From: Seth Philbrook
To: Records Management Section <Records@TWEED.nsw.gov.au>
Date: 17/01/2014 2:29:19 PM
Subject: FW: DA 10/0737 - BP Chinderah DA/Rezoning Application

---

Please register.

Seth Philbrook B. Urb. and Reg. Plan. Grad. Cert. Bus. Admin. | Town Planner

Planning and Regulation Division | Development Assessment Unit

p (02) 6670 2755 | **f** (02) 6672 2429 | **e** sphilbrook@tweed.nsw.gov.au | **w** www.tweed.nsw.gov.au

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From: Clark, Scott [mailto:Scott.Clark@se1.bp.com]
Sent: Friday, 17 January 2014 3:12 PM
To: Seth Philbrook
Subject: DA 10/0737 - BP Chinderah DA/Rezoning Application

Hello Seth,

In response to council's NRM ecological assessment cited a letter received 9th April 2013.

BP commissioned an additional site inspection in respect of the ecological value of the proposed development area. With reference to this expert advice, an internal review of the truck parking development footprint has been completed.

The attached provides a summary of the key findings in response to council's position and affirms BP's position in relation this matter.

<<Response to TSC Final.pdf>>

<<BP Australia TSC Letter DA 10-0737 _ 15th Jan 2014.pdf>>

Regards,

Scott Clark
Network Development Manager-QLD/WA

BP Australia Pty Ltd
572 Curtin Avenue Eagle Farm, Queensland
Postal: PO Box 718 Hamilton 4007
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scott.clark@bp.com

JWA PTY LTD
Ecological Consultants
ABN 18 862 767 739

RESPONSE TO TWEED SHIRE COUNCIL LETTER OF 9 APRIL 2013

BP CHINDERAH TRAVEL CENTRE
Lot 1 DP 1127741
Ozone Street, Chinderah

A Report Prepared for
BP Australia Pty Ltd

DECEMBER 2013

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DOCUMENT CONTROL

Document

Title	Response to Tweed Shire Council Letter of 9 April 2013
Job Number	05023
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Client	BP Australia Pty Ltd

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1	Rw1	Draft	18.09.13	Scott Clark	1	PDF	Email
2	Rw2	Draft	23.09.13	S. Clark & S. Williams	1	PDF	Email
3	Rw3	Draft	29.11.13	S. Williams	1	PDF	Email
4	Final	Final	11.12.13	S. Williams	1	PDF	Email
5							

Client Issue

Version	Date	Author		Approved by	
		Name	Initials	Name	Initials
Rw1	18.09.13	James Warren	JW	James Warren	JW
Rw2	23.09.13	James Warren	JW	James Warren	JW
Rw3	29.11.13	James Warren	JW	James Warren	JW
Final	11.12.13	James Warren	JW	James Warren	JW

1 BACKGROUND

JWA Pty Ltd has been engaged by BP Australia Pty Ltd to prepare a response to a Tweed Shire Council letter (dated 9 April 2013) with respect to the Development Application DA10/0737 for land described as Lot 1 DP1127741 and Lot 2 DP1010771, 1 Ozone Street, Chinderah.

JWA completed an Ecological Assessment to accompany DA10/0737 in June 2012. The DA involved the development of two new diesel refuelling points, expansion of the existing refuelling canopy, a new truck parking area (36 new bays) and a new bus drop-off area.

Council issued a letter (dated 9 April 2013) to the applicant setting out their position with respect to the application. In essence, the suggestion was that re-consideration of the development footprint would be beneficial to the favourable assessment of the development. Additionally, JWA have reviewed an internal Tweed Shire Council memorandum (dated 21 December 2012) from Council's Natural Resource Management Unit (NRMU).

The following report addresses the concerns raised by the Council in the aforementioned letter of April 2013:

- Council Officers consider the areas consisting of Coastal Brushbox/Pink Bloodwood Open Forest on the site to be of high ecological status and hence a high ecological constraint to development;

- Council Officers also consider the mature Pink Bloodwood within the Pink Bloodwood woodland to open woodland community on the site contribute to the overall high ecological status of the site, and need to be considered in any development proposal for this site; and

- The Endangered Ecological Community (EEC) and the population of Scented Acronychia must have a continuous vegetated buffer of minimum 20 metres. This buffer must have the sole purpose of minimising the impact of the development on this EEC and threatened species. A 10m Asset Protection Zone (APZ) within this 20m buffer is not acceptable. Furthermore, the vegetated buffer must be accurately measured and mapped.

- The internal memorandum (December 2012) contains a more detailed analysis of the Council's concerns, in particular it notes:

  (i) significant corridor issues i.e. connectivity between the Tweed River, predominantly along the Kingscliff drain and Cudgen Creek;

  (ii) the significant value of mature Pink bloodwoods as a nectar resource for Grey-headed flying foxes and hollows and fissures in these trees providing roost habitat for microchiropteran bats;

  (iii) that the JWA assessment is considered inadequate with respect to Koala activity in the area and the potential impact of further development on the Tweed Coast local population; and

(iv) that the ecological constraints analysis undertaken in the JWA (June 2012) report is not in accordance with statements made during the Habitat Assessment documented in the same report.

2 RESPONSE TO COUNCIL

2.1 Vegetation Mapping and Zoning

Community 1:

Both the Council and the JWA (June 2012) agree that the vegetation (denoted as Community 1 on attached **FIGURE 1**) is consistent with the Endangered Ecological Community (EEC) Lowland Rainforest on Floodplain and/or Swamp Sclerophyll Floodplain Forest. This EEC comprises 1.32 hectares (or approximately 33%) of the total 4.041 hectare study site.

Part of this EEC area (north-eastern corner) is currently included in an Environmental Protection Zone (Wetland and Littoral Rainforests) denoted 7(a) in the Tweed Local Environmental Plan (LEP 2000). **FIGURE 2** depicts this zoning with respect to the subject site.

The Council notes that *"this area of the development site is to be protected within proposed Environmental Protection zoning."* This refers to the Draft Tweed LEP 2010 Environmental Conservation zoning (E2) - also depicted on **FIGURE 2**. However, it is noted that the NSW Department of Planning and Infrastructure states the following:

> *"Draft Standard Instrument LEPs for the local government areas will be progressed while the environmental zones are reviewed. However, all land to be zoned E2, E3 or E4 in draft plans will be deferred when the LEP is finalised. This means the present zoning under the existing LEP for those deferred areas will remain until such time as the review is completed."*

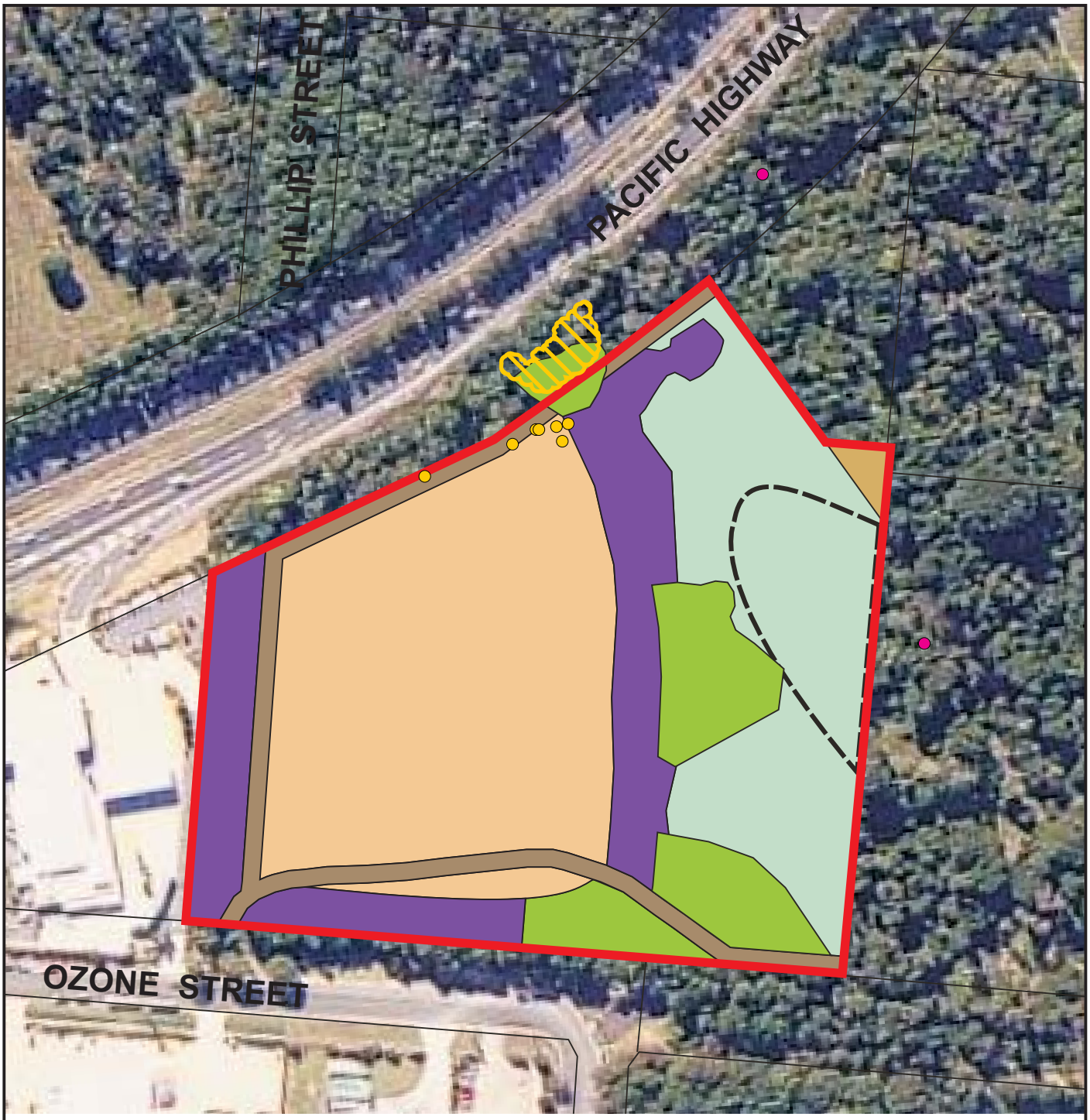
As at the date of this letter, this review had not been completed. Regardless of this zoning distinction, the proposed development does not encroach on the candidate EEC and makes allowance for the requisite 20m ecological buffer zone, as depicted on **FIGURE 3**.

Communities 2, 3 and 5:

JWA do not agree with the vegetation descriptions and mapping provided for the remaining 2.72ha (approximately 67%) of the study site. This area falls within a rural zoning (1(a)) of the Tweed LEP (2000). The footprint of the proposed development is contained entirely within this rural zoning.

The Tweed Council NRM Unit (in their December 2012 memorandum) believes that the vegetation communities in the south-western portion of the site should be classified as:

- Coastal Brushbox/Pink Bloodwood Open Forest (an approximate 20m strip along the western most site boundary and approximate 30m strip along the southern most boundary); and
- Pink Bloodwood woodland to open woodland with dense mid-stratum of *Acacia disparrima*, in the central and central northern portions of the study area.



Legend

- Community 1 - Tall closed sclerophyll forest (*Melaleuca quinquenervia*, *Casuarina glauca* + rainforest species)
- Community 2 - Tall closed sclerophyll forest (*Lophostemon confertus*, *Corymbia intermedia*)
- Community 3 - Low closed shrubland (*Acacia disparrima* +/- scattered trees)
- Community 4 - Drainage canal
- Community 5 - Mid-high regrowth (*Acacia disparrima* +/- *L. confertus* / *Lantana camara* / vine species)

- Stand of 86 Scented acronychias (*Acronychia littoralis*) - Endangered TSC Act (1995)
- Individual Scented acronychias (*Acronychia littoralis*) - Endangered TSC Act (1995)
- Stinking cryptocarya (*Cryptocarya foetida*) - Vulnerable TSC Act (1995)
- Approximate area of Small-leaved privet infestation
- Existing tracks
- Subject Site

0 50m

N

SOURCE: JWA Site Investigations; Near Map 2010 Aerial Photograph

SCALE: 1 : 2000 @ A4

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PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

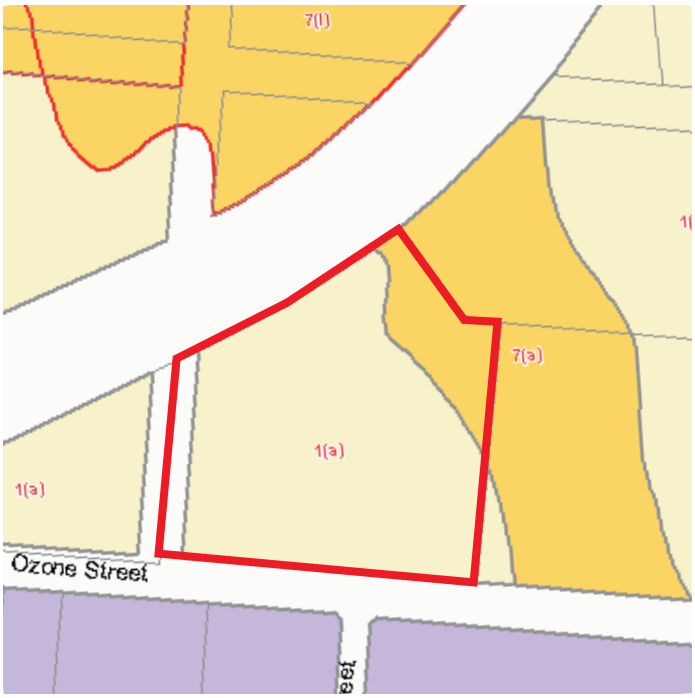
FIGURE 1

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Veg.cdr

TITLE

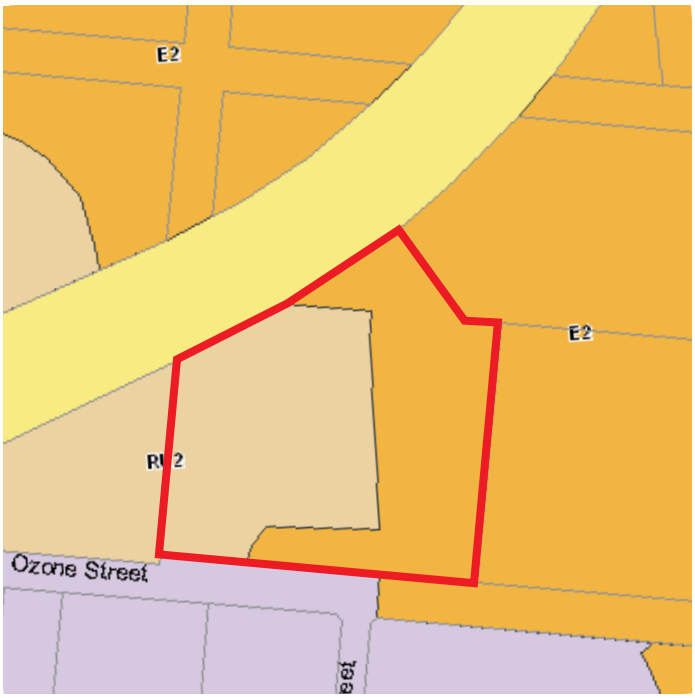
EXISTING SITE VEGETATION

CURRENT ZONINGS - TWEED LOCAL ENVIRONMENTAL PLAN 2000



Legend
- 1(a) Rural
- 7(a) Environmental Protection (Wetland and Littoral Rainforests)
- Subject Site

PROPOSED ZONINGS - TWEED LOCAL ENVIRONMENTAL PLAN 2010



Legend
- RU2 Rural Landscape
- E2 Environmental Conservation
- Subject Site

N

0 150m

SOURCE: Tweed Shire Council website 24.06.10 SCALE: 1 : 5000 @ A4 JWA PTY LTD Ecological Consultants	CLIENT BP Australia Limited PROJECT Lot 1 DP 1127741 1 Ozone Street, Chinderah, NSW Shire of Tweed	**FIGURE 2** PREPARED: BW DATE: 10 December 2013 FILE: 05023_LEP.cdr	TITLE **CURRENT & PROPOSED LANDUSE ZONES**

Tree No.	DBH (mm)	Retained
1	300	No
2	300	No
3	400	No
4	450	No
5	350	No
6	350	No
7	400	No
8	500	Yes
9	300	No
10	700	Yes
11	500	Yes
12	850	No
13	550	No
14	600	No
15	400	No
16	500	Yes
17	450	No
18	600	No
19	400	No
20	500	No
21	550	No
22	450	No
23	500	No
24	550	No
25	500	No
26	450	No

Tree No.	DBH (mm)	Retained
27	600	No
28	600	No
29	500	No
30	500	No
31	500	No
32	700	No
33	400	No
34	700	Yes
35	400	Yes
36	550	No
37	550	No
38	500	No
39	450	No
40	350	No
41	650	No
42	600	No
43	550	No
44	650	No
45	800	No
46	400	No
47	500	No
48	500	No
49	500	No
50	300	No
51	400	No

LEGEND

- *Acacia disparrima*
- *Lophostemon confertus*
- *Corymbia intermedia*
- *Lophostemon sauveolens*
- EEC - Swamp Sclerophyll Forest
- 10m APZ
- Vegetated Buffer Zone to EEC
- Extent of Tree Survey (16.09.13)
- Site Outline

N

ENVIROMENTALLY PROTECTEDFLORA WITH20mBUFFER

SERVICESTATION EXTENSION (33NEWTRUCK PARKINGBAYS)

NEWTRUCK REFUELLINGCANOPY EXTENSION

EXISTINGCAR REFUELLINGCANOPY

EXISTINGTRUCK REFUELLINGCANOPY

EXISTING SERVICESTATION

EXISTINGSTAFF CARPARKING

ENTRY

RELOCATED VENTS

RELOCATED FIRE HYDRANTS

RAMP/STAIR ACCESSFROM TRUCK PARKINGTO MAINSITE

600m²DETENTIONAREA (22FFICABLE).

300m²BIOFILTRATIONBASIN.KERB TOEDGEOFBASIN1.5mOP TRAFIC

RAISED PEDESTRIAN CROSSING

TRANSFORMER

PROPOSEDVEHICLE ENTRYFORSTAGE2

KINGSCLIFF OFF RAMP PACIFIC HIGHWAY

EXITTOPACIFIC HIGHWAY

ACCESS WITH CONSENT

CARAVAN PARKING

CAR PARKING

BUS DROP ZONE

LANDSCAPE

EASEMENT FOR SEWER MAIN (3 METRES WIDE)

(EMT) LP BOUNDARY

PROPOSEDLINEMARKING FORSTAGE2(TYP.)

PROPOSEDLANDSCAPINGFOR STAGE2(TYP.)

EASEMENT

PARKING - 2 COACHES

LP

0 25m

1 : 1 250

SOURCE: JWA Site Investigations; Cadway Projects (Ref: SK-05723-A004-1.pdf); NSW Dept. of LPI 2012 Aerial Photograph

SCALE: 1 : 1250 @ A3

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CLIENT
BP Australia Limited

PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 3

PREPARED: BW
DATE: 10 December 2013
FILE: N05023_Impact.cdr

TITLE
IMPACT OF PROPOSED DEVELOPMENT ON MATURE TREES & EEC

The NRM Unit classification is based on the TVMS (2004). It is noted that the methodology for determining this classification has not been detailed. It is mentioned (in the memorandum) that a "survey" was undertaken but whether this was a desktop review or included ground truthing/mapping is not stated.

JWA (2012) classified the vegetation in the western and southern portion of the site into three different structural units (refer to **FIGURE 1**). Further clarification of classification with respect to that used in the TVMS (2004) has been undertaken to show that the JWA (2012) vegetation mapping, whilst more detailed, is not dissimilar to that proposed by the NRM Unit:

- **Community 2** - Tall closed sclerophyll forest (*Lophostemon confertus*, *Corymbia intermedia*). In terms of the TVMS (2004) this would be included in the Sclerophyll Forests/Woodlands on Sand substrates and Alluvium category. Being dominated by *Lophostemon confertus* with a secondary occurrence of *Lophostemon suaveolens*; and *Banksia integrifolia*; as well as mid storey species of *Cupaniopsis anacardioides*; *Alphitonia excelsa*; *Bridelia exaltala*; and ground storey species of *Lomandra longifolia*; *Austromyrtus dulcis* and *Pteridium* sp., it would most likely fall into the Coastal Pink Bloodwood/Brush Box Open Forest to Woodland classification (Veg Code 302);

- **Community 3** - Low closed shrubland (*Acacia disparrima* +/- scattered trees). Due to the highly modified/disturbed nature of this community (as evidenced by aerial photography indicating clearing occurring in 2001 and 2007 and the presence of windrows) it could also be contended that this community could be classified as the highly modified/disturbed "Acacia/ Other Sclerophyll Regrowth Open Woodland" (Veg Code 1003); and

- **Community 5** - Mid-high regrowth (*Acacia disparrima* +/- *Lophostemon confertus*/*Lantana camara*/vine species). This area has also been disturbed (through repeated clearing); however, disturbance was of a lower intensity. The regrowth, whilst exhibiting edge effects and weed invasion could be classified as regenerating Coastal Brushbox Open Forest to Woodland (Veg Code 303).

To further clarify conclusions regarding the structural classification made in JWA (2012), a plot of all mature trees occurring within the proposed development footprint has been completed. The data collected included the location (mapped via GPS), species and the Diameter at Breast Height (DBH) of each tree. The tree plots (overlaid on a current high resolution aerial photograph) are shown on the attached **FIGURE 4.**

A mature tree density of fifty-one (51) in the mature tree survey area (2.1 hectares) equates to one (1) mature tree every 411m^2. The mature tree survey area covered mostly Communities 3 and 5. A mature Pink bloodwood or Brushbox tree, on average, could have a canopy spread of ten (10) metres i.e. one tree will cover approximately 75 square metres. In a normal Closed forest (70-100% canopy cover) it would be expected to find 280 mature trees (100%) and 196 for 70% cover. It would be expected to find 84 trees in this survey area where there was 30% cover. The survey area actually has 51 mature trees which equates to a Projected Foliage Cover (PFC) of 18%.

LEGEND

- *Acacia disparrima*
- *Lophostemon confertus*
- *Corymbia intermedia*
- *Lophostemon sauveolens*
- Extent of Tree Survey (16.09.13)
- Site Outline

N

Tree No.	DBH (mm)
1	300
2	300
3	400
4	450
5	350
6	350
7	400
8	500
9	300
10	700
11	500
12	850
13	550
14	600
15	400
16	500
17	450
18	600
19	400
20	500
21	550
22	450
23	500
24	550
25	500
26	450
27	600
28	600
29	500
30	500
31	500
32	700
33	400
34	700
35	400
36	550
37	550
38	500
39	450
40	350
41	650
42	600
43	550
44	650
45	800
46	400
47	500
48	500
49	500
50	300
51	400

0 25m

1 : 1 250

SOURCE: JWA Site Investigations; NSW Dept. of LPI 2012 Aerial Photograph

SCALE: 1 : 1250 @ A3

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PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 4

PREPARED: BW
DATE: 10 December 2013
FILE: N05023_Mature Trees.cdr

TITLE

MATURE TREES

The TVMS lists the Coastal Brushbox/Pink bloodwood community as an Open Forest. Specht (1970)[1] notes that this type of structure will have a 30-70% foliage cover. The Specht (1970) structural classification notes the PFC's of less than 30% can either be termed Woodland or Tall Shrubland. The low density of these trees and the prevalence of shrubby weeds and *Acacia disparrima* regrowth are consistent with the structural description of "Low closed shrubland (*Acacia disparrima* +/- scattered trees)" provided in the June 2012 Ecological Assessment. Furthermore, regardless of whether these are termed Woodland or Tall Shrubland, it is clear that they do not fit the structural criteria for description as the Coastal Brushbox/Pink bloodwood Open Forest to Open Woodland described in the TVMS (2004) and are more indicative of a modified/disturbed community.

The overlay of the tree plots on the proposed development shows that there will be a loss of forty-four (44) mature trees (mostly Pink bloodwoods) from the development footprint. The majority of the vegetation along the southern boundary, considered to have high ecological value (by the NRM Unit) would be retained based on the current development footprint (refer to **FIGURE 3**). The loss of these trees is not seen as a loss of Coastal Brushbox/Pink bloodwood community and therefore is not seen as significant in a local or regional sense.

2.2 Koala Activity and Assessment

The Tweed Coast Koala Habitat Study (January 2011) lists the eastern portion, the southern fringe and the south-western corner of the site as being Secondary (A) habitat (**FIGURE 5**). That is:

> *Areas of forest and/or woodland wherein primary food tree species are present but not dominant or co-dominant and usually (but not always) growing in association with one or more secondary food tree species.*

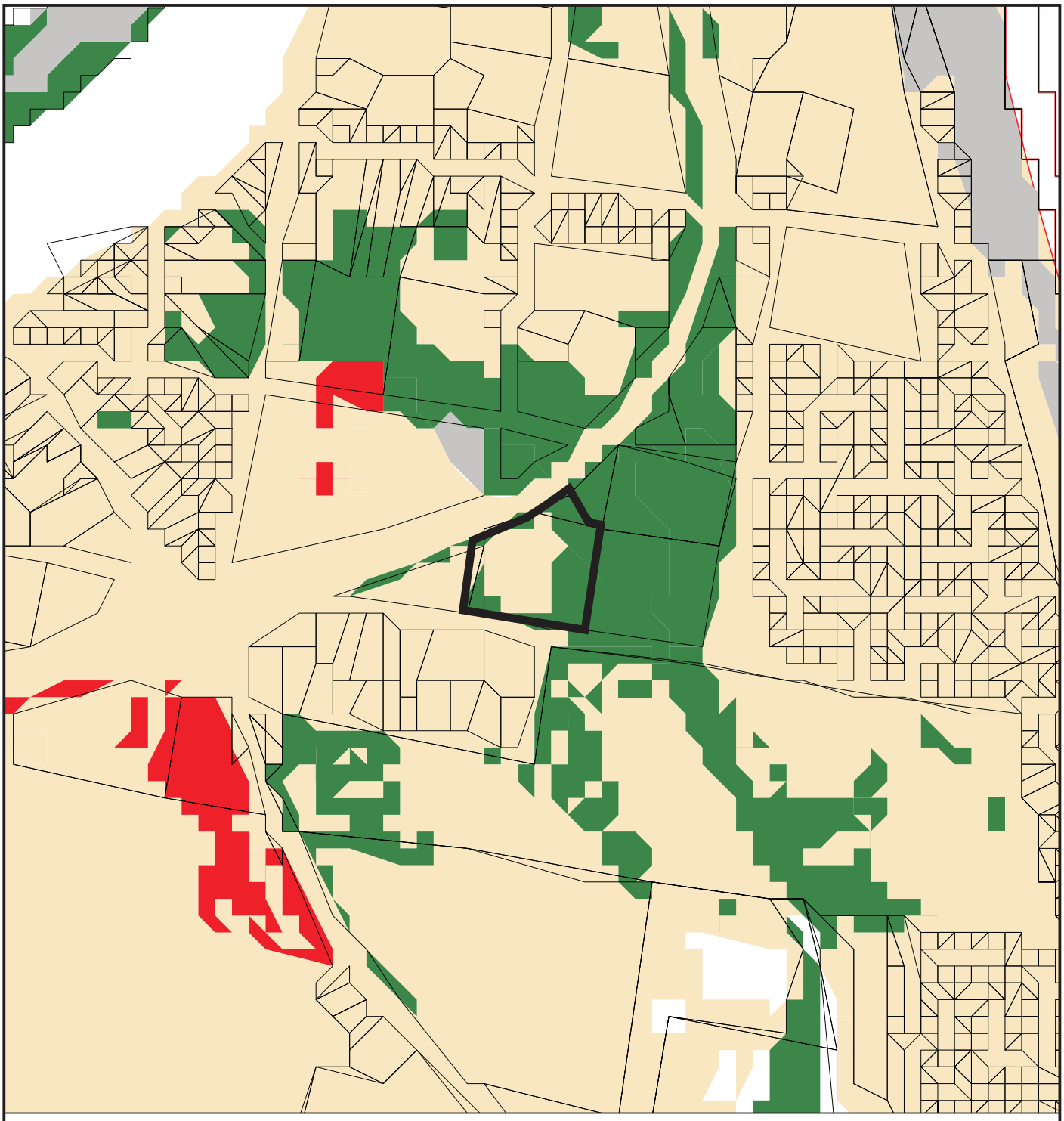
In comparing Appendix II of the Koala Habitat categories against actual site conditions, it indicates that:

Vegetation Code 104 (Community 1) - is categorised as "O" for other;
Vegetation Code 302 (Community 2) - is categorised as "O" for other;
Vegetation Code 303 (Community 5) - is categorised as "2A" for Secondary (A); and
Vegetation Code 1003 (Community 3) - is categorised as "O" for other.

Given the lack of Primary Koala Food Trees (PKFTs) at the site (Swamp mahogany; Forest red gum; Tallowwood and Grey gum); the already fragmented nature of Secondary (A) habitat; and lack of visual evidence for recent Koala activity it is unlikely that vegetation at the site would form a suitable home range for a viable population.

In any event, approximately 95% of the area indicated as Secondary (A) habitat in the study would be retained within the buffered EEC. **FIGURE 6** shows an overlay of the mapped Koala habitat on the proposed development.

[1] Specht R.L. (1970) Vegetation. In: The Australian Environment. 4th edition, ed. G.W. Leeper, pp. 44–67, CSIRO-Melbourne Univ. Press, Melbourne.



Legend
- Primary Habitat
- Secondary (A) Habitat
- Secondary (B) Habitat
- Other
- Unknown
- Subject Site

N

0 300m

SOURCE: Biolink (Jan 2011) Tweed Coast Koala Habitat Study - Figure 4.5 Potential Koala Habitat Map
SCALE: 1 : 10 000 @ A4

JWA PTY LTD
Ecological Consultants

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BP Australia Limited

PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 5

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Koala.cdr

TITLE

POTENTIAL KOALA HABITAT MAP

LEGEND
- Secondary (A) Habitat
- Other
- Unknown
- Subject Site

N

ENVIROMENTALLY PROTECTEDFLORA WITH20mBUFFER

EEC

DRAINAGE CORRIDOR

20METRE BUFFERTOEEC

SERVICESTATION EXTENSION (33NEWTRUCK PARKINGBAYS)

ENTRY

EXISTINGSTAFF CARPARKING

RELOCATED VENTS

RELOCATED FILLPOINTS

RAMP/STAIR ACESSFROM TRUCK PARKINGTO MAINSITE

LPG

600m²DETENTIONAREA (TRAFFICABLE).

300m²BIORETENTIONBASIN.KERB TOEDGEOFBASINTOSTOP TRAFIC

RAISED PEDESTRIAN CROSSING

ENVIRONMENTALPROTECTEDAREA (SIGNIFICANTNATURALVEGETATION ANDWILDLIFEHABITAT)

KINGSCLIFF OFF RAMP PACIFIC HIGHWAY

EXISTINGCAR REFUELLINGCANOPY

NEWTRUCK REFUELLINGCANOPY EXTENSION

EXISTINGTRUCK REFUELLINGCANOPY

CAR PARKING

EXITTOPACIFIC HIGHWAY

CARAVAN PARKING

CAR PARKING

CAR PARKING

LR

EXISTING SERVICESTATION

PARKING - 2 COACHES

LR

ACCESS WITH CONSENT

TTOTWEED AST

BUS DROP ZONE

LANDSCAPE

LANDSCAPE

EASEMENT FOR SEWER MAIN (3 METRES WIDE)

LP

(BMT)

LP

BOUNDARY

PROPOSEDLINEMARKING FORSTAGE2(TYP.)

PROPOSEDLANDSCAPINGFOR STAGE2(TYP.)

EASEMENT

TRANSFORMER

ENTRY

PROPOSEDVEHICLE ENTRYFORSTAGE2

EXISTING OVERLAND FLOW PATH TO BE MAINTAINED

EASEMENT FOR NEXT LOT ACCESS

1

2

0 25m

1 : 1 250

SOURCE: Cadway Projects (Ref: SK-05723-A004-1.pdf) Biolink (Jan 2011) Tweed Coast Koala Habitat Study - Figure 4.5 Potential Koala Habitat Map

SCALE: 1 : 1250 @ A3

JWA PTY LTD
Ecological Consultants

CLIENT
BP Australia Limited

PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 6

PREPARED: BW
DATE: 11 December 2013
FILE: N05023_Impact Koala.cdr

TITLE
IMPACT OF PROPOSED DEVELOPMENT ON KOALA HABITAT

2.3 Basis for Analysis of constraints contained in the JWA (2012) Ecological Assessment

The Council's memo concedes that "vegetation within the development footprint is not considered an EEC" but contends that it does have high ecological value, challenging the JWA (2012) ecological constraints analysis.

The Tweed NRM unit report quotes from the JWA (2012) Ecological Assessment. It should be noted that all of the comments attributed to the JWA (2012) report relate to the eastern portion of the site i.e. the portion of the site containing the Endangered Ecological Community "Lowland Rainforest on Floodplain/Swamp Sclerophyll Floodplain Forest". JWA comments such as, "The site provides a high diversity and abundance of fruiting species", obviously relate to the areas of the site containing rainforest (fruit producing) plants. The middle and western portions of the site are characterised by eucalypt (and allied species) species that do not produce fruit.

A number of inconsistencies between government agency constraints mapping and existing site conditions have been identified during the recent review. The following plans: **FIGURES 1, 7, 8, 9 and 10** depict mapping and assessment results for the study site that were subject to this review.

FIGURE 5 of the JWA report shows the distribution of vegetation communities on the site. The distribution of the EEC Lowland Rainforest on Floodplain/Swamp Sclerophyll Floodplain Forest (Community 1) and Pink bloodwood/Brushbox forest (Community 2) is consistent with the landuse zones as both communities exist within the area of the site outside of the development footprint.

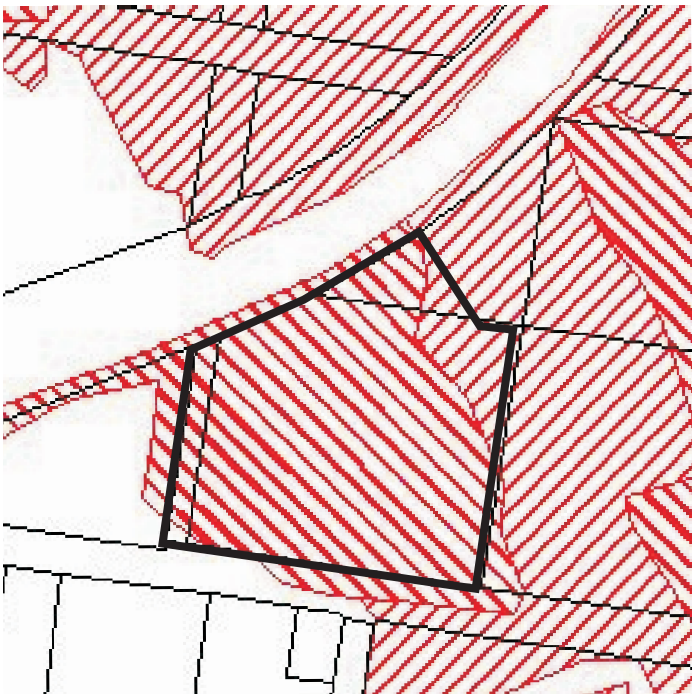
FIGURE 7 of the JWA report shows the TVMS Maps (2004) for Ecological Status and Ecological Sensitivity. The development footprint is denoted as having high status and moderate sensitivity. **FIGURE 8** of the JWA report shows the site as Bushland on the Tweed LEP (2000) Amendment No.21 Catchment Management Map. These maps are not accurate. Reference to the JWA vegetation mapping and the proposed zoning maps shows that the extent of significant value vegetation is significantly underestimated in the TVMS Ecological Status and Sensitivity plans and over-estimated in the Catchment Management Map. Additionally, the TVMS plans were produced prior to subsequent clearing in the middle and western portions of the site. The clearing that occurred in the central and western portion of the site occurred in 2001, three years prior to the 2004 TVMS mapping. The TVMS mapping failed to recognise the clearing.

Furthermore, a review of historical aerial photography indicate that the western two-thirds of the site had been cleared at some time prior to 1947 with the 1947 aerial photograph showing some shrubby regrowth in this area. The 1962 photograph showed that further clearing or maintenance of the cleared area had continued. In 1972 the western one-third of the site had been entirely cleared with the remainder of the site allowed to sucker. The 1987 photograph showed that the canopy of the western two-thirds of the site had been thinned. Records indicate that the western two-thirds of the site were cleared again in 2001 with the 2004 aerial photograph verifying that some mature trees remained but the majority of the site remained cleared. The site was again maintained in 2007 with undergrowth cleared, the 2010 aerial photography plainly showing the extent of clearing. Repeated clearing over a 60 year period has led to the

TWEED VEGETATION MANAGEMENT STRATEGY MAP 4 ECOLOGICAL STATUS

Legend
1. Very High
2. High
3. Medium
Subject Site

TWEED VEGETATION MANAGEMENT STRATEGY MAP 4 ECOLOGICAL SENSITIVITY



Legend
1. High
2. Moderate
Subject Site

N

0 150m

SOURCE: Tweed Vegetation Management Strategy 2004 Map 4 (CD & Council emails)

SCALE: 1 : 5000 @ A4

JWA PTY LTD
Ecological Consultants

CLIENT
BP Australia Limited

PROJECT
Response to TSC Letter 09/04/13
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 7

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Strat Map 4.cdr

TITLE

TWEED SHIRE ECOLOGICAL VALUES

Legend

- Water Sub-Catchment Boundaries
- Bushland
- Non-Bushland
- Drainage Lines and Open Water
- Subject Site

N

0 150m

SOURCE: Draft Tweed LEP (2000) Amendment No. 21 Catchment Management Map

SCALE: 1 : 5000 @ A4

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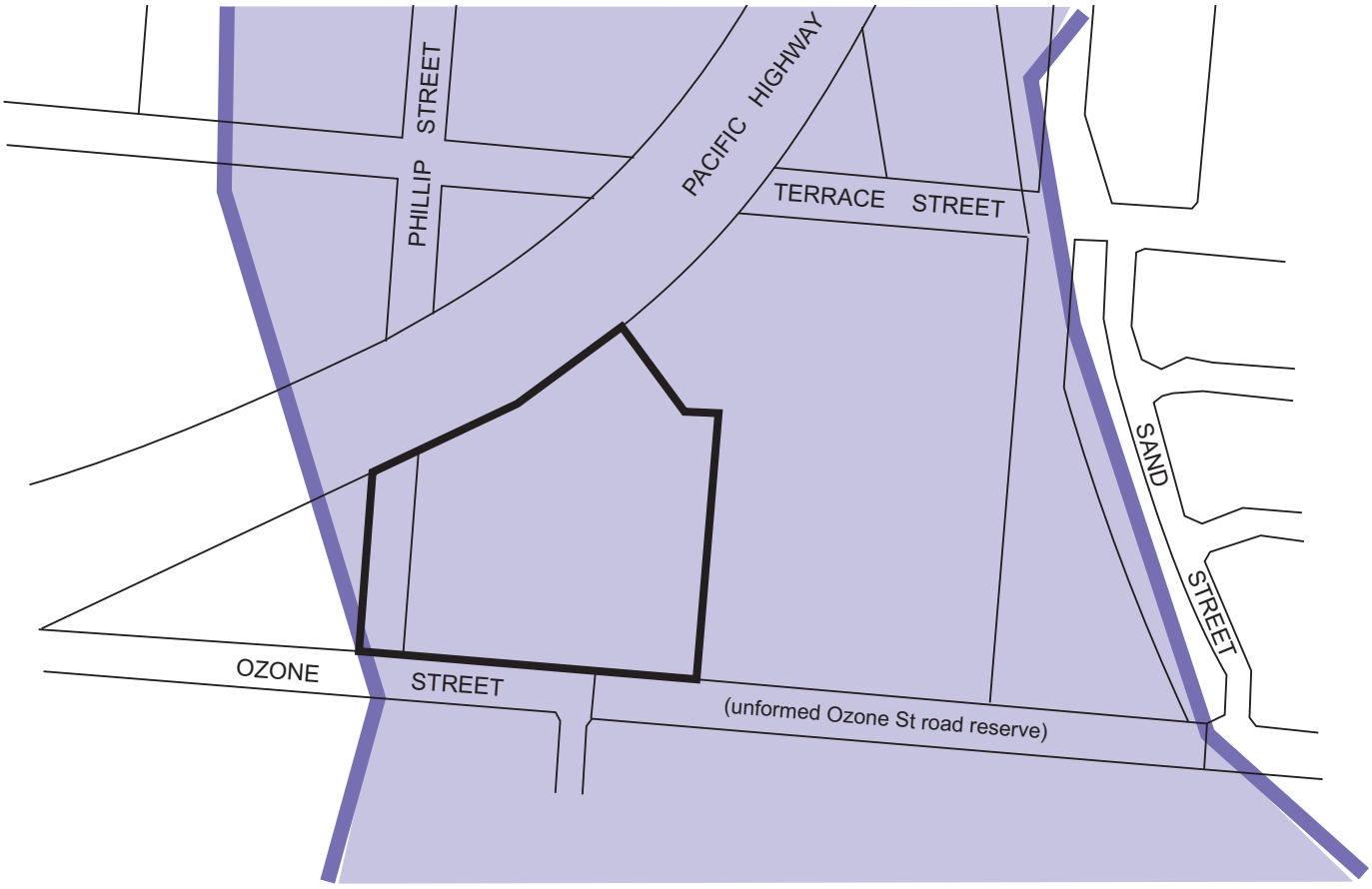
Shire of Tweed

FIGURE 8

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Catchment.cdr

TITLE

CATCHMENT MANAGEMENT MAP



Legend

Priorities for Potential Habitat Areas (Non-bushland)

Key Habitat Linkages - NPWS Regional Corridor

Subject Site

N

0 150m

SOURCE: Tweed Vegetation Management Strategy Map 7

SCALE: 1 : 5000 @ A4

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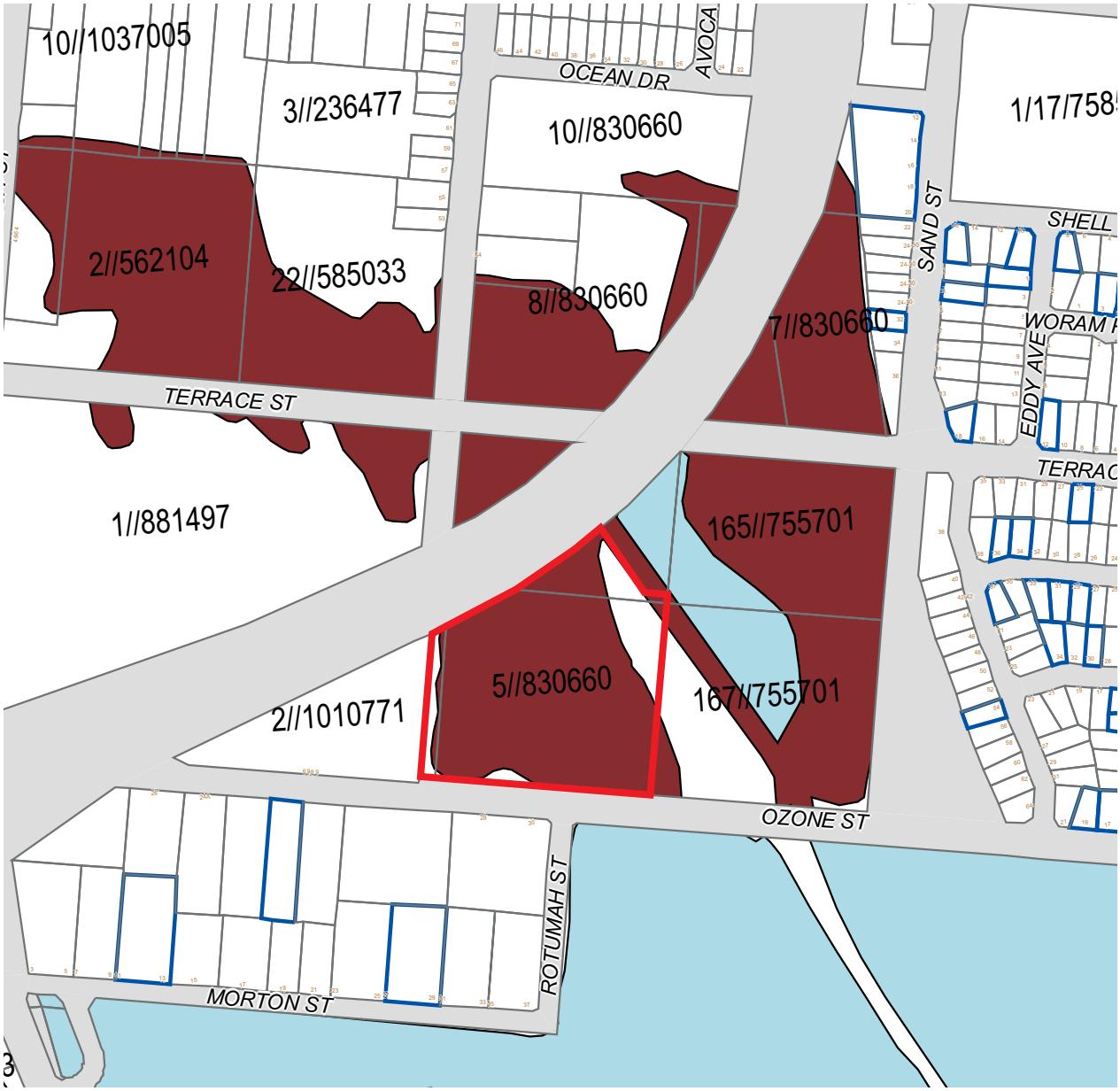
Shire of Tweed

FIGURE 9

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Corridors.cdr

TITLE

NPWS REGIONAL CORRIDORS



SOURCE: Tweed Shire Council SCALE: 1 : 6000 @ A4 JWA PTY LTD Ecological Consultants	CLIENT BP Australia Limited PROJECT Lot 1 DP 1127741 1 Ozone Street, Chinderah, NSW Shire of Tweed	**FIGURE 10** PREPARED: BW DATE: 10 December 2013 FILE: 05023_Wetland 372.cdr	TITLE **COMPREHENSIVE COASTAL AGREEMENT WETLAND No. 372**

highly modified/disturbed habitat that currently exists in the western portion of the site. Aerial photographs have been attached as **APPENDIX 1**.

FIGURE 9 shows the site as occurring within a mapped NPWS regional corridor. This corridor of regional significance is based on mapping completed prior to the clearing in 2001. This mapping was based on "The Key Habitats and Corridors Project" (DEC; Scotts *et al*. 2000).

FIGURE 8 shows the site as Bushland in a Catchment Management Map. This map was produced in 2000 i.e. one (1) year prior to the removal of most of the vegetation from the middle and western portion of the site.

FIGURE 10 shows the site as dominated by a wetland (No. 372). The vegetation assessment shows potential wetland (Lowland Rainforest on Floodplain/Swamp Sclerophyll Floodplain Forest) as occurring only in the far eastern portion of the site, which has also been agreed by Council.

As can be seen, a desktop study of the ecological sensitivity and status of the site gives conflicting information in itself and is not reflective of actual site conditions, in some cases underestimating ecological significance of the eastern portion of the site and over estimating the significance of the western portion of the site. The constraints analysis and mapping completed by JWA (2012) has been amended to show the area containing a small portion of the *Acronychia littoralis* population in the far north of the site as being of high constraint. A small area of native vegetation along the southern boundary has been elevated to moderate constraint. **FIGURE 11** shows the amended constraints plan. This plan has been based on actual site conditions rather than relying on desktop information.

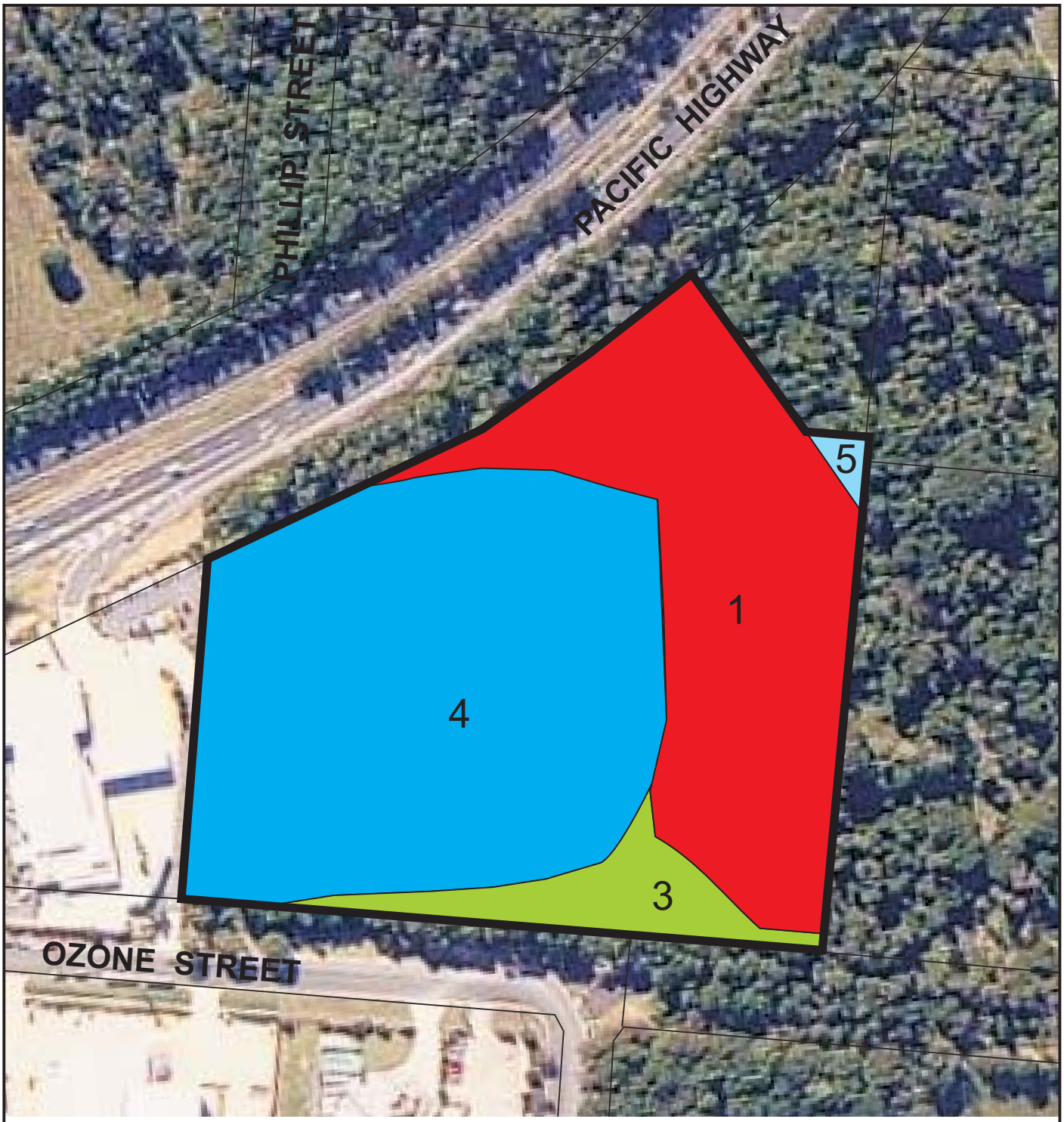
2.4 Analysis of site ecological elements based on existing site conditions

Council have indicated that they disagree with the constraints mapping (**FIGURE 10**) contained in the JWA ecological assessment. It should be noted that comments in the 2012 Ecological Assessment relating to:

"The variety of habitats present in the Study area is likely to result in a high diversity of resident and nomadic birds occurring in the site over the year. The site provides a high diversity and abundance of fruiting species. The Subject site and adjacent areas of vegetation represent high quality habitat for frugivorous birds."

"However, the Study area may represent important forage habitat for hollow-dependent avifauna breeding in forests in the locality."

"The Study area is likely to provide forage habitat for a relatively high diversity and abundance of insectivorous bats, due to the combination of open, forested and denser areas of vegetation. The site provides a relatively high diversity and abundance of fruiting species and represents moderate quality foraging habitat for frugivorous bats."



Legend

1	High Constraint
2	Moderate - high Constraint (N/A)
3	Moderate Constraint
4	Low - moderate Constraint
5	Low Constraint
	Subject Site

N

0 50m

SOURCE: JWA Site Investigations; Near Map 2010 Aerial Photograph

SCALE: 1 : 2000 @ A4

JWA PTY LTD
Ecological Consultants

CLIENT
BP Australia Limited

PROJECT
Lot 1 DP 1127741
1 Ozone Street, Chinderah, NSW
Shire of Tweed

FIGURE 11

PREPARED: BW
DATE: 10 December 2013
FILE: 05023_Constraints.cdr

TITLE

ECOLOGICAL CONSTRAINTS ANALYSIS

A review of the species comprising each of the plant communities confirms that fruiting species predominantly occur in the eastern portion of the site.

These comments were directed to the eastern portion of the subject site. Obviously, the previously cleared areas on the site cannot possibly have the same high values as the eastern (EEC) portion of the site.

The following analysis has been completed based on the actual site conditions rather than the constraints mapping provided by government agencies. JWA have utilised a detailed set of criteria to assess the level of ecological constraint for each discrete habitat (vegetation unit) occurring on the site.

Environmental attributes assigned to each category are shown in **TABLE 1.**

TABLE 1
KEY TO CONSTRAINTS ANALYSIS

Category	Environmental attributes
High	• World Heritage Areas • RAMSAR Wetlands • Endangered species or endangered species habitat (Commonwealth & State) • Land zoned Environmental Protection (LEPs) • Endangered populations (Commonwealth & State) • Critical habitat (State) • Endangered Ecological Communities (State)
Moderate-High	• SEPP No. 14 Coastal Wetlands* • SEPP No. 26 Littoral Rainforests* • Areas containing habitat for a Vulnerable species (Commonwealth & State) • Endangered Vegetation communities (CRA/RVMP)**/*** • Primary Koala habitat identified in any Koala Plan of Management
Moderate	• Vulnerable and Rare vegetation communities (CRA/RVMP) • Flora/fauna species or populations of regional significance (ROTAP****and NRAC*****) • Significant areas of habitat for Rare species (Commonwealth and State). • Secondary Koala habitat identified in any Koala Plan of Management • Wildlife corridors of regional importance
Low-Moderate	• Common native vegetation communities. • Wildlife corridors of local significance
Low	• Exotic vegetation • Cleared areas • Highly disturbed native vegetation
*SEPP **CRA ***RVMP ****ROTAP *****NRAC	• State Environmental Planning Policy • Comprehensive Regional Assessment as part of the Regional Forestry Agreement process (1999) • Regional Vegetation Management Plan • Rare or Threatened Australian Plants (Briggs and Leigh 1999) • Northern Region Audit Council (1995)

Utilising the criteria in **TABLE 1** the development site (excluding the eastern portion of the site and the clumps of Scented acronychia along the northern boundary of the site) contains the following elements and their true relevant ranking:

1. A regionally uncommon vegetation community (Coastal pink bloodwood/Brushbox) – Moderate;
2. Common native vegetation (*Acacia disparrima*) – Low to Moderate;
3. High density of exotic vegetation (Lantana, Winter senna and *Passiflora* spp. – Low;
4. A mapped corridor of regional significance based on mapping completed prior to the clearing in 2001. This mapping was based on "The Key Habitats and Corridors Project" (DEC; Scotts *et al*. 2000). Low – Moderate;
5. No endangered or otherwise significant plant species to be lost- Low;
6. No Endangered Ecological Communities (EEC) – Low;
7. No wetlands – Low;
8. Contains Secondary Koala habitat (Pink bloodwood). Koalas known from the area – Moderate;
9. Habitat for other threatened fauna e.g. Grey-headed flying fox – Low – Moderate;
10. Small areas of more intact vegetation along the western and southern boundaries (Community 5) – Moderate.

Overall, it is considered that the ranking provided in **FIGURE 11** (Ecological Constraints) of the JWA report for the proposed development envelope (Communities 3 and 5) i.e. Low – Moderate is correct. It is considered that the areas of more intact vegetation, particularly along the southern boundary, have elevated conservation value i.e. moderate if viewed in isolation. However, the majority of this area (southern boundary) is also outside of the development footprint (occurring in the ecological buffer zone). A revised representation of **FIGURE 11** is provided to illustrate this.

3 CONCLUSIONS

JWA Pty Ltd has assessed the concerns raised by Tweed Shire Council in their letter (dated 9 April 2013). It has been recognised that inconsistencies between government agency constraints mapping and existing site conditions have led to a misrepresentation of the ecological values of the site.

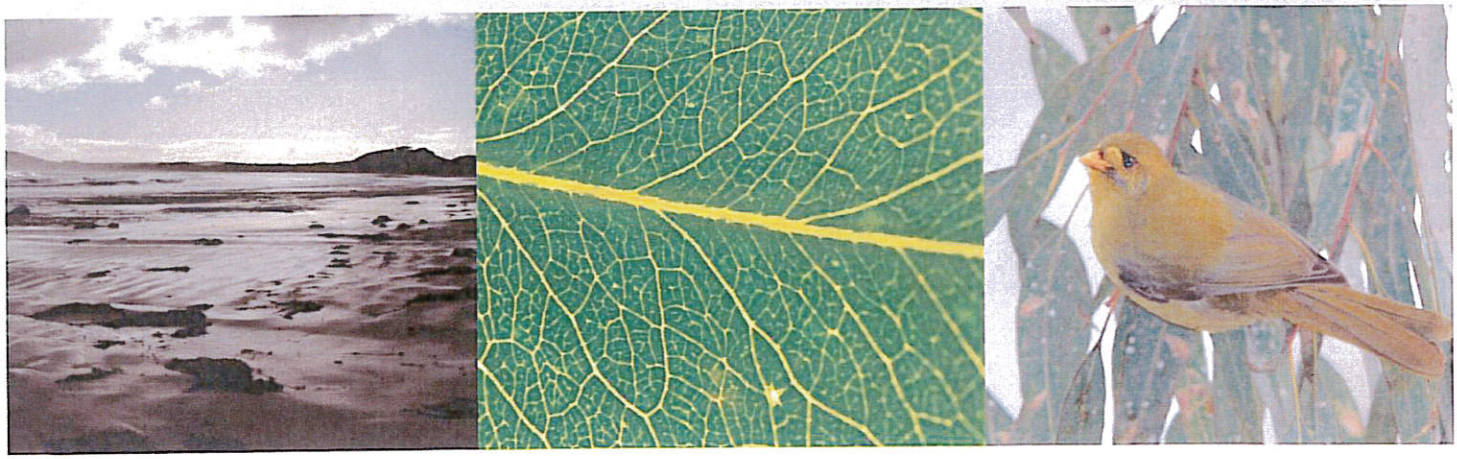
The Proposed development has been designed to utilise areas of the subject site that have a long history (at least 60 years) of modification and disturbance and is unlikely to contribute significantly to an increase in the fragmentation of native vegetation communities. All areas of high ecological constraint on, and adjacent to the site, including the Endangered Ecological Community (EEC) and the population of Endangered Scented acronychia, will be retained and adequately buffered (at least 20m) by dense plantings of appropriate native species. This represents approximately 45% of the site that will remain undisturbed or be replanted.

Approximately 95% of the area indicated as Secondary (A) habitat in the January 2011 Tweed Coast Koala Habitat Mapping, would be retained within the buffered EEC.

Furthermore, the ability of the eastern portion of the site, which contains the dense old growth habitat most likely to contain hollows and fissures, to continue to operate as an effective corridor will not be compromised. It is considered that the loss of forty-four (44) mature trees as a result of the proposed development does not represent a significant impact in a local or regional context.

APPENDIX 1 – AERIAL PHOTOGRAPHS

environmental, engineering & remediation
practical solutions

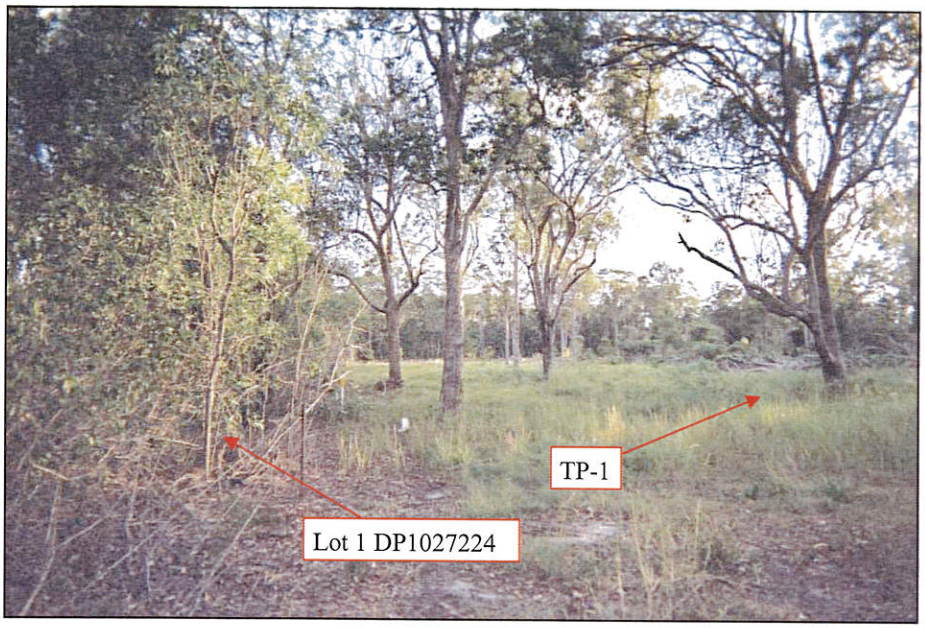


Environmental Site Assessment

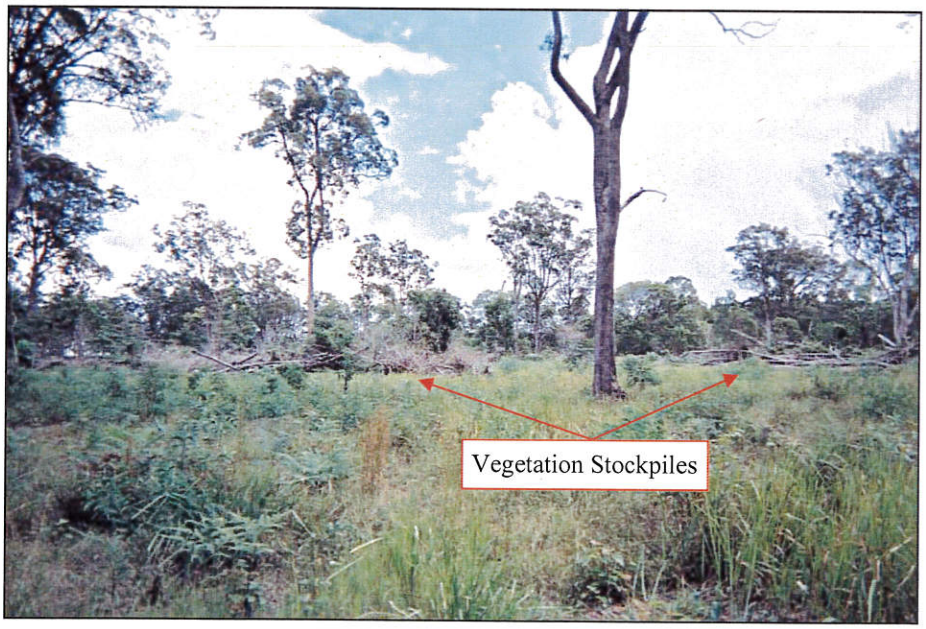
Location
Greenfield Site
Ozone Street
CHINDERAH NSW 2487
(Lot 1 on DP 1027224, Lots 4 & 5 on DP 830660)

Prepared for
BP Australia Pty Ltd
701 Kingsford Smith Drive
WHINSTANES QLD 4007

Date Prepared
26 April 2007



Photograph 01
A view facing north, taken on the south-western corner of Lot 5. The Lot 1 easement can be seen on the left side of the photograph. The location of TP-1 has been indicated.



Photograph 02
A view facing south of the western portion of the investigation area. The location of the two stockpiles of cleared vegetation has been indicated.

To see all the details that are visible on the screen, use the "Print" link next to the map.

Google

Aerial Photography 2010

Aerial Photography 2004

Aerial Photography 1994

Aerial Photography 1987

Aerial Photography 1972

1962

Aerial Photography 1962

Aerial Photography 1947

bp

BP Australia Pty Ltd
ABN 53 004 085 616
572 Curtin Avenue (East)
Eagle Farm QLD 4009

Postal: PO Box 718 Hamilton 4007

17th January 2014

Tweed Shire Council
Attention: Seth Philbrook
TSC Development Assessment Planner
PO Box 816
Murwillumbah NSW 2484

By Email: sphilbrook@tweed.nsw.gov.au

Direct: +617 3364 7103
Main: +617 3364 7111
Mobile: +61 434 073636
Fax: +617 3364 7102
scott.clark@bp.com

Dear Seth,

Ref: DA 10/0737 – BP Chinderah proposed alterations to existing highway service centre and expansion at Lot 1 DP 1127741 & Lot 2 DP 1010771

With reference to the correspondence received from the Tweed Shire Council dated 9th April 2013, for which BP's proposed development is deemed to be unsuitable due to ecological constraints.

In response, BP urgently met with council and commissioned a review of the original James Warran & Associates (JWA) Ecological Assessment submitted to council.

The following key findings are summarised as such –

* Inconsistencies between government agency constraints mapping and existing site conditions have led to a misrepresentation of the ecological values of the site.

* The Proposed development has been designed to utilise areas of the subject site that have a long history (at least 60 years) of modification and disturbance and is unlikely to contribute significantly to an increase in the fragmentation of native vegetation communities.

* All areas of high ecological constraint on, and adjacent to the site, including the Endangered Ecological Community (EEC) and the population of Endangered plant species will be retained and adequately buffered (at least 20m) by dense native planting, approximately 45% of the site that will remain undisturbed or be replanted.

* Approximately 95% of the area indicated as Secondary (A) habitat in the January 2011 Tweed Coast Koala Habitat Mapping, would be retained within the buffered EEC.

* The 'high ecological value' eastern corridor will not be compromised by the proposed development.

BP's Position

In consideration of this advice, BP has not resiled from its initially proposed development footprint and truck parking design.

To this point, BP has openly engaged with council in response to design consideration and site development constraints, such as regional/local flood mitigation, subsequently amending design and finished site level of the truck parking at considerable expense and project delay.

BP trusts the attached JWA Ecological assessment and detail survey provides further detail for your consideration in respect of this application.

Attached is the additional ecological assessment as requested.

Yours Faithfully

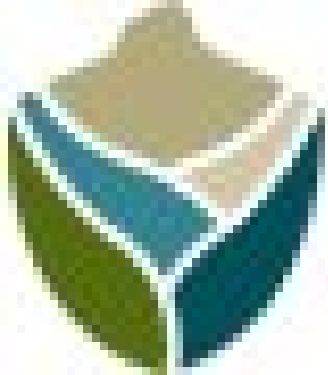
BP Australia Pty Ltd

Conveience Retail Operations

Scott Clark

Network Development Manager - QLD

BP Australia Pty Ltd
572 Curtin Aveue (east)
Eagle Farm QLD 4009



TWEED

SHIRE COUNCIL