Title of Proposal - Mulligans Flat Woodland Sanctuary - Goorooyarroo extension of predatorproof fence

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Science and Research

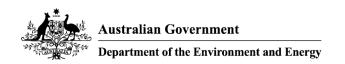
1.2 Provide a detailed description of the proposed action, including all proposed activities.

The ACT Government proposes to extend the existing Mulligans Flat Woodland Sanctuary by constructing a new predator-proof fence (PPF) enclosing most of Goorooyarroo Nature Reserve. The PPF around the Goorooyarroo extension consists of the following two stages:

- Stage 1 Throsby Section. Stage 1 extends for approximately 2.5 kilometres from the existing Mulligans Flat Woodland Sanctuary PPF along the northern boundary of the new suburb of Throsby. Stage 1 is aligned to largely follow the boundary approved as a component of the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Gungahlin Strategic Assessment and corresponding ACT development approval. All required approvals for Stage 1 have been obtained and construction is nearing completion.
- Stage 2 Goorooyarroo Section (proposed action). Stage 2 includes the extension of the PPF for approximately 8.5 kilometres, connecting to the southern end of Stage 1 and running around Goorooyarroo Nature Reserve to connect back with the existing Mulligans Flat Woodland Sanctuary PPF.

The current Mulligans Flat Woodland Sanctuary encloses 484 ha of Mulligans Flat Nature Reserve. On completion of Stage 2 of the PPF, the Goorooyarroo extension to Mulligans Flat Woodland Sanctuary will increase the sanctuary area by 820 ha to a total enclosed area of 1,304 ha. The proposed extension of the Mulligans Flat Woodland Sanctuary will include the Throsby North and Throsby East offset areas and much of the existing Goorooyarroo Nature Reserve (refer Figure 2 of Attachment A - Ecological Impact Assessment). Extending the sanctuary will substantially increase the area of high quality Box-Gum Woodland which can be managed in a secure manner, allowing natural regeneration and excluding cats, foxes and other feral predators. The project will further promote the recovery of the Box-Gum Woodland ecological community itself, as well as provide the largest and most intact patch of lowland woodland habitat in the region for threatened species, notably woodland birds. Extending the sanctuary will increase the value of the Mulligans Flat Woodland Sanctuary as a conservation measure of national and international significance.

On 23 June 2016, the project team (including two Capital Ecology ecologists) completed a site visit to inspect the proposed Stage 2 alignment. It was determined during the site inspection that



substantial alterations should be made to the then proposed alignment. As is now reflected in the currently proposed alignment (illustrated in Figure 3 of Attachment A - Ecological Impact Assessment), it was identified that the alignment could be improved by:

- aligning the PPF to run along existing stock fence lines where practicable, thereby minimising new vegetation clearance and ground disturbance;
- straightening the PPF alignment where practicable to minimise the number of strainer points required: and
- aligning the PPF to minimise creek crossings, substantial rocky outcrops and other natural features through which it will be difficult and expensive to construct the PPF and maintain it once constructed.

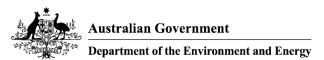
Development of Stage 2 of the PPF will involve the following.

- Clearance of woody vegetation within a five (5) metre wide disturbance zone along the PPF alignment.
- Installation of galvanised steel posts (star pickets).
- Construction of a 1.8 m high fence with 'floppy top' and electric pulse wires.

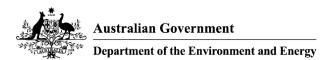
The base of the fence will be constructed as the first package of works scheduled to be completed by 30 June 2018. The 'floppy top' and electric pulse wires will be added to the fence as the second package of works, the timing of which is to be determined. The existing Mulligans Flat Woodland Sanctuary fence is shown in Plates 1 and 2 of Attachment A - Ecological Impact Assessment, it is envisaged that the completed Stage 2 fence will be of a similar type and form as this fence. However, the base of the mesh will not be buried in excavated trenches either side of the fence as it was for the existing Mulligans Flat Woodland Sanctuary, instead the mesh will lay across the ground and be pinned and covered with a light layer of gravel.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Proposed extension to Mulligans Flat Woodland Sanctuary	1	-35.169456185212	149.16935060155
Proposed extension to Mulligans Flat	2	-35.169456185212	149.16935060155
Woodland Sanctuary Proposed extension to Mulligans Flat	3	-35.169526347656	149.16943643224
Woodland Sanctuary Proposed extension to Mulligans Flat	4	-35.170648938525	149.17956445348
Woodland Sanctuary			



-/4				
Area		Point	Latitude	Longitude
•	extension to	5	-35.171210228148	149.18059442174
Mulligans F Woodland				
	extension to	6	-35.170789261294	149.18248269689
Mulligans F		O	-33.170709201294	149.10240209009
Woodland				
	extension to	7	-35.169947321048	149.18265435827
Mulligans F		,	-55.109947521040	149.10203433021
Woodland				
	extension to	8	-35.169175534831	149.18617341649
Mulligans F		O .	00.10017000+001	140.10017041040
Woodland (
	extension to	9	-35.175770562694	149.18334100377
Mulligans F			0011101110002001	
Woodland				
	extension to	10	-35.177173691092	149.18419931066
Mulligans F				
Woodland :				
	extension to	11	-35.178296176373	149.18591592443
Mulligans F				
Woodland	Sanctuary			
Proposed e	extension to	12	-35.178506640637	149.18823335302
Mulligans F	lat			
Woodland	-			
•	extension to	13	-35.1794888	149.19123742711
Mulligans F				
Woodland (
•	extension to	14	-35.180190335137	149.19226739538
Mulligans F				
Woodland			0= 100001001010	440 400040=4040
	extension to	15	-35.180891864218	149.19261071813
Mulligans F				
Woodland	•	40	05 404700004400	4.40.40005.40.4000
•	extension to	16	-35.181733691123	149.19295404088
Mulligans F				
Woodland (-	17	-35.184680016628	149.19544313085
Mulligans F	extension to	17	-33.104000010020	149.19044313000
Woodland				
	extension to	18	-35.191905076998	149.18677423131
Mulligans F		10	00.101000070000	143.10077423131
Woodland (
	extension to	19	-35.191975220066	149.18488595617
Mulligans F		. •	33	
Woodland				
	extension to	20	-35.194851033725	149.18497178686
		-	2212100100120	



Area	Point	Latitude	Longitude
Mulligans Flat			
Woodland Sanctuary			
Proposed extension to	21	-35.195973274856	149.18728921544
Mulligans Flat			
Woodland Sanctuary			
Proposed extension to) 22	-35.199620451457	149.18677423131
Mulligans Flat			
Woodland Sanctuary			
Proposed extension to	23	-35.201654382662	149.18351266515
Mulligans Flat			
Woodland Sanctuary			
Proposed extension to	24	-35.212805031275	149.17990777624
Mulligans Flat			
Woodland Sanctuary	0.5	05.04044000=000	4.40.4700000000000000000000000000000000
Proposed extension to	25	-35.210140235636	149.17389962804
Mulligans Flat			
Woodland Sanctuary	00	05.000.100.1000.15	440.47445004004
Proposed extension to) 26	-35.206423400915	149.17115304601
Mulligans Flat			
Woodland Sanctuary	07	05 000070404400	4.40.40000040040
Proposed extension to) 27	-35.200672491198	149.16909310949
Mulligans Flat			
Woodland Sanctuary	. 00	05.405.400000000	4.40.40700504040
Proposed extension to	28	-35.195482296269	149.16780564916
Mulligans Flat			
Woodland Sanctuary	. 20	25 400670420205	4.40.46022062220
Proposed extension to) 29	-35.188678430395	149.16832063329
Mulligans Flat			
Woodland Sanctuary	. 20	25 101502207245	140 16095226220
Proposed extension to) 3U	-35.181593387245	149.16085336339
Mulligans Flat			
Woodland Sanctuary	v 31	-35.179067876012	149.16711900365
Proposed extension to) 31	-33.179007070012	143.10711300303
Mulligans Flat			
Woodland Sanctuary	. 32	_35_170950422597	1/0 16703317306
Proposed extension to Mulligans Flat) 3 <u>2</u>	-35.170859422587	149.16703317296
Woodland Sanctuary			
Proposed extension to	. 22	-35.169456185212	149.16935060155
Mulligans Flat	, ,,	-00.108 4 00100212	143.1030000100
Woodland Sanctuary			
vvoodiand Sanctuary			

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

The proposed extension of the Mulligans Flat Woodland Sanctuary will include the Throsby North and Throsby East offset areas and much of the existing Goorooyarroo Nature Reserve. Once completed, the proposed extension of the PPF will enclose an additional 820 ha. The proposed development area is bordered by:

- Mulligans Flat Woodland Sanctuary to the north;
- the suburb of Throsby to the east (under construction);
- the suburb of Kenny to the south (currently farmland); and
- the NSW border to the north (farmland beyond).

The site is located approximately 3 km to the east of Gungahlin town centre and 2 km north-east of the suburb of Harrison.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

4.25 ha

1.7 Is the proposed action a street address or lot?

Lot

- 1.7.2 Describe the lot number and title. Not Applicable
- 1.8 Primary Jurisdiction.

Australian Capital Territory

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

Yes

1.9.1 Please provide details.

As part of the Australian Government's ongoing commitment to supporting the Threatened Species Action Plan (released at the Threatened Species Summit, 16 July 2015), the ACT Government secured grant funding of \$600,000 to extend the fence around the Mulligan's Flat Wildlife Sanctuary, a Nationally Significant Woodland Sanctuary.

1.10 Is the proposed action subject to local government planning approval?

Yes

1.10.1 Is there a local government area and council contact for the proposal?

Yes

- 1.10.1.0 Council contact officer details
- 1.10.1.1 Name of relevant council contact officer.

Craig Egle

1.10.1.2 E-mail

craig.egle@act.gov.au

1.10.1.3 Telephone Number

02 6207 5257

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 01/2018

End date 06/2018

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

Planning Framework

A dual planning regime, not dissimilar to other jurisdictions, is established for the Australian Capital Territory (ACT). The Australian and ACT Governments share planning responsibility in the ACT.



The Australian Government is responsible for Canberra's role and functioning to serve its national purposes. The National Capital Capital Authority (NCA) is the Australian Government's statutory agency responsible for managing the national planning interest. The Australian *Capital Territory (Planning and Land Management) Act 1988* (PALM Act) sets out the NCA's roles and functions.

The National Capital Plan (NCP) sets out the policy and principles to ensure that 'Canberra and the Territory are planned and developed in accordance with their national significance'. (Section 9 of the PALM Act). More specifically, 'the purpose of the National Capital Plan is to ensure that the Commonwealth's national capital interests in the Territory are fully protected, without otherwise involving the Commonwealth in matters that should be the prerogative of the Canberra community.'

The ACT Government is responsible for the normal day-to-day planning and development matters, and the ACT Government agency responsible for administering the planning functions is the Environment, Planning and Sustainable Development Directorate (EPSDD). The Territory Plan ensures that the Territory is planned and developed 'in a manner not inconsistent with the National Capital Plan, the planning and development of the Territory to provide the people of the Territory with an attractive, safe and efficient environment in which to live and work and have their recreation', as set out in section 25 of the PALM Act. The development approval process is set out in the Planning and Development Act 2007.

National Capital Plan

A small section of the fence is located within the Hills, Ridges and Buffer Space (The Inner Hills) area as shown on Figure 4 of the NCP and will require Works Approval from the NCA. The land use is defined as 'Nature Conservation Area' which a permitted use within the Inner Hills. Following the outcome of the EPBC Referral process, an application for Works Approval will be made to the NCA.

The Territory Plan

The land use of the balance of the land the subject of this EPBC Referral is NUZ3 - Hills, Ridges and Buffer Zone.

Currently, the proposed development sits in the Impact Assessment Track in the Territory Plan Development Table for NUZ3 as it is an area specified in schedule 4 of the *Planning and Development Act 2007*. Schedule 4 outlines what development requires an Environmental Impact Statement (EIS) to be prepared. The Schedule also lists the circumstances where an



EIS is not required if an Environmental Significance Opinion (ESO) has been provided stating that the proposal is not likely to have a significance adverse environmental impact. Following the outcome of the EPBC Referral process, an application for an ESO will be made. If an ESO is provided, then it will need to be determined whether the development meets the exemption criteria or an application for development approval needs to be made in the merit assessment track.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

The Extended Sanctuary Working Group (ESWG) was established in April 2016 and one of its function is to allocate and coordinate key actions between the parties to deliver an extended sanctuary. Regular meetings have been held since the working group's establishment.

The membership of the ESWG includes members from the Environment, Planning and Sustainable Development Directorate and the Woodlands & Wetlands Trust (the 'Trust'). The Trust was established to support development of Mulligans Flat Woodland Sanctuary and Jerrabomberra Wetlands. The Trust is a joint initiative of the ACT Government, the Canberra community, partners and sponsors of the Trust. The Trust enacts a new model for public land management, by using the expertise in the ACT Government and combining it with the knowledge, skills, enthusiasm and experiences within the community.

Further consultation may occur during the development application process if required by the planning agencies.

All four Representative Aborginal Organisations (RAOs) were invited to participate in a field survey on 26 October 2017. The RAOs are: Buru Ngunawal Aboriginal Corporation, Little Gudgenby River Tribal Council, King Brown Tribal Group and Ngarigu Currawong Clan.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

The ACT Government engaged Capital Ecology Ltd Pty to complete the required desktop and site investigations and prepare an Ecological Impact Assessment (EIA) for the proposed



development (final dated 18 October 2017). The EIA details the ecological values of the site (notably Matters of National Environmental Significance) and provides an assessment of significance of the proposed impacts upon these values. The EIA is the key informing study for this EPBC Act referral.

Upon receipt of the EPBC Act referral decision, the proposal will be referred to the ACT Government Conservator of Flora and Fauna for an Environmental Significance Opinion (ESO). The ESO process is the ACT Government's process for assessing the significance of the impacts of a proposal upon environmental values (including those listed under the EPBC Act and/or the ACT Nature Conservation Act 2014) when the proponent believes that the impacts will not be significant. The EIA includes an ESO supporting document prepared to provide relevant information to assist the Conservator in developing an ESO.

1.15 Is this action part of a staged development (or a component of a larger project)?

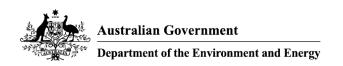
Yes

1.15.1 Provide information about the larger action and details of any interdependency between the stages/components and the larger action.

The PPF around the Goorooyarroo extension to the existing Mulligans Flat Woodland Sanctuary consists of the following two stages:

- Stage 1 Throsby Section. Stage 1 extends for approximately 2.5 kilometres from the existing Mulligans Flat Woodland Sanctuary PPF along the northern boundary of the new suburb of Throsby. Stage 1 is aligned to largely follow the boundary approved as a component of the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Gungahlin Strategic Assessment and corresponding ACT development approval. All required approvals for Stage 1 have been obtained and construction is nearing completion.
- Stage 2 Goorooyarroo Section. Stage 2 is proposed to extend for approximately 8.5 kilometres, connecting to the southern end of Stage 1 and running around Goorooyarroo Nature Reserve to connect back with the existing Mulligans Flat Woodland Sanctuary PPF.

The current Mulligans Flat Woodland Sanctuary encloses 484 ha of Mulligans Flat Nature Reserve. On completion of Stage 2 of the PPF, the Goorooyarroo extension to Mulligans Flat Woodland Sanctuary will increase the sanctuary area by 820 ha to a total enclosed area of 1,304 ha. The proposed extension of the Mulligans Flat Woodland Sanctuary will include the



Throsby North and Throsby East offset areas and much of the existing Goorooyarroo Nature Reserve (refer Figure 2 of Attachment A - Ecological Impact Assessment). Extending the sanctuary will substantially increase the area of high quality Box-Gum Woodland which can be managed in a secure manner, allowing natural regeneration and excluding cats, foxes and other feral predators. The project will further promote the recovery of the Box-Gum Woodland ecological community itself, as well as provide the largest and most intact patch of lowland woodland habitat in the region for threatened species, notably woodland birds. Extending the sanctuary will increase the value of the Mulligans Flat Woodland Sanctuary as a conservation measure of national and international significance.

1.16 Is the proposed action related to other actions or proposals in the region?

No

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The <u>interactive map tool</u> can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- <u>Profiles of relevant species/communities</u> (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- Significant Impact Guidelines 1.1 Matters of National Environmental Significance;
- <u>Significant Impact Guideline 1.2 Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.</u>
- 2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
White Box-Yellow Box-Blakely's Red Gum	The proposed action will result in the

Submission #2869 - Mulligans Flat Woodland Sanctuary - Goorooyarroo extension of predator-proof fence

	Department of the Environment and Energy	
Species Grassy Wo Grassland	oodland and Derived Native	Impact disturbance of a total maximum area of 3.14 ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.
2.4.2 Do y	ou consider this impact to be sign	ificant?
No		
	proposed action likely to have AN' migratory species, or their habitat	direct or indirect impact on the members of
No		
	proposed action to be undertaken wealth marine areas)?	in a marine environment (outside
No		
2.7 Is the	proposed action to be taken on or	near Commonwealth land?
No		
2.8 Is the	proposed action taking place in th	e Great Barrier Reef Marine Park?
No		
	proposed action likely to have AN' related to coal/gas/mining?	f direct or indirect impact on a water
No		
2.10 Is the	e proposed action a nuclear action	?
No		
2.11 Is the	e proposed action to be taken by th	ne Commonwealth agency?
No		

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place

Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

Flora

Mulligans Flat and Goorooyarroo Nature Reserves form the largest, most intact and contiguous patch of the Yellow Box – Blakely's Red Gum Grassy Woodland (Box-Gum Woodland) ecological community in the ACT and region. Much of the Box-Gum Woodland is in good condition and contains high groundcover flora diversity. One threatened flora species, Hoary Sunray *Leucochrysum albicans* var. *tricolor*, has been recorded within the study area or nearby. One other threatened flora species (Austral Toadflax *Thesium australe*) with the potential to occur in the locality is considered to have a moderate likelihood of occurrence within the study area. All other threatened flora species with the potential to occur in the locality are considered to have a low or negligible likelihood of occurrence within the study area. Thirteen other flora species considered rare in the ACT have been recorded in the study area or nearby.

Refer to the Ecological Impact Assessment (EIA) (Capital Ecology, 18 October 2017) for a detailed description of the ecological values of the proposed action area. Appendix B of the EIA provides a Likelihood of Occurrence Assessment which addresses each EPBC Act and/or NC Act listed species with the potential to occur in the locality.

Fauna

The site is located between Mulligans Flat Woodland Sancturary and Mount Majura Nature Reserve. From a fauna habitat connectivity perspective, it is an important area as it connects large patches of fauna habitat retained elsewhere in the north of the ACT. The large area of high quality Box-Gum Woodland encompassed by the Mulligans Flat and Goorooyarroo Nature Reserves is likely to support a wide variety of fauna. The proposed action area supports the following fauna habitat features:



- Together, Mulligans Flat and Goorooyarroo Nature Reserves form the largest, most intact and contiguous Yellow Box Blakely's Red Gum Woodland in the ACT and region. The trees in the woodland would provide important foraging sites and nesting/roosting habitat for microbats and native birds. Threatened birds likely to forage and nest within the area include the Scarlet Robin *Petroica boodang*, Brown Treecreeper *Climacteris picumnus victoriae*, Hooded Robin *Melanodryas cucullata cucullata*, Speckled Warbler *Chthonicola sagittate*, Varied Sitella *Daphoenositta chrysoptera*, White-winged Triller *Lalage sueurii*, Regent Honeyeater *Anthochaera Phrygia*, Swift Parrot *Lathamus discolor*, Superb Parrot *Polytelis swainsonii*, and Little Eagle *Hieraaetus morphnoides*.
- A dense grassy understorey throughout and scattered fallen branches under the remnant eucalypts. These features are likely to provide foraging resources to a variety of reptiles (including the Striped Legless Lizard *Delma impar* in one small part of the proposed action area), arthropods (potentially including the Golden Sun Moth *Synemon plana* and the Perunga Grasshopper *Perunga ochracea*), and native and exotic birds.
- The remnant eucalypts, particularly the Yellow Box, would provide a nectar resource for numerous honeyeater species and other birds when in flower. The seed from the numerous Wattles Acacia spp. within and around this study area would also provide a foraging resource for several parrot species.
- The study area contains patches of outcropping rock, including loose surface rocks. Such habitat is likely to provide refuge and basking habitat for herpetofauna, potentially including the Pink-tailed Worm-lizard *Aprasia parapulchella*, listed as vulnerable pursuant to the EPBC Act and the NC Act.
- The site constitutes a significant component of a wildlife movement corridor and is important for fauna habitat connectivity in the north of the ACT.
- While several threatened migratory listed bird species may visit the study area on transient basis, it is unlikely that the study area provides important breeding habitat for any threatened migratory fauna species.

Refer to the Ecological Impact Assessment (EIA) (Capital Ecology, 18 October 2017) for a detailed description of the ecological values of the proposed action area. Appendix B of the EIA



provides a Likelihood of Occurrence Assessment which addresses each EPBC Act and/or NC Act listed species with the potential to occur in the locality.

3.2 Describe the hydrology relevant to the project area (including water flows).

The extended Mulligan's Flat Wildlife Sanctuary (MFWS) occupies the head waters of three creek catchments, Ginninderra Creek, Gungaderra Creek and Sullivans Creek that flow in a westerly direction to the surrounding urban areas. The upper Ginninderra Creek catchment is located in the northern part of the MFWS catching runoff water from both the north and south side of the main ridge line in the area. Ginninderra Creek Runs from the MFWS to Yerrabi Pond and through the northern suburbs of Gungahlin and Belconnen to Lake Ginninderra.

The Gungaderra Creek catchment drains the southern part of the central flat land and the northern slopes of Sammys Hill. Gungaderra Creek runs to the adjacent suburbs to the west flowing through wetlands in the suburbs of Harrison and Franklin and joins Ginninderra Creek at Kaleen. The upper Sullivans Creek catchment in the MFWS catches runoff from all of hills and valleys of southern part of the area. This catchment is the significant head waters for Sullivans Creek that flows through southern Gungahlin and north Canberra to Lake Burley Griffin.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

Soil Characteristics

ACTmapi, the ACT Government's interactive mapping service (www.actmpai.act.gov.au) indicates that the soil landscapes for the project area are Franklin and Williamsdale. The Franklin soil and landscape features are described as follows:

Landscape— Gently undulating pediplain on Silurian sedimentary and volcanic rocks in the northern ACT. Slopes 2 -5%, local relief <10 m, elevation 590 - 650 m. Extensive cleared woodland to open-forest.

Soils— Deep (100 - 150 cm), imperfectly drained Sodic Yellow Chromosols (Yellow Podzolic Soils) and moderately deep to deep, poorly drained Brown Dermosols (Alluvial Soils).

The Williamsdale soil and landscape features are described as follows:



Landscape— Undulating rises, fans, valley flats and depressions on Silurian volcanics of the Canberra Lowlands. Slopes <10%, local relief 5 - 50 m, elevation 520 - 800 m. Little or no rock outcrop. Completely cleared woodland and grassland.

Soils— Moderately deep (50 - 150 cm), moderately well-drained Red and some Brown Chromosols (Red and Yellow Podzolic Soils) and Red and Brown Kandosols (Red and Yellow Earths), shallow (<50 cm) Leptic Tenosols and Rudosols (Lithosols) and moderately to very deep (100 - >150 cm), imperfectly to moderately well-drained Brown and Yellow Chromosols (Yellow Podzolic Soils, Solodic Soils and Solodized Solonetz Soils) and Brown Kandosols (Yellow Earths).

Vegetation Characteristics

The study area traverses the following two ACT Plant Communities (PCTs) ('climax communities').

PCT-ACT16 – Eucalyptus melliodora - E. blakelyi Tableland Grassy Woodland.

Occurring on gently undulating mid-elevation areas of the ACT, PCT-ACT16 is the dominant PCT along the Stage 2 alignment. This community occurs on soils of moderate to high fertility and generally moderate depth. In its climax form this community would have been characterised by an open canopy, sparse or absent mid and shrubstorey, together with a defined grassy groundstorey supporting a high diversity of native forbs. The Stage 2 alignment traverses PCT-ACT16 in varying condition, with some relatively intact sections, and other sections highly modified by past tree clearing and long-term stock grazing now existing as simplified native pasture with or without scattered remnant trees.

PCT-ACT25 – Eucalyptus macrorhyncha Tableland Grass / Shrub Forest.

PCT-ACT25 occurs on exposed dry low hills in the ACT, usually on well-drained skeletal soils. PCT-ACT25 usually occurs upslope of PCT-ACT16 and intergrades with this community along what is often a broad ecotone. The Stage 2 alignment traverses a number of patches of PCT-ACT25, the majority of which are in moderate to good condition. Portions of the vegetation in Goorooyarroo mapped as EPBC Act Box-Gum Woodland (PCT-ACT16) on ACTMAPi are actually PCT-ACT25

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

Together, Mulligans Flat and Goorooyarroo Nature Reserves support the best remaining example of the threatened ecological community Yellow Box – Blakely's Red Gum Grassy Woodland, listed as critically endangered pursuant to the EPBC Act and endangered pursuant to the NC Act. This location is known to support a large variety of flora and fauna, including numerous rare and threatened species, and contains noteworthy landforms and natural features which are characteristic of their class, and are an outstanding example of the endangered ecological community.

3.5 Describe the status of native vegetation relevant to the project area.

Prior to the establishment of Goorooyarroo Nature Reserve the subject land was managed under rural lease and grazed by stock. The impacts of long-term stock grazing remain evident in the landscape and vegetation communities along the study area, however the condition of the Box-Gum Woodland and other dry forest communities has improved substantially under the current conservation-focussed management. The study area supports extensive Yellow Box – Blakely's Red Gum Woodland with high groundcover flora diversity, listed as critically endangered pursuant to the EPBC Act and endangered pursuant to the NC Act. It also supports many rare and threatened species.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The study area is characterised by undulating topography. The highest point is located towards the center of the Stage 2 alignment (720 m AHD) and falls to approx. 630 m AHD in the north and south-west of the alignment.

3.7 Describe the current condition of the environment relevant to the project area.

Prior to the establishment of Goorooyarroo Nature Reserve the subject land was managed under rural lease and grazed by stock. The impacts of long-term stock grazing remain evident in the landscape and vegetation communities along the study area, however the condition of the Box-Gum Woodland and other dry forest communities has improved substantially under the current conservation-focussed management. Together, Mulligans Flat and Goorooyarroo Nature Reserves support the best remaining example of the threatened ecological community Yellow Box – Blakely's Red Gum Grassy Woodland.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having

heritage values relevant to the project area.

Commonwealth Heritage Register

There are no Commonwealth Heritage Places located within the project area.

Register of the National Estate

Mulligans Flat is listed on the Register of the National Estate (Non-Statutory archive). The listing notes that 'Mulligans Flat is probably the largest area of reasonably intact Red Gum/Yellow Box woodland remaining anywhere (Landsberg, pers comm). Despite 150yrs of rural use, grazing appears to have been light enough to allow maintenance and regeneration of both understorey and overstorey. Less than 2 years after removal of stock grazing regeneration is vigorous.

Normally its gazettal as part of Canberra Nature Park ought to ensure its future protection provided that resources for its management and protection are made available. The major threat is likely to come from planned intensive housing development on the south-eastern boundary, with concomitant increased threat of regular fire, domestic animals and vandalism. Protection in the form of a buffer zone and/or increased fencing in this section are feasible and are likely to assist in protection.'

ACT Heritage Register

On 21 September 2017, the ACT Heritage Council decided not to provisionally register Mulligan's Flat Nature Reserve (Block 305, Gungahlin) because registration of the place is prohibited under s 42A of the Heritage Act 2004, as the place only has natural heritage significance of a kind that is protected under the ACT *Nature Conservation Act 2014*.

European history

The Mulligans Flat Wildlife Sanctuary (MFWS) contains reminders of the 19th and early 20th century European settlement of Gungahlin that provide insights into the way of life and use of land in those times that has now been largely subsumed by urban development. These elements contribute to the story of Gungahlin told in homesteads and other historic sites in the area. The <u>Old Coach Road</u> is located within the MFWS and is listed for protection on the ACT Heritage Register under the *ACT Heritage Act 2004* however it is not located near or within the project area.

The Mulligans Flat Ploughlands, also listed on the ACT Heritage Register and within the



MFWS is also located outside the project area .

3.9 Describe any Indigenous heritage values relevant to the project area.

As a result of its history of Aboriginal occupation, there are a broad range of Aboriginal heritage places and sites of cultural and archaeological significance scattered throughout the Mulligans Flat Wildlife Sanctuary MFWS). All Aboriginal places and objects found in the MFWS are listed and protected under the *ACT Heritage Act 2004*. A cultural heritage survery was undertaken on 26 October 2017 and initial advice is that there are no recommendations for the fence alignment to be moved as a result of the findings of the survey. There are some cultural heritage sites along the alignment that will require management strategies to be implemented prior to construction. These will be detailed in the cultural heritage assessment report currently being prepared.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

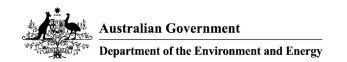
The proposed extension of the Mulligans Flat Woodland Sanctuary will include the Throsby North and Throsby East offset areas and much of the existing Goorooyarroo Nature Reserve.

The tenure of the action area is leasehold. The area is unleased Territory land managed by the Environment, Planning and Sustainable Development Directorate on behalf of the ACT Government.

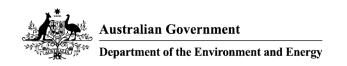
3.11 Describe any existing or any proposed uses relevant to the project area.

The existing use of the proposed action area (Throsby North and Throsby East offset areas and Goorooyarroo Nature Reserve) is for biodiversity conservation, sceintific reserach, and nature-based recreation. Parts of the Throsby offset areas are periodically grazed by stock for biomass management.

The proposed extension of the Mulligans Flat Woodland Sanctuary will allow these uses to be



undertaken in a more controlled and effective manner.



Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

A number of measures are proposed to reduce the impacts of the proposed development upon the ecological values of the study area, specifically Box-Gum Woodland and threatened woodland birds. These measures have been developed in consultation with the ACT Government (EPSDD) and it is envisaged that they will become conditions of any approval. The direct impacts of the proposed predator-proof fence (PPF) construction cannot be avoided, however indirect impacts can be avoided or substantially reduced.

The proposed measures are detailed below.

- * Construction works for the PPF will occur outside of the September to mid-January breeding season of the numerous woodland birds which may breed in the study area.
- * No driving on the fire trail for non-urgent maintenance/access will occur within the September to mid-January breeding season of the Superb Parrot.
- * A five metre wide construction corridor will be established. It will be stipulated in the Construction Environmental Management Plan (CEMP) that this corridor is to be disturbed as little as possible, and that no driving or impacts are to occur outside of this corridor. No regular storage of materials or regular parking of plant or vehicles is to occur within this corridor. If some material storage is required, it is to occur within the corridor outside of the Box-Gum Woodland. The CEMP will stipulate measures (i.e. toolbox talks etc.) to ensure that these requirements are followed.

- * Best practice weed management will be implemented during all works to ensure that weeds (notably African Love Grass, Serrated Tussock, St John's Wort, and Chilean Needle Grass) are not introduced or spread. This will include:
- appropriate vehicle hygiene;
- all vehicles and machinery for fence construction will be cleaned of all weed seed or propagules prior to entry to the work site;
- no top-soil or other potentially weed seed laden organic material will be imported;
- only sterile materials such as hessian/jute or rice straw will be used for soil stabilisation or similar purposes; and
- for 12 to 18 months following conclusion of the works, significant weeds will be controlled within and adjacent to the construction corridor by a qualified and experienced weed control contractor.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

The proposed extension of the Mulligans Flat Woodland Sanctuary will include the Throsby North and Throsby East offset areas and much of the existing Goorooyarroo Nature Reserve, increasing the sanctuary by 820 ha from the existing 484 ha to a total enclosed area of 1,304 ha (refer Figure 2 of the Ecological Impact Assessment). Extending the sanctuary will substantially increase the area of high quality Box-Gum Woodland which can be managed in a secure manner, allowing natural regeneration and excluding cats, foxes and other feral predators. The project will further promote the recovery of the Box-Gum Woodland ecological community itself, as well as provide the largest and most intact patch of lowland woodland habitat in the region for threatened species, notably woodland birds. Extending the sanctuary will increase the value of the Mulligans Flat Woodland Sanctuary as a conservation measure of national and international significance.

No

Section 5 - Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you

identified in section 2 of this application as likely to be a significant impact.
Review the matters you have identified below. If a matter ticked below has been incorre identified you will need to return to Section 2 to edit.
5.1.1 World Heritage Properties
No
5.1.2 National Heritage Places
No
5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)
No
5.1.4 Listed threatened species or any threatened ecological community
No
5.1.5 Listed migratory species
No
5.1.6 Commonwealth marine environment
No
5.1.7 Protection of the environment from actions involving Commonwealth land
No
5.1.8 Great Barrier Reef Marine Park
No
5.1.9 A water resource, in relation to coal/gas/mining

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

The project will require the disturbance/clearance of a maximum 5 m wide corridor for 6.275 km through EPBC Act Box Gum Woodland. However, it is noted that:

- construction impacts will be temporary and it is anticipated that much of the disturbed groundcover vegetation will regenerate and re-establish naturally;
- the alignment has been designed in a manner that will avoid the need to remove large trees;
- the shrub and midstorey strata of Box-Gum Woodland is naturally sparse, the clearance of a few shrubs and midstorey trees along the narrow PPF corridor is therefore unlikely to fragment the ecological community; and
- the construction of the fence and establishment of the extended sanctuary will encourage regeneration of the Box-Gum Woodland within, thereby improving the connectivity of the large expanse of the ecological community across Mulligans Flat Goorooyarroo.

In addition, the following are important points regarding the likely significance of the proposed impact.



- The impact is a small loss (3.14 ha) from the large (approx. 1,330 ha) patch of Box-Gum Woodland extending across the Mulligans Flat Goorooyarroo reserve network. Construction impact will be temporary in nature given and it is anticipated that groundcover will regenerate and re-establish naturally.
- The impact is proposed for the purposes of conserving and improving the Box-Gum Woodland within the sanctuary, therefore the conservation gains will substantially outweigh the short-term impacts associated with construction of the PPF.

Whilst the project will initially result in a relatively small reduction in the extent of the ecological community, this reduction is small in the context of the anticipated conservation gain for the ecological community and its constituent biota. It is anticipated that the Box-Gum Woodland regeneration and improvement in condition facilitated by the PPF will increase the area of the community which meets the EPBC Act listing criteria in future. The PPF will also allow effective control of feral predators (i.e. foxes and cats) which will improve the ecological function of the Box-Gum Woodland within the sanctuary.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Yes.

The ACT Government is the proponent of the proposed action. The ACT Government takes a proactive and responsible approach to environmental management.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

Not Applicable - The ACT Government is the proponent of the proposed action.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

The ACT Government is not a corporation, however the ACT Government takes a proactive and responsible approach to environmental management.

The Nature Conservation Strategy 2013–23 helps guide future planning of the Territory's open spaces, rural areas, urban areas, riverine corridors, and nature reserves, and guide investment of funding and resources in nature conservation. The strategy also improves the opportunities for ACT residents to enjoy parks, reserves and open space, as places for recreation, amenity,



self-renewal and education. It is designed to support the ACT's diverse volunteer base, which put in tens of thousands of hours of unpaid work every year to help manage the ACT's natural areas.

The ACT Planning Strategy (the Strategy) will direct the development of Canberra to help the city achieve its economic, cultural and environmental aspirations. It was developed by planning experts in consultation with the Canberra public. The Strategy is a policy for both government and the community, it:

- outlines where future growth and change is to occur and how it is to be managed;
- directs where more specific planning and investigation is required;
- helps prioritise investment in social and utility infrastructure; and
- identifies where regional collaboration is important.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

The ACT Government has referred numerous proposed actions under the EPBC Act, these include the following.

2000/117 ACT Projects/Urban developments/Gungahlin/ACT/Neighbourhood Landscape Works/Tree Planting

2000/64 Department of Urban Services/Land Transport Infrastructure/Gordon/ACT/Jim Pike Avenue Extension

2000/93 PROCUREMENT PROJECTS ACT DEPARTMENT OF URBAN SERVICES/Commercial Development/North Lanyon/Australian Capital Territory/Point Hut Pond,Floodway and Pedestrian Bridges

2001/341 ACT Department of Urban Services/Land Transport Infrastructure/Gungahlin, Canberra/ACT/Duplication of Barton Highway and Gungahlin Drive

2001/361 Department of Urban Services/Land Transport Infrastructure/Canberra/ACT/Conder 4A - Templestowe Avenue Connection, Ponds and Floodway

2002/825 DEPARTMENT OF URBAN SERVICES ROADS ACT/Transport - Land/Majura



Road/Australian Capital Territory/Majura Road Upgrade

2003/1156 Department of Urban Services, Roads ACT/Land transport/Canberra/ACT/Gungahlin Drive Extension

2003/1257 Department of Urban Services, Roads ACT/Land transport/Campbell/ACT/Fairbairn Avenue Upgrade, Anzac Parade to Northcott Drive

2003/1259 Land Development Authority - Gungahlin/Waste management/Gungahlin/ACT/Gungaderra Trunk Sewer Stage 1

2004/1383 Land Development Agency/Urban and commercial new development/Kingston/ACT/Kingston Foreshore Development - Reclamation and Filling Lake Burley Griffin

2004/1723 ACT Department of Justice and Community Safety/Urban and commercial new development/Hume, Jerrabomberra Valley/ACT/establishment of a prison on part Block 6 Section 24 and part Block 12 Section 18

2005/1975 ACT Department of Treasury/Water management and use/Gungahlin/ACT/Gungaderra Creek Floodway Project

2005/2343 ACT Land Development Agency/Urban and commercial new development/Gungahlin/ACT/Harrison 3 Residential Estate

2005/2474 Land Development Agency/Urban and commercial new development/Gungahlin/ACT/Franklin Residential Estate

2006/2963 ACT Department of Disability, Housing and Community Services/Urban and commercial new development/Mitchell/ACT/Development of Youth Detention Centre

2007/3302 Land Development Agency/Residential development/Dunlop/ACT/Dunlop 5 (West) Residential Development

2007/3420 ACT Procurement Solutions/Transport - land/Gungahlin/ACT/Wells Station Drive Extension Stages 1A & 1B

2007/3531 ACT Dept of Territory and Municipal Services - Parks Conservation &Land/Natural resources mngment/Canberra Nature Parks/ACT/Site Preparation of Inner Asset Protection Zone in 3 Canberra Nature Parks

2008/4036 Land Development Agency (ACT Government)/Residential development/Gungahlin/ACT/Bonner Residential Development Stages 1, 2 and 3

2009/4752 Land Development Agency/Residential development/North Weston, near Cotter Road and Tuggeranong Parkway/ACT/North Weston Residential Development, Canberra



2009/4766 Land Development Agency/Commercial development/Hume West/ACT/Hume West Industrial Estate Development

2009/5041 ACT Planning and Land Authority/Residential development/Molonglo Valley/ACT/Urban development in parts of the suburb of Wright and arterial road btw Streeton Dve & Holden Creek, Molonglo Valley

2009/5050 ACT PLANNING AND LAND AUTHORITY/Residential Development/Molonglo Valley/Australian Capital Territory/Urban development in parts of residential suburb of Coombs, Cotter Road

2009/5057 Roads ACT/Transport - land/Monaro Hwy to Federal Hwy, Majura/ACT/Construction of a four lane dual carriageway road from Monaro Hwy to Federal Hwy, Majura ACT

View Details

2009/5156 ACT PROCUREMENT SOLUTIONS/Transport - Land/West Gungahlin/Australian Capital Territory/Clarrie Hermes Drive Extension

2010/5412 ACT Procurement Solutions /Transport - land/Gungahlin, Mirrabei Drive & Lens Waters Street/ACT/Mirrabei Drive Extension

2010/5456 Department of Territory and Municipal Services/Tourism and recreation/Throsby, Gungahlin/ACT/Throsby Multisport Complex

2010/5501 ACT PROCUREMENT SOLUTIONS/Transport - Land/Kowen (between Queanbeyan & Bungendore)/Australian Capital Territory/Kings Highway Deviation

2010/5565 ACT Procurement Solutions/Transport - land/Approx 8km north of CBD within the suburb of Kenny/ACT/2.1km upgrade and extension of Morisset road

2010/5750 LAND DEVELOPMENT AGENCY/Tourism and Recreation/Block 799 Gungahlin, ACT/Australian Capital Territory/Development of cabin, camping and possible hotel accommodation

2011/5808 ACT NOWASTE/Waste Management (non-sewerage)/ Partly on block 2227 Mugga Lane, NW of Hume, ACT/Australian Capital Territory/Expansion of the Mugga Lane Resource Management Centre

2011/5890 Department of Justice and Community Safety/Natural resources management/Tidbinbilla Nature Reserve approx 35 km SW of Canberra/ACT/Tidbinbilla Land Management Facility

2011/5918 Roads ACT/Transport - land/Gungahlin /ACT/Mulligans Flat Road - Northern Section

2011/6113 Land Development Agency/Residential development/North of Ngunnawal and Amaroo in north Gungalin/ACT/Moncrieff Residential Development



2012/6251 ACT Economic Development Directorate /Commercial development/Horse Park Drive, Gungahlin /ACT/Throsby Denominational School Site

2012/6350 Land Development Agency/Residential development/North- West Gungahlin/ACT/Development of future urban areas Jacka (North), Taylor and Kinlyside

2012/6418 LAND DEVELOPMENT AGENCY/Residential Development/Watson/Australian Capital Territory/Residential Development, Block 9 Section 64, Watson, and extension of Negus Crescent, ACT

2012/6645 TERRITORY AND MUNICIPAL SERVICES ACT GOVERNMENT/Tourism and Recreation/Canberra/Australian Capital Territory/Canberra Centenary Trail Project

2014/7327 ACT Economic Development Directorate/Residential development/Division of Symonston, ACT/ACT/Symonston Residential Estate Stage 2, Symonston, ACT

2015/7483 ACT Shared Services Procurement/Transport - Land/Pialligo/Australian Capital Territory/Construction of a link road on Marjura Parkway, Pialligo, ACT

2016/7742 ACT Procurement/Transport - Land/Mustang Avenue roundabout, Majura Road, Pialligo, ACT/Australian Capital Territory/Construction of the IKEA Canberra Northern Access Road, ACT

2016/7781 Land Development Agency/Residential Development/north of Isabella Pond Weir, between Drakeford Dr and Lake Tuggeranong, ACT/Australian Capital Territory/Urban Development of part Block 5 Section 10 Greenway, ACT

2017/8013 ENVIRONMENT, PLANNING AND SUSTAINABLE DEVELOPMENT DIRECTORATE - DEPARTMENTAL/Residential Development/Block 29, Section 36, Mawson/Australian Capital Territory/Construction of public housing units within Block 29, Section 36, Mawson, ACT.

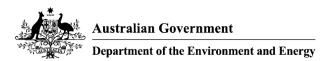
2017/8061 Chief Minister, Treasury and Economic Development Directorate ACT Procurement/Transport - Water/Canberra, ACT/Australian Capital Territory/Molonglo 3 Water Supply Pipeline, ACT

Section 7 - Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
ACT Government (1999). Yellow Box/Red Gum Grassy Woodland: An endangered ecological community. Action Plan No. 10. Environment ACT Canberra.	High ,	None
ACT Government (2004). Woodlands for Wildlife: ACT Lowland Woodland Conservation Strategy. Action Plan No. 27. Environment ACT Canberra.	High ,	None
ACT Government (2013). Little Eagle (Hieraaetus morphnoides). Action Plan No. 35. ACT Government, Canberra.	High	None
Commonwealth of Australia (2006). Policy Statement 3.5: White Box – Yellow Box – Blakely's Red Gum grassy woodlands and derived native grasslands. Commonwealth Department of Environment and Heritage.	High d	None
Commonwealth of Australia (2013). Matters of National Environmental Significance Significant impact guidelines 1.1. Commonwealth Department of the Environment Water, Heritage and the Arts.	High t,	None
Ferronato, B., Roe, J., & Georges, A (2014). Reptile bycatch in a pest-exclusion	High	None



Reference Source fence established for wildlife reintroductions. Journal for Nature Conservation, 22 (2014) 577–585.	Reliability	Uncertainties
Threatened Species Scientific Committee (2006). Advice to the Minister: White Box - Yellow Box - Blakely's Red Gum Grassy Woodlands and Derived Native Grasslands.		None
Vertego Environmental Consultancy, Ian Fraser (2016) Survey and Report – Proposed Predator-Proof Fence – Goorooyarroo Nature Reserve.		None
Capital Ecology (2017). Mulligans Flat Woodland Sanctuary – Goorooyarroo Extension of Predator-proof Fence – Ecological Impact Assessment and Environmenta Significance Opinion Supporting Document. Capital Ecology project no. 2709. Final V2 18 October 2017.		None

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0	Provide a	description	of the	feasible	alternative'	?
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No feasible alternatives are proposed.

A significant amount of effort has gone into determining the proposed fence alignment and design and alternatives were reviewed during the project planning process. The proposed alignment and design was informed by lessons learnt from the design and construction of the original Mulligans Flat fence and Stage 1 - Throsby. Existing fence lines have been followed where possible to minimise environmental impacts and impacts on Aboriginal places and objects. The proposed fence alignment has also been selected as it encapsulates long term study plots which are required for ongoing research within the sanctuary.

During construction there will also be some tolerance for minor adjustment to the alignment to further reduce the impact on the environment.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 - Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Director, Environment

9.2.2 First Name

Daniel

9.2.3 Last Name

Iglesias

9.2.4 E-mail

daniel.iglesias@act.gov.au

9.2.5 Postal Address

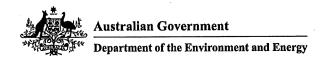
GPO Box 158 Canberra ACT 2601 Australia

9.2.6 ABN/ACN

ABN

31432729493 - ENVIRONMENT, PLANNING AND SUSTAINABLE DEVELOPMENT DIRECTORATE - DEPARTMENTAL

9.2.7 Organisation Telephone



02 6207 5257

DANIEL

designation of

Signature:..\

CRAMA EALE

..... Date: .

the action describe in this EPBC Act Referral.

craig.egle@act.gov.au 9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am: Not applicable **Small Business Declaration** I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption. Signature:...... Date: 9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations No 9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made Person proposing the action - Declaration I, DANIEL 19LESIAS , declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity. Signature:

____, the person proposing the action, consent to the

___ as the proponent of the purposes of

9.3 Is the Proposed Designated Proponent an Organisation or Individual?
Organisation
9.5 Organisation
9.5.1 Job Title
Senior Project Architect
9.5.2 First Name
Craig
9.5.3 Last Name
Egle
9.5.4 E-mail
craig.egle@act.gov.au
9.5.5 Postal Address
GPO Box 158 Canberra ACT 2601 Australia
9.5.6 ABN/ACN
ABN
31432729493 - ENVIRONMENT, PLANNING AND SUSTAINABLE DEVELOPMENT DIRECTORATE - DEPARTMENTAL
9.5.7 Organisation Telephone
02 6207 5257
9.5.8 Organisation E-mail
craig.egle@act.gov.au
Proposed designated proponent - Declaration
I,, the proposed designated proponent, consent to



the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature: Date: 31:10:17

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Director / Principal Ecologist

9.8.2 First Name

Robert

9.8.3 Last Name

Speirs

9.8.4 E-mail

rob@capitalecology.com.au

9.8.5 Postal Address

PO Box 854 Gungahlin ACT 2912 Australia

9.8.6 ABN/ACN

ABN

50607364358 - CAPITAL ECOLOGY PTY LTD

9.8.7 Organisation Telephone

0412474415

9.8.8 Organisation E-mail

Submission #2869 - Mulligans Flat Woodland Sanctuary - Goorooyarroo extension of predator-proof fence

rob@capitalecology.com.au

Re	ferring Party - De	claration	
1, _	Rebert	Speirs	, I declare that to the best of my knowledge the
info	ormation I have giv	∕eń on, or attached	d to this EPBC Act Referral is complete, current and r misleading information is a serious offence.
Sig	nature:	fry	Date: 31/10/2017

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

- 1. 2709.epsdd_.mulligansflatsanctuary.ppfext.eia-eso.fin02.20171018.pdf
- 2. 2709_shapefiles.zip