

## Application background

- Under the ACT Planning and Development Act 2007, the Minister may exempt a development from the requirement to carry out an Environmental Impact Statement (EIS) if the expected environmental impact of the proposal has already been addressed by another study
- The Ginninderry development has already undertaken extensive environmental assessments as part of its approval under the Commonwealth's Environment Protection and Biodiversity Conservation Act (EPBC)
- The assessment required the Ginninderry JV to undertake a Matters of National Environmental Significance (MNES) assessment across the entire Ginninderry site.
- The EPBC assessment was completed and then approved by the Commonwealth Minister for the Environment in August 2017.
- The ACT and Commonwealth Governments have reached a bilateral agreement to recognise parallel approvals made through the EPBC's MNES and ACT Planning's EIS.
- Considering this bilateral agreement and because of the extensive assessments already undertaken, the Ginninderry JV has applied for an exemption as provided for under Section 211 of the Planning and Development Act. The Minister will determine the application based on the evidence provided.
- While the MNES considered the environmental impacts of the Ginninderry project, some of the other EIS requirements already met included:
  - All matters of European heritage were considered, reported and have been endorsed by the ACT Heritage Council.
  - All matters of aboriginal heritage were identified and reported. These reports have been endorsed by the ACT Heritage Council.
  - An auditor was appointed to oversee all aspects of the project to ensure that matters related to contamination would be the subject of an audit processes and resolved to the satisfaction of the EPA.
- Taking all this into account, the Ginninderry project has applied for exemption from the requirement that the DA for stage two and future stages of the project be accompanied by multiple EIS's prepared specifically to cover the individual Development Applications.
- The application for exemption was made by Knight Frank Town Planning on behalf of the Ginninderry Joint Venture.
- It was lodged with the Environment Planning and Sustainable Development Directorate on Friday 9 March 2018.
- The application was lodged in accordance with Section 211 of the ACT Planning and Development Act (2007).

### Further background from Ginninderry

- Over the last 10 years, Ginninderry has completed a wide range of environmental investigations to determine the potential environmental impacts of the project.
- These have been undertaken to ensure that all necessary protection measures are in place, or are able to be easily put in place in the future planning for the project, prior to the start of development.
- It has always been intended that the Ginninderry project would proceed on this basis with robust and comprehensive environmental assessment being completed up-front.
- The alternative approach – piecemeal assessment of environmental impacts of the project on a stage-by-stage basis – would not be acceptable.
- Section 211 of the Act is intended to apply in these circumstances where, prior to the lodgement of an application, environmental investigations have been completed that cover all the matters that might otherwise require investigation under an EIS process.
- It is particularly appropriate for a large scale, long-term project like Ginninderry to take this approach to planning.
- As a footnote, whilst the terminology of the *Act* and reference in the Canberra Times implies that Ginninderry is attempting to avoid (i.e. get an exemption from doing) an EIS – this is not the case.
- Ginninderry is simply seeking exemption from a requirement to re-do a body of work that has already been done. The *Act* recognises this as a sensible approach and allows for it under Section 211.

**From:** [Marcantonio, Laura](#)  
**To:** [EPSD Government Services](#)  
**Cc:** [Ponton, Ben](#)  
**Subject:** DG CLEARED: 18/24616 - Ministerial Brief - EIS Exemption for Ginninderry Stage 2 Urban Development alias (zA632133) [SEC=UNCLASSIFIED]  
**Date:** Monday, 8 October 2018 3:30:34 PM  
**Attachments:** [18\\_24616 - Ministerial Brief - EIS Exemption for Ginninderry Stage 2 Urban Development alias.obr](#)

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Hi Team - Ben is comfortable with this progressing to MO please.

Thanks

Laura

-----Original Message-----

From: McRae, Poppy  
Sent: Monday, 8 October 2018 11:47 AM  
To: EPSD Government Services <[EPSDGovernmentServices@act.gov.au](mailto:EPSDGovernmentServices@act.gov.au)>  
Subject: 18/24616 - Ministerial Brief - EIS Exemption for Ginninderry Stage 2 Urban Development alias (zA632133) [SEC=UNCLASSIFIED]

Good morning,

Brett has cleared the Ginninderry Stage 2 Urban Development s.211 and it is now ready for clearance by the DG and the Minister.

All documetns are in the Objective link and I will bring up the hard copies shortly.

Kind Regards,

Poppy

Poppy McRae has sent you a link to "18/24616 - Ministerial Brief - EIS Exemption for Ginninderry Stage 2 Urban Development alias" (zA632133) from Objective.

Open in Navigator  
Double click on the attachment

Open in ECM for Browser  
<https://objective.act.gov.au:8443/#/documents/zA632133/details>

Open in Your Browser  
<https://objective.act.gov.au/id:qA722025>

## Mick Gentleman MLA

Minister for the Environment and Heritage  
Minister for Planning and Land Management  
Minister for Police and Emergency Services  
Minister assisting the Chief Minister on Advanced Technology and Space Industries  
Manager of Government Business

Member for Brindabella

xx October 2018

## Ginninderry progresses to next stage

An Environment Impact Statement (EIS) exemption has been granted giving Ginninderry the go ahead for the second stage of development.

I am satisfied that an EIS exemption is appropriate in this case as the application has sufficiently addressed the potential environmental impacts. The development and proposed suitable mitigation measures and conditions for future development will need to be followed.

An EIS exemption is not an approval for development and can only be granted where the application addresses all potential environmental impacts.

The EIS exemption process has the same level of scrutiny on environmental impacts as an EIS and the application was open for extended public consultation and considered by ACT Government experts.

Ginninderry has been able to demonstrate this by providing recent environmental studies and proposing mitigation measures and conditions that reduce the impact of the development on the environment. The application addressed the impact on species and ecological communities, native vegetation clearing, nature reserves, heritage and contaminated land.

I am pleased that one of the main measures is the establishment of the West Belconnen conservation corridor along the Murrumbidgee River which will protect important environmental values.

The Ginninderry project will provide residential, community and commercial development over the next 40 years in new suburbs in the ACT and NSW to cater for a population of 30,000 residents. The project will be carried out in stages and includes urban development of land in West Belconnen, provision of future infrastructure and road upgrades.

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### ACT Legislative Assembly

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## Mick Gentleman MLA

Minister for the Environment and Heritage  
Minister for Planning and Land Management  
Minister for Police and Emergency Services  
Minister assisting the Chief Minister on Advanced Technology and Space Industries  
Manager of Government Business

Member for Brindabella

The EIS exemption will allow the joint venture, between the ACT Government and Riverview Projects, to progress estate development plans and future development applications for the project. The exemption was granted in accordance with the *Planning and Development Act 2007*.

The project has also received environmental approval under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

**Statement ends**

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## Mick Gentleman MLA

Minister for the Environment and Heritage  
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Minister for Police and Emergency Services  
Minister assisting the Chief Minister on  
Advanced Technology and Space Industries  
Manager of Government Business  
Member for Brindabella

Aaron Oshyer  
Knight Frank Town Planning  
PO BOX 248  
CIVIC ACT 2608

Dear Mr. Oshyer,

*Aaron*


I have reviewed the information provided in your request under section 211 of the *Planning and Development Act 2007* (the Act) for an exemption from the requirement to complete an Environmental Impact Statement for the Ginninderry Stage 2 Urban Development.

Having considered the information submitted in support of your application, the issues raised in submissions made during consultation and the conditions outlined in the assessment report, I consider that the expected environmental impact of the proposal has been sufficiently addressed.

As Minister responsible for the Act, I have granted you an EIS exemption. I advise that the proposed Ginninderry Stage 2 Urban Development will not require further environmental assessment in relation to this proposal with the Environment, Planning and Sustainable Development Directorate. Please ensure that you include a copy of this letter and the assessment report with your development application.

A copy of the EIS exemption is available on the ACT Legislation Register at <https://www.legislation.act.gov.au/>

Yours sincerely

  
Mick Gentleman MLA  
Minister for Planning and Land Management

*24/10/18*

### ACT Legislative Assembly

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MickGentleman



CANBERRA

**From:** [GENTLEMAN](#)  
**To:** [Aaron.Oshyer@au.knightfrank.com](mailto:Aaron.Oshyer@au.knightfrank.com)  
**Subject:** Correspondence from Mick Gentleman MLA [SEC=UNCLASSIFIED]  
**Date:** Monday, 29 October 2018 12:40:58 PM  
**Attachments:** [20181025 SIGNED LETTER.PDF](#)  
[image003.jpg](#)

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Dear Mr. Oshyer,

Please find attached correspondence from Mick Gentleman MLA - Minister for Planning and Land Management.

Kind regards,

## **Natasha Apostoloski | Office Manager**

Office managers: Natasha Apostoloski (Mon-Wed), Eben Leifer (Thu-Fri)

### **Office of Mick Gentleman MLA**

Member for Brindabella

Minister for the Environment and Heritage

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**Please note that from 1 January 2018 ACT Government ministerial diaries are subject to publication on the ACT Government's open access website under section 23 of the *Freedom of Information Act 2016*.**

**Application for EIS exemption  
Consideration Report**

**FOR**

**Ginninderry Stage 2 Urban Development**

**September 2018**

**Environment, Planning and Sustainable Development Directorate**



This report evaluates the application for an exemption under section 211 of the *Planning and Development Act 2007*, from requiring a completed Environmental Impact Statement in the development application for the Ginninderry Stage 2 Urban Development.

**Ref no:** 201800010

**Document no:** 1-2018/03744

**Project:** Ginninderry Stage 2 Urban Development

**Date lodged:** 09.03.2018

**Proponent:** Riverview Projects (ACT) Pty Ltd

**Location:** Multiple blocks, Belconnen, Dunlop and MacGregor, ACT

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## Glossary and definitions

Term	Definition
ACT	Australian Capital Territory
ACAT	Australian Capital Territory Civil and Administrative Tribunal
BGW	Box Gum Woodland
The Authority	The planning and land authority
CEMP	Construction environmental management plan
CHA	Cultural Heritage Assessment
DA	Development application
DoEE	Commonwealth Department of the Environment and Energy
EDP	Estate development plan
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.
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. In the ACT, an EIS is required for proposals in the impact track as per Section 127 of the <i>Planning and Development Act 2007</i> .
EMP	Environmental management plan
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EPSDD	Environment, Planning and Sustainable Development Directorate
ESA	Emergency Services Agency
GSM	Golden Sun Moth
MNES	Matter of National Environmental Significance (as per the EPBC Act)
The Minister	The Minister responsible for Administering the <i>Planning and Development Act 2007 (ACT)</i>

<b>Term</b>	<b>Definition</b>
NCA	National Capital Authority
NC Act	<i>Nature Conservation Act 2014</i>
NTG	Natural Temperate Grassland
PD Act	<i>Planning and Development Act 2007 (ACT)</i>
PD Regulation	<i>Planning and Development Regulation 2008 (ACT)</i>
the Program Report	Urban Development at West Belconnen Program Report (April 2017)
the Project	Ginninderry Stage 2 Urban Development
the Proponent	Riverview Projects (ACT) Pty Ltd
PTWL	Pink Tailed Worm Lizard
RMP	Reserve Management Plan
TCCS	Transport Canberra and City Services
TPV	Territory Plan Variation
TPV No. 351	Territory Plan Variation No. 351 West Belconnen Urban Development Belconnen District
WBCC	West Belconnen Conservation Corridor

## 1. Introduction

1. This report is to the ACT Minister for Planning and Land Management on the assessment of the EIS exemption application in relation to the Project. The application was made by the Proponent under section 211B of the PD Act.
2. The application relates to works in the ACT Government and Riverview Projects (ACT) Pty Ltd joint venture urban development area.
3. If an EIS exemption is granted, a DA can be lodged in the impact track without a completed EIS. The DA process will also include a statutory public notification period.

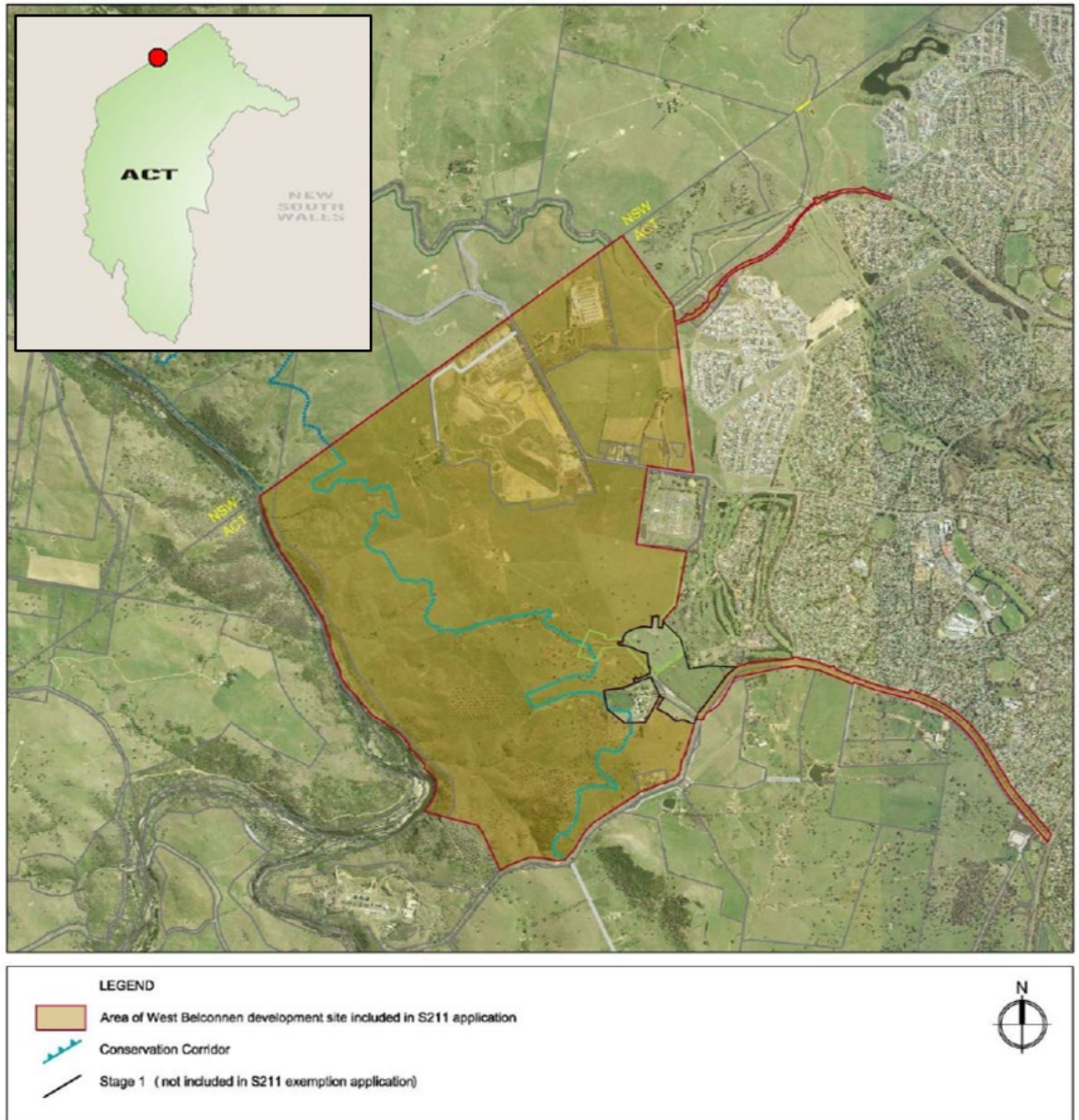
## Project

4. The overall Ginninderry development will provide residential, community and commercial development in new suburbs in the ACT and adjacent land in NSW to cater for a population of 30,000 over the next 40 years.
5. On 9 March 2018, the Proponent formally lodged an application for an EIS exemption under section 211 of the PD Act for the Project. The activities proposed as part of the Project include, but are not limited to:
  - a. land clearing and earthworks;
  - b. contaminated land remediation;
  - c. construction of dwellings, community facilities, commercial buildings, light industry, open space and supporting infrastructure;
  - d. off-site road improvement works on surrounding local and arterial roads for the Ginninderry urban area;
  - e. provision of associated services and future infrastructure, including an extension to Ginninderra Drive and sewer mains; and establishing the WBCC.
6. On 13 June 2018 assessing officers from the ACT Government completed a site visit to the Project area as part of the assessment process.
7. It should also be noted that the Project is planned to be developed over a number of stages. Two stages in particular, namely the extension of Ginninderra Drive and construction of the sewer tunnel, are not likely to start for approximately 20 years. These stages of the development are contingent on the success of future NSW approval processes. Hence, the Authority does not require the Proponent to provide detailed information on the relevant matters at this point in time. Rather, the information (if relevant) relating to these stages of the development, are to be provided to the Authority as part of any future DA's that are lodged.

## Project location

8. The Project area is located approximately 6 km west of the Belconnen Town Centre and 13 km northwest from the Canberra CBD. The Project covers a total area of 961.09 ha of land across Belconnen, Dunlop and McGregor in the ACT. Please refer to Figure 1 for a map of the area subject to the s.211 EIS exemption application.
9. Please note NSW land associated with the development is not included in the s.211 EIS exemption.

Figure 1 – Ginninderry Stage 2 Urban Development – area subject to s.211 EIS exemption application



**Legal land description and tenancy**

10. The Project will directly affect 36 blocks. Table 1 shows the legal land description for each block affected by the Project and the details of tenancy type and tenant.

Table 1 - Legal land description and tenancy

Block	District	Tenancy	Tenant
<b>1633 (formerly 1605)</b>	Belconnen	Unleased	Land Development Agency
<b>1622</b>	Belconnen	Unleased	EPSDD Environment - Vacant

<b>Block</b>	<b>District</b>	<b>Tenancy</b>	<b>Tenant</b>
<b>1621</b>	Belconnen	Unleased	EPSDD Environment - Vacant
<b>1620</b>	Belconnen	Unleased	EPSDD Environment- Public Land
<b>1613</b>	Belconnen	Retired Block	N/A
<b>1607</b>	Belconnen	Retired Block	N/A
<b>1606</b>	Belconnen	Unleased	Land Development Agency
<b>1586</b>	Belconnen	Leased Territory Land	Govt Lease - Not Public Land
<b>1568</b>	Belconnen	Unleased	Land Development Agency
<b>1540</b>	Belconnen	Leased Territory Land	Govt Lease - Not Public Land
<b>1469</b>	Belconnen	Unleased	EPSDD Environment - Vacant
<b>1440</b>	Belconnen	Unleased	Other ACT Government Agency - Not Public Land
<b>1420</b>	Belconnen	Unleased	Other ACT Government Agency - Not Public Land
<b>1333</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>1329</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>993</b>	Belconnen	Unleased	TCCS-Vacant - Municipal
<b>860</b>	Belconnen	Unleased	TCCS-Vacant - Municipal
<b>859</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>858</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>857</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>856</b>	Belconnen	Leased Territory Land	Private Lease - Not Public Land
<b>853</b>	Belconnen	Unleased	TCCS-Vacant - Municipal
<b>2</b>	Dunlop	Unleased	EPSDD (Environment)
<b>S149</b>	Macgregor	Unleased	EPSDD (Environment)

Block	District	Tenancy	Tenant
1565	Belconnen	Unleased	TCCS (Vacant)
<b>Block 1 Section 80</b>	Dunlop	Unleased	TCCS – Public Land
1582	Belconnen	Unleased	TCCS – Public Land
1600	Belconnen	Leased Territory Land	Private Lease – Not Public Land
1599	Belconnen	Leased Territory Land	Private Lease – Not Public Land
1339	Belconnen	Leased Territory Land	Private Lease – Not Public Land
1591	Belconnen	Leased Territory Land	Private Lease – Not Public Land
1592	Belconnen	Leased Territory Land	Private Lease – Not Public Land
<b>Stockdill Drive</b>			TCCS
<b>Drake Brockman Drive</b>			TCCS
<b>Parkwood Road</b>			TCCS
<b>Studio Road</b>			TCCS

## Background

11. Urban development in the Project area has been identified in a number of strategic planning documents that guide future development in the ACT. The Canberra Spatial Plan (2004), which guides sustainable development in Canberra over the following 30 years, identified a portion of the Project area for future residential development. The subsequent strategic document guiding growth in Canberra, the ACT Planning Strategy (2012), also identified a portion of the Project area as a future urban investigation area. The 2018 -2019 ACT Government indicative land release program has identified residential and community development to occur in the Project area over the next three years.
12. On 23 October 2015 the ACT Minister for Planning approved TPV No. 351 which rezoned areas in West Belconnen for future urban development. TPV No. 351 also established a “Structure Plan” and “Concept Plan” (Notifiable Instrument NI2015-610) to set out the policies, principals and spatial requirements for future development within the Project area.
13. On 31 July 2017 the DA for Stage 1 of the Ginninderry project comprising an EDP for the subdivision of 356 dwelling blocks and associated infrastructure was approved by the Authority. The DA was appealed to ACAT, but was eventually dismissed by agreement. The works for the DA have commenced. It is noted the DA is not included in the Project area and does not form part of the s.211 EIS exemption application.

14. The Project area comprises habitat for a number of species and ecological communities listed as MNES under the EPBC Act. In accordance with the requirements of part 10 of the EPBC Act, the Proponent commenced a strategic assessment in June 2014.
15. On 1 September 2017 Ginninderry (then known as West Belconnen) EPBC assessment was completed and approved by a delegate of the Commonwealth Minister for the Environment. The decision was made under section 146B of the EPBC Act (strategic assessment provisions) and approved the taking of actions, or classes of actions, in accordance with an endorsed policy, plan or program. The approval enabled actions (subject to a number of conditions) to occur across the Project area without the need for EPBC approval on a site by site basis.
16. The Project has passed a number of approval processes to enable this s.211 EIS exemption application to be lodged. As part of previous approval processes extensive documentation has been provided to demonstrate the feasibility of the project and compliance with the relevant policies guiding development in the ACT.

## 2. Environmental impact assessment

17. Environmental impact assessment processes are used to identify, predict, plan for and manage the impacts of development proposals before a decision is made about the project going ahead. An environmental impact assessment process is required to be undertaken for projects in the impact track. An EIS exemption process is not an approvals process. Rather, it is an information gathering exercise about the potential impacts of the proposal.
18. Section 123 of the PD Act states that the impact track applies to a development if:
- the relevant development table states that the impact track applies;
  - the proposal is of a kind mentioned in Schedule 4 of the PD Act;
  - the Minister makes a declaration under section 124;
  - section 125 or section 132 applies to the proposal; or
  - the Commonwealth Minister responsible for the EPBC Act advises the Minister in writing that the development is a controlled action under section 76 of the EPBC Act.

### Impact track triggers

19. The Project is in the impact track as it is a development of a kind mentioned in Schedule 4 of the PD Act. This Project triggers the Schedule 4 items listed in Table 2.

Table 2- Impact track triggers per Schedule 4 of the PD Act

Item	Description	Project Component
<b>Part 4.3, item 1</b>	<p>Proposal that is likely to have a significant adverse environmental impact on 1 or more of the following, unless the conservator of flora and fauna provides an environmental significance opinion indicating that the proposal is not likely to have a significant adverse environmental impact:</p> <p>(a) a critically endangered species;</p> <p>(b) an endangered species;</p> <p>(c) a vulnerable species;</p> <p>(d) a conservation dependent species;</p> <p>(e) a regionally threatened species;</p> <p>(f) a regionally conservation dependent species;</p> <p>(g) a provisionally listed threatened species;</p> <p>(h) a listed migratory species;</p>	<p>The Project could have a potential impact on endangered species, vulnerable species and threatened ecological communities.</p> <p>A full list of potentially impacted species and communities is provided in Table 4.</p>

Item	Description	Project Component
	<ul style="list-style-type: none"> <li>(i) a threatened ecological community;</li> <li>(j) a protected native species;</li> <li>(k) a Ramsar wetland; and</li> <li>(l) any other protected matter.</li> </ul>	
<p><b>Part 4.3, item 2</b></p>	<p>Proposal involving—</p> <ul style="list-style-type: none"> <li>(b) the clearing of more than 5.0 ha of native vegetation in a native vegetation area, on land that is designated as a future urban area (FUA) under the territory plan unless the conservator of flora and fauna produces an environmental significance opinion that the clearing is not likely to have a significant adverse environmental impact,</li> </ul>	<p>The Project will result in clearing of 7.18 ha of native vegetation, including:</p> <ul style="list-style-type: none"> <li>a. 3.1ha of NTG;</li> <li>b. 3.8ha of poor BGW; and</li> <li>c. 0.28ha of forest and woodland (not BGW).</li> </ul>
<p><b>Part 4.3, item 3</b></p>	<p>Proposal for development in a reserve, unless—</p> <ul style="list-style-type: none"> <li>(a) the conservator of flora and fauna produces an environmental significance opinion that the proposal is not likely to have a significant adverse environmental impact; or</li> <li>(b) the proposal is for minor public works to be carried out by or for the Territory in accordance with a minor public works code approved by the conservator of flora and fauna under the Nature Conservation Act 2014, section 318A</li> </ul>	<p>The Project will include works within a reserve, the WBCC, including:</p> <ul style="list-style-type: none"> <li>a. construction of a sewer tunnel in the next ten years;</li> <li>b. recreation and tourist facilities including buildings picnic areas, car parking and access roads and walking and cycling tracks,</li> <li>c. bushfire and maintenance management access tracks, and</li> <li>d. bushfire management measures including vegetation management.</li> </ul>
<p><b>Part 4.3, item 6</b></p>	<p>Proposal that is likely to have a significant adverse impact on the heritage significance of a place or object registered under the Heritage Act 2004, unless—</p> <ul style="list-style-type: none"> <li>(a) the heritage council produces an environmental significance opinion</li> </ul>	<p>The EIS exemption application has identified that sites of European and Aboriginal heritage significance are located in the Project area.</p>

Item	Description	Project Component
	<p>that the proposal is not likely to have a significant adverse impact; or</p> <p>(b) the proposal is the demolition of a building that is affected residential premises, and the heritage council has approved a statement of heritage effect in relation to the proposal.</p>	
<p><b>Part 4.3, item 7</b></p>	<p>Proposal involving land included on the register of contaminated sites under the Environment Protection Act 1997 unless the authority produces an environmental significance opinion indicating that the proposal is not likely to have a significant adverse environmental impact.</p>	<p>The EIS exemption application notes that the Project area includes a number of blocks were listed on the EPA Register of Contaminated Sites including:</p> <ul style="list-style-type: none"> <li>a. Block 1606, Belconnen</li> <li>b. Block 1607, Belconnen</li> <li>c. Block 1469, Belconnen</li> <li>d. Block 1632, Belconnen</li> </ul>

## EIS exemption process

20. The flowchart below outlines the EIS exemption application process.

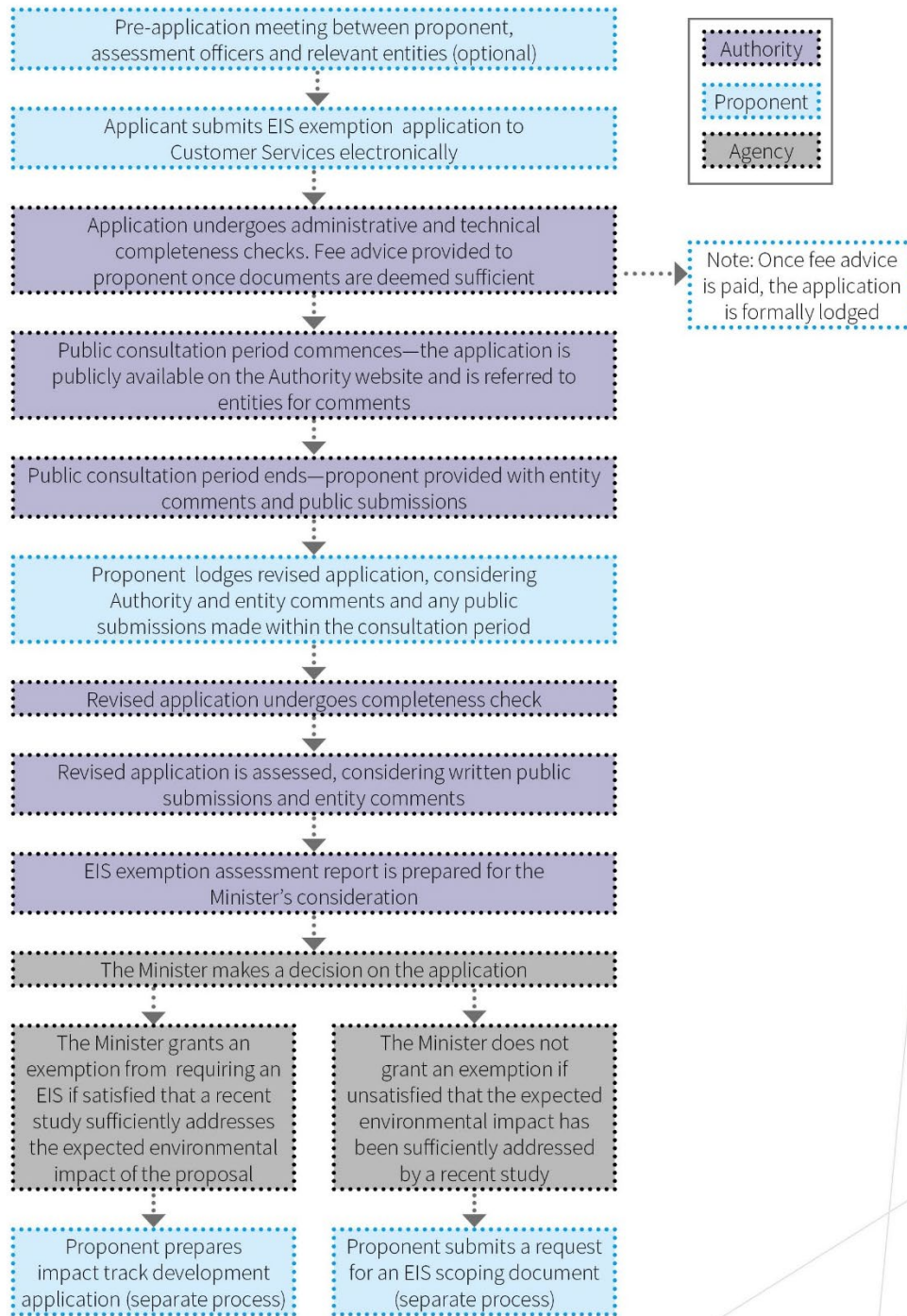


Figure 2 - The EIS exemption process

## **EIS exemption application**

21. On 9 March 2018 the application for an EIS exemption was lodged by the Proponent to the Authority, in accordance with section 211B of the PD Act. The application provided information required by the EIS exemption application - *Form 1M*. Please refer to Appendix 2 for a full list of all documents submitted as part of the EIS exemption application.

## **EIS exemption decision**

22. Section 211H of the PD Act states that the Minister may grant an EIS exemption for the proposal if satisfied that the expected environmental impact of the development proposal has already been sufficiently addressed by a recent study, whether or not the recent study relates to the particular development proposal.
23. In deciding whether the environmental impact of the development proposal has been sufficiently addressed by the recent study, the Minister must consider:
  - a. whether the recent study was conducted by an appropriately qualified person with relevant expertise and experience in relation to the environmental values of the land in the proposal;
  - b. if the recent study does not relate directly to the proposal—whether there is sufficient detail to allow an assessment of the environmental impacts likely to occur if the proposal proceeds;
  - c. whether the part of the recent study relevant to the proposal required public consultation through a statutory process or as part of a government policy development;
  - d. if the recent study is more than 18 months old—whether the Minister is satisfied that the information in the study is current; and
  - e. any submissions received during the consultation period for the EIS exemption application.
24. This report documents the information presented by the Proponent, information received during entity consultation and public notification to inform the Minister in making a decision.
25. For each impact track trigger an assessment of the supporting information will be made against the criteria above in the corresponding sub-sections under Section 4 of this report.

## **Consultation**

26. Entity and public consultation were both undertaken for this application, as required by the PD Act.

## **Entity referral**

27. Section 211E of the PD Act requires the Minister to consult with entities prescribed in the PD Regulation about the EIS exemption application. The Minister may also seek advice from additional entities.
28. Comments were received from referral entities during the consultation period, as noted below in Table 3.

Table 3 - Summary of entity comments

Referred entity	Entity response date
<b>ACT Health</b>	1 April 2018
<b>Conservator of Flora and Fauna</b>	11 April 2018
<b>Emergency Services Commissioner</b>	26 April 2018
<b>EvoEnergy</b>	5 April 2018
<b>Environment Protection Authority</b>	26 April 2018
<b>Heritage Council</b>	26 April 2018
<b>ICON Water</b>	9 April 2018
<b>Evoenergy Gas</b>	9 April 2018
<b>Transport Canberra and City Services</b>	3 May 2018
<b>National Capital Authority</b>	23 April 2018
<b>Yass Valley Council</b>	30 April 2018
<b>Commonwealth Department of Environment and Energy</b>	30 April 2018
<b>Deed Management</b>	14 May 2016
<b>Territory Plan Team</b>	10 May 2018
<b>Strategic Planning</b>	23 April 2018

29. Comments were received from fifteen entities during the consultation period. Entity comments are included in Appendix 1 of this report where they relate to an impact track trigger or potential impact. Any matters to be considered or conditions that have been recommended by a referral entity will be included in Section 6 of this report.

### **Public consultation**

30. The PD Act requires the Minister to consult with the public on the EIS exemption application for 15 working days. Public consultation for the Project was extended to 20 working days under section 211D (2) of the PD Act. The EIS exemption application was publicly notified from 30 March to 1 May 2018 in accordance with Section 211C of the PD Act.
31. Twenty three submissions were received during the public consultation period and were made available on the authority's website until the end of the consultation period as per section 211F of the PD Act.
32. The Proponent was provided with a copy of all public submissions and entity comments. On 23 August 2018 the applicant lodged a supplementary EIS exemption report addressing matters raised in entity comments and public submissions.

### *Issues raised in submissions*

33. The following key issues were raised in submissions during the public consultation period:

- a. the need for an EIS to be completed in order to assess the full impacts of the development;
- b. proximity of residential development to the existing West Belconnen landfill site, Green Waste facility, Parkwood Egg Farm and overhead power lines;
- c. further studies and research on the Scarlet Robin, Little Eagle and Rosenberg's Monitor;
- d. extent of development impacts on the unique river corridor and plateau area;
- e. adequacy of offsets provided for MNES, including GSM and NTG and PTWL;
- f. fire safety risks for future residential development due to the location of ingress and egress and proximity to forest areas;
- g. impacts on existing cultural values including significant sites of European and Aboriginal heritage;
- h. requirement for ongoing community consultation regarding ecological monitoring and ecological impacts of the development;
- i. impacts on the Murrumbidgee River Corridor, and potable water supply for the ACT;
- j. impacts on wildlife connectivity, animal habitat (including hollow bearing trees) and animal foraging areas;
- k. bushfire management in the WBCC;
- l. the role of the ACT legislative assembly to hold a public enquiry into the proposal;
- m. public consultation throughout the s.211 EIS exemption application process;
- n. reports submitted in support of the application and compliance with requirements of the PD Act;
- o. consistency with the ACT Planning Framework to undertake a s.211 EIS exemption application given the type of development proposed; and
- p. the role of the ACT Government as a joint partner in the residential development.

34. The applicant was required to address each matter raised in the public submissions received during the consultation period and provide a revised application to the Minister. Some of the issues are outside the scope of this EIS exemption application (for example, the role of the legislative assembly to hold a public inquiry). The issues relating to the Schedule 4 triggers s for the EIS exemption application are addressed in the following sections of the report.

### *The Revised EIS application*

35. On 23 August 2018 the applicant lodged a supplementary report to the EIS exemption application to respond to comments from the Authority, entities and public submissions. Along with a supplementary report, the application included additional recent studies to support the exemption from an EIS. Please refer to Appendix 2 for the full list of documents.

### *Additional public consultation*

36. Some of the supporting information for the Project has been publically exposed during TPV No. 351. The consultation was not directly related to this application, however it did

result in the information being publically available between 22 May 2015 and 6 July 2015. A consultation notice under section 63 of the PD Act was published on the ACT Legislation Register on 22 May 2015 and in the Canberra Times on 23 May 2015.

37. Sensitive heritage information in the supporting documentation was redacted for public notification as required by section 56 of the *Heritage Act 2004*. Only information pertaining to the location and details of heritage objects were removed from publicly available documents, with the full version lodged for assessment purposes. Some supporting studies involved consultation with representative Aboriginal organisations to determine the cultural values of the project site.
38. The Proponent did not undertake additional public consultation related to this EIS exemption application outside of the statutory notification conducted by the Authority.
39. However we note the Proponent has conducted a range of consultation and community engagement activities in relation to the Project that have been undertaken outside of the EIS exemption application process.

### 3. Matters of National Environmental Significance

40. Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on MNES without approval from the Commonwealth Minister for the Environment and Energy.

#### EPBC Act Strategic Assessment

41. Under section 146 of the EPBC Act, the Commonwealth Minister may agree to assess the impacts of actions under a policy, plan or program as a strategic assessment, this may include (but is not limited to):
  - a. regional-scale development plans and policies;
  - b. large-scale industrial development and associated infrastructure;
  - c. fire, vegetation/resource or pest management policies, plans or programs;
  - d. water extraction/use policies;
  - e. infrastructure plans and policies; or
  - f. industry sector policies.
42. Within this context a strategic assessment normally applies to multiple natured projects which may otherwise be assessed on a case-by-case basis under the EPBC Act.
43. Preliminary environmental investigations in West Belconnen identified several MNES. These included, but were not limited to:
  - a. PTWL (vulnerable);
  - b. BGW (critically endangered);
  - c. GSM (critically endangered);
  - d. NTG (critically endangered);
  - e. Superb Parrot (vulnerable); and
  - f. Swift Parrot (endangered).
44. Given the presence of these MNES, the impacts of development in West Belconnen were required to be assessed under the EPBC Act.
45. On 24 June 2014, an agreement was signed between Riverview Projects (ACT) Pty Ltd and the Commonwealth Government for the strategic assessment of West Belconnen under part 10 of the EPBC Act. This provided the potential to address cumulative impacts on MNES and to look for both conservation and planning outcomes on a much larger scale. Figure 3 illustrates the area of land covered by the strategic assessment.

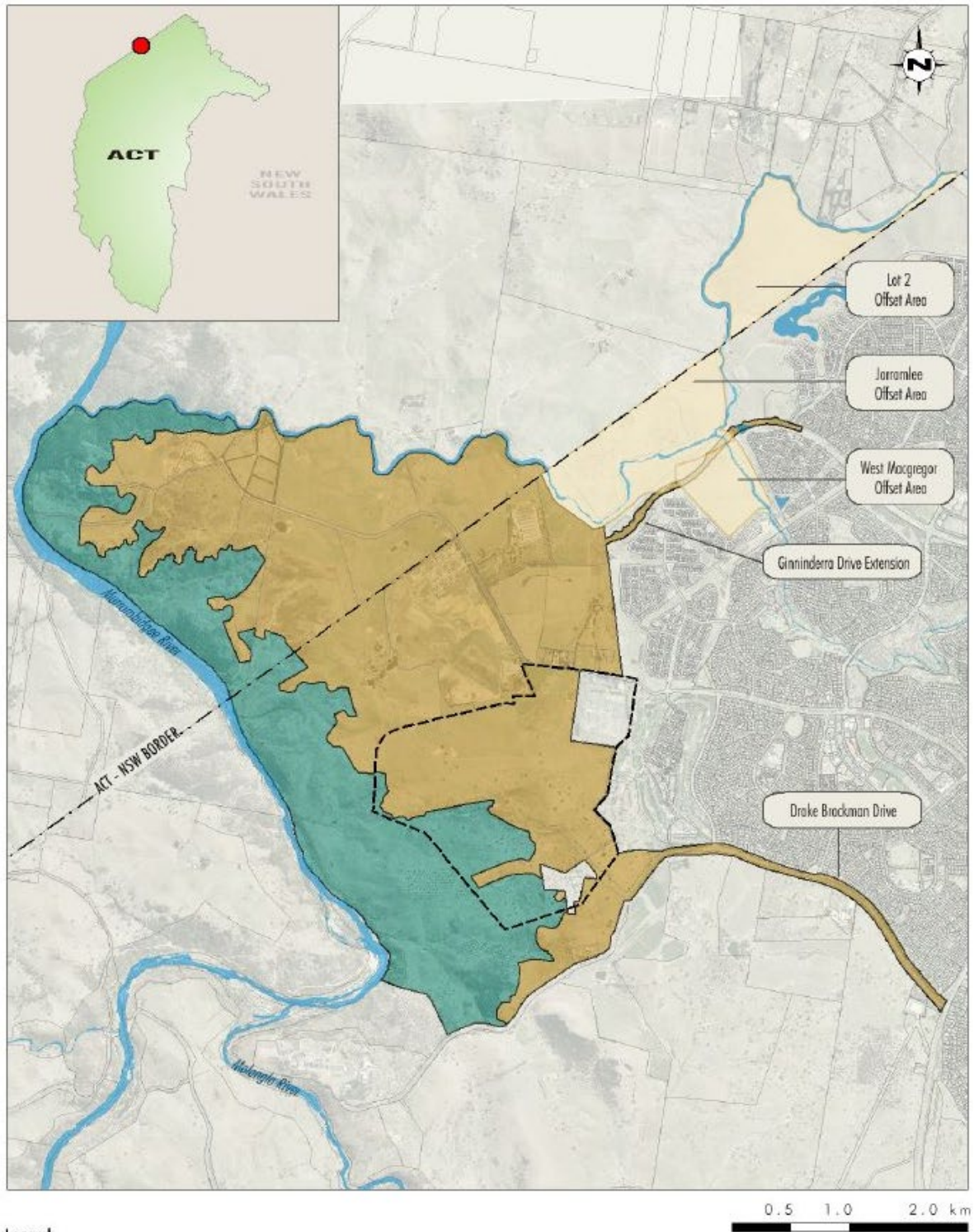


Figure 3 - West Belconnen Project Area

46. The West Belconnen Strategic Assessment Report (March 2017) was prepared to outline the activities required to complete urban development in West Belconnen and address the

impacts of the development by outlining commitments to a suite of avoidance, mitigation and offset measures..

47. On 18 July 2017, the Commonwealth Minister endorsed the Program Report for urban development and biodiversity conservation at West Belconnen. On 1 September 2017, the Commonwealth Minister approved actions associated with urban development in West Belconnen. This approval allows for urban development and biodiversity conservation at West Belconnen as identified in the Program Report to proceed without the need for further approval from the Commonwealth Minister.

#### 4. Impacts on Schedule 4 items

48. This section summarises the impacts of the development on the relevant items from Schedule 4 of the PD Act. Mitigation measures for each of the relevant items from Schedule 4 of the PD Act are provided in Section 6 of this report.

##### Schedule 4 Part 4.3 Item 1– Impacts on species or ecological communities

49. The Project is likely to impact on listed species and ecological communities identified under NC Act and the EPBC Act. The EIS exemption application identified 30 listed threatened species and two endangered ecological communities with the potential to occur within the Project area.

50. Potential impacts associated with the Project include disturbance of vegetation, temporary or permanent clearing of habitat; and an increase in edge effects associated with urban development.

51. The Project has the potential to impact on 12 listed threatened species and two ecological communities, these are discussed in Section 4.1.1 below. The EIS exemption application considers that while impacts may occur on habitat for the remaining 16 species, it is unlikely that the impacts will be significant. Furthermore, the Program Report notes that habitat for these species occurs in the WBCC, which will be conserved.

Table 4 - Ecological communities and threatened species (based on EIS exemption application and Program Report)

Endangered Ecological Community	NC Act Status	EPBC Act Status	Potential Impact
Yellow box/red gum grassy woodland	endangered	critically endangered	yes
Natural Temperate Grassland	endangered	critically endangered	yes
<b>Threatened species</b>			
<b>Flora</b>			
Small purple pea	endangered	endangered	potential
Tarengo leek orchid	endangered	endangered	potential
Ginninderra peppergrass	endangered	vulnerable	unlikely
Murrumbidgee Bossiaea	endangered	N/A	unlikely
<b>Invertebrates</b>			
Perunga grasshopper	vulnerable	N/A	unlikely

Golden Sun Moth	endangered	critically endangered	potential
<b>Fish</b>			
Macquarie perch	endangered	endangered	potential
Trout cod	endangered	endangered	potential
Silver perch	endangered	critically endangered	unlikely
Murray river crayfish	vulnerable	vulnerable	unlikely
Two spined blackfish	vulnerable	N/A	unlikely
<b>Reptiles</b>			
Pink-tailed worm lizard	vulnerable	vulnerable	potential
Striped legless lizard	vulnerable	vulnerable	unlikely
Grassland earless dragon	endangered	endangered	unlikely
<b>Frogs</b>			
Northern corroboree frog	endangered	critically endangered	No. habitat not present within project area.
<b>Birds</b>			
Regent honeyeater	endangered	critically endangered	potential
Brown treecreeper	vulnerable	vulnerable	unlikely
Hooded robin	vulnerable	vulnerable	unlikely
Little eagle	vulnerable	vulnerable	potential
Scarlet robin	vulnerable	vulnerable	potential
Varied sittella	vulnerable	vulnerable	unlikely
White-winged triller	vulnerable	N/A	unlikely
Glossy black cockatoo	vulnerable	vulnerable	No. habitat not present within project area.
Superb parrot	vulnerable	vulnerable	potential

Swift parrot	vulnerable	critically endangered	potential
Painted honeyeater	vulnerable	vulnerable	potential
<b>Mammals</b>			
Spotted tailed quoll	endangered	vulnerable	unlikely
Konoom, smoky mouse	endangered	endangered	No. habitat not present within project area.

## Impacts

### Endangered ecological communities

52. Two endangered ecological communities, BGW and NTG were identified in the Project area. Impacts on these ecological communities are discussed below.

### Yellow box/red gum grassy woodland (BGW)

53. The EIS exemption application notes that 71.8 ha of BGW occurs within the Project area. Due to previous impacts associated with agricultural and urban development, the condition of the BGW is identified as moderate to low quality.
54. The Project will result in the loss of 3.8 hectares BGW within the Drake Brockman Drive upgrade area. The Program Report notes that the BGW within the proposed road upgrade is considered to be poor quality, with a low diversity of native grasses and few native non-grass species.
55. Approximately 67.8 ha of moderate quality BGW will be retained as part of the WBCC. The EIS exemption application notes that indirect and cumulative impacts on the WBCC may occur as a result of increased public access and introduction of associated services and infrastructure. This may result in increased invasive species and other pollution.
56. The EIS exemption application states that the impacts will be avoided through detailed design during the planning stage, and through the implementation of CEMPs. The Program Report notes that impacts associated with the Project are not considered to be significant. Furthermore, management actions will be undertaken to improve the quality of BGW within the WBCC; the objective being to provide an overall net gain in BGW.

### Natural Temperate Grassland

57. Approximately 114.4 ha of NTG were recorded within the Project area. In addition, approximately 5 ha of NTG were identified in the Jaramlee and Macgregor offset area.
58. The Project will result in the loss of 3.1 ha of NTG. The EIS exemption application notes that indirect impacts will be managed through the implementation of CEMPs that will provide measures to minimise run-off, waste disposal and weed management.

### Threatened species

59. The Project has the potential to impact on 12 listed threatened species, as detailed in Table 4. Although, not discussed in the EIS exemption application report, the Rosenberg's Goanna was raised as a concern by entities and in public submissions. The details of potential impacts to threatened species (including the Rosenberg Goanna) are outlined below.

## Flora

60. No threatened flora were recorded within the Project area, however, the EIS exemption identified potential habitat for two threatened plant species (Small Purple Pea and Tarengo Leek Orchid) within the BGW patches. The Program Report notes that this habitat has been subjected to long term agricultural activities and is of low to moderate quality.
61. The Project has the potential to impact on threatened plant species through clearance of habitat, increase in sedimentation and erosion, changes to microclimates and hydrological conditions, fire regimes, and an increase edge effects including weed invasions and pollution, and, The EIS exemption provides a range of mitigation measures to minimise the impacts of the Project on threatened flora. In addition, moderate to high quality habitat for these species will be retained in the WBCC.

## Pink-Tailed Worm-Lizard

62. The EIS exemption notes habitat for the PTWL was established in studies by Wong and Osbourne (2008) and was assessed in the report prepared by SMEC (January 2018).
63. The EIS exemption application identified a total of 143.3 hectares of PTWL habitat in the Project area (Figure 4). The Project has the potential to directly remove approximately 9.5 ha of high quality PTWL habitat and 3.5 ha of low quality PTWL habitat. The areas affected by the Project occur in patches on the eastern edge of PTWL habitat. The Program Report considers the habitat patches to be small and isolated, therefore unlikely to be significant in maintaining the local population or contributing to the north-south habitat connectivity for the species.
64. Over 130 ha of PTWL habitat will be retained within the WBCC. The following potential indirect impacts on WBCC were identified in the Program Report: edge effects (weed invasion); changes to hydrological conditions; pollution; sedimentation and erosion; increased risk of predation, and disturbance to habitat from an increase in recreational activities. The EIS exemption application proposes a range of measures to avoid indirect impacts to PTWL habitat in the WBCC which are outlined in Appendix Four.

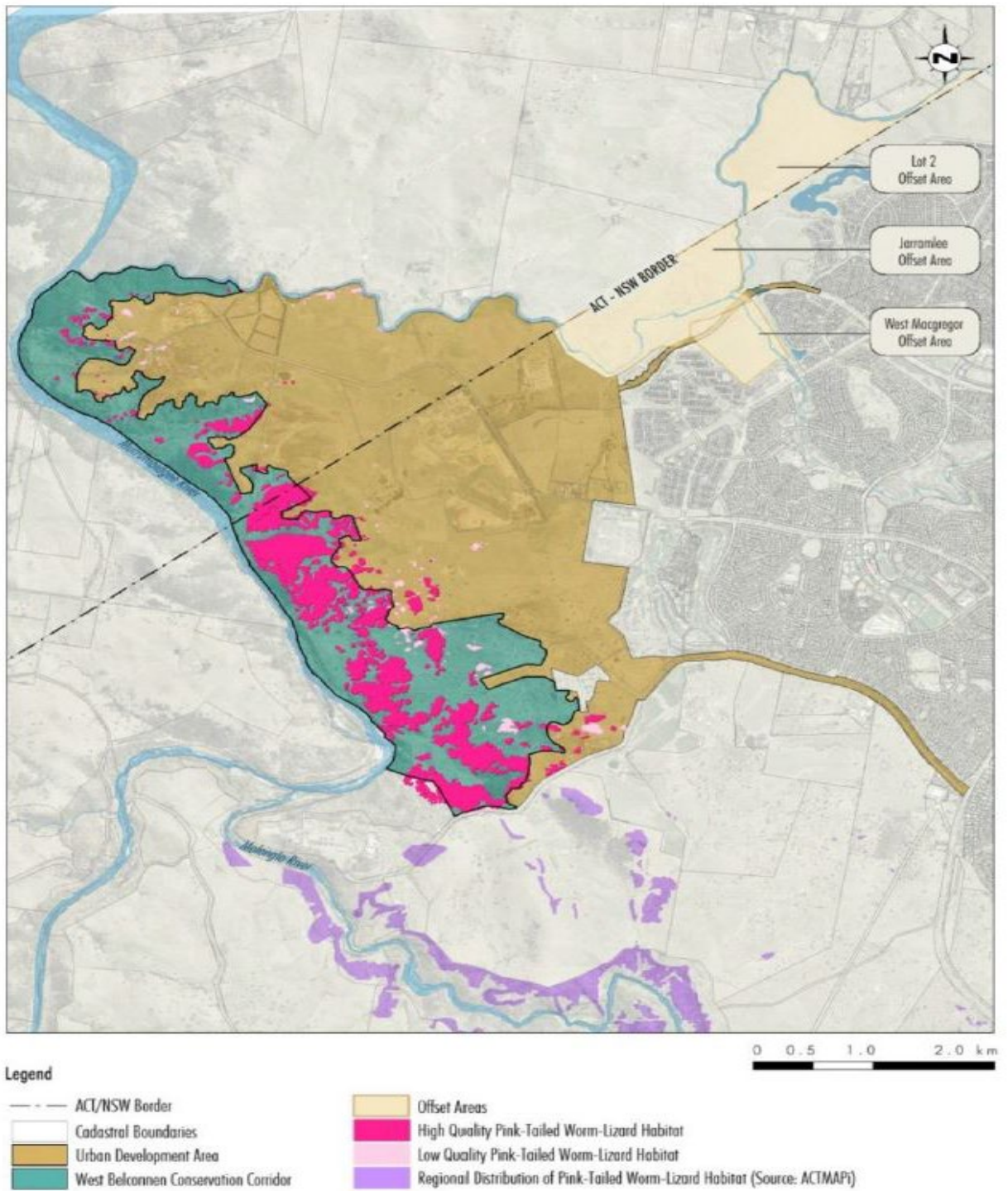


Figure 4 - Moderate to high and low pink tailed worm lizard habitat (extract from Umwelt report, May 2017)

## Golden Sun Moth

65. The EIS exemption identified that a total of 1.8 ha of GSM habitat is located in the Project area, as illustrated in Figure 5. The EIS exemption states that direct impacts on GSM habitat will occur as a result of the proposed Ginninderra Drive extension. The current preferred alignment (option 5 in the Umwelt Strategic Assessment Report, May 2017) would remove approximately 9 ha of GSM habitat. A further 0.96 ha may be impacted on due to overshadowing by the proposed bridge over Ginninderra Creek.

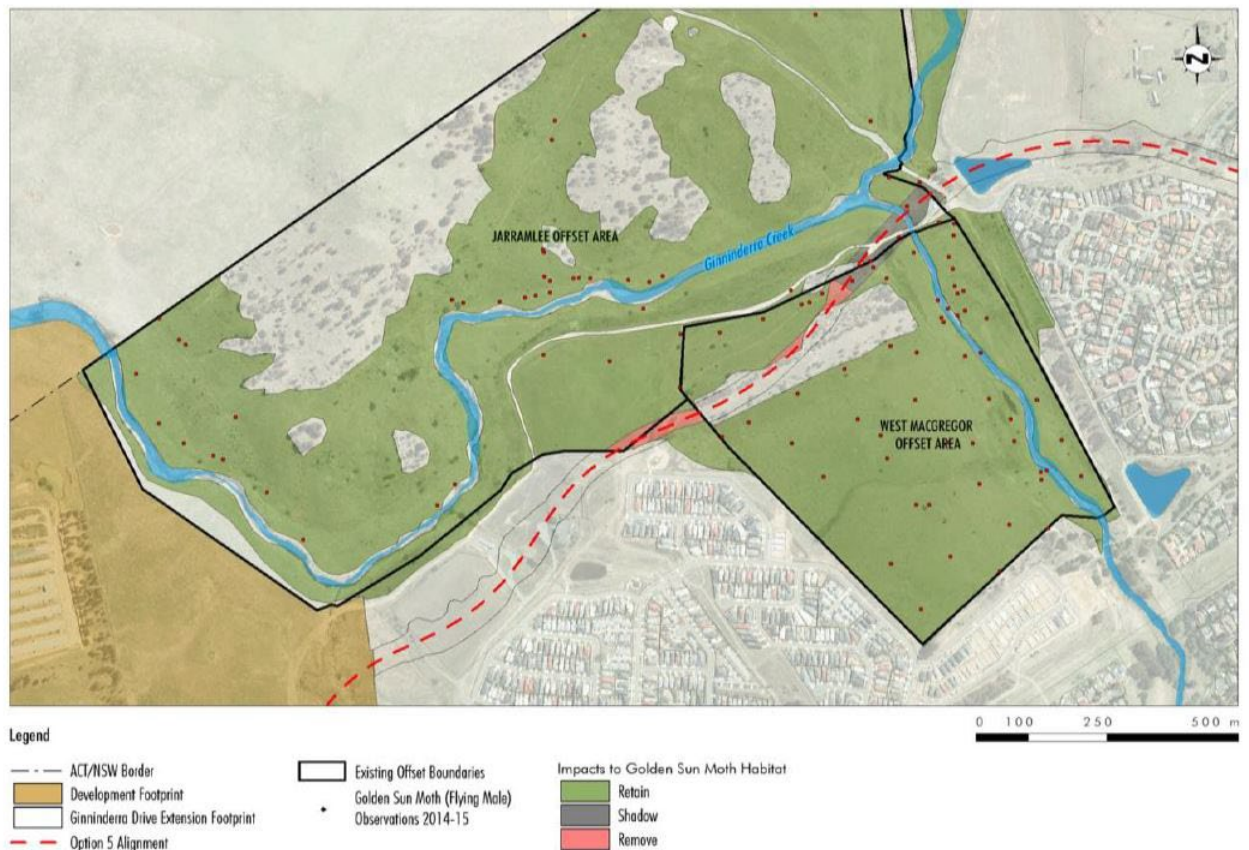


Figure 5 - Golden Sun Moth Habitat (extract from Umwelt report, May 2017)

66. It is noted the Ginninderra Drive extension is subject to future rezoning in NSW. The final alignment of Ginninderra Drive will be resolved within approximately 20 years. As such, the detailed design and environmental studies (as appropriate) will be provided subject to the requirements of the planning approval process and will inform any DA that is lodged for Ginninderra Drive.
67. The northern section of the proposed sewer alignment may impact directly on GSM habitat. The final sewer alignment will be resolved within approximately ten years. The final alignment will be determined at the detailed design phase of the Project, and environmental studies (as appropriate) will be provided to meet the requirements of the planning approval process. Notwithstanding, this sewer alignment will avoid impacts on GSM via:
- proposed tunnelling up to 20 m in depth to avoid surface and sub/surface enviros; and
  - location of man holes will be placed to avoid impacts to environmentally sensitive areas.

## Woodland Birds

68. The EIS exemption application identifies potential habitat for a number of threatened woodland species within the Project area. Habitat for the Swift Parrot, Superb Parrot, and Regent Honeyeater has been identified in the woodland and forest patches within the project area, including WBCC. Habitat for the Painted Honeyeater was identified in the Murrumbidgee River Corridor, and will not be impacted by this Project
69. The Program Report states that approximately 0.28 hectares of woodland and forest habitat including the loss of 28 trees (nine high and three moderate quality trees, and the remainder of poor or unknown quality) will be removed for the proposed sewer alignment; and 0.7 ha of potential habitat will be removed within the proposed Drake Brockman Drive upgrade area.
70. Mitigation measures including the development of management plans, in conjunction with the protection of woodland and forest habitat within the WBCC is likely to minimise the impacts on the woodland bird species.

## Fish

71. The Program Report notes that the Macquarie Perch has been recorded in the Murrumbidgee River, and the Trout Cod is considered likely to occur. Potential impacts associated with the proposal include:
  - a. damage to riparian vegetation;
  - b. increased public access (and its associated infrastructure) into the Murrumbidgee River and Ginninderra Creek for recreational purposes, including recreational angling;
  - c. altering flow regime; and
  - d. changes in water quality associated with increased run-off and sedimentation.
72. The EIS exemption application notes that potential impacts will be managed through the implementation of:
  - a. the WBCC Reserve Management Plan;
  - b. WSUD principles at design stage; and
  - c. CEMPs prior to construction commencing.
73. The Program Report concludes that, providing mitigation measures are implemented, impact on threatened fish species are unlikely to be significant.

## Little Eagle

74. The EIS exemption application notes the Little Eagle was recorded within the Project area, including a nest pair of Little Eagles recorded at the Strathnairn Art Association property. The EIS exemption application states that no impacts on the Little Eagle will occur as part of the Project as a 200m clearance zone around the Strathnairn nest and foraging area will be implemented, see Figure 6 below.



Figure 6 - Little Eagle Clearance Zone (extract from Territory Plan Variation No. 351)

### Scarlet Robin

75. The Scarlet Robin occurs within the Murrumbidgee River Corridor. The Program Report states that the species has been recorded in the grassland areas of the Project area. The Project will result in the loss of grassland habitat for the Scarlet Robin. The Program Report notes that due to the high proportion of exotic grasses, the habitat is unlikely to be important habitat for the Scarlet Robin. Furthermore, a range of woodland and native grassland habitat of higher quality will be protected within the WBCC. The Program Report notes that the urban development is unlikely to result in a significant adverse impact on this species.

### Rosenberg's Goanna

76. Rosenberg's Goanna is known to occur within the Project area, with habitat occurring in the woodland and forested areas along the Murrumbidgee River Corridor. This habitat will be retained within the WBCC. The Program Report notes the species may move across the exotic and native pasture grasslands within the Project area however, this is unlikely to be habitat for the species.

77. Potential impacts associated with the Project include an increase in predation or interference of habitat by feral animals, disturbance to habitat, and potential risk of road kill.

#### *Previous studies and investigation*

78. The Proponent has submitted six reports which address impacts on species and ecological communities in support of the EIS exemption application. The information submitted by the Proponent to support the application is listed and assessed for relevance against the requirements of section 211H of the PD Act in Appendix 2.
79. It is noted at the entity referral stage of the application the Conservator requested further information on the impacts of the proposed sewer tunnel alignment on the GSM. The information requested has been addressed through Condition 7 in Table 5 of this report.
80. In our view, the reports submitted adequately address the expected environmental impacts of the Project on species and ecological communities.

#### **Schedule 4 Part 4.3 Item 2- The clearing of more than 5.0 ha of native vegetation in a native vegetation area**

81. Native vegetation in the Project area includes NTG, BGW, forest and non-listed woodland.

#### *Impacts:*

82. The Project is expected to result in the clearing of 7.18 ha native vegetation. A summary of the impacts on each native vegetation species is provided below:
- a. a total of 3.8 hectares of poor quality BGW will be cleared as part of the Drake Brockman Drive upgrade, as recognised in the Program Report;
  - b. a total of 3.1 hectares of NTG will be cleared. The Ginninderry Natural Temperate Grassland Assessment Summary (SMEC 2018), identifies that these areas of NTG are associated with moderate and high quality patches of PTWL located in the urban development; and
  - c. a total of 0.28 hectares of forest and woodland (not BGW) in the WBCC resulting from drilling for the future sewer installation, as recognised in the Program Report.
83. The EIS exemption application identifies the following potential impacts arising from clearing of native vegetation:
- a. future infrastructure provision and maintenance activities;
  - b. edge effects such as weed invasion, increased recreational activities and urban development;
  - c. changes to hydrological conditions;
  - d. pollution; and
  - e. sedimentation and erosion.
84. Some impacts related to native vegetation clearing are covered in other sections of this report, for example, where native vegetation removal relates to habitat removal for protected species. The impacts and any mitigation measures are considered in Section 6 of this report.

### *Previous Studies and Investigations*

85. The Proponent submitted five studies which addressed the impacts relating to clearing of native vegetation in support of the EIS exemption application. The information submitted by the Proponent to support the application is listed and assessed for relevance against the requirements of section 211H of the PD Act in Appendix 2.
86. In our view, the reports submitted adequately address the expected environmental impacts of the Project on clearing of native vegetation.

### **Schedule 4 Part 4.3 Item 3 – Proposal for development in a reserve**

87. The Project area includes land located in a public nature reserve, including:
  - a. a total of 360 ha in the WBCC; and
  - b. a total of 11 ha in the riparian zone portion of Block 1621 Belconnen; and
88. The EIS exemption application states that works in the WBCC will relate to recreation, infrastructure, bushfire management and maintenance. It is noted the detailed design of these works will be resolved throughout the lifetime of the Project and will be subject to the required development application process.

### *Impacts*

89. The identified impacts relating to undertaking works in the nature reserve include:
  - a. potential impacts to MNES and their habitat areas;
  - b. edge effects on urban areas;
  - c. potential impacts from human pressure due to recreational uses; and
  - d. potential impacts from construction of walking tracks and access routes.

### *Previous Studies and Investigations*

90. The Proponent has submitted two reports in support of the impacts relating to development in a nature reserve in support of the EIS exemption application. The information submitted by the Proponent to support the application is listed and assessed for relevance against the requirements of section 211H of the PD Act in Appendix 2.
91. In our view, the reports submitted adequately address the expected environmental impacts of the Project within a public nature reserve.

## Schedule 4 Part 4.3 Item 6 – Heritage

92. The Project area contains sites listed on the ACT Heritage Register. The EIS exemption application was accompanied by studies on sites of European and Aboriginal heritage significance. Please refer to Appendix 2 for further details on these studies.

### *Impacts*

#### *Sites of European heritage significance*

93. The EIS exemption application states that no European heritage sites will be impacted on as part of the Project. The EIS exemption application proposes to retain the Belconnen Farm Precinct and manage the site with a CEMP.

#### *Sites of Aboriginal heritage significance*

94. Sites of Aboriginal heritage significance have been addressed in the studies prepared by Waters Consultancy (May 2017). This report identifies that Place 2: Corroboree Ground is located within the Project area.
95. The EIS exemption application states that there will not be any impact on existing Aboriginal heritage sites identified in the Waters Consultancy Report. The EIS exemption application proposes to undertake a Cultural Values Management Plan and implement its recommendations prior to works occurring within 100 metres of a place of cultural values.
96. The EIS exemption application identifies that impacts to unexpected finds will be managed through a range of mitigation measures which are outlined in Section 6 of this report.
97. The EIS exemption identifies that infrastructure within the Project area (the sewer tunnel and extension to Ginninderra Drive) will be finalised in approximately 20 years. The EIS exemption states that a Statement of Heritage Effects and detailed heritage studies will be provided to the ACT Heritage Council at the detailed design phase of infrastructure development. Please refer to Section 6 of this report for further discussion on the mitigation measures for potential impacts to sites of Aboriginal Heritage significance.
98. Conditions are proposed to ensure impacts on heritage places or objects are minimised. The conditions attached to this EIS exemption will be applied through conditions of approval for any subsequent development application.

#### *Previous studies and investigation*

99. The Proponent has submitted four studies which address impacts on heritage impacts in support of the EIS exemption application. The information submitted by the Proponent to support the application is listed and assessed for relevance against the requirements of section 211H of the PD Act in Appendix 2.
100. It is noted at the entity referral stage the ACT Heritage Council advised that Aboriginal heritage values had only been partially established and requested further information on the impacts on Aboriginal heritage values resulting from works in the WBCC, construction of the sewer tunnel, and the Ginninderra Drive extension
101. This request for information has been addressed through Condition 12 in Table 5 of this report.
102. In our view, the reports submitted adequately address the expected environmental impacts of the Project on relevant heritage values.

#### Schedule 4 Part 4.3 Item 7 – Contaminated lands

103. The EIS exemption application notes that an extensive assessment has been completed in regards to the contamination risk in the project site. At the time of lodgement, the assessment had identified blocks on the register of contaminated sites under the *Environment Protection Act 1997* including:
- a. Block 1606 Belconnen
  - b. Block 1607 Belconnen
  - c. Block 1469 Belconnen
  - d. Block 1632 Belconnen
104. It is noted that Block 1633 Belconnen is not included in the s.211 assessment area and was included in the Ginninderry Stage 1 EDP.
105. The West Belconnen Landfill site (Block 1586 Belconnen) is located in the project area and is currently managed by ACT NoWaste. This site is not currently located on the register of contaminated sites under the *Environment Protection Act 1997*. In accordance with the requirements of the Territory Plan (West Belconnen Structure Plan) any changes to existing land uses within the Belconnen Landfill site will be determined through a master plan for the site, subject to an appropriate audit process and approval of the EPA.

#### *Previous studies and investigation*

106. The Proponent has submitted two studies in support of the assessment of contaminated sites EIS exemption application. The information submitted by the Proponent to support the application is listed and assessed for relevance against the requirements of section 211H of the PD Act in Appendix 2.
107. The Proponent has also provided two site audit statements from an auditor, accredited and approved by the EPA as detailed below:
- a. The auditor's notification of commencement of blocks 1469, 1606, 1607, 1632 and 1633 (September 2017). The site auditors notification of commencement provided details of the remedial works to be undertaken and concluded the remedial strategy is appropriate for implementation, subject to satisfactory completion of relevant plans, obtaining of relevant permits and subsequent verification reporting.
  - a. The auditor's notification of commencement of audit, Block 1632 Belconnen - Strathnairn Sheep Dip (August 2017). The auditor's notification of commencement provided details of the remedial works to be undertaken and concluded the Douglas Remediation Strategy report is consistent with relevant EPA guidelines for environmental assessment and the remedial strategy is appropriate for the degree and extent of potential contamination that has been identified by the consultant.
108. In our view, the reports submitted adequately address the expected environmental impacts of the Project on contaminated lands.

## 5. Other potential environmental impacts

109. This section identifies other potential impacts of the development on the environment other than those impacts which are impact track triggers discussed in Section 4.
110. The EIS exemption application provided a response regarding other potential impacts of the development, identified by the Authority and referral entities. These matters included:
- a. traffic;
  - b. visual Impacts;
  - c. soils and geology;
  - d. water quality, ground water and water features;
  - e. noise, light spill and vibrations;
  - f. socio-economic and human health impacts;
  - g. climate change;
  - h. risks and hazards, including bushfire risks; and
  - i. waste and materials, including disposal and management of construction waste.
111. The EIS exemption application stated that a range of studies relating to the abovementioned items were already completed as part of TPV No. 351. In our view these matters are not Schedule 4 Triggers. Although not legally required in this process, the documents provide a useful background about the impacts, which may assist in subsequent DA processes.

### Jaramlee and West Macgregor offset areas

112. The West Macgregor and Jaramlee offsets were established following Commonwealth approval under Part 9 of the EPBC Act for development at West Macgregor (EPBC 2010/5520) and Lawson South (EPBC 2010/5549) respectively. The preferred alignment for the Ginninderra Drive extension (option 5) will impact upon 0.85 ha of GSM habitat in the offsets areas. The EIS exemption application notes that an additional 86.8 ha site (lot 2 Wallaroo Road NSW) is proposed to compensate for the impacts on Jaramlee and West Macgregor.
113. A range of offsets were proposed in the Program Report. The offset package was developed in reference to the EPBC Act Environmental Impacts Policy. No further offsets are proposed for the Project.
114. The EIS exemption application provides mitigation measures to minimise the impacts of the Project. These are outlined in Section 6 of this report.

## Green waste clearance zone

115. The EIS exemption application proposes to relocate composting activities, and leave the existing green waste shedding and sales activities at the existing West Belconnen Resource Management Centre. The EIS exemption application notes the composting activities will be relocated via a Technical Amendment to the Territory Plan (TPV 2018-08). On 14 May 2018 public notification of TPV 2018-08 closed. TPV 2018-08 is subject to approval from an auditor and relevant agencies.

## Sewer tunnel

116. The EIS exemption application notes the proposed sewer tunnel was identified as future infrastructure servicing TPV No. 351, which proposed two sections of deep sewer tunnelling to mitigate against potential impacts on environmentally sensitive land.

117. The EIS exemption application notes construction of the future sewer tunnel is not required for approximately ten years. As such, the final alignment of the northern section of the sewer tunnel, and relevant mitigation measures, will be determined during the detailed design stage of development.

118. The EIS exemption application states that future development of the sewer tunnel will be accompanied by a detailed servicing plan, updated environmental studies (as appropriate) and subject to the requirements of a formal development application process.

119. Conditions in Table 5 of this Report have been provided to ensure that impacts are assessed and the required information is provided for future DA's that relate to the sewer tunnel.

## Murrumbidgee River

120. The Project area is located within the catchments of Murrumbidgee River and Ginninderra Creek. These catchments provide habitat for a range of flora and fauna, and are considered an important movement corridor for reptiles, mammals and birds. The Program Report notes that both catchments, in particularly upstream of Ginninderra Falls, have been heavily modified by grazing, clearing and urban development. The Project has the potential to result in the following indirect impacts to the catchments:

- a. damage to riparian vegetation;
- b. increased public access (and its associated infrastructure) into the Murrumbidgee River and Ginninderra Creek for recreational purposes (including recreational angling);
- c. changes in hydrology; and
- d. changes in water quality associated with increased in run-off, sedimentation and pollution.

## Existing businesses and infrastructure

121. The EIS exemption application notes clearance zones for the West Belconnen Precinct Code were established as part of TPV No. 351. The EIS exemption application identifies the following protection to adjoining land uses as follows:

- e. A 2.45 km clearance zone from the Lower Molonglo Water Quality Control Centre which permits compatible development with the treatment plant and excludes new residential, community or other sensitive uses.

- f. A 750 m clearance zone from Parkwood Eggs which prohibits any new residential, community or other sensitive uses within the clearance zone.
- g. An 800 m clearance zone from Parkwood Eggs that prohibits any new ponds, wetland and the like, within 800 m of buildings housing poultry without the endorsement of the EPA.
- h. A 500 m clearance zone from the Belconnen Landfill site that prohibits any new residential, community or other sensitive uses within the clearance zone.
- i. A 1000 m clearance zone from the existing Green Waste facility at Belconnen that prohibits any new residential, community or other sensitive uses within the clearance zone.

122. It is noted that the size of the abovementioned clearance zones may only be adjusted subject to an appropriate independent audit process and approval from relevant agencies.

## **6. Mitigation measures**

123. The supplementary EIS exemption application provided a table of mitigation measures that addressed the impacts of the Project against the Schedule 4 triggers and other potential environmental matters. Please refer to Appendix 4 for a summary of the potential impacts and proposed mitigation measures provided by the Proponent in support of the EIS exemption application.

## **7. EIS exemption conditions**

124. The following conditions are recommended to be imposed to ensure impacts on the matters identified in Section 4 and Section 5 of this report are appropriately addressed and managed through to any future DA stage. If a conditional EIS exemption is in force for a DA, section 128 (1) (b) (iv) of the PD Act requires the approval of the development proposal to be consistent with the EIS exemption conditions.

125. Table 5 details the conditions that are proposed to be set if an EIS exemption is granted. These conditions should be taken into account by the Authority when assessing a DA for the proposal.

126. It is noted the Project will be undertaken in a number of stages over the 40 year timeframe. As each stage of the Project progresses the Authority will consider which conditions will be applied (and to what extent) to future DAs.

Table 5 - Conditions for development approval

No	Condition	Endorsement/ approval	Development stage	Condition of approval
1	Program Report	EPSDD	All stages of planning and development	All works must be in accordance with the Urban Development Program Report, prepared by AT Adams Consulting (18 April, 2017).
2	Construction Environment Management Plans (CEMP)	EPSDD	Prior to the commencement of works	<p>A CEMP must be developed and implemented addressing the commitments made by the proponent in the EIS exemption application.</p> <p>CEMPs should be prepared in accordance with the requirements of Condition 10 of the EPBC approval for the West Belconnen Strategic Assessment area (as described in the endorsed Program Report) and the EIS exemption application.</p>
3	WBCC Reserve Management Plan	ACT Minister for the Environment	Prior to the commencement of construction	Prepare the WBCC Reserve Management Plan in accordance with the requirements set out in Condition 8 of the Commonwealth approval for the endorsed Program Report.
4	Offset Management Plans	ACT Minister for the Environment	Prior to the commencement of construction	Prepare the Offset Management Plan in accordance with the in accordance with the requirements set out in Condition 9 of the Commonwealth approval for the endorsed Program Report.

No	Condition	Endorsement/ approval	Development stage	Condition of approval
5	Bushfire Mitigation	ESA	Prior to lodgement of any future development application	<p>The Bushfire Inner Asset Protection Zone (APZ) must be located in any buffer provided within the Urban Development Area to the WBCC.</p> <p>All works must be consistent with the ACT Strategic Bushfire Management Plan 2014- 2019, or its successor.</p>
6	All works	EPSDD	Prior to planning and commencement of works	All works in the Project area must be consistent with the mitigation measures provided in the EIS exemption application.
7	Impacts on Golden Sun Moth	Conservator of Flora and Fauna	Prior to lodgement of any future development applications	Studies will need to be prepared that demonstrate the impacts on Golden Sun Moth resulting from construction of the future sewer tunnel.
8	Contamination Management	Environmental Protection Authority	Prior to construction	<p>The Project area must be assessed and remediated, as required, by a suitably qualified environmental consultant specialising in contaminated land assessment in accordance with the EPA Contaminated Sites Environment Protection Policy 2017, or successor policy, and EPA endorsed guidelines.</p> <p>The adequacy of the assessment and/or remediation works must be independently audited by an ACT EPA approved environmental auditor.</p> <p>The Auditor must notify the EPA of their engagement within 7 working days of receiving a request to carry out the audit.</p>

No	Condition	Endorsement/ approval	Development stage	Condition of approval
				<p>The findings of the independent audit into the site's suitability for its proposed and permitted uses (under the ACT Territory Plan or appropriate auditor interim advice where acceptable to the EPA ) must be reviewed and endorsed by the EPA prior to the commencement of development works within the EDP area and prior to the site being used for other purposes.</p> <p>No soil is to be placed, reused or disposed elsewhere within the greater 'West Belconnen' development area (outside of the area covered by the EDP) or reused or disposed off-site without EPA approval.</p>
9	Sites of Environmental Concern	Health Protection Service	Prior to commencement of works	<p>Further investigations into sites of environmental concern are required for the following sites:</p> <ul style="list-style-type: none"> <li>a. Current Foundry in Block 1632;</li> <li>b. Excavated spoil in Block 1540 and Block 1632, and spoil materials identified on road reserves;</li> <li>c. Storage yard in Block 1540 with construction and building materials;</li> <li>d. Fertilisers and pesticides use in nursery and landscape premises, and application on agricultural paddocks;</li> <li>e. Chemical storage within art precinct including flammable materials, former veterinary hospital/ pet centres and odour control units, and the usage of old oil drums in horse training paddocks;</li> <li>f. Potential hazardous materials found in aged buildings across the study area; and</li> <li>g. Potential off-site migration and contaminated run-off from the nearby West Belconnen Resource Management Centre.</li> </ul>

No	Condition	Endorsement/ approval	Development stage	Condition of approval
10	Rainwater	Health Protection Service	During construction	Rainwater tanks provided to each residential property must comply with the Rainwater Tanks Guidelines 2010 and the taps and outlets utilising rainwater are clearly labelled as being provided with non-potable water.
11	Water quality control	Health Protection Service	During operation	<p>The design and construction of the water quality pond must minimise the potential for the water quality pond to become a mosquito nuisance.</p> <p>The applicant must contact HPS if the septic tank located at the Farmhouse is to be modified or decommissioned.</p>
12	Aboriginal sites of heritage significance	ACT Heritage Council	Prior to lodgement of future development applications	<p>Prior to lodgement of any future development applications the following information must be provided to the ACT Heritage Council:</p> <ol style="list-style-type: none"> <li>a. a Cultural Heritage Assessment (CHA) of the proposed WBCC sewer tunnel;</li> <li>b. a CHA of the proposed Ginninderra Drive extension;</li> <li>c. a CHA of any currently planned tourist, recreation and bushfire management infrastructure within the WBCC, such as the Stage 1 tracks and trails project;</li> <li>d. all required CHA's must be prepared in accordance with Heritage Act 2004 provisions, the Council's 2015 Cultural Heritage Reporting Policy, or successor policy, and in consultation with representative Aboriginal organisations; and</li> <li>e. where a CHA considers the management of cultural places identified in the Waters Consultancy (2017) report, consultation is</li> </ol>

No	Condition	Endorsement/ approval	Development stage	Condition of approval
				also required with the cultural knowledge holders as identified in that report.
13	DA documentation	EPSDD	All stages of planning and development	As part of any subsequent development applications relying on this EIS exemption application, information must be provided detailing how the recommended mitigation measures and conditions in this report have been met.

## 8. Conclusion

127. It is the Authority's assessment that the Proponent 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 Project.
128. The EIS exemption application and referral entities have proposed a range of mitigation measures and conditions to reduce or avoid potential environmental impacts arising from the Project. It is considered that any potential adverse impacts can be adequately addressed by implementing the conditions outlined in this Report.
129. It is noted that two referral entities, the ACT Heritage Council and the Conservator of Flora and Fauna, requested further information to be provided as part of the EIS exemption application.
130. It is considered that this information can be provided before any future development applications are lodged, due to the long timeframe and staged nature of the Project.
131. Conditions in Table 5 of this Report include requirements on subsequent DA's to ensure the required information is provided and ecological and heritage impacts are appropriately addressed and managed throughout the Project.
132. The Authority's recommendation is that the supporting information submitted with the EIS exemption application for this Project has adequately identified, and considered matters of potentially significant impact and that further environmental assessment is not required, unless stated in the relevant conditions in Table 5, as the expected environmental impact of the Project has already been sufficiently addressed.
133. The Authority's recommendation is that the Minister grants an EIS exemption for this Project under section 211H of the PD Act.

## 9. Appendix 1 – Entity Comments

Referred entity	Entity response
<p><b>ACT Health</b></p>	<p>The HPS supports the s.211 EIS exemption application for the Ginninderry Stage 2 residential estate subject to the applicant following the recommendations;</p> <p>The HPS supports the recommendations contained in the Sydney Environmental &amp; Soil Laboratory (SESL) Environmental Site Assessment (ESA) and Site Suitability Recommendation (SSR) dated January 2018 that further investigations are required in relation to the following areas identified as being of environmental concern:</p> <ul style="list-style-type: none"> <li>• Current Foundry in Block 1/632</li> <li>• Excavated spoil in Block 154/0 and Block 1632, and spoil materials identified on road reserves</li> <li>• Storage yard in Block 1540 with construction and building materials</li> <li>• Fertilisers and pesticides use in nursery and landscape premises, and application on agricultural paddocks</li> <li>• Chemical storage within art precinct including flammable materials , former veterinary hospital/ pet centres and odour control units, and the usage of old oil drums in horse training paddocks</li> <li>• Potential hazardous materials found in aged buildings across the study area</li> <li>• Potential off-site migration and contaminated run-off from the nearby West Belconnen Resource Management Centre</li> </ul> <p>The HPS also supports the recommendations in the SESL, ESA and SSR that further investigation work be implemented, subject to approval by the Site Auditor and EPA, prior to commencement of development work.</p> <p>The HPS advises the applicant that rain water tanks provided to each residential property must comply with the Rainwater Tanks Guidelines 2010 and the taps and outlets utilising rainwater are clearly labelled as being provided with non-potable water.</p> <p>The development proposes a water quality pond. The HPS advises the applicant that the design and construction of the water quality pond must minimise the potential for the pond to become a mosquito nuisance.</p> <p>The HPS notes a septic tank system is located within the area of the Farm house. The HPS advises the applicant must contact HPS if the septic tank is to be modified or decommissioned.</p>

Referred entity	Entity response
<b>Conservator of Flora and Fauna</b>	<p>The Strategic Assessment comprehensively considered and documented the distribution and relative significance of the proposed development area for all Commonwealth and ACT listed threatened species and ecological communities and other species of conservation concern within the ACT.</p> <p>It is noted that the s.211 application may have under estimated the impact on Golden Sun Moth as the report does not address impacts caused by the construction of the future Ginninderry Sewer Tunnel as shown on Plan 11.9 (Sewer Master Plan Sheet) Ginninderry Stage 2 Estate Development Plan - February 2018.</p>
<b>Emergency Services Commissioner</b>	<p>The ACT Fire and Rescue has reviewed the "Ginninderry Planning report for section 211 exemptions" and has no special considerations or objection at this time.</p> <p>ACTF&amp;R will conduct a thorough review of the Development Application (DA) for Ginninderry Stage 2 when submitted by the proponent.</p> <p>At the DA stage, ACTF&amp;R will review compliance with hydrant provisions, ACTF&amp;R vehicle access, bushfire protection measures, compliance with the Strategic Bushfire Management Plan and any other matter relevant for emergency services.</p>
<b>EvoEnergy</b>	<p>No objection.</p>
<b>Environment Protection Authority</b>	<p>The EPA requested further information on</p> <ul style="list-style-type: none"> <li>• The Murrumbidgee River for the development including mitigation measures and details of any ongoing management plans; and</li> <li>• Existing businesses and infrastructure in the area such as the Lower Molonglo Water Quality Control Centre, the egg production facility on Block 1329 Belconnen and the waste facilities on Block 1586 Belconnen.</li> </ul> <p>The following contamination assessment and management provisions will be required to be appropriately dealt with in future planning instruments such as estate development plans for each stage of development.</p> <ul style="list-style-type: none"> <li>• The area subject to development under the EDP (the site) must be assessed and remediated, as required, by a suitably qualified environmental consultant specialising in contaminated land assessment in accordance with the EPA Contaminated Sites Environment Protection Policy 2017 and EPA endorsed guidelines.</li> <li>• The adequacy of the assessment/remediation works must be independently audited by an ACT Environment Protection Authority (EPA) approved environmental auditor.</li> <li>• The Auditor must notify the EPA of his/her engagement within 7 working days of receiving a request to carry out the audit.</li> </ul> <p>The findings of the independent audit into the site's suitability for its proposed and permitted uses under the ACT Territory Plan or appropriate auditor interim advice where acceptable to the EPA must be reviewed and endorsed by the EPA prior to the commencement of development works within the EDP area.</p>

Referred entity	Entity response
	<p>The findings of the independent audit into the site's suitability for its proposed and permitted uses under the ACT Territory Plan must be reviewed and endorsed by the EPA prior to the site being used for other purposes.</p> <p>No soil is to be placed, reused or disposed elsewhere within the greater 'West Belconnen' development area (outside of the area covered by the EDP) or reused or disposed off-site without EPA approval.</p>
<p><b>Heritage Council</b></p>	<p>Following review of the Section 211 EIS exemption application for the Ginninderry Stage 2 urban development, the Council provides the following advice: The Aboriginal heritage values of the application area have been partially established through heritage assessments (Biosis 2015 and Waters Consultancy 2017); however, the following aspects of the application have not been subject to heritage assessment:</p> <p>The sewer tunnel proposed within the WBCC has not been subject to heritage assessment, and this proposed infrastructure would directly impact an Aboriginal corroboree ground identified in Waters Consultancy (2017) and an associated archaeological site of heritage significance and high conservation value (recorded as MW5). On available information, the Council considers that this infrastructure would have a significance adverse impact on Aboriginal heritage, and in accordance with <i>Heritage Act 2004</i> provisions, requires that heritage effects be assessed and that reasonably practicable alternatives to heritage impacts be explored;</p> <p>The extension of Ginninderra Drive has not been subject to heritage assessment, and the potential heritage effects of this proposed infrastructure have not been established;</p> <p>The establishment of tourist and recreation facilities, and any bushfire management infrastructure, within the WBCC has not been subject to heritage assessment, and the potential heritage effects of this proposed infrastructure have not been established; and</p> <p>The application refers throughout to no Aboriginal places within the WBCC being impacted by proposed development. However, the Council understands that the proposed sewer tunnel and planned Stage 1 tracks and trails infrastructure will directly impact Aboriginal places and objects; and anticipates that future assessments may identify other heritage impacts resulting from WBCC infrastructure.</p> <p>In this context, the Council advises that the impact of proposed development on Aboriginal heritage has not been adequately assessed, and that the Council does not support the Section 211 EIS exemption application in its current form.</p> <p>The following further information is requested to demonstrate that the Aboriginal heritage values of place and the likely Aboriginal heritage impacts of the project have been adequately assessed:</p> <ul style="list-style-type: none"> <li>• A CHA of the proposed WBCC sewer tunnel;</li> </ul>

Referred entity	Entity response
	<ul style="list-style-type: none"> <li>• A CHA of the proposed Ginninderra Drive extension; and</li> <li>• A CHA of any currently planned tourist, recreation and bushfire management infrastructure within the WBCC, such as the Stage 1 tracks and trails project.</li> <li>• All required CHAs must be prepared in accordance with Heritage Act 2004 provisions, the Council’s 2015 Cultural Heritage Reporting Policy and in consultation with representative Aboriginal organisations. Where a CHA considers the management of cultural places identified in the Waters Consultancy (2017) report, consultation is also required with the cultural knowledge holders as identified in that report.</li> </ul> <p>The Council also requires the following amendments be made to the Section 211 EIS exemption application, to accurately identify Aboriginal heritage values of place, likely heritage impacts and the management of those impacts:</p> <ul style="list-style-type: none"> <li>• Identification of the Aboriginal heritage values of the Stage 2 area, in a manner that does not make culturally sensitive information or information declared as restricted under Part 8 of the Heritage Act 2004 publically available. For example, the application should identify the number of recorded Aboriginal places and objects within the application area, and summarise the public version of the Waters Consultancy (2017) report.</li> <li>• Description of the Aboriginal heritage impacts expected to result from proposed development, including urban development and works proposed within the WBCC;</li> <li>• Description of the planned management of the above Aboriginal heritage impacts, spanning both conservation and impact mitigation; and identify the further investigation and salvage actions that would require Heritage Act 2004 approvals; and</li> <li>• Amendment of statements throughout that no Aboriginal places within the WBCC would be impacted by proposed development.</li> </ul> <p>The Council understands that future infrastructure areas within the WBCC may be identified over the course of the project, and CHAs will also be required for those future works at the time of planning. Further heritage assessment may also be required by the Council for future urban development areas in addition to the Bosis (2015) CHA; reflecting the conditional endorsement of that report by the Council on 28 July 2015 – which required Riverview Projects to consult with the Council prior to each future stage of estate development to identify any additional heritage assessment or management requirements for those stages.</p> <p>Through the continued Aboriginal heritage assessment and management process, Aboriginal places of heritage and cultural significance and high conservation value may be identified; the appropriate management of which would be in situ conservation outcomes that are not anticipated at this time. In those instances,</p>

Referred entity	Entity response
	heritage conservation requirements would be identified through advice from the Council and through continued liaison with RAOs and heritage practitioners.
<b>ICON Water</b>	Icon Water has no specific feedback relating to the EIS exemption for the Ginninderry development. The scope of the documentation is in relation to the development footprint and does not affect utility interests.
<b>Evoenergy Gas</b>	No comment.
<b>Transport Canberra and City Services</b>	TCCS supports the proposed exemption application
<b>National Capital Authority</b>	No comment.
<b>Yass Valley Council</b>	No submission provided.
<b>Department of Environment and Energy</b>	<p>The Delegate of the Minister issued an approval under Part 10 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) on 1 September 2017 for a class of actions for urban development undertaken in accordance with the 'Urban Development at West Belconnen Program Report'. Actions taken in accordance with the program report do not require further approval under the EPBC Act.</p> <p>It is noted that section 3.3 of the program report anticipates that Riverview will seek the s211 exemption in relation to ACT development approval.</p>
<b>Deed Management</b>	No comment
<b>Strategic Planning</b>	No comment
<b>Territory Plan</b>	<p>Appendix O of the Ginninderry Planning Report for Section 211 Exemption (the Planning Report) and the draft Technical Amendment both state that the proposal is about moving the composting component to the north eastern corner of the existing landfill site, and the shredding and sale operations will remain at current location. The 2nd last paragraph on Page 28 of the Planning Report need to be corrected to reflect these.</p> <p>Territory Plan Section's understanding is a technical amendment process was only agreed for Greenwaste at this point in time. Process about any future changes to any clearance zone in Ginninderry would depend on the nature of the proposal and circumstance at the time. As such, we would like to see "will be" in the first sentence of paragraph 3 on Page 29 of the Planning Report to be changed to "may be" or "could be potentially considered".</p>

## 10. Appendix 2 – Information submitted as part of the EIS exemption application

TITLE & AUTHOR OF STUDY	QUALIFIED PERSON	RECENT STUDY	If recent study >18 months, is information current	INFORMATION DIRECTLY RELATED TO PROPOSAL?	Schedule 4 Trigger
'West Belconnen Strategic Assessment Report' (Umwelt)	Yes	Yes – March 2017		Yes	All Schedule 4 triggers
Assessment of mapped pink-tailed worm lizard habitat within Ginninderry for potential to meet criteria for classification as natural temperate grassland (SMEC)	Yes	Yes – January 2017	N/A	Yes	Schedule 4 Part 4.3 Item 1
West Belconnen Vegetation Survey Summary (Robert Jessop Pty Ltd.)	Yes	Yes – April 2017	N/A	Yes	Schedule 4 Part 4.3 Item 2
Ginninderry Conservation Zone Vegetation Unit Descriptions(Sarah Sharp	Yes	Yes – February 2017	N/A	Yes	Schedule 4 Part 4.3 Item 2
Ginninderry Natural Temperate Grassland Assessment Summary (SMEC)	Yes	Yes – April 2018		Yes	Schedule 4 Part 4.3 Item 2
Assessment of mapped pink-tailed worm, lizard habitat with Ginninderry for potential to meet criteria for classification as natural temperate grassland (Revision 1) (SMEC)	Yes	Yes – January 2018		Yes	Schedule 4 Part 4.3 Item 1
Urban Development at West Belconnen Program Report (AT Adams Consulting)	Yes	Yes – April 2017	N/A	Yes	All Schedule 4 triggers
Ginninderry Development Project Aboriginal Cultural Values Assessment Report Redacted Version for Public Release (Waters Consultancy) – (Redacted)	Yes	Yes – May 2017	N/A	Yes	Schedule 4 Part 4.3 Item 6
West Belconnen Future Residential Development:	Yes	No – May 2016	Yes	Yes	Schedule 4 Part 4.3 Item 6

Stage 1 West Belconnen Statement of Heritage Effects (SHE), (Past Trace)		The information is still considered to be current			
West Belconnen European Cultural Heritage Report Blocks 1605 and 1606 (Eric Martin and Associates Architects)	Yes	Yes – January 2018	N/A	Yes	Schedule 4 Part 4.3 Item 6
West Belconnen European Cultural Heritage Report ACT Parkwood Land: Blocks 853, 856, 857, 858, 859, 860, 1329, 1333, 1440, 1540, 1621, 1622 and Part Block Macgregor Block 7 Section 149, (Eric Martin and Associates Architects)	Yes	Yes – January 2018	N/A	Yes	Schedule 4 Part 4.3 Item 6
‘ESA1 & Site Suitability’ GHD	Yes	Yes – August 2017	N/A	Yes	Schedule 4 Part 4.3 Item 7
‘Stage 1 ESA and Site Suitability Recommendation’	Yes	Yes – November 2017	N/A	Yes	Schedule 4 Part 4.3 Item 7
West Belconnen Resource Management Centre and Canberra Sand and Gravel, Parkwood Road (Riverview Projects)	Yes	Yes – June 2017			Schedule 4 Part 4.3 Item 7
West Belconnen Strategic Environmental Assessment: Air Quality Review (AECOM)	Yes	Yes – February 2018			N/A
Ginninderry Planning Report for Section 211 Exemption (Knight Frank)	Yes	Yes – February 2018			N/A
Ginninderry Supplementary Planning Report for Section 211 Exemption (Knight Frank)	Yes	Yes – August 2018			N/A
Preliminary Risk Assessment (PRA), (Knight Frank Town Planning)	Yes	Yes – August 2018			N/A
EPBC Consultation Report, (Knight Frank Town Planning)	Yes	Yes – April 2017			N/A
Movements of the Little Eagle (Hieraaetus morphnoides) surrounding the proposed Riverview	Yes	Yes - 2016			Schedule 4 Part 4.3 Item 1

Development Area, Australian Capital Territory, (Brawata & Gruber)					
Paper "Invalid evidence for purported 'collapse' in the number of breeding Little Eagles in the Australian Capital Territory", (Olsen & Rae, ANU)	Yes				Schedule 4 Part 4.3 Item 1
Auditors notification of commencement of Audit (Blocks 1469, 1606, 1607, 1632 and 1633)	Yes	October 2017			Schedule 4 Part 4.3 Item 7
Auditors notification of commencement of Audit (Part Block 1632 Section 0 Strathnairn Sheep Dip)	Yes	August 2017			Schedule 4 Part 4.3 Item 7
Auditors notification of commencement of Audit (B1 S80, Dunlop, Part B2 S186 Dunlop, B7 S149 Macgregor, Blocks 853, 856, 857, 858, 859, 860, 993, 1333, 1440, 1469, 1540, 1568, 1621, 1622, 1632 Belconnen)	Yes	December 2017			Schedule 4 Part 4.3 Item 7
Drainage Flows in the Ginninderry Region Memorandum, (Air Environment)	Yes	November 2017			N/A
Proposal to adjust Clearance Zone: Greenwaste Shredding, Composting and Sales	Yes	N/A			N/A
Statutory Notification Periods for Recent Supporting Studies, (Knight Frank Town Planning)	Yes	February 2018			N/A
Map of blocks included in the s211 exemption application, (Knight Frank Town Planning)	Yes	February 2018			N/A
Conservation Corridor Reserve Management Plan (Draft), (TRC Tourism)	Yes	November 2016			

Ginninderry Community Needs Assessment, (SGS Economics and Planning)	Yes	September 2017			N/A
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## **11. Appendix 3 – EPBC Approval Instrument**

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## **12. Appendix 4 – Summary of potential impacts and mitigation measures**

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# Planning and Development (Environmental Impact Statement – Ginninderry Urban Development Stage 2) Exemption 2018

Notifiable Instrument NI 2018 - 599

Made under the

*Planning and Development Act 2007* s 211H (EIS exemption—decision)

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## 1 Name of instrument

This instrument is the *Planning and Development (Environmental Impact Statement -Ginninderry Urban Development Stage 2) Exemption 2018*

## 2 Commencement

This instrument commences on the day after its notification day.

## 3 Grant


In accordance with section 211H of the *Planning and Development Act 2007* (the Act), I grant an Environmental Impact Statement (EIS) exemption for the Ginninderry Urban Development Stage 2 proposal.

*Note 1* Under s 211H of the Act, the Minister may grant an EIS exemption if satisfied that the expected environmental impact of the development proposal has already been sufficiently addressed by a recent study.

*Note 2* A copy of the EIS exemption consideration report considered by the Minister is available on the planning and land authority's website:  
[http://www.planning.act.gov.au/topics/design\\_build/da\\_assessment/environmental\\_assessment/exemption\\_from\\_requiring\\_and\\_eis\\_s211](http://www.planning.act.gov.au/topics/design_build/da_assessment/environmental_assessment/exemption_from_requiring_and_eis_s211)

## 4 EIS exemption - expiry

In accordance with Section 211I, the EIS exemption expires on 30 June 2067.

  
Mick Gentleman MLA  
Minister for Planning and Land Management

29/10/18

October 2018



## Mick Gentleman MLA

Minister for the Environment and Heritage  
Minister for Planning and Land Management  
Minister for Police and Emergency Services  
Minister assisting the Chief Minister on  
Advanced Technology and Space Industries  
Manager of Government Business  
Member for Brindabella

Aaron Oshyer  
Knight Frank Town Planning  
PO BOX 248  
CIVIC ACT 2608

Dear Mr. Oshyer,

I have reviewed the information provided in your request under section 211 of the *Planning and Development Act 2007* (the Act) for an exemption from the requirement to complete an Environmental Impact Statement for the Ginninderry Stage 2 Urban Development.

Having considered the information submitted in support of your application, the issues raised in submissions made during consultation and the conditions outlined in the assessment report, I consider that the expected environmental impact of the proposal has been sufficiently addressed.

As Minister responsible for the Act, I have granted you an EIS exemption. I advise that the proposed Ginninderry Stage 2 Urban Development will not require further environmental assessment in relation to this proposal with the Environment, Planning and Sustainable Development Directorate. Please ensure that you include a copy of this letter and the assessment report with your development application.

A copy of the EIS exemption is available on the ACT Legislation Register at <https://www.legislation.act.gov.au/>

Yours sincerely

Mick Gentleman MLA

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### ACT Legislative Assembly

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MickGentleman



Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
<b>1. PROPOSAL LIKELY TO HAVE A SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACT ON 1 OR MORE OF THE FOLLOWING...</b>								
<b>AN ENDANGERED SPECIES</b>								
Murrumbidgee Bossiaea	It has not been recorded within the project area; however habitat for the species occurs within the project area within the riparian zone of the Murrumbidgee River Corridor. There are no known potential risks or impacts anticipated to this species.	Unlikely	Minimal	N	The riparian habitats will be protected within the WBCC through site based pre-construction surveys and ongoing flora and fauna vegetation management.	Unlikely	Minimal	N
Regent honeyeater	The species was not observed during targeted bird surveys within the project area (KMA 2013c, cited in Umwelt, March 2017 p61) but all native woodland patches provide potential habitat and it is considered likely that the species is present occasionally, when suitable conditions and other circumstances prevail. Potential risks include: <ul style="list-style-type: none"> <li>Disturbance from increase public access, recreational activities and service provision</li> <li>Indirect impacts of edge effects, weed invasion and changes in hydrological conditions</li> </ul> Potential impacts include: <ul style="list-style-type: none"> <li>Disturbance to nesting sites and to breeding seasons from increase public access, recreational activities and service provision</li> <li>Localised damage to habitat</li> <li>Pollution,</li> <li>Invasive species introduction</li> <li>Trampling and predation from unrestrained domestic animals</li> <li>Edge effects,</li> <li>Weed invasion, and,</li> <li>Changes in hydrological conditions.</li> </ul>	Possible	Minor	L	<ul style="list-style-type: none"> <li>Implement WSUD principles based on geotechnical, surface water and groundwater assessments that;                             <ul style="list-style-type: none"> <li>Retard stormwater flows and the increased run-off from the urban development area before they enter the WBCC. This will minimise the impact of altered hydrological regimes on vegetation upon which avifauna will rely.</li> <li>Provide suitable wetland habitat for water birds (e.g. Australian painted snipe) where appropriate.</li> </ul> </li> <li>Mitigation actions during the construction phases implemented through CEMPs prepared prior to construction commencing in accordance with relevant guidelines:                             <ul style="list-style-type: none"> <li>Definition of clearing procedures and boundaries that include the retention of trees; avoid with appropriate buffers threatened bird species' nesting trees; clear outside of threatened bird species' breeding seasons, and outline faunal rescue procedures.</li> <li>Recovery and beneficial use for the purpose of fauna habitat enhancement of fallen timber, including logs and tree section containing hollows</li> <li>Invasive species management</li> <li>Sediment and erosion controls to prevent site run-off.</li> </ul> </li> <li>Operation phase management including:                             <ul style="list-style-type: none"> <li>Domestic pet containment policies within the proposed residential development, prohibition of 'off-leash' areas for dogs within the WBCC, and education initiatives targeting the west Belconnen community regarding the impact of unrestrained domestic animals.</li> <li>Ongoing management actions as outlined in the WBCC RMP.</li> </ul> </li> </ul>	Unlikely	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
Macquarie perch Trout cod	<p>General threats/potential impacts for Macquarie perch include : -</p> <ul style="list-style-type: none"> <li>• Damage to riparian vegetation</li> <li>• Sedimentation</li> <li>• Barriers to fish passage</li> <li>• Flow regime alteration</li> <li>• Recreation angling</li> <li>• Predation and competition with alien fish species</li> <li>• Diseases and parasites</li> <li>• Impacts of bushfires</li> </ul> <p>General threats for Trout Cod include: -</p> <ul style="list-style-type: none"> <li>• Damage to riparian vegetation</li> <li>• De-snagging</li> <li>• Sedimentation</li> <li>• Recreational angling</li> <li>• Predation from introduced species</li> <li>• Changes to water quality and flows</li> <li>• Barriers to fish passage</li> </ul>	Possible	Minor	L	<p>Implementation of a number of mechanisms including:</p> <ul style="list-style-type: none"> <li>• The WBCC RMP, which will be implemented prior to allowing public access and will include:                             <ul style="list-style-type: none"> <li>○ Controls to public access and use of the riparian areas post construction phase; and</li> <li>○ Site-scale survey prior or concurrent to the design stage for recreational development in the WBCC to determine the location of threatened fish species and their habitat within the proposed development footprint and avoid as necessary.</li> <li>○ (State/Territory based controls on recreational fishing (e.g. bag limits) will not be implemented by the WBCC RMP as they are currently law and enforced as such.)</li> </ul> </li> <li>• Incorporation of WSUD principles into the Master Plan that aim to:                             <ul style="list-style-type: none"> <li>○ Maintain stormwater run-off to acceptable levels as defined; and</li> <li>○ Treat urban runoff to reduce urban pollutants to acceptable levels before discharge to the Murrumbidgee River or Ginninderra Creek.</li> </ul> </li> <li>• Implementation of CEMPs to be prepared prior to construction commencing and targeting among other environmental values:                             <ul style="list-style-type: none"> <li>○ Erosion and sediment controls</li> <li>○ Water treatment standards before release in the Murrumbidgee River or Ginninderra Creek;</li> <li>○ Flow controls</li> <li>○ Pollutions and waste management; and</li> <li>○ Avoidance of riparian habitat areas</li> </ul> </li> </ul>	Unlikely	Minimal	N
Silver Perch	<p>Silver perch has historically been recorded in the reach of the Murrumbidgee River that runs alongside the Project Area (ACT Gov't 2007, cited in Umwelt, March 2017 p63). Since this time, the species has suffered a continued decline and is considered extinct in the ACT (ACT Gov't 2015c, cited in Umwelt, March 2017 p63). This is despite stocking of impoundments throughout the Murray Darling Basin (including Lake Burrinjuck) for recreational purposes. In most cases (with the exception of Cataract Dam near Sydney),</p>	Unlikely	Minimal	N	<p>Implementation of a number of mechanisms including:</p> <ul style="list-style-type: none"> <li>• The WBCC RMP, which will be implemented prior to allowing public access and will include:                             <ul style="list-style-type: none"> <li>○ Controls to public access and use of the riparian areas post construction phase; and</li> <li>○ Site-scale survey prior or concurrent to the design stage for recreational development in the WBCC to determine the location of threatened fish species and their habitat within the proposed development footprint and avoid as necessary.</li> <li>○ (State/Territory based controls on recreational fishing (e.g. bag limits) will not be implemented by the WBCC RMP as they are currently law and enforced as such.)</li> </ul> </li> </ul>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	stocking does not appear to have established self-sustaining populations in the wild (NSW Gov't 2016b, cited in Umwelt, March 2017 p63). In the event that individuals stocked at Lake Burrinjuck have been able to migrate upstream (approximately 85 kilometres) into the Project Area, there is no evidence to show that they are able to sustain a viable population from year to year. For this reason, it is considered unlikely that the species occurs in this reach of the Murrumbidgee River and is very unlikely to cause any impacts to the species.				<ul style="list-style-type: none"> <li>Incorporation of WSUD principles into the Master Plan that aim to:                             <ul style="list-style-type: none"> <li>Maintain stormwater run-off to acceptable levels as defined; and</li> <li>Treat urban runoff to reduce urban pollutants to acceptable levels before discharge to the Murrumbidgee River or Ginninderra Creek.</li> </ul> </li> <li>Implementation of CEMPs to be prepared prior to construction commencing and targeting among other environmental values:                             <ul style="list-style-type: none"> <li>Erosion and sediment controls</li> <li>Water treatment standards before release in the Murrumbidgee River or Ginninderra Creek;</li> <li>Flow controls</li> <li>Pollutions and waste management; and</li> </ul> </li> </ul> Avoidance of riparian habitat areas			
Northern corroboree frog	Northern corroboree frogs ( <i>Pseudophryne pengilleyi</i> ) and yellow-spotted tree frogs ( <i>Litoria castanea</i> ) both occur at elevations higher than that which occur within the Project Area (Australian Gov't 2015b, cited in Umwelt, March 2017 p65). Due to the absence of suitable conditions or habitat, these species are not likely to be present and are considered no further. No known risks or impacts are anticipated for this species.	Remote	Minimal	<b>N</b>	No mitigation measures are considered to be required for the Northern corroboree frog as it is unlikely to be present in the project area.  There will however, be measures put in place in the RMP, WSUD principles in the Master plan and CEMP's which will ensure there is no impacts if the species were to occur.	Remote	Minimal	<b>N</b>
Golden Sun Moth	Potential impacts include: <ul style="list-style-type: none"> <li>Loss of habitat for the species from the proposed Ginninderra Drive extension (1.8ha in total)</li> <li>Overshadowing of habitat from the proposed bridge structure.</li> <li>Fragmentation of habitat from the construction of the Ginninderra Drive bridge</li> <li>Changes to hydrology</li> <li>Weed invasion and changes to species composition</li> <li>Pollution</li> <li>Mortality</li> </ul>	Possible	Moderate	<b>M</b>	Implementation of the following mitigation measures: <ul style="list-style-type: none"> <li>Consideration of direct impacts to golden sun moth habitat throughout the design phase of the Ginninderra Drive extension.</li> <li>Detailed design features of the road and bridge including:                             <ul style="list-style-type: none"> <li>Measures to reduce water runoff</li> <li>Measures to allow adequate solar access to the verges to ensure native grass growth</li> <li>Post construction design such as landscaping with native grass species in order to restore golden sun moth habitat to sections that are 'at grade'</li> <li>Bridge placed at highest practicable height over densest area of golden sun moth to improve willingness of moths to pass underneath it.</li> <li>Bridge design will also allow for a clear view of suitable habitat on the other side, and has limited obstacles (i.e. piles</li> </ul> </li> </ul>	Possible	Minor	<b>L</b>

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					spaced at 50m intervals) to entice moths to cross. <ul style="list-style-type: none"> <li>Removal of all trees within the areas of the Macgregor offset that currently do not support golden sun moth. The planting of trees in this area has reduced viability of the habitat although the ground layer vegetation in this area retains the necessary native grasses that would otherwise be suitable for golden sun moth. By restoring this area to grassland, the Program seeks to improve the potential for movement across the road. This would occur prior to construction commencing.</li> <li>CEMP's implemented during the construction phase of the Ginninderra Drive extension, which include the following measures that are specific to golden sun moth:                             <ul style="list-style-type: none"> <li>Erosion and sediment control</li> <li>Fencing to ensure avoidance of retained areas of habitat</li> <li>Flow controls; and</li> <li>Weed management actions such as vehicle hygiene standards to ensure the control of the spread of weeds.</li> </ul> </li> </ul>			
Konoom, Smoky Mouse	The Umwelt assessment concluded this species is only known in the Brindabella Ranges, and, therefore, is not considered to occur in the project area. No potential risks or impacts are anticipated on this species.	Remote	Minimal	N	As the species is unlikely to be present in the project area, no mitigation measures are proposed for this species.	Remote	Minimal	N
Grassland earless dragon	It appears appropriate habitat for grassland earless dragon to occur in areas of natural temperate grassland in the Jarramlee offset; however the only known populations occur in the Majura and Jerrabomberra Valleys of the ACT and in Queanbeyan and the Monaro Basalt Plains in NSW. It is not considered likely to occur within the project area. No potential risks or impacts are anticipated on this species.	Remote	Minimal	N	As the species is unlikely to be present in the project area, no mitigation measures are proposed for this species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
<p>Small purple pea, Tarengo leek orchid Ginninderra peppergrass</p>	<p>Within the project area habitat for small purple pea is considered to be Box Gum Woodland patches (excluding those that occur along Drake Brockman Drive); all of which will be protected within the WBCC. The box gum woodland that occurs within the Drake Brockman Drive upgrade area is not considered to be of sufficient quality with regard to native forbs to constitute habitat for the species.</p> <p>The nearest population for the Tarengo leek orchid is at Hall Cemetery, to the north east of the Project Area. Here the species is found among Blakely's red gum and yellow box with a grassy understorey of kangaroo and wallaby grass (NSW Gov't 2010a, cited in Umwelt March 2017, p76). In the Project Area potential habitat for Tarengo leek orchid occurs in the high quality patch of box gum woodland in the south. Potential direct impacts to the species will be avoided by inclusion of this habitat in the WBCC.</p> <p>Ginninderra peppergrass is considered unlikely to occur within the project area as it is found in natural temperate grasslands along the Ginninderra floodplain. Whilst some of this habitat occurs within the Jarramlee offset, it has not been recorded despite numerous recent surveys (ACT Gov't 2013a, cited in Umwelt, March 2017, p73-74).</p> <p>It is anticipated there will unlikely be any potential risks or impacts on these species.</p>	<p>Unlikely</p>	<p>Minor</p>	<p>VL</p>	<p>There are no direct impacts identified to the Small purple pea. Indirect impacts will be managed through the implementation of:</p> <ul style="list-style-type: none"> <li>• CEMP's particularly targeting                             <ul style="list-style-type: none"> <li>○ Prescriptions for pre-clearing surveys for listed species prior to the commencement of any construction activities such that further avoidance and mitigation measures can be incorporated where cost effective and practicable</li> <li>○ Erosion and sediment controls</li> <li>○ Water treatment standards before release</li> <li>○ Flow controls</li> <li>○ Pollution and waste management</li> <li>○ Weed management</li> <li>○ Appropriate definition of clearing boundaries; and Avoidance of the WBCC</li> </ul> </li> <li>• Appropriate storm water management based on geotechnical, surface water, and groundwater assessments and WSUD principles to reduce impacts to hydrological systems.</li> <li>• Implementation of the WBCC RMP, which will include the following mechanisms to adequately protect potential threatened flora species if present:                             <ul style="list-style-type: none"> <li>○ Controls to public access and use of the habitats within the WBCC</li> <li>○ Bushfire hazard and fuel management prescriptions that are not inconsistent with biodiversity conservation objectives; and</li> <li>○ Conservation management actions that target the improvement of overall environmental and habitat values of the area (i.e. a landscape approach).</li> </ul> </li> </ul>	<p>Remote</p>	<p>Minimal</p>	<p>N</p>

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
<b>A VULNERABLE SPECIES</b>								
Brown treecreeper	The species is known to occur in the woodland habitat of the Project Area (COG 2015b, cited in Umwelt, March 2017, p222), though it was not identified during targeted survey by KMA (2013c, cited in Umwelt, March 2017, p222). No major impacts have been identified on the species. The Program is not expected to have significant adverse impacts on this species.	Remote	Minimal	N	The Implementation of the WBCC RMP will protect forest and woodland habitat, including that along the Murrumbidgee River, within the WBCC through the implementation of a landscape scale approach to management that will protect connectivity values, improve woodland habitat quality including its structural complexity, site-based pre-construction surveys, avoidance of construction during threatened bird breeding seasons, and considering ecological requirements when implementing fire and grazing regimes within the WBCC. Areas of exotic and native pasture within the Urban Development Area are not considered habitat for the species.	Remote	Minimal	N
Hooded Robin	The species has been recorded in Jarramlee Offset Area and at Sheppard's lookout. Other habitat for the species is likely to be in the woodland in the south, which will be incorporated into the WBCC. The Program is not expected to have significant adverse impacts on this species.	Remote	Minimal	N	The Implementation of the WBCC RMP will protect forest and woodland habitat within the WBCC through the implementation of a landscape scale approach to management that will protect connectivity values, improve woodland habitat quality including structural diversity for perches, and controlling grazing and fire regimes based on ecological constraints. Areas of exotic and native pasture within the Urban Development Area are not considered habitat for the species.	Remote	Minimal	N
Little Eagle	Little eagles have been recorded across most of the ACT and NSW, with nesting generally occurring in the north, especially along the Murrumbidgee and Molonglo Rivers (NSW Gov't 2015a; COG 2015b, cited in Umwelt, March 2017, p225). Between 1988 and 2011 the number of known little eagle active nests declined from 13 to one. In recent years up to three nesting pairs have been identified one of which occurring in the Strathnairn property, adjacent to the Project Area. This pair is known to have also nested in six different locations in the lower Molonglo area since 2001(A Lane 2016, pers. comm. 12 August, cited in Umwelt, March 2017, p225). A full assessment of impacts to little eagle will be included within State and Territory approval processes as appropriate. To aid	Unlikely	Minor	VL	The endorsed Program will enforce a 200 metre development buffer around the known nest site at Strathnairn, avoiding direct impact from the proposed development. It will also mitigate the indirect impact of proximate human presence to the nest site. This measure has been developed in consultation with and endorsed by ACT Conservation Planning and Research Unit, Environment, Planning and Sustainable Development Directorate and is considered appropriate for managing impacts to nesting habitat. Furthermore, given the presence of nearby nesting territories in lower Molonglo, it is anticipated that the little eagles will favour these following development (A Lane 2016, pers. comm.12 August, cited in Umwelt, March 2017 p225). Maintaining a treed movement corridor within the Urban Development Area will facilitate the use of the lower Molonglo nesting territories.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	this process, information gathered from ACT Government radio tracking of the male of the nesting pair at Strathnairn and food analysis will be utilised, following analysis of the results.							
Scarlet robin	<p>Scarlet robin has been recorded in the Murrumbidgee River Corridor (Canberra Nature Map 2016, cited in Umwelt, March 2017, p227) and in grassland areas of the Urban Development Area (KMA 2013a, cited in Umwelt, March 2017, p227).</p> <p>Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Localised damage to habitat</li> <li>• Pollution,</li> <li>• Increased disturbance due to human presence and activities</li> <li>• Invasive species introduction</li> <li>• Trampling and predation from unrestrained domestic animals</li> <li>• Edge effects,</li> <li>• Weed invasion, and,</li> <li>• Changes in hydrological conditions.</li> </ul> <p>The project is not considered to have a significant adverse impact to the species.</p>	Remote	Minimal	N	<p>Implementation of the <b>WBCC RMP</b> will include a landscape scale approach to management that will protect connectivity values, improve woodland habitat quality including structural diversity for perches, and controlling grazing and fire regimes based on ecological constraints.</p> <p>Grassland within the Urban Development Area will be impacted by the Program, however, due to the high proportion of exotic grasses, it is not considered important habitat for scarlet robin. In addition, the WBCC will protect a range of woodland and native grassland habitats of higher quality for the species. This combined with the management measures described above is expected to minimise residual impacts to scarlet robin, such that the Program is not expected to have significant adverse impacts to the species.</p>	Remote	Minimal	N
Varied sittella, White winged triller	<p>Varied sittella has been recorded in the woodland and riparian corridor of the Project Area (Canberra Nature Map 2016, cited in Umwelt, March 2017, p228).</p> <p>White-winged triller has been recorded in the Project Area at Jarramlee, Parkwood, and in the Murrumbidgee River Corridor (KMA 2013c; COG 2015a; Canberra Nature Map 2016, cited in Umwelt, March 2017, p229).</p> <p>Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Localised damage to habitat</li> <li>• Pollution,</li> </ul>	Remote	Minimal	N	<p>Implementation of the <b>WBCC RMP</b> will include a landscape scale approach to management that will protect connectivity values, improve woodland habitat quality including improving structural diversity and weed control measures, fire and grazing regimes that are based on ecological constraints, pest management including cat containment and dog control measures, construction activities must occur outside of threatened bird species' breeding times, and site-based pre-construction surveys.</p> <p>The Program is not expected to have significant adverse impacts on these species.</p>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	<ul style="list-style-type: none"> <li>Increased disturbance due to human presence and activities</li> <li>Invasive species introduction</li> <li>Trampling and predation from unrestrained domestic animals</li> <li>Edge effects,</li> <li>Weed invasion, and,</li> <li>Changes in hydrological conditions.</li> </ul> <p>Areas of exotic and native pasture within the Urban Development Area are not considered habitat for the species. The project is not considered to have a significant adverse impact to these species.</p>							
Glossy black cockatoo	Glossy black cockatoo is known in the ACT as an uncommon visitor, with most records from Mount Ainslie and Mount Majura in the north-east (COG 2015b, cited in Umwelt, March 2017, p220). In NSW, it is not known to occur within the Murrumbateman sub-region (NSW Gov't 2015a, cited in Umwelt, March 2017, p220). Glossy black cockatoos feed almost exclusively on sheoak species ( <i>Allocasuarina</i> spp. Or <i>Casuarina</i> spp.); specifically drooping sheoak ( <i>A. verticillata</i> ) in the ACT region (ACT Gov't 2013b cited in Umwelt, March 2017, p220). Drooping sheoak has not been identified within the Project Area, therefore, is not considered to contain habitat for the species. No potential risks or impacts are anticipated on this species.	Remote	Minimal	N	As the species is unlikely to be present in the project area, no mitigation measures are proposed for this species.	Remote	Minimal	N
Murray river crayfish	Murray River crayfish are known to occur within the Murrumbidgee River, including the reach that is adjacent to the Project Area (NSW Gov't 2016; ACT Gov't 2015a, cited in Umwelt, March 2017, p232). As the project will not directly impact on the waters of the Murrumbidgee River and	Remote	Minimal	N	As the project will not directly impact on the waters of the Murrumbidgee River, no mitigation measures are proposed for this species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	indirect impacts as a result of urban development will be managed, it is unlikely to have a significant adverse impact on the species.							
Two spined blackfish	Two-spined blackfish ( <i>Gadopsis bispinosus</i> ) is restricted to the Cotter River Catchment in the ACT and is not known to occur within the Murrumbidgee River (ACT Gov't 2007, cited in Umwelt, March 2017, p231). It will not be impacted by the project.	Remote	Minimal	N	As the species is not present in the area, no mitigation measures are proposed for this species.	Remote	Minimal	N
Perunga grasshopper	The species has not been recorded within the project area, however native grasslands and woodland areas with a native grassy understorey are likely to be habitat for Perunga grasshopper. Exotic grasslands area not considered habitat for the species.	Likely	Minimal	L	This species will be addressed by using the defined process strategy as outlined in the Umwelt report.	Remote	Minimal	N
Superb parrot	Targeted surveys between 2008 and 2013 recorded superb parrots in small numbers (12 birds over five separate days) in the wooded areas to the south of the Project Area. The trees near Stockdill Drive and the golf course are seemingly particularly important as a movement corridor for the species. In addition, a survey of tree hollows was also undertaken in spring 2012, during which any use by animals was recorded. There was no observation of breeding of superb parrot, which typically occurs at Throsby Ridge (Gungahlin) and in the central Molonglo Valley (KMA 2013c, cited in Umwelt, March 2017, p61). Observations of the species in the Project Area are most likely indicative of its use of the area for movements between the central Molonglo breeding area and other foraging habitat, or wider seasonal movement corridors. COG (2015, cited in Umwelt, March 2017, p61) notes a similar movement of superb	Unlikely	Moderate	L	<ul style="list-style-type: none"> <li>• WSUD principles based on geotechnical, surface water, and groundwater assessments that:                             <ul style="list-style-type: none"> <li>○ Retard stormwater flows and the increased run-off from the urban development area before they enter the WBCC. This will minimise the impact of altered hydrological regimes on vegetation upon which avifauna will rely.</li> <li>○ Provide suitable wetland habitat for water birds (e.g. Australian painted snipe) where appropriate.</li> </ul> </li> <li>• Mitigation actions during the construction phase implemented through CEMPs prepared prior to construction commencing in accordance with relevant guidelines:                             <ul style="list-style-type: none"> <li>○ Definition of clearing procedures and boundaries that include the retention of trees; avoid with appropriate buffers threatened bird species' nesting trees; clear outside of threatened bird species' breeding seasons, and outline faunal rescue procedures.</li> <li>○ Recovery and beneficial use for the purpose of fauna habitat enhancement of fallen timber, including logs and tree sections containing hollows.</li> <li>○ Invasive species management.</li> <li>○ Sediment and erosion controls to prevent site run-off.</li> </ul> </li> <li>• Operation phase management including:                             <ul style="list-style-type: none"> <li>○ Domestic pet containment policies within the proposed</li> </ul> </li> </ul>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	parrots into Belconnen Farm that has occurred since the 2005 – 2006 survey year as well as numerous records from nearby Belconnen suburbs. Key threats/risks include fragmentation, connectivity between breeding and foraging sites, poisoning and illegal trapping of the species.				residential development, prohibition of 'off-leash' areas for dogs within the WBCC, and education initiatives targeting the west Belconnen community regarding the impact of unrestrained domestic animals. <ul style="list-style-type: none"> <li>Ongoing management actions as outlined in the WBCC RMP.</li> </ul>			
Swift parrot	The species was not observed in the Project Area during targeted bird surveys, although may occur in woodland when mature eucalypts are flowering (KMA 2013c, cited in Umwelt, March 2017, p62). It is classified as having the potential to occur within the Project Area; however, it would only occur when specific habitat conditions around the flowering of certain eucalypts are met as the species is regarded as having a high degree of site fidelity (Taws and Saunders 2005, cited in Umwelt, March 2017, p62). Areas of woodland with high value connectivity and quality will be protected under the Program.	Unlikely	Minor	<b>VL</b>	<ul style="list-style-type: none"> <li>WSUD principles based on geotechnical, surface water, and groundwater assessments that: <ul style="list-style-type: none"> <li>Retard stormwater flows and the increased run-off from the urban development area before they enter the WBCC. This will minimise the impact of altered hydrological regimes on vegetation upon which avifauna will rely.</li> <li>Provide suitable wetland habitat for water birds (e.g. Australian painted snipe) where appropriate.</li> </ul> </li> <li>Mitigation actions during the construction phase implemented through CEMPs prepared prior to construction commencing in accordance with relevant guidelines: <ul style="list-style-type: none"> <li>Definition of clearing procedures and boundaries that include the retention of trees; avoid with appropriate buffers threatened bird species' nesting trees; clear outside of threatened bird species' breeding seasons, and outline faunal rescue procedures.</li> <li>Recovery and beneficial use for the purpose of fauna habitat enhancement of fallen timber, including logs and tree sections containing hollows.</li> <li>Invasive species management.</li> <li>Sediment and erosion controls to prevent site run-off.</li> </ul> </li> <li>Operation phase management including: <ul style="list-style-type: none"> <li>Domestic pet containment policies within the proposed residential development, prohibition of 'off-leash' areas for dogs within the WBCC, and education initiatives targeting the west Belconnen community regarding the impact of unrestrained domestic animals.</li> </ul> </li> </ul> <p>Ongoing management actions as outlined in the WBCC RMP.</p>	Remote	Minimal	<b>N</b>
Painted honeyeater	Painted honeyeaters have the potential to occur along the Murrumbidgee River in river oak vegetation where mistletoe is also present (KMA 2009b, cited in Umwelt, March 2017, p62); although it is unclear to	Unlikely	Moderate	<b>L</b>	<ul style="list-style-type: none"> <li>WSUD principles based on geotechnical, surface water, and groundwater assessments that: <ul style="list-style-type: none"> <li>Retard stormwater flows and the increased run-off from the urban development area before they enter the WBCC. This will minimise the impact of altered hydrological regimes on</li> </ul> </li> </ul>	Remote	Minimal	<b>N</b>

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	<p>what extent the patch of potentially suitable habitat would be utilised by painted honeyeaters should they occur. Closest COG records in 2013-2014 are from Stony Creek and the Molonglo River, south of the Project Area (COG 2015a, cited in Umwelt, March 2017, p62). Vegetation within the existing Murrumbidgee River Corridor will be protected from impacts of the Program by the WBCC.</p> <p>It is considered that the avoidance and mitigation measures presented in the Program will prevent the Program from having a significant impact on any of the threatened bird species. Key elements to this finding are the avoidance and protection of woodland and forest communities within the WBCC, in addition to mitigation measures that will seek to further enhance vegetation through the urban open space network; and the inclusion of constructed wetlands as part of the WSUD plan for the Program.</p>				<p>vegetation upon which avifauna will rely.</p> <ul style="list-style-type: none"> <li>o Provide suitable wetland habitat for water birds (e.g. Australian painted snipe) where appropriate.</li> <li>• Mitigation actions during the construction phase implemented through CEMPs prepared prior to construction commencing in accordance with relevant guidelines:                             <ul style="list-style-type: none"> <li>o Definition of clearing procedures and boundaries that include the retention of trees; avoid with appropriate buffers threatened bird species' nesting trees; clear outside of threatened bird species' breeding seasons, and outline faunal rescue procedures.</li> <li>o Recovery and beneficial use for the purpose of fauna habitat enhancement of fallen timber, including logs and tree sections containing hollows.</li> <li>o Invasive species management.</li> <li>o Sediment and erosion controls to prevent site run-off.</li> </ul> </li> <li>• Operation phase management including:                             <ul style="list-style-type: none"> <li>o Domestic pet containment policies within the proposed residential development, prohibition of 'off-leash' areas for dogs within the WBCC, and education initiatives targeting the west Belconnen community regarding the impact of unrestrained domestic animals.</li> </ul> </li> </ul> <p>Ongoing management actions as outlined in the WBCC RMP.</p>			
Spotted tailed quoll	<p>Records in the ACT region most regularly occur within the Brindabella Ranges with others occurring throughout the urban area. There are no records within the Project Area; however, the species has been historically sighted within the nearby suburbs of Holt and Charnwood (Canberra Nature Map 2016, cited in Umwelt, March 2017, p69).</p> <p>It is unlikely that there is a resident population of spotted-tail quolls within the Project Area given the size of potential habitat. It is, however, considered likely that vagrants from breeding populations in the Brindabella Mountains utilise forest and woodland habitats within the river and creek corridors as a dispersal corridor,</p>	Unlikely	Minor	N	As the species is unlikely to be present in the project area, no mitigation measures are proposed for this species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	though the extent to which this may occur is unknown. As the connectivity function of the river corridor will be maintained, and the availability of den and prey items is unlikely to be adversely affected by the Program, it is considered unlikely that the Program will impact upon spotted-tail quoll.							
Pink-tailed Worm-lizard	<p>In total, 16.4 hectares (10.2 hectares of high and 6.2 hectares of low quality) of pink-tailed worm-lizard habitat will be directly impacted by the project. The remaining 146.4 hectares (141.9 hectares of high and 4.5 hectares of low quality) will be protected within the WBCC. There will be no direct impact to pink-tailed worm-lizard habitat as result of the sewer tunnel construction.</p> <p>Potential Impacts</p> <ul style="list-style-type: none"> <li>• Future infrastructure provision and maintenance activities</li> <li>• Edge effects such as weed invasion,</li> <li>• Changes to hydrological conditions,</li> <li>• Pollution,</li> <li>• Sedimentation and erosion,</li> <li>• Increased risk of predation by fox, or feral or domestic cat and</li> <li>• Disturbance of micro habitat from increased public access to the WBCC</li> </ul> <p>The provision of infrastructure and recreational facilities within the WBCC will result in no net loss of pink-tailed worm-lizard habitat within the WBCC. The WBCC RMP will include measures to avoid and mitigate these impacts as more detailed design is undertaken and construction and operation phases begin.</p>	Possible	Moderate	M	<p>Direct impacts to the areas of habitat within the footprint of the proposed urban area are not considered important for maintenance of the local population due to the low occupancy rates of these small and isolated patches and the likelihood that they do not contribute to the gene pool of the rest of the population. Following the conclusions of Osborne and Wong (2013) such areas may retain importance for pink-tailed worm-lizard, however, given the spatial arrangement of these affected patches of habitat within the Project Area, they are unlikely to be considered important (i.e. they occur on the eastern extremity of habitat within the Project Area and contribute very little (if any) to the north – south connectivity values of the existing habitat). The majority of pink-tailed worm-lizard habitat that is retained within the WBCC occurs on steeper slopes and in areas that have a substantially better quality of understorey vegetation.</p> <p>Direct impacts to pink-tailed worm-lizard habitat within the WBCC as a result of recreational infrastructure provision and maintenance activities will be avoided such that there is no net loss of pink-tailed worm-lizard habitat, as directed by the WBCC RMP. These impacts will be avoided where possible at the detailed design stage; and mitigated further by targeting poorest quality areas, incorporating raised grating (or similar) into pathway design to enhance connectivity between habitat patches that would otherwise be bisected, and keeping vehicle track widths to a maximum of six metres (6 m) and trail widths to a maximum of 2.5 metres wide. Existing tracks that currently fragment portions of the pink-tailed worm-lizard habitat within the WBCC will either be upgraded for use as part of the Program and where required be subject to the same design considerations as new tracks, or will be rehabilitated to enhance connectivity.</p> <p>Areas of habitat have been included within the development footprint as a result of a process of design including consideration</p>	Unlikely	Minor	VL

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					<p>of the longer term viability of small isolated patches, feasibility of their management for conservation values, and determining an optimal configuration for retention of areas of conservation value. The avoidance strategy has incorporated all medium-high quality habitats in the WBCC in a configuration that minimises management costs and the risk of population collapse. Indirect impacts to pink-tailed worm-lizard will be mitigated through the implementation of a number of mechanisms:</p> <ul style="list-style-type: none"> <li>• WBCC RMP: <ul style="list-style-type: none"> <li>o controls to public access within the WBCC</li> <li>o controls of permitted activities of within the WBCC</li> <li>o informed infrastructure design based on advice from relevant scientific experts, particularly with regard to protecting and avoiding impacts to MNES and their habitat areas as part of an adaptive approach to the management of ecological values</li> <li>o utilisation of existing infrastructure and resources, including the use of existing roads and tracks and upgrading them to improve connectivity where possible</li> <li>o vehicle track widths will be a maximum of six metres, other tracks and trails a maximum of 2.5 metres wide with further design considerations that can further reduce the width of roads, for example, passing bays</li> <li>o fox and other predator control measures</li> <li>o implementation of measures as appropriate that are prescribed by the ACT Government's Action Plan 29 (ACT Gov't 2007, cited in Umwelt, March 2017, p145) and recovery planning documents specific to pink-tailed worm-lizard (ACT Gov't 1995122; ACT Gov't 2007; NSW Gov't 2015, cited in Umwelt, March 2017, p145)</li> <li>o consideration of pink-tailed worm-lizard habitat when designing infrastructure and services, including maintaining an effective buffer around known populations; and</li> <li>o implementation of habitat improvement strategies (such as weed control) targeting habitat requirements of pink-tailed worm-lizard.</li> </ul> </li> <li>• Incorporation of WSUD principles into the Master Plan to maintain stormwater run-off and associated pollutants to acceptable levels or better</li> <li>• Implementation of CEMPs, particularly targeting <ul style="list-style-type: none"> <li>o erosion and sediment controls</li> </ul> </li> </ul>			

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					<ul style="list-style-type: none"> <li>o water treatment standards before release</li> <li>o flow controls</li> <li>o pollution and waste management; and</li> <li>o avoidance of riparian habitat areas.</li> </ul> <p>Operation phase management including domestic pet containment policies within the proposed residential development and prohibition of 'off-leash' areas for dogs within the WBCC. These mechanisms will be developed to the satisfaction of the Department of the Environment prior to construction and public access to the WBCC beginning.</p> <p>Cumulative and facilitated impacts will be avoided or mitigated through the WBCC RMP which is considered an effective means to avoiding, managing and mitigating risks during the operational phase. Adoption of the adaptive management principles will ensure the WBCC RMP remains current and implements measures on the basis of the best available information.</p>			
Striped legless lizard	It is considered unlikely that striped legless lizard ( <i>Delma impar</i> ) occurs within the Project Area due to a lack of appropriate cover by tussock grass species and lack of previous records. The project is not anticipated to have any impact on the species.	Unlikely	Minor	N	As the species is unlikely to be present in the project area, no mitigation measures are proposed for this species.	Remote	Minimal	N
<b>A LISTED MIGRATORY SPECIES</b>								
Rufous fantail	Habitat preferred by the species includes rainforests, wet forests, swamp woodlands, and mangroves. Rufous fantail is considered an uncommon breeding, summer migrant to the ACT and is usually recorded in the tall, wet forests of the Brindabella Range, with occasional fly-over records from the suburbs (COG 2014, cite in Umwelt, March 2017, p78). It was recorded in the ACT woodland within the Project Area (KMA 2009b and 2013c, cited in Umwelt, March 2017, p78) and in nearby suburbs (COG 2014, cited in Umwelt, March 2017, p78). It is considered unlikely that the project will have a significant impact on rufous fantail	Unlikely	Minor	N	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	due to the important habitat for the species occurring in the Brindabella Range, the fly-over nature of records in the Project Area, and most of its habitat being conserved within the WBCC.							
Fork-tailed swift	Fork-tailed swifts arrive in Australia around October, entering via the Northern Territory and remain highly mobile for the duration of their stay. The species is common in the ACT between December and March, with several flocks passing through within this period (Australian Gov't 2015b, cited in Umwelt, March 2017, p78). The species has been recorded within the broader west Belconnen area. Most recently in Mount Painter Nature Reserve and West Belconnen Ponds in Dunlop during the 2012 – 2013 survey year (COG 2014, cited in Umwelt, March 2017, p78). Whilst it is likely that the species flies over the Project Area, potential impacts to the species as a result of the Program are considered unlikely due to its aerial nature and wide distribution.	Unlikely	Minor	<b>N</b>	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	<b>N</b>
White throated needletail	White-throated needletails are not very common in the ACT, though are associated with the arrival of weather fronts in the region. They have previously been recorded over the Project Area and in nearby suburbs (COG 2014 and 2015a, cited in Umwelt, March 2017, pg 79). Whilst it is likely that the species flies over the Project Area, due to its aerial nature and wide distribution, potential impact to the species as a result of the Program are considered unlikely	Unlikely	Minor	<b>N</b>	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minor	<b>N</b>

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
Latham's snipe/Japanese snipe	Latham's snipe is more commonly recorded further east of the Project Area, in and around Lake Burley Griffin, Lake Ginninderra, and Mulligan's Flat Nature Reserve. The nearest records are from West Belconnen Pond, Dunlop (COG 2015a, cited in Umwelt, March 2017, pg79 ). Geoff Butler and Associates (2000) noted a previous record along the Ginninderra Creek, however, did not provide any detail on when or where this record was taken. As all major water bodies will be conserved as a part of the project, it is considered unlikely that the project will have any impact upon Latham's snipe.	Unlikely	Minor	N	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minor	N
Satin flycatcher	Satin flycatchers breed in the ACT during summer, departing in late autumn (Mulvaney 2012, cited in Umwelt, March 2017, p80). Most records are from the tall, wet forests of the Brindabella Range, though there are a few records of the species in the broader west Belconnen area (COG 2015a, cited in Umwelt, March 2017, p80). As these records are uncommon occurrences and are separate from the main habitat type, it is not considered likely that the Program will impact upon this species.	Unlikely	Minor	N	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minor	N
Black-faced monarch	Black-faced monarch ( <i>Monarcha melanopsis</i> ) is considered unlikely to occur within the Project Area as its preferred habitat is rainforest. Whilst it has been known to be recorded within marginal habitat that includes dry woodlands in the ACT, the closest record is from Lake Ginninderra (COG 2015b, cited in Umwelt, March 2017, p77).	Unlikely	Minor	N	As the project does not support habitat for this species and unlikely to have a significant impact, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
Osprey	Osprey ( <i>Pandion haliaetus</i> ) is generally found in coastal areas, particularly in the north of Australia, though will occasionally travel inland following major rivers. However, as they require extensive areas of open water for foraging, they are not considered likely to occur within the Project Area (Australian Gov't 2015b, cited in Umwelt, March 2017, p77). The last record from COG of the species within the ACT region is from Googong Dam in 2013 (COG 2015a, cited in Umwelt, March 2017, p77).	Unlikely	Minor	N	As the project does not support habitat for this species and unlikely to have a significant impact, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	N
Yellow wagtail	Yellow wagtail ( <i>Motacilla flava</i> ) is considered to be an extremely uncommon migrant to Australia, being noted as a vagrant in southern NSW. Whilst a majority of the continent is mapped as habitat for the species, the nearest sightings to the Project Area are from the Sydney and Melbourne regions (Australian Gov't 2015c, cited in Umwelt, March 2017, p77-78). COG does not have any records of yellow wagtail within the ACT (COG 2015b, cited in Umwelt, March 2017, p77-78). It is, therefore, considered unlikely to occur within the Project Area.	Unlikely	Minor	N	As the project is unlikely to have a significant impact on the species, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	N
Curlew sandpiper Eastern curlew/far eastern curlew	Both curlew sandpiper ( <i>Calidris ferruginea</i> ) and eastern curlew ( <i>Numenius madagascariensis</i> ) have primarily coastal distributions. When recorded inland, both species prefer large lakes with mudflats for foraging. These are not found within the Project Area, with the nearest being at Lake George and Lake Bathurst to the north-east (Australian Gov't 2015b, cited in Umwelt, March 2017 p78). No habitat for these species exists within the Project Area.	Unlikely	Minor	N	As the project does not support habitat for this species and unlikely to have a significant impact, no further impact assessment or mitigation measures are proposed for the species.	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
<b>A THREATENED ECOLOGICAL COMMUNITY</b>								
Yellow box/red gum grassy woodland	<p>Subsequent to the detailed analysis by David Hogg Pty Ltd (2013), KMA (2014) (cited in Umwelt, March 2017, p97) undertook further targeted validation of vegetation boundaries in collaboration with a range of ACT Government specialists; and Umwelt investigated the box gum woodland patches present within the Drake Brockman Drive upgrade area to verify mapping published by the ACT Government on ACTmapi. This resulted in slight amendments to the extent of the woodland community as previously mapped such that a total of 72 hectares is considered to be present within the Project Area. Approximately 3.8 hectares of vegetation assumed to be box gum woodland on a precautionary basis within the Drake Brockman Drive corridor and the remaining 68.2 hectares associated with the west Molonglo component of the Project Area; and excludes the box gum woodland that is present within the Strathnairn property.</p> <p>The box gum woodland present within the road upgrade area is of low quality due to a general absence of non-grass native species diversity, important species, and grass diversity overall. It is comprised of approximately 0.7 hectares of vegetation in a woodland form and the remaining 3.1 hectares as derived native grassland. The apparent connectivity of predominantly native grass areas to other patches as identified by ACTmapi as box gum woodland principally provided the basis for classification of box gum woodland within the Drake Brockman Drive corridor.</p>	Unlikely	Moderate	L	<p>Impacts to box gum woodland within the west Molonglo area will be avoided by inclusion of all existing patches as mapped by KMA (2014) within the WBCC. The WBCC will connect the remnant box gum woodland to forest and woodland patches along the Murrumbidgee River and Ginninderra Creek. Approximately 3.8 hectares of box gum woodland will be directly impacted within the Drake Brockman upgrade area.</p> <p>Impacts (indirect and cumulative) affecting the WBCC as a result of recreational activities, increased public access, and service delivery (e.g. sewerage pipes) will be avoided during the design and planning phase, and mitigated through CEMPs and the WBCC RMP.</p> <p>Indirect impacts to retained box gum woodland from the urban development component of the Program (including the Drake Brockman Drive upgrade) will be mitigated through the implementation of CEMPs, WSUD principles, and the WBCC RMP (for impacts within the WBCC).</p> <p>Actions specific to box gum woodland protection will include:</p> <ul style="list-style-type: none"> <li>• WSUD principles: <ul style="list-style-type: none"> <li>○ Stormwater flow retardation based on geotechnical, surface water, and groundwater assessments to reduce impacts to hydrological systems.</li> </ul> </li> <li>• CEMPs that: <ul style="list-style-type: none"> <li>○ Define clearing procedures and boundaries, including the retention of selected significant trees, clearing outside of threatened bird breeding seasons, and fauna rescue procedures.</li> <li>○ Implement weed management during construction.</li> <li>○ Enforce sediment and erosion controls to prevent site runoff during construction.</li> </ul> </li> <li>• WBCC RMP (applicable to the WBCC patches only): <ul style="list-style-type: none"> <li>○ ongoing habitat improvement;</li> <li>○ ongoing quality monitoring; and</li> <li>○ avoidance of box gum woodland patches.</li> </ul> </li> </ul> <p>These plans will be prepared prior to construction commencing in accordance with relevant guidelines.</p> <p>Facilitated impacts within the WBCC will be avoided or mitigated by the WBCC RMP within an adaptive management framework.</p>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	<p>In the Project Area these threats have arisen from a history of agricultural land use and urban development of areas north of Drake Brockman Drive, and have resulted in a reduced area of occupancy for the community and degradation of the remaining patches. The woodland ranges in quality from moderate / low to high and includes a 7.89 hectare patch with a planted overstorey (David Hogg Pty Ltd 2013, cited in Umwelt, March 2017, p98-99). Also at the far eastern end of the Drake Brockman Drive area adjacent to the William hovel Drive intersection is another example of box gum woodland with a planted tree component.</p> <p>There will be no direct impacts to the box gum woodland that occurs within the west Molonglo area, as per the commitment set out in the Molonglo Strategic Assessment. The road upgrade works to Drake Brockman Drive will impact approximately 3.8 hectares of box gum woodland that occurs along the existing road reserve and within adjacent private properties (Drake Brockman Drive upgrade area).</p> <p>Indirect impacts that may affect retained box gum woodland within the Project Area include</p> <ul style="list-style-type: none"> <li>• edge effects such as weed invasion, and</li> <li>• changes in hydrological conditions that could affect species composition.</li> </ul> <p>Cumulative impacts to retained box gum woodland may arise from increased public access to the WBCC and the introduction of associated services and infrastructure.</p>							

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
	<p>These may lead to:</p> <ul style="list-style-type: none"> <li>• damage to the understorey and regrowth success,</li> <li>• invasive species introduction, and</li> <li>• eutrophication and other pollution.</li> </ul> <p>The provision of visitor infrastructure may also facilitate further impacts in the foreseeable future as it promotes the use of the WBCC for recreational purposes and makes it more accessible to the public; however, these are generally included in the range of activities proposed within the river corridor.</p>							
Natural Temperate Grasslands	<p>Areas of likely natural temperate grassland that are associated with pink-tailed worm-lizard habitat will be assessed under the Defined Process Strategy as defined in the Umwelt report as there is insufficient information regarding the extent and quality of the community in these areas at present.</p> <p>Field research has been completed in depth by SMEC and has identified several small patches of this grassland (SMEC Assessment attached in Attachment G) and figure 8. <b>Error! Reference source not found.</b> This information will provide a basis for the defined process strategy.</p>	Likely	Minimal	L	<p>Areas of likely natural temperate grassland that are associated with pink-tailed worm-lizard habitat will be assessed under the Defined Process Strategy as there is insufficient information regarding the extent and quality of the community in these areas at present.</p> <p>Areas of known natural temperate grassland within the Jarramlee and Macgregor West offset areas were taken into consideration when alignment options for the Ginninderra Drive extension were discussed. As a result, no natural temperate grassland in these areas will be directly impacted by the Program. Indirect impacts will be managed via the implementation of a Construction Environment Management Plan (CEMP) that will control run-off, waste disposal, and weed management. It is, therefore, considered that no further assessment of impacts is necessary for this ecological community.</p> <p>Notwithstanding the absence of natural temperate grassland, areas of the Project Area that support grassy communities of various forms, in some instances still provide important habitat for threatened fauna, in particular golden sun moth.</p>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
<b>2. PROPOSAL FOR DEVELOPMENT IN A RESERVE...</b>								
	<p>The WBCC will be managed as an IUCN Category IV reserve. The primary objective of a reserve managed in accordance with this standard is 'to maintain, conserve and restore species and habitats' (IUCN 201593). The IUCN description of the characteristics of such a reserve note that they are:</p> <ul style="list-style-type: none"> <li>• not strictly protected from human use</li> <li>• aim conservation efforts towards particular species or habitats in a targeted manner</li> <li>• generally associated with landscapes where human pressure is comparatively greater; and</li> <li>• rely on regular management intervention.</li> </ul> <p>Given the intent of an IUCN Category IV reserve is on focussed conservation outcomes whilst not precluding human use, implementation of the WBCC RMP will be used to ensure that wherever practicable, that the avoidance of MNES will be maintained throughout the life of the Program (established as part of the EPBC approval)</p> <p>Where avoidance is not entirely possible such as for walking trail construction or access roads, measures to minimise and mitigate impacts will be implemented such that no net loss of habitat occurs within WBCC. These indirect impacts will be managed through the WBCC RMP</p>	Unlikely	Moderate	L	<p>Management strategies and principles that will be included in the WBCC RMP include:</p> <ul style="list-style-type: none"> <li>• Identification of management zones so that impacts to MNES and their habitats are avoided as far as possible. This includes locating of visitor hubs and access routes in locations where impacts such as habitat fragmentation, isolation, and removal can be avoided.</li> <li>• Ensure that there is no net reduction in total MNES habitat areas. This includes ensuring picnic and other facilities will avoid known habitat areas.</li> <li>• Ensure increased use of the WBCC does not impact upon threatened fish species. This includes implementing: <ul style="list-style-type: none"> <li>○ Controls on recreational fishing such as bag limits, prohibitions on taking certain species, and licensing requirements in line with those that already exist within the ACT and NSW.</li> <li>○ Controls to public access and use of the riparian areas post construction.</li> </ul> </li> <li>• Recognise the importance of enhancing connectivity between MNES habitat areas. In particular, where complete avoidance of habitat for pink-tailed worm-lizard is not possible, roads and tracks will be targeted to poorer quality areas and incorporate raised grating (or similar) to enhance connectivity between habitat patches that they otherwise bisect. The design of such roads and tracks will provide for sufficient height and width considerations to permit adequate vegetation growth beneath the grating to establish suitable conditions so as to enhance connectivity. This will also be incorporated into roads and tracks to be upgraded which presently traverse pink tailed worm-lizard habitat resulting in improved connectivity of habitat beyond the current situation.</li> <li>• Informed infrastructure design based on advice from relevant scientific experts, particularly with regard to protecting and avoiding impacts to MNES and their habitat areas as part of an adaptive approach to the management of ecological values.</li> <li>• Utilisation of existing infrastructure and resources, including the knowledge and experience of existing conservation and land managers. In particular, roads and tracks will follow existing alignments where practicable.</li> </ul>	Remote	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					<ul style="list-style-type: none"> <li>Vehicle track widths will be a maximum of six metres, other tracks and trails a maximum of 2.5 metres with further design considerations that can further reduce widths of roads, for example, passing bays. Unused existing tracks will be rehabilitated to enhance connectivity between habitat areas where they fragment existing habitat paths.</li> <li>Mechanisms that allows for integrated consideration of all values as facilitated through holistic management of the WBCC and associated offsets through the EMT with a clear priority for MNES where appropriate.</li> <li>Consultation and collaboration with community, government, and expert stakeholders.</li> <li>Compliance with legislative requirements</li> <li>An adaptive management process based on monitoring regime that will address cumulative impacts and changing knowledge frameworks in future planning and management actions.</li> <li>Prohibition of 'off-leash' dog areas within the WBCC.</li> </ul>			
<b>3. PROPOSAL THAT IS LIKELY TO HAVE A SIGNIFICANT ADVERSE IMPACT ON THE HERITAGE SIGNIFICANCE OF A PLACE OR OBJECT</b>								
Aboriginal heritage	Disturbance to existing heritage sites	Possible	Moderate	M	<p>None of the sites identified within the Waters consultancy report will be impact upon, and recommendations identified in the report will be carried out as development occurs.</p> <p>In the Biosis report it identifies the types of activities that will impact the ground surface and sub-soils including excavation of infrastructure such as drainage, sewerage, communication and roads; and foundations trenches for residual structures. Lesser impact activities include the establishment of public open space and establishment of vegetation.</p> <p>As each of the stages occur, a SHE will be carried out to determine whether there will be any potential impacts from proposed development. As there are no designs for future stages yet, this cannot yet be determined.</p>	Remote	Minimal	N
	Discovery of unexpected finds	Possible	Moderate	M	<p>An unexpected discovery of isolated finds is outlined in the Biosis report which identifies the following is to occur:</p> <ol style="list-style-type: none"> <li>1. Work must immediately stop in the area within a buffer zone of 20 metres from the primary grid coordinate.</li> <li>2. ACT Heritage (132281) must be informed of the suspected find within 5 working days.</li> </ol>	Remote	Minimal	

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					3. A suitably qualified heritage advisor and the RAOs for the ACT need to be engaged to assess the potential site. 4. If the items are not considered to be Aboriginal, activity may recommence. 5. If the items are considered to be Aboriginal, the Proponent, archaeologist and RAOs will discuss the possibility of avoiding and minimising harm to the Aboriginal cultural heritage, and the Proponent must avoid or minimise harm to the Aboriginal cultural heritage, where possible 6. If the items are considered to be Aboriginal, an assessment report or letter of advice, will need to be prepared and submitted to the Heritage Council. After approval from the Heritage Council, the artefacts should be recorded and salvaged. 7. Following completion of the recording and salvage, the activity may then recommence.			

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
European Heritage	Impact on European Heritage listed sites	Unlikely	Minor	N	Both reports identified there is no part of the Parkwood land that meets the threshold of satisfying any of the criteria for listing on the ACT Heritage register. Both European Heritage reports identify elements of European heritage which could be maintained where possible to maintain the history of the area. The Belconnen Farm Precinct will be retained and a Conservation Management Plan has been prepared to manage the site.	Unlikely	Minor	N
<b>4. PROPOSAL INVOLVING LAND INCLUDED ON THE REGISTER OF CONTAMINATED SITES UNDER THE ENVIRONMENT PROTECTION ACT 1997</b>								
Contamination	Potential for more sites to be added onto the register over the life of the project	Possible	Moderate	M	A process has been established for the audit of all blocks in the project. As they are audited they are added to the Register and will then be taken off the register following an audit and EPA approval process.	Possible	Minimal	VL
	Identification of contaminated sites across the Ginninderry project area	Possible	Moderate	M	A process has been established to audit all areas for contamination. This requires any sites identified to be remediated appropriately audited and approved prior to any development occurring	Possible	Minimal	VL
	Discovery of previously unidentified contaminated sites during construction.	Possible	Moderate	M	A process has been established which requires any sites identified to be remediated appropriately prior to any development occurring	Possible	Minimal	VL
<b>5. POTENTIAL IMPACT ON AIR QUALITY</b>								
Air Quality	Potential for impact on air quality through the use of wood fire heater across the development.	Possible	Moderate	M	Wood fire heaters: Studies indicate that under the topography and meteorological conditions, particularly valley drainage flows, expected in the West Belconnen development wood smoke generated within the development will not be a significant issue for the proposed development should appropriate wood heaters be installed. The West Belconnen development is more likely to receive drainage flows from other areas of Canberra and NSW, particularly under inversion conditions but at concentrations that are not judged to be an issue. The valley drainage flows from the project area will flow to the north away from sensitive receptors. Recommendations were provided for consideration for Ginninderry development in regards to woodfire heaters. These include: <ul style="list-style-type: none"> <li>• Wood heater overall efficiency standard of not less than 65%;</li> <li>• Wood heater emissions standard not greater than 1 g/kg;</li> <li>• Education on the use of wood heaters;</li> <li>• Controls on installation and 2<sup>nd</sup>-hand heaters;</li> </ul>	Unlikely	Minimal	N

Specific risk area at West Belconnen	Potential risk/impacts	Likelihood	Consequence	Risk rating	Proposed action/mitigation measures	Likelihood of risk occurring	Consequence	Risk rating
					<ul style="list-style-type: none"> <li>• Encouragement for the use of pellet heaters over standard wood heaters;</li> <li>• Continuation of the ACT Government education and information programs such as the 'Don't Burn Tonight' campaign; and</li> <li>• Continual review of relevant legislation, industry standards and guidelines and documents prepared such as the impending delivery of the National Plan for Clean Air and COAGs response to the Regulation Impact Statement.</li> </ul> <p>The above mitigation measures will be taken into consideration for the Ginninderry development, and it is proposed that appropriate controls will be placed in the Housing Development Guidelines as part of each staged Development, as well considering any legislative requirements which may come into regulation in the future.</p>			
Air Quality	Potential for impact on air quality through vehicle emissions	Possible	Minimal	VL	From air quality assessments, current legislation has been identified as being sufficient to address any potential odour issues associated with vehicle emissions.	Unlikely	Minimal	N
Air Quality	Potential for impact on air quality from bushfires	Possible	Moderate	M	From air quality assessments, current legislation has been identified as being sufficient to address any potential odour issues associated with bushfire emissions.	Possible	Minimal	VL
	Potential impact on air quality from the operation of the green waste facility.	Unlikely	Minor	VL	The Greenwaste Clearance Zone was put in place with the Territory Plan Variation 351. This clearance zone will remain in place until the EPA is satisfied there is no longer a risk. The project is anticipating to move the composting facility further north away from the proposed residential area. This will further minimise odour impacts.	Remote	Minor	N
<b>6. Potential Impacts within the Jaramlee and West Macgregor offset areas</b>								
Golden Sun Moth	<ul style="list-style-type: none"> <li>• Direct impacts include loss of habitat for the species from the proposed Ginninderra Drive extension (1.8ha in total)</li> <li>• Overshadowing of habitat from the proposed bridge structure.</li> <li>• Fragmentation of habitat from the construction of the Ginninderra Drive bridge</li> <li>• Changes to hydrology</li> <li>• Weed invasion and changes to</li> </ul>	Possible	Major	H	<ul style="list-style-type: none"> <li>• Consideration of direct impacts to golden sun moth habitat throughout the design phase of the Ginninderra Drive extension. Mitigation measures which will further protect avoided areas of golden sun moth habitat include:</li> <li>• Detailed design features of the road and bridge including:                             <ul style="list-style-type: none"> <li>○ Measures to reduce water runoff</li> <li>○ Measures to allow adequate solar access to the verges to ensure native grass growth</li> <li>○ Post construction design such as landscaping with native grass species in order to restore golden sun moth habitat to sections that are 'at grade'</li> </ul> </li> </ul>	Unlikely	Moderate	L

	<p>species composition</p> <ul style="list-style-type: none"> <li>• Pollution</li> <li>• Mortality</li> </ul>			H	<ul style="list-style-type: none"> <li>○ Bridge placed at highest practicable height over densest area of golden sun moth to improve willingness of moths to pass underneath it.</li> <li>○ Bridge design will also allow for a clear view of suitable habitat on the other side, and has limited obstacles (i.e. piles spaced at 50m intervals) to entice moths to cross.</li> <li>• Removal of all trees within the areas of the Macgregor offset that currently do not support golden sun moth. The planting of trees in this area has reduced viability of the habitat although the ground layer vegetation in this area retains the necessary native grasses that would otherwise be suitable for golden sun moth. By restoring this area to grassland, the Program seeks to improve the potential for movement across the road. This would occur prior to construction commencing.</li> <li>• CEMP's implemented during the construction phase of the Ginninderra Drive extension, which include the following measures that are specific to golden sun moth:             <ul style="list-style-type: none"> <li>○ Erosion and sediment control</li> <li>○ Fencing to ensure avoidance of retained areas of habitat</li> <li>○ Flow controls; and</li> <li>○ Weed management actions such as vehicle hygiene standards to ensure the control of the spread of weeds.</li> </ul> </li> </ul>				
<b>7. Potential Impacts by construction of sewer tunnel</b>									
	<ul style="list-style-type: none"> <li>• Direct impacts include potential loss of golden sun moth habitat and disturbance of existing heritage sites from the proposed Sewer Tunnel</li> </ul>	Possible	Major	H	<p>Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• The final alignment of this northern section of sewer tunnel is to be determined and informed by more detailed design and mitigation measures as deemed necessary.</li> <li>• The proposed tunnel will be in sections up to 20m in depth.</li> <li>• The tunnelling will not impact on the surface / sub-surface environs.</li> <li>• The location of manhole shafts will be coordinated to avoid environmental and heritage sensitive areas.</li> <li>• When development progresses to a stage where the future sewer tunnel is required to service development a detailed servicing plans and updated environmental studies (as appropriate) will be prepared and submitted with any proposal for staged development EDP.</li> </ul>	Unlikely	Moderate	L	

9. Potential Impacts of the proposed development on the Murrumbidgee River								
	<p>The WBCC will be managed as an IUCN Category IV reserve. The primary objective of a reserve managed in accordance with this standard is 'to maintain, conserve and restore species and habitats' (IUCN 201593). The IUCN description of the characteristics of such a reserve note that they are:</p> <ul style="list-style-type: none"> <li>not strictly protected from human use</li> <li>aim conservation efforts towards particular species or habitats in a targeted manner</li> <li>generally associated with landscapes where human pressure is comparatively greater; and</li> <li>rely on regular management intervention.</li> </ul> <p>Given the intent of an IUCN Category IV reserve is on focussed conservation outcomes whilst not precluding human use, implementation of the WBCC RMP will be used to ensure that wherever practicable, that the avoidance of MNES will be maintained throughout the life of the Program (established as part of the EPBC approval)</p> <p>Where avoidance is not entirely possible such as for walking trail construction or access roads, measures to minimise and mitigate impacts will be implemented such that no net loss of habitat occurs within WBCC. These indirect impacts will be managed through the WBCC RMP</p>	Possible	Major	H	<p>Management strategies and principles that will be included in the WBCC RMP include:</p> <ul style="list-style-type: none"> <li>Identification of management zones so that impacts to MNES and their habitats are avoided as far as possible. This includes locating of visitor hubs and access routes in locations where impacts such as habitat fragmentation, isolation, and removal can be avoided.</li> <li>Ensure that there is no net reduction in total MNES habitat areas. This includes ensuring picnic and other facilities will avoid known habitat areas.</li> <li>Ensure increased use of the WBCC does not impact upon threatened fish species. This includes implementing:                             <ul style="list-style-type: none"> <li>Controls on recreational fishing such as bag limits, prohibitions on taking certain species, and licensing requirements in line with those that already exist within the ACT and NSW.</li> <li>Controls to public access and use of the riparian areas post construction.</li> </ul> </li> <li>Recognise the importance of enhancing connectivity between MNES habitat areas. In particular, where complete avoidance of habitat for pink-tailed worm-lizard is not possible, roads and tracks will be targeted to poorer quality areas and incorporate raised grating (or similar) to enhance connectivity between habitat patches that they otherwise bisect. The design of such roads and tracks will provide for sufficient height and width considerations to permit adequate vegetation growth beneath the grating to establish suitable conditions so as to enhance connectivity. This will also be incorporated into roads and tracks to be upgraded which presently traverse pink tailed worm-lizard habitat resulting in improved connectivity of habitat beyond the current situation.</li> <li>Informed infrastructure design based on advice from relevant scientific experts, particularly with regard to protecting and avoiding impacts to MNES and their habitat areas as part of an adaptive approach to the management of ecological values.</li> <li>Utilisation of existing infrastructure and resources, including the knowledge and experience of existing conservation and land managers. In particular, roads and tracks will follow existing alignments where practicable.</li> <li>Vehicle track widths will be a maximum of six metres, other tracks and trails a maximum of 2.5 metres with further design considerations that can further reduce widths of roads, for example, passing bays. Unused existing tracks will be rehabilitated to enhance connectivity between habitat areas where they fragment existing habitat paths.</li> <li>Mechanisms that allows for integrated consideration of all</li> </ul>	Unlikely	Moderate	L

					<p>values as facilitated through holistic management of the WBCC and associated offsets through the EMT with a clear priority for MNES where appropriate.</p> <ul style="list-style-type: none"> <li>• Consultation and collaboration with community, government, and expert stakeholders.</li> <li>• Compliance with legislative requirements</li> <li>• An adaptive management process based on monitoring regime that will address cumulative impacts and changing knowledge frameworks in future planning and management actions.</li> <li>• Prohibition of 'off-leash' dog areas within the WBCC.</li> </ul>			
<b>6. Potential Impacts on existing businesses and infrastructure</b>								
	Disturbance to existing businesses and infrastructure due to the introduction of residential development.	Possible	Major	H	<p>As part of the Territory Plan Variation #351, clearance zones are applied via the West Belconnen Precinct Code that protect each of the following adjoining activities</p> <ul style="list-style-type: none"> <li>• There is a 2.45km clearance zone from the Lower Molonglo Water Quality Control Centre (LMWQCC) in which no new uses are permitted other than development which is compatible with and does not have adverse impact to the treatment plant. The Precinct Code prohibits any new residential, community or other sensitive uses with the LMWQCC clearance zone.</li> <li>• There is a 750m Egg Farm clearance zone from Parkwood Eggs that prohibits any new residential, community or other sensitive uses with the clearance zone.</li> <li>• There is an 800m Pond and Wetland clearance zone from Parkwood Eggs that prohibits any new ponds, wetland and the like, within 800m of the buildings housing poultry without the endorsement of the EPA</li> <li>• There is a 500m clearance zone from the Belconnen Landfill Site that prohibits any new residential, community or other sensitive uses with the clearance zone.</li> <li>• There is a 1000m clearance zone from the existing Green Waste facility at Belconnen that prohibits any new residential, community or other sensitive uses with the clearance zone.</li> </ul> <p>The size of the clearance zone may only be adjusted subject to an appropriate independent audit process and approval of the Environment Protection Authority and where applicable Icon Water.</p>	Unlikely	Minimal	N
<b>7. ITEM 2 (a) – CLEARING OF MORE THAN 0.5 HA OF NATIVE VEGETATION - (OTHER THAN A FUTURE URBAN AREA)</b>								
Native vegetation	The road upgrade works to Drake Brockman Drive will impact approximately 3.8 hectares of native vegetation (in the form of box gum woodland) that occurs along the existing road reserve and within adjacent private properties (Drake	Likely	Moderate	H	<p>Mitigation measures specific to native vegetation protection will include:</p> <ul style="list-style-type: none"> <li>• WSUD principles: <ul style="list-style-type: none"> <li>○ Stormwater flow retardation based on geotechnical, surface water, and groundwater assessments to reduce impacts to hydrological systems.</li> </ul> </li> </ul>	Likely	Minimal	N

	<p>Brockman Drive upgrade area).</p> <p>Indirect impacts that may affect retained native vegetation box gum woodland within the Project Area include edge effects, weed invasion, and changes in hydrological conditions that could affect species composition.</p> <p>Cumulative impacts to retained box gum woodland may arise from increased public access to the WBCC and the introduction of associated services and infrastructure. These may lead to damage to the understorey and regrowth success, invasive species introduction, and eutrophication and other pollution. The provision of visitor infrastructure may also facilitate further impacts in the foreseeable future as it promotes the use of the WBCC for recreational purposes and makes it more accessible to the public; however, these are generally included in the range of activities proposed within the river corridor.</p>			H	<ul style="list-style-type: none"> <li>• CEMPs that:                             <ul style="list-style-type: none"> <li>○ Define clearing procedures and boundaries, including the retention of selected significant trees, clearing outside of threatened bird breeding seasons, and fauna rescue procedures.</li> <li>○ Implement weed management during construction.</li> <li>○ Enforce sediment and erosion controls to prevent site run-off during construction.</li> </ul> </li> <li>• WBCC RMP (applicable to the WBCC patches only):                             <ul style="list-style-type: none"> <li>○ ongoing habitat improvement;</li> <li>○ ongoing quality monitoring; and</li> <li>○ avoidance of box gum woodland patches.</li> </ul> </li> </ul>				
<b>6. ITEM 2 (b) – CLEARING OF MORE THAN 5.0 HA OF NATIVE VEGETATION – (IS A FUTURE URBAN AREA)</b>									
Native Vegetation	<p>3.1 ha of Natural Temperate Grassland has been recognised by SMEC (2018) Ginninderry Natural Temperate Grassland Assessment Summary Appendix E – areas of natural temperate grassland that are associated with pink tailed worm lizard habitat will be assessed under the Defined Process Strategy as defined in the Umwelt report and under the EPBC Approval.</p> <p>0.28 hectares of forest and woodland (not box gum woodland) associated with sewer infrastructure installation, as recognised by Umwelt (2017) <i>West Belconnen Project Strategic Assessment, Strategic Assessment Report</i>.</p> <p>Potential Impacts</p> <ul style="list-style-type: none"> <li>• Future infrastructure provision and maintenance activities</li> </ul>	Likely	Moderate	H	<p>Areas of likely natural temperate grassland that are associated with pink-tailed worm-lizard habitat will be assessed under the Defined Process Strategy as there is insufficient information regarding the extent and quality of the community in these areas at present.</p> <p>Mitigation measures associated with sewer infrastructure installation include:</p> <ul style="list-style-type: none"> <li>• The final alignment of this northern section of sewer tunnel is to be determined and informed by more detailed design and mitigation measures as deemed necessary.</li> <li>• The proposed tunnel will be in sections up to 20m in depth.</li> <li>• The tunnelling will not impact on the surface / sub-surface environs.</li> <li>• The location of manhole shafts will be coordinated to avoid environmental and heritage sensitive areas.</li> <li>• When development progresses to a stage where the future sewer tunnel is required to service development a detailed servicing plans and updated environmental studies (as appropriate) will be prepared and submitted with any proposal</li> </ul>	Remote	Very low	M	

	<ul style="list-style-type: none"><li>• Edge effects such as weed invasion,</li><li>• Changes to hydrological conditions,</li><li>• Pollution,</li><li>• Sedimentation and erosion.</li></ul>				for staged development EDP.			
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