abundance of food and an area of intact vegetation in which to forage. Seventy per cent of the diet is medium-sized mammals, and also feeds on invertebrates, reptiles and birds. Individuals require large areas of relatively intact vegetation through which to forage. The home range of a female is between 180 and 1000ha, while males have larger home ranges of between 2000 and 5000ha. Breeding occurs from May to August.	<b>Moderate</b> The species may pass through the study area, however the study area is unlikely to provide significant habitat for the species which prefers large undisturbed natural areas.
<i>Phascolarctos cinereus</i> Koala (combined populations of Qld, NSW and the ACT)	V	-	In NSW, the Koala mainly occurs on the central and north coasts with some populations in the western region. Koalas feed almost exclusively on eucalypt foliage, and their preferences vary regionally. They are solitary with varying home ranges. In high quality habitat home ranges may be 1-2 hectare and overlap, while in semi-arid country they are usually discrete and around 100 ha.	<b>Negligible</b> The species is not known to occur in the lowland areas of the ACT and surrounding region of NSW.
<i>Pteropus poliocephalus</i> Grey-headed Flying Fox	V	-	The Grey-headed Flying Fox occurs in the coastal belt from Rockhampton in central Queensland to Melbourne in Victoria. Whilst Brisbane, Newcastle, Sydney and Melbourne are occupied continuously, the species is widespread throughout their range during summer. In autumn the species occupies coastal lowlands and is uncommon inland. In winter the species congregates in coastal lowlands north of the Hunter Valley and is occasionally found on the south coast of NSW and on the northwest slopes (associated with flowering eucalypts of these areas).	<b>Moderate</b> The species may visit the study area to feed on the flowering eucalypts, however there are no known camps (roost sites) in the locality.



Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			<p>The Grey-headed Flying-fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands.</p> <p>The Grey-headed Flying-fox roosts in aggregations of various sizes on exposed branches. Roost sites are typically located near water, such as lakes, rivers or the coast. The roost at Commonwealth Park in Canberra is the only known roost in the ACT region.</p>	
<b>Reptiles</b>				
<i>Aprasia parapulchella</i> Pink-tailed Worm-lizard	V	V	<p>The Pink-tailed Worm-lizard is a fossorial species which lives beneath surface rocks and occupies ant burrows. It feed on ants, particularly their eggs and larvae. Thought to lay eggs within the ant nests under rocks that it uses as a source of food and shelter and for thermoregulation. Key habitat features are a cover of native grasses, particularly Kangaroo Grass, sparse or no tree cover, little or no leaf litter, and scattered small rock with shallow embedment in the soil surface.</p>	<p>Low</p> <p>The rocky habitat (refer Figure 3) has a low potential to support the species.</p>
<i>Delma impar</i> Striped Legless Lizard	V	V	<p>The Striped Legless Lizard is patchily distributed in grasslands of south-eastern NSW, the ACT, north-eastern, central and south-western Victoria, and south-eastern South Australia. In the ACT, the species is known to occur at four separate locations - in grassland areas of Gungahlin, Majura and Jerrabomberra Valleys, and Yarramundi. Unsuitable habitat, roads and urban development separate these sites. Most areas where the species persists are thought to have had low to moderate levels of agricultural disturbance in the past and it has been suggested that ploughing in particular may be incompatible with the survival of the species. Until recently, the species was thought to inhabit only native grasslands dominated by species such as Tall Speargrass and Kangaroo Grass. In recent years, surveys have revealed the Striped Legless Lizard in many sites dominated by exotic grasses such as Phalaris, Serrated Tussock and Flatweed (Biosis Research 2012). They have also</p>	<p>Low</p> <p>The study area is not located near primary habitat for the species (natural temperate grassland) and the closest records of the species are in the Jerrabomberra Valley.</p>

Species Name	EPBC Act Status	NC Act Status	Description (Distribution and Habitat)	Likelihood of Occurrence
			been found in several derived grassland sites, generally within two kilometres of primary grassland.	

## Appendix 5. Significant Impact Criteria Assessment

### White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland

The *EPBC Act Matters of National Environmental Significance - Significant Impact Guidelines 1.1* (DoE 2013) provide a number of criteria for use in determining whether an 'action' will have, or is likely to have, a significant impact upon an EPBC Act listed 'critically endangered or endangered ecological community'. An assessment of the proposed development against each of these criteria is provided below.

- *Is there a real chance or possibility that the action will reduce the extent of the ecological community?*

The proposed development involves the installation of three new power poles which will require the modification/disturbance of a maximum of 1,159 m<sup>2</sup> (0.12 ha) of EPBC Act Box-Gum Woodland. The removal of woody vegetation will also be required within the new powerline easement. In effect, the proposed development will result in the conversion of a total of 7,330 m<sup>2</sup> (0.73 ha) of EPBC Act Box-Gum Woodland currently in its woodland form to EPBC Act Box-Gum Woodland in its derived grassland form. Regeneration of the midstorey and overstorey will also be prevented across up to 791 m<sup>2</sup> (0.08 ha) of EPBC Act Box-Gum Woodland currently in its derived grassland form. Some ground disturbance around the pole locations is expected to occur during installation (up to 10 m from the base of the pole, confined within the demarcated maximum 20x20 m Pole Installation Disturbance Areas), however this disturbance will be temporary in nature.

The action will reduce the extent of the community in its woodland form within the new easement, however it will persist in its derived grassland form. The remainder of the study area and surrounds will retain its woodland values. As evident in the current condition of the study area and adjacent land (notably PCT-ACT16 Zone 2), management of Box-Gum Woodland as an easement can be compatible with the long term retention of groundstorey flora species diversity. The land will continue to be maintained as a powerline easement which will reduce the likelihood that other less compatible development occurs within.

- *Is there a real chance or possibility that the action will fragment or increase fragmentation of the ecological community, for example by clearing vegetation for roads or transmission lines?*

The new easement will become a 20 m wide extension to the existing 60 m wide Transgrid easement, within which the removal of most woody vegetation has already occurred and the prevention of regeneration is ongoing. As such, the proposed development is unlikely to significantly increase the fragmentation which has already occurred through the establishment of the Transgrid easement and through the formation of the road to the Transgrid 330/132kV substation. The removal of woody vegetation in the new 20 m wide easement is unlikely create a barrier to dispersal for native species.

It is also noted that the proposed establishment of the new easement as an extension to the existing Transgrid easement will minimise the required impact to the extent practicable. The establishment of a standalone 132kV easement separated from the existing easement would require the establishment of another 60 m wide corridor cleared of woody vegetation.

- *Is there a real chance or possibility that the action will adversely affect habitat critical to the survival of the ecological community?*

The action will modify 7,330 m<sup>2</sup> (0.73 ha) of EPBC Act Box-Gum Woodland to its derived grassland form. Very little permanent loss of the community in its derived grassland form is expected, as any disturbance caused by the works will be restricted to the demarcated maximum 20x20 m Pole Installation Disturbance Areas and all disturbed areas will be remediated and revegetated. The action will not affect the survival of the ecological community at the site or in the locality.

- *Is there a real chance or possibility that the action will modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for the ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns?*

It is highly unlikely that the proposed development will modify or destroy abiotic factors necessary for the survival of the ecological community. Sediment and erosion control measures will be put in place to ensure no additional impacts to the community from any ground disturbance associated with the power pole installation. The proposed development will not involve alteration of groundwater levels or surface water drainage patterns.

- *Is there a real chance or possibility that the action will cause a substantial change in the species composition of an occurrence of the ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting?*

The action will include removal of midstorey and overstorey vegetation from 7,330 m<sup>2</sup> (0.73 ha) of EPBC Act Box-Gum Woodland in its woodland form, and prevention of mid and overstorey regeneration in up to 791 m<sup>2</sup> (0.08 ha) of EPBC Act Box-Gum Woodland currently in its derived grassland form. The proposed removal of vegetation will cause some localised change in species composition (through changes in light, removal of woody species etc.) within the new powerline easement and around the poles, however this will not result in a substantial change in species composition of the broader patch of the ecological community.

- *Is there a real chance or possibility that the action will cause a substantial reduction in the quality or integrity of an occurrence of the ecological community, including, but not limited to:*
  - *assisting invasive species, that are harmful to the listed ecological community, to become established, or*
  - *causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community?*

Many of the exotic pasture species and/or exotic grassland weeds which occur in the ACT already occur as patches scattered throughout the study area and locality (refer Section 6.1 or this EAR). The proposed development is unlikely to result in the introduction and establishment of additional invasive weeds. The construction works for the proposed development may temporarily increase the occurrence of the weed species already present, however appropriate vehicle hygiene and ongoing weed management



measures will be implemented to minimise the risk of weed introduction and spread (refer Section 6 of this EAR).

Some exotic pest fauna species are likely to occur within the study area and surrounds. The proposed development is highly unlikely to increase the incidence of these species. Notably, the proposed development is not of a type that is likely to introduce or increase the numbers of exotic avifauna present in the area.

The proposed development will not result in the mobilisation of fertilisers, herbicides or other chemicals or pollutants in the ecological community. Some weed control will be undertaken following the works, however the control works will be undertaken by suitably qualified and experienced personnel, to prevent negative impacts upon the ecological community.

The works will cause a minor reduction in the integrity of the community, through the removal of mid and overstorey vegetation within the proposed new easement and around the new power poles. However, the localised modification and disturbance resulting from the proposed development is unlikely to cause a substantial reduction in the quality or integrity of the occurrence of the ecological community.

- *Is there a real chance or possibility that the action will interfere with the recovery of the ecological community?*

The action will have impact upon (modify) only a small component of the ecological community in the locality, and therefore, is unlikely interfere with the recovery of the ecological community.

## Conclusion

The results of this assessment suggest that the proposed development is unlikely to have a significant impact upon the EPBC Act listed Box-Gum Woodland critically endangered ecological community.

## Cultural Heritage Desktop Assessment



Report Prepared for Purdon Planning Pty Ltd

23 May 2016



Project Number:	20160915		
Project File Name:	Williamsdale Proposed 132kV Electricity Transmission Line Desktop Heritage Assessment		
Revision	Date	Prepared by (name)	Approved by (name)
Draft	11/4/2016	Lyn O'Brien	Trevor Fitzpatrick
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- ACT Heritage
- Purdon Planning Pty Ltd
- NSW Office of Environment and Heritage

## ABBREVIATIONS

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
OEH	NSW Office of Environment and Heritage
PAD	Potential Archaeological Deposit
SHE	Statement of Heritage Effects
UDP	Unexpected Discovery Plan



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## EXECUTIVE SUMMARY

Past Traces Pty Ltd has been contracted by Purdon Planning Pty Ltd (Purdon), on behalf of Essential Energy, to prepare a desktop heritage review for the proposed construction of the 132kV electricity transmission line from the Williamsdale substation to the Queanbeyan-Cooma line. The transmission line will be located in the existing electricity easement and would run parallel to the existing transmission lines. This alignment covers both the ACT and NSW jurisdictions.

The project consists of the installation of 5 transmission poles which would impact an area of approximately 10m<sup>2</sup> at each location. The extent of the project and the 5 small areas of ground impact are shown on Figure 1. The Project Area is located along the electricity easement that separates Tuggeranong Block 1674 and Tuggeranong Block 1675 and runs eastwards into NSW. The length of the easement that will be impacted by the project is approximately 1km in length, of which ground surface impacts are limited to the five small areas of the pole locations.

The Williamsdale transmission line project would involve ground disturbance that has the potential to impact on Aboriginal and historic heritage sites and objects which are protected under the ACT *Heritage Act 2004* and the NSW *Parks and Wildlife Act 1974* and NSW *Heritage Act 1977*. The purpose of the desktop review is therefore to investigate the presence of any heritage sites and to assess the impacts and management strategies that may mitigate any impact.

No consultation with the Aboriginal community has been undertaken for this preliminary desktop review of the alignment. Consultation will be undertaken if heritage or potential heritage sites are at risk due to the proposal. This consultation will be undertaken at the Statement of Heritage Effect (SHE) stage or within NSW the Aboriginal Cultural Heritage Assessment Report (ACHAR).

A review of the information available on the NSW Aboriginal Heritage Information System (AHIMS) and ACT Heritage Register was undertaken and relevant reports requested. No Aboriginal or historical heritage sites or areas of Potential Archaeological Deposit (PAD) were identified within the project area from the desktop review. No trees are located in the project area, removing the potential for scarred trees to be present. Recorded Aboriginal heritage sites are present in the locality, but located outside of areas of impact and the project area.

A site visit was undertaken to confirm the findings of the desktop assessment which located no surface sites or indications of potential archaeological deposits based on landforms present within the project area.

As a result of the desktop assessment the following findings and recommendations apply for the project:

- No registered Aboriginal or historical heritage sites are located within the project area.
- No areas of potential archaeological deposits or scarred trees have been identified within the development area and the potential for unidentified Historical or Aboriginal heritage objects within the development area has been assessed as low.
- The desktop assessment finds that the potential to impact on heritage sites within the confined impact areas of the pole locations is assessed as low.
- If the project area should be enlarged or further impacts anticipated progression to a Cultural Heritage Assessment with the participation of the Aboriginal community will be required.

- 
- All Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974* and ACT *Heritage Act 2004*. It is an offence to disturb an Aboriginal site without a consent permit issued by the NSW Office of Environment and Heritage (OEH) or approvals granted by ACT Heritage.
  - Approvals should be sought for the project either through a Development Application or approval of a Statement of Heritage Effects prior to works commencing. Under the ACT *Heritage Act 2004*, this report does not constitute a defence against harming any Aboriginal heritage sites. Further studies may be requested by the relevant agency.
  - Should any Aboriginal objects be encountered during works then works must cease immediately in the vicinity of the find, and the find should not be moved until assessed by a qualified archaeologist. Adherence to the Unexpected Discovery Plan (UDP) attached at Appendix 1 is required.

# 1 INTRODUCTION

Past Traces Pty Ltd has been contracted by Purdon Planning Pty Ltd (Purdon), on behalf of Essential Energy, to prepare a desktop heritage review for the proposed construction of the 132kV electricity transmission line from the Williamsdale substation to the Queanbeyan-Cooma line. The transmission line will be located in the existing electricity easement and would run parallel to the existing transmission lines. This alignment covers both the ACT and NSW jurisdictions.

The Williamsdale transmission line project would involve ground disturbance that has the potential to impact on Aboriginal and historic heritage sites and objects which are protected under the ACT *Heritage Act 2004* and the NSW *Parks and Wildlife Act 1974* and NSW *Heritage Act 1977*. The purpose of the desktop review is therefore to investigate the presence of any heritage sites and to assess the impacts and management strategies that may mitigate any impact.

## 1.1 PROJECT PROPOSAL

The project consists of the installation of 5 transmission poles which would impact an area of approximately 10m<sup>2</sup> at each location. The extent of the project and the 5 small areas of ground impact area shown on Figure 1. The project area is located along the electricity easement that separates Tuggeranong Block 1674 and Tuggeranong Block 1675 and runs eastwards into NSW. The length of the easement that will be impacted by the project is approximately 1km in length of which ground surface impacts are limited to the five small areas of the pole locations.

Vehicle access would use the existing easement tracks and will not require grading of roads to provide access. As a result this assessment is limited to the 5 small areas of impact (clear work areas) surrounding each of the pole locations, approximately 10m<sup>2</sup> around each pole. This is not all ground excavation work. It is expected that only the area where the pole is to be erected will be impacted (excavated). The other parts of the “clear work area” will allow for manoeuvring of machinery.

The potential heritage implications of the project are therefore limited to a small confined impact area.

## 1.2 ABORIGINAL CONSULTATION

No consultation has been undertaken with Aboriginal communities for this desktop assessment. If findings indicate that heritage sites may or will be impacted by this proposal then consultation with the aboriginal community will be a requirement of further studies.

## 1.3 REPORT FORMAT

This desktop heritage review was prepared in line with the following where applicable:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011);
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010a), and
- *Aboriginal cultural heritage consultation requirements for proponents 2010* (OEH 2010b) produced by the NSW Office of Environment and Heritage (OEH).



- 
- *Heritage Assessment Policy (ACT Heritage 2015)*
  - *Cultural Heritage Reporting Policy (ACT Heritage 2015)*

The purpose of this desktop review is therefore to provide an assessment of the Aboriginal and historical cultural values associated with the project area and to assess the cultural and scientific significance of any heritage sites.

## 2 BACKGROUND INFORMATION

### 2.1 REVIEW OF LANDSCAPE CONTEXT

#### 2.1.1 *Geology and Topography*

The project area is underlain by the Collinton Volcanics and Brandy Beds (Richardson 1976). This late Silurian volcanic system consists mainly of rhylitic and dacitic tuffs. Quartz will be present naturally within this formation along with shales. Thin shallow soils characterise the area, highly acidic and easily erodible. A duplex soil system overlaying clay bedrock appears in profile across the area. The soils belong to the Williamsdale group (Jenkins 2000). These are moderately deep, well drained chromosols that have formed on the crests and upper slopes, grading to moderately deep, poorly drained sodosolic soils on the mid-slopes and most lower slopes (Jenkins 2000).

The topography of the area consists of undulating to rolling hills with generally long to moderately inclined waning slopes (Jenkins 2000:132). The landform elements that are present within the limited project area consist of lower slopes and a mid slope spur line. A small creek line is present along the northern boundary is the most western section which has now been dammed. This creek line has been impacted by previous works in this area.

#### 2.1.2 *Flora and Fauna*

The natural vegetation across the proposal area has been almost totally cleared with grass coverage appearing to have been subject to pasture improvement. Areas of regrowth vegetation are present along the Monaro Highway road verge and on the eastern side of the project area, near the old Cooma Railway Line. The natural vegetation of the area would most likely have consisted of Tableland grassy woodland prior to clearing with native grasses under an understory of Eucalypts.

The grassy woodland environment supported a wide range of edible plant and fauna species. Fauna present would range from small marsupials (i.e. possums), to avian species and macropods. A range of lizards also inhabit this environment that would have been utilised by Aboriginal groups. The NSW OEH lists over 200 flora and fauna species as present within these woodlands, the majority of which had some utilisation in traditional Aboriginal lifeways.

#### 2.1.3 *Historic Landuse*

Pastoral settlement commenced in the Williamsdale region with the granting of 2000 acres in 1827 to Peter Murdoch. The grant then transferred to John McLaren in 1828 and became known as Janevale. McLaren sold the property to Thomas Macquoid in 1835. Large pastoral runs were the norm with the closer settlement into smaller farms commencing following the Robertson Land Acts (1861). The area was mainly used for sheep grazing due to the poor soils in the area.

The first authorized landowner of the Tuggeranong area following white settlement was Peter Murdoch, aide-de-camp of Thomas Brisbane, who was awarded a grant of 2,000 acres (8 km<sup>2</sup>) in 1827. Following Murdoch's appointment to a position in Tasmania in 1829, the area became part of a grant to John McLaren who arrived from Glasgow in 1828. The property, then known as Janevale, was managed as a cattle station by McLaren's partner, William Wright (Moore, 1982). Tuggeranong was the original name of the whole of the Wanniasa and Lanyon areas. McLaren sold the property to Thomas Macquoid in 1835. In 1857 the property was sold to Andrew Cunningham of Lanyon and became part of the extensive Cunningham holdings.

Following the resumption of land for the Federal Territory farming continued under lease with areas developed for the construction of the Williamsdale Substation and electricity easement.

The Cooma Railway line (later extended to Bombala) was opened in 1887 and ceased operation in 1988. The project area crosses over the embankment and existing railway line as it progresses eastwards from the Williamsdale Substation. This section of the alignment has been highly disturbed with extensive soil movements.

In summary, the proposed location for the new power transmission poles has been subject to considerable impacts from farming, road and railway construction and the construction of the current transmission line.

## 2.2 REVIEW OF ABORIGINAL ARCHAEOLOGICAL CONTEXT

### 2.2.1 Ethnohistoric Setting

The Williamsdale project area is within a region identified as part of the Ngunnawal language group. This is an assemblage of many small clans and bands speaking a number of similar dialects (Howitt 1996, Tindale 1974, Horton 1994). The borders were however, not static, they were most likely fluid, expanding and contracting over time to the movements of smaller family or clan groups. Boundaries ebbed and flowed through contact with neighbours, the seasons and periods of drought and abundance.

The southern section of Canberra represents the boundary between Ngunnawal and Ngarigo language groups. Currently descendants of both Aboriginal groups hold cultural affiliation with the project area.

The small family group (called Bands by anthropologists) was at the core of Aboriginal society, forming the basis for their hunting and gathering life. These small groups camped, sourced food, made shelter and performed daily activities together. The archaeological evidence of these activities are likely to be small campsites, characterised by small artefact scatters across the landscape. Places that were visited more frequently would develop into larger site complexes with higher numbers of artefacts and possibly more diverse archaeological evidence.

Prior to European settlement, the tablelands supported dense woodlands, which provided habitat for a broad range of plant and animal species that formed the core of Aboriginal dietary items prior to contact with early European explorers and settlers

Aboriginal traditional lifestyles were disrupted by the spread of European settlement by the 1840s. European disease and violence by early settlers lead to a decline in the local population, with some remaining families finding employment on the large pastoral stations that had become established in the region. Janevale was a blanket distribution centre and focus for Aboriginal families.

### 2.2.2 ACT Heritage Register Search

The online Heritage Register (HeRO) was searched on the 8<sup>th</sup> April along with the ACTMAPi interactive heritage mapping service. No sites were recorded within the project area but three sites have been previously recorded in close proximity. Site 14 is located to the south of Pole 3 by approximately 50m. These sites and their locations are provided in Table 1 below.

Table 1: Listed Heritage Sites (ACT)

Site Name	Site Type	Location
<b>CR14</b>	Artefact scatter (n=5)	692937.60599984
<b>CR15</b>	Artefact scatter	693130.6060093
<b>Site 14</b>	Isolated Find	693531.6060106

To the north of the project area several sites mainly consisting of small artefact scatters and isolated finds have been located due to investigations for the Murrumbidgee to Googong Water Transfer Project (Navin Officer 2010) and Williamsdale Solar Farm (Biosis 2015 and 2016). These sites are located 1 – 2 km north of the project area. Previous studies are discussed in section 2.2.4.

### 2.2.3 NSW AHIMS Search Results

The Aboriginal Heritage Information Management System (AHIMS) is maintained by OEH and provides a database of previously recorded Aboriginal heritage sites. Searches of the AHIMS database can be made providing information about any sites previously identified within a designated search area. The results of the search are able to be relied upon for 12 months.

A search of the AHIMS database was undertaken on 11<sup>th</sup> April 2016. The AHIMS search has found that there are no recorded sites within the proposed project area or the surrounding 1km search radius.

### 2.2.4 Previous archaeological studies.

Archaeological evidence has shown that Aboriginal people have occupied the Australian continent for at least 40,000 years and perhaps 60,000 years and beyond (Mulvaney and Kamminga 1999). Excavations at Birrigai Rockshelter show evidence of occupation of 32, 000 years (Flood et al 1987). No regional synthesis of archaeology for the Williamsdale region has been undertaken with most assessments being small scale and development focused. The following are summaries of those archaeological survey reports that have been completed in the area that are relevant for the current project.

Barz (1980) completed a survey of the easement for the Canberra/Royalla transmission line. Two sites were located at the southern end CR14 and CR15. Both of these sites were small artefact scatters in a disturbed context and considered to hold low potential for sub surface deposits. This sites are located south of the current project area.

Navin Officer (2006) completed an assessment for the proposed substation site at Williamsdale ACT. During this survey two previously registered sites were identified (CR14 and CR15) and one new site (Site



14. One site (Site 14 isolated find) is located within the transmission line close to the current project area (approximately 50m to the south).

Navin Officer (2007) completed a desktop heritage assessment for the proposed electricity transmission line from Williamsdale to Theodore ACT. This study area covered the Rob Roy Nature Park, an area holding many aboriginal sites. They recommended that a field survey be undertaken based on the 33 registered sites that occurred along the alignment and the large study area.

Biosis Research (2009) completed a desktop assessment of the proposed Williamsdale Substation and electricity lines. Three previously registered sites were identified and a model of low potential based on distance to water theorised.

Navin Officer from 2008 to 2010 completed numerous field surveys, salvage excavations and management plans for the Murrumbidgee to Googong Water Transfer Project. This pipeline runs to the north of the current project area at a distance of approximately 1km. This work located 10 surface scatters along the alignment with increasing size and complexity as they neared the Murrumbidgee River. These sites were subject to salvage excavation prior to the installation of the water pipeline.

Biosis (2011) completed an assessment for the proposed Williamsdale Solar Farm located approximately 2km north of the current study area along both sides of Angle Crossing Road. The field survey identified 16 surface sites consisting of isolated finds and small artefact scatters. The larger sites were located on the alluvial terraces to the east of Murrumbidgee River in areas of exposure caused by vehicle tracks.

Biosis 2016 completed a process of sub surface testing at the Williamsdale Solar Farm site confirming site predictive models of concentration along the Murrumbidgee where use of resources was most convenient.

## 2.3 SUMMARY OF ABORIGINAL LAND USE/PREDICTIVE MODEL

The results of previous archaeological surveys in the Williamsdale region indicates that the potential for sites is present in a range of landforms. There does appear however to be a pattern of site location that relates to the presence of potential resources for Aboriginal use. The small artefact scatters tend to be present due to the occurrence of small drainage or creek lines per resources, an essential factor for Aboriginal people.

Based on the results of these previous archaeological investigations in the local area, it is possible to provide the following model of site location in relation to the proposed impact areas.

**Stone artefact scatters** – representing camp sites these sites can occur across the landscape, usually in association with some form of resource or landscape unit. Creek lines and small water holding bodies can also be a focus of Aboriginal occupation. Boundaries between changes in vegetation can also be a focus for occupation. Within the project area, no such features exist and therefore large campsites are unlikely to occur.

**Burials** – are generally found in sandy contexts or in association with rivers and major creeks. No such features exist with the project and therefore such sites are unlikely to occur.

**Scarred Trees** – these require the presence of mature trees and are likely to be concentrated along major waterways and around swamps areas. There are no trees remaining on the project area.

**Isolated Artefacts** – are present across the entire landscape, in varying densities. As Aboriginal people traversed the entire landscape for thousands of years, such finds can occur anywhere and indicate the presence of isolated activity, dropped or discarded artefacts from hunting or gathering expeditions or the ephemeral presence of short term camps.

In summary, the lack of topographic, environmental or landscape features within the proposal area means that there are few loci that could potentially be attractive to Aboriginal people to concentrate activity and therefore have a better chance of leaving archaeological traces. Nonetheless, given that Aboriginal people have lived in the region for tens of thousands of years, there is some potential for archaeological evidence to occur. This is most likely to be in the form of isolated stone artefacts.

## 3 ARCHAEOLOGICAL INVESTIGATION RESULTS

### 3.1 DESKTOP ASESMENT

As discussed in the previous section 2 the desktop assessment and review of previous studies has shown that no registered heritage sites (Aboriginal or historical) are present within the project area. The review of previous studies and landforms present within the project area indicate low potential for unrecorded heritage sites to occur. The degree of disturbance to the area should also be considered as having impacted on potential for unrecorded sites.

### 3.2 SITE VISIT

A site visit was undertaken on Friday the 8<sup>th</sup> April by Lyn O'Brien to verify the desktop assessment of low potential for unidentified heritage sites to be present within the limited area of the pole impact areas.

No surface sites were identified as being present during the site visit. The 5 pole locations were visually inspected, photographed and details of their level of prior disturbance noted.

The pole locations have all suffered a degree of disturbance, either through works to reduce water flows to the creek line, the installation of water drains associated with the highway, or through the original construction of the electricity easement and installation of major power lines. Only one pole location is close to a creek line and thus holding higher potential but this area (Pole 3) has a higher degree of disturbance due to past works for the highway and erosion control.

The combination of the small impact areas, the degree of previous disturbance and the placement across the landscape away from areas of high potential based on landscape forms results in finding of low potential for the project to impact on unidentified heritage sites.

The condition of each of the pole locations at the time of the site visit are shown below in plates 1-5. The pole locations are shown on Figure 1.



Plate 1. Location of Pole 1.



Plate 2. Location of Pole 2.



Plate 3. Location of Pole 3.



Plate 4. Location of Pole 4.



Plate 5. Location of Pole 5.

### 3.3 PRIOR DISTURBANCE

It has been noted above that historically area on the western side of the Monaro Hwy project area has been impacted through previous construction activities for the Hwy, and associated water drainage work and the electricity transmission lines.

The balance of the project area have not been as radically disturbed, although the paddocks have been subject to tree removal and pasture improvement. The Railway alignment has been subject to high levels of earthworks and is now abandoned and being revegetated naturally.

### 3.4 ASSESSMENT OF HARM

There are no recorded Aboriginal archaeological sites present within the proposal area and the assessment is that there are unlikely to be other unrecorded sites or sub-surface deposits within the project area. Any impacts from the proposed electricity transmission line would be unlikely to impact on Aboriginal or historical heritage if the recommendations in section 4 are applied for the project.



## 4 RECOMMENDATIONS

The recommendations are based on the following information and considerations:

- Results of the ACT Heritage register search;
- Results of the AHIMS database search;
- Consideration of results from other local archaeological studies;
- Results of the verification site visit;
- Appraisal of the proposed impact area, and
- Legislative context for the development proposal.

As a result of the desktop assessment the following findings and recommendations apply for the project:

- No registered Aboriginal or historical heritage sites are located within the project area.
- No areas of potential archaeological deposits or scarred trees have been identified within the development area and the potential for unidentified Historical or Aboriginal heritage objects within the development area has been assessed as low.
- The desktop assessment finds that the potential to impact on heritage sites within the confined impact areas of the pole locations is assessed as low.
- If the project area should be enlarged or further impacts anticipated progression to a Cultural Heritage Assessment with the participation of the Aboriginal community will be required.
- All Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974* and ACT *Heritage Act 2004*. It is an offence to disturb an Aboriginal site without a consent permit issued by the NSW Office of Environment and Heritage (OEH) or approvals granted by ACT Heritage.
- Approvals should be sought for the project either through a Development Application or approval of a Statement of Heritage Effects prior to works commencing. Under the ACT *Heritage Act 2004*, this report does not constitute a defence against harming any Aboriginal heritage sites. Further studies may be requested by the relevant agency.
- Should any Aboriginal objects be encountered during works then works must cease immediately in the vicinity of the find, and the find should not be moved until assessed by a qualified archaeologist. Adherence to the Unexpected Discovery Plan (UDP) attached at Appendix 1 is required.

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## 5 FIGURES

Figure 1: Location of Project Area

## 6 REFERENCES

- Barz, R. (1980). *An Archaeological survey of the route of the Canberra/Royalla 330/132kV transmission line corridor*. Report to NSW Electricity Commission.
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## APPENDIX A UNEXPECTED DISCOVERY PLAN

The process outlined in the unanticipated discovery plans should not be undertaken until it has been endorsed by the ACT Heritage Council. The plans provide guidance to project personnel so that obligations in accordance with the *Heritage Act 2004* can be met.

If any items are uncovered during the course of works, which are considered to possibly be of Aboriginal or historical significance the following unanticipated discovery plan should be implemented. All Aboriginal and significant historical heritage places or objects are protected under the *Heritage Act 2004*. Offence provisions (Section 74 and Section 75) of the Act apply to impacting heritage sites. Any unanticipated find of potential heritage value should follow the process outlined below to avoid breaching obligations under the Act.

### 1. UNEXPECTED DISCOVERY OF ABORIGINAL CULTURAL HERITAGE

If suspected Aboriginal Heritage items (isolated stone artefacts, artefact scatters, archaeological deposits or scarred trees) are found then the following management process must be implemented:

1. Work must immediately stop in the area within a buffer zone of 10 metres from the primary grid coordinate.
2. ACT Heritage (132281) must be informed of the suspected find within 5 working days.
3. A suitably qualified heritage advisor and the Representative Aboriginal Organisation (RAOs) must be engaged to assess the potential site.
4. If the items are not considered to be Aboriginal, activity may recommence.
5. If the items are considered to be Aboriginal, the Proponent, RAOs and the Cultural Heritage Advisor, will discuss the possibility of avoiding and minimising harm to the Aboriginal cultural heritage, and the Proponent must avoid or minimise harm to the Aboriginal cultural heritage, where possible.
6. If the items are considered to be Aboriginal, an assessment report will need to be prepared and submitted to the Heritage Council. After approval from the Heritage Council, the artefacts should be recorded and salvaged in accordance with the approved methodology.
7. After approval of the salvage report, works can recommence.

### 2. UNEXPECTED DISCOVERY OF HISTORICAL CULTURAL HERITAGE

If suspected historical items are found then the following management process must be followed:

1. Work must immediately stop in the area within a buffer zone of 10 metres from the primary grid coordinate.
2. ACT Heritage must be contacted on 13 22 81 for advice.



3. A suitably qualified heritage advisor needs to be engaged to assess the potential site.
4. If the items are not considered to be historically significant, activity may recommence.
5. If the items are considered to be historically significant, a management recommendation should be given by the heritage advisor.
6. Following approval by ACT Heritage Council and completion of the management recommendation, the activity may then recommence.

### 3. UNEXPECTED DISCOVERY OF HUMAN REMAINS

If any suspected human remains are discovered during any works, all activity in the areas must cease immediately. The following contingency plan describes the actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the activity area must follow these steps.

#### Discovery:

- If any suspected human remains are found during any activity, works in the vicinity **must** cease.
- All personnel should leave the area immediately
- The remains must be left in place, and protected from harm or damage.

#### Notification:

- The ACT Federal Police must be notified immediately. All details of the location and nature of the human remains must be provided to the relevant authorities.
- If there are reasonable grounds to believe that the remains are Aboriginal, ACT Heritage must be contacted immediately on **13 22 81**.
- The Project Manager must be contacted immediately.

#### Process:

- If the remains are considered to be Aboriginal by the AFP an appropriate management and mitigation, or salvage strategy will be implemented following consultation with the RAOs and ACT Heritage.