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Assessment of Significance of Potential Impacts of the Proposed Redevelopment of Doltone Motorboat Club site, Deepwater Park, Milperra on the Status of the Swift Parrot (*Lathamus discolor*) and its Habitats.

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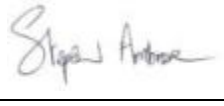
Signed:	
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1. INTRODUCTION

1.1 Overview

The purpose of this report is to assess the significance of the proposed redevelopment of the Deepwater Motor Boat Club site and upgrade of Webster Street (the "proposed development") on the NSW and national status of the Swift Parrot and its habitats.

1.2 NSW Assessment of Significance

Section 78A of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) enables a person to apply to a consent authority to carry out development that is permissible under an environmental planning instrument.

In assessing a development application a consent authority must, pursuant to 79C of the EP&A Act take into consideration, where relevant, the likely impacts of the development on the natural and built environments.

Part 5A of the EP&A Act lists the factors to be taken into consideration in assessing a development application in deciding whether there is likely to be a significant effect on a threatened species or population, endangered ecological community, critically-endangered ecological community or their habitats (the Seven-part Test of Significance). If a significant impact is likely to occur then a Species Impact Statement (SIS) must be prepared in accordance with Division 2 of Part 6 of the *Threatened Species Conservation Act, 1995* (TSC Act).

An SIS provides a more detailed assessment of threatened biota issues and proposes measures to manage and mitigate adverse impacts on the threatened species, populations or ecological communities, or their habitats, resulting from the proposal.

The present report presents a Seven-part Test of Significance for the Swift Parrot as a means of assessing the impact of the proposed development on the NSW status of the Swift Parrot and its habitats.

1.3 Commonwealth Assessment of Significance

The *Environmental Protection and Biodiversity Conservation Act, 1999* (EPBC Act) regulates the assessment and approval of actions that have a significant impact on matters of national environmental significance. These may include:

- wetlands protected by international treaty (the Ramsar Convention);
- nationally listed threatened species and ecological communities; and
- nationally listed migratory species.

An action that is likely to have a significant impact requires the approval of the Commonwealth Minister for the Environment. Actions are projects, developments, undertakings, activities, series of activities or alteration of any of these actions. Guidelines for assessing the national significance of impacts are presented on the Department of the Environment (DoE) website.

This report assesses whether or not the proposed development would significantly impact on the national status of the Swift Parrot and its habitats, matters of national environmental significance. If a significant impact is likely, then the matter needs to be referred to DoE.

2. THE SUBJECT SITE

The subject site is Lot D in DP 391154 and Lot A in DP 405225, 30 Webster Street, Milperra which, collectively, is 4.08 ha in size.

The following development occurs on the subject site:

- a duel carriage concrete road leading from the end of Webster Street to the existing two- storey Deepwater Motorboat Club building;
- a road branching off the main entrance road to two existing boat ramps and associated hard stand car parking area;
- the existing two storey motorboat club consisting of storage at ground level and the habitable club area at first floor level;
- an associated pool area with brick outbuilding is located to the north of the Club building;
- a two-coat bitumen car parking area, with no formal line markings, located to the east of the Club building; and
- a pedestrian pathway wandering generally along the Georges River foreshore running along the south and east of the site.

Fauna species and their habitats recorded on the subject site in 2011 are detailed in Ambrose (2011). Descriptions of the floristic composition, structure and condition of vegetation communities on the subject site are presented in Clements *et al.* (2014a & b).

Fifty-nine (59) isolated locally-native canopy trees of the former River-flat Eucalypt Forest (NSW) Endangered Ecological Community occur on the Deepwater Motorboat Clubhouse site, including around the existing car parking areas.

The locally native trees are Grey Box (*Eucalyptus moluccana*), Narrow-leaved Ironbark (*Eucalyptus crebra*), Broad-leaved Ironbark (*Eucalyptus fibrosa*), Thin-leaved Stringybark (*Eucalyptus eugenoides*), Spotted Gum (*Corymbia maculata*), Blue Box (*Eucalyptus baueriana*), Ribbon Gum (*Eucalyptus viminalis*), River Oak (*Casuarina cunninghamiana*) and Swamp Oak (*Casuarina glauca*). An Australian tree that is not locally native to the Sydney Basin Bioregion that occurs on the subject site is the Flooded Gum (*Eucalyptus grandis*).

The Deepwater Motorboat Club is located on the northern shoreline of the Upper Georges River. Sydney Coastal River Flat Forest occurs north, east and west of the subject site. A mix of Estuarine vegetation (*Casuarina glauca*/*Melaleuca ericifolia* Open Scrub and Mangrove Forest) and Cooks River/Castlereagh Ironbark Forest occurs on either side of the access road (Webster Street).

A natural drainage line with Mangrove Forest growing along its banks drains water from two large wetlands located in the central area of Deepwater Regional Park into the Georges River.

3. PROPOSED DEVELOPMENT

The proposed development involves:

- alterations and additions to the existing Deepwater Motorboat Club facility including continued and expanded use of part of the ground floor for administration and boat storage purposes by the

Deepwater Motorboat Club, as well as pre-function and back-of-house areas associated with the new first floor 800 seat function centre;

- conversion of the existing pool and associated outbuilding into a new 112-seat restaurant and organic garden;
- site-wide landscaping , formal car parking and spill-over car parking, business identification, signage and infrastructure services;
- demolition and tree removal as noted on the architectural and landscape plans;
- upgrade of infrastructure services within the Deepwater Reserve and Webster Street road reserve; and
- upgrade of the intersection of Webster Street and Henry Lawson Drive.

A site plan showing the proposed development footprint is provided in Figure 1.

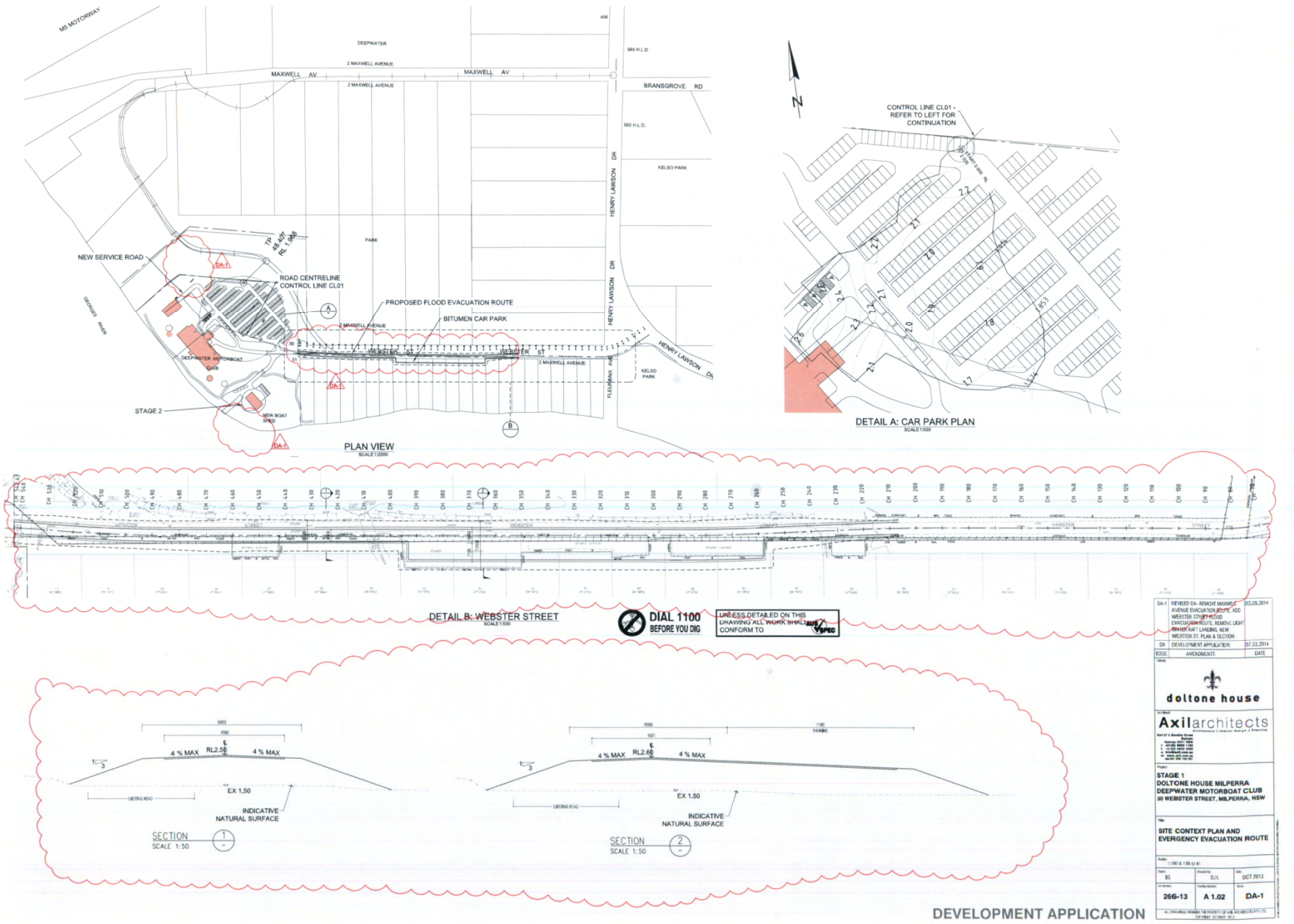
It is also proposed to upgrade Webster Street to allow it to serve as a flood evacuation route (Figure 2). This involves raising the westerly most 300 m length of the road by 1.2 m to a nominal crest elevation of 2.7 m AHD by:

- relocating the centreline of the road to the south by up to 3 m to avoid impacts on the vegetation located along the northern edge of the existing roadway;
- constructing an earth roadway formation with batters at 1:3 with the raised section of the road built over the southern part of Webster Street so that vegetation in areas to the north is not impacted;
- constructing 90-degree car parking along the southern side of Webster Street with the southern edge of these car parks battered down into the adjoining parkland at 1:3;
- using the existing table drain located along the northern edge of Webster Street to capture road runoff and directing it towards the box culvert that crosses Webster Street at approximately Chainage 410 and which connects Deepwater Lagoon to Georges River; and
- Providing drainage infrastructure along the southern side of the upgraded Webster Street to direct road surface runoff to the low point at the box culvert that crosses Webster Street at approximately Chainage 410.

According to the Tree Removal Plan prepared by Context, dated February 2014 (Figure B3 of Clements *et al.* 2014a), modifications to the Deepwater Motorboat Club building and existing car parking area would require the removal of the following locally-native canopy tree species: four Forest Red Gums (*Eucalyptus tereticornis*) (Tree Nos 47 to 50), 10 Grey Boxes (*Eucalyptus molucanna*) (Tree Nos. 9, 10, 12, 22, 92, 97, 98, 117, 118 & 119), three Blue Boxes (*Eucalyptus baueriana*) (Tree Nos. 11, 100 & 101), two Grey Ironbarks (*Eucalyptus paniculata*) (Tree Nos. 108 & 110), one Spotted Gum (*Corymbia maculata*) (Tree No. 8), one Rough-barked Apple (*Angophora floribunda*) (Tree No. 103) and one White Feather Honey Myrtle (*Melaleuca decora*) (Tree No. 99). Two of these trees (one Grey Box and one Grey Ironbark) are in poor health and are likely to die in the short-term). Therefore, 23 locally-native trees, two of which are in poor health, are likely to be removed from within the proposed redevelopment footprint of the clubhouse and car park.

FIGURE 1 PROPOSED DEVELOPMENT FOOTPRINT

FIGURE 2 PROPOSED MODIFICATIONS TO WEBSTER STREET



Clements *et al*. (2014b) indicate that the Webster Street upgrade would require the removal or pruning of an additional five Grey Boxes (*Eucalyptus moluccana*), three Swamp Oaks (*Casuarina glauca*), two Prickly-leaved Paperbarks (*Melaleuca styphelioides*) and one White Feather Honey Myrtle (*Melaleuca decora*). Therefore up to 11 locally-native trees have the potential to be removed along the proposed flood evacuation route.

Clements et al. (2014b) also indicate that between 0.015 and 0.03 ha of Swamp Oak Floodplain Forest will require removal from the Webster Street upgrade area..

4. SWIFT PARROT PROFILE

The Swift Parrot is listed as Endangered under the schedules of the TSC and EPBC Acts.

The Swift Parrot is a gregarious species that breeds in eucalypt forests in eastern and northern Tasmania and it over-winters in south-eastern mainland Australia. During the breeding season the species feeds on the nectar of the flowering Tasmanian Blue Gum (*Eucalyptus globulus*).

In late March almost the entire population moves to mainland Australia. Most over-winter in Victoria and central and eastern NSW, but each year a few are recorded from south-eastern Qld and occasionally from as far west in Tasmania (Blakers *et al.* 1984). Migrants return to Tasmania in September (Brown 1989).

Swift Parrots inhabit *Eucalyptus* forests, breeding in mature and senescent trees. They breed where Tasmanian Blue Gums are flowering well, and in poor flowering seasons the amount of breeding is reduced. On the mainland Swift Parrot movements are little understood. It congregates in areas where eucalypts are flowering profusely or where there are abundant lerp infestations, often returning regularly to the same places. It is consequently dependent on winter-flowering species, particularly Red Ironbark (*Eucalyptus sideroxylon*), Yellow Gum (*E. leucoxylon*), White Box (*E. albens*) and Swamp Gum (*E. ovata*) (Brown 1989). It also feeds in Manna Gum (*E. viminalis*) in autumn. It often occurs in remnant patches of mature eucalypts of agricultural land and is also common in some Melbourne suburbs (Emison *et al.* 1987).

Favoured food trees of the Swift Parrot in NSW when winter-flowering include Swamp Mahogany (*Eucalyptus robusta*), Spotted Gum (*Corymbia maculata*), Red Bloodwood (*C. gummifera*), Mugga Ironbark (*E. sideroxylon*), and White Box (*E. albens*). Commonly used lerp-infested trees include Inland Grey Box (*E. macrocarpa*), Grey Box (*E. moluccana*) and Blackbutt (*E. pilularis*) (OEH Threatened Species Database http://www.environment.nsw.gov.au/threatenedspecies).

Population size and trends are poorly known as the species' habitat use within its broad range varies irregularly (Garnett *et al.* 2011). The breeding population was estimated at 1,320 breeding pairs in 1987-1988 and 940 pairs in 1995-96 (Brereton 1996). Annual surveys across the species' non-breeding range fluctuate depending on the distribution of birds across the landscape and flock sizes. A total of 2,158 birds, including immature, in 2010, was the highest count for many years (C. Tzaros & D. Ingwersen cited by Garnett *et al*. 2011). There is little evidence of decreased national abundance, but much anecdotal evidence of localised declines and demonstrable loss of breeding habitat. Garnett *et al.* (2011) estimates the total population consists of 2000 mature birds and is declining.

In Tasmania the abundance of Blue Gums has been greatly reduced by clearance of land for agriculture, saw log production and clear-felling for woodchips (Garnett 1993). Individual parkland trees are now often the most important food sources.

Similarly, on the mainland most of the best-quality stands of favoured food tree species have been cleared for agriculture and many of those remaining have been heavily cut-over to produce poles for firewood. The resulting immature stands may be poorer and less reliable sources of nectar (Brown 1989). In 1959 there were several reports of large concentrations of Swift Parrots from Victoria and NSW during winter (Hindwood and Sharland 1964). However, in NSW, there appear to be few records from the period 1988-90 (Garnett 1993) and, apart from 100+ birds being observed in Temora in May 1990, all observations were of fewer than four birds (A. Morris in Garnett 1993).

Some Swift Parrots are also taken illegally for the commercial bird trade and, in recent years, a number of trappers have been prosecuted in NSW (J. Hardy in Garnett 1993).

Other less well understood potential threats include competition for food with large, aggressive nectarivorous honeyeaters and the introduced Bumblebee (*Bombus terrestris*), and for nest hollows with the Common Starling (*Sturnus vulgaris*) which may be exacerbated by forest fragmentation (Hingston *et al.* 2004, Saunders & Tzaros 2010).

High mortality also occurs through collisions with windows, wire netting, fences and vehicles (Pfennigwerth 2008). Wind energy turbines in south-eastern Australia are probably not a serious threat (Smales 2005). Another potential threat is Psittacine Beak and Feather Disease (Garnett *et al.* 2011).

5. SEVEN-PART TEST OF SIGNIFICANCE

5.1 The Seven-part Test

(a) In the case of a threatened species, whether the action proposed 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.

The first ever observations of Swift Parrots occurring in Deepwater Park were recorded on 24 August 2014 ("a small flock"), with a further 12 individuals recorded on 12 September 2014 (OEH Media Release, 17 September 2014 http://www.environment.nsw.gov.au/media/OEHMedia14091701.htm). These individuals were feeding on the nectar of Blue Box (*Eucalyptus baueriana*) which was flowering in Deepwater Park at the time.

The individuals recorded within Deepwater Park are part of the Tasmanian breeding population that over-winters on the south-eastern Australian mainland and which is estimated to comprise about 2000 individuals. Therefore, the sub-population observed in Deepwater Park in August and September 2014 is at least 0.6% of the viable local population. Although small numbers of Swift Parrots are recorded in the Sydney metropolitan area over the winter period, they favour inland NSW forests and woodlands where there is a greater concentration and abundance of preferred food trees. However, in years when there is poor flowering in these inland habitats, eucalypt nectar and lerp sources in coastal and river bank forests, such as in Deepwater Park, are important drought refuges for over-wintering Swift Parrots.

Only three Blue Box individuals (Tree Nos. 11, 100 and 101) will be removed as a result of the proposed development. Two other Blue Box individuals that occur on the subject site (Tree Nos. 122 &135) will be retained. Blue Box trees also occur elsewhere in Deepwater Park. In NSW, this plant species occurs in gallery woodland on alluvial soils along streams in coastal areas south of Putty. The main habitat areas for Blue Box in the Sydney metropolitan region occur along the Georges River, and Prospect and Cabramatta Creeks. Therefore, the removal of three Blue Boxes as part of the proposed development would not significantly limit the availability of this tree species as a

potential food source for Swift Parrots at a local (Blacktown LGA), regional (Sydney Basin Bioregion) or State (NSW) levels.

The Spotted Gum (*Corymbia maculata*) is the only favoured food tree species within the proposed development area. There is only one individual of this species (Tree No. 8), which has been planted. Spotted Gums occur in open forest on somewhat infertile, drier sites on shales and slates along the entire NSW coastline. Therefore, the removal of one Spotted Gum form the subject site would not significantly limit the availability of this species as a food source for Swift Parrots in NSW.

The Swift Parrot also has the potential to feed on occasional lerp infestations on Grey Box (*Eucalyptus moluccana*) within Deepwater Park. The proposed development would result in the removal of 15 Grey Boxes from the subject site. The Grey Box is a common tree species with a widespread distribution in NSW, occurring in grassy woodland or forest on loamy soils of moderate to high fertility on coastal plains and western and eastern slopes of the Great Dividing Range, north of Nowra. The Grey Box is one of the most common tree species within Deepwater Park. Therefore, the removal of 15 Grey Box individuals as a result of the proposed development would not significantly limit accessibility of Swift Parrots to lerp infestations, either at a local or broader geographical level.

The Swift Parrot does not breed in mainland south-eastern Australia. Therefore, the proposed development would not result in the removal of actual or potential nesting habitat of this species.

According to GTA Consultants (2014), Webster Street currently carries less than 50 vehicles per hour during the evening peak hour. They predict that the proposed development would generate at most about 319 vehicle trips during the weekend afternoon peak hour before a large evening function. Therefore, there is a marginal risk of increased disturbance to Swift Parrots feeding on resources on food trees along or near the edges of Webster Street. This is unlikely to result in significantly limiting accessibility of Swift Parrots to food resources because they are likely to become habituated to such disturbances, or be temporarily displaced to nearby feeding areas within Deepwater Park or elsewhere along the banks of the Georges River.

Swift Parrots fly low over open ground. Increased traffic flow along Webster Street also has the potential to increase the risk of Swift Parrot road-kills along Webster Street. However, this is unlikely to be a significant risk because the volume of traffic along Webster Street as a result of the proposed development is still relatively low and the maximum speed limit is 50 km/hr, providing both Swift Parrots and vehicle drivers enough time to avoid vehicle-bird collisions.

(b) In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.

Not applicable. There are no listed endangered populations of the Swift Parrot in the schedules of the TSC Act.

(c) In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:

(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, or

(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.

Not applicable. The Swift Parrot is not an endangered ecological community or critically endangered ecological community.

(d) In relation to a habitat of a threatened species, population or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.

(i) See comments under Part (a) of Seven-part Test.

(ii) The Swift Parrot is an extremely mobile species capable of moving long distances over open spaces. The proposed development would not result in fragmentation or isolation of Swift Parrot habitat.

(iii) Although small numbers of Swift Parrots are recorded in the Sydney metropolitan area over the winter period, they favour inland NSW forests and woodlands where there is a greater concentration and abundance of preferred food trees. However, in years when there is poor flowering in these inland habitats, eucalypt nectar and lerp sources in coastal and river bank forests, such as in Deepwater Park, are important drought refuges for over-wintering Swift Parrots.

(e) Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).

No critical habitats for Swift Parrots occur in the locality.

(f) Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.

Priority actions proposed by OEH for the recovery of the Swift Parrot in NSW are:

- Retain existing vegetation and remnant stands along roadsides and in paddocks.
- Increase the size of existing remnants by planting trees and establishing buffer zones.
- Where remnants have lost connective links, re-establish links by revegetating corridors or stepping stones.
- Limit firewood collection and retain dead timber in open forest and woodland areas.
- Encourage regeneration of habitat by fencing remnant stands and managing the intensity and duration of grazing.
- Control weeds in areas of known habitat.

The proposed development is consistent with the priority actions for the recovery of Swift Parrots in NSW. Although some vegetation will be removed from within the road corridor as a result of upgrades to Webster Street, remnant stands will still occur on both sides of this street.

Landscaping of the subject site with locally-native trees grown from local sources of seed, and the design and implementation of an effective weed management plan for the site, are part of the development proposal.

(g) Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

"Clearing of Native Vegetation" is a Key Threatening Process listed in Schedule 3 of the *Threatened Species Conservation Act, 1995*. The proposed development would result in the removal of actual or potential food trees or foraging substrate trees of Swift Parrots. However, these trees are a negligible amount of available foraging habitat for Swift Parrots [See Part (a)] and their removal would not significantly limit resources available to them within the locality or broader geographical region.

5.2 Seven-part Test Conclusion

The proposed development will not significantly impact on the NSW status of the Swift Parrot or its habitats. Therefore, a Species Impact Statement is NOT required for this species in relation to the proposed development.

6. COMMONWEALTH ASSESSMENT OF SIGNIFICANCE

6.1 Assessment of Significance

Under the EPBC Act, a nationally endangered species is significantly impacted on if a proposal is likely to:

- lead to a long-term decrease in the size of a population; or
- reduce the area of occupancy of a species; or
- fragment an existing population into two or more populations; or
- adversely affect habitat critical to the survival of a species; or
- disrupt the breeding cycle of a population; or
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; or
- result in invasive species that are harmful to an endangered species becoming established in the endangered species' habitat; or
- interfere substantially with the recovery of a species.

Each of these issues is addressed below:

(a) The proposal would lead to a long-term decrease in the size of a population.

No. The proposed redevelopment of the Deepwater Motorboat Club and Webster Street upgrade would result in the removal or modification of a negligible amount of Swift Parrot habitat. Therefore, these works are unlikely to significantly limit resources available to this species to the extent that a local viable population, the NSW population, the national population, or their habitats, are significantly impacted.

Marginally increased traffic flow along Webster Street has the potential to increase disturbances to Swift Parrots feeding in trees alongside the street. This may initially cause Swift Parrots to avoid feeding on nectar or lerp sources on favoured food trees near Webster Street. However, it is likely that Swift Parrots would become habituated to these disturbances and use tree close to Webster Street because they occur in other urban environments where these disturbances already occur.

Increased traffic flow along Webster Street resulting from the proposed redevelopment of the Deepwater Motorboat Clubhouse is unlikely to result in a significant increase in the number of Swift Parrot road-kills.

(b) The proposal would reduce the area of occupancy of a species.

No. The proposal is unlikely to result in the disappearance of Swift Parrots from Deepwater Park. The presence of Swift Parrots within Deepwater Park and other parts of the species' range within the locality depends largely on the availability of flowering of preferred food trees and lerp infestations. The proposal would not impact significantly on the availability of these resources.

(c) The proposal would fragment an existing population into two or more populations.

No. The Swift Parrot is an extremely mobile species capable of moving long distances over open spaces. The proposed development would not result in fragmentation or isolation of Swift Parrot habitat or populations.

(d) The proposal would adversely affect habitat critical to the survival of a species.

No. The proposal would result in the removal or modification of a negligible amount of Swift Parrot habitat. Therefore, these works are unlikely to significantly limit resources available to this species to the extent that a local viable population, the NSW population, the national population, or their habitats, are significantly impacted.

(e) The proposal would disrupt the breeding cycle of a population.

No. The Swift Parrot does not breed on mainland Australia. The removal of a small number of actual or potential food trees of Swift Parrots for the proposed development would not impact on the ability of Swift Parrots to build up enough energy resources to migrate to Tasmania each spring to breed.

(f) The proposal would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

No. Only three Blue Box individuals (Tree Nos. 11, 100 and 101) will be removed as a result of the proposed development. Two other Blue Box individuals that occur on the subject site (Tree Nos. 122 &135) will be retained. Blue Box trees also occur elsewhere in Deepwater Park. In NSW, this plant species occurs in gallery woodland on alluvial soils along streams in coastal areas south of Putty. The main habitat areas for Blue Box in the Sydney metropolitan region occur along the Georges River, and Prospect and Cabramatta Creeks. Therefore, the removal of three Blue Boxes as part of the proposed development would not significantly limit the availability of this tree species as a potential food source for Swift Parrots at a local (Blacktown LGA), regional (Sydney Basin Bioregion) or State (NSW) levels.

The Spotted Gum (*Corymbia maculata*) is the only favoured food tree species within the proposed development area. There is only one individual of this species (Tree No. 8), which has been planted. Spotted Gums occur in open forest on somewhat infertile, drier sites on shales and slates along the entire NSW coastline. Therefore, the removal of one Spotted Gum form the subject site would not significantly limit the availability of this species as a food source for Swift Parrots in NSW.

The Swift Parrot also has the potential to feed on occasional lerp infestations on Grey Box (*Eucalyptus moluccana*) within Deepwater Park. The proposed development would result in the removal of 15 Grey Boxes from the subject site. The Grey Box is a common tree species with a widespread distribution in NSW, occurring in grassy woodland or forest on loamy soils of moderate to high fertility on coastal plains and western and eastern slopes of the Great Dividing Range, north of Nowra. The Grey Box is one of the most common tree species within Deepwater Park. Therefore,

the removal of 15 Grey Box individuals as a result of the proposed development would not significantly limit accessibility of Swift Parrots to lerp infestations, either at a local or broader geographical level.

The Swift Parrot does not breed in mainland south-eastern Australia. Therefore, the proposed development would not result in the removal of actual or potential nesting habitat of this species.

(g) The proposal would result in invasive species that are harmful to an endangered species becoming established in the endangered species' habitat.

No. Priority actions proposed by the National Swift Parrot Recovery Plan are:

- Retain existing vegetation and remnant stands along roadsides and in paddocks.
- Increase the size of existing remnants by planting trees and establishing buffer zones.
- Where remnants have lost connective links, re-establish links by revegetating corridors or stepping stones.
- Limit firewood collection and retain dead timber in open forest and woodland areas.
- Encourage regeneration of habitat by fencing remnant stands and managing the intensity and duration of grazing.
- Control weeds in areas of known habitat.

The proposed development is consistent with the priority actions for the recovery of Swift Parrots in NSW. Although some vegetation will be removed from within the road corridor as a result of upgrades to Webster Street, remnant stands will still occur on both sides of this street.

Landscaping of the subject site with locally-native trees grown from local sources of seed, and the design and implementation of an effective weed management plan for the site, are part of the development proposal.

6.2 Conclusion

The proposed redevelopment of the Deepwater Motorboat Clubhouse and associated works would not significantly impact on the national status of the Swift Parrot or its habitats.

7. OVERALL CONCLUSION

The proposed redevelopment of the Deepwater Motorboat Clubhouse and Webster Street upgrade would result in the removal or modification of a negligible amount of Swift Parrot habitat. Therefore, these works are unlikely to significantly limit resources available to this species to the extent that a local viable population, the NSW population, the national population, or their habitats, are significantly impacted.

Marginally increased traffic flow along Webster Street has the potential to increase disturbances to Swift Parrots feeding in trees alongside the street. This may initially cause Swift Parrots to avoid feeding on nectar or lerp sources on favoured food trees near Webster Street. However, it is likely that Swift Parrots would become habituated to these disturbances and use tree close to Webster Street because they occur in other urban environments where these disturbances already occur.

Increased traffic flow along Webster Street resulting from the proposed redevelopment of the Deepwater Motorboat Clubhouse is unlikely to result in a significant increase in the number of Swift Parrot road-kills.

8. RECOMMENDATIONS

- **Include Blue Box (*Eucalyptus baueriana*) and Grey Box (*E. moluccana*) tube stock, sourced from locally-provenanced seed, in landscape plantings.** This will compensate for the loss of potential or actual food trees of Swift Parrots.

- **Design and implement an appropriate weed management plan for the subject site.** This will improve the quality of Swift Parrot habitat on the subject site.

- **If possible, reduce the maximum speed limit along Webster Street from 50 km/hr to 40 km/hr.** This will help minimize the likelihood of Swift Parrot road-kills along Webster Street.

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