2 October 2014

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REVIEW OF ECOLOGICAL ASSESSMENT BY JAMES WARREN & ASSOCIATES FOR A PROPOSED EXPANSION OF BP AUSTRALIA SITE AT CHINDERAH: LOT 1 DP 1127741 AND LOT 2 DP 1010771

Dear John,

This letter provides our review of an ecological assessment ("the Ecological Assessment") by James Warren and Associates (2012), of Lot 1 in DP 1127741 ("the Subject Site"). The Ecological Assessment was prepared for a development application (DA) and planning proposal (the Proposal) for the expansion of an existing BP Service Station (Lot 2 in DP 1010771), to allow for truck parking and associated infrastructure, including drainage works, within the vacant Lot 1 DP 1127741.

The focus of our review was on the mapped vegetation of the subject site, its values for native flora and fauna, and whether or not the proposed conservation outcomes are adequate to offset the impacts of the Proposal.

In addition to the review, we provide some options to respond to the concerns raised by Tweed Shire Council regarding the ecological constraints of the Subject Site. These options were discussed with the Council on 5 August 2014, and will be presented to them for consideration in due course.

Appendix A to this letter provides a summary of the findings of our peer review of the Ecological Assessment and the site inspection, and also advises on the modification of the Proposal to facilitate a better environmental outcome. It is our opinion that the onsite offsets being provided as part of the proposal, with or without a minor modification to the Proposal (as set out in this letter) would result in an acceptable environmental outcome on the site.

Appendix B to this letter provides the Draft Development Layout Options (**Options**) prepared by Cadway Projects.

Appendix C to this letter provides the Asset Protection Zone Drawings prepared by Bushfiresafe (Aust).

Yours sincerely

Dr David Robertson
Director
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Appendix A

Vegetation Assessment and Options

A.1 Purpose

The purpose of this letter report is to provide a review of an Ecology Assessment of Lot 1 in DP 1127741 ("the Subject Site") prepared by James Warren & Associates (2012) and to provide advice to BP to progress a development application (DA) and planning proposal (the Proposal) in relation to the Subject Site.

A.2 Background

In 2010, BP lodged a combined DA/planning proposal application to Tweed Shire Council. The DA component of the Proposal seeks to:

- Provide 36 new truck parking bays to the east of the existing highway service centre;
- Provide two new diesel refuelling points;
- Expand the truck refuelling canopy; and
- Replace the existing truck parking area with additional car parking spaces and a bus drop off area.

The planning proposal component seeks an amendment to the *Tweed Local Environmental Plan 2000* by:

- Redefining the boundary between the 1(a) Rural zone and the 7(a) Environmental Protection (Wetlands and Littoral Rainforests) zone; and
- Providing a site specific clause to enable the land zoned 1(a) Rural to be used as a highway service centre.

In support of the Proposal, an Ecological Assessment was prepared by James Warren and Associates dated September 2010. A second Ecological Assessment report was prepared in response to Council's request for additional information, dated June 2012. The 2012 Ecological Assessment concluded that the vegetation proposed for clearance was of low conservation value (being largely comprised of "Acacia regrowth") and that an adequate conservation outcome could be achieved via the maintenance and enhanced management of forest along the eastern and southern boundaries of the site.

In April 2013, Council wrote to BP to advise that the Proposal would not be approved in its current form because Council environmental officers consider:

- the vegetation identified for clearing has higher integrity, diversity and conservation values than shown in the Ecological Assessment; and
- the Proposal would be likely to have a significant impact on:

- the "candidate" endangered ecological communities (EEC's) that cover much of the site; and
- an endangered plant species on the site, *Acronychia littoralis* (Scented Acronychia).

Cumberland Ecology has conducted a preliminary peer review of the Ecological Assessment, and of the Council feedback about the Ecological Assessment. The peer review noted that the Ecological Assessment lacked a flora species list, photographs of the vegetation communities and descriptions of the ecological communities with consideration of the soil types present. To progress and refine the review of the Ecological Assessment, ecologists Dr David Robertson and Vanessa Orsborn visited the Subject Site on the 22nd of July 2014. During the site inspection, notes were taken regarding the vegetation structure, dominant species present and photographs were taken of each community type. The site inspection aimed at verifying the vegetation community types present on the site, but focused on the areas proposed for removal, rather than the areas to be conserved under the proposed 7(a) zoning. Particular attention was paid to the area mapped as "Acacia regrowth", which would be cleared if the project was approved.

Our findings are presented below:

A.3 Findings

A.3.1 Peer Review

The Ecological Assessment (James Warren and Associates, 2012) mapped vegetation on the five communities on the subject site:

- 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; and
- Community 5 - Mid-high regrowth (*Acacia disparrima* +/- *Lophostemon confertus* / *Lantana camara* / vine species).

Community 1 is described by James Warren & Associates (2012) as being consistent with Swamp Sclerophyll Forest on Coastal Floodplains endangered ecological community, as listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) and also has some affinities with Lowland Rainforest on Coastal Floodplains endangered ecological community, as listed under the TSC Act. Lowland Rainforest is also listed as a critically endangered ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act*

1999 (EPBC Act). Community 1 is proposed for retention and conservation under the Proposal. For ease of reference, ecological communities listed under the TSC Act and/or EPBC Act are collectively called 'threatened ecological communities' and abbreviated to TECs in this letter.

Communities 2, 3, 4 and 5 were described by the Ecological Assessment as being more disturbed and are not listed under the TSC Act or EPBC Act. Parts of these communities, particularly Community 3, would be cleared for the Proposal.

Two threatened flora species were also recorded by James Warren & Associates (2012):

- 86 *Acronychia littoralis* (Scented Acronychias) plants (listed as endangered under the TSC Act and EPBC Act), were recorded along the northern boundary of the site. These plants will be conserved under the Proposal within land zoned as E2.

- One *Cryptocarpa foetida* (Stinking Cryptocarpa) plant (listed as vulnerable under the TSC Act) was recorded to the east of the subject site, adjacent to land proposed for conservation. It would neither be cleared nor indirectly impacted by the Proposal.

Few threatened fauna species were identified during surveys, restricted to the Grey-headed Flying Fox (*Pteropus poliocephalus*), and also threatened microchiropteran bats, all of which are highly mobile. However, it was considered that complex fauna habitat features were generally lacking for the vast number of threatened species with potential to occur in the locality. This is due to the low density of hollow-bearing trees available for hollow-dependant species, lack of structure of vegetation on much of the Subject Site, particularly where the Proposal occurs, and also the presence of only secondary Koala (*Phascolarctos cinereus*) feed tree species and not primary feed trees.

A.3.2 Findings of the Site Inspection

Vegetation mapped by James Warren & Associates (2012) as Community 3 was not solely Acacia regrowth and contained a diversity of native understorey and mid-storey species, including regenerating eucalypts throughout, mainly *Corymbia intermedia* (Pink Bloodwood). Large mature scattered trees of *Corymbia intermedia* also occurred within areas mapped as Community 3.

A high proportion of the understorey was dominated by *Acacia disparrima*, as per the community name ascribed by James Warren & Associates (2012). However, the presence of regenerating eucalypts and the scattered mature trees indicates that this vegetation would naturally regenerate to Community 2, as shown in **Photograph 1,** if left undisturbed. It should therefore be classified as a degraded form of Community 2 - Tall closed sclerophyll forest (*Lophostemon confertus, Corymbia intermedia*). Similarly, Community 5 appears to be a modified form of Community 2, although the canopy dominance was more strongly influenced by *Lophostemon confertus* than in Community 3, as shown in **Photograph 2**.

Much of this central part of the Subject Site has been mapped by Tweed Shire Council (Ecograph 2004) as "Coastal Brush Box Open Forest to Woodland". The description of this forest type is similar to Community 2 described by James Warren & Associates (2012), although *Corymbia intermedia* is dominant on the Subject Site, rather than *Lophostemon confertus*

(Coastal Brush Box). Coastal Brush Box Open Forest to Woodland has been extensively cleared and has a restricted distribution within Tweed Shire local government area. It is understood that this is the reason that the Council considers that it has a high conservation value.

Photograph 1 **Vegetation in the centre of the site, mapped as Community 3 (James Warren and Associates, 2012)**

Photograph 2 **Vegetation at the southern perimeter of the site, mapped as Community 5 (James Warren and Associates, 2012)**

Inspection of Community 1 indicated that rainforest elements are present, with various vine species identified, as shown in **Photograph 3**. It was also observed during the site inspection that the soil present on the entire site consisted of sand. This was verified with Stephanie Williams (Soil Scientist for BP) onsite, and with reference to the soil logs provided by BP (Otek 2007), which show that Aeolian Sands are present, and no shale. For this reason, and the lack of evidence of flooding on the site, it is not believed that the site is on a floodplain. This indicates that the classification of Community 1, as conforming to Swamp Sclerophyll Forest on Coastal Floodplains TEC, may be incorrect.

Based on the site inspection by Cumberland Ecology, and from a review of available information, it is more likely that Community 1 is affiliated with Littoral Rainforest, which is listed as critically endangered under the TSC Act and EPBC Act. Littoral Rainforest is characterised as containing rainforest species, having a closed canopy (greater than 70% cover) and occurring on coastal headlands or hind-dunes (usually within 2km of the ocean) (NSW Scientific Committee 2004), which are applicable to the eastern side of the Subject Site, in parts. The area of vegetation considered to comprise elements of Littoral Rainforest is entirely within the eastern portion of the Subject Site, which will be conserved under the Proposal.

Photograph 3 Vegetation in the east of the site, mapped as Community 1 (James Warren & Associates, 2012)

A.3.3 Outcomes from the Meeting with Council

Outcomes from the meeting with Council, held at Tweed Shire Council office in Murwillumbah on 5 August 2014 included:

- The proponent is to investigate options for a modification in the building footprint to reduce the area of impact on native vegetation. In consideration of the requirements for truck turning circle space, and the minimum number of truck parking bays being feasible, several options for reduction were discussed and included;

  - Option 1: reduction in the area of vegetation removed from the southern boundary to minimise impacts on the more intact representative of Community 5, which contains a greater number of mature *Lophostemon confertus* and *Corymbia intermedia* trees than the central portion of the Subject Site;

  - Option 2: reduction in the area of vegetation removed from the northern boundary, to increase the buffer area between the development and the threatened *Acronychia littoralis* (Scented Acronychia) plants that are to be retained and fenced; and

  - Option 3: reduction in the area of vegetation removed from the eastern boundary, to increase the buffer between the development and the TECs that will be retained and protected on the eastern half of the Subject Site.

- The proponent is to investigate options to offset the residual impacts of the development, with consideration of the loss of regenerating forest that is part of Community 2. As per the current Proposal, the primary offset is to include the on-site conservation of the eastern third of the Subject Site, as previously proposed, which contains some areas of Community 2, and also TECs. Additional offset measures may include propagation of the threatened *Acronychia littoralis* (Scented Acronychia) and planting appropriate vegetation within the Conservation Area, in the eastern portion of the Subject Site;

Each of the DA modifications have been investigated and are discussed below:

i. Modifications to the Building Footprint

Each option for reducing the footprint of the Proposal has been considered, and draft designs for the modified DA have been prepared by Cadway (2014) are attached in **Appendix B** to this letter for reference. The feasibility of reducing the footprint has been assessed, and the minimum number of truck parking bays has been applied to each option, being 30, which is a reduction from 36 originally, and then reduced to 33 under the previous revisions to the Proposal (JGA 2010). Under each new option, there will be a slight reduction in the total area of vegetation removed, as shown in **Table 1**.

Table 1 Vegetation communities present on the Subject Site (James Warren & Associates, 2012) and the areas removed under each development option

Vegetation Community	Area Present on the Subject Site (ha)	Area Removed (ha)			
		Current Proposal	Option 1	Option 2	Option 3
Community 1: Tall closed sclerophyll forest (*Melalueca quinervia, Casurina glauca*+rainforest spp)	0.99	0.00	0.00	0.00	0.00
Community 2: Tall closed sclerophyll forest (*Losphostemon confertus, Corymbia intermedia*)	0.47	0.00	0.00	0.00	0.00
Community 3: Low closed shrubland (*Acacia disparrima*+/-scattered trees)	1.53	1.11	0.99	1.00	1.17
Community 4: Drainage canal	0.03	0.00	0.00	0.00	0.00
Community 5: Mid-high Regrowth (*Acacia disparrima*+/-*L.confertus/Lantana camara*/Vine spp)	0.73	0.18	0.15	0.13	0.18

Option 1 is likely to allow for the retention of the greatest number of mature trees, as per the Mature Trees Plan (James Warren & Associates 2013), however, the narrow strip of vegetation

present is bounded by Ozone Street, and does not connect to a corridor of vegetation to the south or west.

Option 2 provides greater protection for the *Acronychia littoralis* (Scented Acronychia) plants. However, even under the current Proposal, the existing cluster of plants will be retained and protected in situ, with exclusion fencing installed. Despite the fencing, and the additional buffer proposed by Option 2, it is possible that the future longevity of this sub-population is at risk, due to its proximity to the Pacific Highway and associated edge-effects. For this reason, it is suggested that additional measures to offset the impacts on this threatened plant are employed, including propagation within the Conservation Area, as described further below.

Option 3 provides a slightly better ecological outcome for the Conservation Area, as there will be a setback between the development and the 20m buffer area to the Conservation Area and TECs. This will allow for the retention of all mature trees in this area, and the best quality examples of Community 2.

Additional considerations for each of the options include the need for ancillary works and asset protection zone (APZ) establishment. There will be a requirement for filling of the development footprint area due to the changes in levels across the Subject Site, and this will result in battering on the perimeter. Detailed grading and drainage plans will be prepared for the final layout option selected, but it can be assumed that batters will extend for approximately 5m from the edge of the truck parking area hardstand surface, as indicated for the current Proposal. This will account for the final surface level of the development area being approximately 0.5m above that of current ground level. It can be assumed that any native vegetation in the batters, including mature trees, will require removal.

All three options have been assessed by a bushfire planning consultant (Bushfiresafe Aust 2014), and current legislation has been applied to indicate the location and extent of APZs. **Appendix C** to this letter provides the Asset Protection Zone Drawings prepared by Bushfiresafe (Aust). Each of the three options comply with the bushfire safety requirements. The APZ for each draft option can include the truck parking area, and there is no overlap with the buffer to the Conservation Area and TECs. The narrow strips of native vegetation (Community 5) that occurs to the south and also to the north of the development footprint, will be technically within the APZ, although no vegetation removal or fuel management activities will be required (pers comm. Wayne Hadaway, Bushfiresafe, 26/09/2014).

From an ecological perspective, although Option 3 will result in slightly more vegetation removal overall, this option will allow for the greatest buffer to the TEC vegetation, which is of high conservation value. The buffer area is located in an area that is currently in moderate to low condition, and includes a windrow. This edge-effected zone can remain vegetated and improved in condition through active management. This option is therefore recommended for consideration by BP and Council.

ii. Propagation of Acronychia littoralis (Scented Acronychia) plants

The threatened shrub to small tree *Acronychia littoralis* (Scented Acronychia) occurs in a cluster of approximately 86 plants on the northern boundary of the Subject Site. This plant is

associated with Littoral Rainforest on sandy soil (Office of Environment and Heritage 2012). For this reason, the most suitable habitat for this species occurs within the Conservation Area in the east of the Subject Site.

All individuals of *Acronychia littoralis* (Scented Acronychia) will be retained in situ as part of the Proposal, but there is potential for some indirect impacts to occur due to the proximity to development, and the Pacific Highway. For this reason, it is suggested that the plants are propagated and planted within suitable habitat within the Conservation Area.

Collection of seed and other vegetative material from the existing population of *Acronychia littoralis* (Scented Acronychia) plants should only be done by suitably qualified persons, so as not to threaten the survival of these plants. Propagation of Acronychia sp. has proven successful by a local native plant nursery; Bush Nuts. It is proposed that Bush Nuts, who are located in Tallebudgera Valley, Queensland, are engaged for seed collection, propagation, planting and maintenance of the *Acronychia littoralis* (Scented Acronychia) on the Subject Site. Collection and propagation methods will give regard to accepted protocols (Vallee, Hogbin et al. 2004) (Brown, Hall et al. 2003). It is also recommended that additional samples are placed in a herbarium collection for future conservation efforts.

The collection of seeds from a threatened species requires a Section 132C Scientific Licence under the NSW *National Parks and Wildlife Act 1974* to be issued by the NSW Office of Environment and Heritage. The application for this licence can be made by Bush Nuts, or else an ecological consultant can apply for the licence and undertake the seed collection for germination by Bush Nuts.

iii. Offsets

A substantial on-site offset has been provided under the current Proposal which includes the conservation of all TEC vegetation, the majority of mature trees and all known occurrences of threatened plants. The structurally complex vegetation that occurs in the Conservation Area includes a variety of fruiting and flowering plants that provide habitat for a vast number of fauna species. A 20m buffer between the development and the Conservation Area and TEC will be established and all vegetation retained onsite will be maintained under a Vegetation Management Plan (VMP).

The Proposal makes provision for a substantial Conservation Area across the eastern third of the Subject Site. This would adjoin other protected lands to the east and it includes the entire area of vegetation that has been previously identified as Swamp Sclerophyll Forest TEC, but has recently been found to contain elements of Littoral Rainforest, which is listed as critically endangered under the TSC Act and EPBC Act.

This onsite offset adequately compensates for the loss of regrowth vegetation from the subject site, which is not listed as a TEC, and provides very limited flora and fauna habitat, due to the generally lack of mature trees, and lack of floristic and structural diversity.

A.4 Conclusion

The findings of the peer review and site assessment indicate that some of the vegetation communities have been described in the Ecological Assessment in a simplified way that does not accurately represent their form or species diversity. This includes the communities that are mapped as shrubland and regrowth communities of *Acacia disparrima*. Despite the dominance of this shrub species, there is also evidence of regenerating trees of *Corymbia intermedia* throughout.

The majority of the Subject Site, including the area marked for development under the current Proposal, is a regenerating but degraded form of Community 2 - Tall Closed Sclerophyll Forest (*Lophostemon confertus, Corymbia intermedia*), which is broadly consistent with Council's Coastal Brush Box Open Forest to Woodland. The conservation value of this regenerating vegetation is therefore similar to that of Community 2 - Tall Closed Sclerophyll Forest (*Lophostemon confertus, Corymbia intermedia*). However, due to the degraded (recently cleared) form, and general lack of tree hollows, it has substantially lower habitat value for fauna.

Furthermore, a review of historical aerial photographs indicates that the entire area of the Subject Site that is proposed for development was cleared of all understorey, and the vast majority of trees since 1990. Under the definitions of the NSW *Native Vegetation Act 2003*, this would class the vegetation as regrowth, and hence would not require approval for clearing under the Act.

The Proposal makes provision for conservation of all TEC vegetation, the majority of mature trees and all known occurrences of threatened plants. The major areas of clearance are within the regenerating forest community, which is not a TEC and which has lower conservation values than the aforementioned forest types.

Under the current Proposal:

- There is opportunity to enhance the habitat for this threatened community in the Conservation Area through the implementation of a Vegetation Management Plan (VMP); and
- Threatened flora species would be retained and fenced on the Subject Site. Furthermore, the habitat for these species would be enhanced in the Conservation Area, through the implementation of a VMP and propagation of these species.

The Proposal makes provision for a substantial Conservation Area across the eastern third of the Subject Site. This would adjoin other protected lands to the east and it includes the entire area of vegetation that has been previously identified as Swamp Sclerophyll Forest EEC, but has recently been found to contain elements of Littoral Rainforest, which is listed as critically endangered under the TSC Act and EPBC Act.

In response to Councils' contention that the vegetation mapped as Acacia regrowth has a higher conservation value than allowed by the Ecological Assessment, the options to modify the Proposal to reduce the impacts on native vegetation on the site were discussed with the Council at the meeting on 5 August 2014.

The options for a reduced footprint have been based on the minimal number of truck parking bays that are feasible, with a reduction from 33 to 30, which allows for a reduction in vegetation clearing from either the north, east or south, as shown in the plans presented in **Appendix B** to this letter. The greatest ecological outcome is indicated to result from Option 3, as this will increase the buffer to the Conservation Area and TECs present. These options are provided to Council for further discussion.

It is our opinion that the onsite offsets being provided as part of the proposal, with or without a minor modification to the Proposal (as set out in this letter) would result in an acceptable environmental outcome on the site.

A.5 References

Brown, C. L., F. Hall, et al. (2003). Plant Conservation: Approaches and Techniques from an Australian Perspective. Canberra, Australian Network for Plant Conservation.

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JGA (2010). Planning Proposal & Statement of Environmental Effects; Expansion of an Existing Highway Service Centre "BP Chinderah Travel Centre" Pacific Highway & Ozone Street Chinderah. Murwillumbah, NSW. **A**.

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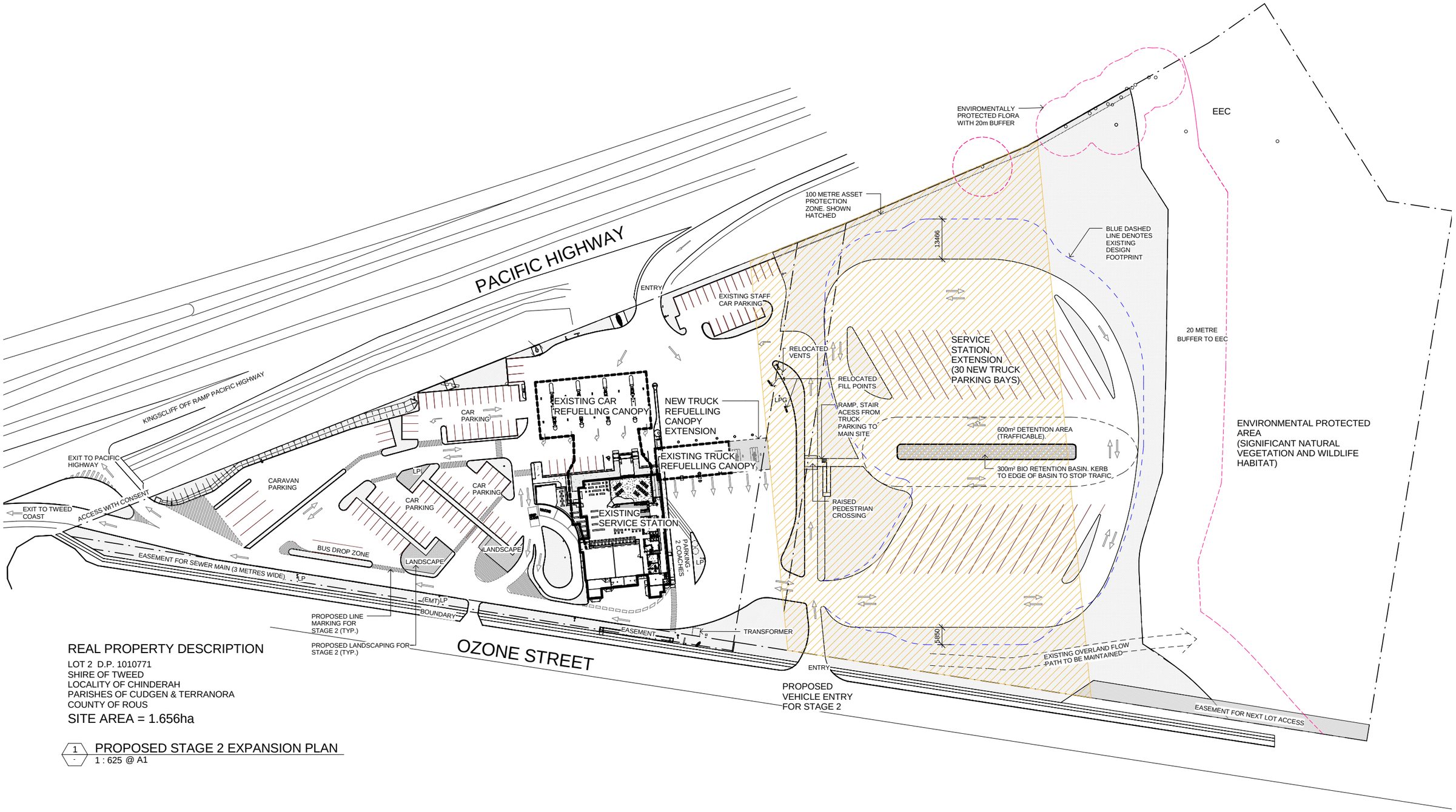
Otek (2007). Environmental Assessment: Greenfield Site, Ozone Street, Chinderah NSW 2487. Prepared for BP Australia. Yeerongpilly Qld.

Vallee, L., T. Hogbin, et al. (2004). Guidelines for the Translocation of Threatened Plants in Australia. Canberra, Australian Network for Plant Conservation.

Appendix B

Draft Development Layout Options (Cadway 2014)



REAL PROPERTY DESCRIPTION

LOT 2 D.P. 1010771
SHIRE OF TWEED
LOCALITY OF CHINDERAH
PARISHES OF CUDGEN & TERRANORA
COUNTY OF ROUS

SITE AREA = 1.656ha

1 / - PROPOSED STAGE 2 EXPANSION PLAN
1 : 625 @ A1

ISSUE FOR APPROVAL

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CADWAY REF: 10999

ISSUE	DATE	AMENDMENTS	DRN	CKD
2	25/09/14	ADDITION OF ASSET PROTECTION ZONE	JC	
1	03/09/14	PARKING BAYS AND SPACE REDUCED (OPT 1)	JC	

DIMENSIONS IN MM
DO NOT SCALE
DRAWING PRACTICE TO AS1100

BP AUSTRALIA PTY LTD.
GPO Box MELBOURNE VIC 3001
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TEL (03) 9268 4111

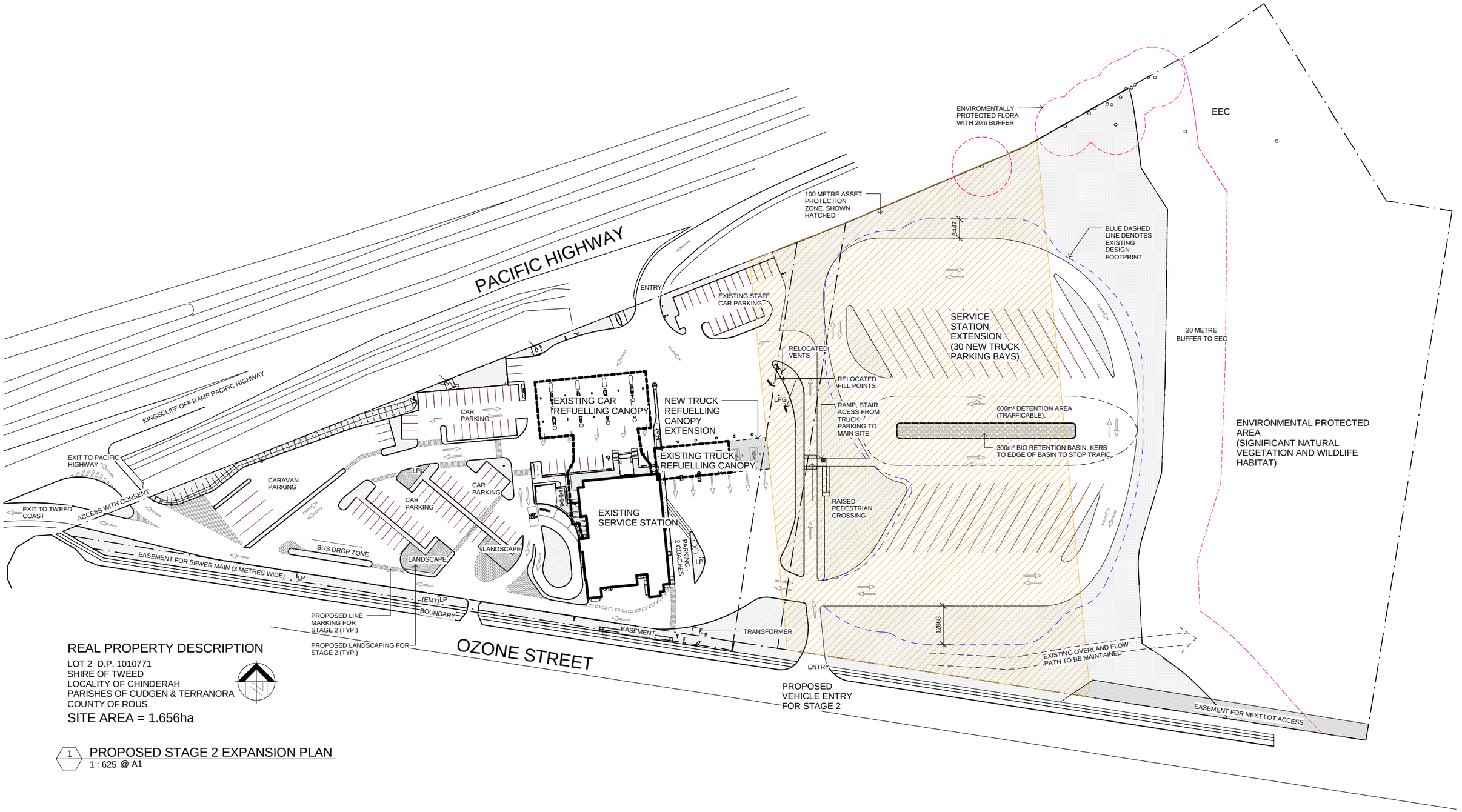
BP CHINDERAH SOUTH

PACIFIC HIGHWAY, CHINDERAH, NSW - 2487
STAGE 2 - EXPANSION

SITE LAYOUT - PROPOSAL E (OPTION 1)

DRAWN	DATE	CHECKED	APPROVED	DWG No	ISSUE
JC	29/08/2014	WL	WL	SK-05723-A010	2

SCALE 1 : 625 PLOT 1 : 1 @A1



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ISSUE	DATE	AMENDMENTS	DRN	CKD
2	25/09/14	ADDITION OF ASSET PROTECTION ZONE	JC	
1	03/09/14	PARKING BAYS AND SPACE REDUCED (OPT 2)	JC	

DIMENSIONS IN MM DO NOT SCALE
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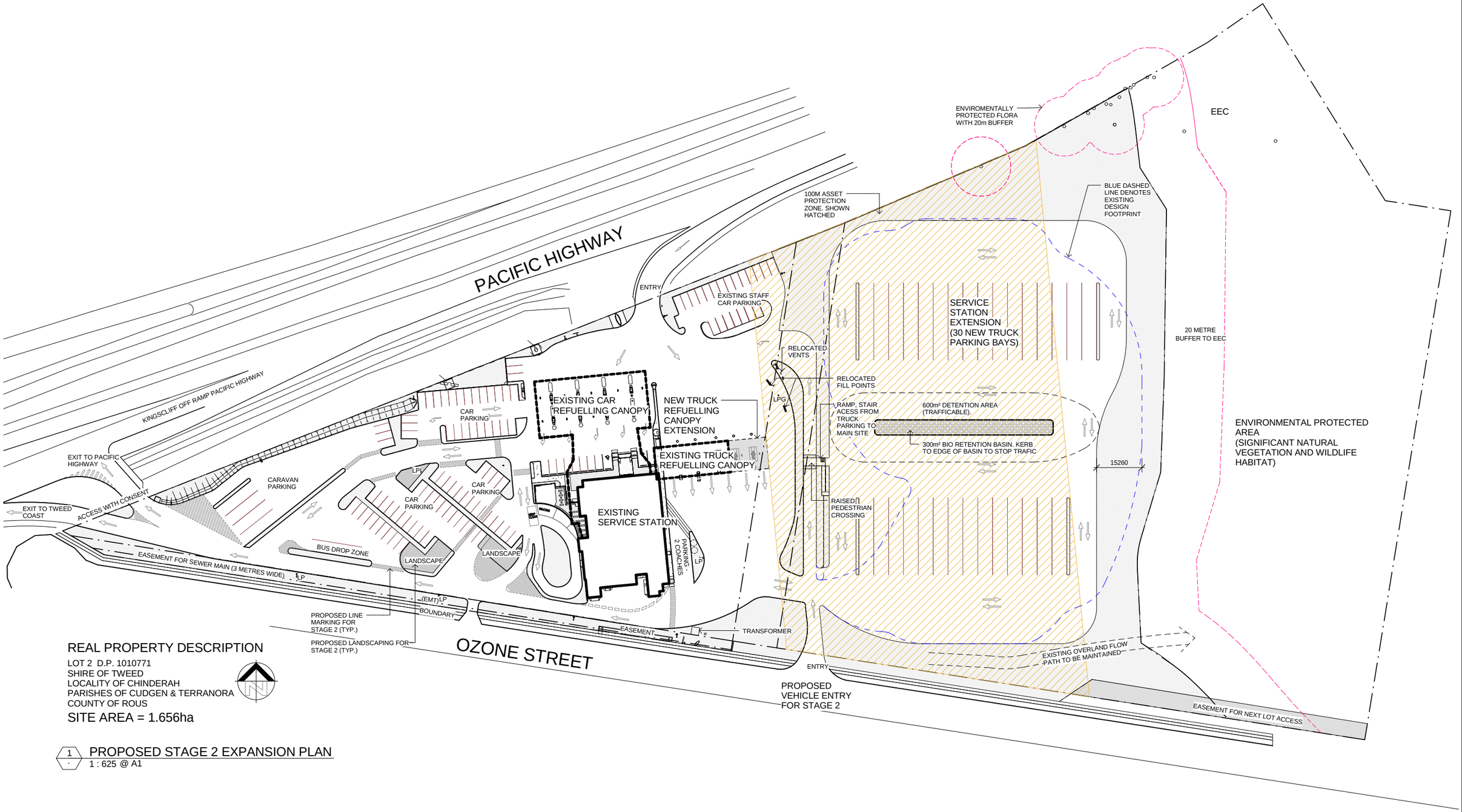
BP CHINDERAH SOUTH
PACIFIC HIGHWAY, CHINDERAH, NSW - 2487
STAGE 2 - EXPANSION
SITE LAYOUT - PROPOSAL E (OPTION 2)

DRAWN	DATE	CHECKED	APPROVED	DWG No	ISSUE
JC	3/09/2014	WAL	WAL	SK-05723-A012	2

SCALE 1 : 625 PLOT 1 : 1 @A1



REAL PROPERTY DESCRIPTION

LOT 2 D.P. 1010771
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SITE AREA = 1.656ha

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1 : 625 @ A1

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ISSUE	DATE	AMENDMENTS	DRN	CKD
2	25/09/14	ADDITION OF ASSET PROTECTION ZONE	JC	
1	03/09/14	PARKING PAYS AND SPACE REDUCED (OPT 3)	JC	

DIMENSIONS IN MM DO NOT SCALE

DRAWING PRACTICE TO AS1100

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BP CHINDERAH SOUTH
PACIFIC HIGHWAY, CHINDERAH, NSW - 2487
STAGE 2 - EXPANSION

SITE LAYOUT - PROPOSAL E (OPTION 3)

DRAWN	DATE	CHECKED	APPROVED	DWG No	ISSUE
JC	29/08/2014	WAL	WAL	SK-05723-A014	2

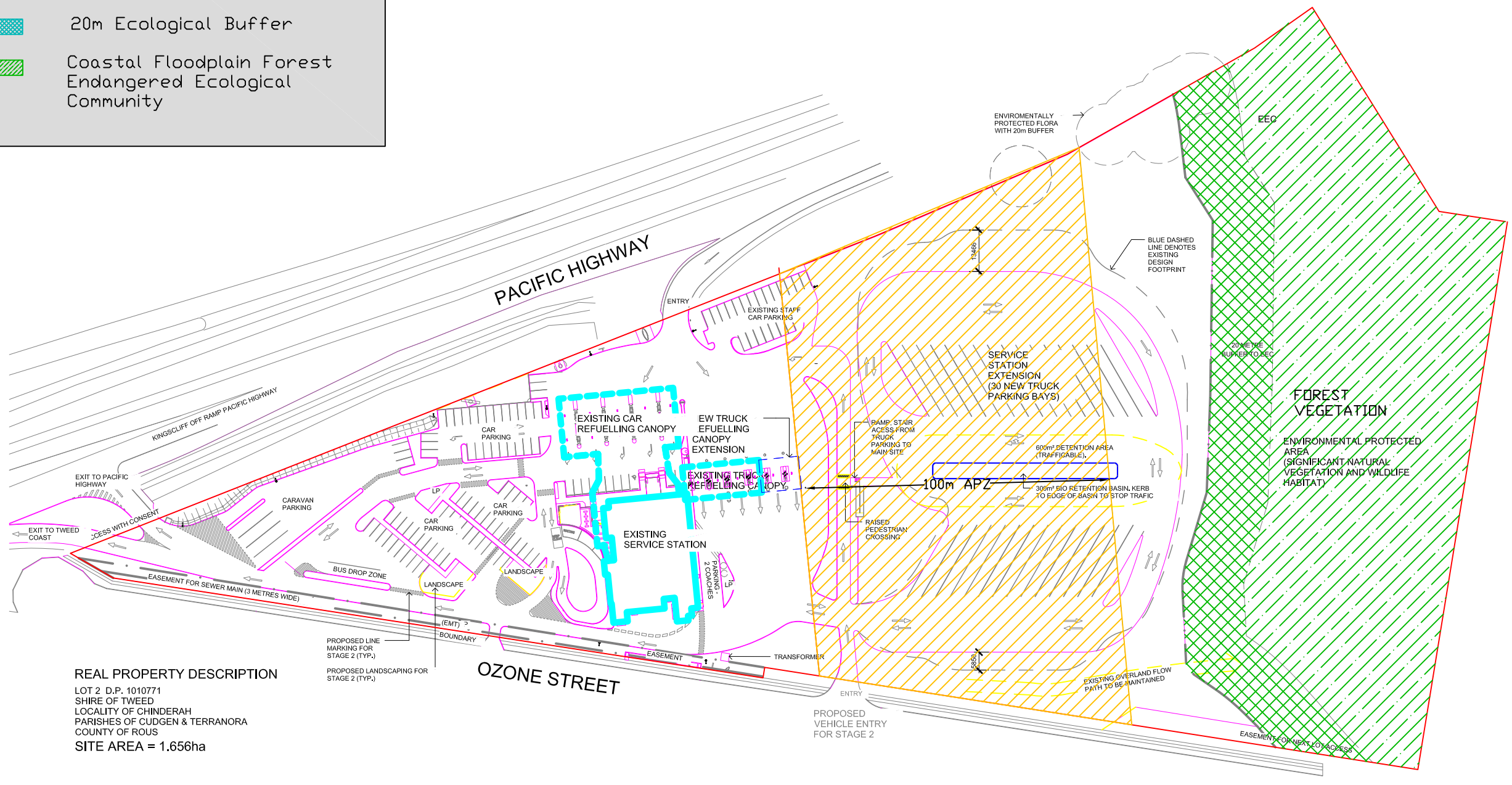
SCALE 1 : 625 PLOT 1 : 1 @A1

Appendix C

APZ Requirements (Bushfiresafe Aust, 2014)

LEGEND

- Property boundary
- Access Roads
- Stormwater Drain and Detention Basin
- Existing Service Station
- Proposed Extension to Refuelling Canopy
- 100m Asset Protection Zone
- 20m Ecological Buffer
- Coastal Floodplain Forest Endangered Ecological Community



REAL PROPERTY DESCRIPTION

LOT 2 D.P. 1010771
SHIRE OF TWEED
LOCALITY OF CHINDERAH
PARISHES OF CUDGEN & TERRANORA
COUNTY OF ROUS
SITE AREA = 1.656ha

General Notes

This drawing was prepared by Bushfiresafe (Aust) P/L to demonstrate the vegetation rehabilitation areas as part of the proposed development and should not be used for any other purpose.

OPTION 1

A10

ATTACHMENT 1

APZ / VEGETATION COMMUNITIES

Bushfiresafe (Aust)
20 McLachlan Street
Maclean NSW 2463
Ph: 02) 66451088
Fax: 02) 66451099

CLIENT:
BP Austriala

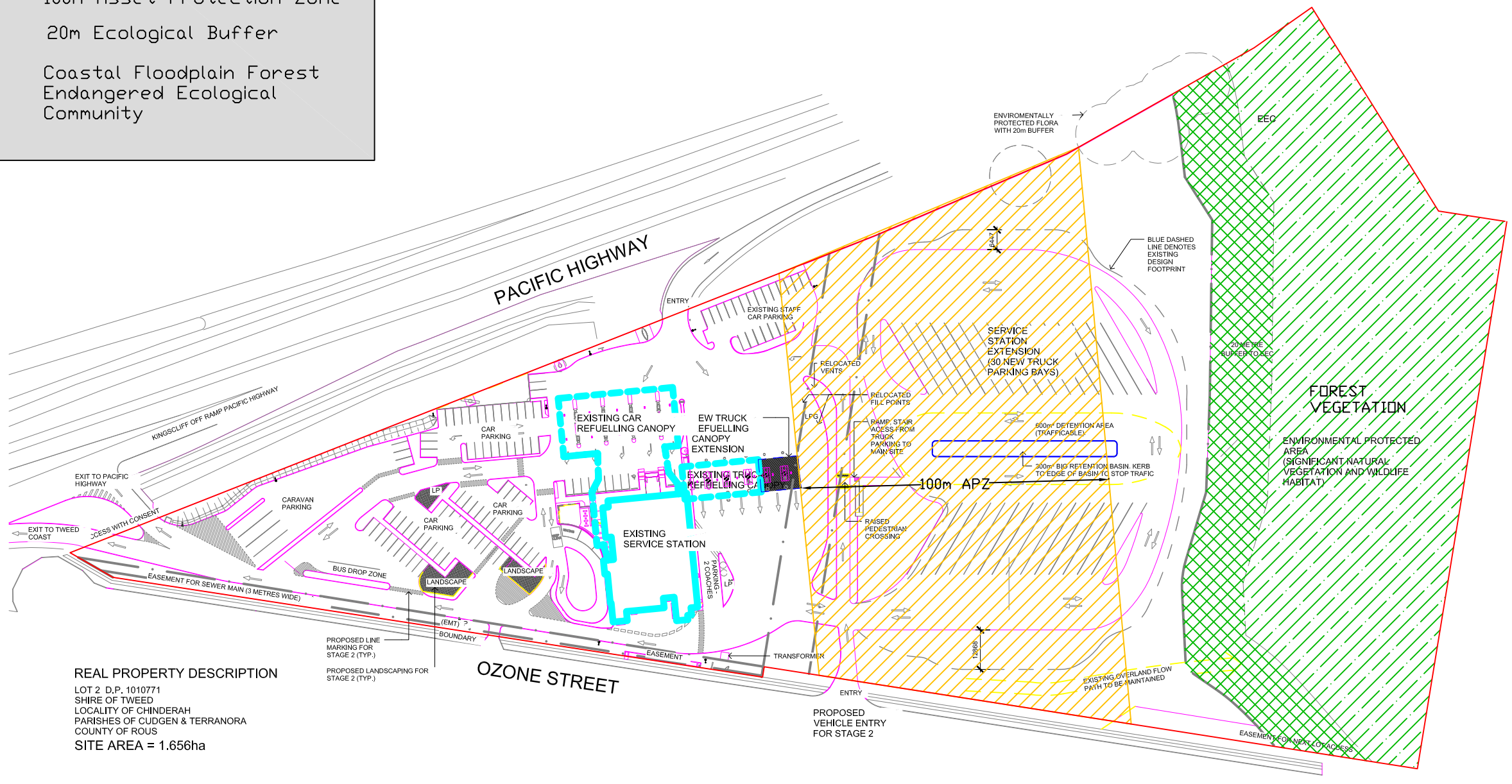
Project

Bushfire Assessment
BP Chinderah
Stage 2 Expansion
Pacific Highway

Date: Sept 2014
Scale:
Ref# 14043

LEGEND

- Property boundary
- Access Roads
- Stormwater Drain and Detention Basin
- Existing Service Station
- Proposed Extension to Refuelling Canopy
- 100m Asset Protection Zone
- 20m Ecological Buffer
- Coastal Floodplain Forest Endangered Ecological Community



REAL PROPERTY DESCRIPTION

LOT 2 D,P, 1010771
SHIRE OF TWEED
LOCALITY OF CHINDERAH
PARISHES OF CUDGEN & TERRANORA
COUNTY OF ROUS
SITE AREA = 1.656ha

General Notes

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OPTION 2

A□12

ATTACHMENT 1

APZ / VEGETATION COMMUNITIES

Bushfiresafe (Aust)
20 McLachlan Street
Maclean NSW 2463
Ph: 02) 66451088
Fax: 02) 66451099

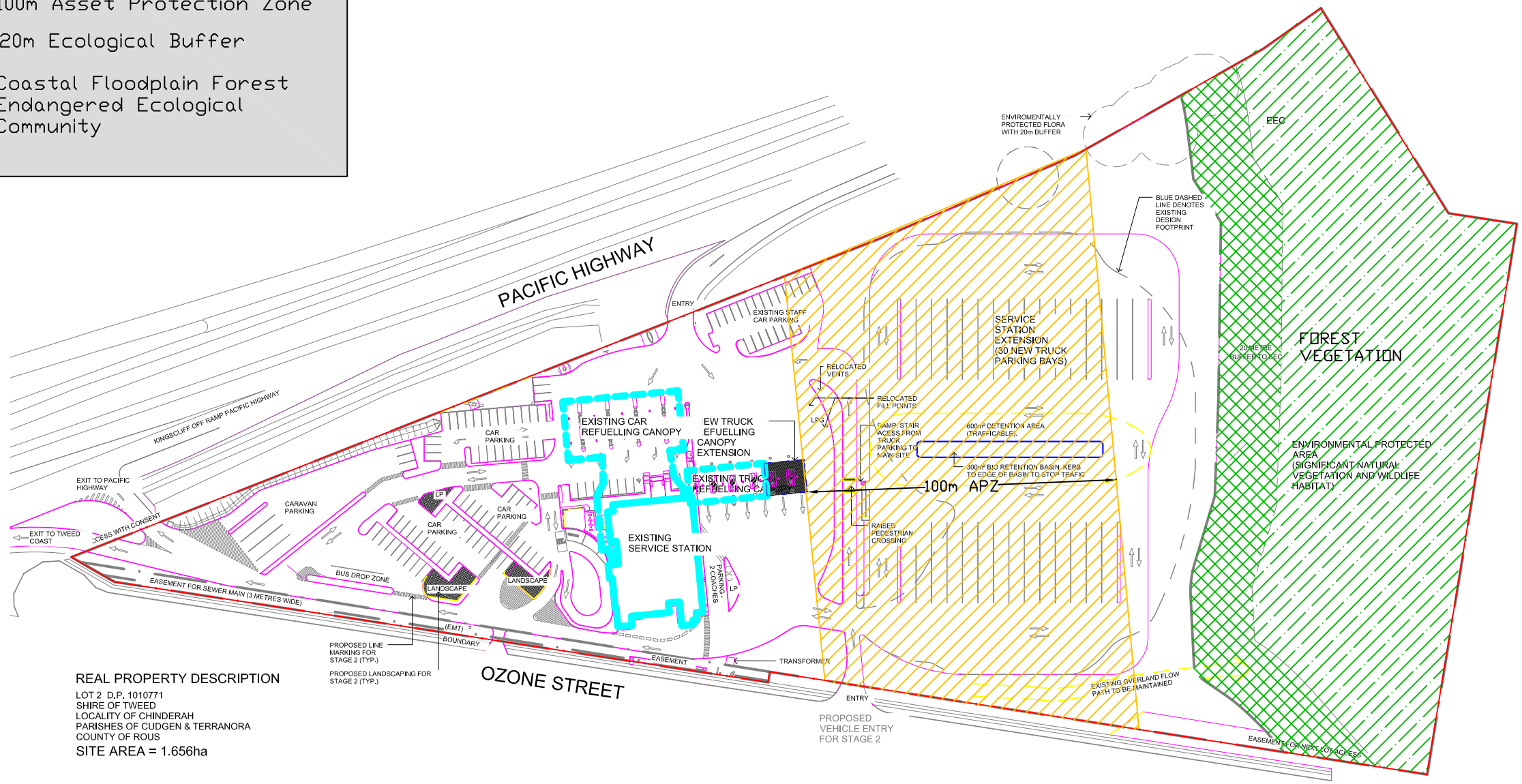
CLIENT:
BP Austriala

Project
Bushfire Assessment
BP Chinderah
Stage 2 Expansion
Pacific Highway

Date: Sept 2014
Ref# 14043
Scale:

LEGEND

- Property boundary
- Access Roads
- Stormwater Drain and Detention Basin
- Existing Service Station
- Proposed Extension to Refuelling Canopy
- 100m Asset Protection Zone
- 20m Ecological Buffer
- Coastal Floodplain Forest Endangered Ecological Community



REAL PROPERTY DESCRIPTION

LOT 2 D.P. 1010771
SHIRE OF TWEED
LOCALITY OF CHINDERAH
PARISHES OF CUDGEN & TERRANORA
COUNTY OF ROUS

SITE AREA = 1.656ha

General Notes

This drawing was prepared by Bushfiresafe (Aust) P/L to demonstrate the vegetation rehabilitation areas as part of the proposed development and should not be used for any other purpose.

OPTION 3

A□14

ATTACHMENT 1

APZ / VEGETATION COMMUNITIES

Bushfiresafe (Aust)
20 McLachlan Street
Maclean NSW 2463
Ph: 02) 66451088
Fax: 02) 66451099

CLIENT:
BP Austriala

Project

Bushfire Assessment
BP Chinderah
Stage 2 Expansion
Pacific Highway

Date: Sept 2014

Ref# 14043

Scale: