Australian Capital Territory

Planning and Development (Environmental Impact Statement Assessment Report – Lawson South 132kV Power Line Relocation) Notice 2014

Notifiable Instrument NI2014–211

made under the

***Planning and Development Act 2007*, s 225A (EIS assessment report)**

---

1 Name of instrument

This instrument is the *Planning and Development (Environmental Impact Statement Assessment Report– Lawson South 132kV Power Line Relocation) Notice 2014.*

2 Commencement

This instrument commences on the day after notification.

3 Environmental Impact Statement Assessment Report

An environmental impact statement (EIS) assessment report has been prepared by the planning and land authority. The EIS assessment report was given to the Minister for the Environment and Sustainable Development and the Minister has decided to take no action in relation to the EIS.

The EIS assessment report is shown at Annexure A.

A copy of the EIS assessment report may be obtained from ESDD's website:

http://www.actpla.act.gov.au/topics/design_build/da_assessment/environmental_assessment/current_and_completed_eiss

4 Completion

The EIS assessment report expires 18 months after the day the notice is notified.

Simon Corbell MLA
Minister for the Environment and Sustainable Development
14 May 2014

Lawson South 132kV Power Line Relocation

Environmental Impact Statement
Assessment Report

MARCH 2014

ACT Government
Environment and Sustainable Development

Authorised by the ACT Parliamentary Counsel—also accessible at www.legislation.act.gov.au

Pursuant to Section 222 of the *Planning and Development Act 2007*, this report evaluates the revised environmental impact statement for the following application:

Ref no: DA201200117

Date Revised EIS Lodged: 3 December 2013

Project: Lawson South 132kV Power Line Relocation Project

Applicant: Shared Services Procurement (SSP), Treasury Directorate, ACT Government

The following information provides the certificate of approval for issue of this report.

Document no: A8998668

Revision: 2.0

Document status: FINAL

Date of issue:

	Position	**Name**	**Signature**	**Date**
Reviewed by	Manager	Jonathan Teasdale		
	Executive Director – Planning Delivery	Jim Corrigan		
Reviewed by	Deputy Director-General - Planning	Ben Ponton		
Approved by	Director General	Dorte Ekelund		

Table of contents

Figures

Tables

Glossary and definitions

ACT	Australian Capital Territory
Australian Government Department	The Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.
Australian Government Minister	The Australian Government Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister
BZS	Belconnen Zone Substation
CEMP	Construction Environmental Management Plan
DA	Development Application
EIA	Environmental Impact Assessment: the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals before major decisions and commitments are made[1].
EIS	Environmental Impact Statement: a document prepared to detail the expected environmental, social and economic effects of a development, and state commitments to avoid, mitigate or satisfactorily control and manage any potential adverse impacts of the development on the environment[2]. In the ACT, an EIS is required for proposals in the impact track as per Section 123 of the *Planning and Development Act 2007*.
ESDD	Environment and Sustainable Development Directorate
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FoG	Friends of Grasslands
MNES	Matters of National Environmental Significance
SSP	Shared Services Procurement
TAMSD	Territory and Municipal Services Directorate
The Act	*Planning and Development Act 2007*
The Authority	The planning and land authority within the Environment and Sustainable Development Directorate
WMS	Work Method Statements

[1] International Association for Impact Assessment in cooperation with Institute of Environmental Assessment, UK, 'Principles of Environmental Impact Assessment Best Practice', <http://www.iaia.org/modx/assets/files/Principles%20of%20IA_web.pdf>, viewed on 2 June 2009.

[2] Ceduna Marina Development Company, 2004, 'Guidelines for the preparation of an Environmental Impact Statement', <http://dataserver.planning.sa.gov.au/publications/1017p.pdf>, viewed on 5 June 2009

Executive summary

The purpose of this report is to:

- inform the Minister for the Environment and Sustainable Development of the environmental impact assessment process undertaken;
- provide an assessment as to whether sufficient information has been provided in the environmental impact statement documentation to address the requirements of the scoping document; and
- provide recommendations to the Minister for Environment and Sustainable Development on whether further actions should be taken on the environmental impact statement.

Shared Services Procurement within the Treasury Directorate, ACT Government has proposed the relocation of 132kV power lines to support the development of the Lawson South residential estate. The proponent has prepared an environmental impact statement which identifies the potential impacts of the proposed power line relocation and provides commitments to mitigate the impacts of the construction and operation of the project.

Project background

The Lawson South 132kV Power Line Relocation project (see Figure 1) was proposed to support development of the Lawson South residential estate. Lawson South is a residential development in north-eastern ACT, bounded by the suburbs of Bruce, Belconnen, Kaleen and McKellar, with Lake Ginninderra to the west and Commonwealth land to the north.

This project is designed to support development of the suburb by reducing the constraints imposed by existing power lines. It is expected that this project would substantially improve the aesthetics, urban amenity and value of this suburb. It will ensure that existing infrastructure will not constrain the design of the subdivision and that a greater area of land can be used for residences, as power line easements and safety zones will be reduced.

Project description

According to the EIS the project will involve the following main components:

- remove five existing 132kV power line towers and overhead power lines;
- construct:
    - foundations and security compounds;
    - two new underground/overhead transition structures;
    - power line entrance and exit infrastructure at the Belconnen Zone Substation;
- establish power line conduits under Lake Ginninderra using underboring; and
- underground power lines through underboring beneath Lake Ginninderra and through trenching beneath College Creek.

Some works may be undertaken at the Belconnen Zone Substation in parallel with this project. This may include preparation work for installation of a third power transformer and an extension of security fencing. Work will also be undertaken to establish temporary access ways, work areas and underbore entry and exit pits.

The environmental impact assessment process

Under section 123(b) of the *Planning and Development Act 2007*, the development application for the Lawson South 132kV Power Line Relocation must include a completed environmental impact statement as it falls in the activities, areas and process identified in Schedule 4 of the Act.

On 23 April 2012, Shared Services Procurement submitted a request for a scoping document. A final scoping document was issued by the planning and land authority within the Environment and Sustainable Development Directorate to the proponent on 3 June 2012. The draft environmental impact statement was lodged by the proponent on 12 February 2013. Public notification of the draft EIS occurred from 2 March 2013 to 3 April 2013.

On 3 December 2013, SSP submitted an addendum report (revised environmental impact statement) taking into account the planning and land authority's preliminary review of the draft EIS and comments from referral entities.

After considering the documentation and information provided, the planning and land authority accepts the environmental impact statement under Section 222 of the Act. This report is to inform the Minister for the Environment and Sustainable Development of the environmental impact assessment process undertaken and provide recommendations on further actions to be taken on the environmental impact statement.

Key findings

In preparing the environmental impact statement, the proponent investigated the potential impacts of the proposal on the environment under the following aspects:

- landscape and visual;
- soils and geology;
- water quality and hydrology;
- terrestrial flora and fauna (including matters of national environmental significance);
- socio-economic and health; and
- hazard and risk.

The key findings from the assessment of the environmental impact statement are provided in more detail in Section 4 of this report.

The following aspects were considered as having non-potentially significant impacts, as they had no identified risk scenarios of a medium rating or above:

- planning and land status;
- traffic;
- utilities;
- materials and wastes;
- climate change and air quality;
- aquatic flora and fauna;
- aboriginal and European cultural heritage;
- noise, vibration and lighting; and
- recreation.

For further information refer to Section 4.7.

The environmental impact statement proposed mitigation measures to the identified risk scenarios under these aspects. For those risks which had an assessed risk rating of medium or above the proponent conducted a residual risk assessment after the application of mitigation measures. It is the Environment and Sustainable Development Directorate's assessment that the risk assessment methodology used by the proponent in considering the impacts of the proposal is acceptable.

Development assessment

Based on the information provided in the environmental impact statement as well as comments received from referral entities, any subsequent development application related to the completed environmental impact statement will need to consider conditions for the matters discussed in this report. Details of these possible conditions are outlined in Section 5 of this report.

Recommendation

It is considered that the environmental impact statement has provided sufficient information to allow informed assessment of the potential environmental impacts of the Lawson South 132kV Power Line Relocation project. To reduce or avoid potential environmental impacts associated with the project, the proponent has committed to implementing a range of mitigation measures. The planning and land authority considers that the implementation of offsets, mitigation measures and development applications considerations can adequately address any adverse impacts.

With regards to matters of national environmental significance, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* assessment for the Lawson South residential development (EPBC Ref. 2010/5549) addresses impacts on Golden Sun Moth and Striped Legless Lizard. Approval was given through the Commonwealth assessment for development to progress, with conditions, including an offset.

The planning and land authority recommends that the ACT Minister for the Environment and Sustainable Development take no further action in relation to the environmental impact statement.

This page has been left intentionally blank.

1 Introduction

This section outlines the Environmental Impact Assessment (EIA) process that applies to this project. The Development Application (DA) to this project is required to include a completed Environmental Impact Statement (EIS) under the *Planning and Development Act 2007* (the Act).

1.1 ACT environmental impact assessment requirements

1.1.1 The environmental impact statement

The Lawson South 132kV Power Line Relocation is a proposal that meets Section 123 of the Act as it involves a process or activity mentioned in schedule 4 of the Act, and therefore requires an EIS. An EIS must be completed in accordance with the requirements of the Act before a DA can be lodged in the impact track.

A final scoping document was provided to Shared Services Procurement (SSP), Treasury Directorate, ACT Government on 3 June 2012 which specified what had to be assessed and considered in the EIS.

More information on representations received as part of the consultation process can be found in section 3 of this report. More information on the key findings of SSP's assessment of impacts outlined in the final scoping document can be found in section 4.

The EIS is not an approval process. It ensures potential impacts and possible mitigation measures for certain development proposals have been fully investigated and documented in accordance with the requirements of a scoping document.

The EIS is then used as a key assessment tool for any DA lodged for the proposal.

1.1.2 Assessment and key findings

The keys findings of the assessment are discussed in section 4 under the following headings:

- landscape and visual;
- soils and geology;
- water quality and hydrology;
- terrestrial flora and fauna;
- socio economic and health;
- hazard and risk; and
- non potentially significant impacts.

The proponent has also identified cumulative construction impacts as having a medium risk rating. This will be addressed by the assessment of the six categories above.

1.1.3 Development application considerations

Possible conditions of approval for the DA are in section 5 of this report. Conditions relate to mitigation measures and impact management based on the information provided in the EIS as well as comments received from entities on the EIS. The DA may require further conditions to fulfil the planning intent of the proposal.

1.1.4 Recommendation to the Minister for the Environment and Sustainable Development

Once the planning and land authority (the authority) within the Environment and Sustainable Development Directorate (ESDD) accepts the EIS under section 222 of the Act, the authority must give the EIS to the ACT Minister for the Environment and Sustainable Development. Once this has occurred the Minister may:

- choose no action on the EIS under section 226 of the Act;
- present the EIS to the Legislative Assembly under section 227 of the Act; or
- establish an inquiry panel to inquire about the EIS.

Requirements for establishing an inquiry panel are detailed under Part 8.3 of the Act.

If, under section 226, the Minister has decided to take no action in relation to the EIS, he must give the authority written notice of that decision.

The authority's recommendation to the Minister is in section 6 of this report.

1.1.5 Impact track process

Once the final EIS has been completed, the proponent can lodge a DA in the Impact track. Any subsequent DA relating to the EIS must include the completed EIS.

1.2 Commonwealth environmental impact assessment requirements

The Lawson South 132kV power line relocation project was proposed to support the Lawson South residential development.

The Lawson South residential development proposal was referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in June 2010. This project required approval under the EPBC Act as it had the potential to have significant impacts on listed threatened species and ecological communities (EPBC Ref: 2010/5549). Preliminary Documentation was provided to the Commonwealth and approval, with conditions, was granted in September 2012.

The area assessed as part of the Lawson South residential development referral covered most of the area of impact associated with the Lawson South 132kV power line relocation project. The only area not covered under the residential development referral was the area to the west of Lake Ginninderra. The EIS indicates that there are no potential impacts on MNES on the west side of the lake. Therefore, the action was not referred.

The potential impacts on Golden Sun Moth and Striped Legless Lizard associated with the Lawson South 132kV power line relocation proposal were addressed through the EPBC Act approval conditions for the Lawson South residential development (EPBC Ref: 2010/5549). This included an offset.

This page has been left intentionally blank.

2 Project details

This section gives an overview of the Lawson South 132kV Power Line Relocation project including its background, scope, location, timeline, as well as all other alternative relocation options in the ACT and why the Lawson South 132kV Power Line Relocation project was chosen to be developed.

2.1 The project

The Lawson South 132kV Power Line Relocation project (see Figure 1) was proposed to support development of the Lawson South residential estate. Lawson South is a residential development in north-eastern ACT, bounded by the suburbs of Bruce, Belconnen, Kaleen and McKellar, with Lake Ginninderra to the west and Commonwealth land to the north.

The Lawson South 132kV Power Line Relocation project is designed to support development of the suburb by reducing the constraints imposed by existing power lines. It is expected that this project would substantially improve the aesthetics, urban amenity and value of this suburb. It will ensure that existing infrastructure will not control the design of the subdivision and that a greater area of land can be used for residences, as power line easements and safety zones will be reduced.

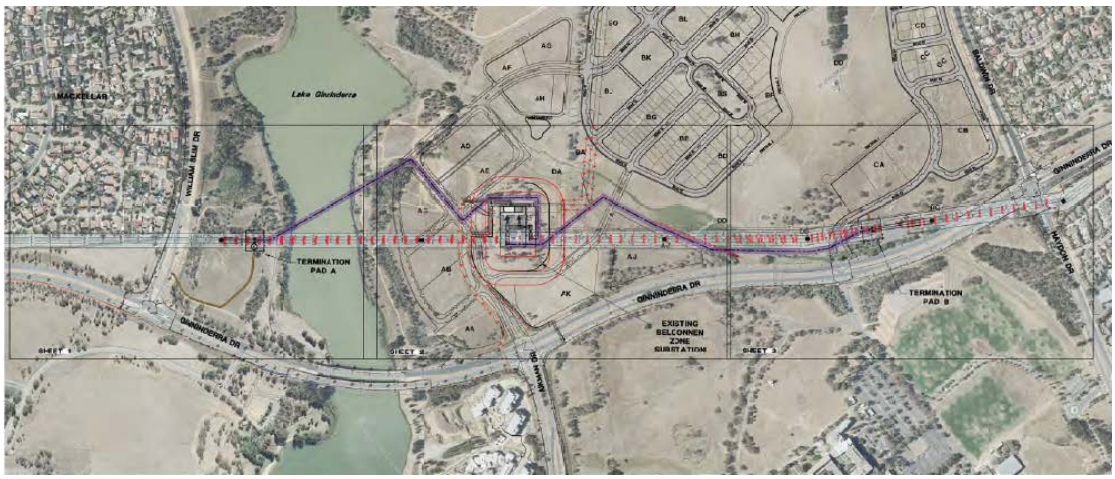

Figure 1 –Lawson South 132kV Power Line Relocation
Source: Figure 1, Lawson South 132kV Power Line Relocation Draft EIS.

2.1.1 Project description

According to the EIS the project will involve the following main components:

- five 132kV power line towers and overhead power lines will be removed;
- construction of:
    - foundations and security compounds;
    - two new underground/overhead transition structures;
    - power line entrance and exit infrastructure at the Belconnen Zone Substation (BZS);
- establish power line conduits under Lake Ginninderra using underboring; and
- power line undergrounding through underboring beneath Lake Ginninderra and through trenching beneath College Creek.

Some works may be undertaken at the BZS in parallel with this project. This may include preparation work for installation of a third power transformer and an extension of security fencing. Work will also be undertaken to establish temporary access ways, work areas and underbore entry and exit pits.

During operation ActewAGL electrical service vehicles may require access to maintain the infrastructure.

2.1.2 Project proponent

Shared Services Procurement (SSP), Treasury Directorate, ACT Government is the proponent.

2.1.3 Ecological Sustainable Development Principles and Statement of Strategic Directions

The EIS states that the project proposal has been prepared in line with the ecological sustainable development principles. This has been achieved through:

- determining biodiversity values on the site and avoiding areas which were identified as having high biodiversity values;
- avoiding high quality habitat during planning for the alignment;
- relocating power lines underground to improve public amenity and safety;
- applying a precautionary approach to the potential risks associated with electric and magnetic fields; and
- balancing social, economic and environmental factors when selecting the final alignment.

The EIS included an assessment by the proponent of the project's compliance with the Territory Plan statement of strategic directions. The EIS notes that the proposal is consistent with the urban consolidation objectives of the Canberra Spatial Plan and National Capital Plan. It is stated that the final alignment addresses the sustainable development principles in the Territory Plan's statement of strategic directions.

The project has been designed to balance environmental, economic and social constraints.

2.1.4 Alternatives

The proponent assessed nine overhead and underground alignments, including the existing alignment which provides a route directly to the substation. The options were assessed with the key aim of maximising the financial return to the ACT Government from the development of Lawson South as a residential estate.

The options were assessed by HMAC, in consultation with ActewAGL and Brown Consulting to determine which option would maximise the ACT Government's financial return. The alternatives provided different combinations of alignments, with northern and southern options and a combination of overhead and underground options.

These options were then assessed using a range of non-financial criteria, which are listed in Section 2.4.4 of the EIS. The final option was selected based on a preference to locate the underground power line under a wider suburban road which followed a route to the BZS, rather than under a residential street.

Relocating the power line along the verges of Ginninderra Drive was also considered however, there were too many constraints to investigate this option further.

Another option was relocation of the power lines under the Lake Ginninderra Bridge. This option was not progressed as space limitations and vibration issues deemed it unsuitable.

2.1.5 Timeframes

This section includes key dates associated with the Lawson South 132kV Power Line Relocation EIS process and a brief overview of the project staging and project timeframes.

- 23 April 2012 - SSP submitted the request for scoping document pursuant to section 212(1) of the Act;
- 3 June 2012 – the authority issued the final scoping document pursuant to section 212(2) of the Act;
- 12 February 2013 - SSP lodged the draft EIS pursuant to section 216(2) of the Act;
- 2 March 2013 to 3 April 2013 - the draft EIS was publicly notified pursuant to section 217 of the Act; and
- 3 December 2013 - SSP submitted the revised EIS pursuant to section 221 of the Act.

The Lawson South 132kV Power Line Relocation is expected to be completed in 2016, subject to obtaining various approvals for the project.

This page has been left intentionally blank.

3 The environmental impact assessment process

The EIA process systematically identifies, predicts and evaluates the environmental effects of a proposed project. This process occurs before major decisions and development commitments are made. The main objective is to prevent, reduce and offset significant negative impacts on the environment.

The purpose of the process is to ensure the decision maker (i.e. the authority) is fully informed about environmental aspects and consequences before making a final decision on the DA.

Figure 2 depicts the EIA process in accordance with the Act and the Planning and Development Regulation 2008.

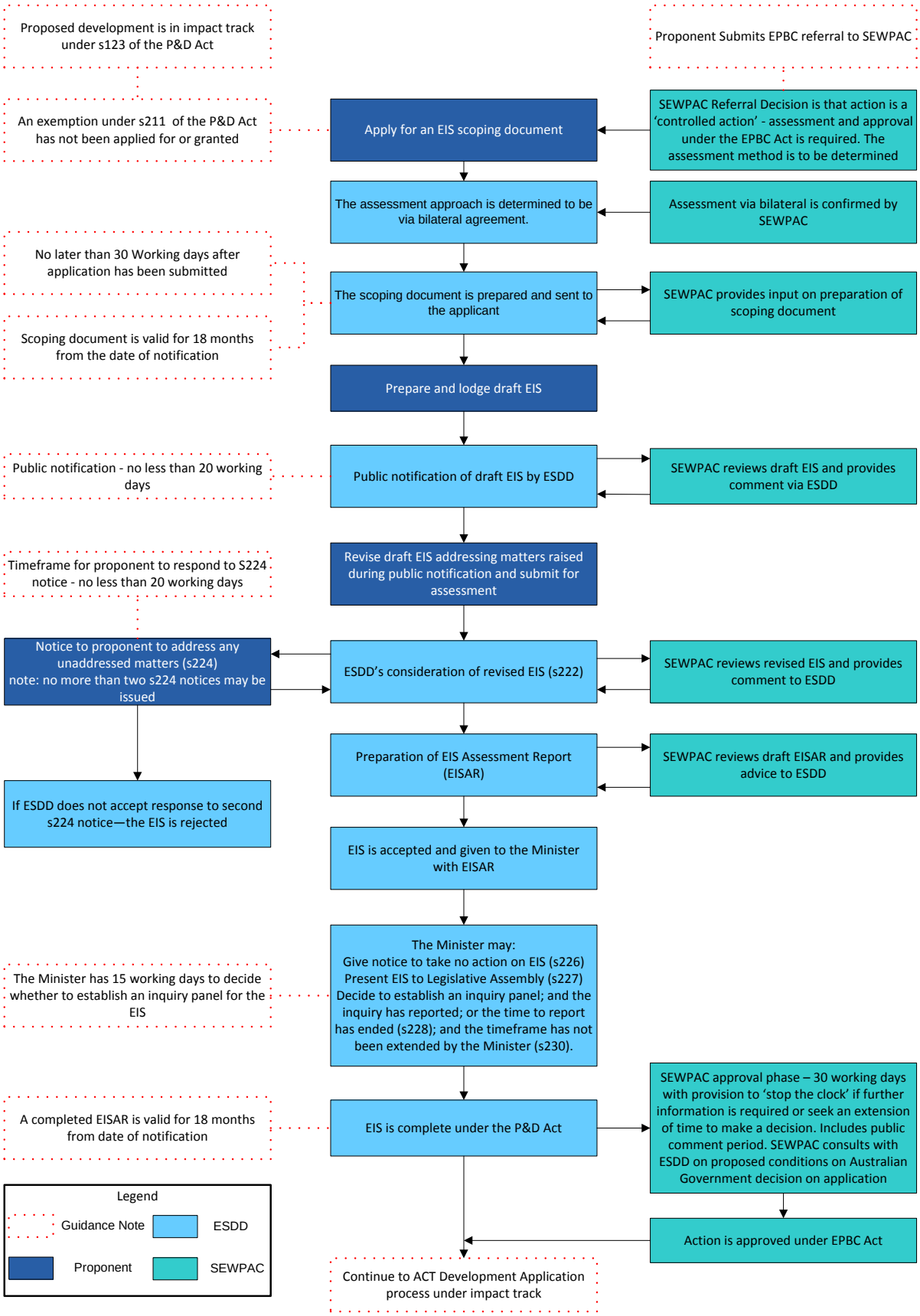

Figure 2 - The EIA process

3.1 Impact track

Under section 127 of the Act, a DA for a proposal in the impact track must include a completed EIS for the proposal unless the application is exempted by the Minister under section 211. No request for exemption from an EIS has been made. Section 123 of the Act also states that the impact track provisions of the Territory Plan apply to any proposal listed in Schedule 4 of the Act.

The Lawson South 132kV Power Line Relocation project includes proposals described in Schedule 4 as listed below and therefore requires an EIS. The Lawson South 132kV Power Line Relocation project is a project 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.*

3.1.1 EIS final scoping document

After receiving the request for a scoping document and in accordance with section 212(2) of the Act, the authority:

- identified matters to be addressed by an EIS in relation to the development proposal; and
- prepared a final scoping document of the matters.

A scoping document is used by the authority to outline matters to be investigated and documented in an EIS, and minimum requirements for analysis. The draft EIS must conform to the requirements of the final scoping document. Section 50.2 of the *Planning and Development Regulation 2008* outlines the list of information that must be included in an EIS for a development proposal.

In accordance with Regulation 26(1) and 51 of the *Planning and Development Regulation 2008* certain mandatory referrals are required by the authority. Regulation 51 also provides for community consultation where appropriate in addition to consultation with prescribed entities. The authority sought input from government advisory bodies for comments in relation to their areas of expertise and responsibility, including identifying potentially significant environmental impacts to be addressed in the EIS. The following entities were consulted in preparing the final scoping document:

- Health Directorate;
- Territory and Municipal Services Directorate (TAMSD);
- Heritage;
- Emergency Services Authority;
- Environment Protection Authority (EPA);
- Conservator of Flora and Fauna;
- ActewAGL Water and Sewerage; and
- ActewAGL Electrical

Two community groups were also invited to comment:

- Conservation Council ACT; and
- Belconnen Community Council

The authority issued the final scoping document to the proponent on 3 June 2012. Under section 215 of the Act, the final scoping document is effective for 18 months from the day after the date on the final scoping document notice. After receiving the final scoping document and pursuant to section 216(2) of the Act, the proponent is required to:

- prepare a draft EIS that addresses each matter raised in the final scoping document for the proposal; and
- give the draft EIS to the authority for public notification (for further details see section 3.3.2).

The final scoping document is at Appendix 1 – Final scoping document.

3.2 Submission of draft EIS

The purpose of the draft EIS is to identify and describe the potential positive and negative environmental, social, economic and cultural impacts of the project, including cumulative, regional, temporal and spatial considerations.

The draft EIS is required to:

- assist the proponent, public and regulatory agencies in understanding the environmental and socio-economic consequences of the projects' construction, operational and reclamation activities, and will assist the proponent in its decision making;
- address:
    - project impacts;
    - mitigation options; and
    - residual impacts relevant to the assessment of the project including, as appropriate, those related to other projects. Residual impacts should be discussed in terms of magnitude, frequency, duration, seasonal timing, reversibility and geographical extent.
- discuss possible measures, including possible improvements based on research and development to:
    - prevent or mitigate impacts;
    - assist in the monitoring of environmental protection measures; and
    - identify residual environmental impacts and their significance including cumulative and regional development considerations.
- include tables that cross-reference the draft EIS to the final scoping document; and
- include a glossary of terms and a list of abbreviations to assist the reader in understanding the material presented.

3.2.1 Cross reference between the final scoping document and EIS

The draft EIS for the project did not precisely follow the structure of the document as required in the final scoping document. An EIS cross reference table was included as an Appendix to the draft EIS to cross reference the contents of the EIS to the contents required in the final scoping document. For further information see Appendix 3 – Cross reference table between EIS and the final scoping document.

3.3 Public notification and consultation

3.3.1 Public consultation by the proponent

The Lawson South 132 kV Power Line Relocation project is part of the larger Lawson South residential development. Public consultation was undertaken for the residential development between 2008 and 2011. Issues were raised about the power line at that time, which were addressed as far as practicable. Several studies were later commissioned to address any remaining issues. These included a study by Aurecon Australia which assisted in determining buffer zone sizes based on an assessment of electric and magnetic fields and electric and magnetic radiation and a study by Brown Consulting assessing different alignments and potential financial returns. Further consultation was deemed unnecessary given the Lawson South residential development consultation process included considered of the power lines.

The Lawson South 132 kV Power Line Relocation draft EIS was publically notified on the ESDD website. This provided a further opportunity for the public to comment. Only one representation was received.

The final scoping document required SSP to consult with the following entities in preparing the draft EIS:

- lease holders and land managers of land potentially impacted by the proposal;
- any recreational groups which will be affected by the proposal;
- any volunteer conservation, landscape management or land care groups active in the area to be effected by the proposal; and
- the local community.

3.3.2 Public notification

As required by the Act, the authority publicly notified the draft EIS by putting a notice in *The Canberra Times* on 2 March 2013, and maintaining a notification on ESDD's website from 2 March 2013 to 3 April 2013. Copies of the draft EIS were available for inspection at ESDD's Customer Service Centre during the notification period. This process provided agencies, stakeholders and the community with the opportunity to make comments on the proposal or in respect to specific environmental issues of concern.

Under section 218 of the Act, the public notification period for a draft EIS is not less than 20 working days. For the project, the draft EIS was notified for more than 20 working days.

As required by the Act, copies of all representations were made available on ESDD's website and these will remain on the website until either the EIS is completed, or the representations are withdrawn. One representation was received from Friends of Grasslands (FoG). The issue raised by FoG relates to the amount of detail provided in the Construction and Environmental Management Plan. FoG requested that more detail be provided for mitigation measures in the plan.

3.4 Review of Draft EIS

A preliminary review of the draft EIS was completed by the authority and sent to SSP on 11 April 2013 with copies of all representations from the public and the comments from the entities.

The following key issues were the main concerns following the authority's review of the draft EIS:

- insufficient justification for the effect of the development on Golden Sun Moth and Striped Legless Lizard;
- insufficient detail on stormwater management during construction and operation;
- some medium or above rated risks have not been addressed in the EIS report; and
- inconsistency between the preliminary and residual risk assessment.

The proponent was required to revise the draft EIS, to take into consideration all matters raised in representations made during public consultation, comments from the authority and to demonstrate how the matters have been taken into account in the revised EIS.

3.5 Submission and review of revised EIS

The revised EIS (in the form of an EIS addendum report) was submitted to the authority on 3 December 2013 in accordance with section 221 of the Act. A brief adequacy review was then undertaken to confirm that all appropriate sections and appendices had been included. Following this, an assessment strategy was developed to guide the assessment of the EIS in accordance with section 222 of the Act, and a program developed to ensure the review was undertaken as efficiently as possible.

The assessment strategy outlined the process for reviewing the EIS and included a review of the revised EIS for:

- adherence to the final scoping document and legislation;
- consideration and incorporation of the authority's comments provided on the draft EIS; and
- consideration and response to representations received during notification of the draft and other consultation processes.

3.6 Giving the EIS to the Minister for the Environment and Sustainable Development

Once the authority accepts the EIS under section 222 of the Act, the authority must give the EIS to the ACT Minister for the Environment and Sustainable Development. Once this has occurred the Minister may:

- choose no action on the EIS under section 226 of the Act;
- present the EIS to the Legislative Assembly under section 227 of the Act; or
- establish an inquiry panel to inquire about the EIS under section 288 of the Act.

The requirements for establishing an inquiry panel are detailed under Part 8.3 of the Act. If, under section 226, the Minister has decided to take no action, he must give the authority written notice that the Minister has decided to take no action in relation to the EIS.

The authority's recommendation to the Minister can be found at section 6 of this report.

3.6.1 Lodging a development application

Once the final EIS has been completed the proponent can lodge a DA in the impact track. Any subsequent DA related to the EIS must include the completed EIS.

This page has been left intentionally blank.

4 Key findings

This section summarises issues identified in the scoping document that had to be assessed in the EIS. For each set of issues, the results of the proponent's assessment are summarised under the following six headings:

1. **Key findings**

Summarises the proponent's key findings in assessing the potential environmental impacts of the project.

2. **Public notification**

Indicates the number and types of responses received during public notification of the project, and summarises the proponent's response.

3. **Impacts**

Details potential impacts of the project as identified by the proponent. These may differ from the impacts raised in the final scoping document as additional impacts may have arisen during the EIA.

4. **Commitments**

Lists the proponent's commitments relating to the environmental management of the project.

5. **Mitigation**

Lists mitigation measures the proponent will implement to manage the level of risk to an acceptable level.

6. **Scoping document requirements**

Lists the preliminary assessment of impacts from the EIS. Where relevant it also lists the residual risk following the EIS assessment. Residual risk assessment is required where the initial risk assessment is medium or above.

4.1 Landscape and visual impact

The subject site currently contains power lines and five transmission towers which have visual impacts on views of the surrounding areas, in particular, Lake Ginninderra. A visual assessment was undertaken by Enviro Links Design Pty Ltd to determine the impact of the power line relocation project on the landscape and visual amenity.

4.1.1 Key findings

The project is expected to result in a beneficial impact on visual amenity as it will reduce the amount of above ground infrastructure on the site. Above ground power lines are being replaced with underground power lines which also reduces the need for transmission towers. Five towers will be removed, and replaced with two shorter towers.

As this project is being undertaken as a component of the Lawson South residential development, the final power line infrastructure would form only one part of the built environment in Lawson South, as opposed to being a non-natural element in a natural landscape as is currently the case. This would make the visual impacts less significant.

Impacts during construction would be temporary and comparable to other projects of a similar nature.

The EIS indicates that, overall, the project is expected to have a very high positive impact on landscape and visual amenity, due mainly to the removal of transmission towers and power lines.

4.1.2 Public notification

No comments were made by the public relating to landscape and visual amenity.

4.1.3 Impacts

The EIS identifies the following potential impacts on landscape and visual amenity:

<u>Construction</u>

- movement of construction machinery;
- temporary obstruction of views as a result of dust;
- drilling machinery and cranes visible in the landscape; and
- fencing of construction areas highly visible in the landscape.

<u>Operation</u>

- reduction in visual impacts associated with the existing infrastructure, in particular views from Ginninderra Drive to the north; and
- significant positive impact associated with the removal of overhead infrastructure, particularly given the development is part of the larger Lawson South residential development.

4.1.4 Commitments

Key commitments identified from the EIS and addendum report have been included in the assessment as follows:

- the Construction Environmental Management Plan (CEMP) will detail dust suppression methods;
- vegetation screening will be planted either during construction or immediately following construction completion;
- ActewAGL will be responsible for vegetation maintenance within infrastructure compounds; and
- the construction period will be minimised.

4.1.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with landscape and visual amenity as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Visual amenity changes	N/A – beneficial impact.	Operation
Major positive impact on views from southerly quarters due to removal of 5 steel-lattice transmission towers and overhead power lines. Overall positive impact on views across the area.	N/A – beneficial impact.	Operation

Note: The impacts in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.1.6 Scoping document requirements

Assessment of significance and residual risk

The table below details the risks associated with landscape and visual impacts as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Visual amenity changes	Likely	Major	Very High	Very High

There is a very high beneficial outcome expected to be associated with landscape and visual impacts as a result of this project. Further details can be found in section 6.2 of the EIS and Table 19 and Table 20 of the EIS Addendum Report.

4.2 Geology and soils

Geological and soil assessments were undertaken for Lawson South. A literature-based geotechnical assessment was completed for the Lawson South development area by ACT Geotechnical Engineers Pty Ltd in 2008. In 2012 test pit and dynamic core penetrometers samples were collected on the western side of Lake Ginninderra by Douglas Partners Pty Ltd. The information in the EIS was derived from reports on these assessments. The EIS describes the geology and soils on the site and investigates the potential impacts of the project.

4.2.1 Key findings

The EIS explains that the area of Lawson east of Lake Ginninderra has sedimentary rock of the middle to late Ordovician age Pittman Formation. The rock is fine-grained siltstone, sandy siltstone, silty sandstone and sandstones. The rock is generally highly weathered in the top two to five meters. On the western edge of Lake Ginninderra there is evidence of Canberra Formation marine sediments. College Creek has alluvial and colluvial deposits of silt, clay, sand and gravel.

Two geological faults lie parallel, on the east side of Lake Ginninderra. The EIS specifies that any instability would cause movement at the fault lines, but not under the lake, making adverse impacts on under-lake conduits highly unlikely.

The Williamsdale Grouping and Winnunga Grouping are the two main soil types across the project area. These soil groups are weak and dispersible, making them prone to erosion and seasonal waterlogging. The EIS indicates that the characteristics of the soil increase the erosion risk and the potential for waterlogging or flooding when ponding and flow diversions are put in place.

Contamination of soil from fuel spills during vehicle and machinery refuelling, and leakages from hydrocarbons stored on site during construction have also been considered by the proponent.

4.2.2 Public notification

No comments were made by the public relating to soils and geology.

4.2.3 Impacts

The EIS identifies the following potential impacts on soils and geology:

- erosion and increased sediment loadings in runoff caused by the creation of bare surfaces and the erosive nature of the soil;
- waterlogging, flooding, and temporary drainage channel erosion;
- decline in Lake Ginninderra's water quality from increased sediment loads;
- soil contamination from fuel spills and leakages of hydrocarbons from storage areas, during construction; and
- alteration of the form and function of the College Creek stream bed as a result of temporary disturbance.

4.2.4 Commitments

Key commitments identified from the EIS and addendum report have been included in the assessment as follows:

- soil conservation measures will be implemented in accordance with the project's CEMP;
- college Creek will be reinstated to its pre-construction form and function following construction;
- before underboring occurs geotechnical investigations will be completed to assess hydrogeology in the Lake Ginninderra area - this will inform sediment control practices and will inform the final bore design; and
- the CEMP will detail sediment control practices and procedures.

4.2.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with soils and geology as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Soil erosion and sediment loading	*Implementation of industry-standard sediment control practices including bunding, temporary sediment ponds, silt fencing on downslope side of protective fencing surrounding the construction zone and stabilisation of exposed slopes during construction (e.g. grass seeding or geotextile).*	Design, Construction

Note: The impact and mitigation measures in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.2.6 Scoping document requirements

Assessment of significance and residual risk

This table details the risks associated with soils and geology as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Soil erosion and sediment loading	Possible	Minor	Medium	Low

The above risk rating was revised from low to medium in the EIS addendum report. There is a low risk associated with the potential impacts of soil erosion after applying the mitigation measures in section 6.8.4 of the EIS and Table 19 and Table 20 of the EIS Addendum Report.

4.3 Water quality and stormwater

Drainage from the project site enters Lake Ginninderra directly, and via College Creek. The site is at the lower end of a catchment of approximately 295ha. The EIS considers the potential for the proposal to impact water quality and stormwater runoff. The potential for hydrogeological impacts due to underboring have also been considered.

4.3.1 Key findings

Water quality management for the project is primarily focused on maintaining Lake Ginninderra's water quality, as the major receptor of runoff from the project site. The EIS identifies through an assessment of the impacts and proposed mitigation measures, that the risk of impacts to water quality and stormwater can be reduced to low by implementing mitigation measures for the project.

4.3.2 Public notification

No comments were made by the public relating to water quality and stormwater.

4.3.3 Impacts

The EIS identifies the following potential impacts on water quality and stormwater:

- water and site contamination from spills;
- sediment runoff into waterways during rain events;
- the hydrological regime in College Creek being altered;
- water quality and aquatic habitats declining; and
- potential groundwater impacts from underboring activities.

4.3.4 Commitments

Key commitments identified from the EIS and addendum report have been included in the assessment as follows:

- establishment and implementation of sediment control practices and spill management procedures will be the responsibility of the construction contractor;
- the CEMP will describe sediment control practices and spill management procedures;
- geotechnical investigations will be undertaken by the construction contractor to determine the best drilling method and equipment and potential groundwater contamination risks;
- the CEMP will describe measures to minimise impacts on hydrogeology;
- the CEMP will detail standard industry practice stormwater and pollutant management which will be implemented; and
- the CEMP will be prepared before construction commences, by the construction contractor.

4.3.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with water quality and stormwater as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Sediment loading	*Implementation of industry-standard sediment control practices including bunding, temporary sediment ponds, silt fencing on downslope side of protective fencing surrounding the construction zone and stabilisation of exposed slopes during construction (e.g. grass seeding or geotextile).*	Design, Construction
Hydrogeology: Groundwater contamination from underboring of Lake Ginninderra, particularly due to drilling fluids.	*Underboring methods would use non-toxic drilling fluids and include monitoring and management systems to minimise drilling fluid escape.*	Construction

Note: The impacts and mitigation measures in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.3.6 Scoping document requirements

Assessment of significance and residual risk

The table below details the risks associated with water quality and stormwater as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Sediment loading	Possible	Minor	Medium	Low

There is a low risk associated with the potential impacts of sediment loading after applying the mitigation measures in section 6.9 of the EIS and Table 19 and Table 20 of the EIS Addendum Report.

4.4 Terrestrial flora and fauna

Vegetation assessments were undertaken for Lawson South and the areas to the west of Lake Ginninderra by Eco Logical Australia Pty Ltd (Eco Logical) in 2008 and 2011 respectively. Eco Logical's 2008 assessment was reviewed in 2010 by David Hogg Pty Ltd. A variety of vegetation communities occur in the area in different conditions, but overall the project site is characterised by modified vegetation dominated by exotic grasses and herbs.

4.4.1 Key findings

On the west of Lake Ginninderra, vegetation is characterised by disturbed native grassland, native plantings and exotic grasslands and parklands. East of Lake Ginninderra vegetation is characterised by exotic pasture, plantings, native pasture and riparian vegetation.

Two small natural temperate grassland patches are located near the construction site but the EIS specifies that they are not at risk of impact from the project given their distance from construction works.

No significant trees are proposed for removal. Twenty-six regulated trees may require removal for construction to proceed. The removal of any regulated trees will be considered during the DA process.

Lawson South was found to have low fauna diversity. However, grasslands present on the site were identified as habitat for Golden Sun Moth and potential habitat for Striped Legless Lizard.

Striped Legless Lizard was not recorded in Lawson South during four surveys completed between 2002 and 2011. However, this does not mean that they are not on the site. Habitat on the site is suitable for Striped Legless Lizard. The project will disturb approximately 0.42ha of potential marginal habitat for the Striped Legless Lizard. On the west side of Lake Ginninderra, construction will occur immediately north of two disturbed native grassland patches. Further, an access road would partly encircle these areas. However, the EIS indicates that it is highly unlikely these areas provide Striped Legless Lizard Habitat due to the low quality and limited connectivity. The EPBC Act assessment for the Lawson South residential development (EPBC Ref. 2010/5549) addresses impacts on Striped Legless Lizard. Approval was given through the EPBC assessment for development to progress, with conditions, including an offset.

Golden Sun Moth was present in the proposed Lawson South development site in low to moderate numbers. An area of 0.13ha of Golden Sun Moth edge habitat will be impacted. The EPBC Act assessment for the Lawson South residential development (EPBC Ref. 2010/5549) addresses impacts on Golden Sun Moth. Approval was given through the EPBC assessment for development to progress, with conditions, including an offset.

The EIS also considered the likelihood of impacts on other threatened species that have the potential to occur on the proposed site. Based on the ecological investigations lodged with the EIS, potential impacts on Grassland Earless Dragon and Regent Honeyeater were assessed as negligible. The EIS also identifies impacts on the Perunga Grasshopper, but indicates that the proposal is not likely to have significant impacts on this matter.

In relation to the Golden Sun Moth, Striped Legless Lizard, Grassland Earless Dragon and Regent Honeyeater, the EIS addendum report states that "*these fauna are mobile and if they were present in the vicinity of the construction works, would likely temporarily move away from development areas into adjacent available habitat if disturbed by construction noise*." (EIS Addendum Report, pg 7). This comment is not supported, however, given the wealth of information and measures taken relevant to these species it does not prevent the EIS from being accepted.

4.4.2 Public notification

No comments were made by the public relating to terrestrial flora and fauna.

4.4.3 Impacts

The following potential impacts were identified:

- 26 regulated trees may need to be cleared as part of construction works;
- weed introduction and spread;
- disturbance of animal behaviour;
- disturbance or loss of native vegetation;
- loss of significant trees;
- disturbance or loss of native terrestrial animals;
- disturbance or loss of threatened species and ecological communities;
- loss of individuals (and habitat) for the Perunga Grasshopper and Regent Honeyeater;
- loss of Natural Temperate Grassland; and
- disturbance of 0.42ha of Striped Legless Lizard marginal potential habitat and 0.13ha of Golden Sun Moth edge habitat.

4.4.4 Commitments

Key commitments identified from the EIS and Addendum Report have been included in the assessment as follows:

- the CEMP will detail industry standard weed hygiene strategies and vegetation and fauna management procedures and protection areas;
- a weed control programme will be implemented if new infestations of declared weed species or weeds of national significance are found on site;
- suitable disposal facilities will be used to dispose of green waste and contaminated spoil;
- any soil being brought onto site will be from sources assessed as weed free;

- weed management, monitoring and minimisation of vegetation removal will be the responsibility of the construction contractor;
- fauna habitat protection areas will be fenced by the conservation contractor;
- the number of trees removed during construction would be exceeded by the number of rehabilitation plantings; and
- the Lawson South development area Tree Management Plan and Tree Replacement Strategy will be followed for all tree removal and planting works.

4.4.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with terrestrial flora and fauna as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Clearance of vegetation and regulated trees; however no significant vegetation or trees are likely to be adversely impacted.	*Implement industry standard weed hygiene practices and vegetation monitoring during construction. Fence off vegetation that is not to be removed.*	Construction
Disturbance of 0.42ha of Striped Legless Lizard marginal potential habitat and 0.13ha of Golden Sun Moth edge habitat.	*Potential habitat would be fenced off and avoided. Disturbance of marginal quality fauna habitat would be limited to the permissible construction corridor.* *Impacts will be offset in accordance with habitat offset requirements for striped legless lizard that were included in the EPBC Act approval conditions for the Lawson south residential development (EPBC Ref. 2010/5549).*	Construction
Native vegetation disturbance/loss	*...site disturbance would be minimised wherever possible and rehabilitated once construction is complete.*	Construction, Post Construction
Significant tree loss	*...the easement has been planned to avoid as many significant trees as possible, only those trees that ultimately need to be removed would be cleared during construction, and rehabilitation plantings would, in time, replace the lost trees several times over.*	Design, Construction, Operation
Native terrestrial animal disturbance/loss	*Fauna and habitat surveys have indicated that native terrestrial animals are unlikely to be present and that the power line easement generally avoids any potentially suitable native fauna habitat.*	Construction

Note: The impacts and mitigation measures in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

Table 19 specifies in the impact column for terrestrial fauna that "*the risk of adverse impacts on significant fauna and habitat is very low to negligible*." It is noted that this comment does not apply to impacts on Golden Sun Moth and Striped Legless Lizard which are extreme.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.4.6 Offset

Offsets were a condition of approval for the Lawson South residential development to compensate for unavoidable impacts arising from the development of Lawson South on MNES. This included the potential impacts on Golden Sun Moth, Striped Legless Lizard and Natural Temperate Grassland.

The Lawson South residential development assessment did not include an assessment of the area to the west of Lake Ginninderra which will be impacted by this project, however, the EIS for this project indicates that no MNES will be impacted by the proposal to the west of Lake Ginninderra. Therefore an offset package is not required for the proposed Lawson South 132kV Power Line Relocation project as it forms part of the Lawson South residential development.

4.4.7 Scoping document requirement

Assessment of significance and residual risk

The table below details the risks associated with terrestrial flora and fauna as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Native vegetation disturbance/loss	Likely	Minimal	Medium	Low
Significant tree loss	Likely	Minimal	Medium	Low
Native terrestrial animal disturbance/loss	Unlikely	Major	Medium	Very Low
Loss of Golden Sun Moth habitat	Almost Certain	Minor	Extreme	High
Loss of Striped Legless Lizard habitat	Almost Certain	Minor	Extreme	High

There is a low risk associated with the potential impacts of native vegetation disturbance/loss and significant tree loss and a very low risk associated with native terrestrial animal disturbance/loss after applying the mitigation measures in Section 6.5 to 6.6 of the EIS and Table 19 and Table 20 of the EIS Addendum Report.

There is a high risk associated with the potential impacts of loss of Golden Sun Moth habitat and loss of Striped Legless Lizard habitat after applying the mitigation measures in Section 6.5 to 6.6 of the EIS. However, the impacts have been addressed by the EPBC Act approval for the Lawson South residential development, which allowed development to progress with conditions, including an offset.

4.5 Socio-economic and health

The Lawson South 132 kV Power Line Relocation project has both positive and negative socio-economic and health impacts.

The potential risks of electric and magnetic fields and electric and magnetic radiation associated with the proposal were assessed by Aurecon Australia Pty Ltd. It was found that the electrical infrastructure would only pose a health threat if people were subject to prolonged, close exposure. The EIS notes that international research suggests a negligible human health risk associated with this type of infrastructure. Public concern about the potential health risks associated with the infrastructure are addressed through the use of appropriate buffers.

The security of electricity supply is also considered in the EIS. This is mainly a concern during de-energisation of the power lines for construction works. The EIS makes a number of commitments to reduce the potential impacts associated with any power failure.

4.5.1 Key findings

The relocation has the potential to increase property values due to the removal of power lines from the estate development area.

Negative impacts include a reduction in the security of electricity supply and community concerns relating to the potential health risks associated with electric and magnetic fields.

4.5.2 Public Notification

No comments were made by the public relating to socio-economics and health.

4.5.3 Impacts

Potential impacts:

Electric and magnetic fields

- potential health implications from long term exposure to electric and magnetic fields; and
- public concern related to the health impacts of exposure to electric and magnetic radiation.

Security of electricity supply

- reduced network security as potential supply issues could arise if there is a fault in the network while the 132kV power line is de-energised; and
- disturbance to existing services.

4.5.4 Commitments

Key commitments identified from the EIS and addendum report have been included in the assessment as follows:

- industry practice and Australian and international standards would be used for all design and construction;
- all works associated with erecting warning signs relating to EMF will be done during construction;
- the period of time that the lines will be disconnected/de-energised will be minimised;
- ActewAGL will work with the construction contractor to ensure the risk of a power outage is minimised;
- ActewAGL will be responsible for maintenance of electricity supply;
- Parliament sitting times will be avoided in ActewAGL's planning for disconnection of the lines; and
- during high load demand or periods of adverse weather the lines will not be disconnected.

4.5.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with socio-economic and health impacts as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Loss of electrical supply to surrounding suburbs during disconnection of the 132 kV line if alternative power supply options also fail.	*Reliance on alternative electrical supply network. Minimise period of disconnection/ de-energised lines.*	Construction
Publicly perceived impact of electromagnetic radiation from electrical infrastructure affecting human health, especially that of children.	*Underground cables to be designed to minimise EMF. Buffer zones are proposed for all electrical infrastructure and EMF levels are predicted to be negligible beyond these buffer zones. Warning signs to be erected around electrical infrastructure and at suitable places along the underground cable alignment.*	
Property value changes	N/A – beneficial impact.	Operation

Note: The impacts and mitigation measures in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

The alternative electrical supply network which will be relied upon during disconnection of the 132 kV line would be provided by the Gold Creek Substation loop through the Bruce Switching Station.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.5.6 Scoping document requirements

Assessment of significance and residual risk

The table below details the risks associated with socio-economics and health as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Reduced security of electricity supply	Remote	Major	Medium	Low
Electric and magnetic fields, community concern	Likely	Minimal	Very High	Low
Property value changes	Possible	Moderate	Medium	Medium

There is a low risk associated with the potential impacts of reduced security of electricity supply and community concerns regarding electric and magnetic fields, after applying the mitigation measures in Section 6.3 to 6.4 and Table 19 and Table 20 of the EIS Addendum Report.

Property value changes are expected to be beneficial as a result of the project.

4.6 Hazard and risk

Several potential hazards and risks were considered in the EIS. These related to bushfire, flooding, vandalism and accidents. The key hazard and risks discussed within the EIS submission are the potential danger of electrocution during construction and operation of the infrastructure.

4.6.1 Key findings

The EIS indicates that the hazards and risks associated with this project are comparable to other projects of this nature.

Bushfire: There is potential for construction activities to increase the fire risk for the local area. Fire prevention and control measures will be applied to minimise this risk. During operation, the risk of bushfires impacting natural and human assets was found to be low due to the project being situated in the urban area and outside any bushfire prone areas.

Flooding: The EIS states that all permanent infrastructure constructed above-ground will be built in locations above the 1:100 year flood level. The same applies for most below-ground infrastructure. The EIS indicates that adverse impacts from flooding are unlikely.

Vandalism: The location of the project in an urban area makes it susceptible to vandalism. Security arrangements will reduce the potential for vandalism.

Accidents: Strict OH&S and public safety provisions will be implemented to minimise the risk of accidents. The EIS indicates that power lines will be de-energised while contractors are working to avoid electrocution. Fencing and signage of permanent infrastructure would ensure the public are aware of the dangers.

4.6.2 Public notification

No representations relating to hazards or risks were received during the public notification of the draft EIS.

4.6.3 Impacts

The project has the potential to have the following impacts:

- fires during construction and operation, including bushfires;
- flooding causing damage to electrical infrastructure;
- injuries or death resulting from accidents, in particular during removal of existing power lines and cutting of power lines during operational maintenance; and
- vandalism.

4.6.4 Commitments

Key commitments identified from the EIS and addendum report have been included in the assessment as follows:

- infrastructure will be maintained by ActewAGL;
- a construction fire management plan will be part of the project CEMP - this will be prepared and implemented by the construction contractor;
- buffer areas will be maintained by ActewAGL;
- asset protection zones and reserve area vegetation in the Lawson South development area will be maintained by TAMS;
- site security will be the construction contractors responsibility during construction;
- the CEMP will detail security measures;
- security for the electricity infrastructure during operation is the responsibility of ActewAGL;
- safe work practices will be implemented by the construction contractor, by applying the ACT Work Health and Safety Act 2011 and codes of practice;
- public safety and the coordination with ActewAGL of power line access and construction activities is the construction contractors responsibility; and
- warning signage and mapping of underground infrastructure is ActewAGL's ongoing responsibility.

4.6.5 Mitigation

Mitigation measures against impacts of the proposal have been detailed in the EIS. The table below details the mitigation measures associated with hazard and risk as proposed in the EIS.

Identified impacts	Proposed mitigation measures	Stage of implementation
Accidents *Operation: Medium risk of serious injury or death to workers on other projects inadvertently unearthing/ cutting the underground power line.*	*The underground power line alignment would be permanently identified with appropriate above and below ground signage, and be identified on maps of utilities.*	Operation
Danger of electrocution of workers during power line removal.	*Implement appropriate health and safety procedures during removal. Management described in CEMP, works subject to Safe Work Method Statements/ Job Safety Analysis.*	Construction
Safety (e.g. danger to workers from inadvertent unearthing/cutting of underground power line during future development/ maintenance works).	*Protection of the underground power line (e.g. cables buried in a concrete box with hard plastic maker tape across the top), appropriate warning signage along the power line, identification of the power line on relevant utilities maps and close supervision of excavation contractors...*	Operation

Note: The impacts and mitigation measures in the above table were taken directly from Tables 19 and 20 of the EIS Addendum Report.

The CEMP proposed for this project sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the proposal. Refer to 5.2 Construction and Environmental Management Plan for further information.

4.6.6 Scoping document requirements

Assessment of significance and residual risk

The table below details the risks associated with hazards and risks as defined in the EIS.

Potential Impact EIS	Risk Assessment			
	Likelihood	Consequence	Risk	Residual risk
Danger of electrocution of workers during power line removal.	Remote	Catastrophic	Medium	Medium
Safety (e.g. danger to workers from inadvertent unearthing/cutting of underground power line during future development/maintenance works).	Remote	Catastrophic	Medium	Medium

The risk of electrocution during construction and operation is an inherent risk associated with this type of infrastructure. Mitigation measures in section 6.12.4 of the EIS and Table 19 and Table 20 of the EIS Addendum Report will reduce the potential for this to occur.

4.7 Non potentially significant impacts

This section of the report outlines the EIS's response to the scoping document for those impacts which the proponents risk assessment assigned a pre-mitigation risk rating lower than medium. The risk assessment in the EIS identifies the following potential environmental risk aspects as having a pre-mitigation risk rating of less than medium:

- planning and land status;
- traffic and transport;
- utilities;
- materials and waste;
- climate change and air quality;
- aquatic flora and fauna;
- Aboriginal and European cultural heritage;
- noise, vibration and lighting; and
- recreation.

The authority's assessment of these findings is included in Table 1.

Table 1 - Non potentially significant impacts

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
s 8.1.1 – Planning and land status					
a	1 (EIS) 3 (AR)	1 8	Include a description of planning context of the area where the project will be located.	• The EIS and Addendum Report describe the planning context for the project and for the associated Lawson South residential development.	Yes
b	3 (AR)	8	Describe planning and development status of any land or project relevant to the proposal.	• The EIS Addendum Report describes the planning and development status for the project and for the associated Lawson South residential development.	Yes
c	Figure 2 (EIS) 3 (AR) 18 (AR)	6 8 23	Describe land use of the proposed land and any land to be affected (including, but not limited to, zoning, lessee(s) or custodian of the land, the permissibility of the proposed use defined in the Territory Plan).	• Figure 2 in the EIS shows the Lawson South concept master plan. • The EIS Addendum Report describes the land use of the proposed site and details the current land custodians. The report refers to the Lawson South residential development, for which this project is a preliminary component. • A Territory Plan variation commenced for Lawson South in 2010.	Yes
d	2.3.1 (EIS)	8	Address item 2 outlined in A3 of attachment A: *The proponent must secure the land through a license/lease application.*	• The proponent has confirmed that the land lease arrangements will be developed between the ACT Government and ActewAGL.	Yes
s 8.1.2 – Traffic and transport					
a	6.17 (EIS) 4 (AR)	105 9 (AR)	Describe arrangements for the transport of construction materials, equipment, products, wastes and	• The EIS identifies the types of transportation that will be required for the project, including drilling equipment, cranes, earthwork machinery and materials and personnel transport.	Yes

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
			personnel during both the construction phase and operational phases of the development proposal.	• During operation it is suggested that traffic will generally be limited to minor vehicular movements, mostly light vehicles undertaking checks or maintenance works.	
b	4 (AR)	9 (AR)	Include a description of the volume of traffic generated during construction and operation.	• The EIS Addendum Report indicates the following volumes of traffic: o 16 heavy vehicle movements during the project; o approximately 40 light vehicles per day; and o minor traffic movements (usually light vehicles) during operation.	Yes
c	6.17	105	Include details of vehicle traffic, transit routes and transport of heavy and oversize loads (including types and composition).	• The EIS Addendum Report specifies that heavy vehicles will use designated heavy load transit routes. The report also specifies access points for the site.	Yes
s 8.1.3 – Utilities					
a	6.11	92	Describe the existing utilities located on the land subject to this proposal.	• The EIS describes the existing utilities on the project site.	Yes
b	6.11	92	Describe any new utilities, removal, realignments or utility connections required as a result of this development.	• The project proposes to relocate the existing 132kV power lines in Lawson South. Chapter 1 provides details of the proposal. • The EIS indicates that the proposed alignment for the power line relocation crosses a number of sewers and 11kV power cables. The 11kV power cables will be relocated and the sewers will be avoided by passing over or tunnelling below them.	Yes
s 8.1.4 – Materials and waste					
a	6.10.4 (EIS)	92	Describe hazardous materials and dangerous chemicals to be used or	• Liquid waste from horizontal directional drilling are identified as a potential contamination risk.	Yes

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
	5 (AR)	10	stored on site during construction and operation.	• Hazardous substances could cause impacts on the surrounding environment if spills occur. • The EIS specifies that waste management will be undertaken in accordance with the project CEMP. The CEMP will include ActewAGL's standard waste management procedures. • A Drilling Fluid Plan will form part of the CEMP.	
b	6.10 5 (AR)	90 10 (AR)	Describe the nature, sources, location and quantities of all materials to be handled, including the storage, stockpiling and disposal of materials and waste.	• The EIS and Addendum Report describe the waste and hazardous materials associated with the project and indicate how they will be managed and disposed of.	Yes
C	6.10.2	90	Include a description of measures proposed to manage solid waste generated by the removal of the existing power line towers.	• The EIS outlines the removal of solid waste to appropriate disposal facilities. • Excess spoil is proposed to be stockpiled so it can be used for site rehabilitation works.	Yes
s 8.1.8 – Climate change and air quality					
a	6.13	99	Discuss the potential air emissions from the proposed development during construction and operation	• Air emissions will be mainly gaseous emissions from fuel consumption, carbon emissions from vegetation clearance and dust generation.	Yes
b	6.13	99	Discuss methods for reducing impacts of air emissions.	• The EIS indicates that vehicles will be maintained to ensure they run efficiently, revegetation works will provide long term benefits for air quality, and dust management will aim to reduce dust generation.	Yes
s 8.1.10 – Aquatic flora and fauna					

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
a	6.7	80	Include a description of the local aquatic ecosystems including a description of downstream systems and those which have the potential to be impacted by the development.	• The EIS specifies that Lake Ginninderra receives all drainage from the project site, either directly or via College Creek. • The EIS Addendum Report indicates that good quality aquatic habitat occurs in the project area, but these areas are not extensive enough to constitute key habitat for threatened species survival.	Yes
b	6.7 11 (AR)	80 14 (AR)	Describe the effects and potential effects of the proposal on aquatic flora and fauna.	• The EIS states that the removal of overhead power lines is the only activity that may affect aquatic flora and fauna, as the under-ground cables would be put in place using underboring. • The EIS indicates that riparian habitat may be temporarily impacted during removal of the overhead cable from the water, but that significant adverse impacts would not occur. • The EIS Addendum Report indicates that impacts on Murray Cod and Murray Crayfish are likely minimal. The EIS notes that wild populations of Murray Cod are not reliant on the Lake Ginninderra population for survival.	Yes
c	11 (AR)	14 (AR)	Include a preliminary aquatic flora and fauna assessment that identifies any potential impacts generated during construction and operation.	• Aquatic flora and fauna assessment provided as an Appendix to the Addendum Report.	Yes
s 8.1.11 – Aboriginal and European cultural heritage					
a	6.18-6.19	105	Describe the heritage values of the site and any impacts of the proposal on any heritage items.	• An archaeological due diligence assessment did not identify any Aboriginal artefacts. The EIS indicates that indigenous heritage values do not present a constraint on the project site. • The EIS states that no European heritage values will be affected by the project.	Yes

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
b	Appendix G (EIS) 12 (AR)	15	Address item A2 of attachment A: *The main requirement for the Heritage Council is that an Unanticipated Discovery Plan needs to be prepared.*	• An Unanticipated Discovery Protocol was prepared and approved by the Heritage Council. • Potential for unknown Aboriginal artefacts found on the site to be damaged if appropriate protocols are not in place. • The Addendum Report indicates that an induction to the Unanticipated Discovery Protocol will form part of the construction site induction.	Yes
s 8.1.13 – Noise, vibration and lighting					
a	6.14-6.16	101-105	Identify any potentially sensitive receivers (including residential dwellings and road users) which may be affected by the construction and operation of this proposal.	• The EIS identifies residential dwellings in McKellar and Kaleen and at the Kangara Waters retirement village as the closest sensitive receivers. • The EIS Addendum Report identifies the University of Canberra as a fourth sensitive receiver. • Given the proposed development of Lawson South, the potential noise impacts of the BZS were also considered as there will be sensitive receivers in the suburb of Lawson South. • The EIS Addendum Report considers potential impacts on threatened flora and fauna.	Yes
b	6.14-6.16 2 (AR)	101-105 6	Discuss the magnitude, duration and frequency of any lighting, noise, and vibration that might arise from the construction phase.	• The EIS indicates that noise produced on the site would be from construction vehicles. As point sources the noise which would be heard in McKellar and Kaleen would be less than existing noise produced by traffic on Ginninderra Drive. • The EIS Addendum Report indicates that: Gi*ven the existing ambient noise levels it is reasonable to expect that impacts of construction noise from the proposal on flora and fauna would be minimal (EIS Addendum Report, page 7).* • The EIS indicates that vibrations will not be detected further than	Yes

Environmental aspect from Scoping document			Scoping requirement/consideration	Assessment comments – impacts and mitigation measures	Assessment of Scoping Document requirements met
Sub item	EIS/ Addendum Report (AR) section	Page			
				approximately 50m from the activity generating the vibration. • The EIS indicates that light spill will not cause any impacts as the works will be undertaken during the day and sensitive receptors are 100m away or more.	
c	6.14-6.16	101-105	Discuss the types, duration and frequency of any lighting, noise and/or vibration during operation phases of the proposal.	• The EIS indicates that during operation potential noise impacts would be associated with the BZS, which will have an additional transformer. This is not expected to have a significant impact, when considered with the two existing transformers. • During operation light spill would be associated with security lighting at the BZS and at the two power line transition compounds. • Vegetation screening will be used to limit the light spill from these facilities.	Yes
s 8.1.15 – Recreation					
a	15 (AR)	17	Describe any areas used for recreation (formal or informal) and the potential for the proposal to impact on these areas.	• The EIS and Addendum Report describe the impacts on recreation. These impacts are temporary. The operation of the infrastructure is not expected to affect recreation. • The construction project may temporarily affect cycling and pedestrian access on the west side of Lake Ginninderra. • Use of the lake for recreation will likely be impacted temporarily while overhead power lines are removed. • Detour and warning signs will be erected. • Traffic controls will be put in place for crossings. • Safety fencing will be used to prevent access to construction areas.	Yes

5 Development assessment

5.1 Development assessment considerations

Any DA related to the completed EIS will include consideration of appropriate conditions of approval such as those outlined below. Issues identified during the assessment of the subsequent impact track DA may be addressed through further conditions not included in this section or as a variation of these conditions.

Table 2 - Draft Conditions of Development Approval details possible conditions of approval identified during consideration of the EIS for the proposal.

No.	Condition contents	Endorsement/approval	Construction stage	Draft condition of approval
1	Construction and Environmental Management Plan	EPA TAMSD ESDD The ACT Heritage Council	Before construction	A CEMP must be endorsed by the identified entities prior to the commencement of any work on the site. The CEMP may be a single document or include a number of sub-plans. The CEMP must provide enough detail to ensure that on-site staff and contractors are aware of the requirements under each sub-plan. The endorsed CEMP must be implemented. The CEMP must include the mitigations measures proposed in Section 9.2 of the EIS. The CEMP is required to include the following items as a minimum:
	(a) Works Management Plan	EPA TAMSD	Before construction	A Works Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. The Works Management Plan should include the mitigation measures proposed in Sections 6.12.4, 6.14.3 and 9.2.1 of the EIS.
	(b) Sediment and Erosion Control Management Plan	EPA	Before construction	A Sediment and Erosion Control Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. The Sediment and Erosion Control Management Plan should include the mitigation measures proposed in Section 9.2.2 of the EIS and Item 2 of the EIS Addendum Report.
	(c) Traffic and Vehicle Management Plan	TAMSD	Before construction	A Traffic and Vehicle Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Section 9.2.3 of the EIS.
	(d) Earthworks Management Plan	EPA TAMSD	Before construction	An Earthworks Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Sections 6.12.1, 9.2.1 and 9.2.4 of the EIS.

				Dust management must be included in the plan in accordance with the Environment Protection Guidelines for Construction and Land Development in the ACT.
	(e) Bushfire Management Plan	ESA TAMSD ESDD	DA lodgement	A Bushfire Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Sections 6.12.1 and 9.2.1 of the EIS.
	(f) Site Security Management Plan	TAMSD	Before construction	A Site Security Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Sections 6.12.3, 6.12.4 and 9.2.1 of the EIS.
	(g) Spill Management Plan	EPA	Before construction	A Spill Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Sections 6.9.2 and 9.2.1 of the EIS.
	(h) Cultural Heritage Management Plan	ACT Heritage Council?		A Cultural Heritage Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Section 9.2.1 of the EIS.
	(i) Stormwater and Pollutant Management Plan	EPA	Before construction	A Stormwater and Pollutant Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures proposed in Section 6.9 of the EIS and Items 2 and 8 of the EIS Addendum Report.
	(j) Waste Management Plan	EPA, TAMSD	Before construction	A Waste Management Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the mitigation measures specified in Section

				6.10 of the EIS and Item 5 of the Addendum Report. ActewAGL's standard waste management procedure and hazardous waste management procedure must form the basis of this plan.
	(k) Drilling Fluid Plan	EPA	Before construction	A Drilling Fluid Plan must be endorsed by the identified entities prior to commencement of any work on the site. This plan should include the information specified for inclusion in Item 5 of the EIS Addendum Report.
	(l) Stream Rehabilitation and Landscaping Works Plan	TAMSD ESDD	DA lodgement	A Stream Rehabilitation And Landscaping Works Plan must be developed and implemented. College Creek must be reinstated in accordance with Section 6.9.2 of the EIS.
2	Urban Trees – Detailed Design Stage	TAMSD	Before Construction	In accordance with TAMS comments on the draft EIS, TAMS must be consulted at detailed design stage to ensure that: • *"trees that require protection are effectively protected;* • *trees to be removed have been assessed and endorsed for removal, or else alternative construction method may be required to avoid their removal;* • *proposed planting meets TAMS Design Standards and Standard Specifications."*
3	Tree Management Plan and Tree Replacement Strategy	TAMSD	During construction	The Tree Management Plan and Tree Replacement Strategy which was developed for the Lawson South development area must be implemented in relation to all tree removal and replanting works. Any proposed removal of regulated trees as part of the project works must be referred to the Conservator of Flora and Fauna as required under the *Tree Protection Act 2005*.
4	Unanticipated Discovery Protocol	N/A	During Construction	That the existing Unanticipated Discovery Protocol must be adhered to at all times. As part of the site induction for on-site project staff, a specific induction to the Unanticipated Discovery Protocol must be given.
	Landscape Management Plan	ESDD TAMSD		That a Landscape Management Plan must be endorsed by the identified entities. The plan should be prepared in accordance with the Conservator of

				Flora and Fauna's comment on the draft EIS: • *Restoration of the disturbance corridor (away from those areas that will be mown open space), should utilise native wetland/riparian species (wetland section) and native Danthonia and Stipa grasses (other sections) rather than the dryland grassing mix proposed.* The plan should include revegetation measures for College Creek in accordance with Section 6.9.2 of the EIS.
5	Geotechnical Investigation	ESDD	Before construction	A geotechnical investigation must be undertaken prior to the commencement of the project works. The EIS specifies that: • *The investigation needs to be undertaken close to the prescribed bore route on either side of the Lake Ginninderra, preferably to a depth exceeding that of the initial bore design.*
6	Lighting Management	TAMSD	During construction	Appropriate standards will be met for all lighting. These include: • AS4282: Control of the Obtrusive Effects of Outdoor Lighting; and • AS1158: Lighting for Roads and Public Spaces.

Table 2 - Draft Conditions of Development Approval

5.2 Construction and Environmental Management Plan

A CEMP has been proposed by the proponent to set out the framework for continuing management, mitigation, monitoring and, if relevant, adaptive management programs for the relevant impacts of the proposal.

6 Recommendation

Having regard to the documentation and information provided, the authority has assessed the Lawson South 132kV Power Line Relocation revised EIS as meeting the requirements of Chapter 8 of the Act.

It is the authority's assessment that the revised EIS has provided sufficient information to the ACT Government and the community to allow an informed evaluation of potential environmental impacts which could be attributed to the Lawson South 132kV Power Line Relocation proposal. SSP has proposed a range of mitigation and management measures to reduce, avoid or offset potential environmental impacts arising from construction and operational activities associated with the project. It is considered that any potential adverse impacts can be adequately addressed by implementing these measures and the DA conditions specified in this report.

In regards to the MNES, the EPBC Act assessment for the Lawson South residential development (EPBC Ref. 2010/5549) addresses impacts on Golden Sun Moth and Striped Legless Lizard. Approval was given through the EPBC assessment for development to progress, with conditions, including offsets.

The influence of construction activity associated with the project, and the subsequent environmental performance attributable to its ongoing operation, will be monitored by a variety of public agencies; particularly the EPA, ESDD and TAMSD.

The authority's recommendation is that the matters not substantially addressed in the revised EIS do not justify the establishment of a panel of inquiry. The authority's recommendation is that the Minister need take no action in relation to the revised EIS. The Minister may however, decide to present the revised EIS to the Legislative Assembly. This action does not affect an EIS being complete in accordance with section 209 of the Act.

This page has been left intentionally blank.

Appendix 1 – Final scoping document

This page has been left intentionally blank.

ACT Government
Environment and Sustainable Development

Form

Scoping Document

Under Part 8 of the *Planning and Development Act 2007*

APPLICATION NUMBER: 201200117	**DATE OF THIS NOTICE: 3 June 2012**	
DATE LODGED: 30 April 2012	**DATE OF EXPIRY: 3 December 2013**	
PROJECT: Lawson South 132kV Powerline Relocation		
BLOCK: 1	**SECTIONS: 5, 12, 19, 20**	**SUBURB: Lawson**
BLOCK: 2	**SECTION: 13**	**SUBURB: Lawson**
ADDRESS: n/a		
APPLICANT: Jody Yap, Shared Services Procurement, Treasury Directorate		
LAND CUSTODIAN: Stacey Quayle, Land Development Agency		
LAND CUSTODIAN : Fleur Flanery, Department of Territory and Municipal Services Directorate		
LAND CUSTODIAN: Stephen Devlin, ActewAGL Distribution Ltd		

SCOPING DOCUMENT:

The planning and land authority within the Environment and Sustainable Development Directorate (ESDD) received your application under Section 212(1) of the *Planning and Development Act 2007* (the Act) for Scoping of an EIS for the above proposed development. Pursuant to Section 212(2) of the Act ESDD has:

a) Identified the matters that are to be addressed by an Environmental Impact Statement (EIS) in the relation to the development proposal

b) Prepared a written notice (the ***scoping document***) of the matters.

NB: The attached scoping document is final. The Environmental Impact Statement must conform to the requirements of this scoping document. This document does not indicate approval, or support in any way, nor does it indicate approval in principle.

TERM OF SCOPING DOCUMENT

Pursuant to Section 215 of the Act, this Scoping Document is effective for 18 months from the day after the date of this notice.

FORM AND FORMAT OF EIS

ESDD requires that the Proponent prepares an EIS in the following form and format:

- The EIS must be prepared in accordance with section 50 of the *Planning and Development Regulation 2008*
- The EIS document sized A4 with maps and drawings in A4 or A3 format
- The proponent must supply three (3) copies of the draft EIS and four (4) copies of the revised

EIS

- The EIS must be presented for circulation and web posting in an electronic format
- The Proponent must supply nine (9) CD/DVD copies of the draft EIS and three (3) CD/DVD copies of the revised EIS. Additional CD/DVD copies must be produced on request
- Digital files must not exceed 10 MB each
- The EIS must be written in plain English and avoid the use of jargon as much as possible
- The EIS is required to be provided in the same structure as described in this scoping document as closely as possible. A table that cross-references the EIS to the scoping document must be included if the structure is different
- Additional technical detail, including relevant data, technical reports and other sources of the EIS analysis must be provided in appendices
- Maps, diagrams and other illustrative material should be included in the EIS to assist readers to interpret information.

COST OF PREPARATION OF EIS

The proponent is responsible for the preparation of the draft and revised EIS and any related applications and associated costs. This includes additional copies of the draft and revised EIS and other associated documents as required by ESDD from time to time.

NEXT STEPS:

Pursuant to Section 216(2) of the Act, you are now required to:

a) Prepare a document (a ***draft EIS***) that addresses each matter raised in the scoping document for the proposal
b) Pay the public notification fee once you receive the fee advice from Customer Services, ESDD
c) Prepare a document (a ***revised EIS***) that addresses each matter raised in ESDD's comments and the representations on the draft EIS
d) Submit the revised EIS to ESDD for evaluation.

If you have any queries about the requirements outlined in this scoping document, please contact Linda Ren to arrange a suitable time to discuss.

Delegate
Ben Ponton
A/g Deputy Director General,
Planning
Environment & Sustainable Development Directorate

3 June 2012

Contact
Linda Ren
Assessment Officer
Impact and Estates Assessment
Planning Delivery Division
Environment & Sustainable Development Directorate
E: linda.ren@act.gov.au
T: (02) 6205 3343

GENERAL REQUIREMENTS FOR THE EIS

1 Cover Page

The cover page must clearly display the following:

- The name of the proposal (project title)
- The block identifier and street address for the proposal
- The date of the preparation of the document
- Full name and postal address of the designated proponent
- Name of the person/organisation who prepared the documents
- Address, telephone and email contact details for the person/organisation who prepared the document
- Name of person/organisation for whom the document was prepared.

2 Glossary

Provide a glossary of technical terms, acronyms and abbreviations used in the EIS.

3 Executive Summary

Provide a non-technical summary of the EIS including a description of the proposal, key findings and recommendations.

4 Introduction

Summarise the proposal background and justification for the proposal.

5 Proposal Details

5.1 Project Description

Provide a description of the proposal, including:

a) The location of the land to which the proposal relates, including detailed maps

b) If the land is leased – the lessee's name

c) If the land is unleased or public land – the custodian of the land

d) The purposes for which the land may be used

e) If the land is leased –

   a. The division name, and block and section number of the land under the *Districts Act 2002*

   b. The volume and folio of the lease in the register under the *Land Titles Act 1925*.

f) Clearly identify all lands subject to direct disturbance from the proposal and associated infrastructure and geomorphic features such as waterways and wetlands

g) An outline of any developments that have been, or are being, undertaken by the proponent, or other person(s) or entities, within the proposal area and broadly in the region, e.g the residential development of Lawson South and the future expansion of the substation. Describe how the proposal relates to those in the region affected by the proposal

h) A description of all the components of the proposal, including the proposal specifications such as the removal of existing towers and associated circuits; predicted timescale for implementation (design, approvals, construction and decommissioning) and project life

i) A description of the precise location of any works to be undertaken, structures to be built or elements of the proposal that may have relevant impacts

j) A description of the construction and maintenance methodologies, including the construction hours for the proposal.

5.2 Alternatives to the proposal

Provide details of any alternatives to the proposal considered in developing the proposal including a description of:

a) Any alternatives to the proposal and provide reasons for selecting the preferred option. Include any detailed analysis of site selection as an attachment to the EIS

b) The criteria used for assessing the performance of any alternative to the proposal considered

c) Any matters considered to avoid or reduce potential impacts prior to the selection of the preferred option

d) The criteria used for choosing an alignment that is different from recommend options

e) Details of the consequences of not proceeding with the proposal.

5.3 Objectives

Describe the objectives of and justification for the proposal.

6 Legislative Context

A description of the EIS process including any statutory approvals obtained or required for the proposal.

6.1 Statutory requirements

The description must include information on statutory requirements for the preparation of an EIS:

- *Planning and Development Act 2007*
- *Planning and Development Regulation 2008*
- Related statutory approvals.

6.2 Other requirements

The description must also include information on how each of the following has been considered in the preparation of the EIS:

- Territory Plan 2008
- National Capital Plan
- Sustainability Policy

- Sustainable Transport Plan
- Canberra Spatial Plan
- ACT Climate Change Strategy
- Water Use and Catchment General Code
- Lawson South Structure Plan
- Lawson South Concept Plan
- Other relevant planning and environmental guidelines and management plans.

6.2.1 Ecologically sustainable development

Provide a description of the proposed action in relation to the long-term and short-term considerations of economic development, social development and environmental protection. A statement should be provided to address how the following ecologically sustainable development principles have been considered in the preparation of the EIS:

a) The precautionary principle

b) The principle of intergenerational equity

c) The conservation of biological diversity and ecological integrity

d) Improved valuation, pricing and incentive mechanisms.

6.2.2 Territory Plan strategic directions

A statement must be provided regarding the proposal's compatibility with the principles in the Statement of Strategic Directions in the Territory Plan 2008 (Section 2.1- Strategic Direction).

7 Risk Assessment

7.1 Risk Assessment Methodology

Provide a risk assessment in accordance with the Australian and New Zealand Standard for risk management AS/NZS ISO 31000:2009 *Risk Management – Principles and guidelines.* The proposed criteria for determining which risks are potentially significant impacts must be described. This should be based upon the Preliminary Risk Assessment (PRA) submitted with your request for the scoping application.

Should any risk levels change during the preparation of the EIS or any new risks become apparent, these must be assessed and included within the EIS, and where relevant, the residual risk assessment.

-Assessment guide-			
Provide a table with the headings below to describe the risks identified and the original risk rating without any mitigation strategies in place. This table format is one option, however alternative formats can be used provided the methodology is clearly described and in accordance with AS/NZS ISO 31000:2009 *Risk Management – Principles and guidelines*			
Risk	Likelihood	Consequence	Risk rating

8 Assessment of Impacts

Sufficient information is required to provide ESDD with an adequate understanding of the environmental impacts associated with the proposal. Each potentially significant impact rated with a risk rating of medium and above as identified in the risk assessment must be addressed against items identified in sections 8.1- 8.6 where not already identified in Table 1.

Table 1 identifies the issues that ESDD has identified as potentially significant risks, and sections of the scoping document that must be addressed in the EIS. The risks and their associated risk levels were determined from the information submitted with the PRA, comments received from entities on the request for scoping document application and ESDD's assessment.

Table 1 – Identified Impacts and requirements to be addressed in the EIS

Environmental Theme	Risk identified	Sections of scoping document to be considered
Planning and land status		8.1.1
Traffic and transport		8.1.2
Utilities		8.1.3
Materials and waste		8.1.4
Landscape and visual	• Impacts on the landscape amenity due to construction activity and removal of vegetation (including trees) • Impacts on the landscape amenity from the termination block structures	8.1.5, 8.2-8.6
Soils and geology	• Soil contamination through fuel spills from construction machinery used on site	8.1.6, 8.2-8.6
Water quality and hydrology	• Impact on water quality of Lake Ginninderra, College Creek and associated downstream due to erosion and sedimentation during construction • Increased water contamination in Lake Ginninderra and College Creek through fuel spills from construction machinery used on site • Vegetation removal and changes to topography impacting on watercourses	8.1.7, 8.2-8.6
Climate change and air quality		8.1.8
Terrestrial flora and fauna	• Disturbance or loss of listed endangered ecological communities • Removal of habitat for Golden Sun Moth • Spread of weeds due to vegetation	8.1.9, 8.2-8.6

Environmental Theme	Risk identified	Sections of scoping document to be considered
	removal and construction vehicle movements • Impact/ loss of EPBC Act listed threatened flora and fauna, e.g. striped legless lizard, Grassland Earless Dragon, Regent Honeyeater, Ginninderra Peppercress, and Natural Temperate Grassland	
Aquatic flora and fauna	• Disturbance or loss of aquatic flora and fauna in Lake Ginninderra during construction and maintenance • Impact on NC Act listed Silver Perch and Murray River Crayfish • Impact on EPBC Act Listed vulnerable specie Murray Cod	8.1.10, 8.2-8.6
Aboriginal and European cultural Heritage		8.1.11
Socio-economic and health	• Reduce security of electricity supply during construction • Health risks for future Lawson South residents resulting from radiation associated with high voltage powelines	8.1.12, 8.2-8.6
Noise, vibration and lighting		8.1.13
Hazard and risk	• Safety risks for workers and public during construction due to removal of the existing structures • Danger to workers from inadvertent unearthing/cutting of underground powerline during future development / maintenance works • Risk of the substation causing a bushfire or being damaged by a fire	8.1.14, 8.2-8.6
Recreation		8.1.15
All other impacts		8.1.16

8.1 General

The baseline information used for predicting each potentially significant environmental impact identified within the scoping document should be outlined within this section. This should be discussed under the headings 8.1.1 – 8.1.16. Describe the assessment scenario for each heading under 8.1.1 – 8.1.16.

-Assessment Guide-		
Assessment Scenarios: Proponent should describe and use baseline case, application case and planned development case in their EIS to describe and address impacts at all stages of the project (construction, operation, decommissioning and reclamation)		
Baseline case The baseline case establishes and describes the conditions that exist prior to the development or if the project were not developed. Describe the environmental conditions that include the effects of existing land uses of the area.	**Application case** The application case describes the baseline case with the effects of the proposal added. Information is provided to allow regulators to determine how project operations should be controlled and how adverse effects can be mitigated and managed.	**Planned development case** The planned development case describes the environmental conditions of the project when integrated with the existing conditions and any other planned projects which can be reasonable expected to occur.

***NOTE:** the information provided under the following headings is for guidance only and is not an exhaustive list of matters that may be required to accurately detail the assessment scenarios.*

8.1.1 Planning and land status

- *Include a description of planning context of the area where the project will be located*
- *Describe planning and development status of any land or project relevant to the proposal*
- *Describe land use of the proposed land and any land to be affected (including, but not limited to, zoning, lessee(s) or custodian of the land, the permissibility of the proposed use defined in the Territory Plan)*
- *Address item 2 outlined in A3 of attachment A.*

8.1.2 Traffic and transport

- *Describe arrangements for the transport of construction materials, equipment, products, wastes and personnel during both the construction phase and operational phases of the development proposal*
- *Include a description of the volume of traffic generated during construction and operation.*
- *Include details of vehicle traffic, transit routes and transport of heavy and oversize loads (including types and composition).*

8.1.3 Utilities

- *Describe the existing utilities located on the land subject to this proposal*
- *Describe any new utilities, removal, realignments or utility connections required as a result of this development.*

8.1.4 Materials and waste

- *Describe hazardous materials and dangerous chemicals to be used or stored on site during construction and operation*
- *Describe the nature, sources, location and quantities of all materials to be handled, including the storage, stockpiling and disposal of materials and waste*
- *Include a description of measures proposed to manage solid waste generated by the removal of the existing powerline towers.*

8.1.5 Landscape and visual

- *Undertake a visual assessment of the site and surrounds to describe the current landscape character of the area*
- *Identify important view sheds and significant views and vistas to and from the site*
- *Conduct a visual impact analysis that details predicted impacts the proposal, may have on the landscape character of the site and surrounds*
- *Provide perspectives and/or a visual analysis of the proposal from local points*
- *Address items 1 and 4 outlined in A3 of attachment A.*

8.1.6 Soils and geology

- *Describe the soil and geology features of the area*
- *Discuss the potential impacts associated with soils and geology on the proposed site and surrounding areas*
- *Provide information on methods of impact reduction and rehabilitation associated with soils and geology.*

8.1.7 Water quality and hydrology

- *Describe the present and potential water uses and users within the affected catchment of the proposal. Include a map of the catchment*
- *Describe how water will be managed on the site*
- *Provide information on the stormwater management both during construction and during operation including any on site detention and water quality protection measures*
- *Describe the current groundwater quality and measures proposed to maintain and monitor ground water quality*
- *Impact of project on Hydrological regime of Lake Ginninderra and College Creek during construction and maintenance*
- *Address item 3 outlined in A3 of attachment A.*

8.1.8 Climate change and air quality

- *Discuss the potential air emissions from the proposed development during construction and operation*
- *Discuss methods for reducing impacts of air emissions.*

8.1.9 Terrestrial flora and fauna

- *Include a description of the existing ecology and environmental values*
- *Describe the effects or potential effects of the proposal on terrestrial flora and fauna of the region*
- *Address item A1 of attachment A.*

8.1.10 Aquatic flora and fauna

- *Include a description of the local aquatic ecosystems including a description of downstream systems and those which have the potential to be impacted by the development*
- *Describe the effects and potential effects of the proposal on aquatic flora and fauna*
- *Include a preliminary aquatic flora and fauna assessment that identifies any potential impacts generated during construction and operation.*

8.1.11 Aboriginal and European cultural heritage

- *Describe the heritage values of the site and any impacts of the proposal on any heritage items*
- *Address item A2 of attachment A.*

8.1.12 Socio-economic and health

- *Provide an analysis of the potential impacts on human health and any measures incorporated into the development to mitigate these impacts*
- *Describe the suitability of the land for the type of proposal described in terms of socio-economic and health*
- *Detailed discussion of the potential social and economic impacts associated with the proposal.*
- *Provide maps showing sensitive receivers.*

8.1.13 Noise, vibration and lighting

- *Identify any potentially sensitive receivers (including residential dwellings and road users) which may be affected by the construction and operation of this proposal*
- *Discuss the magnitude, duration and frequency of any lighting, noise, and vibration that might arise from the construction phase*
- *Discuss the types, duration and frequency of any lighting, noise and/or vibration during operation phases of the proposal.*

8.1.14 Hazard and risk

- *Describe the potential for hazard and risk associated with the construction and operation of the project including bushfire, flooding, vandalism and accidents*
- *Describe how the site is suitable for the proposed use by considering identified hazards and risks.*

8.1.15 Recreation

- *Describe any areas used for recreation (formal or informal) and the potential for the proposal to impact on these areas.*

8.1.16 All other impacts

- *Describe any potential impacts that have not been discussed in the previous sections.*

8.2 Environmental conditions and values

Describe the environmental conditions and identify the environmental values for the environmental themes identified in Table 1. This section should discuss the baseline conditions for the area.

8.3 Investigations

Identify the findings and results of any environmental investigation in relation to the land to which the proposal relates.

8.4 Impacts

Describe the effects of the environmental impact as a result of construction and operation for the environmental themes identified in Table 1 (including cumulative, consequential and indirect effects) on physical and ecological systems and human communities. Particular emphasis should be placed on the potentially significant impacts identified in the risk assessment. Include a discussion of the timeframes of impacts i.e. short or long term, their nature and extent and whether they are reversible or irreversible, unknown or unpredictable. Include an analysis of the significance of the relevant impacts. Information must include any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

8.5 Mitigation and offsets

Discuss the proposed safeguards and mitigation measures proposed to be taken for the environmental management of the land to which the proposal relates for the environmental themes identified in Table 1. This is to include:

a) A description and an assessment of the proposed impact prevention, mitigation or offsetting measures to deal with the environmental impact of the proposal

b) A description of the expected or predicted effectiveness of the mitigation measures.

c) Any statutory or policy basis for the mitigation measures

d) An outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing

e) The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program

f) An offset package that is to provide compensation for any unavoidable impacts arising from the proposal on listed threatened species and communities. The offset package must include, but not be limited to, measures to address the long-term protection and management of relevant listed threatened species and communities at offset sites in the ACT (or surrounding area) and may also include management measures to improve the ecological values. Further information on the provision of Federal offsets is detailed in the *Draft Policy Statement: Use of environmental offsets under the EPBC Act* (August 2007) available on the Department of Sustainability, Environment, Water, Population and Communities website

g) A description of the cost effectiveness of environmental mitigation or rehabilitation measures proposed and the expected or predicted effectiveness of those measures.

8.6 Residual risk

Provide a table that details the residual risk for the potentially significant impacts identified for the environmental themes in Table 1. A residual risk assessment is only required where the significance of impact is determined as medium or above. The calculation of the residual risk should take into account the influence of implementation of mitigation or offsetting measures on the impacts identified by the risk assessment. A discussion of how the calculations were determined should also be included.

-Assessment Guide-

Provide a table with the headings below to describe the risks identified and the original risk rating without any mitigation. The residual risk assessment will include the consideration of management, mitigation and monitoring strategies applied to each risk identified. The residual risk rating describes the final risk with the mitigation measures in place.				
Risk identified in Section 7.1	**Original risk rating from items identified in 7.1**	**Residual likelihood**	**Residual consequence**	**Residual risk rating**

9 Community and stakeholder consultation

9.1 The proponent must consult with:

- Lease holders and land managers of land potentially impacted by the proposal
- Any recreational groups which will be affected by the proposal
- Any volunteer conservation, landscape management or land care groups active in the area to be effected by the proposal
- The local community.

9.2 Describe the community consultation undertaken (methodology and criteria for identifying stakeholders and the communication methods used).

9.3 The revised EIS must include the representations received, issues raised in the representations and a response to the issues and values identified. The summary response must clearly identify the representation(s) to which the responses relate.

9.4 Describe how any concerns have been considered in light of the proposal and any future development planned.

10 Recommendations

10.1 Provide a summary of any commitments to impact prevention, mitigation measures, offsetting measures and other actions within the EIS.

10.2 Provide a summary table outlining the residual risk assessment results.

10.3 Describe the monitoring parameters, monitoring points, frequency, data interpretation and reporting proposals.

11 Other relevant information

The proponent may wish to include issues outside of the scope of the EIS, as a separate section of the EIS. This allows the proponent to identify matters, not required to be addressed in the EIS, but that would be subject to development assessment consideration and notification. This can provide additional context for members of the public regarding management of environmental issues, by ensuring that the public is aware that these issues will be addressed in the detailed design of the proposal.

12 References

A reference list using standard referencing systems must be included.

13 Required Appendices

13.1 Scoping document for the EIS

A copy of the scoping document should be included in the EIS. Where it is intended to bind appendices in a separate volume from the main body of the EIS, the scoping document should be bound with the main body of the EIS for ease of cross-referencing.

13.2 Scoping Document Reference

Include a table that cross-references the EIS to the scoping document.

13.3 Proponent's Environmental Record

Provide details of any proceedings under a Commonwealth or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- The person proposing to take the action
- For an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, then provide details of the corporation's environmental policy and planning framework.

13.4 Information Sources

For information given the following must be stated:

- The source of the information
- How recent the information is
- How the reliability of the information was tested
- What uncertainties (if any) are in the information.

13.5 Study team

The qualifications and experience of the study team and specialist sub-consultants and expert reviewers must be provided.

13.6 Specialist studies

All reports generated based on specialist studies undertaken as part of the EIS are to be included as appendices.

13.7 Research

Any proposals for researching alternative environmental management strategies or for obtaining any further necessary information should be outlined in an appendix.

Attachment A

ENTITY REQUIREMENTS

Where not otherwise identified as a potentially significant impact, provide information in accordance with the requirements of the entities. If the issues raised by entities have been addressed in other sections of the EIS, this must be cross referenced in this section.

A1. The Conservator of Flora and Fauna / Conservation Planning and Research

The key features of concern, which have already been investigated, are whether any of the following may be impacted by the proposal:

- Any occurrence of natural temperate grassland;
- Habitat of the golden sun moth;
- The endangered Ginninderra peppercress; and
- Habitat of the striped legless lizard.

The works should be designed so as to minimise disturbance on the small area of native grassland that occurs on the block of land west of Lake Ginninderra.

A2. ACT Heritage Council

The main requirement for the Heritage Council is that an Unanticipated Discovery Plan needs to be prepared.

Advice: a cultural heritage assessment has been undertaken within the future urban area of Lawson, with all heritage requirements fulfilled with excepting the submission of an Unanticipated Discovery Protocol (UDP). A UDP must be submitted for Council comment before development works proceed.

A3. Territory and Municipal Services Directorate (TAMSD)

1. EIS must address that the proposed frame type steel structure will have impact on visual amenity for the nearby residents;
2. The proponent must secure the land through a license/lease application;
3. There is a possibility of water contamination in Lake Ginninderra. EIS must provide acceptable migration measures to protect water and aquatic resources; and
4. EIS must state the reinstatement of the disturbed sites with similar plant species/local provenance.

FOR NOTING BY THE PROPONENT ONLY

ActewAGL -- Water and Sewerage Division

1. Existing major sewer assets must be contained within open spaces/off leased land;
2. Sewer capacity need to be assessed; and
3. Major off site works are required for water supply and detailed assessment is required.

ActewAGL – Electricity Division

ActewAGL Electricity Division has no comments with regard to the proposal.

Conservation Council

Conservation Council provided no comment on the request for scoping document during the referral period.

Belconnen Community Council

Belconnen Community Council provided no comment on the request for scoping document during the referral period.

Territory and Municipal Services Directorate (TAMSD)

1. Bushfire Management Plan must be prepared as part of the EIS preparation; and
2. EIS must provide sediment and erosion control plan in order to protect the creek and nearby lake.

Environment Protection Authority

1. Due to the potential for contamination from the use of pesticides and/or herbicides around the base of the power line towers all soil from the base of the towers must be assessed by a suitably qualified consultant and approved for reuse or disposal by the Environmental Protection Unit (EPU) prior to movement from site; and
2. If the ActewAGL substation is to be relocated that substation area must be assessed and remediated as necessary in accordance with EPA guidelines. The findings of the assessment must be reviewed and endorsed by the EPU prior to development of the area.

ACT Health

ACT Health provided no comment on the request for scoping document during the referral period.

ACT Emergency Services Agency

The ACT Emergency Services Agency states there is no a special consideration or comment with regard to the proposal.

Attachment B

GLOSSARY

Biodiversity: The variability among living organisms defined under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).

Biodiversity corridor: A river corridor or wildlife corridor identified in the Territory Plan 2008 or in a nature conservation strategy, or action plan, under the *Nature Conservation Act 1980* (the NC Act).

Clearing of native vegetation: The actions that are undertaken to native vegetation and listed under the NC Act, section 74 (1).

Critical habitat: Habitats of threatened species or threatened ecological community defined under the EPBC Act, section 207A (4).

Ecological community: A group of ecologically related species defined under the NC Act, or an assemblage of native species defined under the EPBC Act.

Ecosystem: A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit, as defined under the EPBC Act.

Endangered: A native species or an ecological community listed under the EPBC Act, or an ecological community or a species defined under the NC Act.

Environment: As defined under the *Planning and Development Act 2007* (the P&D Act), each of the following is part of the environment:

(a) the soil, atmosphere, water and other parts of the earth;

(b) organic and inorganic matter;

(c) living organisms;

(d) structures, and areas, that are manufactured or modified;

(e) ecosystems and parts of ecosystems, including people and communities;

(f) qualities and characteristics of areas that contribute to their biological diversity, ecological integrity, scientific value, heritage value and amenity;

(g) interactions and interdependencies within and between the things mentioned in paragraphs (a) to (f);

(h) social, aesthetic, cultural and economic characteristics that affect, or are affected by, the things mentioned in paragraphs (a) to (f).

Habitat: An area defined under NC Act, or the biophysical medium or media defined under the EPBC Act.

Impact: An event or circumstance defined under the EPBC Act, section 527E.

Impact Track: An assessment track that applies to a development proposal defined under the P&D Act, section 123.

Long term: Greater than 15 years duration.

Medium term: Greater than three (3) years to 15 years duration.

Native Species: The kinds of native animal and native plant defined under the NC Act.

Native vegetation: In relation to an area, means the kinds of vegetation indigenous to the area as listed under the NC Act, section 73.

Protected: A species declared under the NC Act, section 34.

Protected Trees: A registered tree or a regulated tree defined under the *Tree Protection Act 2005*.

Rare: A species or ecological communities defined under the Nature Conservation (Criteria and Guidelines for Declaring Threatened Species and Communities) Determination 2008.

Reserved area: An area of public land reserved under the Territory Plan 2008 as a wilderness area, national park or nature reserve.

Regulated waste: waste defined under the *Environment Protection Act 1997*

Scoping: The process of identifying the matters that are to be addressed by an EIS in relation to the development proposal - see the P&D Act, Section 212 (2).

Short term: Zero to three (3) years duration.

Socio-economic: Involving both social and economic factors.

Threatening process: A process declared to be a threatening process under the NC Act, section 38 (4).

Threatened Species: A species is vulnerable or endangered, or an ecological community is endangered or a process is threatening under the NC Act, or a species included in the categories that are listed under the EPBC Act, section 178.

Vulnerable: A species defined under the NC Act, or a species or an ecological community listed in the vulnerable category under the EPBC Act.

Wilderness area: An area of public land reserved under the Territory Plan 2008 as a wilderness area.

Appendix 2 – *Executive Summary* from Lawson South 132 kV Power Line Relocation draft EIS (February 2013)

This page has been left intentionally blank.

EXECUTIVE SUMMARY

Description of the Proposal

The ACT Government, Environment and Sustainable Development Directorate (ESDD), through the management of Shared Services Procurement, proposes to relocate the 132 kV power line traversing the proposed Lawson South residential development (Lawson South) in the north-eastern part of the town of Belconnen in the Australian Capital Territory.

The power line relocation is a preliminary component of the ACT Government's development of Lawson South, which is part of the orderly development of the town of Belconnen. The power line would allow development of Lawson South to proceed without the constraint of the existing power line traversing the suburb. Urban amenity, aesthetics and the ultimate value of what is proposed to be a high end suburb would be significantly improved.

Under the ACT *Planning and Development Act,* the power line relocation project must follow the 'Impact Track' approvals process and requires an environmental impact statement (EIS), as it is a specific type of development that comprises:

> *Electricity transmission line construction, including additions or realignment works, outside an existing easement or exceeding 500 m in length, that are intended to carry underground or above-ground transmission lines with a voltage of 132 kV or more.*

David Hogg Pty Ltd and Robert Jessop Pty Ltd have prepared this EIS for assessment by the ACT Planning and Land Authority in accordance with the ESDD Scoping Document (Ref. 201200117), which identifies the environmental issues that need to be addressed in the EIS.

The power line relocation project design has evolved in association with Lawson South planning and in response to outcomes from several rounds of public and stakeholder consultation. Preliminary environmental assessments, land valuations and cost benefit analyses for eighteen alignment options were evaluated with respect to social, economic and environmental advantages and disadvantages before the final alignment option was approved by the Director Generals' Land Supply Steering Group. This approach is consistent with the ACT Government's Sustainability Policy.

The selected power line alignment would proceed underground from a new overhead/ underground transition structure east of an existing transmission tower immediately east of William Slim Drive. The line would pass underground north eastwards beneath Lake Ginninderra, south eastwards to the Belconnen Zone Substation (BZS) then approximately eastwards to a new transition structure prior to the existing transmission tower just west of Baldwin Drive. Here the power line would resurface and rejoin the existing 132 kV overhead power line which continues eastwards above the intersection of Ginninderra and Haydon Drives. As part of the works, five existing transmission towers and associated conductors would be removed.

Key Findings

Extensive environmental risk assessments were undertaken to identify the potential adverse and beneficial impacts construction and operation of the power line relocation project may have on the natural and human environment. Management measures to avoid, remedy or mitigate the adverse impacts are described, and residual risks assessed. The residual risk of adverse environmental impacts from most construction and operational factors is negligible. Several project impacts have beneficial socio-economic and environmental outcomes. Key environmental issues and their assessment are summarised as follows:

- The power line relocation project would produce a net reduction in the adverse visual impacts of electrical infrastructure when looking northwards across Lake Ginninderra east to Reservoir Hill from viewpoints along Ginninderra Drive. Five transmission towers and associated power lines would be removed from the landscape.
- Removal of visually intrusive electrical infrastructure has the potential to enhance existing and future property values in the proposed Lawson South residential development.
- The risk of an interruption to electricity supply to the Belconnen and wider Northern Canberra areas during power line reconnections is low due to backup supply options and the reliability of the backup supply network.
- The risk of adverse human health effects from electrical and magnetic fields and radiation produced by electrical infrastructure is low. A precautionary approach involving prudent avoidance of electrical infrastructure has contributed significantly to power line relocation and subdivision planning.
- The risk of human injury when unintentionally contacting the underground power line during future excavation works is significant (i.e. medium) although the likelihood is remote, as the consequences can be severe on machinery operators. Strict controls, managed by ActewAGL, would be in place when working around the underground power line.
- The risk of adverse power line construction and operation impacts on listed threatened species and communities is low to negligible. The impact on listed threatened species and communities, including golden sun moth (GSM), striped legless lizard (SLL) and natural temperate grassland, has been addressed under the *EPBC Act* in relation to the whole of the Lawson South residential development (EPBC Ref. 2010/5549). Following the assessment of the Lawson South development by Preliminary Documentation, approval has been given for development to proceed in areas of potential GSM and SLL habitat.
- The risk of cumulative construction works adversely impacting the environment and local residents in adjacent suburbs is low to negligible following appropriate management measures. Such impacts include:
    - increased noise and vibration;
    - excessive gaseous and dust emissions;
    - uncontrolled waste production and disposal;
    - increased local traffic movements;
    - increased lighting; and
    - disturbance of cultural heritage artefacts and sites.

- The risk of groundwater and stormwater contamination in College Creek and Lake Ginninderra from suspended sediment and fuel spills is low to negligible due to the relatively small construction areas and the implementation of industry standard sediment and spill control measures.

Overall, the identified adverse environmental impacts due to construction and operation activities do not constitute a significant constraint for the 132 kV power line relocation project.

Recommendations

As most of the impacts are likely to be apparent during the construction process, a comprehensive, site-specific Construction Environmental Management Plan, detailing impact management methods, monitoring programs, and landscaping and rehabilitation plans, should be produced by the works contractor following the power line relocation project's detailed design stage. Specific management areas should include:

- Works management
- Sediment management
- Traffic and vehicle management
- Earthworks management
- Bushfire management
- Site security management
- Spill management
- Cultural heritage management

Appendix 3 – Cross reference table between EIS and the final scoping document

Final Scoping Document – EIS Cross Reference Table

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
1	Cover Page	Proposal name	Cover	Cover	Proposal name
		Block identifier and street address for the proposal	Cover	Cover	Block identifier and street address for the proposal
		Document preparation date	Cover	Cover	Document preparation date
		Full name and postal address of the designated proponent	Cover	Cover	Full name and postal address of the designated proponent
		Name of the person/organisation who prepared the documents	Cover	Cover	Name of the person/organisation who prepared the documents
		Address, telephone and email contact details for the person who/organisation who prepared the document	Cover	Cover	Address, telephone and email contact details for the person who/organisation who prepared the document
		name of the person/organisation for whom the document was prepared	Cover	Cover	name of the person/organisation for whom the document was prepared
2	Glossary		xii		List of technical terms, acronyms and abbreviations
3	Executive Summary		i		Executive Summary
4	Introduction		1	1	Introduction
		Background	2	1.2	Background
		Justification	3	1.3	Justification
5	Proposal Details		7	2	Proposal Details
5.1	Project Description		8	2.3	Project Description
5.2	Alternatives to the Proposal		10	2.4	Alternatives to the Proposal
5.3	Objectives		7	2.1	Objectives
		Justification	3	1.3	Justification
6	Legislative Context		22	3	Legislative Context
6.1	Statutory Requirements		22	3.1	Statutory Requirements
6.2	Other Requirements		24	3.2	Other Requirements
6.2.1	Ecologically Sustainable Development		28	3.3	Ecologically Sustainable Development
6.2.2	Territory Plan Strategic Directions		29	3.4	Territory Plan Strategic Directions
7	Risk Assessment		36	5	Power Line Relocation Risk Assessment

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
7.1	Risk Assessment Methodology		36 Appendix	5.1 5.2 Appendix C	Method Risk Assessment Matrix Lawson South – Relocation of 132 kV power line application for scoping document
8	Assessment of Impacts		42	6	Proposal Impacts: Environmental Evaluation
8.1	General		42	6.1	Preliminary Scoping Assessment Process
8.1.1	Planning and Land Status		1 7 22	1 2 3	Introduction Proposal Details Legislative Context
8.1.2	Traffic and Transport		105	6.17	Traffic and Transport
8.1.3	Utilities		92	6.11	Utilities
8.1.4	Materials and Waste		90	6.10	Solid, Liquid and Hazardous Waste Management
8.1.5	Landscape and Visual		42	6.2	Landscape and Visual Impacts
8.1.6	Soils and Geology		81	6.8	Geology and Soils
8.1.7	Water Quality and Hydrology		83	6.9	Stormwater and Water Quality
8.1.8	Climate Change and Air Quality		99	6.13	Climate Change and Air Quality
8.1.9	Terrestrial Flora and Fauna		69 74	6.5 6.6	Terrestrial Vegetation Terrestrial Fauna
8.1.10	Aquatic Flora and Fauna		80	6.7	Aquatic Flora and Fauna
8.1.11	Aboriginal and European Cultural Heritage		105 106	6.18 6.19	Aboriginal Cultural Heritage European Cultural Heritage
8.1.12	Socio-economic and Health *(specifically EMR, EMF)*		57 107	6.3 6.21	Effects of Electric and Magnetic Fields on Human Health Socio-economic Impacts
8.1.13	Noise, Vibration and Lighting		101 104 104	6.14 6.15 6.16	Noise Vibration Light Spill
8.1.14	Hazard and Risk		95	6.12	Hazards and Risks
8.1.15	Recreation		107	6.20	Recreation
8.1.16	Other Impacts		64	6.4	Security of Electrical Supply
8.2	Environmental Conditions and Values		42 57 64 69	6.2.1 6.3.1 6.4.1 6.5.1	Environmental conditions (Landscape and Visual Impacts Environmental conditions (Electric and Magnetic Fields) Electrical network environmental conditions Overview of environmental conditions and vegetation

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
					assessments
			74	6.6.1	Overview of environmental conditions and fauna assessments
			80	6.7.1	Environmental conditions (Aquatic Flora and Fauna)
			81	6.8.2	Environmental conditions (Geology and Soils)
			83	6.9.1	Environmental conditions (Stormwater and Water Quality)
			85	6.9.3	Existing conditions (Hydrogeology)
			90	6.10	Solid, Liquid and Hazardous Waste Management
			92	6.11	Utilities
			95	6.12	Hazards and Risks
			95	6.12	Climate Change and Air Quality
			101	6.14.1	Existing conditions (Construction noise)
			102	6.14.2	Existing conditions (Substation noise)
			104	6.15.1	Vibration
			104	6.16.1	Light Spill
			105	6.17	Traffic and Transport
			105	6.18	Aboriginal Cultural Heritage
			106	6.19	European Cultural Heritage
			107	6.20.1	Existing conditions (Recreation)
			107	6.21	Socio-economic impacts
8.3	Investigations		43	6.2.2	Landscape and Visual Impacts
			60	6.3.3	Electric and Magnetic Fields (undergrounding)
			63	6.3.5	Electric and Magnetic Fields (BZS)
			66	6.4.2	Security of Electrical Supply
			69	6.5.1	Terrestrial Vegetation
			74	6.6.1	Terrestrial Fauna
			80	6.7.2	Aquatic Flora and Fauna
			81	6.8.1	Geology and Soils
			83	6.9	Stormwater and Water Quality
			85	6.9.3	Hydrology
			90	6.10	Solid, Liquid and Hazardous Waste Management
			92	6.11	Utilities
			95	6.12	Hazards and Risks
			95	6.12	Climate Change and Air Quality
			101	6.14.1	Construction noise
			102	6.14.2	Substation noise
			104	6.15.1	Vibration
			104	6.16.1	Light Spill
			105	6.17	Traffic and Transport
			105	6.18	Aboriginal Cultural Heritage
			106	6.19	European Cultural Heritage

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
			107	6.20.1	Existing conditions (Recreation)
			107	6.21	Socio-economic impacts
8.4	Impacts		43	6.2.3	Landscape and Visual Impacts (completed works)
			50	6.2.4	Landscape and Visual Impacts (construction)
			63	6.3.4	Electric and Magnetic Fields (undergrounding)
			63	6.3.5	Electric and Magnetic Fields (BZS)
			66	6.4.2	Security of Electrical Supply
			69	6.5	Terrestrial Vegetation
			74	6.6	Terrestrial Fauna
			80	6.7.3	Aquatic Flora and Fauna
			82	6.8.3	Geology and Soils
			83	6.9	Stormwater and Water Quality
			85	6.9.3	
			90	6.10	Solid, Liquid and Hazardous Waste Management
			92	6.11	Utilities
			95	6.12	Hazards and Risks
			95	6.12	Climate Change and Air Quality
			101	6.14.1	Construction noise
			102	6.14.2	Substation noise
			104	6.15.1	Vibration
			104	6.16.1	Light Spill
			105	6.17	Traffic and Transport
			105	6.18	Aboriginal Cultural Heritage
			106	6.19	European Cultural Heritage
			107	6.20.2	Existing conditions (Recreation)
			107	6.21	Socio-economic impacts
8.5	Mitigation and Offsets		50	6.2.5	Landscape and Visual Impacts
			63	6.3.4	Electric and Magnetic Fields (undergrounding)
			63	6.3.5	Electric and Magnetic Fields (BZS)
			69	6.4.3	Security of Electrical Supply
			69	6.5	Terrestrial Vegetation
			74	6.6	Terrestrial Fauna
			80	6.7	Aquatic Flora and Fauna
			83	6.8.4	Geology and Soils
			83	6.9	Stormwater and Water Quality
			85	6.9.3	
			90	6.10	Solid, Liquid and Hazardous Waste Management
			92	6.11	Utilities
			95	6.12	Hazards and Risks
			95	6.12	Climate Change and Air Quality
			103	6.14.3	Noise

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
			104 105 105 105 106 107 107	6.15.2 6.16.2 6.17 6.18 6.19 6.20.2 6.21	Vibration Light Spill Traffic and Transport Aboriginal Cultural Heritage European Cultural Heritage Existing conditions (Recreation) Socio-economic impacts
8.6	Residual Risk		118	8	Residual Risk
9	Community and Stakeholder Consultation		31	4	Community and Stakeholder Consultation
10	Recommendations		121	9	Recommendations
11	Other Relevant Information		Various	Various	Various
12	References		125	References	References
13	Required Appendices			Appendices	Appendices
	13.1	Scoping Doc for EIS		Appendix A	ESDD EIS Scope
	13.2	Cross reference table		Appendix D	Scoping Document – EIS Cross Reference Table
	13.3	Proponent's Environmental Record		Appendix J	Project Proponent: Shared Services Procurement – Environmental Policy and Planning Framework
	13.4	Information Sources		Appendix F	Information Verification for Specialist EIS Studies
	13.5	Study Team		Appendix H	Study Team, and Consultant Qualifications and Experience
	13.6	Specialist Studies		Appendix I	Studies Undertaken Specifically for this EIS and Relevant Studies Undertaken for the Related Lawson South Residential Development
	13.7	Research	N/A	N/A	N/A
Attachment A					
A1.	The Conservator of Flora and Fauna / Conservation Planning and Research				
		NTG occurrence	70	6.5.2	Natural temperate grassland
		Golden Sun Moth habitat	74	6.6.2	Golden sun moth assessment
		Endangered Ginninderra peppercress	71	6.5.3	Ginninderra peppercress
		Striped Legless Lizard habitat	75	6.6.3	Striped legless lizard
A2.	ACT Heritage Council				
		Unanticipated Discovery Plan		Appendix G	Unanticipated Discovery Plan

SD Section	SD Sub section	SD Aspect	Page	EIS Section	EIS Aspect
A3.	Territory and Municipal Services Directorate (TAMSD)				
		EIS must address the visual impact of the frame-type steel structures	42	6.2	Landscape and Visual Impacts
		Land must be secured through a license/lease application	8	2.3.1	Electrical infrastructure
		Address possible water contamination in Lake Ginninderra and mitigation measures	81 83	6.8 6.9	Geology and Soils Stormwater and Water Quality
		Disturbed site reinstatement with similar plant species/local provenance	9	2.3.2	Landscape Design
	Noting by the proponent				
	TAMSD	Bushfire Management Plan to be prepared as part of the EIS	122 95	9.2.5 6.12.1	Construction and Environment Management Plan Bushfire Management
		Sediment and Erosion Control Plan must be prepared as part of the EIS	121	9.2.2	Sediment Management
	EPA	Soil testing and approval	N/A	N/A	ActewAGL does not use herbicides or pesticides around the base of the towers.