



1 May 2023

Imogen Featherstone
Project Planning Manager
Ginninderry
The Link, 90 Stockdill Drive
Holt, ACT, 2615
P: 1800 316 900
M: 0428 246 341
E: imogen@ginninderry.com

Riverside Park, Ginninderry, ACT – Ecological Impact Assessment and Defined Process Strategy

Capital Ecology project no. 3170

Dear Imogen Featherstone,

This letter provides an Ecological Impact Assessment (EIA) and applies the Defined Process Strategy for the 'proposed development' of the Riverside Park, and associated infrastructure, to support the recreational and social needs of the adjacent urban area. The proposed development is located in the Ginninderry Conservation Corridor (GCC) on Part Blocks 2 and 5 Section 37 Strathnairn, Part Block 1 Section 3 Macnamara, and Part Block 1640 Belconnen (Figure 1 and Figure 2).

In 2017, Riverview Projects and the Commonwealth Government commenced a **Strategic Assessment**¹ under Part 10 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The focus of the Strategic Assessment was to assess the potential impacts from development of the Ginninderry project area on Matters of National Environmental Significance (MNES) protected under the EPBC Act, but also included consideration of ACT and NSW protected matters. Following endorsement of the **Program Report**² Riverview received **EPBC Act Approval**³ to implement the staged development of the project. Attached to the approval are 20 conditions, many of which relate to the GCC. A number of documents have subsequently been developed to address the conditions of approval

¹ Umwelt (2017). *West Belconnen Project Strategic Assessment. Strategic Assessment Report. Final*. Prepared by Umwelt (Australia) Pty Ltd on behalf of Riverview Projects Pty Ltd. Report No. 8062_R01_V8, March 2017.

² A T Adams Consulting (2017). *Urban Development at West Belconnen. Program Report*. Prepared for: Riverview Projects (ACT) Pty Ltd, 18 April 2017.

³ Australian Government (2017). *Urban Development at West Belconnen (Ginninderry) – SA.024 – Final approval decision for the taking of actions in accordance with an endorsed program under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. Signed K. Farrant on 1 September 2017.

We acknowledge the Traditional Custodians of the land on which we work. We pay our respects to Elders past and present.

Capital Ecology Pty Ltd

PO Box 854
Gungahlin ACT 2912

ACN: 607 364 358
ABN: 50 607 364 358

Phone: 0412 474 415
Email: admin@capitalecology.com.au

www.capitalecology.com.au

relating to the GCC, including the **Ginninderry Conservation Corridor Management Plan**⁴ and associated **Ginninderry Development Offset Management Plan**⁵. In combination, these documents address many aspects related to the management of the GCC, including actions covered by the EPBC Act approval such as *'recreation and tourist facilities including buildings, picnic areas, car parking and access roads and walking and cycling tracks'*.

As the proposed development is located in the ACT it is also subject to ACT legislation. On 9 March 2018, Riverview formally lodged an application for an **Environmental Impact Statement (EIS) Exemption**⁶ under Section 211 of the *Planning and Development Act 2007* (P&D Act). The EIS Exemption, including a number of conditions, was granted by the Minister for Planning and Land Management on 24 October 2018. The proposed activities included *'recreation and tourist facilities including buildings, picnic areas, car parking and access roads and walking and cycling tracks'*.

The proposed development of the Riverside Park and associated access road is therefore an approved action that must comply with all of the conditions associated with the Commonwealth and ACT planning and environmental approvals. As such, the key aim of this EIA is to identify and assess the likely impacts of the proposed development upon habitat for terrestrial flora and fauna species and ecological communities listed as threatened under EPBC Act and/or the *ACT Nature Conservation Act 2014* (NC Act) and ensure that those impacts are compliant with all relevant legislation, regulations, and existing approvals and conditions. In addition to the above, this EIA also assesses the proposed development in full against all relevant ACT legislation and regulations.

1. Scope

This EIA is restricted to the analysis of impacts associated with the proposed development of the Riverside Park and associated access road in the GCC. It has been developed with reference to existing ecological reports and addresses the relevant conditions associated with the planning and environmental approvals. This EIA is separated into the following sections.

- **Section 2** identifies the relevant conditions associated with the planning and environmental approvals for the proposed development in the GCC.
- **Section 3** lists the ecological reports this EIA relies on to assess the impact of the proposed development on ecological values in the GCC.
- **Section 4** describes the proposed development.
- **Section 5** outlines the measures implemented to avoid and minimise impacts on ecological values.
- **Section 6** details the impact that the proposed development will have on ecological values in the GCC.
- **Section 7** outlines the minimisation and mitigation measures implemented to reduce unavoidable residual impacts on ecological values.

⁴ Ginninderry (2018). *Ginninderry Conservation Corridor 2018 – 2023 Management Plan*. September 2018.

⁵ SMEC (2018). *Ginninderry Development Offset Management Plan*. Prepared for Riverview Projects (ACT) Pty Ltd, 5 October 2018. Reference No: 3002638.

⁶ Riverview Projects (ACT) Pty Ltd. *Ginninderry Stage 2 Urban Development. Application for EIS Exemption. Consideration Report*. September 2018. Ref no: 201800010

- **Section 8** identifies the appropriate offsets in the GCC to offset the unavoidable residual impacts on MNES.
- **Section 9** assesses the significance of the residual impacts of the proposed development on ecological values.
- **Section 10** assesses the proposed development against the relevant Commonwealth and ACT legislation.

2. Conditions associated with existing planning and environmental approvals

As mentioned above, the proposed development in the GCC is subject to multiple layers of planning and environmental approvals. As a result, the conditions that the proposed development in the GCC must comply with are spread across a variety of documents, specifically the Strategic Assessment, Program Report, EPBC Act Approval, EIS Exemption, Ginninderry Conservation Corridor Management Plan, Ginninderry Development Offset Management Plan, and **Trail Masterplan**⁷ (the full reference for most of these documents is given in the footer of previous pages of this EIA).

The proposed development in the GCC must identify any impacts to MNES and/or NC Act listed matters and review those impacts against the relevant legislation, regulations, planning approvals, environmental approvals, and associated conditions.

Appendix A reconciles the various conditions associated with the above-mentioned documents and is referred to throughout this EIA in order to demonstrate compliance. In some instances, the exact wording of conditions in Appendix A has been altered in order to consolidate related conditions from different documents, improve understanding, and streamline an assessment of compliance. Reference should be made to the above-mentioned documents for the exact wording of conditions. It is important to note that many of the conditions in Appendix A are specific to works taking place in the GCC. These have been clearly identified by including 'in the GCC' in the text of the condition.

Appendix B reproduces '*Table 5. Conditions for development approval*' of the EIS Exemption. The conditions in Appendix B are considered by the ACT Planning and Land Authority when assessing a proposed development for approval.

⁷ Canberra Town Planning (2016). *Trail Masterplan West Belconnen Conservation Reserve*. Prepared for Riverview Projects, June 2016.

2.1 The Defined Process Strategy

An important condition associated with development in the Ginninderry project area is the application of the Defined Process Strategy. As stated in the Program Report, the Defined Process Strategy will be implemented when either of the following occurs:

- *“Proposal to develop any area dominated by native grasses that is part of a larger patch of native grassland which includes high or moderate quality pink-tailed worm-lizard habitat as mapped by Osborne and Wong (2013⁸)⁹; or*
- *Additional servicing or infrastructure requirements within the GCC that impact MNES beyond what is already described by the program.”*

In other words, the Defined Process Strategy will be implemented for a proposal to develop an area that may meet the listing criteria of Natural Temperate Grassland of the South Eastern Highlands (NTG-SEH), or to assess impacts on MNES in the GCC when the design for infrastructure substantially changes.

“In these instances, the Defined Process will provide the Commonwealth with the confidence that impacts to MNES from actions outside of those specified in the program will be consistently and appropriately assessed and managed. In achieving this outcome, the relevant conservation advice, recovery plans, significant impact assessment guidelines, and offset policy under the EPBC Act will be applied in order to ensure a consistent outcome for MNES across the implementation of the program. In summary, the Defined Process relating to MNES in the project area is as follows:

1. *Where development within the project area triggers the need to implement the Defined Process Strategy, assess the impact of the proposed development using data collected from site-based, field verified surveys that are consistent with EPBC Guidelines.*
2. *Implement avoidance and mitigation measures to the greatest extent practicable through design.*
3. *Determine offset requirements for any residual impacts using the criteria outlined above and applied in assessment of the program.*
4. *Identify an appropriate offset and establish according to the relevant State or Territory jurisdiction.*
5. *Prepare and implement an offset management plan either for incorporation into the Ginninderry Conservation Corridor Management Plan or as a stand-alone plan in the instance that the offset cannot be collocated in or adjoining the GCC. Any management plan will include all aspects that apply to other MNES such as adaptive management and ensuring delivery of the offset and environmental values in perpetuity.”*

⁸ Osborne and Wong (2013). *The extent of habitat for the vulnerable Pink-tailed Worm Lizard (Aprasia parapulchella) in the West Belconnen – Ginninderra Creek investigation area – confirmatory distribution surveys and mapping*. Report commissioned by The Riverview Group Pty Ltd, 10 May 2013.

⁹ In the absence of accurate mapping of the occurrence of Natural Temperate Grassland of the South Eastern Highlands (NTG-SEH) in the GCC, the “area dominated by native grasses that is part of a larger patch of native grassland which includes high or moderate quality pink-tailed worm-lizard habitat” was used as a surrogate for the area likely to meet the definition for the ecological community listed as critically endangered under the EPBC Act in 2016.

2.2 Application of the Defined Process Strategy to the proposed development

As mentioned previously, the planning and environmental approvals provide for the proposed development in the GCC. However, the following is noted regarding the application of the Defined Process Strategy for the proposed development.

1. The proposed development will impact areas that meet the listing criteria of NTG-SEH. The Defined Process Strategy must therefore be implemented for the proposed impact upon NTG-SEH.
2. The development of 'recreation and tourist facilities including buildings, picnic areas, car parking and access roads and walking and cycling tracks' is specifically included in 's3.1 Summary of Actions' of the Program Report. In addition, the West Belconnen **Landscape and Open Space Strategy**¹⁰ is referenced in 's3.6.2 Conservation Corridor access and activity nodes' of the Program Report. Pages 58 to 68 of The Landscape and Open Space Strategy detail the following pertinent information.

'The second vehicular access point will be to the main recreation area, which is described below. This road will also utilise the alignment of an existing vehicle track, however providing public access will require widening to approximately 6m and sealing of the road. This trail will also enable fire fighting and management access to the corridor. This trail traverses a section of lizard habitat and will require detailed planning to ensure impacts are appropriately managed...

The river recreation area will be located in the ACT portion of the corridor. This area is identified in the NCP, shown opposite, and will provide a valuable resource for all Canberrans. The area will be accessible by road with a parking area catering for approximately 75 vehicles. The recreation area will enable local residents and the wider community to engage with the river at the heart of the conservation area. Proposed recreation activities are to include picnic facilities, interpretive play and free play areas and educational elements regarding the surrounding landscape. Due to limited ability to provide utilities to the site, composting toilets will be utilised. The recreation area will also provide a base for excursions into the Conservation Corridor and beyond.

Due to the steep topography and natural features of the site, access to the river's edge will be provided via a loop trail which will traverse the steep banks down to the river. This trail will enable interaction with the river's edge at points where the existing vegetation, particularly the River Oaks, will not be detrimentally impacted.

A deck structure is proposed to enable all users to engage with the River. The deck extends out over the steep bank to a height of approximately 10m. It is aligned with the confluence of the Murrumbidgee and Darling Rivers on the NSW/VIC border approximately 528km to the west. The deck will provide views up and down the river corridor and will be accessible to wheelchairs. Interpretive and educational signage outlining various aspects of the River including its cultural significance to indigenous and non-indigenous peoples will also be incorporated.'

¹⁰ McGregor and Coxall (2014). *West Belconnen Landscape and Open Space Strategy*. Prepared for Riverview Projects [ACT] Pty Ltd & ACT Land Development Agency. Final, 11 June 2014.

Accordingly, the proposed development (i.e. the development of Riverside Park and associated infrastructure in the GCC) is described by the program, and thus it is not “Additional servicing or infrastructure requirements within the GCC that impact MNES beyond what is already described by the program”. Therefore, the Defined Process Strategy is not triggered for the proposed development due to impacts to other MNES (i.e. Pink-tailed Worm-lizard habitat or Box-Gum Woodland).

In light of the above, the impact of the proposed development on NTG-SEH must be assessed via the Defined Process Strategy. With reference to Appendix A, where triggered the application of the Defined Process Strategy addresses **Conditions 1.1, 1.3, 8.3, and 8.4.**

3. Ecological reports used in this EIA to assess the impacts of the proposed development on ecological values

A large body of work exists in relation to the ecological values of the Ginninderry project area (i.e. the Ginninderry development area and GCC), the threats to those values, and their management needs.

Table 1 lists the ecological reports this EIA has considered when assessing the direct impact, and the potential indirect impacts, of the proposed development on ecological values in the GCC. Figures 3 to 7 include results from those reports on recent aerial imagery.

While some of the reports are several years old, they remain valid as they were performed by suitably qualified individuals, the methods employed adhered to the relevant recognised guidelines, and the ecological values are unlikely to have changed substantially in extent or quality over the ensuing years.

In combination, the ecological reports listed in Table 1 provide an in-depth analysis of the ecological values in the Ginninderry project area. Sufficient information therefore exists to determine the impact of the proposed development in the GCC. With reference to Appendix A, this addresses **Conditions 1.3 and 3.1.**

Table 1. Relevant ecological reports of MNES in the GCC

MNES	Ecological Report
Box-Gum Woodland	Kevin Mills & Associates (2009a) ¹¹ , David Hogg Pty Ltd (2013) ¹² , Kevin Mills & Associates (2014) ¹³ , Capital Ecology (2022a) ¹⁴ , and Capital Ecology (2022b) ¹⁵ .

¹¹ Kevin Mills & Associates (2009a). *West Belconnen Project. ACT and NSW Land. Flora and Fauna Studies.* Prepared for CB Richard Ellis Pty Limited, January.

¹² David Hogg Pty Ltd (2013). *West Belconnen Woodland Areas: Confirmatory Ecological Assessment.* Prepared for The Riverview Group, Canberra.

¹³ Kevin Mills & Associates (2014). *Ecological Studies. West Belconnen. Australian Capital Territory.* Prepared for the Riverview Group, June.

¹⁴ Capital Ecology (2022a). *The Extent and Condition of Woody Vegetation Communities in the Ginninderry Conservation Corridor, ACT.* March 2022. Prepared for the Ginninderry Conservation Trust. Authors: C. Ross and R. Speirs. Project no. 2985.

¹⁵ Capital Ecology (2022b). *Ginninderry, NSW – Stage 1 Biodiversity Assessment Method assessment, summary of methods and results.* 4 February 2022. Prepared for the Riverview Group Pty Ltd. Project no. 2987.

MNES	Ecological Report
Natural Temperate Grassland	Sharp (2015) ¹⁶ , Robert Jessop Pty Ltd (2015) ¹⁷ , Robert Jessop Pty Ltd and SMEC (2017) ¹⁸ , SMEC (2017a) ¹⁹ , SMEC (2017b) ²⁰ , Sharp (2017) ²¹ , and Capital Ecology (2020) ²² .
Pink-tailed Worm-lizard	Osborne and Wong (2013), Capital Ecology (2018a) ²³ , Capital Ecology (2018b) ²⁴ , and Capital Ecology (2019) ²⁵ .
Threatened Birds	Geoff Butler and Associates (2000) ²⁶ , Kevin Mills & Associates (2009a), Kevin Mills & Associates (2013a) ²⁷ , Kevin Mills & Associates (2013b) ²⁸ , Kevin Mills & Associates (2014), and Capital Ecology (2021a) ²⁹ .
Threatened Flora	Geoff Butler and Associates (2000), Kevin Mills & Associates (2009a), Kevin Mills & Associates (2009b) ³⁰ , Kevin Mills & Associates (2013a), David Hogg Pty Ltd (2013), and Kevin Mills & Associates (2014).

3.1 Identified significant ecological values

The reports summarised in Table 1 have identified the following significant ecological values in or adjacent to the GCC.

- 60.2 ha of *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland* (EPBC Act critically endangered, NC Act endangered), commonly known as EPBC Act Box-Gum Woodland.
- 44.5 ha of Natural Temperate Grassland of the South Eastern Highlands (EPBC Act critically endangered, NC Act endangered).
- 167.5 ha of Pink-tailed Worm-lizard *Aprasia parapulchella* habitat (EPBC Act and NC Act vulnerable).

¹⁶ Sharp (2015). *Procedures Manual Baseline Condition Assessment*. March 2015

¹⁷ Robert Jessop Pty Ltd (2015). *West Belconnen vegetation survey summary*. Report prepared for The Riverview Group. Robert Jessop Pty Ltd, Cook, ACT

¹⁸ Robert Jessop Pty Ltd and SMEC (2017). *West Belconnen Vegetation Survey Summary. 2017 Update*. Report prepared by Robert Jessop Pty Ltd in association with SMEC Australia Pty Ltd for Riverview Group, Canberra

¹⁹ SMEC (2017a). *Assessment of mapped pink-tailed worm lizard habitat within Ginninderry for potential to meet criteria for classification as natural temperate grassland*. 18 January 2017.

²⁰ SMEC (2017b). *Assessment of mapped pink-tailed worm lizard habitat within Ginninderry for potential to meet criteria for classification as natural temperate grassland*. 27 September 2017.

²¹ Sharp, S. (2017). *Ginninderry conservation zone vegetation unit descriptions*. Report prepared for The Riverview Group. S. Sharp, Canberra, ACT.

²² Capital Ecology (2020). *The extent and condition of the Natural Temperate Grassland of the South Eastern Highlands in the Ginninderry Project Area*. Final 02, July 2020. Project No. 2916.

²³ Capital Ecology (2018a). *Ginninderry – Pink-tailed Worm-lizard survey and habitat mapping*. Project 2772. 2018.

²⁴ Capital Ecology (2018b). *Ginninderry – Pink-tailed Worm-lizard survey and habitat mapping of NSW land*. Project 2842. 23 November 2018.

²⁵ Capital Ecology (2019). *Ginninderry – Pink-tailed Worm-lizard survey and habitat mapping*. Project 2866. 2019.

²⁶ Geoff Butler and Associates (2000). *The Revegetation of Ginninderra Creek Between Barton Highway and Macgregor, ACT*. Prepared for Canberra Urban Parks and Places, Canberra

²⁷ Kevin Mills & Associates (2013a). *West Belconnen Project. NSW Land. Flora and Fauna Studies*. Report prepared for The Riverview Group, September.

²⁸ Kevin Mills & Associates (2013b). *West Belconnen Project. ACT and NSW Land. Targeted Bird Surveys*. Report prepared for The Riverview Group, September.

²⁹ Capital Ecology (2021a). *Targeted Superb Parrot surveys in portions of the Ginninderry development area*. Project No. 3006. 15 March 2021.

³⁰ Kevin Mills & Associates (2009b). *Further Flora and Fauna Studies, Land at West Molonglo and Ginninderra Creek, New South Wales, Australian Capital Territory*. Report prepared for The Riverview Group, July.

- Habitat for threatened birds, specifically the EPBC Act and/or NC Act listed Gang-gang Cockatoo *Callocephalon fimbriatum* (EPBC Act endangered), Varied Sittella *Daphoenositta chrysoptera* (NC Act vulnerable), Little Eagle *Hieraetus morphnoides* (NC Act vulnerable), White-winged Triller *Lalage tricolor* (NC Act vulnerable), Rainbow Bee-eater *Merops ornate*, Scarlet Robin *Petroica boodang* (NC Act vulnerable), Superb Parrot *Polytelis swainsonii* (EPBC Act and NC Act vulnerable), Rufous Fantail *Rhipidura rufifrons*, and Australian Painted Snipe *Rostratula australis* (EPBC Act and NC Act endangered). Important habitat for these species is largely restricted to the more intact vegetation in the GCC.
- Habitat for threatened invertebrates, specifically Perunga grasshopper *Perunga ochracea* (NC Act vulnerable).
- Threatened flora, specifically Pale Pomaderris *Pomaderris pallida* (EPBC Act and NC Act vulnerable) and several other species considered significant by the ACT Government (i.e. Small Crowea *Crowea exalata* subs. *exalata*, Currawong *Acacia doratoxylon*, Varnish Wattle *Acacia verniciflua*, and Black Cypress Pine *Callitris endlicheri*).
- Habitat for EPBC Act and/or NC Act threatened fish and arthropods in the Murrumbidgee River and Ginninderra Creek, including Murray Cod *Maccullochella peelii peelii*, Macquarie Perch *Macquaria australasica*, Trout Cod *Maccullochella macquariensis*, and Murray River Crayfish *Euastacus armatus*.

In addition, while they have not been recorded, several other threatened or 'rare and uncommon' flora and fauna species have been assessed as having the potential to occur in the GCC, including the following.

- Murrumbidgee Bossiaea *Bossiaea grayi* (NC Act endangered), Hoary Sunray *Leucochrysum albicans* var. *tricolor* (EPBC Act vulnerable), and Austral Toadflax *Thesium australe* (EPBC Act vulnerable).
- Regent Honeyeater *Anthochaera phrygia* (EPBC Act critically endangered, NC Act endangered), Brown Treecreeper *Climacteris picumnus victoriae* (NC Act vulnerable), Painted Honeyeater *Grantiella picta* (EPBC Act and NC Act vulnerable), and Hooded Robin *Melanodryas cucullata* (NC Act vulnerable).
- Spotted-tailed Quoll *Dasyurus maculatus* (EPBC Act endangered, NC Act vulnerable) and Grey-headed Flying-fox *Pteropus poliocephalus* (EPBC Act vulnerable).
- Rosenberg's Monitor *Varanus rosenbergi*.

Figures 3 to 7 show the proposed development and the surrounding areas of EPBC Act Box-Gum Woodland, NTG-SEH, Pink-tailed Worm-lizard habitat, and NC Act 'native vegetation'.

4. Description of the proposed development

Approval is sought for works associated with the construction of Riverside Park on Part Blocks 2 and 5 Section 37 Strathnairn; Part Block 1 Section 3 Macnamara; and Part Block 1640 Belconnen. Such works comprise the:

- construction of site access and vehicular circulation routes extending from McClymont Way;
- construction of an amenities building;
- construction of surface car parking;

- landscaping;
- fencing; and
- associated site works and servicing.

These works align with the definition of parkland and minor road under the Territory Plan.

4.1 Consideration of alternative designs

Riverside Park

A key aspect of the management of the GCC is controlling access and movement of visitors within the GCC. Given that Riverside Park will be one of the main locations through which visitors will enter the GCC, it is therefore considered to be a vital piece of the management infrastructure.

As succinctly summarised in Past Traces (2023)³¹, the design and location of Riverside Park has been considered from the early master planning stages of the Ginninderry development. During that process, it was determined that the location of Riverside Park as presented in this EIA was the only viable option due to the flat topography, its proximity to the Murrumbidgee River, and future connectivity to closely situated urban areas along an existing farm access track; no other site in the GCC was identified that had all three of these attributes. For example, placing Riverside Park in a more distant location far from the early stages of the Ginninderry development would result in limited access to the GCC and greater impacts to retained ecological values (e.g. through a longer access road).

In addition to ecological considerations, the design of Riverside Park has been modified to accommodate some of the significant heritage sites that occur in the GCC. As stated in Past Traces (2023):

'The Riverside Park design has been modified several times to incorporate the heritage assessment findings and views of the RAOs. The ongoing consultations and refinement of the Riverside Park design have resulted in a high degree of modification from the original design to the current design.

Design workshops with RAO participation have been ongoing since 2020 and input has been included with a reduction in built elements, a large conservation area and natural finishes on pathways, play areas and carparks.

The design modifications resulted in an avoidance of harm to the high density areas of site RP1, conservation of 73% of the entire site of RP1 and removal of impacts to site RP2...'

Access Road

Multiple road alignment options were considered during the design phase of the project. Each alignment considered constraints posed by ecological values, heritage values, existing/approved infrastructure, and engineering requirements. While the lower section of the alignment as it heads towards the Murrumbidgee is relatively similar between the considered options, the following two alternate options were considered for the upper section adjacent to the urban areas.

Option 1 is shown in Plate 1 and was discounted for the following reasons.

- In comparison to the alignment as presented in this EIA, Option 1 impacted / damaged a greater number of trees.

³¹ Past Traces (2023). *Riverside Park 1 Recreational Area and Access Road, Ginninderry – Statement of Heritage Effects*. Report Prepared for Riverview Projects Pty Ltd 10/02/2023.

- Option 1 is located on an area of mid slopes considered to hold low potential for unrecorded heritage sites or subsurface deposits.
- The benefit of Option 1 is that the alignment results in minimal impacts to Pink-tailed Worm-lizard as it passes between two patches of habitat.

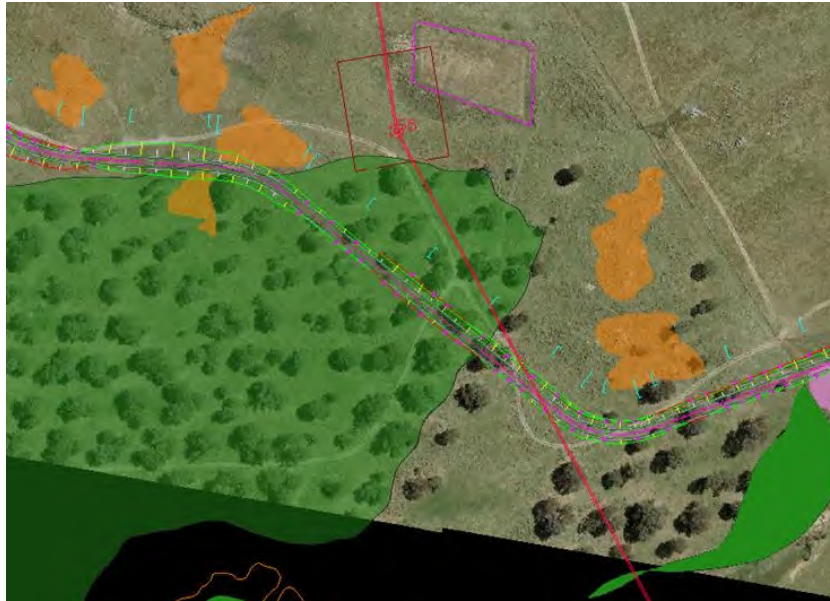


Plate 1. Road alignment Option 1

Option 2 is shown in Plate 2 and was discounted for the following reasons.

- Option 2 runs through an environmental scrape and sowing restoration site (represented by the magenta colour in Plate 2).
- Option 2 runs through the sewer alignment works area (represented by the magenta colour in Plate 2), which must remain clear to enable sewer development and maintenance activities.
- The benefit of Option 2 is that the alignment aids most environmental impacts on adjacent significant ecological values.

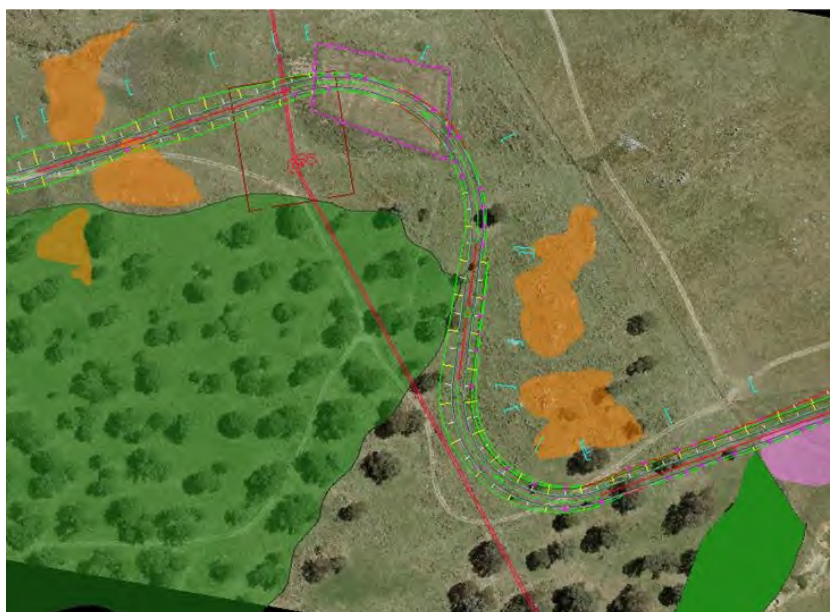


Plate 2. Road alignment Option 2

5. Proposed Measures to avoid and minimise impacts on biodiversity

In addition to the alternate design options discussed in Section 4.1, the final design of the proposed development as presented in this EIA was chosen as it avoided the significant ecological values of the GCC to the greatest extent while still achieving the goal of providing amenity to the Ginninderry urban area. This was achieved by:

- using existing tracks where possible;
- avoiding EPBC Act Box-Gum Woodland, NTG-SEH, and Pink-tailed Worm-lizard habitat where possible;
- altering the alignment of the access road to reduce the impact to Pink-tailed Worm-lizard and NTG-SEH;
- minimising the number of points where Pink-tailed Worm-lizard habitat is traversed;
- minimising vegetation clearance and impacts to remnant trees; and
- designing the access road in order to reduce the amount of required 'cut and fill'.

In addition to the above, the impact of the proposed development will be further minimised by:

- incorporating strategically located habitat crossings to ensure continuity of connection between identified key areas of Pink-tailed Worm-lizard habitat (refer to Figure 6) - these crossings will include suitable surface rock, adequate drainage, and appropriate exposure to natural light; and
- relocating displaced Pink-tailed Worm-lizard habitat rocks to improve connectivity between retained areas of Pink-tailed Worm-lizard habitat (refer to Figure 6) – this will help ensure that impacted patches of habitat are well connected to surrounding populations.

When considered together, the above points demonstrate that the proposed development has been designed and located to avoid and minimise impacts on the identified significant ecological values of the GCC to the greatest extent practicable. With reference to Appendix A, these measures address **Conditions 1.3, 3.1 – 3.7, 3.10 – 3.12, 4.2 – 4.5, 5.2 – 5.7.**

6. Summary of proposed residual impacts on biodiversity

6.1 Direct impacts in the GCC on MNES

As shown in Figures 3 to 6, the proposed development will have the following unavoidable residual impacts to MNES in the GCC.

- 0.18 ha of EPBC Act Box-Gum Woodland.
- 1.03 ha of NTG-SEH.
- 0.55 ha of Pink-tailed Worm-lizard habitat.

6.2 Direct impacts in the GCC on NC Act listed matters

As shown in Figures 7, the proposed development will have the following unavoidable residual impacts to NC Act native vegetation and NC Act listed Box-Gum Woodland.

- 3.93 ha of NC Act native vegetation, which is also likely to constitute habitat for the NC Act listed species identified in Section 3.1 and which includes 0.48 ha of NC Act listed Box-Gum Woodland.

6.3 Indirect impacts in the GCC

Indirect impacts from construction and occupation

The proposed development has the potential to indirectly impact native vegetation and habitat adjacent to the development footprint. Potential indirect impacts are listed below.

- Increased noise, vibration, and dust during construction.
- Changes in hydrology and increased sedimentation of receiving waterways (i.e. Murrumbidgee River) during construction.
- Weed introduction and/or spread during construction and operation.
- Increased public access leading to general disturbance, incidental damage, or removal of adjacent native vegetation and habitat during operation.
- Increase in pest animal populations as a result of increased human activity during operation.

The above potential indirect impacts could occur during the construction and/or operation of the proposed development and may reduce the extent and/or condition of the surrounding native vegetation and habitat. This may occur in the short-term during the construction phase of the proposed development and in the long-term during the operation phase of the proposed development. By impacting native vegetation and habitat, indirect impacts also have the potential to indirectly impact the threatened species and ecological communities listed in Section 3.1. However, the proposed development reduces the likelihood of indirect impacts by enacting the minimisation and mitigation measures outlined in Section 7. These measures include:

- control of noise, light, vibration, and dust spill during construction;
- control of hydrology and potential sedimentation of receiving waterways during construction;
- control of weed introduction and/or spread during construction and operation;
- control of public access and associated incidental disturbance, damage, and removal of adjacent native vegetation and habitat during operation; and
- control of pest animal populations as a result of increased human activity during operation.

Pink-tailed Worm-lizard habitat connectivity

It is considered likely that the proposed 6 m wide access road will permanently sever Pink-tailed Worm-lizard habitat connectivity between the patches of retained habitat that occur on opposite sides of the

road. As shown in Figure 6, the following two measures will therefore be implemented in order to help mitigate the impact on connectivity.

- Strategically located habitat crossings will be provided in an attempt to ensure continuity of connection between identified areas of key habitat. These crossings will include suitable surface rock, adequate drainage, and appropriate exposure to natural light.
- Pink-tailed Worm-lizard habitat rocks displaced by the proposed development will be relocated to specific areas that have been selected to improve connectivity between retained areas of habitat. These areas of newly created habitat will help ensure that the retained patches of habitat are well connected to surrounding populations.

7. Proposed measures to minimise and mitigate residual impacts on biodiversity

The following measures will be implemented to minimise and mitigate the residual direct and indirect impacts on ecological values during the construction and operation of the proposed development (the conditions they address in Appendix A are given in **bold**).

7.1 Construction

A Construction Environmental Management Plan (CEMP)³² will be developed to guide the proposed development from before construction commences and until construction is completed (**Conditions 3.4, 6.1 – 6.5**). At a minimum, the CEMP will include:

- appropriate definition of clearing boundaries;
- buffer zones around sensitive values;
- clearing procedures;
- weed management procedures during construction;
- sediment and erosion controls to prevent site run-off during construction;
- flow controls;
- pollution and waste management;
- water treatment standards before release;
- avoidance of riparian habitat areas;
- worker and public health and safety policies;
- traffic and access controls;
- appropriate surface remediation post-construction and rehabilitation activities; and
- monitoring, reporting, and compliance requirements.

Pre-clearing site surveys for threatened flora and threatened fauna that have the potential to occur in the development footprint will be conducted during the appropriate season for each species and before

³² Note: there is an existing Minister-approved CEMP framework that will be adopted/made site-specific.

construction begins. Surveys will be restricted to those areas that will be directly impacted by the proposed development. If any threatened flora and/or threatened fauna species are found to be utilising habitat in the areas directly impacted by the proposed development, impacts will be avoided where possible or managed in accordance with the Ginninderry Conservation Corridor Management Plan and EPBC Act Approval (**Conditions 2.1, 3.8, 6.5**).

Pre-clearing site surveys for Pink-tailed Worm-lizard will be conducted by a wildlife consultant before construction begins. Surveys will be restricted to the areas of Pink-tailed Worm-lizard habitat that will be directly impacted by the proposed development (refer to Figures 3 and 6). Any Pink-tailed Worm-lizard individuals detected during this process will be relocated to the nearest available habitat as directed by the wildlife consultant (**Conditions 2.1, 3.8**).

Appropriate Pink-tailed Worm-lizard habitat rocks impacted by the proposed development will either be:

- collected and relocated to an adjacent area devoid of appropriate habitat rocks; or
- collected and relocated to specific areas that have been selected to improve connectivity between retained areas of habitat.

The purpose of this process will be to create habitat for the Pink-tailed Worm-lizard and thereby help mitigate impacts to the species as a result of the proposed development (**Conditions 1.3, 3.2, 3.7**).

7.2 Operation

Weeds will be managed in accordance with the CEMP, Geoff Butler & Associates (2014)³³, and the Ginninderry Conservation Corridor Management Plan (**Conditions 6.3, 3.18**).

Community targeted education initiatives will be implemented as part of the Ginninderry urban development to increase community awareness of the ecological values of the GCC, the threats posed to those values (e.g. unrestrained dogs, weeds, removal of habitat features, etc.), to encourage minimal impact behaviours, and to encourage development of stewardship for the GCC (**Condition 3.15**).

The GCC will be managed in accordance with the Ginninderry Conservation Corridor Management Plan and associated Ginninderry Development Offset Management Plan. These plans include a large number of management, monitoring, and reporting requirements, many of which aim to minimise and mitigate potential impacts from human activity. This includes (but is not limited to) the following.

- A master plan for tracks, trails, and visitor nodes. This will take account of impacts on ecological values in the location and design of trails and infrastructure and will reduce any unintended impacts by visitors to the ecological values of the GCC. Vehicle tracks will be restricted to a maximum width of 6 m and will follow existing alignments where feasible. Other tracks and trails will be restricted to a maximum width of 2.5 m and will follow existing alignments where feasible (**Conditions 3.1 – 3.6, 3.10 – 3.13, 3.16, 4.2 – 4.5, 5.1 – 5.7**).
- Controls to public access within the GCC (**Conditions 3.6, 3.16**).
- Controls to public access and use of the riparian areas (**Condition 3.16**).
- Prohibition on damaging activities such as taking rocks and fallen wood (including compliance enforcement by Conservation Officers) (**Condition 3.4**).

³³ Geoff Butler & Associates (2014). *Weed Management Plan for the Proposed Riverview Development West Belconnen*. August 2014.

- Controls on recreational fishing such as bag limits, prohibitions on taking certain species, and licensing requirements in line with those that already exist in the ACT (**Condition 3.4, 3.16**).
- Education initiatives regarding the threats posed by domestic animals to the flora and fauna of the GCC. These will work in conjunction with prohibition of dogs within the GCC and the cat containment policy in the Ginninderry urban development area to minimise the risk of potential impacts from domestic dogs, cats, and other exotic species (**Condition 3.15**).
- Adaptive management techniques will be implemented and based on a monitoring regime to address cumulative impacts, changing knowledge frameworks in future planning and management actions, and as an avoidance and mitigation strategy for unforeseen ongoing and potential future impacts (**Condition 3.4**).

7.3 Offsetting for impacts to MNES in the GCC

As discussed in Section 8, residual impacts to MNES in the GCC following avoidance, minimisation, and mitigation measures will be offset in accordance with the EPBC Act Environmental Offset Policy³⁴ to ensure that there will be no net loss of MNES. This may include protection and management of similar quality vegetation, targeted rehabilitation of areas in the GCC (including those that seek to improve connectivity between small patches), enhancement of quality, and/or restoration of environmental values (**Conditions 1.3, 3.3, 8.1 – 8.4**).

8. Identification of appropriate offsets in the GCC to offset the unavoidable residual impacts on MNES

8.1 Offsets for NTG-SEH via application of Defined Process Strategy

As noted in Section 2.2, the impact of the proposed development on NTG-SEH must be assessed via the Defined Process Strategy. At the time the Strategic Assessment was finalised, the extent and condition of NTG-SEH in the GCC was not known. As a result, no values for use in the calculator (the EPBC Act Offsets Assessment Guide) were developed at that time. For the purposes of this EIA, the relevant values for NTG-SEH are taken from those developed for the Pink-tailed Worm-lizard in the Strategic Assessment. This approach is considered appropriate as 86.7% of the NTG-SEH in the GCC coincides with the mapped high-quality Pink-tailed Worm-lizard habitat. As such, the following values are used for NTG-SEH in the calculator (Appendix C).

- Quality (for both impact quality and offset start quality) = **8**.
- Risk-related time horizon = **20 years**.
- Time until ecological benefit = **20 years**.
- Risk of loss (with and without offset) = **0%**³⁵.
- Future quality without offset = **7**.
- Future quality with offset = **8**.
- Confidence in result = **90%**.

³⁴ <https://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy>

³⁵ Risk of loss with or without offset has been set to 0% as the GCC is now protected and not at risk of development.

In summary, the residual impact of 1.03 ha of NTG-SEH in the GCC requires an offset of 34.2 ha. As shown in Appendix C, 34.2 ha offsets 100.21% of the residual impact.

Whilst the 34.2 ha area in the GCC to offset the proposed development has not yet been designated, it is noted that the Ginninderry Development Offset Management Plan³⁶ identifies 44.5 ha of existing NTG-SEH that could be used to directly offset adverse impacts, and 86.9 ha of land in the GCC that could be enhanced by management to offset adverse impacts. It is envisaged that the 34.2 ha offset area to be designated for the proposed development will be located within the existing 44.5 ha of NTG-SEH.

As detailed in the Ginninderry Development Offset Management Plan, improvement of the natural values of NTG-SEH offset areas requires the implementation of restoration management measures. NTG-SEH has generally experienced severe loss of biodiversity and disruption to its natural processes, therefore the goals for restoration have shifted from complete restoration to a pre-European state. The aim is now to improve vegetation structure and plant composition of grasslands, improve fauna habitat, manage and control exotic species, and enhance native biodiversity. Restoration opportunities for NTG-SEH include, but are not limited to:

- weed control;
- improving fauna habitat elements;
- threatened species translocation;
- managing herbage mass and grazing levels; and
- planting native forbs amongst tussock grasses.

Restoration programmes may apply a combination of any of the above methods in the 34.2 ha offset area, as appropriate to the site requirements and conditions. Specific restoration activities are not prescribed here but should be undertaken in conjunction with a prescribed work plan identifying the restoration opportunity, proposed restoration measures, maps of restoration work, ongoing maintenance requirements, and any site-specific proposed monitoring.

8.2 Offsets for Box-Gum Woodland and Pink-tailed Worm-lizard

As outlined in Section 6.1 and shown in Figures 3 to 6, the proposed development in the GCC will have unavoidable residual impacts on 0.18 ha of EPBC Act Box-Gum Woodland and 0.55 ha of Pink-tailed Worm-lizard habitat. Whilst the Defined Process Strategy is not applied for these impacts, as stated in the Strategic Assessment, where impacts on MNES in the GCC cannot be avoided the Ginninderry Conservation Corridor Management Plan and associated Ginninderry Development Offset Management Plan will implement measures to ensure that there will be no net loss of these MNES in the GCC. Measures to address this will include targeted rehabilitation of areas in the GCC (including those that seek to improve connectivity between small patches) and enhancement of quality and restoration of environmental values subject to an assessment of best return on investment by the Environmental Management Trust (EMT). Offsets will be implemented over time by the EMT and will feed into its annual report to the Commonwealth EPBC Act compliance unit.

³⁶ NTG-SEH has been added to a recently updated version of the Ginninderry Development Offset Management Plan (SMEC (2022). *Ginninderry Development Offset Management Plan. Prepared for Riverview Projects (ACT) Pty Ltd, 6 April 2022. Reference No: 30018032*).

To assist with the above, the Ginninderry Conservation Corridor Management Plan and associated Ginninderry Development Offset Management Plan identify the following specific areas in the GCC to be enhanced/restored to offset impacts on MNES associated with works undertaken in the GCC.

- 60.2 ha of existing Box-Gum Woodland that could be used to directly offset adverse impacts, and 34.3 ha of land in the GCC that could be enhanced by management to offset adverse impacts.
- 167.5 ha of existing Pink-tailed Worm-lizard habitat that could be used to directly offset adverse impacts, and 44.1 ha of land in the GCC that could be restored to offset adverse impacts.

The improvement via restoration of these areas, as detailed in the Ginninderry Development Offset Management Plan and summarised in the following sections, will ensure that there will be no net loss of these MNES in the GCC due to the proposed development (or other development defined in the Program Report).

Box-Gum Woodland

As detailed in the Ginninderry Development Offset Management Plan, improvement of the natural values of Box-Gum Woodland areas requires the implementation of restoration management measures. Restoration principles to be followed would be assisting natural regeneration, establishing corridors between existing woodland fragments, creating islands of habitat structure and enhanced groundcover diversity, and introducing habitat features that are currently absent or sparse within the woodland area. Restoration opportunities for Box-Gum Woodland include, but are not limited to:

- promoting natural regeneration of woodland trees (e.g. assisted natural regeneration);
- targeted planting of woodland trees and shrubs;
- improving ground-cover diversity through planting forbs and grasses;
- placing woody debris;
- stabilising erosion; and
- erecting vertical structures to create bird and bat habitat.

Restoration programmes may apply a combination of any of the above methods, as appropriate to the site requirements and conditions. Specific restoration activities are not prescribed here but should be undertaken in conjunction with a prescribed work plan identifying the restoration opportunity, proposed restoration measures, maps of restoration work, ongoing maintenance requirements, and any site-specific proposed monitoring.

Pink-tailed Worm-lizard

As detailed in the Ginninderry Development Offset Management Plan, restoration opportunities for the Pink-tailed Worm-lizard habitat include the following.

- Habitat improvement in low quality Pink-tailed Worm-lizard habitat comprising intensive weed control, targeted to significant threats (i.e. woody weed and exotic perennial tussock grass invasion) and native groundcover establishment.
- Low intensity habitat creation (e.g. rock placement), typically in degraded native pasture where suitable rocks are absent or sparse to improve connectivity and expand patches of restricted habitat. This approach may or may not include revegetation, depending on the site condition. If

revegetation is undertaken, appropriate site preparation (including an intensive weed control program) and follow up maintenance is essential.

- High intensity habitat creation (e.g. topsoil stripping, rock placement and native groundcover establishment), typically in highly degraded exotic pasture areas where suitable rocks are absent or sparse. The objective of such restoration is to improve connectivity and expand patches of restricted habitat.

Scientific research should inform restoration measures and should be adaptive to respond to additional habitat restoration opportunities. The guidance detailed in Section 2.5 of the Ginninderry Development Offset Management Plan is provided to inform proposed work plans, but it does not exclude other approaches which are supported by published research or advice from the ACT Parks and Conservation Service. Research to determine the effectiveness of novel restoration approaches may also be undertaken if supervised by the ACT Parks and Conservation Service or an academic institution.

9. Significance of the impact of the proposed development on ecological values

9.1 Impacts on MNES

The proposed development will have the following unavoidable residual impacts to MNES in the GCC.

- 0.18 ha of EPBC Act Box-Gum Woodland. This represents an impact to 0.3% of the 60.2 ha of EPBC Act Box-Gum Woodland in the GCC.
- 1.03 ha of NTG-SEH. This represents an impact to 2.3% of the 44.5 ha of NTG-SEH in the GCC.
- 0.55 ha of Pink-tailed Worm-lizard habitat. This represents an impact to 0.3% of the 167.5 ha of Pink-tailed Worm-lizard habitat in the GCC.

The relatively small-scale of the impact combined with avoidance measures (Section 5), minimisation and mitigation measures (Section 7.1), ongoing protection and management measures (Section 7.2), and offsetting measures (Section 7.3, Section, 8 and Section 9) indicate that the proposed development is unlikely to significantly impact any of the MNES that occur in the GCC.

9.2 Impacts to NC Act listed matters

The proposed development will have the following unavoidable residual impacts to NC Act listed matters.

- 0.48 ha of NC Act Box-Gum Woodland. This represents an impact to 0.6% of the 74.11 ha of NC Act Box-Gum Woodland in the GCC.
- 3.93 ha of NC Act native vegetation, which is also likely to constitute habitat for the NC Act listed species identified in Section 3.1. This represents an impact to 0.9% of the 455.39 ha of NC Act native vegetation / threatened species habitat in the GCC.

The small-scale of the impact combined with avoidance measures (Section 5), minimisation and mitigation measures (Section 7.1), and ongoing protection and management measures (Section 7.2) indicate that the proposed development is unlikely to significantly impact any of the NC Act listed matters that occur in the GCC.

10. Legislative requirements

10.1 Commonwealth

Environment Protection and Biodiversity Conservation Act 1999

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

- listed threatened species and communities;
- listed migratory species;
- Ramsar wetlands of international importance;
- Commonwealth marine environment;
- world heritage properties;
- national heritage places;
- the Great Barrier Reef Marine Park;
- nuclear actions; and
- a water resource, in relation to coal seam gas development and large coal mining development.

Where a potential impact on a MNES may occur as a result of a proposed action, the significance of that impact must be assessed. Guidelines for determining whether an impact is significant are provided by the Department of Agriculture and Water Resources (Commonwealth of Australia 2013³⁷). If it is determined that a proposed action will, or is likely to, have a significant impact on a MNES, the action must be referred to the Commonwealth Minister for the Environment. The Department of Climate Change, Energy, the Environment and Water (DCCEEW) will then consider the referred action and the Minister (or their Delegate) will make a determination regarding whether the action requires approval under the EPBC Act and associated conditions and controls.

As mentioned previously, in 2017 Riverview Projects and the Commonwealth Government commenced a Strategic Assessment under Part 10 of the EPBC Act. The focus of the agreement was to assess the potential impacts from development of the Ginninderry project area on MNES protected under the EPBC Act. Following endorsement of the Program Report, Riverview received EPBC Act Approval to implement the staged development of the project. Attached to the approval are 20 conditions.

Therefore, the impacts on MNES in the GCC have been previously addressed and approved via the Strategic Assessment. Accordingly, the proposed development in the GCC must occur in a manner consistent with the EPBC Act Approval conditions and referral as a standalone action is not required. As demonstrated throughout this EIA, the proposed development in the GCC is compliant with all of the EPBC Act Approval conditions.

³⁷ Commonwealth of Australia (2013). *Matters of National Environmental Significance - Significant Impact Guidelines 1.1. Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth Department of the Environment

10.2 Australian Capital Territory

Planning and Development Act 2007

Pursuant to the ACT *Planning and Development Act 2007* (P&D Act), a development application will be assessed via the 'impact track' and require the preparation of an Environmental Impact Statement (EIS) if the development will have any of the impacts listed under Part 4.3 of Schedule 4 of the Act.

The ecological impacts that trigger the requirement to be assessed in the 'impact track' and prepare an EIS of relevance to the proposed development are detailed below, together with an assessment of the proposed development against each of these triggers.

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

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

The proposed development does impact areas that support habitat for NC Act listed flora, fauna, and ecological communities (refer to Section 6.2). However, as detailed in Section 9.2, the small-scale of the impact combined with avoidance measures, minimisation and mitigation measures, and ongoing protection and management measures indicate that the proposed development is unlikely to have a 'significant adverse environmental impact' on any of the NC Act listed matters that occur in the GCC.

Item 2. *Proposal involving —*

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

As detailed in Section 6.2, the proposed development will impact 3.93 ha of NC Act native vegetation. However, as detailed in Section 9.2, the small-scale of the impact combined with avoidance measures, minimisation and mitigation measures, and ongoing protection and management measures indicate that the proposed development is unlikely to have a 'significant adverse environmental impact'.

Item 3. Proposal for development in a reserve, unless —

- (a) *the conservator of flora and fauna produces an environmental significance opinion that the proposal is not likely to have a significant adverse environment impact; or*
- (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*

As shown on ACTmapi, the 'Territory Plan – Land Use Zone' of the GCC is NUZ4: River Corridor' and the 'Territory Plan - Overlay Zone' is 'Pc: Nature Reserve'. As the proposed development will not be carried out by or for the Territory, the proposed development will therefore meet the triggers for Item 3. However, as detailed in Section 9.2, the small-scale of the impact combined with avoidance measures, minimisation and mitigation measures, and ongoing protection and management measures indicate that the proposed development is unlikely to have a 'significant adverse environmental impact'.

Summary and implications

As mentioned previously, on 9 March 2018 Riverview Projects formally lodged an application for an EIS Exemption under Section 211 of the P&D Act for the Ginninderry Stage 2 Urban Development. The EIS Exemption, including a number of conditions, was granted by the Minister for Planning and Land Management on 24 October 2018. Therefore, the impacts in the GCC listed under Part 4.3 of Schedule 4 of the P&D Act have been previously addressed. Accordingly, provided that the proposed development in the GCC occurs in a manner consistent with the EIS Exemption conditions, an EIS is not required. As demonstrated throughout this EIA, the proposed development is compliant with all of the EIS Exemption conditions.

Tree Protection Act 2005

The proposed development will not impact any trees located in urban zoned land. As such, there are no requirements for approval under the *Tree Protection Act 2005*.

Pest Plants and Animals Act 2005

A number of species listed on the *ACT Pest Plants and Animals (Pest Plants) Declaration 2015 (no 1)* under the *ACT Pest Plants and Animals Act 2005* are known to occur in the GCC. Works for the proposed development have the potential to increase the spread and/or dominance of significant weed species, however, as described in Section 7, appropriate weed control measures will be implemented to prevent weed spread and/or proliferation within the development footprint and surrounds.

11. Conclusion

This EIA has assessed the impacts of the proposed development upon habitat for terrestrial flora and fauna species and ecological communities listed as threatened under EPBC Act and/or the NC Act and demonstrated that those impacts are compliant with all relevant legislation, regulations, existing approvals and conditions, and the Defined Process Strategy where triggered.

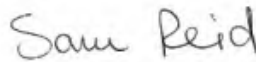
We trust that this EIA provides the assessment and advice required. If, however, you should have any questions relating to any of the matters discussed herein, please do not hesitate to contact us.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Robert Speirs".

Robert Speirs

Director / Principal Ecologist

A handwritten signature in black ink, appearing to read "Sam Reid".

Dr Sam Reid

Senior Ecologist

Attachments:

Figure 1. Locality plan

Figure 2. The proposed development on aerial imagery

Figure 3. The proposed development and MNES

Figure 4. The proposed development and MNES in the GCC – impacts to EPBC Act Box-Gum Woodland

Figure 5. The proposed development and MNES in the GCC – impacts to NTG-SEH

Figure 6. The proposed development and MNES in the GCC – impacts to Pink-tailed Worm-lizard habitat

Figure 7. The proposed development and vegetation in the GCC – impacts to NC Act native vegetation and NC Act Box-Gum Woodland

Appendix A. Conditions associated with the planning and environmental approvals

Appendix B. EIS Exemption 'Table 5. Conditions for development approval'

Appendix C. EPBC Act Offsets Assessment Guide – NTG-SEH

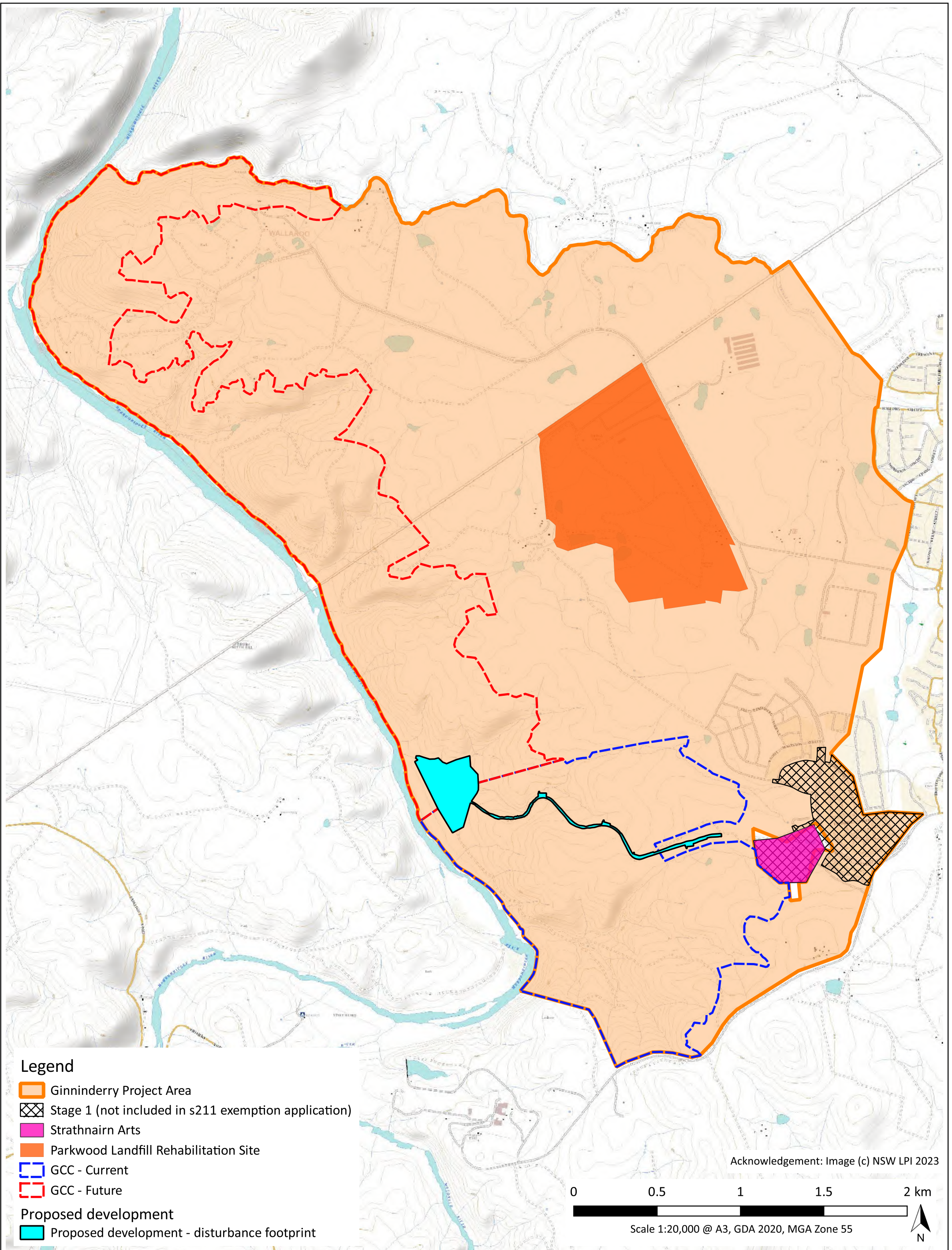
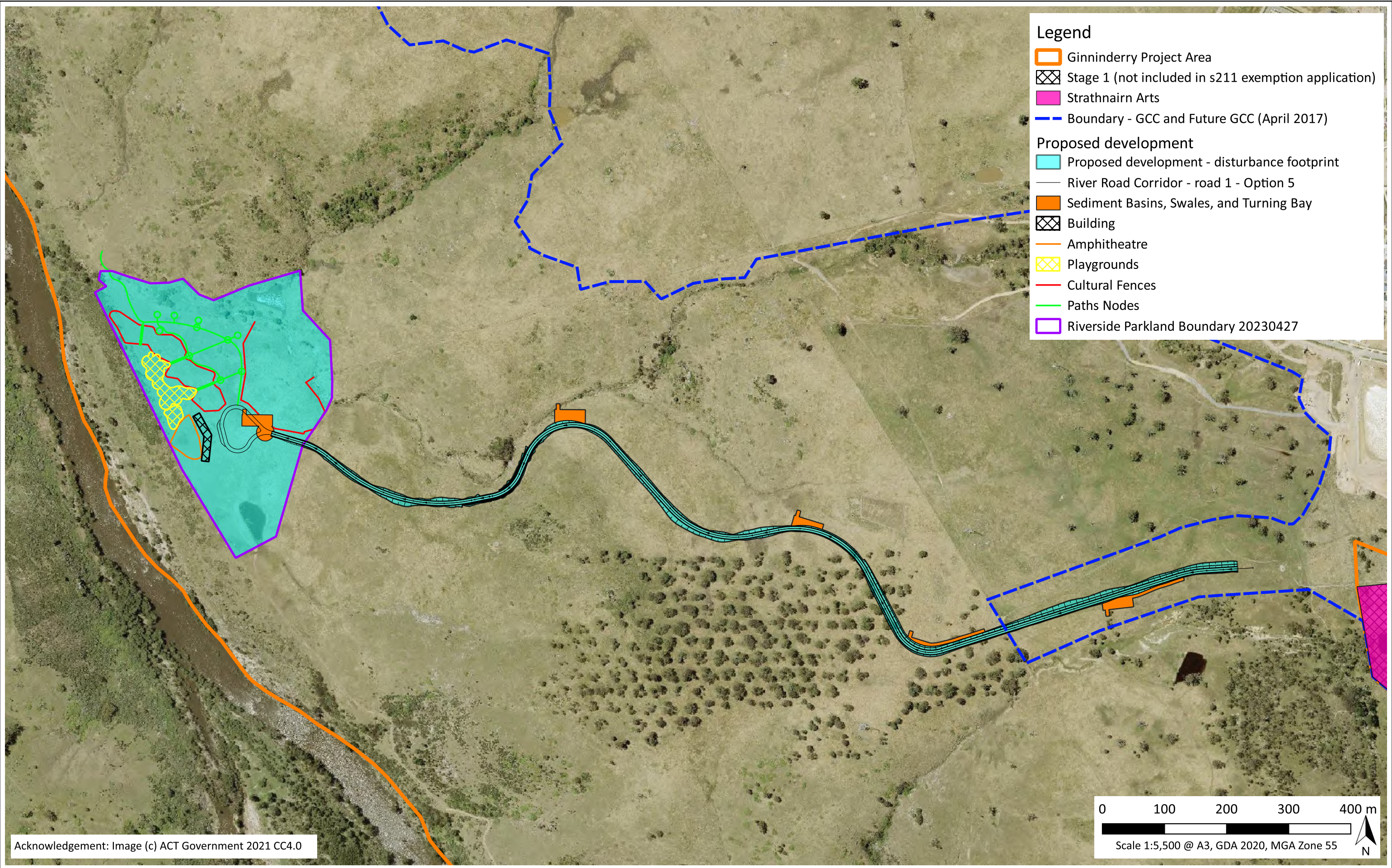
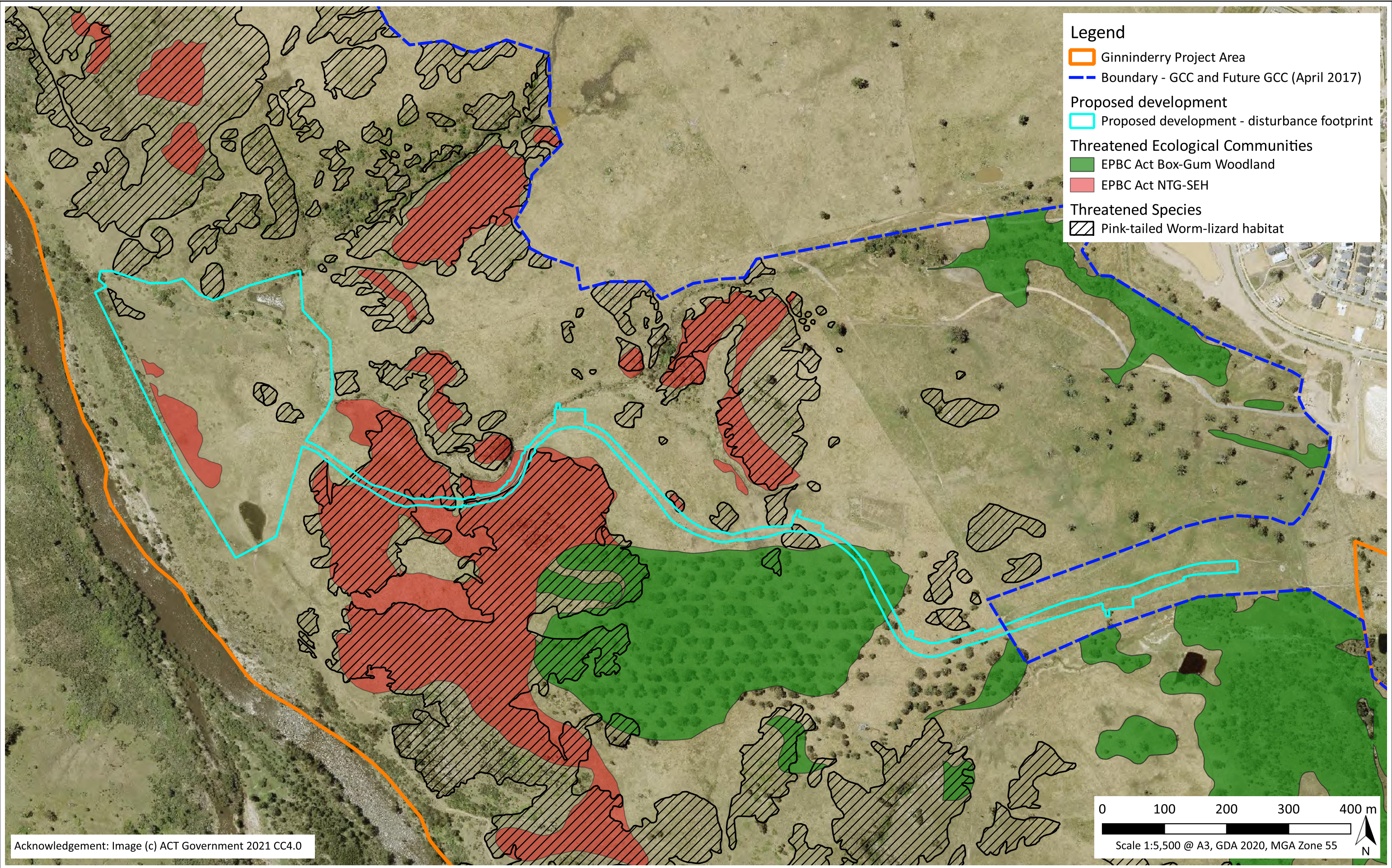


Figure 1. Locality Plan



Acknowledgement: Image (c) ACT Government 2021 CC4.0

Figure 2. The proposed development on aerial imagery



Acknowledgement: Image (c) ACT Government 2021 CC4.0

Figure 3. The proposed development and MNES

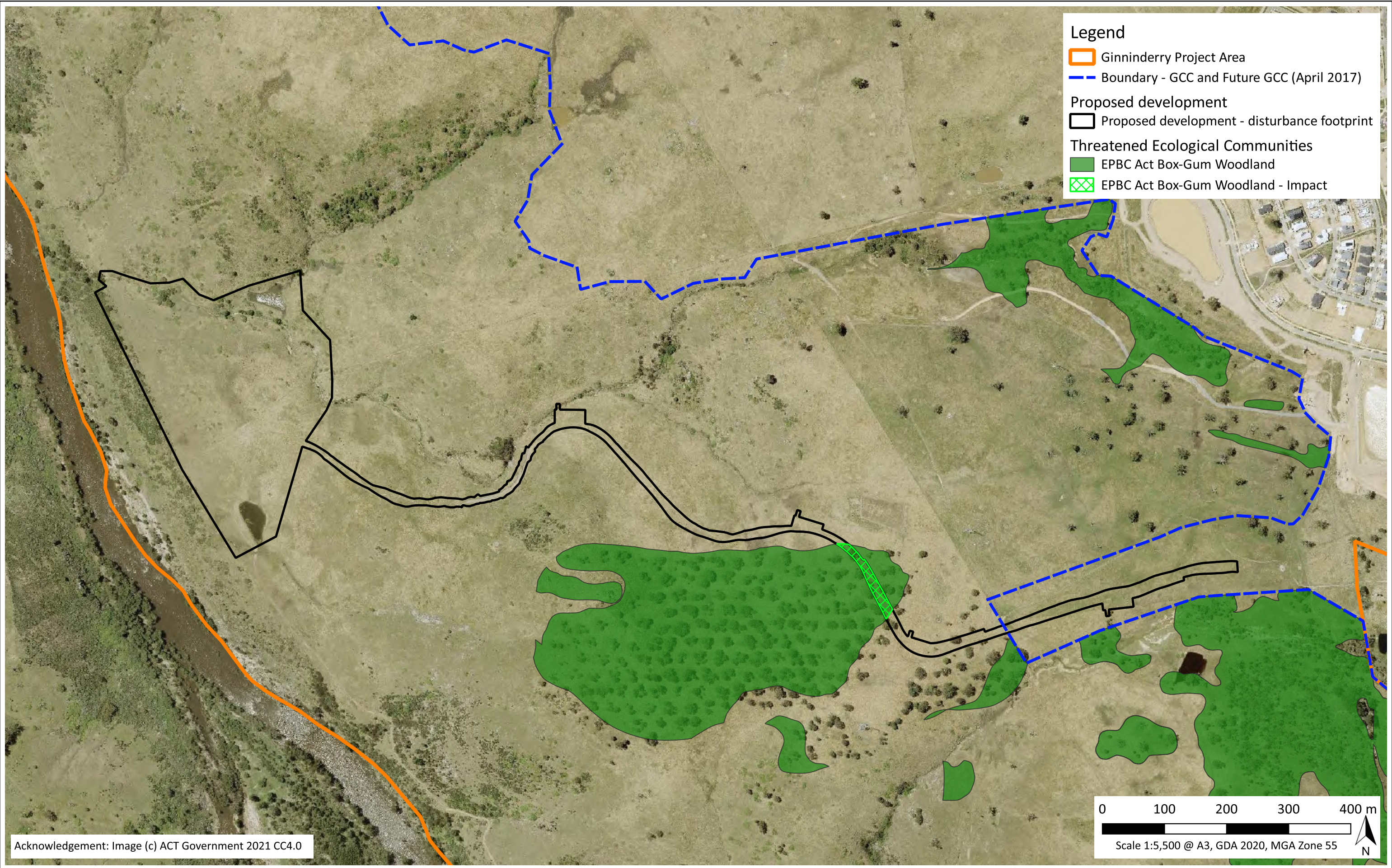
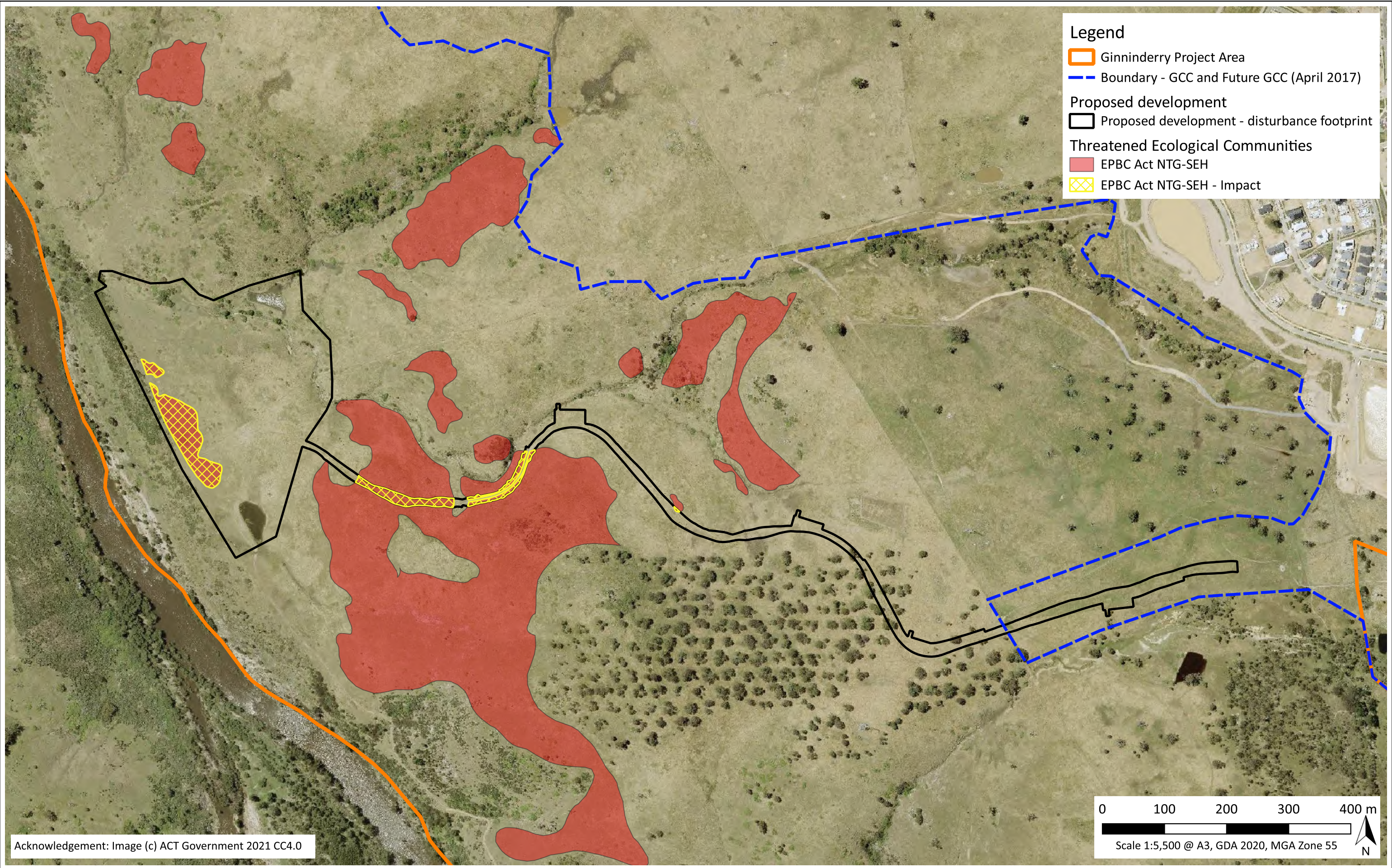


Figure 4. The proposed development and MNES in the GCC – impacts to EPBC Act Box-Gum Woodland



Acknowledgement: Image (c) ACT Government 2021 CC4.0

Figure 5. The proposed development and MNES in the GCC – impacts to NTG-SEH

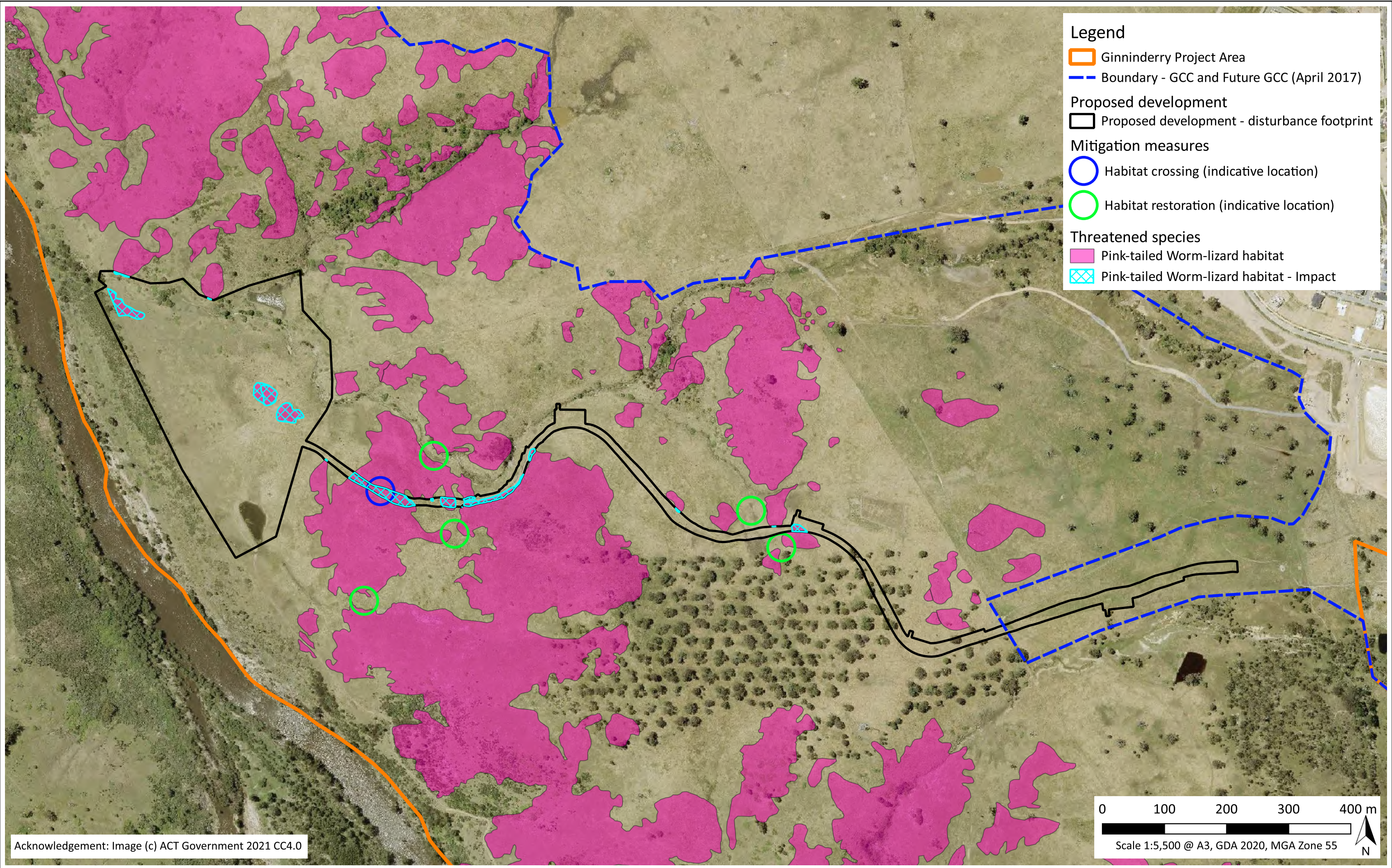


Figure 6. The proposed development and MNES in the GCC – impacts to Pink-tailed Worm-lizard habitat

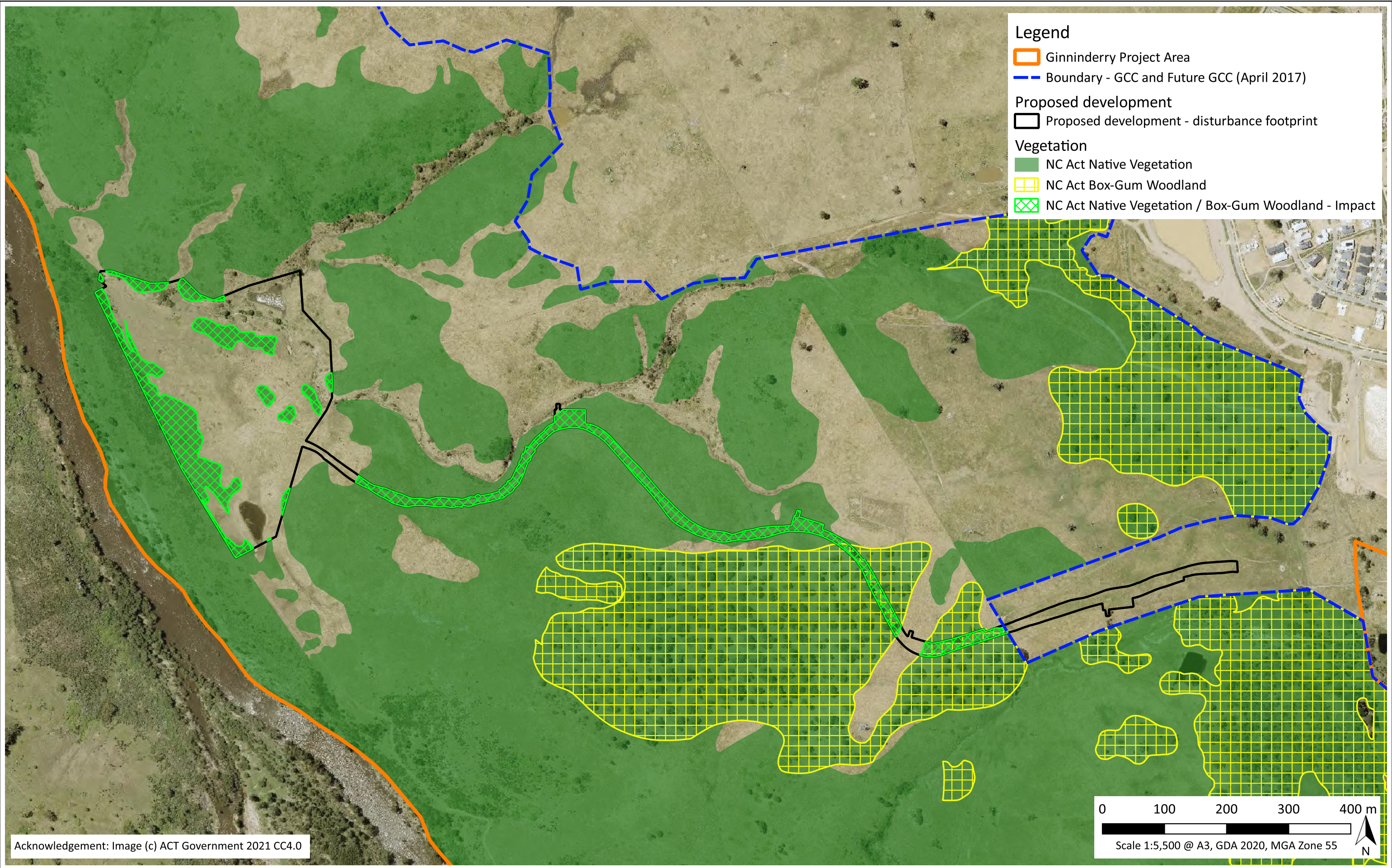


Figure 7. The proposed development and vegetation in the GCC – impacts to NC Act native vegetation and NC Act Box-Gum Woodland

Appendix A. Conditions associated with the planning and environmental approvals

The below information has been summarised from the Strategic Assessment, Program Report, EPBC Act Approval, Ginninderry Conservation Corridor Management Plan, Ginninderry Development Offset Management Plan, EIS Exemption, and Trail Masterplan (the full reference for most of these documents is given in the footer of previous pages of this EIA). As noted in Section 2, as the proposed development is subject to multiple layers of planning and environmental approvals the descriptions in Appendix A reconcile the various associated conditions. In some instances, the exact wording of conditions in Appendix A has been altered in order to consolidate related conditions from different documents, improve understanding, and streamline an assessment of compliance. Reference should be made to the above-mentioned documents for the exact wording of conditions.

It is important to note that some of the conditions in Appendix A are specific to works taking place in the GCC. These have been clearly identified by including **'in the GCC'** in the text of the condition.

Condition category	Condition ID	Condition description	Associated MNES
1. Defined Process Strategy	1.1	The Defined Process Strategy will be implemented when the following occurs: a proposal to develop any area dominated by native grasses that is part of a larger patch of native grassland which includes high or moderate quality Pink-tailed Worm-lizard habitat as mapped by <u>Osborne and Wong (2013)</u> .	NTG-SEH
	1.2	The Defined Process Strategy will be implemented when the following occurs: additional servicing or infrastructure requirements within the GCC that impact MNES beyond what is already described by the program.	All
	1.3	When triggered the Defined Process Strategy will: <ol style="list-style-type: none"> 1. Assess the impact using data collected from site-based, field verified surveys as per EPBC guidelines; 2. Implement avoidance and mitigation measures where practicable; 3. Determine offset requirements for any residual impacts; 4. Identify an appropriate offset and establish; and 5. Prepare and implement an offset management plan to incorporate in the <u>Ginninderry Conservation Corridor Management Plan</u> or a standalone plan. 	All

Condition category	Condition ID	Condition description	Associated MNES
	1.4	Riverview must consult the Department of the Environment and Energy (DoEE) prior to taking an action when the Defined Process Strategy is triggered. Riverview must provide the DoEE with any information requested on the action or proposed conservation outcomes and must implement any modification to the way the action is undertaken as requested by the DoEE to achieve the conservation outcomes specified in Section 5 of the <u>Program Report</u> .	All
2. Survey requirements	2.1	Prior to development of infrastructure in the GCC , site surveys of threatened flora and fauna species will be conducted and populations of threatened flora and fauna species will be avoided or impacts managed in accordance with the <u>Ginninderry Conservation Corridor Management Plan</u> and <u>EPBC Act Approval</u> .	Pink-tailed Worm-lizard, Threatened Birds, Threatened Flora
	2.2	Prior to the commencement of construction (in all areas other than the area marked as Stage 1 in the <u>Program Report</u> [Figure 4]) and within 12 months before or within 12 months after endorsement of the <u>Program Report</u> by the DoEE, Riverview must engage a suitably qualified expert to survey the West Belconnen site for Pink-tailed Worm Lizard and Natural Temperate Grassland of the South Eastern Highlands in accordance with the survey guidelines. The results of surveys must be submitted to the DoEE for acceptance within 6 months of the completion of the survey. The accepted report must be made available to the public prior to the commencement of construction.	Pink-tailed Worm-lizard, NTG-SEH
3. Avoidance, minimisation, and mitigation	3.1	The design of all infrastructure in the GCC will be informed by advice from relevant scientific experts, particularly with regard to protecting and avoiding impacts to MNES and their habitat areas.	All
	3.2	Impacts to MNES in the GCC will be avoided where possible at the detailed design stage, otherwise minimisation and mitigation measures based on scientific advice will be incorporated in <u>the Ginninderry Conservation Corridor Management Plan</u> .	All
	3.3	Direct impacts to MNES will be avoided such that there is no net loss of habitat, as directed by the <u>Ginninderry Conservation Corridor Management Plan</u> .	All
	3.4	Impacts will be avoided, minimised, or mitigated through the implementation of CEMPs, Water Sensitive Urban Design (WSUD) principles, and the <u>Ginninderry Conservation Corridor Management Plan</u> .	All
	3.5	Roads and tracks in the GCC will follow existing alignments where feasible.	All
	3.6	MNES habitat will be considered when designing infrastructure and services, including maintaining an effective buffer around known habitat.	All

Condition category	Condition ID	Condition description	Associated MNES
	3.7	All works in MNES buffer areas will be required to demonstrate specific measures to manage (e.g. avoid, minimise, or mitigate) adverse impacts on MNES habitat.	All
	3.8	Prior to development of infrastructure in the GCC , site surveys of threatened flora and fauna species will be conducted, and populations of threatened flora and fauna species will be avoided or impacts managed, in accord with the <u>Ginninderry Conservation Corridor Management Plan</u> and <u>EPBC Act EPBC Act Approval</u> .	Pink-tailed Worm-lizard, Threatened Birds, Threatened Flora
	3.9	Logs and/or tree sections containing hollows will be recovered for the purpose of fauna habitat enhancement.	Threatened Birds
	3.10	Infrastructure in the GCC will be located to avoid or manage impacts on Pink-tailed Worm-lizard in accordance with <u>EPBC Act approval</u> conditions. Management trails, recreation trails, vehicle roads and other infrastructure will be located and designed to avoid or minimise impacts on Pink-tailed Worm-lizard habitat and enable the passage of lizards between habitat patches. Roads and tracks will incorporate raised grating or similar design techniques to enhance connectivity between habitat areas that will be bisected or separated by a road or track.	Pink-tailed Worm-lizard
	3.11	Infrastructure in the GCC will be located to avoid or manage impacts on Box-Gum Woodland in accordance with <u>EPBC Act approval</u> conditions. Management trails, recreation trails, vehicle roads and other infrastructure will be located and designed to avoid or manage impacts on Box-Gum Woodland restoration in accordance with <u>EPBC Act approval</u> conditions.	Box-Gum Woodland
	3.12	Impacts in the GCC will be mitigated by targeting the poorest quality areas and keeping vehicle track widths to a maximum of 6 m and trail widths to a maximum of 2.5 m. Tracks and trails will incorporate raised grating (or similar) into pathway design to enhance connectivity between Pink-tailed Worm-lizard habitat patches that would otherwise be bisected. Existing tracks that currently fragment habitat will either be upgraded for use and where required be subject to the same design considerations as new tracks, or will be rehabilitated to enhance connectivity.	All
	3.13	A 200 m development buffer will be enforced around the Little Eagle Strathnairn nest site. [Note: The requirements to enforce the Little Eagle buffer has been removed in accordance with TA2021-14. As such, this condition is no longer applicable].	Threatened Birds
	3.14	Riverview must ensure that a cat containment policy (enduring in perpetuity) is established, implemented, monitored and maintained across the West Belconnen site. Results of monitoring must be reported in the Annual Report and reviewed as part of the five yearly Program Review Report to ensure ongoing protection of listed threatened species and ecological communities from domestic predators.	All

Condition category	Condition ID	Condition description	Associated MNES
	3.15	No dog walking, including 'on-lead', will be permitted in the GCC . Implement education initiatives targeting the West Belconnen community regarding the impact of unrestrained domestic animals.	All
	3.16	In the GCC , controls to public access and use of the riparian areas will be established during the post-construction phase.	Threatened Fish
	3.17	Site-scale survey will be conducted prior or concurrent to the design stage for recreational development in the GCC to determine the location of threatened fish species and their habitat within the proposed development footprint and avoided as necessary.	Threatened Fish
	3.18	Pest plant and animal control measures will be implemented.	All
4. Connectivity	4.1	Unused existing tracks will be rehabilitated to enhance connectivity between habitat areas where they fragment existing habitat areas.	All
	4.2	Design will need to ensure connectivity between Pink-tailed Worm-lizard habitat patches in the GCC is not compromised.	Pink-tailed Worm-lizard
	4.3	Management trails, recreation trails, vehicle roads and other infrastructure in the GCC will be located and designed to avoid or minimise impacts on Pink-tailed Worm-lizard habitat and enable the passage of lizards between habitat patches in accordance with <u>EPBC Act approval</u> conditions.	Pink-tailed Worm-lizard
	4.4	Where complete avoidance of habitat for Pink-tailed Worm-lizard in the GCC 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	Pink-tailed Worm-lizard
	4.5	Identify 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.	All
5. Tracks and trails	5.1	The location of management trails in the GCC that provide vehicle access for management purposes will be addressed in the <u>Trail Masterplan</u> .	All
	5.2	Vehicle track widths in the GCC will be a maximum width of 6 m, other tracks and trails a maximum width of 2.5 m.	All
	5.3	Roads and tracks in the GCC will follow existing alignments where feasible.	All

Condition category	Condition ID	Condition description	Associated MNES
	5.4	Existing tracks in the GCC that currently fragment habitat will either be upgraded for use and where required be subject to the same design considerations as new tracks, or will be rehabilitated to enhance connectivity.	All
	5.5	Roads and tracks in the GCC will incorporate raised grating or similar design techniques to enhance connectivity between Pink-tailed Worm-lizard habitat areas that will be bisected or separated by a road or track.	Pink-tailed Worm-lizard
	5.6	In the GCC , include grated road crossings in the design of any access roads passing through Pink-tailed Worm-lizard habitat or potential movement corridors. Include raised and/or grated paths in the design of trails in Pink-tailed Worm-lizard habitat to minimise disturbance to habitat and maintain connectivity.	Pink-tailed Worm-lizard
	5.7	Where complete avoidance of habitat for Pink-tailed Worm-lizard in the GCC 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.	Pink-tailed Worm-lizard
6. CEMPs	6.1	Prior to the commencement of construction (in all areas other than the area marked as Stage 1 in the <u>Program Report</u> [Figure 4]), Riverview must prepare a Construction Environmental Management Plan (CEMP) to mitigate impacts that may occur throughout the construction phase. The CEMP must include measures outlined in the <u>Program Report</u> .	All
	6.2	CEMPs will be prepared in accordance with Government guidelines in addition to any specific requirements of the <u>Ginninderry Conservation Corridor Management Plan</u> for mitigation of indirect impacts from adjacent development. CEMPs will be prepared prior to construction commencing and be maintained until after construction and remediation activities have been finalised.	All

Condition category	Condition ID	Condition description	Associated MNES
	6.3	<p>CEMPs will be implemented to avoid, minimise, or mitigate impacts that may occur throughout the construction phase. They will specify regulations for practices such as:</p> <ul style="list-style-type: none"> • appropriate definition of clearing boundaries; • buffer zones around sensitive values; • clearing procedures; • weed management procedures during construction; • sediment and erosion controls to prevent site run-off during construction; • flow controls; • pollution and waste management; • water treatment standards before release; • avoidance of riparian habitat areas; • worker and public health and safety policies; • traffic and access controls; • monitoring, reporting, and compliance requirements; and • appropriate surface remediation post-construction and rehabilitation activities. 	All
	6.4	CEMPs will define clearing procedures and boundaries, including the retention of selected significant trees, avoiding with appropriate buffers threatened bird species nesting trees, clearing outside of threatened bird breeding seasons, and fauna rescue procedures.	Box-Gum Woodland, Threatened Birds
	6.5	Prescriptions for pre-clearing surveys will be implemented for listed flora species prior to the commencement of any construction activities in the GCC such that further avoidance and mitigation measures can be incorporated where cost effective and practicable.	Threatened Flora
7. WSUD principles	7.1	Stormwater flow retardation will be based on geotechnical, surface water, and groundwater assessments to reduce impacts to hydrological systems.	All
	7.2	Maintain stormwater run-off to acceptable levels as defined.	All
	7.3	Treat urban runoff to reduce urban pollutants to acceptable levels before discharge to the Murrumbidgee River or Ginninderra Creek.	Threatened Fish
	7.4	Provide suitable wetland habitat for water birds where appropriate.	Threatened Birds

Condition category	Condition ID	Condition description	Associated MNES
8. Offsetting / restoration	8.1	Where MNES habitat in the GCC cannot be avoided, the <u>Ginninderry Conservation Corridor Management Plan</u> will implement measures to ensure that there will be no net loss of habitat within the GCC. Measures to address this will include targeted rehabilitation of areas within the GCC (including those that seek to improve connectivity between small patches) and enhancement of quality and restoration of environmental values subject to an assessment of best return on investment by the Environmental Management Trust (EMT).	All
	8.2	Residual impacts in the GCC following mitigation will be offset in accordance with the EPBC Act Offsets Policy.	All
	8.3	When the Defined Process Strategy is triggered due to ' <i>Additional servicing or infrastructure requirements within the GCC that impact Pink-tailed Worm-lizard habitat beyond what is already described by the program</i> ' ('habitat' being Pink-tailed Worm-lizard management zone, confirmed and potential Pink-tailed Worm-lizard habitat in the GCC , or a Pink-tailed Worm-lizard buffer area), an impact assessment should be conducted. This impact assessment should determine the extent of impacts on Pink-tailed Worm-lizard habitat, identify measures required to manage (e.g. avoid, minimise or mitigate) potential adverse impacts, and specify any restoration required to offset residual impacts (unless otherwise specified, no specific restoration or management works are required within the buffer area). The assessment should follow the Defined Process Strategy.	Pink-tailed Worm-lizard
	8.4	When the Defined Process Strategy is triggered due to ' <i>Additional servicing or infrastructure requirements within the GCC that impact Box-Gum Woodland beyond what is already described by the program</i> ' ('Box-Gum Woodland' being Box-Gum Woodland management zone, confirmed Box-Gum Woodland habitat in the GCC , or a Box-Gum Woodland buffer area), an impact assessment should be conducted. This impact assessment should determine the extent of impacts on Box-Gum Woodland, identify measures required to manage (e.g. avoid, minimise or mitigate) potential adverse impacts, and specify any restoration required to offset residual impacts (unless otherwise specified, no specific restoration or management works are required within the buffer area). The assessment should follow the Defined Process Strategy.	Box-Gum Woodland
	8.5	Retired tracks in Pink-tailed Worm-lizard habitat areas in the GCC will be remediated to restore native groundcover and Pink-tailed Worm-lizard habitat. This may comprise ripping, topsoil removal, seeding with diverse native grassland mix and rock placement.	Pink-tailed Worm-lizard

Appendix B. EIS Exemption ‘Table 5. Conditions for development approval’

Appendix B reproduces ‘Table 5. Conditions for development approval’ of the EIS Exemption. The conditions in Appendix B are considered by the ACT Planning and Land Authority when assessing a proposed development for 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	A CEMP must be developed and implemented addressing the commitments made by the proponent in the EIS exemption application. 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.
3	GCC Reserve Management Plan	ACT Minister for the Environment	Prior to the commencement of works	Prepare the GCC 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 works	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.
5	Bushfire Mitigation	ESA	Prior to planning and commencement of works	The Bushfire Inner Asset Protection Zone (APZ) must be located in any buffer provided within the Urban Development Area to the GCC. All works must be consistent with the ACT Strategic Bushfire Management Plan 2014-2019, or its successor.
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	The Project area must be assessed and remediated, as required, by a suitably qualified environmental consultant specialising in contaminated land assessment in accordance

No	Condition	Endorsement/ approval	Development stage	Condition of approval
				<p>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> <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> <ol style="list-style-type: none"> a. Current Foundry in Block 1632; b. Excavated spoil in Block 1540 and Block 1632, and spoil materials identified on road reserves; c. Storage yard in Block 1540 with construction and building materials; d. Fertilisers and pesticides use in nursery and landscape premises, and application on agricultural paddocks; 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; f. Potential hazardous materials found in aged buildings across the study area; and g. Potential off-site migration and contaminated run-off from the nearby West Belconnen Resource Management Centre.

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	The design and construction of the water quality pond must minimise the potential for the water quality pond to become a mosquito nuisance. The applicant must contact HPS if the septic tank located at the Farmhouse is to be modified or decommissioned.
12	Aboriginal sites of heritage significance	AT Heritage Council	Prior to lodgement of future development applications	Prior to lodgement of any future development applications the following information must be provided to the ACT Heritage Council: <ul style="list-style-type: none"> a. a Cultural Heritage Assessment (CHA) of the proposed GCC sewer tunnel; b. a CHA of the proposed Ginninderra Drive extension; c. a CHA of any currently planned tourist, recreation and bushfire management infrastructure within the GCC, such as the Stage 1 tracks and trails project; 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 e. 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.
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.

Appendix C. EPBC Act Offsets Assessment Guide – NTG-SEH

