

Stuart Withington
NSW Department of Planning
GPO Box 39
Sydney NSW 2001

23 June 2008

Dear Stuart

MP07_0075 Major Project Application
Residential Subdivision - 45 Hearnese Lake Road, Woolgoolga
Response to Ecological Matters raised in the Department of Planning and
Department of Environment and Climate Change draft Adequacy Reviews

Thank you for the opportunity to respond to the Department of Planning and Department of Environment and Climate Change draft adequacy review letter regarding the above application. We have reviewed the comments made relating to strategic planning, archaeology and ecology and provide the following information. Department comments are in italics.

DEPARTMENT OF PLANNING

1. Strategic Planning

- *Under the Hearnese Lake/Sandy Beach DIP there is a requirement for a detailed Vegetation Management Plan (VAMP) to be prepared for the rehabilitation/renegotiation of environmental protection land. Please provide a VAMP in accordance with the DIP.*

The principle impacts, management and mitigation measures were considered and addressed in the ecological assessment and would be included in a Vegetation Management Plan (VMP) developed for the site upon development approval. As the VMP will depend on the final site detail and approval, it is requested that the requirement for a VMP be included in the draft Statement of Commitments, to be prepared and agreed by the Department of Environmental and Climate Change prior to works commencing.

9. Heritage

- *Further survey work is required to be submitted as part of the Environmental Assessment for this proposal, as per the Hearnese Lake/Sandy Beach DCP and recommendation 2 (p.22) of the Collin's report 2007 Aboriginal Report. Please discuss these requirements with DECC.*

Assessment has been undertaken to ensure the Aboriginal archaeological constraints of the site have been considered in the site design and planning. Further assessment and subsurface testing would be undertaken in accordance with the DCP and the NP&W Act once Part 3A approval has been granted. At this stage, any further testing would not provide any additional information to determine the subdivision impacts and design profile.

10. Flora and Fauna

- *Trapping and further assessment are required for at least the Common Planigale and the Long-nosed Potoroo, which have a high potential to use habitat on the site. Please discuss with DECC appropriate trapping requirements for threatened fauna species which may use the site.*

Neither the Long-nosed Potoroo nor Common Planigale were considered likely to occur at the subject site or to be significantly impacted by the proposal. The only possible potential habitat on the site (swamp sclerophyll vegetation, healthy regenerating Banksia/Bloodwood scrub, and ephemeral wetland margins) is within areas designated for protection and enhancement within a reserve as part of the development application. Those parts of the site proposed for urban development constitute mostly cleared land with scattered remnant trees, and a highly modified understorey. The closest record of Potoroo to the subject site is about 24 kilometres to the north west near Sherwood Nature Reserve, and that of the Planigale is about 20 kilometres to the north from the headland heath at Arrawarra. Neither species appeared in the 10 kilometre radius Atlas records data search, but they did appear in the list of potential species for the Coffs Coast and Escarpment subregion of the Northern Rivers CMA region during a DECC Threatened Species website data search. It is therefore considered unnecessary to undertake targeted surveys for these species at the subject site.

- *Further assessment is required of the slashed themeda grassland community present in study area 1 of Figure 3. A number of species occur within this community that also occur within the Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney basin and South East Corner bioregions Endangered Ecological Community. Further assessment should include quadrat and further survey data in accordance with the draft DECC Threatened Biodiversity Survey and Assessment Guidelines and references to the NSW Scientific Committee's Final Determination.*

While species composition on the subject site is similar in some respects to that of the Themeda EEC, the subject site is confined to a coastal hillock and lowlands on which former native forest was mostly cleared for agriculture some time ago. The land is in no way associated with headland or seacliffs, and the slashed grassland community there is not the Themeda Grassland on Headlands EEC. Instead, this is derived Themeda grassland which has been managed in a way (regular slashing) that has favoured the establishment of *Thesium australe* in parts of the site.

- *Copies of completed field survey data sheets must be provided.*

We will provide completed datasheets (attached).

- *A full species list must be provided for all fauna recorded for the site.*

We will provide a complete fauna list (attached).

- *Habitat for the Wallum froglet must be shown on a plan.*

We will provide a wallum habitat map to accompany the plan (attached).

- *The impact of any domestic animals kept within the proposed subdivision on native fauna needs to be addressed.*

Potential impact of domestic dogs has been addressed in the Landscape Concept Plan provided by Anne Harrison, Landscape Architect (Category 3, pp 19-20; open space network plan in site plan p.13). The proposed fence will provide an adequate barrier to movement of dogs into the wetland/dune system.

Potential impact of domestic cats will be addressed by imposing a cat exclusion clause in the title of each property in the proposed development.

- *Other issue - Austral Toadflax (*Thesium australe*)*

As detailed in the Eco Logical Flora and Fauna Assessment for 45 Hearnese Lake Road, this species is listed as 'vulnerable' under the TSC Act 1995. It was listed at the inception of the TSC Act, with few records of the species known at that time. Since then, the species has been recorded in a great many areas of the Northern Tablelands and North Coast Bioregions, and its conservation status is now considered to be secure. It is reserved in most coastal headland reserves in the region, and is also conserved in many Northern Tableland reserves. Populations recorded on site have most likely colonised the site as a result of the positive growth response of its host Kangaroo Grass *Themeda australis* as a result of past clearing of the native forest overstorey, and ongoing slashing of the grassy groundcover.

On our advice, and in the knowledge that there would be some loss of *Thesium* on-site as a result of the development, our client provided consent for ELA to undertake a detailed survey of the species' status in the local area. Outcomes of this survey, as documented in the ELA report, show that it is present on most of the nearby headlands, most of which are now protected in conservation reserves. Our strong view is that this development will not pose a significant impact to this species, particularly as a significant proportion of the sub-populations will be retained in the designated buffers and proposed reserve in the eastern portion of the site. Further offsets, if considered necessary, could be used by collecting seed from colonies designated for removal, and sowing within the grassy areas of the proposed reserve in the east of the site. This would be a preferred option over translocation of mature plants for this comparatively short-lived species, as described in the ELA report in which DECC botanist Mr John Briggs is cited as suggesting the sowing of collected seed as the preferred translocation strategy for this species.

DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE

Flora and Fauna

- *Buffers: Please overlay the Sainty map on the subdivision plan plus add 50m buffer lines from all EEC's, the wetland in the north-east corner and *Thesium australe*. Accurately map the wetland boundary using the wetland*

community criteria defined in Adam et al (1985) for mapping of SEPP 14 Coastal Wetlands. Please provide at an appropriate scale.

The proposal lies within the 'Sainty map' buffers, as required. This includes a buffer on the wetland in the northeast corner. Additional 50 metre buffers on all EECs and *Thesium australe* on the subject site would render almost the entire site constrained from development. It is considered that the mitigative measures proposed for remnant EEC and *Thesium australe* on the subject site are sufficient to offset any potential impacts on them.

Adam et al.(1985) criteria mapped SEPP 14 Coastal Wetlands rapidly and coarsely, to the extent that this particular wetland on the subject site was omitted or overlooked from the original SEPP 14 mapping undertaken by Adam et al. The ELA 2007 report notes that this wetland qualifies as SEPP 14 Coastal Wetland, although it is not officially mapped as SEPP 14 wetland. The map provided in the ELA (2007) report is a reasonably accurate representation of the extent of the wetland at the time site surveys were undertaken.

- *Threatened species: Further assessment is required of the impact of the proposal on Maundia triglochinos, Acronychia littoralis, Comb-crested jacana, Brolga, Black necked stork (all known from the site) and Green turtle (known breeding habitat on Hearn's Lake Beach).*

These issues were addressed in the Eco Logical Australia (ELA) final flora/fauna report (ELA 2007), and also partly in the ELA March 2007 report 'A Review of the Sainty and Associates (2006) report 'Environmental Constraint Analysis Lot 21 DP 714858 45 Hearn's lake Road Woolgoolga'.

The ELA 2007 flora/fauna report described the threatened plants search undertaken on the subject site. The only threatened plant species found was Austral Toadflax *Thesium australe*. The ELA March 2007 report noted that the records of *Maundia triglochinos* and *Acronychia littoralis*, as listed in the James Warren & Associates flora and fauna report for the subject site, and repeated in the Sainty & Associates report, were found to be erroneous, and neither species was located during ELA searches of the subject site.

In the ELA 2007 flora and fauna report, an assessment of the potential impact of the proposal upon the Comb-crested Jacana, Brolga, Black-necked Stork and Green Turtle, concluded that there would be no significant impact upon those species and that further consideration was not required. The entire wetland area within the subject site is proposed for protection, with a 50 metre buffer extending inland up a vegetated slope in order to protect remnant vegetation on the site, and to ensure a vegetated buffer was retained to maintain high quality runoff into the wetland.

No records of Brolga were retrieved from the NSW Wildlife Atlas nor the EPBC search tool for the subject site and surrounds, so it was not considered further. The ELA report concluded that the site represented poor habitat for Comb-crested Jacana, as the wetland does not support a dense cover of waterlilies, which is a key component of this species habitat requirements. The Jacana was therefore not

considered further. The report considered that, although the site is utilised at times by Black-necked Stork, all habitat for this species is proposed to be protected and will not be affected by the proposal (Table 4, ELA 2007). In the case of the Green Turtle, there is no potential habitat for this species on the subject site, which is separated from the nearest turtle habitat (Woolgoolga Back Beach) by a large foredune (Crown land) which is consolidated by a complex of coastal vegetation including Banksia scrub and littoral rainforest. The swale behind this foredune is proposed for protection, and therefore it was considered that the proposal would not constitute any form of impact upon the Green Turtle.

- *Demonstrate how drainage to the wetland will be of a quality suitable to ensure no medium to long-term threat to the Wallum Froglet and its habitat.*

The ELA 2007 flora and fauna report refers to the WBM Oceanics (2006) stormwater management system proposed for the site, which is considered to exceed current best practice in terms of the quality of stormwater leaving the site. This, coupled with the significant vegetated buffer adjoining the inland margin of the wetland habitat, will ensure that the Wallum Froglet or its habitat will not be impacted by any water quality-related threats in the medium to long term.

- *Assessments of Significance (s5A EP&A act) are required for all identified potential threatened species, populations or ecological communities.*

'7-part tests' were undertaken for those threatened species, populations or ecological communities considered to potentially be affected by the proposal. These are the Austral Toadflax *Thesium australe*, and the Endangered Ecological Community 'Subtropical Coastal Floodplain Forest of the NSW North Coast Bioregion'. This is the statutory requirement under s5A of the EP&A Act, not a 7-part test for every identified potential threatened species for the subject site.

Thank you again for the opportunity to comment on the matters raised and we look forward to discussing these issues further with the Department of Planning and the Department of Environment and Climate Change.

If you have any further queries with regard to these matters, please do not hesitate to contact the undersigned on 6651 5484 or 0437 390 398.

Yours sincerely,

Simon Williams
Senior Consultant
Environmental Planning and Assessment

Attachments

1. Copies of completed field survey data sheets
2. A full species list for all fauna recorded for the site
3. Habitat for the Wallum froglet shown on a plan

DIURNAL HERPETOFAUNA

Spotlight 1

Survey Details

Date of survey 3 Nov 06

Name of surveyor P. Richards Contact number traverse on foot

Name of person analysing calls 1 light 5099H Contact number _____

Total effort expressed in person hours 1 hr 40m.

Location Details

Location (including basic habitat) description 45 Heaney Lake Rd

Map number _____ Map name _____

Type of survey, eg. transect or quadrat _____ AMG Zone _____

Active or passive search _____ Size of survey area (ha) _____

Survey area Eastings (6 digits) _____ Northings (7 digits) _____

Eastings (6 digits) _____ Northings (7 digit) _____

Start time (24hr) _____ End time (24 hr) _____

Weather Details

At start of survey, record: Cloud cover* 2

Wind direction and speed* 1, N Rain* 0

Temperature (°C) 17.5° 80%RH Moon* 2

Comments _____

SPOTLIGHTING SURVEY PROFORMA

Spotlight 2

Survey Details

Name of surveyor

P. Lidab / J. Wall
Contact number

Date of survey

10 Nov 06.

On foot or in vehicle

Foot

Number of surveyors

2

Total effort expressed in person hours

1 hr 10 mins.

Length of transect or grid dimensions

c. 500m.

Number of lights

2.

Wattage of spotlight

2 x 50W

Start 2130
End 2205

Location Details

Location (including basic habitat) description

45 Nees Lake Rd.

Map name

Map number

AMG Zone

Start details

Easting (6 digits)

Finish details

Easting (6 digits)

Northing (7 digits)

Northing (7 digits)

Start time (24 hr)

End time (24 hr)

Weather Details

At start of survey, record
Cloud cover*

0

Moon*

0

Wind direction and speed*

1, N

Rain*

0

Temperature (°C)

15.5 76% RH.

Comments

Attachment 1:

DIURNAL HERPETOFAUNA NOCTURNAL STREAMSIDE CENSUS SURVEY PROFORMA

Noc herp 1

Survey Details

Date of survey 1/11/06
 Name of surveyor P. Richards Contact number _____
 Name of person analysing calls _____ Contact number _____
 Total effort expressed in person hours 1.5

Location Details

Location (including basic habitat) description Wetland on 45 Heans Lake Rd

Map number _____ Map name _____
 Type of survey, eg. transect or quadrat transect AMG Zone 56
 Active or passive search Active search Size of survey area (ha) 1
 Survey area Eastings (6 digits) 519391 Northings (7 digits) 6666725 (WGS84)
 Eastings (6 digits) _____ Northings (7 digit) _____
 Start time (24hr) _____ End time (24 hr) _____

Weather Details

At start of survey, record: Cloud cover* 1/8
 Wind direction and speed* 1. NNE Rain* 0
 Temperature (°C) 19.5°C Moon* 2
 Comments _____

Attachment 1:

DIURNAL HERPETOFAUNA NOCTURNAL STREAMSIDE CENSUS SURVEY PROFORMA

Nov Loop 2

Survey Details

Date of survey 10 Nov 06
Name of surveyor P. Richards Contact number _____
Name of person analysing calls _____ Contact number _____
Total effort expressed in person hours 1.5 Start 2330 End 0100

Location Details

Location (including basic habitat) description Wetland, 45 Heavers Lake Rd.

Map number _____ Map name _____
Type of survey, eg. transect or quadrat _____ AMG Zone _____
Active or passive search _____ Size of survey area (ha) _____
Survey area Eastings (6 digits) _____ Northings (7 digits) _____
Eastings (6 digits) _____ Northings (7 digit) _____
Start time (24hr) _____ End time (24 hr) _____

Weather Details

At start of survey, record: Cloud cover* 0
Wind direction and speed* 0 Rain* 0
Temperature (°C) 15° 77% RH Moon* 0
Comments _____

Map 1

TRIPLINE/HARP TRAPPING/MIST NETTING SURVEY PROFORMAS

Survey Details

Name of principle surveyor P. Richards Contact number _____

Location description Adjacent to wetland, 45 Heanes Lake Rd

Start date 1/11/06 End date 3/11/06

Type of trap 2 x HARP traps

Time/date trap checked _____

Location Details

Map number _____ Map name _____

AMG Zone _____

Survey site Eastings (6 digits) _____ Northing (7 digits) _____

Weather Details

At start of survey, record Cloud cover* no. hwp. see playback sheet Moon* _____

Wind direction and speed* _____ Rain* _____

Temperature (°C) _____

Comments _____

Date	Species name	Sex	Wt (g)	Forearm (mm)	Comments
2/11/06	NIC				
3/11/06	NIC				
	= 4 trap nights				

* See Appendix A Standard reporting codes

Map 2

TRIPLINE/HARP TRAPPING/MIST NETTING SURVEY PROFORMAS

Survey Details

Name of principle surveyor P. Riddler Contact number _____

Location description S. boundary 45 Heasnes Lake Rd.

Start date 10/11/06 End date 12/11/06

Type of trap 2x HARP traps

Time/date trap checked _____

Location Details

Map number _____ Map name _____

AMG Zone _____

Survey site Eastings (6 digits) _____ Northing (7 digits) _____

Weather Details

At start of survey, record Cloud cover* see noc temp & playback sheets. Moon* _____

Wind direction and speed* _____ Rain* _____

Temperature (°C) _____

Comments _____

Date	Species name	Sex	Wt (g)	Forearm (mm)	Comments
11/11	Nil				
12/11	Nil result				
	= 4 trap weights				

* See Appendix A Standard reporting codes

NOCTURNAL CALL PLAYBACK SURVEY PROFORMA

1 Nov 06
 Harp #2
 P' back
 Frog census
 Still to do
 Spotlight
 P' back -
 wheelbarrow
 Grass
 Bushes
 Curlew
 Beach St
 Curlew

Survey Details

Name of surveyor P. Richards Contact number _____
 Date of survey 01/11/06 Type of amplification (loudhailer, tape deck only) loudhailer
 Duration of call playback (minutes) start 2106 Duration of listening (minutes) c. 20 mins
20/56 listen
end 2140

Location Details

Location description Southern bdy of 45 Heans Lake Rd, adjacent Heans Lake.
 Map name _____ Map number _____

Full AMG reference(s) for survey site or transect _____ AMG Zone _____
 Easting (6 digits) 519271 Northing (7 digits) 6666575 (WGD 84)
 Start time (24 hr) _____ End time (24 hr) _____

Weather Details

At start of survey, record
 Cloud cover* 0/8 Moon* 2
 Wind direction and speed* 01 NNE Rain* 0
 Temperature (°C) 19.50 18° wet bulb RH=87%
 Comments _____

Playback details		Species response			
Time (24hr)	Call Species Name	Time (24hr)	Species name	No Ind	Comments
2106	POWL		NIL		
2115	BOWL		NIL		
2123	MOWL	2123	Sugar Glider	1W	Lakeside veg
2129	Koala	2130	Ribb-tailed Kooka	2, ob.	Adult & young on back in Swamp oak on-site.
2136	Squirrel Gl		NIL		

* See Appendix A Standard reporting codes

NOCTURNAL CALL PLAYBACK SURVEY PROFORMA

Survey Details

Name of surveyor P. Richards Contact number _____
 Date of survey 10 Nov 06 Type of amplification (loudhailer, tape deck only) loudhailer
 Duration of call playback (minutes) 2210 - 2318 Duration of listening (minutes) _____

Location Details

Location description 45 Heanes Lake Rd.

Map name _____ Map number _____

Full AMG reference(s) for survey site or transect _____ AMG Zone _____

Easting (6 digits) _____ Northing (7 digits) _____

Start time (24 hr) _____ End time (24 hr) _____

Temperature (°C) _____

At start of survey, record

Cloud cover* 0 Moon* 0

Wind direction and speed* 0 Rain* 0

Comments 15.5 76% RH

Playback details		Species response			
Time (24hr)	Call Species Name	Time (24hr)	Species name	No Ind	Comments
2220	POWL		NIL		
2230	BOWL		NIL		
2238	M OWL		Common R-Tail Bstle	1	O/w in Su oak stand above wetland
2250	G owl		NIL		
2259	B.S. owls		NIL		
2310	Koala		NIL		
2308	Squirrel		NIL		
+10 2318	listening				

* See Appendix A Standard reporting codes