



NSW NATIONAL PARKS & WILDLIFE SERVICE

# Appendix A: Threatened Species tests of significance

Shanes Park Review of Environmental Factors



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# Contents

Appendix A: Threatened species tests of significance	4
Species and communities listed under the <i>Biodiversity Conservation Act 2016</i>	4
Species and communities listed under the Fisheries Management Act	4
Species and communities listed under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i>	4

## List of tables

Table 1	Threatened Species Test of Significance for species listed under the <i>Biodiversity Conservation Act 2016</i>	5
Table 2	Threatened Species Test of Significance for communities listed under the <i>Biodiversity Conservation Act 2016</i>	10
Table 3	Assessment of Significant Impact Criteria for species or communities listed under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i>	12

# Appendix A: Threatened species tests of significance

## Species and communities listed under the *Biodiversity Conservation Act 2016*

A Threatened Species Test of Significance has been undertaken in accordance with Part 7 of the *Biodiversity Conservation Act 2016* and has concluded that that the activity will not have any significant effect on threatened species or ecological communities.

## Species and communities listed under the *Fisheries Management Act*

Not applicable.

## Species and communities listed under the *Environmental Protection and Biodiversity Conservation Act 1999*

On 28 February 2012, the Commonwealth Government approved all actions associated with the development of the Western Sydney Growth Centres as described in the Sydney Growth Centres Strategic Assessment Program Report. The proposed action is associated with the development of the Western Sydney Growth Centres and is consistent with the report. As such, separate referral is not required under the *Environmental Protection and Biodiversity Conservation Act 1999*.

All threatened species tests of significance for species listed under the *Biodiversity Conservation Act 2016* and the *Environmental Protection and Biodiversity Conservation Act 1999* can be found in Appendix A.

**Table 1 Threatened Species Test of Significance for species listed under the *Biodiversity Conservation Act 2016***

Species	Key species/habitat information	(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
<b>Flora</b>					
<i>Grevillea juniperina</i> subsp. <i>juniperina</i> – vulnerable	Grows on reddish clay to sandy soils derived from Wianamatta Shale and Tertiary alluvium (often with shale influence), typically containing lateritic gravels.	There are a number of examples of these species within the proposed activity footprint, and furthermore throughout the reserve. It is estimated that the individuals of these species to be adversely impacted by the proposed activity makes up 5% or less of their population within the reserve. Given that the extensive habitat throughout the reserve will improve in condition as a result of the proposed activity (particularly removal of feral herbivores and the reinstatement of natural disturbance processes with the return of digging mammals), it is not likely that the proposed activity will have an adverse effect on the life cycle of the species such that a viable local population is placed at risk of extinction.	The proposed activity area does include potential habitat for this species. The proposed activity involves the removal of approximately 5.308 ha of habitat. These species prefer open areas / edges and are threatened by overshadowing by dense canopy, and the disturbance created by clearing is likely to create additional habitat for these species.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of the species in the locality. Within the Shanes Park reserve remains a further 545 ha of suitable habitat for these species. Furthermore, the quality of this habitat will be vastly improved as a result of the proposed activity.
<i>Pultenaea parviflora</i> – endangered	May be locally abundant, particularly within scrubby/dry heath areas within Castlereagh Ironbark Forest and Shale-Gravel Transition Forest on tertiary alluvium or laterised clays. May also be common in transitional areas where these communities adjoin Castlereagh Scribbly Gum Woodland.	There are a number of examples of these species within the proposed activity footprint, and furthermore throughout the reserve. It is estimated that the individuals of these species to be adversely impacted by the proposed activity makes up approximately 6.7% of their population within the reserve. Given that the extensive habitat throughout the reserve will improve in condition as a result of the proposed activity (particularly removal of feral herbivores and the reinstatement of natural disturbance processes with the return of digging mammals), it is not likely that the proposed activity will have an adverse effect on the life cycle of the species such that a viable local population is placed at risk of extinction.	The proposed activity area does include potential habitat for this species. The proposed activity involves the removal of approximately 5.308 ha of habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of the species in the locality. Within the Shanes Park reserve remains a further 545 ha of suitable habitat for these species. Furthermore, the quality of this habitat will be vastly improved as a result of the proposed activity.
<i>Dillwynia tenuifolia</i> – vulnerable	In western Sydney, may be locally abundant particularly within scrubby/dry heath areas within Castlereagh Ironbark Forest and Shale-Gravel Transition Forest on tertiary alluvium or laterised clays. May also be common in transitional areas where these communities adjoin Castlereagh Scribbly Gum Woodland.	There are a number of examples of these species within the proposed activity footprint, and furthermore throughout the reserve. It is estimated that the individuals of these species to be adversely impacted by the proposed activity makes up approximately 6.7% of their population within the reserve. Given that the extensive habitat throughout the reserve will improve in condition as a result of the proposed activity (particularly removal of feral herbivores and the reinstatement of natural disturbance processes with the return of digging mammals), it is not likely that the proposed activity will have an adverse effect on the life cycle of the species such that a viable local population is placed at risk of extinction.	The proposed activity area does include potential habitat for this species. The proposed activity involves the removal of approximately 5.308 ha of habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of the species in the locality. Within the Shanes Park reserve remains a further 545 ha of suitable habitat for these species. Furthermore, the quality of this habitat will be vastly improved as a result of the proposed activity.
<i>Hibbertia puberula</i> – endangered	Occurs on sandy soil often associated with sandstone, or on clay. Habitats are typically dry sclerophyll woodland communities, although heaths are also occupied.	There are a number of examples of these species within the proposed activity footprint, and furthermore throughout the reserve. It is estimated that the individuals of these species to be adversely impacted by the proposed activity makes up approximately 6.7% of their population within the reserve. Given that the extensive habitat throughout the reserve will improve in condition as a result of the proposed activity (particularly removal of feral herbivores and the reinstatement of natural disturbance processes with the return of digging mammals), it is not likely that the proposed activity will have an adverse effect on the life cycle of the species such that a viable local population is placed at risk of extinction.	The proposed activity area does include potential habitat for this species. The proposed activity involves the removal of approximately 5.308 ha of habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of the species in the locality. Within the Shanes Park reserve remains a further 545 ha of suitable habitat for these species. Furthermore, the quality of this habitat will be vastly improved as a result of the proposed activity.

Species	Key species/habitat information	(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
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proposed activity will have an adverse effect on the life cycle of the species such that a viable local population is placed at risk of extinction.

**Fauna**

Cumberland Plain land snail ( <i>Meridolum corneovirens</i> – endangered)	Lives in small areas on the Cumberland Plain west of Sydney, from Richmond and Windsor south to Picton and from Liverpool west to the Hawkesbury and Nepean Rivers at the base of the Blue Mountains. Primarily inhabits Cumberland Plain Woodland; lives under litter of bark, leaves and logs, or shelters in loose soil around grass clumps. Occasionally shelters under rubbish.	A search of the proposed activity area found multiple examples of this species within the Shanes Park reserve. Preferred habitat includes leaf litter, bark and woody debris. The proposed activity involves the distribution of additional coarse woody debris throughout the reserve, adding to the extensive extant habitat throughout. Vegetation removal as part of the proposed activity will affect less than 1% of habitat for this species in the reserve. As a result of the extensive remaining habitat, and works to improve habitat throughout the reserve (with the addition of coarse woody debris, the prevention of illegal firewood collection and the control of invasive weed species), it is unlikely that the proposed activity will have an adverse effect on the life cycle of this species such that a viable local population is placed at risk of extinction.	The proposed activity area does include habitat for this species. Approximately 5.308 ha of habitat will be removed. In addition to this, an extensive volume of coarse woody debris will be redistributed throughout the reserve to supplement habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of this species. Much of the habitat within the alignment is subject to significant edge effects such as weed incursion, firewood collection, illegal clearing. The proposed activity will significantly improve the quality of habitat within the reserve.
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Species	Key species/habitat information	(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
Squirrel glider ( <i>Petaurus norfolcensis</i> – vulnerable)	Inhabits woodland and dry sclerophyll forest areas below 300 m in elevation, though in the northern parts of its distribution it will also occur in coastal forest and some of the wet forest areas bordering on rainforests. Habitat ideally consists of a stand of diverse shrub and tree cover and numerous nesting hollows used as dens for shelter and raising young.	A search of the proposed activity area did not find the species and found no obvious indicators of the species presence such as feeding scars on trees or claw marks. Despite this, there is the possibility of the species occurring within the reserve due to the presence of some suitable habitat, and nearby records. Vegetation removal as part of the proposed activity will affect less than 1% of habitat for this species in the reserve. It is unlikely that the proposed activity will have an adverse effect on the life cycle of this species such that a viable local population is placed at risk of extinction.	The proposed activity area does include potential habitat for these species. The proposed activity involves the removal of 5.308 ha of potential habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of this species. Much of the habitat within the alignment is subject to significant edge effects such as weed incursion, firewood collection, illegal clearing. Ideal habitat for this species includes numerous hollows, which are sparse within the vegetation removal alignment. The proposed activity will significantly improve the quality of habitat within the reserve through the removal of feral predators.
Little lorikeet ( <i>Glossopsitta pusilla</i> – vulnerable)	Forages primarily in open eucalypt forest and woodland canopies, particularly along water courses; occasionally in <i>Angophoras</i> , <i>Melaleucas</i> and other tree species, riparian habitats are also used.	These species have all been previously recorded within the reserve, with extensive suitable habitat present throughout. While the proposed activity will result in the removal of some habitat, it represents less than 1% of the available habitat within the reserve. Additionally, the proposed activity will result in a significant improvement in habitat quality within the reserve through the removal of feral predator species (which are a major nest predator of speckled warblers), the prevention of illegal activity such as firewood collection and illegal clearing, and the application of a natural fire regime. It is unlikely that the proposed activity will have an adverse effect on the life cycle of these species such that viable local populations are placed at risk of extinction.	The proposed activity area does include potential habitat for these species. The proposed activity involves the removal of approximately 5.308 ha of habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of this species. Much of the habitat within the alignment is subject to significant edge effects such as weed incursion, firewood collection and illegal clearing. Ideal habitat for these species includes eucalypt woodlands and forests. The proposed activity will significantly improve the quality of habitat within the reserve through the removal of feral predators and the elimination of illegal activity.
Speckled warbler ( <i>Chthonicola Sagittata</i> – vulnerable)	Typical habitat would include scattered native tussock grasses, a sparse shrub layer, some eucalypt regrowth and an open canopy.				
Varied sittella ( <i>Daphoenositta chrysoptera</i> – vulnerable)	Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and <i>Acacia</i> woodland.				
Dusky woodswallow ( <i>Artamus cyanopterus cyanopterus</i> – vulnerable)	Primarily inhabit dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs,				

Species	Key species/habitat information	(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
	and ground-cover of grasses or sedges and fallen woody debris.				
Swift parrot ( <i>Lathamus discolor</i> – endangered)	Inhabits eucalypt forest and woodland on the mainland following breeding in Tasmania. Only likely to be present as a winter visitor				
Scarlet robin ( <i>Petroica boodang</i> – vulnerable)	Lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. Only likely to be present as a winter visitor.				
Australian painted snipe ( <i>Rostratula australis</i> – endangered)	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber.	These species have suitable habitat present within the Shanes Park reserve and are somewhat likely to occupy waterbodies, marshes or wetlands within the reserve during the summer period.  There is approximately 42ha of suitable habitat for these species within the reserve, the proposed activity will involve the removal of approximately 0.5% of suitable habitat within the reserve.	The proposed activity area does include potential habitat for these species. The proposed activity involves the removal of approximately 0.25 ha of habitat. Mitigation measures such as erosion and sediment control will minimise any impacts to this habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of this species. Much of the habitat within the alignment is subject to significant edge effects such as weed incursion, and illegal clearing.
Curlew sandpiper ( <i>Calidris ferruginea</i> – endangered)	Non-breeding summer migrant. Generally, occupies littoral and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats of sheltered coasts.	It is unlikely that the proposed activity will have an adverse effect on the life cycle of this species such that a viable local population is placed at risk of extinction. These species are likely to benefit from management activities at the site such as eradication of feral predators, weed control and fire management.			
Yellow-bellied sheath-tail-bat ( <i>Saccolaimus flaviventris</i> – vulnerable)	Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows. Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.	These species have some suitable habitat present within the Shanes Park reserve and are likely to be present. These species ideally occupy large eucalyptus forests and woodlands in proximity to water bodies.	The proposed activity area does include potential habitat for these species. The proposed activity involves the removal of approximately 5.308 ha of habitat.	The proposed activity will not fragment or isolate any area of habitat. The Shanes Park reserve is already isolated from surrounding habitat.	The habitat to be removed is of low importance to the long-term survival of this species. Much of the habitat within the alignment is subject to significant edge effects such as weed incursion, and illegal clearing.



Species	Key species/habitat information	(a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
Eastern false pipistrelle ( <i>Falsistrellus tasmaniensis</i> – vulnerable)	Prefers moist habitats, with trees taller than 20 m. Generally, roosts in hollow-bearing trees (eucalypts), but has also been found under loose bark on trees or in buildings.	There is approximately 550 ha of suitable habitat for these species within the reserve, the proposed activity will involve the removal of approximately 0.01% of suitable habitat within the reserve.			
Southern myotis ( <i>Myotis Macropus</i> – vulnerable)	Generally, roost in groups of 10–15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface.	These species will benefit from the proposed activity through the control of weed species, removal of feral predators and the implementation of a natural fire regime. It is unlikely that the proposed activity will have an adverse effect on the life cycle of this species such that a viable local population is placed at risk of extinction.			
Greater broad-nosed Bat ( <i>Scoteanax rueppellii</i> – vulnerable)	Utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest. Usually roosts in tree hollows but also in buildings.				
Eastern coastal free-tailed bat ( <i>Micronomus norfolkensis</i> – vulnerable)	Occur in dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. Roost mainly in tree hollows but will also roost under bark or in man-made structures.				

**Table 2 Threatened Species Test of Significance for communities listed under the *Biodiversity Conservation Act 2016***

Ecological Community	(b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction	(b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
River-Flat Eucalypt Forest in the Sydney Basin Bioregion	<p>Part of the proposed activity footprint is mapped as <i>Alluvial Woodland</i>, which on the Cumberland Plain forms <i>River-Flat Eucalypt Forest endangered ecological community (EEC)</i> (EEC).</p> <p>Additionally, part of the proposed activity footprint is mapped as <i>Freshwater Wetlands</i>, which on the Cumberland Plain forms part of <i>Freshwater Wetlands on Coastal Floodplains EEC</i>.</p> <p>The proposed activity involves the vegetation removal of approximately 0.5% of these EEC's within the Shanes Park reserve. The remaining 99.5% of these communities within the reserve will benefit significantly as a result of the ecological benefits of the proposed activity e.g. weed management, feral herbivore control, fire management and return of natural disturbance processes with the reintroduction of the locally extinct mammals.</p> <p>Therefore, the proposed activity is not likely to have an adverse effect on the extent of these EEC's such that its local occurrence is likely to be placed at risk of extinction.</p>	<p>The proposed activity will not substantially alter the composition of the EEC's such that its local occurrence is likely to be placed at risk of extinction.</p>	<p>The proposed activity will involve the removal of approximately 0.25 ha of the EEC's. This is a small proportion of this EEC's remaining throughout the Cumberland Plain.</p>	<p>No area of habitat is likely to become fragmented or isolated as a result of the proposed activity. The Shanes Park reserve is already isolated from surrounding habitat.</p>	<p>The EEC to be removed is of low importance to the long-term survival of the ecological community. The EEC to be removed is subject to significant edge effects such as weed incursion and illegal clearing. Erosion and sediment controls will prevent adverse effects to surrounding vegetation. The proposed activity will significantly improve the long-term condition of the remainder of these EEC's within the reserve.</p>
Freshwater Wetlands on Coastal Floodplains in the Sydney Basin Bioregion	<p>The proposed activity involves the vegetation removal of approximately 0.5% of these EEC's within the Shanes Park reserve. The remaining 99.5% of these communities within the reserve will benefit significantly as a result of the ecological benefits of the proposed activity e.g. weed management, feral herbivore control, fire management and return of natural disturbance processes with the reintroduction of the locally extinct mammals.</p> <p>Therefore, the proposed activity is not likely to have an adverse effect on the extent of these EEC's such that its local occurrence is likely to be placed at risk of extinction.</p>	<p>The proposed activity will not modify the composition of this ecological community such that its local occurrence will be placed at risk of extinction.</p>	<p>The proposed activity will involve the removal of approximately 4.54 ha of these EEC's.</p>	<p>No area of habitat is likely to become fragmented or isolated as a result of the proposed activity. The Shanes Park reserve is already isolated from surrounding habitat.</p>	<p>The EEC to be removed is of low importance to the long-term survival of the ecological community. The EEC to be removed is subject to significant edge effects such as weed incursion and illegal clearing. The proposed activity will significantly improve the long-term</p>
Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion (Vulnerable Ecological Community)	<p>All these EEC's are present within the proposed activity footprint, with <i>Shale-gravel Transition Forest</i> being the most effected, with 3.87 ha being removed, with the other communities having less than 0.5 ha impacted.</p>	<p>The proposed activity will not modify the composition of this ecological community such that its local occurrence will be placed at risk of extinction.</p>	<p>The proposed activity will involve the removal of approximately 4.54 ha of these EEC's.</p>	<p>No area of habitat is likely to become fragmented or isolated as a result of the proposed activity. The Shanes Park reserve is already isolated from surrounding habitat.</p>	<p>The EEC to be removed is of low importance to the long-term survival of the ecological community. The EEC to be removed is subject to significant edge effects such as weed incursion and illegal clearing. The proposed activity will significantly improve the long-term</p>

Ecological Community	(b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction	(b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction	(c) In relation to the habitat of a threatened species or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	(c) In relation to the habitat of a threatened species or ecological community: (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species of ecological community in the locality
Shale-gravel Transition Forest in the Sydney Basin Bioregion (Endangered Ecological Community)	Despite this, the <i>Shale-gravel Transition Forest</i> to be impacted represents only 1.54% of this community throughout the reserve, and 0.23% of this community in New South Wales. Additionally, the other communities listed here have less than 1% of their extents throughout the reserve adversely affected by the proposed activity.		condition of the remainder of these EEC's within the reserve.		
Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion (Endangered Ecological Community)	The proposed activity will involve the removal of 0.003% of <i>Cumberland Plain Woodland</i> in New South Wales, 0.04% of <i>Cooks River/Castlereagh Ironbark Forest</i> in New South Wales and 0.001% of <i>Castlereagh Scribbly Gum Woodland</i> in New South Wales.				
Cumberland Plain Woodland in the Sydney Basin Bioregion Critically Endangered Ecological Community)	Furthermore, the activity will significantly benefit these remaining communities through weed control, the restoration of ecological processes, control of feral herbivores, and prevention of illegal activity such as firewood collection and vegetation removal. Therefore, the proposed activity is not likely to have an adverse effect on the extent of these EEC's such that its local occurrence is likely to be placed at risk of extinction.				

**Table 3 Assessment of Significant Impact Criteria for species or communities listed under the *Environmental Protection and Biodiversity Conservation Act 1999***

Assessment of relevant significant impact criteria	
<p><b>Critically Endangered Ecological Communities</b></p> <ul style="list-style-type: none"> <li>• Cumberland Plain Shale Woodlands</li> <li>• Shale-Gravel Transition Forest</li> <li>• River-flat Eucalypt Forest on coastal floodplains of southern New South Wales and eastern Victoria</li> <li>• Cooks River – Castlereagh Ironbark Forest</li> </ul>	<p>The proposed activity involves the removal of 4.68 ha of the ecological communities listed as critically endangered.</p> <p>The habitat to be impacted is in poor condition, is relatively young regeneration and is subject to significant edge effects such as weed incursion, illegal clearing and firewood collection. Therefore, it is unlikely that the removal of this habitat will result in a species decline.</p> <p>Furthermore, the proposed activity will result in a significant increase the quality of habitat within the reserve through weed control, the addition of artificial habitat, the restoration of ecological processes, control of feral herbivores, removal of feral predators and prevention of illegal activity.</p> <p>Therefore, the proposed activity will not result in a significant impact as it will not 'modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline'.</p>
<p><b>Endangered Ecological Communities</b></p> <ul style="list-style-type: none"> <li>• Castlereagh Scribbly Gum and Agnes Banks Woodland</li> </ul>	<p>The proposed activity does involve the removal of 0.03 ha of the ecological communities listed as endangered.</p> <p>The habitat to be impacted is of poor condition and is subject to significant edge effects such as weed incursion, illegal clearing and firewood collection. Therefore it is unlikely that the removal of this habitat will result in a species decline.</p> <p>Furthermore, the proposed activity will result in a significant increase the quality of habitat within the reserve through weed control, the addition of artificial habitat, the restoration of ecological processes, control of feral herbivores, removal of feral predators and prevention of illegal activity.</p> <p>Therefore, the proposed activity will not result in a significant impact as it will not 'modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline'.</p>
<p><b>Critically Endangered species</b></p> <ul style="list-style-type: none"> <li>• Swift Parrot (<i>Lathamus discolor</i>)</li> </ul>	<p>The proposed activity does involve the removal of less than 1% of the suitable habitat for this species within the Shanes Park reserve.</p> <p>The habitat to be impacted is of poor condition and is subject to significant edge effects such as weed incursion, illegal clearing and firewood collection. Therefore it is unlikely that the removal of this habitat will result in a species decline. There is a remaining 550 ha of suitable habitat for these species throughout the reserve.</p> <p>Furthermore, the proposed activity will result in a significant increase the quality of habitat within the reserve through the restoration of ecological processes, removal of feral predators and prevention of illegal activity.</p> <p>Therefore, the proposed activity will not result in a significant impact as it will not 'modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline'.</p>
<p><b>Vulnerable species</b></p> <ul style="list-style-type: none"> <li>• <i>Pultenaea parviflora</i></li> </ul>	<p>The proposed activity does involve the removal of approximately 5% of individuals of this species throughout the Shanes Park reserve. This species is well represented in nearby National Parks and Wildlife Service (NPWS) reserves including Castlereagh Nature Reserve and Wianamatta Regional Park.</p> <p>The habitat to be impacted is of poor condition and is subject to significant edge effects such as weed incursion, illegal clearing and firewood collection. Therefore it is unlikely that the removal of this habitat will result in a species decline. This species often thrives on disturbed landscapes, and it is likely that proliferation of this species along the edge of the disturbed corridor will occur.</p> <p>Furthermore, the proposed activity will result in a significant increase in the quality of habitat within the reserve through the restoration of ecological processes, removal of feral predators and prevention of illegal activity.</p> <p>Therefore, the proposed activity will not result in a significant impact as it will not 'modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline'.</p>
<p><b>Endangered species</b></p> <ul style="list-style-type: none"> <li>• Australian Painted Snipe (<i>Rostratula australis</i>)</li> <li>• Curlew Sandpiper (<i>Calidris ferruginea</i>)</li> </ul>	<p>The proposed activity does involve the removal of 0.25 ha of the suitable habitat for these species within the Shanes Park reserve.</p> <p>The habitat to be impacted is of poor condition and is subject to significant edge effects such as weed incursion, illegal clearing and firewood collection. Therefore it is unlikely that the removal of this habitat will result in a species decline. There is a remaining 42 ha of suitable habitat for these species throughout the reserve.</p> <p>Furthermore, the proposed activity will result in a significant increase the quality of habitat within the reserve through the restoration of ecological processes, removal of feral predators and prevention of illegal activity.</p> <p>Therefore, the proposed activity will not result in a significant impact as it will not 'modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline'.</p>
<p><b>Migratory species</b></p> <ul style="list-style-type: none"> <li>• Latham's Snipe (<i>Gallinago hardwickii</i>)</li> </ul>	<p>The proposed activity does involve the removal of 0.25ha of suitable habitat for these species within the Shanes Park reserve. There is a remaining 42 ha of suitable habitat for these species throughout the reserve. The proposed activity is not likely to result in any of the significant impact criteria for these species.</p> <p>Furthermore, the proposed activity will result in a significant increase the quality of habitat within the reserve through the restoration of ecological processes, removal of feral predators and prevention of illegal activity.</p>