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Lot 106 in DP 1144462 Hearnese Lake Road
Woolgoolga

Proposed Expansion of
The Pines and Waterside Cabins

Part 3A Project Response Report

13th October 2011

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SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street Lane Cove NSW 2066 Australia

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WOOLGOOLGA**

**PROPOSED EXPANSION
of
THE PINES and WATERSIDE CABINS**

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PART A	INTRODUCTION & INFORMATION BASE
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1 BACKGROUND

The subject site comprises Lot 106 in DP 1144462, and is located just off the Pacific Highway at Woolgoolga. The site has been the subject of a *Development Application* (DA 260/101) involving the proposed extension of the existing Caravan Park ('The Pines and Waterside Cabins') with long-stay accommodation, at Hearn's Lake Road, Woolgoolga.

The proposed development on the site at Woolgoolga has been the subject of:

- a *Major Project Application* pursuant to Part 3A of the *Environmental Planning & Assessment Act 1979* (in 2010):
 - to extend the existing area of residences in the southwestern quarter of the land to provide a total of sixty (60) additional long-term sites, including the provision of associated park facilities; and
 - to connect the whole of the site (including existing dwellings) to the Council sewer, which would facilitate the removal of the existing maintenance building, water storage dam and three effluent dams located in the southern part of the site;
- a number of field investigations for flora and fauna undertaken on the subject site in 2008, 2009 and 2010; and
- analysis and assessment of potential impacts as documented in the *Ecological Issues & Assessment Report* (EIAR) prepared by Environmental InSites (2010).

The Part 3A project and *Major Project* application, with the *Environmental Assessment* prepared by the applicant, was placed on public exhibition pursuant to Part 3A of the EP&A Act in 2010. Submissions were received from various government agencies as well as the public, and have been collated by the Department of Planning (DoP¹). Responses to the proposal have been received from the relevant government agencies, including Coffs Harbour City Council (CHCC) and the Office of Environment & Heritage (OEH²).

¹ The DoP is now the Department of Planning & Infrastructure (DPI).

² The OEH (Office of Environment & Heritage), in the Department of Premier & Cabinet, contains the relevant parts of the DECCW. The DECCW (Department of Environment, Climate Change & Water) includes the National Parks & Wildlife Service (NPWS), and was previously the Department of Environment & Climate Change (DECC).

The most relevant responses, which require the resolution of a number of matters, include those by CHCC and the OEH:

- Council has stated that it requires “*further review of the ecological impacts of the proposal including buffers to the waterway to conform to the requirements of the Hearnese Lake / Sandy Beach DCP, the Ecological Issues Assessment Report, the Ecological Assessment and the Vegetation Management Plan*”; and
- OEH has stated that “*DECCW has reviewed the information provided and has determined that it is able to support the proposal subject to the applicant providing the Department of Planning (DoP) with additional supporting information on a number of issues and DoP attaching a number of conditions to any approval issued, as identified in Attachment 1. Attachment 2 contains DECCW's assessment of the proposal, including justification for the amendments*”.

The issues raised by Coffs Harbour City Council (CHCC), the Office of Environment & Heritage (OEH) and others, as identified by the DoP, include matters relating to:

- riparian issues and the need for, and widths of, buffers to Hearnese Lake and Double Crossing Creek;
- the mapping of vegetation and of conservation values provided by CHCC in its *Hearnese Lake/Sandy Beach Development Control Plan* (DCP);
- the extent of “*endangered ecological communities*” (EECs) listed in the *Threatened Species Conservation Act 1995* (TSC Act);
- the presence or otherwise and the relevance of various threatened biota, including the Squirrel Glider, Koala, Swift Parrot, Little Tern, Sooty Oyster-catcher and microchiropteran bats;
- the potential for impacts on resources for threatened species, both in the short-term and in the long-term;
- matters relating to corridors and connectivity, and potential impacts upon those elements of the environment;
- issues relating to impact amelioration and environmental management matters, including tree retention and operational matters; and
- a requirement for offsets for the development activities.

The following *Response Report* has been prepared by SLR Consulting to address the concerns outlined in the correspondence from the relevant Departments (Appendix A) in relation to the *Ecological Issues & Assessment Report* (EIAR), which had been prepared by Environmental InSites³. This *Report* refers to the *Vegetation Management Plan* prepared by Coffs Harbour Bushland Regeneration Group Pty Ltd (dated October 2011), and some of the impact amelioration measures contained herein rely on appropriate implementation of the VMP.

³ The principal author of the EIAR (Mr F Dominic Fanning) and his team (formerly Environmental InSites) are now SLR Ecology.

2 RIPARIAN ISSUES

It has been suggested by Coffs Harbour City Council that *“the Proponent needs to clarify the proposed location of the caravan park expansion relative to the Hearnese Lake / Sandy Beach DCP in terms of adherence to the waterway of 50 metres measured from contour 3.5m AHD, this buffer excluding any Asset Protection Zone. This buffer requirement is likely to impact on sites 49, 50, 59 and 60.”*

In this regard, the DCP states that:

- *“to ensure protection of water quality ... buffers are to be provided”* to Hearnese Lake and Double Crossing Creek;
- *“A minimum of 50m from an RL Level of 3.5 around Hearnese Lake and Double Crossing Creek”* is required;
- *“As part of development proposals the buffers specified above are to be rehabilitated and revegetated using local native species, in accordance with a detailed plan approved by Council, and dedicated as environmental protection land (refer to Master Plan and Map 4)”*; and
- *“Development applications for subdivision are to be accompanied by water quality modelling to assess the impact of development in accordance with the Stormwater Strategy for each precinct (refer to attachments A)”*.

The proposed development footprint has been modified following the exhibition period for the Part 3A Project, and the amended proposal involves *inter alia* a revised location for the southern perimeter road and a reduction in the total number of lots on the subject land. In this regard, the proposed yield has been reduced (by seven lots in total) and has been modified to provide a greater revegetation and offset area in the south.

Importantly, the proposal now contains a minimum 50m wide band of vegetation across the southern part of the site, which is to be rehabilitated and managed for biodiversity conservation purposes. In addition, an *Asset Protection Zone* (APZ) of 20m width is to be provided between the development and the areas of vegetation to be managed for biodiversity conservation purposes in the southern part of the land.

As a consequence of that re-design, there is no requirement for the provision of any further buffer or of any managed vegetation within the Council land to the south of the subject site along Double Crossing Creek. Further, as the proposed new development relates solely to the southwestern corner of the subject land, there is no requirement for works (either development or rehabilitation) along the Hearnese Lake frontage of the subject land, because there will be no impact from the new works on that area. Nevertheless, the proponent would be prepared, following development approval, to assist with the management and enhancement of the Hearnese Lake foreshores adjacent to the site.

It is noted that the proponent has been required by CHCC to remove 4 dwellings from the southeastern corner of the subject site, which are located partly within land zoned for environmental protection purposes. Whilst that activity is not part of the Part 3A proposal, it is acknowledged that rehabilitation and revegetation of those areas of the subject land will be required following the removal of the

dwellings. The ultimate outcome will be an enhancement in environmental and biodiversity features at this location, and an improved setback from Hearn's Lake.

It is important when considering riparian issues and the need or otherwise for buffers to Double Crossing Creek and Hearn's Lake to take into account:

- the distance between the proposal and Double Crossing Creek to the south (approximately 70m to 150m+);
- the extent of earthworks required, as well as the considerable extent of rehabilitation and replanting proposed;
- the significant benefits to be derived from removal of the effluent ponds, and connection of the whole site to the sewer;
- the water cycle management regime prepared by Northrop Engineers (2009), which is intended to avoid the imposition of adverse impacts upon the water quality of Hearn's Lake, Double Crossing Creek or Sandy Beach; and
- the *Vegetation Management Plan* (VMP) prepared by Coffs Harbour Bushland Regeneration Group, which outlines measures to rehabilitate and revegetate the land in the southern part of the subject site as a buffer to Double Crossing Creek and to rehabilitate the southeastern corner of the subject land where dwellings are to be removed to enhance buffers to Hearn's Lake.

3 VEGETATION MAPPING and CONSERVATION VALUES

3.1 Endangered Ecological Communities

In their response to the proposal, the OEH (DECCW) has noted that the EIAR describes the existing vegetation in the subject site and offset area as:

- Disturbed Dry Blackbutt Open Forest (Map Unit 1a), including a canopy of Blackbutt, Northern Grey Ironbark, Forest Red Gum, Swamp Turpentine and Red Mahogany over a generally artificial and maintained (mown) understorey; and
- Blackbutt Open Forest with a Riparian understorey (Map Unit 1b), including a canopy of Blackbutt, Forest Red Gum, Swamp Turpentine and Broad-leaved Paperbark.

The OEH acknowledges that *“no threatened flora, nor endangered ecological communities (EECs) were identified in the surveys conducted as part of this EA, other than some areas of Swamp Oak Floodplain Forest (SOFF) and Swamp Sclerophyll Forest on Coastal Floodplains (SSFCF) in the far south of the site near Double Crossing Creek and to the east near Hearnese Lake”* (ie outside both the subject land and the subject site).

The OEH notes that *“no mapping has been provided that indicates the location of these EECs, nor have specific recommendations been provided that indicate specific intentions to protect, maintain and enhance these EECs and their habitats”*.

As stated in the original EIAR (Environmental InSites 2010), the Swamp Oak Floodplain Forest (SOFF) and Swamp Sclerophyll Forest on Coastal Floodplains (SSFCF) vegetation fringes Double Crossing Creek and Hearnese Lake. These areas of vegetation are located almost exclusively on the adjoining Council land, and are not to be affected by the proposal.

The only location within the subject land where some vegetation could potentially constitute the SSFCF community is in the larger gully in the southwestern part of the land. However, this area is well outside the location of any proposed development activities, and will be rehabilitated in any case.

Importantly, the proposal has been amended, *inter alia*, by moving the southern perimeter road northwards and by reducing the yield by seven lots, as well as reconfiguring the proposal. As a consequence, the proposed regeneration and rehabilitation works are now contained entirely within the subject site, other than where existing dwellings (existing Lots 25, 27, 29 and 31 in the southeastern corner of the site) are required (by CHCC) to be removed. This area of land will also be rehabilitated by the proponent, but rehabilitation and regeneration works associated with the new proposal are to be located entirely within the subject site, providing a buffer of at least 50m from Double Crossing Creek.

Further, the required *Asset Protection Zone* (APZ) for the new proposal is located outside of the 50m setback from the 3.5m AHD contour, providing a 25m-50m band for full rehabilitation of native vegetation across the southern part of the site. It should be noted that substantial parts of the APZ will also consist of rehabilitated or replanted native woodland.

On the basis that the proposed development works are not going to remove or affect in any way the areas of EEC along Double Crossing Creek or Hearnese Lake, detailed mapping of that vegetation is not considered necessary. This issue is further addressed in Chapter 5.1 of this *Report*.

Significantly, the proposal does not involve the imposition of any adverse impacts upon any EEC. Even if some of the vegetation in the larger gully in the southwest of the site is regarded as an EEC, all of that vegetation is to be retained and rehabilitated in any case (including by a major weed removal program). Therefore, there is no requirement to further “*protect, maintain and enhance these EEC*” as requested by the OEH.

The rehabilitation and regeneration of native vegetation in the southern part of the subject land will enhance native vegetation in this area, including by a reduction of weed invasion into those areas and as a consequence of the removal of effluent from that area.

In regard to the vegetation mapping of the subject site by Environmental InSites (2010), the OEH correspondence also suggests that areas which fringe the existing dams on the site might be “*relic* [sic] *Swamp Sclerophyll Forest EEC*”.

In the opinion of the authors of this *Report*, however, this vegetation is not a relict (*ie* a ‘remnant’) of the Swamp Sclerophyll Forest on Coastal Floodplains (SSFCF) community because:

- the vegetation in those areas is “*characterised*” by a range of plant species other than those typical of the SSFCF community;
- the areas of vegetation are not located on a floodplain, and therefore do not conform to the definition of this community as “*Swamp Sclerophyll Forest on Coastal Floodplains*” (emphasis added), as detailed in the *Final Determination* for that EEC; and
- these patches of vegetation only exist at these locations because of the artificial modification of the landscape which has allowed for wetter conditions to enable the growth of these species. In any case, they are located on artificial embankments around the artificial ponds.

In any case, as the OEH correctly indicates, “*the total impact of the loss of these* [patches of vegetation] *might be* [in fact is] *relatively small in the context of other resources elsewhere*”. In addition, with respect to these elements being “*selectively incorporated into the design*”, it should be noted that:

- the earthworks for the proposed works (including removal of the effluent ponds) will not permit the retention of any vegetation around those features; and
- both the *Landscape Plan* (Moir Landscape Architecture) and the *Vegetation Management Plan* (Coffs Harbour Bushland Urban Group) incorporate the planting of a significant number of native plant species of a swamp sclerophyll nature within the rehabilitation area.

3.2 Conservation Values of Vegetation

3.2.1 Vegetation Mapping in the DCP

In regard to the conservation value of the vegetation on the subject site, the OEH notes that the InSites vegetation mapping (EIAR 2010) is “*at odds with mapping by Coffs Harbour City Council (CHCC) in the Vegetation Conservation Development Control Plan (DCP)*”. That DCP of Council maps this area as “*high to very high conservation value Dry Blackbutt and Swamp Mahogany dominated eucalypt communities*”.

Whilst the OEH acknowledges the faults in the CHCC mapping of the vegetation communities, it seems that the Department has some concern regarding the vegetation in the northwestern corner of the subject site. The OEH states that this area *“does contain significant mature open eucalypt forest comprising a range of species that would provide a variety of important local resources for biodiversity, including threatened fauna”*, with further reference to the sighting of the Squirrel Glider and the supposed *“secondary Koala habitat”*.

These features of the vegetation on the subject site were considered in the EIAR (Environmental InSites 2010), and are addressed further in Chapters 4 and 5 of this *Response Report*. Importantly, the authors of this *Report*:

- do not accept the description of that area as a ***“significant mature open eucalypt forest”*** (emphasis added); and
- question the relevance of the Koala and the Squirrel Glider (see below).

Further, the OEH does not seem to agree with the view (Environmental InSites 2010) that this vegetation has and will be subject to *“degradation, isolation and barrier effects for fauna due to the Pacific Highway, its upgrading and other development to the north”*, to an extent that would justify the *“dismissal of the mapping and intent of the CHCC Vegetation DCP”*. It is on this basis that the OEH *“does not support removal of mapped high value vegetation in the north western corner of the proposed extension”*.

The Environmental InSites assessment (as detailed in the 2010 EIAR) was based on:

- the existing highly modified and degraded nature of the vegetation (even prior to the major loss of trees imposed by the Pacific Highway upgrade), consisting essentially of trees scattered amongst buildings, roads and other infrastructure, or ‘remnant’ trees (of which just one supports a tree-hollow) scattered through a maintained (mown and irrigated) grassland;
- the serious reduction in connectivity which would occur consequent to the Pacific Highway upgrade, which has now taken effect and which has involved *inter alia* a substantial loss of trees, as well as the complete severance of habitat connectivity (Figure 2);
- the major access road interchange (Hearnes Lake Road) to be constructed at the northwestern corner of the property, and which severs any connectivity to the northwest;
- the marginal value of the vegetation in its current state for any other than highly mobile species; and
- the incorrect identification of the vegetation in this area by Council (noting particularly that there are very few Swamp Mahoganies present), thus casting doubt on its evaluation as of ‘high conservation value’ in the DCP.

The OEH states that *“none of this reduces the need to be precautionous [sic] about habitat value assessments as suggested by the proponents, but rather increases the need for precaution and thus, maintenance and enhancement of such existing habitat and the tenuous connectivity it may provide”*.

However, and counter to the OEH view, the value of vegetation on the subject site needs to be assessed in recognition of its actual existing circumstances, not on the basis of a DCP (or any other document) which was prepared at a broad scale and some years ago.

Significantly, the mapping of vegetation in the DCP clearly did not include any detailed and intensive investigations of the vegetation on the subject site, whereas the analysis by Environmental InSites (EIAR 2010), as well as that contained in this *Report*, are based on accurate site-specific empirical data. The alleged habitat valuation in the DCP is in any case significantly 'out-of-date' and now irrelevant, given the major changes that have occurred in the immediate vicinity (including to some of that vegetation) as a result of the Pacific Highway upgrade.

There is no justification for identifying the vegetation within the area proposed for development activities as of 'high conservation value'. Its designation in that regard in the DCP does not appear to have been warranted in the first instance. It is clearly not the case that the disturbed Blackbutt Open Forest with a maintained (mown) grassy groundcover is of high conservation value at all. It is unlikely that it was ever of such value.

As a consequence, and on the basis of empirical evidence, the continued assertion by the OEH that the vegetation should be treated in a "*precautious* [sic]" manner is unjustified. Indeed, as the OEH itself notes, there is only some possible "***tenuous connectivity***" (emphasis added) of that vegetation with other vegetation in the vicinity.

The only vegetation on the subject land and adjoining it which may be considered of at least higher conservation value is that located along Double Crossing Creek and on the Council land adjoining Hearn's Lake (Figure 2). That vegetation is not to be affected by the proposal.

It is the opinion of the authors of this *Report*, given all of the circumstances and the evidence contained within this and previous documentation, that:

- the vegetation mapping of CHCC contained in the DCP is incorrect and invalid;
- there is no "*significant mature open eucalypt forest*" present within the areas proposed for development activities;
- the vegetation does not constitute relevant habitat for the Koala or Squirrel Glider;
- the only possible "***tenuous connectivity***" through the subject land is confined to vegetation around the edges of Double Crossing Creek and Hearn's Lake. That vegetation is to be retained and will not be adversely affected by the proposal; and
- the conservation value ascribed vegetation within the development area by CHCC and the OEH are unjustified and incorrect.

3.2.2 Squirrel Glider

The OEH further requests that "*no approval be granted to the current proposal until more detailed, accurate and objective understanding of its uses by the Squirrel Glider is provided*". The Squirrel Glider is addressed in detail in Chapter 5.2 of this *Report*, but it is important to note here that:

- the hollow-bearing tree in which the Squirrel Glider was originally (allegedly) recorded has since been removed for the Pacific Highway upgrade (*ie* NOT as part of the current proposal); and
- no Squirrel Gliders were recorded on the site during the recent supplementary survey (see Chapter 5.2).

Given those circumstances, the Squirrel Glider is NOT a relevant consideration for the proposed development at Woolgoolga (see Chapter 5.2).

3.2.3 Offsets

On the basis of the perceived status of the vegetation mapping as 'high conservation value', the OEH also indicates that "*an offset of 4:1 for the mature eucalypts in the north western corner*" would be required to remove this vegetation.

Offsets are discussed in detail in Chapter 8 of this *Report*. It is noted here, however, that the authors of this *Response Report* do not accept the 'requirement' of the OEH for a 4:1 tree replacement ratio, as there is no justification for the alleged 'high conservation value' classification (see above).

4 FAUNA and FAUNA HABITATS

4.1 General Fauna

As discussed in Chapter 3, the OEH has also raised some concern regarding the conservation value of the land in the northwestern corner of the subject site, specifically with regard to the Squirrel Glider and the Koala. The Department has described *“the loss of this vegetation (0.3 hectares considered as secondary Koala habitat and high conservation value vegetation in the CHCC Vegetation DCP), and all other winter flowering eucalypts and mid storey trees in the northern part of the site generally, is likely to have significant impact upon this species, despite its degraded nature”*.

In addition, Council has indicated some concern regarding the assessment of habitat for fauna across the subject site and its vicinity. Council states that the *“presence of fauna would indicate activity”*, and that *“the description of the vegetation as sub-optimal habitat”* by Environmental InSites (2010) contradicts the presence of fauna on the site. The authors of this *Response Report* do not agree with Council in this regard.

The past surveys of the *“subject land”* (as detailed in Environmental InSites 2010) and the recent supplementary survey have detected (Appendix C):

- 5 common frog species, including the Common Eastern Froglet, Green Tree Frog, Bleating Tree Frog, Green Reed Frog and the Striped Marsh Frog;
- 5 common reptile species, including the Red-bellied Black and Brown Snakes, Water Dragon, Sun-skink and the Sand Goanna;
- 54 birds, including 5 species which are listed as *“migratory”* in the EPBC Act⁴ (such as the Cattle Egret and Masked Lapwing) and one species, the Glossy Black Cockatoo, which is listed as *“vulnerable”* in the TSC Act; and
- 13 mammals, inclusive of the Squirrel Glider and 4 threatened bats (including the Grey-headed Flying Fox and 3 microchiropteran bats), all of which are listed as *“vulnerable”* in the TSC Act.

It should be noted that the data provided for the presence of fauna are in respect to the whole of the subject land. This does not mean that these species are, or have ever, been present specifically on the *“subject site”* (ie the development area), nor that they rely on those parts of the site on a regular basis for important habitat (or at all). The data indicate that those species which have been detected in the subject land might utilise the subject site either on a temporary or permanent basis.

Of more relevance is the assessment of the type and quality of habitat on the site (particularly in the area proposed for development activities) and in the general vicinity, which would determine whether these species could depend on the subject site for their survival. Detailed inspections of the subject site since 2008 have failed to detect important habitat within the proposed development area on the subject land (ie that area identified as the *“subject site”*) for any of the species detected during those surveys, especially those threatened species relevant to the site.

⁴ EPBC Act *Environment Protection & Biodiversity Conservation Act 1999*

Whilst there are some winter-flowering eucalypts present on the subject site which could provide foraging habitat (*albeit* to a very minor extent), there are no other features on the site which would indicate a permanent or important area of habitat (*ie* roosting or breeding habitat):

- there is only one small hollow-bearing tree on the site (which was not observed to be used by any threatened fauna during the 2011 survey of the site);
- there are no rock outcrops to provide shelter for reptiles;
- there is no understorey or groundcover vegetation which would provide year-round foraging resources and shelter for small mammals and birds, other than patches of weedy vegetation around the immediate periphery of the effluent ponds and farm dam; and
- there are no relevant watercourses.

There are no fauna species which could be considered dependent on the subject site *per se* for their survival.

Further, the highly modified nature of the overwhelming majority of the vegetation on the subject site is such that it provides only very limited habitat opportunities for fauna. The vegetation present is most likely to be utilised only by medium to large mammals (such as the Eastern Grey Kangaroo which is a common inhabitant of open forests in the region, and has been recorded on the site) and/or highly mobile species (such as birds and individuals of microchiropteran bat species).

The area to the south of the development area, which is proposed for retention and rehabilitation, contains predominantly Dry Open Blackbutt Forest with a moderately dense middle and lower stratum of mesic species. Relative to the vegetation on the subject site (which is to be removed), this area is of a much higher habitat quality. The increased structural complexity in that area would provide more habitat opportunities for an array of fauna, in particular for those species which avoid open woodland types.

The large central dam provides habitat for a number of bird and amphibian species, although the dam lacks significant aquatic vegetation, and currently receives run off from the Highway. During the surveys conducted as part of this assessment, no threatened species were observed utilising this area, although individuals of the Large-footed Myotis could utilise the dam for foraging purposes. It is anticipated that the future removal of this dam would be unlikely to have a significant impact on any threatened species, due to the proximity of Hearn's Lake and Double Crossing Creek, as well as other dams in the vicinity, which offer a variety of wetland habitats for such species.

Three effluent ponds are located in the southeastern portion of the subject site, which service effluent disposal for the existing residential park. The ponds provide habitat for a number of water birds (such as ducks and the Eastern Swamp Hen) but, given the proximity of the site to Hearn's Lake, it is considered that the ponds would constitute only a minor habitat feature in the local area. Only small numbers of birds were observed on the ponds, and the water quality is clearly very poor.

Two very minor incised ephemeral drainage channels bisect the southern and southwestern portions of the site. These two channels have been fenced off and currently exhibit a highly weed-infested riparian understorey. Nevertheless, these drainage channels are likely to provide habitat for a number of amphibian, reptile, bird and mammal species.

In particular, it should be noted that the “*subject site*” (ie the area of the proposed expansion) is a small proportion of the subject land, and constitutes an even smaller portion of the forest and open water habitats in the general vicinity.

Notwithstanding the assertions by CHCC and the OEH, the habitat values of those areas of the subject land to be affected by the proposed development activity (ie the subject site in the southwestern corner of the land) are limited. There are few resources of any particular value or significance (eg there is only one tree-hollow), and the open forest canopy is of only limited value for a few native (albeit including some threatened) species. However, only occasional individuals of any such species would be likely to utilise the subject site to any relevant extent, if at all.

Further, notwithstanding the mapping of much of the area as of ‘high conservation value’ by CHCC, there is no objective justification for that categorisation of the site. In addition to being of only limited value by virtue of its existing condition and nature, the subject site is isolated by the substantial upgrade of the Pacific Highway to its immediate east and by the major road interchange to the north. Even in its undeveloped state, this area constitutes only very limited, isolated and low value habitat for native biota (including threatened species).

In addition, as discussed in detail below, there is no evidence for the presence of either the Squirrel Glider or Koala on the subject site or subject land.

4.2 Tree-hollow Resources

Council has requested a review of the information provided for tree-hollow resources on the subject site “*due to the fact that the squirrel glider ... was located just after dusk on a tree containing a hollow onsite*” (in 2007).

The hollow-bearing tree containing the Squirrel Glider record in 2007 was Tree No. 234, which was located in the southwestern corner of the subject land. That tree was never located within the “*subject site*”. Further, and most significantly, that tree has since been removed for construction of the Pacific Highway upgrade.

The subject site now contains just one small tree-hollow. Two nights of stag-watching of that hollow during the recent site inspection in August 2011 failed to detect any Squirrel Gliders, or indeed any other fauna, utilising that habitat. Furthermore, the Squirrel Glider has never been recorded emerging from a hollow in the area proposed for development.

The Squirrel Glider is considered in further detail in Chapter 5.2 below.

4.3 Microchiropteran Bats

Coffs Harbour City Council also suggests that the original *Report* by InSites “*has limited consideration*” of the “*use of the site by microbats*”.

To the contrary, the original EIAR (Environmental InSites 2010) dedicated an entire Chapter to bats, as well as providing detailed *Section 5A Assessments of Significance* for the relevant species. As detailed in the EIAR, five microchiropteran bat species were positively identified within the subject site, and a

further two species were recorded to a lesser degree of certainty. Two threatened microchiropteran bat species (the Little Bent-wing Bat and the Large-footed Myotis) were recorded on the subject site.

The EIAR describes that both of those threatened microchiropteran bat species predominantly utilise caves or other such structures for roosting (Churchill 2006), and that no such habitat exists on the subject site at Woolgoolga. Further, the subject land would still provide foraging opportunities for the Common Bent-wing Bat after the proposed re-development of the site, and that foraging resources for the Large-footed Myotis will remain in Hearnes Lake and Double Crossing Creek.

Threatened microchiropteran bats are further considered in Chapter 5.6 of this *Report*.

5 THREATENED BIOTA

Coffs Harbour City Council (CHCC) has suggested that *“the removal of resources present on the site is likely to result in irreversible impacts on the threatened species on site”*.

This assertion by CHCC, in the opinion of the authors of this *Report*, is not justified other than possibly to a trivial extent.

As discussed in detail below, the removal of the canopy trees from the development part of the subject site is not likely to result in any *“significant effect”*, nor indeed any notable adverse effect, on any threatened species at all. There is no evidence of any threatened fauna residing within the subject site itself, although doubtless microchiropteran bats, and possibly an occasional Swift Parrot or Grey-headed Flying Fox, could utilise the tree canopy for foraging. However, the extent of that resource within the subject site is minuscule in terms of the distribution of that habitat and those resources in the locality and immediate vicinity.

As discussed in detail below for the various threatened biota, removal of the small area of highly modified Blackbutt Open Forest on the subject site is not likely to adversely affect even individuals of any such species to any relevant degree, if at all. The impacts of the proposal are of no consequence for threatened species (particularly when compared to those imposed by the Pacific Highway upgrade to its immediate west). The resources which will be affected by the proposal constitute a minute and irrelevant proportion of those present in the immediate vicinity or general locality.

5.1 Endangered Ecological Communities

As discussed previously in this *Response Report*, the OEH (DECCW) has raised some concerns with regard to Swamp Oak Floodplain Forest (SOFF) and Swamp Sclerophyll Forest on Coastal Floodplains (SSFCF) in and around the subject land.

As stated in the original EIAR (Environmental InSites 2010), the SOFF and SSFCF vegetation is located around the fringes of Double Crossing Creek and Hearn's Lake. The amended proposal, including the proposed regeneration and rehabilitation works, now excludes the Council-owned land along the banks of Hearn's Lake and Double Crossing Creek, and will not remove or affect in any way the areas of EEC at these locations. As a consequence, there is no requirement to assess this vegetation, nor is there a requirement to further *“protect, maintain and enhance these EEC”*.

The rehabilitation and regeneration of native vegetation in the southern part of the subject land will not impose any significant or relevant impacts upon any EEC. In fact, those works are likely to enhance any such vegetation (if present), *inter alia* by facilitating a reduction in weed invasion into those areas, and by providing a substantial, rehabilitated and managed 'buffer' to any EECs present.

In regard to the vegetation mapping of the subject site by InSites (EIAR 2010), DECCW (OEH) correspondence also suggests that areas which fringe the existing dams might be *“relic Swamp Sclerophyll Forest EEC”*.

As discussed above, however, and in the opinion of the authors of this *Report*, this vegetation is not “relic”⁵ SSFCF. Whilst there are some elements of the floristic composition of these communities, these areas:

- are not positioned on a floodplain, and therefore do not conform to the definition of this community as “*Swamp Sclerophyll Forest on Coastal Floodplains*” (emphasis added); and
- are likely only to be present at these location because of the artificial modification of the landscape which has allowed for wetter conditions to enable the growth of these species.

In any case, as the OEH correctly indicates “*the total impact of the loss of these might be [in fact is] relatively small in the context of other resources elsewhere*”. In addition, with respect to these elements being “*selectively incorporated into the design*” it should be noted that both the *Landscape Plan* (Moir Landscape Architecture) and the *Vegetation Management Plan* (Coffs Harbour Bushland Urban Group) incorporate the replanting of a high number of native plant species that are characteristic of Swamp Sclerophyll vegetation.

The proposed development will not require the removal of any “*remnant swamp EEC*”. The only vegetation to be removed includes:

- part of a Dry Blackbutt Open Forest, which has virtually no understorey vegetation and has a mown, maintained groundcover of exotic grasses; and
- areas of weed-infested regrowth around the existing effluent ponds on artificial embankments.

As detailed in the EIAR Report (by Environmental InSites 2010), there are no EECs on the subject site *per se*, and no EEC will be adversely affected by the proposal.

5.2 Squirrel Glider

The OEH (DECCW) has requested that “*prior to approval of this project, a detailed, accurate and objective understanding of the proposal on the Squirrel Glider needs to be provided ... with particular regard to the significance of the proposed loss of the ‘high conservation value’ vegetation in the north western corner of the proposed extension*”.

In the first instance, the Squirrel Glider has not been recorded on the subject site during surveys undertaken over the last four years, including the most recent dedicated survey (in August 2011). There is only one hollow-bearing tree present, and specific monitoring of that hollow did not reveal the presence of any Squirrel Gliders, despite mild conditions. In addition, as discussed above, the only hollow-bearing tree in which the Squirrel Glider had (allegedly) been recorded (in 2007) has subsequently been destroyed for the upgrade of the Pacific Highway.

⁵ The word “relic” usually refers to an object or an item, generally one of religious or historical value. It does not, properly defined, refer to a “remnant” or remaining patch of vegetation.

Further, as discussed in detail in previous Chapters of this *Report*, there is no 'high conservation value' vegetation of relevance to the Squirrel Glider to be removed by the proposed development. The mapping of part of the development area as 'high conservation value' by CHCC vegetation:

- is not justified on the basis of its nature and condition;
- is neither relevant nor correct with respect to the Squirrel Glider (or other threatened species – see below);
- is not justifiable on the basis of any objective analysis of the vegetation present; and
- is no longer relevant (even if it had ever been appropriate) given the substantial impacts of the adjoining Pacific Highway upgrade, including the substantial removal of trees and of the one relevant hollow-bearing tree.

Council and the OEH have expressed some concern regarding the *"sightings of this species and the existence of some hollows"* on the site, particularly noting the sighting of the Squirrel Glider *"emerging from a tree hollow"*.

However, as noted elsewhere in this *Report* (including above) and in the original EIAR (Environmental InSites 2010), the record of the Squirrel Glider on the subject site was made by Geolink in 2007. A number of subsequent surveys of the subject land in more recent times (including dedicated surveys in August 2011) have failed to detect any gliders on the subject site or the subject land.

Furthermore, it is important to note that:

- the subject site *per se* (ie the proposed development area) contains only extremely limited shrub or understorey vegetation;
- there are no glider incisions in any tree on the site;
- there have been no sightings of the Squirrel Glider on the land since 2007; and
- the only hollow-bearing tree which was apparently used by the Squirrel Glider was recently removed to facilitate the upgrade of the Pacific Highway (Appendix D).

The position of OEH (DECCW) is that *"more detailed and well supported information about the impacts of the proposal on this species needs to be provided, including in relation to the issue of connectivity and protection and enhancement of this habitat. In the absence of such information, there is need for a precautionary position which would require a redesign of the proposal to avoid the loss of known and potential vegetation of significance to this species, as well as its protection and enhancement"*.

As indicated in some detail above, there is no evidence that the Squirrel Glider is present on the subject site. Further, the hollow-bearing tree in which that species had allegedly been recorded in 2007 has since been removed for the Pacific Highway upgrade. The area of the subject land which is proposed for development activities is of no relevance in terms of the provision of habitat and resources for the Squirrel Glider, and is of no relevance in terms of the connectivity of habitat for that species, even if it was present.

Given all of those considerations, there is NO rationale for any further re-design of the proposal, beyond that which has already been undertaken by the proponent as part of the *Preferred Project Plan*. The concerns of the OEH and CHCC in this regard are without foundation.

5.3 Koala

The OEH (DECCW) has raised concerns with regard to the purported presence of Koala habitat on the subject site at Woolgoolga. The OEH has suggested that *“no development and associated vegetation clearing is to be allowed within any areas currently mapped as either secondary or tertiary Koala habitat in the Coffs Harbour Koala Plan of Management”*.

The OEH were concerned about the conflicting values ascribed to Koala habitat on the site which are contained in:

- the existing CHCC *Koala Plan of Management* (KPOM), which maps the site as ‘secondary’ Koala habitat;
- the draft KPOM, which maps the site as ‘tertiary’ habitat; and
- the EIAR, which suggests that there is no relevant Koala habitat on the site.

Importantly, it is to be noted that the OEH acknowledges that the mapping by InSites *“may be more accurate”*.

The authors of this *Report* maintain our original analysis (Environmental InSites 2010) that whilst parts of the subject land have been identified as *“Tertiary Koala Habitat”* and/or *“Secondary Koala Habitat”* pursuant to the original or the revised Coffs Harbour City Council KPOM (2009), that mapping is theoretical rather than factual, and represents predicted rather than known foraging or other habitat for this species. In this regard:

- the subject site at Woolgoolga does not constitute a significant area of even potential Koala habitat;
- there are few preferred Koala food trees present in the area proposed for development activities;
- there is no evidence of Koalas being present on the subject land or the subject site;
- there is extremely little likelihood of Koalas utilising the subject site, given its isolation by major roadworks and the barriers of Double Crossing Creek and Hearnese Lake (Figure 2 of this *Report*); and
- the proposed rehabilitation and revegetation works will involve significant supplementary plantings of trees that could be utilised by Koalas, if they occur on the subject land (for which there is no evidence).

With regard to supplementary plantings of canopy trees, the OEH has raised concerns about a perceived lack of suitable area for the planting of canopy trees. Conversely, there are substantial areas of proposed plantings (see Chapter 8), including both mesic areas (where the Swamp Mahogany would be an appropriate canopy tree) and more xeric areas (where the Tallow-wood would be an appropriate tree). Substantial parts of the southern and southwestern portions of the subject land are to be rehabilitated and replanted, and selective planting of the Swamp Mahogany and Tallow-wood would provide both resources for Koalas (if they ever occur on the land, for which there is no evidence) and the other threatened fauna species (either as food or as a source of insects – for the microchiropteran bats).

Given that the Koala has not been recorded using the subject site in recent times, or currently, *“the time taken to re-establish meaningful habitat to be lost”* is of no relevance.

The authors of this *Report* maintain that the proposed development of the subject site at Woolgoolga will neither remove relevant habitat for the Koala nor impose any impediment to Koala movements through the subject land or the locality generally.

It is our position that the proposed development is not in conflict with the CHCC KPoM, except perhaps insofar as the KPoM habitat mapping of the subject site and subject land is incorrect.

As noted above, there is no evidence of any use of the subject land by Koalas, and the proposed development will not impose a relevant adverse impact (if indeed any adverse impact) upon this species.

5.4 Swift Parrot

The OEH has requested that *“further assessment of the habitat value of the subject site and the potential for impact on the Swift Parrot is to be determined by an independent and suitably qualified ecologist, before any approval is granted.”*

Mr F Dominic Fanning (the principal author of this *Report*) is *“an independent and suitably qualified ecologist”*.

The OEH expresses some concern that there are winter-flowering eucalypt species *“in particular Swamp Mahogany (according to CHCC mapping)”* (emphasis added) on the subject site, and that *“there are two records of the Swift Parrot from the site (2000 and 2002)”*. In this regard, however:

- as noted elsewhere in this *Report* (and in other documentation about the site), the CHCC vegetation mapping of the subject land is incorrect. There do not appear to be any Swamp Mahogany trees within the proposed development area;
- this tree species is to be a focus of the rehabilitation program; and
- had the proponent sought to rely on records that are 9 and 11 years old (2000 and 2002), the OEH would have rejected them as *“out-of-date”*.

With regard to the Swift Parrot:

- this species is wide-ranging and highly mobile, and would only utilise the subject site on occasions;
- it is not likely that a *“viable local population”* of the Swift Parrot could conceivably be dependent on the subject site, either in isolation or as a significant element in a broader area of habitat;
- the site does not contain significant or important habitat or resources for the Swift Parrot due to the nature of the site, its context, its location, its size and the few winter-flowering resources present;
- there are no recent (current) records of the Swift Parrot on the subject site; and
- the area to be affected by the proposal is not of any particular relevance or significance for this species, and constitutes only a very small proportion of potentially suitable habitat in the locality.

Therefore, with regard to the proposed development on the subject site:

- there is **no** likelihood that a “*viable local population*” of the Swift Parrot could be “*placed at risk of extinction*” (emphasis added)⁶ because of the proposal;
- it is **not** likely to result in the removal or modification of significant areas of potential habitat (or, indeed, any notable area of potential habitat) for the Swift Parrot;
- it is **not** likely to result in any habitat for the Swift Parrot becoming “*fragmented or isolated from other areas of habitat*”, given the extent and disturbance of habitat in the locality, and the context and location of the site, and the high mobility of the Swift Parrot;
- it is **not** likely to result in any disturbance to important or significant habitat for the Swift Parrot. Those portions of the subject site proposed to be developed cannot reasonably be regarded as of importance with respect to “*the long-term survival*” of the Swift Parrot “*in the locality*”;
- the subject site does **not** represent listed “*critical habitat*” for the Swift Parrot;
- the “*action proposed*” on the subject site could **not** reasonably be inconsistent with the likely objectives or actions of any relevant *Recovery Plan* or *Threat Abatement Plan*; and
- whilst “*the action proposed*” will involve either the imposition of or the exacerbation of “*a key threatening process*” (to an extremely minor extent), that activity is **not** of significance or concern with respect to Swift Parrot or to the application of Section 5A of the EP&A Act.

There is no requirement for the preparation of a *Species Impact Statement* (SIS) in respect of the Swift Parrot for the proposed development of the subject site at Woolgoolga.

5.5 Little Tern and Sooty Oystercatcher

The OEH has raised concerns with regard to the Little Tern and Sooty Oyster-catcher, stating that “*increasing the residential population and therefore levels of human activity in these areas by as many as 60 habitable sites is significant in the circumstances*”. The OEH has also recommended “*that all domestic dogs and cats be banned from the site*”.

In this regard, it is noted by the authors of this *Report* that there are at present no constraints to human access to Sandy Beach or to the Shores of Hearn Lake, where the Little Tern and Sooty Oyster-catcher are likely to occur. Further, these areas are at some distance from the subject site. The proposed development will involve only a small increase in human activities in those areas (involving 53, not 60, habitable sites), and all of the relevant locations (for the Sooty Oyster-catcher and Little Tern) are on public lands.

It is entirely inappropriate and unreasonable to constrain or prohibit a development on the basis of the public use of public lands elsewhere. This is particularly the case where such access and use is facilitated by local government. The appropriate response, rather, is for a program of signage and education to ensure that people generally, including those who may become resident on the subject site, are aware of the issues and are sensitive to the requirements of Little Tern and Sooty Oyster-catcher.

⁶ The term “*extinction*” is significant. It means the destruction of or the obliteration of a “*viable local population*” – its cessation to exist. It does not mean merely some reduction in the population or in the extent of its distribution, or some reduction in the extent of relevant habitat.

The requirement by OEH for a ban on domestic dogs on the subject site is neither reasonable (on the basis of social equity or a balanced approach) nor justifiable (on legal, practical or even ecological grounds). In this regard:

- the bulk of the existing caravan park and long-term dwellings on the subject site are able to possess dogs, albeit with restrictions imposed by park management;
- there are no controls on dogs on any adjoining lands;
- there are only very few dogs present within the park, in any case; and
- the measures discussed below with respect to the management of dogs on the subject land at Woolgoolga.

With regard to the impacts of dogs on native wildlife generally, it is noted that the Section 16 of the *Companion Animals Act 1998* states that it is an offence “*if a dog rushes at, attacks, bites, harasses or chases any .. animal (other than vermin), whether or not any injury is caused to the ... animal*”.

Further, there is legal precedent which makes it clear that it is not appropriate to assume that people will act in an illegal manner when determining a development application. In any case, the subject site *per se* does not contain habitat or resources of relevance for the species.

Whilst dogs could harass birds near the entrance to Hearnese Lake or on Sandy Beach (where both the Little Tern and Sooty Oystercatcher are known to occur), that is an offence pursuant to the *Companion Animals Act 1998*. Significantly, there are currently no controls on human or dog access to Sandy Beach, notwithstanding the knowledge of both the OEH and the CHCC of the presence of Little Terns and Sooty Oystercatchers at this location.

A requirement that the proposed development must “*ban all domestic dogs and cats from the site*”, is onerous, excessive, unworkable and discriminatory. In the absence of both a ban on such pets over a considerable (several kilometres radius at least) and the banning of pets on Sandy Beach under any circumstances, as well as an intensive feral pest eradication program, it is also unlikely to have any beneficial impact on threatened (or any) birds.

In contrast to the imposition of an unworkable and ineffective “*ban*”, the proponent would be prepared instead:

- to provide regular letterboxing of residents and visitors regarding responsible pet ownership;
- to erect signs to inform residents and the public about the requirements of responsible pet ownership in accordance with the *Companion Animals Act 1998*, such as those outlined above; and
- to provide educational signage about the Little Tern and the Sooty Oystercatcher.

Perhaps Coffs Harbour City Council and the OEH could do likewise.

5.6 Insectivorous bats

The OEH (DECCW) has requested additional information regarding the assessment of the four threatened microchiropteran bats that have been recorded on the site. In particular they have noted that *“the loss of native vegetation and dams from the northern half of this proposed extension will impact on forage opportunities for most of these species”*.

In this regard, only very limited canopy and mid-storey resources are to be removed to facilitate the proposal, and substantial rehabilitation and regeneration measures are proposed which will provide additional resources for these species. There will be no relevant or measurable impact on microchiropteran bats. A detailed *Section 5A Assessment of Significance* was provided in the EIAR (Environmental InSites 2010) with regard to the impacts on threatened microchiropteran bats on the site.

As noted in the original EIAR (Environmental InSites 2010) and in this *Report*, the subject site in its current condition provides only extremely limited habitat for microchiropteran bats in relation to the extent of suitable habitats and resources in the immediate vicinity and general location. In this regard:

- the tree canopy which is to be removed occupies only a very small area (approximately 0.9ha – Figure 1) compared to the extensive home ranges of the relevant threatened microchiropteran bat species;
- the subject land will retain a substantial area of tree canopy, as well as rehabilitated areas of tree canopy, in the southern part of the site, between the perimeter road and the Council land along Double Crossing Creek;
- additional trees are to be planted to provide supplementary foraging habitat for these species;
- it is assumed that the OEH is not recommending the retention of the effluent ponds on the subject site as habitat for the Large-footed Myotis; and
- substantial foraging habitat and resources for those species is present in the vicinity and locality, including along Double Crossing Creek, in Hearn Lake and in the many farm dams in the vicinity.

The *Section 5A Assessments of Significance* contained in the original EIAR (Environmental InSites 2010) remain valid for the amended development at Woolgoolga. Indeed, as there will be a larger area of rehabilitation and canopy tree planting, there is likely to be even less impact upon threatened microchiropteran bats than originally contemplated as a result of the proposal as now designed.

6 CORRIDORS and CONNECTIVITY

6.1 The Issues Raised

As noted above, the OEH disagrees with the reduced conservation value of the vegetation on the subject site ascribed by Environmental InSites, with particular reference to those parts of the site that were mapped as 'high conservation value' by CHCC in the DCP. The Environmental InSites assessment was based on the existing degraded nature of the vegetation on the site, coupled with the reduction in connectivity which would occur consequent to the Pacific Highway upgrade (which has now taken effect).

The OEH has stated that *"none of this reduces the need to be precautionary [sic] about habitat value assessments as suggested by the proponents, but rather increases the need for precaution and thus, maintenance and enhancement of such existing habitat and the tenuous connectivity it may provide"*.

Further, Council has requested additional information with regard to the habitat linkages around the subject site, in particular the *"large tracts of land on the eastern sector"*. The OEH has also stated that *"the role and function of current & future habitat corridors / connections should be more comprehensively addressed"*.

6.2 The Response

In the first instance, there is no habitat corridor, wildlife corridor or connectivity through the northwestern part of the subject site which connects to any relevant habitat or resources to the northwest.

In addition to most of the vegetation in the northwestern part of the subject land having been removed for construction of the Pacific Highway upgrade and Hearnese Lake Road interchange, there is no relevant habitat to the north of Hearnese Lake Road for any of the threatened biota which even potentially could be of concern or interest.

Thus, there is no connection between the subject site (*ie* that part of the subject land which is proposed for development activities) and any habitat or resources to the northwest. The Pacific Highway upgrade has destroyed any even theoretical connectivity to the west, and to the northwest (Figure 2).

The only *"habitat corridor"* or wildlife corridor which provides any potential *"connectivity"* is located around the southern and eastern peripheries of the subject land, including the Council land to the immediate south and east along Double Crossing Creek and Hearnese Lake (Figure 2). That band of vegetation is contiguous, and further links to forest to the south and immediate north of Hearnese Lake Road, to the northeast of the subject site.

Notwithstanding the proposal by the RTA to provide a fauna 'underpath' beneath the new enlarged bridge across Double Crossing Creek to the immediate southwest of the subject site, that point will constitute something of an impediment to movement by many fauna species. Further, as a result of the enhancement and rehabilitation of vegetation in the southern parts of the site and in the southwestern corner, the proposed development will enhance that *"habitat corridor"*, and will ensure the maintenance of *"connectivity"* around the edges of the subject land.

The proposed development will have no significant or relevant adverse impact upon any habitat connectivity, anywhere.

7 AMELIORATION and MANAGEMENT

7.1 Tree retention

Coffs Harbour City Council (CHCC) states that *“no clear strategy exists for the treatment or protection of hollows (tree 234-7 hollows & unidentified tree 2 near incised channel).”*

With respect to the trees nominated by CHCC:

- Tree No. 234 was present on that part of the land which had been acquired by the RTA for the Pacific Highway upgrade. This tree has been **removed** to facilitate that development, which is currently under construction. It no longer exists, and its *“protection”* is now irrelevant; and
- unidentified Tree No. 2 is located outside the subject site, and therefore will not be affected by the proposed development.

It is further suggested by CHCC that the *“information supplied is inconclusive and not inbuilt into the VMP, no plan from a qualified arborist as per Australian Standards has been supplied or evidence of negotiations with the RTA”*.

In respect of the matters raised by Council:

- the VMP has been updated to address the issues raised and the amended development design;
- as no trees are to be retained on the subject site (*ie* in the development area) *per se*, an *Arborist's Report* is of no utility. However, all trees elsewhere on the land are to be retained, and a substantial habitat rehabilitation and tree re-planting program is proposed;
- the single tree-hollow on the site will be salvaged and installed in the southern rehabilitation area; and
- it is not clear what *“negotiations with the RTA”* would be required (if any).

Council has also stated that *“no clear amelioration strategy or discussion has been presented of the impacts of clearing resources on site, including:*

- *time lapse in resources being available for threatened species onsite from removal to maturity of offset.*
- *increased habitat viability e.g. hollow dependant species on site.*
- *seasonal resources availability or proposed lack of, with removal of swamp sclerophyll components as part of the proposal. This is not part of the threatened species considerations”.*

In this regard, the proposed development is confined to areas that are already highly modified, and there are also substantial areas of regeneration and rehabilitation proposed. As a consequence, there will be no significant *“time lapse in resources”*, as there are no resources of particular relevance or value on the subject site itself. Further, the proposal will involve:

- minimal loss of resources over a small area relative to the home ranges of the relevant biota;

- no loss of critical resources for any threatened biota; and
- no relevant temporal reduction in resources or habitat for any biota.

Nevertheless, the following measures will be implemented at initiation of the construction phase of the development:

- the salvage of the single tree-hollow and its re-erection in the offset area;
- the installation of artificial nest boxes in the offset area and other parts of the subject land where trees are to be retained; and
- implementation of the *Vegetation Management Plan* (which will facilitate the early establishment of resources in the understorey).

There is no statutory requirement for “*increased habitat viability*” (emphasis added) *inter alia* for hollow-dependent biota, as requested by CHCC. Nevertheless, the “*habitat viability*” for hollow-dependent species will be increased by the erection of artificial nest boxes, and the salvage and re-use of the one tree-hollow on the site. The removal of “*swamp sclerophyll components*” from the subject site will be very minor, and those “*components*” will be a key part of the vegetation to be planted in the offset area, and will thereby be enhanced.

Council have indicated that whilst trees are to be retained within the development site, there is “*little information on location, assessment including arborists report, future protection and management*”. In this regard, no trees are proposed to be retained within lots, although some trees may be retained in open space and common areas.

7.2 Operational

The OEH has requested that “*all domestic dogs and cats should be banned from the site*”.

As noted above, the authors of this *Report* consider this request to be unreasonable and excessive, particularly given the existing *Policy* which allows dogs in the park. As detailed in the original documentation, controls on pet ownership within the park should include:

- an assessment of pet dogs for socialisation and general health by Park Managers;
- strict rules regarding the control of dogs around the park, including the requirement to be on a leash within common areas;
- ongoing education of park residents and visitors regarding their obligations pursuant to the *Companion Animals Act 1998* and with respect to native wildlife, by regular letterboxing, community notices and signs; and
- complete exclusion of cats from the park.

8 OFFSETS

8.1 Analysis of OEH/CHCC Concerns

The OEH and Council have raised concerns regarding the relevance of the proposed offset areas, in terms of the spatial and temporal availability of land within the offset areas, and the ability to provide sufficient offsets. DECCW has requested “an offset ratio of 4:1 for the mature eucalypts in the north western corner” of the subject site.

The proposal will involve the removal of 152 trees from a highly modified landscape (Tables 1 and 2; Appendix B), and the total area of vegetated land (being predominantly individual trees in a mown grassland) to be removed to facilitate the development is 0.94ha (Table 2; Figure 1). The balance of the development area in the subject site (approximately 1ha) is cleared mown lawn, roads and dams (Figure 1). There is no justification for any offset requirement for this cleared disturbed land.

The offset area contains 0.5 hectares of cleared land which can be planted out as an offset. In addition there are 0.92 hectares of vegetated land to be rehabilitated within the offset area, some of which also provides opportunities for offset canopy planting (refer to VMP by Coffs Harbour Bushland Regeneration Group Pty Ltd (dated October 2011)).

Table 1 Trees for offsetting

	Total No.	Location	No. of trees
Removal	152	Alleged ‘high conservation land’ in the subject site	58
		Cleared portion of the subject site	94
Offset	770	Trees to be replanted in accordance with the <i>Landscape Plan</i>	59
		Trees to be replanted in accordance with the VMP	711

Table 2 Areas for offsetting in southern part of the land

	Total Area. (ha)	Location	Area (ha)
Removal	1.94	Vegetated land in the subject site	0.94
		Cleared portion of the subject site	1.0
Offset	1.42	Vegetated portion in the offset area	0.92
		Cleared portion of the offset area	0.5

As indicated in the updated *Plans* for the proposed development (Appendix B), there are 58 trees to be removed from within the area which is identified as ‘high conservation value’ by CHCC. Were a 4:1 ratio to be implemented as requested, this would entail the planting of 232 trees as an offset. As discussed in some detail above (Chapter 4.1), however, no part of the subject site can reasonably be regarded as of ‘high conservation value’. That classification by CHCC and the OEH is not warranted given its nature and condition.

Given those circumstances, an offset ratio (either in terms of tree numbers or in terms of hectares) of 4:1, as requested by the OEH, is not regarded as appropriate or reasonable. Therefore, whilst the proposal does allow for the provision of an additional 232 trees this is not regarded as an appropriate enforcement to offset the alleged ‘high conservation value’ trees.

The remainder of the subject site contains 94 trees in predominantly mown grassland or in cleared land which is not identified as 'high conservation value'. The *Biodiversity Guideline 4 Compensatory Planting Advice* (CHCC 2010) suggests a replanting ratio of 2:1 for the removal of trees with "other" significance category (*ie* the 94 trees). It is to be noted that these are merely 'guidelines' and that there is no a legal requirement, as a consequence of these guidelines, to replant at these 'suggested' ratio's.

Nonetheless, the replanting works proposed (in the *Landscape Plan* and *Vegetation Management Plan*) include the replanting of well over 420 trees, which is the combined tree offset ratio according to the 'alleged' vegetation significance (*ie* at 4:1 and 2:1 ratio's). The *Landscape Plan* entails the replanting of 59 eucalypts and she-oaks, as well as 55 Lily Pillies and Tuckeroos. The *Vegetation Management Plan* identifies 711 trees for replanting within the offset area.

That part of the subject land along its southern boundary is to be rehabilitated and regenerated by the removal of weeds and by the supplementary planting of native habitat and resources. This area includes slightly elevated locations, which will be planted out with xeric species, and lower-lying areas, which will be planted out with more mesic species. It should be noted that the proponent no longer proposes to include the rehabilitation of Council-owned land as an offset for this development.

8.2 Proposed Offset

The area proposed for offset planting for the proposed development in the southwestern corner of the subject land is to be contained entirely within the subject land. There is no longer any requirement for offset planting or works to be undertaken on any of the Council land adjoining The Pines property, although consideration may be given to providing some assistance to Council with respect to management of its land adjoining the rehabilitation areas within the subject land.

The proposed development has been re-designed, leaving a broader buffer and area for rehabilitation to the south of the development area. Much of this land is occupied either by existing stormwater and/or effluent dams or effluent disposal areas, with an abundance of introduced plants including Kikuyu and a range of weed shrub and tree species. Major earthworks will be required to remove the dams and to regrade the subject site, and substantial replanting will be undertaken south of the proposed perimeter road.

In addition, the southwestern corner of the subject land, which is not proposed for development activities, is to be rehabilitated predominantly by the planting of mid-storey and understorey species, and by the cessation of mowing activities.

The proposal will result in a net environmental benefit, by providing approximately 1.4ha of rehabilitated and vegetated land to offset the removal of the tree canopy in approximately 0.94ha of the subject site.

As discussed in detail above, the area of tree canopy is not regarded as of 'high conservation value' or significance, and the substantial rehabilitation in the southern part of the subject land, involving weed removal, tree canopy planting and a major program of understorey rehabilitation (as detailed in the VMP), constitutes a long-term environmental benefit for the subject land. This approach will contribute to conservation values along Double Crossing Creek and around Hearn's Lake. As noted in the VMP, rehabilitation works will also be undertaken on the eastern side of the subject land along Hearn's Lake, to improve habitat and resources along the boundaries of Hearn's Lake.

9 CONCLUSIONS

The proposed development of the subject site in the southwestern part of the subject land at Woolgoolga (the Pines and Waterside Cabins site) has been re-designed following exhibition of the original *Concept Plan* and the receipt of submissions from government agencies and the public.

The amended proposal for the subject site at Woolgoolga provides a number of environmental benefits, including:

- a perimeter road system to provide a management boundary between the proposed new long-term sites and areas to be managed for *Asset Protection Zone* (APZ) and/or biodiversity conservation purposes;
- a minimum 50m buffer from Double Crossing Creek to the immediate south;
- an area of approximately 1.4ha to be rehabilitated for biodiversity conservation purposes (including parts to be managed as APZs) to offset the removal of canopy trees from part of the subject site;
- the dedicated planting of Swamp Mahoganies and Tallow-woods to provide potential resources for Koalas as well as winter foraging for other potential threatened fauna (noting that neither Koalas nor Squirrel Gliders are present on the subject site); and
- an improvement in water quality discharges by the removal of the existing effluent ponds and removal of the need for the irrigation of treated effluent, as a result of connection to the sewer system.

Issues had been raised by Coffs Harbour City Council (CHCC) and the Office of Environment & Heritage (OEH) with respect to a number of matters, including threatened biota, buffers and offsets, habitat connectivity and trees. Those matters have been addressed in considerable detail in this *Response Report*. The principle observations are *inter alia* that:

- there is no evidence for the Koala on the subject site at Woolgoolga;
- there is no evidence that any Squirrel Gliders are present on the subject site;
- there are no resources of particular relevance for threatened microchiropteran bats, and no relevant roosting resources;
- even if the Swift Parrot utilises the subject site, individuals of that species would continue to be able to use the land;
- appropriate buffers and offsets have been provided within the subject land boundary, and there is no requirement for offset activities on any Council-owned land; and
- a minimum 50m vegetated buffer is provided to Double Crossing Creek as a result of the proposal.



F Dominic Fanning
Technical Director – Ecology

GLOSSARY

Activity	means: (a) the erection of a building; (b) the carrying out of a work in, on, over or under land; (c) the use of land or of a building or work; and (d) the subdivision of land, and includes any act, matter or thing for which provision may be made under Section 26 of the EP&A Act and which is prescribed for the purposes of this definition, but does not include: (e) any act, matter or thing for which development consent under Part 4 is required or has been obtained; or (f) any act, matter or thing which is prohibited under an environmental planning instrument.
DA	<i>Development Application</i> prepared pursuant to the EP&A Act.
Development	in relation to land, means: (a) the erection of a building on that land; (b) the carrying out of a work in, on, over or under that land; (c) the use of that land or of a building or work on that land; and (d) the subdivision of that land, but does not include any development of a class or description prescribed by the regulations for the purposes of this definition.
DEC	Department of Environment & Conservation.
DECC	Department of Environment & Climate Change.
DECCW	Department of Environment, Climate Change & Water.
DGRs	<i>Director-General's Requirements</i> .
Director-General	the Director-General of the Department of Planning.
Endangered Ecological Community	"an ecological community specified in Part 3 of Schedule 1" of the TSC Act.
Endangered Population	"a population specified in Part 2 of Schedule 1" of the TSC Act. EP&A Act <i>Environmental Planning & Assessment Act 1979</i> .
Key Threatening Process	"a threatening process specified in Schedule 3" of the TSC Act.
Locality	the area within a 10km radius of the study area.
NPWS	NSW National Parks & Wildlife Service.
OEH	Office of Environment & Heritage (in the Department of Premier & Cabinet).
Proposal	the development, activity or action proposed.
Recovery Plan	"a plan prepared and approved under Part 4" of the TSC Act.
Region	"a bioregion defined in a national system of bioregionalisation that is determined (by the Director-General by order published in the Gazette) to be appropriate for those purposes" (TSC Act).
SIS	<i>Species Impact Statement</i> prepared pursuant to Sections 109, 110 and 111 of the TSC Act.
Threatening Process	"a process that threatens, or may have the capability to threaten, the survival or evolutionary development of species, populations or ecological communities" (TSC Act).
Threatened Species	"a species specified in Part 1 or 4 of Schedule 1 or in Schedule 2" of the TSC Act.
TSC Act	<i>Threatened Species Conservation Act 1995</i> .

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Figure 1

Details of the subject site at Woolgoolga



LEGEND

Subject Site

Offset Area

Vegetation Community

Cleared

Trees

Area	Area (Ha)	
	Trees	Cleared
Subject Site	0.94	1
Offset Area	0.92	0.5

0 5 10 20 30 40

Metres

N

NOTES

1. Aerial photography courtesy of Nearmap
Capture date: 31/07/2011

2. Subject site & offset boundaries based on "Overall Site Plan, tail Site Plan & Staging Plan" prepared by Urban Group
Ref: DA-04[D] Proposed Site Plan - 11.09.07.pdf
Date: March 2009

3. All features are approximate only and subject to detailed survey

2 Lincoln Street
Lane Cove
NSW 2066
Australia
T: +61 2 6287 0800
F: +61 2 6287 0801
www.slrconsulting.com

Project Name:

The Pines, Woolgoolga

Prepared for:

Whoopie Park Unit Trust

Project No: **610.10679**

Scale 1:1,000 @ A3	Date 08/09/2011
Drafted Sepehr Sobhani	Approved Dominic Fanning

Figure 2

Context of the proposed development



LEGEND

- Subject Site
- Offset Area
- Potential wildlife corridor

0 12.5 25 50 75 100
Metres

N

NOTES

- Aerial photography courtesy of Nearmap
Capture date: 31/07/2011
- Digital Cadastre DataBase (DCDB) ©
LPMA SIX portal, 13/10/2011
- Subject site & offset boundaries based on
"Overall Site Plan, tail Site Plan & Staging
Plan" prepared by Urban Group
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2 Lincoln Street
Lane Cove
NSW 2066
Australia
T: +61 2 6287 0800
F: +61 2 6287 0801
www.slrconsulting.com

Project Name:
The Pines, Woolgoolga

Prepared for:
Whoopie Park Unit Trust

Project No: **610.10679**

Scale 1:2,500 @ A3	Date 13/10/2011
Drafted Sepehr Sobhani	Approved Dominic Fanning

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global environmental solutions

Lot 106 in DP 1144462 Hearn's Lake Road
Woolgoolga

Proposed Expansion of
The Pines and Waterside Cabins

Response Report

Appendix A
Correspondence from the Relevant Government Agencies

October 2011

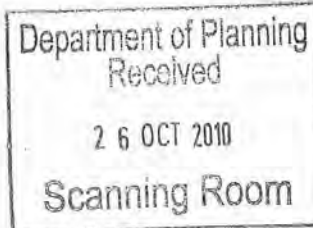
Your Reference : MP08_0005
Our reference : FIL07/2233-05 DOC10/42718
Contact : Biodiversity: Adrian Deville, 66402511
Aboriginal Cultural Heritage: Nick Pulver, 6659 8225



PCU015928

Alan Bright
A/Director, Regional Projects
NSW Department of Planning
GPO Box 39
SYDNEY, NSW 2001

Attn: Sebastian Tauni



22 OCT 2010

Dear Mr Bright

RE: Proposed Extension to Existing Caravan Park, The Pines, Hearnese Lake Road, Woolgoolga, Environmental Assessment, MP08_0005

I refer to the Project Application, Environmental Assessment, and accompanying information provided for the proposed extension to the Pines Caravan Park at Hearnese Lake Road Woolgoolga, received by the Department of Environment, Climate Change and Water (DECCW) on 17 September 2010.

DECCW has reviewed the information provided and has determined that it is able to support the proposal subject to the applicant providing the Department of Planning (DoP) with additional supporting information on a number of issues and DoP attaching a number of conditions to any approval issued, as identified in Attachment 1. Attachment 2 contains DECCW's assessment of the proposal, including justification for the amendments.

It is expected that DECCW will be given an opportunity to review the draft Director-General's Environmental Assessment Report for this proposal. If the amendments to the draft Statement of Commitments are not included to the satisfaction of DECCW, we will be recommending that they are included as Conditions of Approval, if approval is recommended by the Department of Planning. It should be noted that these amendments are important for DECCW's ongoing support of the proposal.



Should there be any other matters, or should the Department of Planning be in possession of any further information of interest to the DECCW associated with the proposed development, please contact the following:

- Adrian Deville (66402511) in relation to Biodiversity Conservation
- Nick Pulver (66598225) in relation to Aboriginal Cultural Heritage.

Yours sincerely



JON KEATS

**Head, Biodiversity Management Unit North Coast
Environment Protection and Regulation Group**

ATTACHMENT 1: RECOMMENDED ADDITIONAL INFORMATION REQUIREMENTS AND CONDITIONS OF APPROVAL

Biodiversity

1. Prior to approval for this project, a detailed, accurate and objective understanding of the impacts of the proposal on the Squirrel Glider needs to be provided by a suitably qualified ecologist, with particular regard to the significance of the proposed loss of the 'high conservation value' vegetation in the north western corner of the proposed extension.
2. In the absence of such information (in 1), DECCW recommends that the proposal be redesigned in such a manner as to avoid, protect, buffer and enhance all mapped high conservation value vegetation.
3. Appropriate steps must be taken to identify, protect and enhance all Endangered Ecological Communities (EECs) on the site or affected by this proposal, with evidence of relevant Coffs Harbour City Council agreement where needed, before approval is granted.
4. Remnant swamp EEC elements currently proposed for clearing in the centre of the site should be selectively incorporated into the design of the proposal to further prevent cumulative impacts on remnant EECs and the potential habitat and forage resources they provide.
5. No development and associated vegetation clearing is to be allowed within *any* areas currently mapped as either secondary or tertiary Koala habitat in the Coffs Harbour Koala Plan of Management.
6. Further assessment of the habitat value of the subject site and the potential for impact on the Swift Parrot is to be determined by an independent and suitably qualified ecologist, before any approval is granted.
7. All domestic dogs and cats should be banned from the site.
8. Any vegetation management strategies proposed must be approved by Coffs Harbour City Council and be consistent with Council's Biodiversity Guidelines.
9. The proponent should be required to further demonstrate the appropriateness of their proposal in terms of use of Council owned land to offset proposed vegetation losses in terms of it providing suitable habitat to allow for like for like losses, and in terms of relevant permissions.

Aboriginal Cultural Heritage

1. The applicant must continue to consult with and involve all of the registered local Aboriginal representatives for the project, in the ongoing management of all Aboriginal Cultural Heritage matters. Evidence of this consultation must be collated and provided to the consent authority upon request.
2. In the event that surface disturbance identifies a new Aboriginal site, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the object(s). The site is to be registered in the AHIMS (managed by DECCW) and the management outcome for the site included in the information provided to the AHIMS. The proponent will consult with the Aboriginal community representatives the archaeologist and DECCW to develop and implement management strategies for all objects/sites.
3. If human remains are located in the event that surface disturbance occurs, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are contacted immediately. No action is to be undertaken until Police provide written notification to the proponent. If the

skeletal remains are identified as Aboriginal, the proponent must contact DECCW's Enviroline on 131555 and representatives of the local Aboriginal community. No works are to continue until DECCW provide written notification to the proponent.

4. All reasonable efforts must be made to avoid impacts to Aboriginal Cultural Heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the local Aboriginal community and DECCW.
5. An Aboriginal Cultural Education Program must be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed and implemented in collaboration with the Aboriginal community.

ATTACHMENT 2 – DECCW'S ASSESSMENT OF THE PROPOSAL

1. Biodiversity Assessment

Existing Vegetation on the Site

The proponents have described the existing vegetation on south western part of the site in terms of two communities:

1. Disturbed Dry Blackbutt Open Forest (Map Unit 1a), including a canopy of Blackbutt, Northern Grey Ironbark, Forest Red Gum, Swamp Turpentine and Red Mahogany; and,
2. Blackbutt Open Forest with a Riparian understorey (Map Unit 1b), including a canopy of Blackbutt, Forest Red Gum, Swamp Turpentine and Broad-leaved Paperbark.

DECCW notes that in mapping the vegetation within the proposed development footprint, the proponents are at odds with mapping by Coffs Harbour City Council (CHCC) in the Vegetation Conservation Development Control Plan (DCP), where two main polygons represent *high* to *very high* conservation value Dry Blackbutt and Swamp Mahogany dominated eucalypt communities, these polygons therefore also largely being mapped as Secondary Koala habitat (1999). As argued in the Environmental Assessment (EA), the southern Swamp Mahogany community as mapped by CHCC is not present, although could readily support such a community, and is proposed to be conserved in any case.

However, the north-western corner of the footprint which is proposed to be cleared, does contain significant mature open eucalypt forest comprising a range of species that would provide a variety of important local resources for biodiversity, including threatened fauna. DECCW notes in this regard that a Squirrel Glider sighting in the north western corner of the proposed footprint indicates that this vegetation provides important current forage and future hollow bearing trees for this species. The loss of this vegetation (0.3 hectares considered as secondary Koala habitat and *high conservation value* vegetation in the CHCC Vegetation DCP), and all other winter flowering eucalypts and mid story trees in the northern part of the site generally, is likely to have significant impact upon this species, despite its degraded nature.

DECCW notes that the proponent disputes the accuracy and value of this mapping of vegetation and its habitat values and its implications in respect of the areas proposed to be cleared. They argue further that its degradation, isolation and barrier effects for fauna due to the Pacific Highway, its upgrading and other development to the north, are factors that allow for dismissal of the mapping and intent of the CHCC Vegetation DCP. In DECCW's view, however, none of this reduces the need to be precautionary about habitat value assessments as suggested by the proponents, but rather increases the need for precaution and thus, maintenance and enhancement of such existing habitat and the tenuous connectivity it may provide. Therefore, DECCW does not support removal of mapped high value vegetation in the north western corner of the proposed extension, and further, recommends that no approval be granted to the current proposal until more detailed, accurate and objective understanding of its uses by the Squirrel Glider is provided. In the absence of such information, DECCW recommends that the proposal be redesigned in such a manner as to avoid, protect, buffer and enhance mapped high conservation value vegetation.

In terms of the proposal to retain other vegetation in the south and east in conservation zones and to offset the above losses proposed, DECCW notes that the offset requirement within the CHCC Vegetation DCP, albeit disputed by the proponents, would require an offset of 4:1 for the mature eucalypts in the north

western corner. With this in mind, the proposed removal of all vegetation from the north of the development area will be likely to be difficult to replace on the southern (and certainly the eastern) parts of the site, even at a 1:1 ratio, both spatially and temporally. The southern proposed 'conservation zone' contains significant eucalypt resources already and/or is capable of natural or assisted regeneration under suitable management, while the riparian parts of this area and the eastern areas proposed as part of the offset, would not be able to support or be suited to such offsets.

No threatened flora, nor endangered ecological communities (EECs) were identified in the surveys conducted as part of this EA, other than some areas of Swamp Oak Floodplain Forest (SOFF) and Swamp Sclerophyll Forest on Coastal Floodplains (SSFCF) in the far south of the site near Double Crossing Creek and to the east near Hearn's Lake. These EECs are either already protected (ie reserved) on Council owned land or are proposed to be protected and enhanced through the development of a vegetation management plan as part of this proposal. However, no mapping has been provided that indicates the location of these EECs, nor have specific recommendations been provided that indicate specific intentions to protect, maintain and enhance these EECs and their habitats. Subject also to DECCW's concerns below about use of Council lands as an integral part of this proposal, DECCW recommends that further information be provided that demonstrates that appropriate steps will be taken to identify, protect and enhance all EECs on the site or affected by this proposal, before approval is granted.

DECCW notes that other vegetation mapped as either degraded or as disturbed Blackbutt, in places on the fringes of existing dams proposed to be filled, includes mature Broad-leaved Paperbark, Swamp Oak and Cheese Tree, elements indicative of relic Swamp Sclerophyll Forest EEC. As well as comprising highly degraded EEC elements, these also provide some forage value on the site that would be removed for nectivorous threatened species such as blossom bats, flying foxes, gliders, or for glossy black cockatoos. Although the total impact of the loss of these might be relatively small in the context of other resources elsewhere, DECCW recommends that such values could be selectively incorporated into the design of the proposal to further prevent cumulative impacts on remnant EECs and the potential habitat and forage resources they provide.

Threatened Fauna

The proponents have undertaken a survey effort that they regard as demonstrating very limited values associated with the site generally for Threatened Fauna.

Koala

The presence of some preferred Koala food trees and the mapping of parts of the subject site as Tertiary Koala habitat under the draft Coffs Harbour Koala Plan of Management – 2009 (CHKPOM) are considered to be of limited significance by the proponents, chiefly on the basis of the condition of possible habitat and the results of targeted surveys by Geolink (2007) and Environmental InSites (2009), which found no traces of this species.

DECCW notes, however, that though the draft CHPOM maps part of the central western part of the subject site proposed be cleared as *tertiary* habitat, it is still formally categorised in the current CHPOM as *secondary* habitat, which is a significantly more restrictive category, as well as a more extensively mapped polygon reaching to the south of the property over vegetation mapped by CHCC as very high significance vegetation. Subject to the accuracy of these competing interpretations of vegetation upon the site, there remains the possibility that the subject land has

greater significance for this (and other) species than the EA acknowledges. DECCW notes that the CHCC vegetation and KPOM mapping are both under review and that the proponent's interpretation of potential habitat may be more accurate. However, DECCW is concerned at the view taken in the EA that the draft (ie most recent but not yet adopted by CHCC or approved by DoP) area of mapped *tertiary* habitat, proposed to be largely cleared, should not be considered to be such tertiary Koala habitat:

“... none of the vegetation on the subject site represents relevant “*Koala habitat*”, given the absence of any records of the Koala from the subject land or the subject site. Further, that area identified in the KPOM as *Tertiary Koala Habitat* does not represent likely Koala habitat, and is not representative of the distribution of potential Koala food trees on the land or the site. There will be no relevant impacts upon any *Tertiary Koala Habitat*, because none of the vegetation on the subject site is of relevance for the Koala.” p36.

DECCW does not agree that detectable presence is a relevant criteria in determining potential tertiary Koala habitat, and the absence of Koalas at the time of assessment or lack of current occupancy does not mean that otherwise important habitat areas can be discounted and thus removed from consideration as a constraint to development. The above statement in the EA also appears to be at odds with the statement that:

“The proposed development will involve only limited removal of preferred Koala food tree species (the Tallow-wood, Swamp Mahogany, Flooded Gum, Forest Red Gum and Small-fruited Grey Gum)” p38.

The discussion that follows indicates an intention to undertake “supplementary planting of those tree species within the conservation areas in the southern and eastern parts of the subject site and/or on the adjoining Council Reserve (as agreed) to replace any potential Koala food trees lost as a result of the proposal.” Not only does this seem to contradict the view that there is no habitat value for Koalas to be lost from the clearing area, but DECCW cannot confirm evidence of any such agreement by Council to such a proposal. In addition, DECCW notes that the intention to replant Koala food trees in areas already described as secondary Koala habitat in the current CHKPOM, and/or upon Council owned riparian land to the south and east, appears to be of questionable appropriateness and limited value given:

- pre-existing requirements to protect such lands and their habitat values;
- the time taken to re-establish meaningful habitat to be lost; and
- the lack of any clear improvement offset ratio.

Further, the discussion about the impacts on any potential that does exist for Koala (or other) habitat on the areas of native vegetation to be removed as part of the Pacific Highway upgrade, does not reduce the need to be precautionary about habitat value assessments as suggested by the proponents, but in DECCW's view, increases the need for precaution and thus, maintenance and enhancement of such existing habitat.

Finally, DECCW is aware of the detection of Koala prints in a sand trap set up in relation to vertebrate pest monitoring for the Little Tern nesting site to the north of the development, suggesting that there is some Koala habitation and movement at some location within proximity of the site.

On the basis of available information, and with regard to the existing and draft revised versions of the CHPOM, DECCW recommends that no development and associated vegetation clearing be allowed within any areas currently mapped as either secondary or tertiary Koala habitat in the CHPOM.

Swift Parrot

The *Ecological Assessment Geolink Appendix A* states that this species is unlikely to have a presence on the site, noting favoured feed trees include winter flowering species such as Swamp Mahogany (*Eucalyptus robusta*), Spotted Gum (*Corymbia maculata*), Red Bloodwood (*C. gummifera*), Mugga Ironbark (*E. sideroxylon*) and White Box (*E. albens*). However, DECCW notes that at least some of these tree species do exist on the site, in particular Swamp Mahogany (according to CHCC mapping). *Appendix B - Ecological Information from the Pacific Highway Upgrade Project*, indicates that the species has "potential" to occur on the site (adjacent to the West), while significantly, the NPWS Atlas records show there are two records of the Swift Parrot from the site (2000 and 2002) near to existing cabins.

It is therefore unclear why further assessment of the presence and/or impact upon this species appears not to have been made in the documents provided. DECCW recommends that prior to any approval being issued, further assessment of the habitat value of the subject site and the potential for impact on this threatened species, be determined by an independent and suitably qualified ecologist.

Little Terns and Sooty Oystercatchers

These two Threatened species are known to occur relatively near the subject site. It is acknowledged that the Sooty Oystercatcher is highly likely to utilise the adjoining shores and shallows around Hearn's Lake, while the Little Tern is known to nest approximately 1kilometre to the east of the subject site (also on the shores of Hearn's Lake). The EA asserts (p81) that:

"There is no likelihood of any direct adverse impact being imposed upon those two species as a result of the proposed development. Further, any indirect impacts (resulting from human activities in Hearn's Lake) would merely increase, to an insignificant extent, existing activities and disturbance."

While DECCW notes that there are no additional access points proposed to Hearn's Lake or Double Crossing Creek, there is little justification in the documents provided for this statement, from the viewpoint of conservation of threatened species. Increasing the residential population and therefore levels of human activity in these areas by as many as 60 habitable sites is significant in the circumstances. DECCW remains concerned about this issue despite assurances elsewhere in the EA that dogs will be mostly small and non-aggressive, often away with owners on vacations, or appropriately vetted and controlled by management. In order to protect Little Terns, Sooty Oystercatchers, the Black-necked Stork also known from near this site and other wetland and shore bird species, DECCW recommends that all domestic dogs and cats be banned from the site.

Squirrel Glider

Sightings of this species and the existence of some hollows on this site, suggest that this site in total is an important habitat for this species to some degree. Gliders require a relatively well connected area of eucalypts of a variety of species to ensure they can access food resources throughout the year. Existing vegetation on the site, including that along the eastern side of the Pacific Highway, is likely to be crucial to the viability of any glider family or families, given their need for a mix of mature eucalypt woodland species, including many of those found on site such as ironbarks,

redgums and blackbutts and an abundance of hollows for refuge and nesting. The proposition in the Part 5A test of significance provided is that the retained vegetation to the south would ensure that any family group or population that does inhabit the site, would viably remain. There does not appear to be any evidence provided to support this statement and DECCW is further concerned at the argument that the marginal nature of the available habitat is reason to disregard its importance. DECCW's view is that more detailed and well supported information about the impacts of the proposal on this species needs to be provided, including in relation to the issue of connectivity and protection and enhancement of this habitat. In the absence of such information, there is need for a precautionary position which would require a redesign of the proposal to avoid the loss of known and potential vegetation of significance to this species, as well as its protection and enhancement.

Insectivorous bats

At least four threatened microbat species appear to have been recorded from the site, although limited assessment has been made about the impact of the proposal on these species. The loss of native vegetation and dams from the northern half of this proposed extension will impact on forage opportunities for most of these species, although perhaps not significantly. Nevertheless, this reinforces the recommendation above regarding selective incorporation of mid-storey and low canopy native remnant EEC vegetation in the central portions of the site to further prevent cumulative impacts on remnant EECs and the potential habitat and forage resources they provide.

Vegetation Management Plan (VMP)

The VMP has not been assessed in detail, but given the intent to offset some of the proposed vegetation losses and simultaneously rehabilitate areas of private and Council owned land as 'conservation zones', DECCW recommends that any vegetation management strategies proposed must be approved by Coffs Harbour City Council and be consistent with the following Council Biodiversity Guidelines:

1. Preparing Vegetation Management Plans;
4. Compensatory Planting Advice; and,
6. Protection of Vegetation During Development and Construction.

Use of Council owned Land to Offset and Revegetate

DECCW understands that the intention to offset native vegetation lost from the proposed development site is proposed to be partly undertaken upon Council owned riparian land. However:

1. the vegetation to be removed in part is reasonably regarded as high value vegetation (CHCC Veg DCP) and at minimum as tertiary Koala habitat (in the draft 2009 CHKPOM 2009), which, if its removal can be justified, implies the need for replacement with like for like, at a ratio of at least 4:1.
2. it is not clear how native vegetation to be removed from the proposed development site can be appropriately offset in the riparian zone, which is likely to support significantly different vegetation communities.
3. It is not clear that Council is supportive of this proposal in any case. DECCW is unaware that relevant discussions have been had and agreement reached to authorise this proposal, which is already a separate land management responsibility of Council.

DECCW recommends that the proponents be required to further demonstrate the appropriateness of their proposal in terms of uncertainties about use of Council owned land to offset proposed vegetation losses.

2. Coastal Hazards and Flooding Assessment

Coastal

The EA has referenced and correctly interpreted the results of Council's Hearn's Lake Estuary Management Plan in respect of coastal hazards. The proposed extensions to the park are some 4 metres above areas predicted to be affected by sea level rise and coastal hazards due to climate change for the 2100 design period.

DECCW concurs with the EA conclusions "that due to the geometry of Hearn's Lake the typical hazards caused by coastal processes will not be an issue for the proposed development particularly given the lowest proposed allotments in the order of RL 8.0m (AHD)."

Flood Risk

The EA has referenced and correctly interpreted the results of Council's Hearn's Lake Estuary Management Plan. The estimated 2100 berm height at the entrance to Hearn's Lake (before natural breakout) will determine the 1 in 100 Average Recurrence Interval (ARI) flood level within the lake. The proposed extensions to the park are some 4 metres above the natural breakout level of the entrance berm.

The proposed stormwater system appears adequate to deal with any overland flow due to significant catchment rainfall.

DECCW therefore concurs with the EA conclusion that "The topography of the site provides adequate emergency egress to significantly higher ground in the case of extreme flood events (Probable Maximum Flood)."

DECCW concurs with the EA conclusion that "the proposed development will not require the placement of any fill below the 1 in 100 year ARI peak flood level, and as such, will not alter the local flooding regime".

3. Aboriginal Cultural Heritage Issues

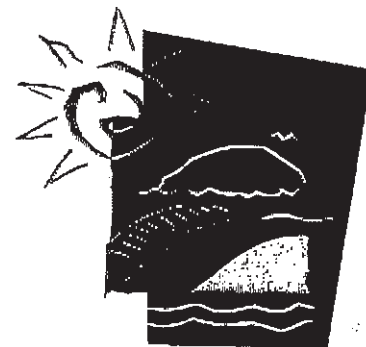
DECCW acknowledges that at least one site, recorded as #22-1-0363, called 'HL-4', an isolated stone artefact, is likely to be impacted by the proposed development. DECCW notes that the applicant, with the support of the registered Aboriginal stakeholders, proposes to salvage 'HL-4' prior to construction commencing, relocate to the riparian area near the southern boundary of the project area and supply DECCW with an updated site recording form. DECCW supports these proposed management recommendations.

DECCW notes that there is also a likelihood of finding further evidence of Aboriginal occupation of this area. If Aboriginal objects are uncovered due to the development all works should halt in the immediate area to prevent any further impacts to the objects. A suitably qualified archaeologist and local Aboriginal community representatives must be contacted to determine the significance of the object(s). Any new sites must also be registered in DECCW's Aboriginal Heritage Information Management System (AHIMS) and details of proposed management these sites be provided to DECCW in the information submitted to AHIMS. We have included a recommended condition of approval to target this matter.

DECCW has no additional concerns with the ACH assessment undertaken. However, DECCW proposes that the following recommendations are reflected in any approval conditions or statements of commitments for the project:

- The applicant must continue to consult with and involve all of the registered local Aboriginal representatives for the project, in the ongoing management of all Aboriginal Cultural Heritage matters. Evidence of this consultation must be collated and provided to the consent authority upon request.
- In the event that surface disturbance identifies a new Aboriginal site, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the object(s). The site is to be registered in the AHIMS (managed by DECCW) and the management outcome for the site included in the information provided to the AHIMS. The proponent will consult with the Aboriginal community representatives the archaeologist and DECCW to develop and implement management strategies for all objects/sites.
- If human remains are located in the event that surface disturbance occurs, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are contacted immediately. No action is to be undertaken until Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact DECCW's Enviroline on 131555 and representatives of the local Aboriginal community. No works are to continue until DECCW provide written notification to the proponent.
- All reasonable efforts must be made to avoid impacts to Aboriginal Cultural Heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the local Aboriginal community and DECCW.
- An Aboriginal Cultural Education Program must be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed and implemented in collaboration with the Aboriginal community.

COFFS HARBOUR CITY COUNCIL



Our ref: 2635131 (DA 260/11)

28 October 2010

Mr Sebastian Tauni
NSW Planning
GPO Box 39
SYDNEY NSW 2000

Dear Mr Tauni

**MP 08-0005, The Pines Caravan Park
Lot 106, DP 1144462, No. 8 Hearnese Lake Road, Woolgoolga**

Council refers to the above Major Project Application and to the Department's request for comments on the Environmental Assessment.

Council is not in a position to issue draft conditions on the application until a number of matters are resolved, including:

- Clarification of the "land to be developed", ie. does the proposal include the adjoining public reserve? Has Council's formal agreement to the use of this area been issued?
- Has the Department of Lands imposed any requirements relating to Hearnese Lake Road?
- Clarification of land title details.
- Agreement from the proponent to resolve outstanding matters relating to Development Consent 207/76 modification of 7 August 2008.
- Further review of acoustic impacts on the whole of the site, and not just the extension.
- Further review of the ecological impacts of the proposal including buffers to the waterway to conform to the requirements of the Hearnese Lake / Sandy Beach DCP, the Ecological Issues Assessment Report, the Ecological Assessment and the Vegetation Management Plan.

Please find attached Council's further detailed comments on the Environmental Assessment.

For further information please contact Mark Hannon on (02) 6648 4631.

Yours faithfully


Mark Hannon
Project Manager Development

njj

• Communications to: The General Manager, Locked Bag 155, Coffs Harbour 2450 • Administration Building,
2 Castle Street, Coffs Harbour • Tel: (02) 6648 4000
• Fax: (02) 6648 4199 • DX: 7559 • ABN 79 126 214 487
• Email: coffs.council@chcc.nsw.gov.au
• Website: www.coffsharbour.nsw.gov.au

Major Project MP 08-0005 The Pines Caravan Park

Owners Consent and the land the subject of the proposed development:

The proposal relies upon offsetting within the adjacent Council public reserve. No formal approval has been provided for this arrangement from Council. The proponent should consult with Council's Recreation Services Section on this aspect and amend the application accordingly.

Access – Highway:

The site is in the immediate vicinity of current Pacific Highway upgrading works. The requirements of the Roads & Traffic Authority for interim and long term access to the site is a relevant consideration.

Services:

The Environmental Assessment is acceptable to Council in terms of proposed services and may be conditioned accordingly.

Acid Sulfate Soils:

The Acid Sulfate Soils report is considered satisfactory. The consent may be conditioned accordingly.

Phase 1 Environmental Site Assessment:

The Phase 1 Environmental Site Assessment report is considered satisfactory. The consent may be conditioned accordingly.

Hearnes Lake Road:

Hearnes Lake Road is a Crown Road and is not a "Council public road". It is likely that the Department of Lands will require transfer of this road to Council as "public road". Council is agreeable to this arrangement subject to certain conditions.

Further, upgrade of the Hearnes Lake Road frontage of the site is warranted. The consent may be conditioned accordingly.

Pedestrian and Public Transport Arrangements:

The Environmental Assessment makes an erroneous presumption that most residents would be using their cars, and further that no persons are catching a bus from the existing bus shelter so is therefore not required. In fact school students and other local residents do catch the bus at the Highway intersection. The proposal should provide for a cycleway along Hearnes Lake Road from the caravan park to the future collector road intersection and should provide an accessible bus stop/shelter on Hearnes Lake Road.

The consent may be conditioned accordingly.

Consolidation Requirement and Title Details:

The Environmental Assessment describes the site as Lot 2, DP 1031068 and Lot 2, DP 1031968. It is understood that part of the site has been acquired by the RTA for the Pacific Highway upgrade. Consequently the title has changed to effect this acquisition.

- 2 -

The development should be contained to the one lot (note, this may have occurred as part of the RTA acquisition process).

The Environmental Assessment needs amendment to reflect current property title arrangements. Note the previous comments concerning the adjoining public reserve forming part of this Major Project Application.

Fire Safety:

The whole of the caravan park (including existing sites) should be upgraded to satisfy the fire safety provisions of the NSW Rural Fire Service and the provisions of the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Movable Dwellings) Regulation 2005. The consent may be conditioned accordingly.

Modification of Development Consent 207/76 dated 7 August 2008:

13 manufactured home sites were established at this caravan park without a requisite approval having issued beforehand. 4 of those sites were located on land zoned Environmental Protection 7A Habitat and Catchment. Council issued a modification to the 1976 consent to regularise the unlawful activity. The terms of the modification determination have not been satisfied to date.

Any consent to the current Major Project Application should include the terms of the modification determination (copy attached) of 7 August 2008.

Acoustic:

The proponent should address acoustic impacts for the total site, not just the extension. The acoustic report should determine and specify the location, height and construction of the acoustic barrier for the western site boundary and **not** for just a part of this boundary.

Further, any replacement manufactured home proposed for the existing 115 long term sites should conform to the construction requirements of the Reverb Acoustics report. The Environmental Assessment should detail the above requirements and also detail the methodology to ensure that "attenuated" manufactured homes are established at the caravan park post this Major Project approval.

Developer Contributions (Section 94) and Developer Services Charges (Water Management Act 2000):

The new development is subject to the application of developer contributions and developer services charges as a result of additional demands for services and infrastructure. As the existing sites are to be connected to reticulated services the existing sites are also subject to payment of developer services charges. The consent may be conditioned accordingly.

Ecological Issues:

1. The proponent needs to clarify the proposed location of the caravan park expansion relative to the Hearn Lake / Sandy Beach DCP in terms of adherence to a buffer to the waterway of 50 meters measured from contour 3.5m AHD, this buffer excluding any Asset Protection Zone. This buffer requirement is likely to impact on sites 49, 50, 59 and 60.

/3...

- 3 -

2. The following issues are raised with respect to the **Ecological Issues and Assessment Report and the Ecological Assessment.**

- No clear strategy exists for the treatment or protection of hollows (tree 234-7 hollows & unidentified tree 2 near incised channel). Information supplied is inconclusive and not inbuilt into the VMP, no plan from a qualified arborist as per Australian Standards has been supplied or evidence of negotiations with the RTA.
- No clear amelioration strategy or discussion has been presented of the impacts of clearing resources on site, including:
 - Time lapse in resources being available for threatened species onsite from removal to maturity of offset.
 - Increased habitat viability e.g. hollow dependant species on site.
 - Seasonal resources availability or proposed lack of, with removal of swamp sclerophyll components as part of the proposal. This is not part of the threatened species considerations.
 - The description of vegetation as sub-optimal habitat...but the presence of the fauna would indicate activity.
 - fauna activity level is not considered in a reasonable scientific based argument, or
 - on the restricted viable habitat (noted in the report), or
 - linkages to large tracts of land on the eastern sector, or
 - the availability of resources extending off site...not just those to be impacted by the RTA Pacific Highway upgrade.
 - Advice that the site contains little to no resources including hollows – the discussion should be reviewed due to the fact that the squirrel glider (one detected – does a family group occupy the area?) was located just after dusk on a tree containing a hollow onsite – is the area being used as denning? The assessment of impacts for habitat tree removal needs review.
 - The “use of the site by microbats” has limited consideration.
 - Removal of seasonal flowering resources present on site is not discussed or presented within the VMP.
- A nomination of what is a reasonable offset; level of retention of recruitment trees is not considered with the reports. Offsets considered in the current design include currently forested areas of the adjoining CHCC reserve or areas of retained canopy.
- Advice that trees will be retained within the development site with little information on location, assessment including arborists report, future protection and management.
- The application fails to maintain resourcing levels present on site or present viable offsets under the current design.
- The removal of resources present on site is likely to result in irreversible impacts on the threatened species on site.
- The role and function of current & future habitat corridors / connections should be more comprehensively addressed.

- 4 -

The following issues are raised with respect to the Vegetation Management Plan:

- The plan fails to note the level of tree removal, provision of offsets under Council's planning documents including the KPOM, Draft Vegetation DCP etc.
- Limited species lists have been presented in the VMP with no discussion on the plant community targets.
- Design of isolated clump plantings may allow encroachment in the outer APZ if canopy separation complies with Planning for Bushfire Protection Guidelines 2006.
- Improvement programs will only account for a small % of offset with no replacement of canopy trees.
- Any APZ arrangement to inclusion in the Council reserve is to be determined in consultation with Council's Recreation Services Section.

3. The following issues are raised as recommended amendments to the Vegetation Management Plan (VMP):

- Two VMP's are required – one to cover works on private land and a separate VMP to cover works in the public reserve.
- Zone 4 works proposed must be consistent with Council's current APZ requirements in relation the Public Reserve.
- If offsets occur in Reserve, VMP would need to clearly delineate all works within the reserve, in terms of initial works, maintenance works and costing.
- The report notes retention of some trees within the landscape (inside the development area) these are to be included within the Vegetation Management Plan.
- The developer would need to pay to Council the cost of the outstanding maintenance works identified within the VMP that relate to the public reserve. This would be required prior to occupation of any of the new sites.
- Notation of replacement plants in case of deaths should be covered within the budget applied to CHCC as a bond.

Further information is required to be provided with the Environmental Assessment prior to Council being satisfied that the proposal is acceptable on ecological considerations; two Vegetation Management Plans are necessary (a private land VMP and a public reserve VMP).

Caravan Park / Public Reserve Interface:

The proponent should detail fencing arrangements to delineate the caravan park / public reserve boundary, fencing type and location to be determined in consultation with Council's Recreation Services Section. The consent may be conditioned accordingly.



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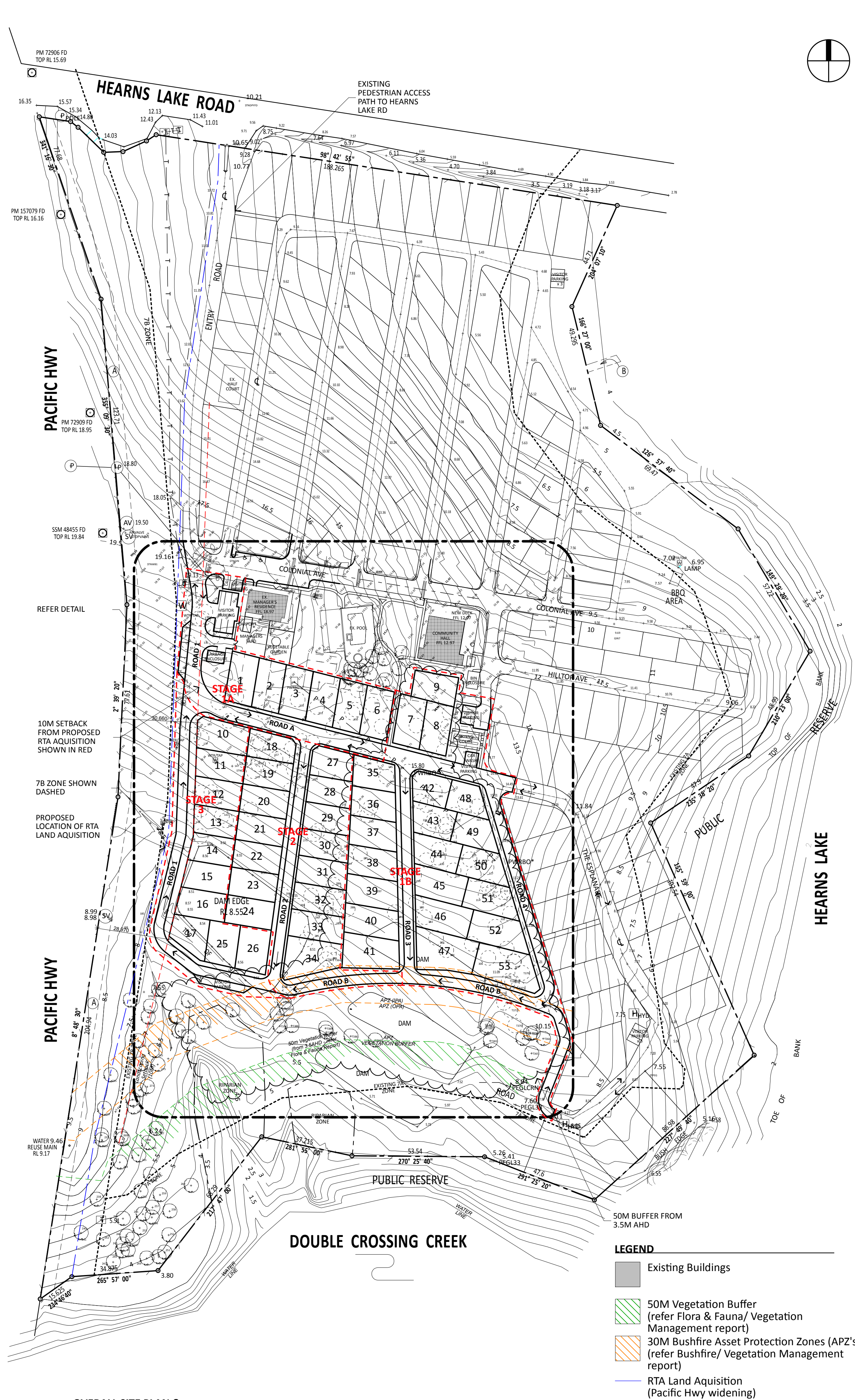
Lot 106 in DP 1144462 Hearn's Lake Road
Woolgoolga

Proposed Expansion of
The Pines and Waterside Cabins

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Appendix B
Amended Proposed Development Plan

October 2011



REVISION		
No.	DESCRIPTION	DATE
1	Prelim issue for Traffic Impact Assessment	29.4.09
2	Prelim issue for Traffic Impact Assessment	26.6.09
3	Modified prelim issue for revised Consultant Reports	13.09
4	Additional visitor parking spaces maintenance building demolished road A moved to the north Modified prelim issue for revised Consultant Reports	23.09
A	Issued for approval	13.11.09
B	Issued for Development Approval	4.6.10
C	Issued for meeting with Council	20.12.10
D	Issued for Council	6.9.11

Urban Group Australia

191(02) 4367 4220 - Fax 191(02) 4367 4224 - www.urbangroup.com.au

CLIENT: Urban Group Australia

PROJECT: Southern Precinct Upgrade
The Pines Estate
Cnr Pacific Hwy & Hearns Lake Rd
Woolgoolga NSW 2456

TITLE: Overall Site Plan, Detail Site Plan & Staging Plan

SCALE	DATE	ISSUE	DESIGNED BY	DRAWN BY	REVISION
1:1000	MARCH 2009	ISSUE	DW	AM	

Overall Site Plan, Detail Site Plan & Staging Plan

DA-04 D



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Lot 106 in DP 1144462 Hearns Lake Road
Woolgoolga

Proposed Expansion of
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Appendix C
Combined Fauna Species List

October 2011

KEY	
+	Non-indigenous native
*	Introduced Species
V	Species is listed as “vulnerable” on the <i>Threatened Species Conservation Act 1995</i> (TSC Act).
M	Species is listed as “migratory” on the <i>Environmental Protection & Biodiversity Act 1999</i> (EPBC Act).
A	Geolink 2008
B	InSites 2009
C	SLR Consulting 2011

STATUS	SCIENTIFIC NAME	COMMON NAME	A	B	C
AMPHIBIANS					
	Hylidae				
	<i>Litoria caerulea</i>	Green Tree Frog	X		
	<i>Litoria dentata</i>	Bleating Tree Frog	X	X	
	<i>Litoria fallax</i>	Green Reed Frog	X	X	
	Myobatrachidae				
	<i>Crinia signifera</i>	Common Eastern Froglet	X		
	<i>Limnodynastes peroni</i>	Striped Marsh Frog	X	X	
BIRDS					
M	Accipitridae				
	<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle		X	
	Anatidae				
M	<i>Anas superciliosa</i>	Pacific Black Duck	X	X	
M	<i>Chenonetta jubata</i>	Australian Wood Duck	X	X	
	Ardeidae				
M	<i>Ardea ibis</i>	Cattle Egret	X		
	Artamidae				
	<i>Cracticus nigrogularis</i>	Pied Butcherbird	X		
	<i>Gymnorhina tibicen</i>	Australian Magpie	X	X	
	<i>Strepera graculina</i>	Pied Currawong	X		
	Cacatuidae				
	<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo	X		
V	<i>Calyptorhynchus lathami</i>	Glossy Black Cockatoo	X		
	<i>Cacatua roseicapilla</i>	Galah	X	X	
	Charadriidae				
M	<i>Vanellus miles</i>	Masked Lapwing	X		
	Cinclosomatidae				
	<i>Psophodes olivaceus</i>	Eastern Whipbird	X	X	
	Columbidae				
	<i>Columba leucomela</i>	White-headed Pigeon	X		
	<i>Macropygia amboinensis</i>	Brown Cuckoo Dove	X		
	<i>Geopelia humeralis</i>	Bar-shouldered Dove	X		
	<i>Ocyphaps lophotes</i>	Crested Pigeon	X	X	
	Coraciidae				
	<i>Eurystomus orientalis</i>	Dollarbird	X	X	
	Corvidae				
	<i>Corvus orru</i>	Torresian Crow		X	

STATUS	SCIENTIFIC NAME	COMMON NAME	A	B	C
	Culidae				
	<i>Eudynamys scolopacea</i>	Common Koel	X	X	
	Dicruridae				
	<i>Dicrurus bracteatus</i>	Spangled Drongo	X		
	<i>Grallina cyanoleuca</i>	Magpie-lark	X	X	
	<i>Rhipidura fuliginosa</i>	Grey Fantail		X	
	<i>Rhipidura leucophrys</i>	Willie Wagtail	X	X	X
	Halcyonidae				
	<i>Dacelo novaeguineae</i>	Kookaburra	X	X	
	Hirundinidae				
	<i>Hirundo neoxena</i>	Welcome Swallow		X	
	Laridae				
	<i>Larus novaehollandiae</i>	Silver Gull	X		
	Maluridae				
	<i>Malurus cyaneus</i>	Superb Fairywren	X	X	
	Meliphagidae				
	<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill	X		
	<i>Anthochaera carunculata</i>	Red Wattlebird	X	X	
	<i>Anthochaera chrysoptera</i>	Little Wattlebird	X		
	<i>Entomyzon cyanotis</i>	Blue-faced Honeyeater	X		
	<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater	X		
	<i>Manorina melanocephala</i>	Noisy Miner	X	X	X
	<i>Meliphaga lewinii</i>	Lewin's Honeyeater	X	X	
	<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater	X		
	<i>Philemon corniculatus</i>	Noisy Friarbird	X	X	
	Oriolidae				
	<i>Oriolus sagittatus</i>	Olive-backed Oriole	X	X	
	<i>Sphecotheres viridis</i>	Figbird		X	
	Pachycephalidae				
	<i>Colluricincla harmonica</i>	Grey Shrike-thrush		X	
	<i>Pachycephala rufiventris</i>	Rufous Whistler	X		
	Pardalotidae				
	<i>Acanthiza lineata</i>	Straited Thornbill		X	
	<i>Acanthiza pusilla</i>	Brown Thornbill		X	
	<i>Sericornis frontalis</i>	White-browed Scrubwren	X		
	Passeridae				
	<i>Neochmia temporalis</i>	Red-browed Finch	X		
	Psittacidae				
	<i>Alisterus scapularis</i>	Australian King Parrot		X	
	<i>Platycercus eximius</i>	Eastern Rosella	X		
	<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet	X	X	
	<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	X	X	
	Ptilonorhynchidae				
	<i>Ailuroedus crassirostris</i>	Green Catbird		X	
	Rallidae				
	<i>Gallirallus philippensis</i>	Buff-banded Rail		X	
	<i>Gallinula tenebrosa</i>	Dusky Moorhen		X	
	<i>Porphyrio porphyrio</i>	Purple Swamphen	X	X	
	Threskiornithidae				
	<i>Threskiornis molucca</i>	Australian White Ibis	X		
	Zosteropidae				
	<i>Zosterops lateralis</i>	Silvereye		X	

STATUS	SCIENTIFIC NAME	COMMON NAME	A	B	C
MAMMALS					
V	Macropodidae <i>Macropus giganteus</i> <i>Wallabia bicolor</i>	Eastern Grey Kangaroo Swamp Wallaby	X	X X	
	Molossidae <i>Mormopterus sp.</i>	A Eastern Free-tailed Bat	X		
	Peramelidae <i>Isodon macrourus</i>	Northern Brown Bandicoot	X	X	
	Petauridae <i>Petaurus norfolcensis</i>	Squirrel Glider	X		
	Pseudocheiridae <i>Pseudocheirus peregrinus</i>	Common Ringtail Possum	X		
	Pteropodidae <i>Pteropus poliocephalus</i>	Grey-headed Flying Fox	X		
	Vespertilionidae <i>Chalinolobus gouldii</i>	Gould's Wattle Bat	X		
	<i>Miniopterus australis</i>	Little Bent-winged Bat	X		
	<i>Myotis macropus</i>	Southern Myotis	X		
	<i>Nyctophilus sp.</i>	Unknown Long-eared Bat	X		
	<i>Scotorepens sp.</i>	Eastern Broadnosed Bat	X		
	<i>Vespadelus pumilus</i>	Eastern Forest Bat	X		
REPTILES					
	Elipidae <i>Pseudechis porphyriacus</i> <i>Pseudonaja textilis</i>	Red-bellied Black Snake Eastern Brown Snake	X X		
	Physignathus <i>Physignathus lesueurii</i>	Eastern Water Dragon	X		
	Scincidae <i>Lampropholis delicata</i>	Garden Sun-skink	X		
	Varanidae <i>Varanus gouldii</i>	Sand Goanna	X		



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Lot 106 in DP 1144462 Hearns Lake Road
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Proposed Expansion of
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Appendix D
Photographs of the Subject Land at Woolgoolga

October 2011



Photo 1 The large dam on the subject site at Woolgoolga, with weed infested surrounds and poor water quality.



Photo 2 The substantial level of weed invasion along the southern boundary of the subject site at Woolgoolga which is to be rehabilitated, involving weed removal and replanting of native understorey species.



Photo 3 The southwestern corner of the subject land which was identified in the Council mapping as 'Swamp Mahogany' vegetation of 'very high' conservation value. This is clearly an Open Blackbutt Forest (note Blackbutts with some scattered Ironbarks and Forest Red Gums in this photo), with a mesic mid-storey of Broad-leaved Paperbark and a mown grassy groundcover. This area is to be rehabilitated to a swamp sclerophyll vegetation type, with the planting of mesic understory and groundcover species.



Photo 4 The land to the west of the site, including parts of the subject land acquired by the RTA, which has been cleared as part of the Pacific Highway upgrade.



Photo 5 The Pacific Highway to the west of the subject land, showing the lack of connectivity with vegetation on the subject land in this direction.