NORTHERN TERRITORY GOVERNMENT
Department of
LANDS, PLANNING AND
ENVIRONMENT

Level 1
Goyder Centre
25 Chung Wah Terrace
Palmerston NT 0830

PO Box 496
Palmerston NT 0831

E DevelopmentAssessment.DEPWS@nt.gov.au
T 08 8999 4446

Our ref: DEPWS2024/0261

Ms Sarah Smith
Department of Lands, Planning and Environment
PO Box 3675
DARWIN NT 0801

Dear Ms Smith

**Re: Invitation to comment –Referral - APA SPP Pty Ltd – Sturt Plateau Pipeline**

The information submitted for the above Referral has been assessed by the relevant environmental divisions within the department and the following comments are provided:

## Flora and Fauna Division

The Flora and Fauna Division has reviewed the Referral and have provided comments in **Attachment 1.**

The Flora and Fauna Division has considered the likelihood of threatened species and sensitive and/or significant vegetation occurring within and/or adjacent to the proposed pipeline. The Flora and Fauna Division considers that construction and operation of the Sturt Plateau Pipeline poses a low risk to local and regional populations of threatened species. An assessment against NT EPA Environmental factors and objectives indicates that the proposed works pose a low risk and are unlikely to have a significant environmental impact. While the risks are considered low, the Flora and Fauna Division has provided recommendations in relation to the Northern Blue-tongue Skink and the Grey Falcon that could further reduce impacts to individuals occupying or traversing the proposal area.

## Environment Division

### Heritage Branch

The Heritage Branch has reviewed the referral and have provided comment in **Attachment 2.**

### Environmental Operations

Should the proponent collect, transport, store, recycle or treat listed wastes on a commercial or fee for service basis as part of the development or operations of the activity, then an Environment Protection Approval or Licence will be required to authorise the activity under the *Waste Management and Pollution Control Act 1998* (NT).

If the activity requires the discharge of waste to water or could cause water to be polluted, then a waste discharge licence under the *Water Act* 1992 (NT) will be required. Please refer to the Guidelines[1].

[1] https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/950603/guidelines-waste-discharge-licensing.pdf

The proponent should note that all persons are required to comply at all times with the General Environmental Duty under section 12 of the *Waste Management and Pollution Control Act 1998* (NT) (WMPC Act). To help satisfy the General Environmental Duty, the proponent is advised to take notice of the list of environmental considerations below. The list is not exhaustive, and the proponent is responsible for ensuring their activities do not result in non-compliance with Northern Territory (NT) laws.

A non-exhaustive list of environmental issues that should be considered to meet requirements under NT law are listed below:

1. **Dust**: The proposed activities have the potential to generate dust, particularly during the dry season. The proponent must ensure that nuisance dust and/or nuisance airborne particles are not discharged or emitted beyond the boundaries of the premises.

2. **Noise**: The proponent is to ensure that the noise levels from the proposed premises comply with the latest version of the NT EPA Northern Territory Noise Management Framework Guideline available online[2].

3. **Erosion and Sediment Control (ESC):** The proponent must ensure that pollution and/or environmental harm do not result from soil erosion.

   ESC measures should be employed prior to and throughout the construction stage of the development. Larger projects should plan, install and maintain ESC measures in accordance with the current International Erosion and Sediment Control Association (IECA) Australia guidelines and specifications. Where sediment basins are required by the development, the NT EPA recommends the use of at least Type B basins, unless prevented by site specific topography or other physical constraints.
   Basic advice for small development projects is provided by the NT EPA document: Guidelines to Prevent Pollution from Building Sites[3] and Keeping Our Stormwater Clean[4]

4. **Storage:** If an Environment Protection Approval or Environment Protection Licence is not required, the proponent should store liquids only in secure bunded areas in accordance with VIC EPA Publication 1698: Liquid storage and handling guidelines, June 2018, as amended. Where these guidelines are not relevant, the storage should be at least 110% of the total capacity of the largest vessel in the area.

   Where an Environment Protection Approval or Environment Protection Licence is required, the proponent must only accept, handle or store at the premises listed waste, including asbestos, as defined by the WMPC Act, in accordance with that authorisation.

5. **Site Contamination**: If the proposal relates to a change of land use or if the site is contaminated, including as a result from historical activities such as cyclones, a contaminated land assessment maybe required in accordance with the National Environment Protection (Assessment for Site Contamination) Measure (ASC NEPM). The proponent is encouraged to refer to the information provided on the NT EPA website[5,] and the NT Contaminated Land Guidelines[6].

6. **Waste Management - Import and Export of Fill**: The proposed activities have the potential to generate fill and/or involve the importation of fill for use on-site. Untested fill material may already be present on the site. All fill imported or generated and exported as part of the activity must either be

[2] https://ntepa.nt.gov.au/__data/assets/pdf_file/0004/566356/noise_management_framework_guideline.pdf
[3] https://ntepa.nt.gov.au/__data/assets/pdf_file/0010/284680/guideline_prevent_pollution_building_sites.pdf
[4] https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/284676/guideline_keeping_stormwater_clean_builders_guide.pdf
[5] https://ntepa.nt.gov.au/your-environment/contaminated-land
[6] https://ntepa.nt.gov.au/__data/assets/pdf_file/0020/434540/guideline_contaminated_land.pdf

certified virgin excavated natural material (VENM) or be sampled and tested in line with the NSW EPA Guidelines[7]

All imported fill material must be accompanied by details of its nature, origin, volume, testing and transportation details. All records must be retained and made available to authorised officers, upon request. The proponent should also consider the following NT EPA fact sheets: How to avoid the dangers of accepting illegal fill onto your land[8], and Illegal Dumping - What You Need to Know[9].

7. **Odour or Smoke:** The proposed activities may have the potential to create odours and/or smoke. The proponent must ensure that nuisance odours or smoke are not emitted beyond the boundaries of the premises.

**Water Resources Division**

**Groundwater Assessment**

The project footprint overlies the Gum Ridge Formation of the Georgina Basin, which comprises a portion of the regional Cambrian Limestone Aquifer system within the NT. Aquifer depths in this region are in excess of 80m below ground level and are unlikely to be impacted by surface works for pipeline construction.

Section 2.3.1.4 (Water Supply) of the Environmental Referral Report (SLR, 2024) states that water for the construction camp will be sourced from new bores drilled within the footprint of the camp. This report also states that bore locations will be determined via a groundwater investigation following receipt of an Aboriginal Areas Protection Authority (AAPA) Authority Certificate.

**Surface water assessment**

As the proposed pipeline development only intersects an unmonitored section of a minor waterway, on which no assessment has been undertaken or is anticipated, there are no issues of concern requiring comment within the responsibilities of the Surface Water Assessment Team.

**Licensing and Regulation**

The proponents project area is within the Daly Roper Beetaloo water control district and within the Georgina Wiso water allocation plan area. Water management is guided by the Georgina Wiso Water Allocation Plan 2023-2031.

The proponents of the Sturt Plateau pipeline project have been informed by Water Regulation officers that a water licence will be required for the project. The proponent has submitted an application to take 40ML of water, which will be sourced outside of existing licences. The applicant may also need an Interference with a Waterway permit if the planned pipeline intersects or requires work on existing waterways. This permit would also cover any ongoing maintenance works, if needed.

The Water Resources Division have advised that the proponent should continue engaging with the department to manage their licence application and any potential interference with a waterway permit.

Further information can be obtained from the DLPE website[10] and by contacting water.licensing@nt.gov.au or call 08 8999 4455.

[7] https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material
[8] https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/285728/factsheet_avoid_danger_accepting_illegal_fill_to_your_land.pdf
[9] https://ntepa.nt.gov.au/__data/assets/pdf_file/0008/285740/factsheet_illegal_dumping_what_you_need_know.pdf
[10] https://nt.gov.au/environment/water

**Rangelands Division**

**Weed Management Branch**

A desktop assessment of the NT Weeds Database for NT Portions 1077, 7026 and 7513, surrounding parcels and roads has revealed current and or previous data records of the following:

| Common Name | Botanical Name | Declared |
|---|---|---|
| Bellyache bush | *Jatropha gossypiifolia* | Class A |
| Gamba grass | *Andropogon gayanus* | Class A |
| Neem | *Azadirachta indica* | Class B |
| Prickly acacia | *Vachellia nilotica* | Class A |
| Grader grass | *Themeda quadrivalvis* | Class B |
| Parkinsonia | *Parkinsonia aculeata* | Class B |
| Khaki weed | *Alternanthera pungens* | Class B |
| Coffee senna | *Senna occidntalis* | Class B |
| Sida species | *Sida spp* | Class B |
| Hyptis | *Hyptis suaveolens* | Class B |
| Sida - flannel weed | *Sida cordifolia* | Class B |
| Noogoora burr | *Xanthium strumarium* | Class B |
| Rubber bush | *Calotropis procera* | Class B (South of 16˚30' S) |

All land in the Northern Territory (NT) is subject to the *Weeds Management Act* 2001 (WM Act). The WM Act describes the legal requirements and responsibilities that apply to all persons, owners and occupiers of land regarding declared and potential weeds. General duties described in Division 1 of the WM Act include the requirement for owners or occupiers of land to take all reasonable measures to prevent land being infested with a declared weed and to prevent a declared weed from spreading.

There are various types of classifications for a declared or potential weed under the WM Act, including Class A (to be eradicated) and Class B (growth and spread to be controlled). Class A weeds are listed in the Katherine Regional Weeds Strategy 2021-2026 as a Category 1 - priority weed for eradication.

Gamba grass, grader grass, prickly acacia, neem and bellyache bush are subject to statutory weed management plans. Management obligations outlined in these plans must be adhered to by all land holders[11].

A useful tool to help manage weed risk is property weed management plans, which assist the proponent in managing weed risk within the property and to ensure compliance with the WM Act. Vehicle and equipment hygiene controls are key for weed spread prevention. The proponent should ensure that any machinery used in the clearing process is free of mud and soils, weeds and weed seeds before entering the property to ensure weeds are not inadvertently introduced or spread during the clearing activity. 'Preventing Weed Spread is Everybody's Business' is a document outlining actions proponents can conduct to reduce the risk of weeds being spread during exploration and other land activities. This document is available online[12].

[11] https://nt.gov.au/environment/weeds/weed-management-planning
[12] https://denr.nt.gov.au/__data/assets/pdf_file/0011/257987/preventing-weed-spread.pdf

Consideration should also be made for methods, treatments and timing for effective weed management to be undertaken prior and throughout the life of the development so that weeds are satisfactorily managed at the site, access roads and/or tracks.

The NT WeedMate app is recommended for keeping accurate records of weed infestation and control activities. Further information about the NT WeedMate app is available online[13].

Further information as to management requirements and the Weed Management Plans for gamba grass, grader grass, prickly acacia, neem and bellyache bush are available online[14] or alternatively contact the Weed Management Branch for further advice on (08) 8973 8862.

**Vegetation Assessment Unit**

On 8 January 2025, APA SPP Pty Ltd lodged two land clearing applications for assessment under the *Pastoral Land Act 1992*:

PL2025/0002 - Clearing of approximately 88.76ha of native vegetation for the purpose of constructing and operating the Sturt Plateau Pipeline; and

PL2025/0003 - Clearing of approximately 54.31ha of native vegetation for the purpose of constructing and operating the Sturt Plateau Pipeline.

It should be noted that the clearing extent identified above is for the proposed clearing within a 30m wide corridor within a 500m wide assessment corridor.

The Pastoral Land Board as the consent authority will consider these applications against Section 7 of the Pastoral land clearing guidelines.

Should you have any further queries regarding these comments, please contact the Development Coordination Branch by email DevelopmentAssessment.DEPWS@nt.gov.au or phone (08) 8999 4446.

Yours sincerely

Maria Wauchope
Executive Director Rangelands

3 February 2025

**Attachment 1** – Flora and Fauna Division comment
**Attachment 2** – Heritage Branch comment

[13] https://environment.nt.gov.au/rangelands/publications2/weed-management-publications/contribute-weed-data/weed-data-collection/nt-weedmate-app
[14] http://www.nt.gov.au/environment/weeds

# Attachment 1

## Submission on referral information

### APA SPP Pty Ltd – Sturt Plateau Pipeline

This submission is made under regulation 53 of the Environment Protection Regulations 2020

**NT EPA reference number:** EP2024/040

**Government authority:** Department of Lands, Planning and Environment–**Flora and Fauna Division**

**Summary:**

- Eight *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act) / *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) threatened species are known or likely to occur within the proposed development area.
- Risks to threatened species are deemed to be low.
- Recommendations to further reduce risks in relation to Northern Blue-tongue Skink and the Grey Falcon are provided.
- The proposed development area intersects a broad ephemeral floodplain.
- Risks posed by the temporary clearing of vegetation on the floodplain are low.

| Theme / issue | Comment |
|---|---|
| Terrestrial ecosystems (Vegetation) | **Cumulative Impacts Assessment**<br><br>A cumulative impacts assessment on the vegetation community extent was undertaken using NT National Vegetation Information System (NTNVIS) mapping[15] as a baseline, updated as far as practicable to represent current intact native vegetation cover for the area to near-present day. Clearing data was compiled from NTNVIS mapping, DLPE clearing (or permitted to be cleared) areas data and Land Use Mapping (LUMP) data[16]. Although there are some deficiencies in the completeness and adequacy of these mapping products, for these analyses the data represents the best available continuous and consistently attributed mapping for the NT. All area values were calculated using GDA 1994 Australian Albers projected coordinate system. The assessment was undertaken on 30 January 2025. |

[15] http://www.ntlis.nt.gov.au/metadata/export_data?type=html&metadata_id=B75510B92F680755E040CD9B2144596C
[16] http://www.ntlis.nt.gov.au/metadata/export_data?type=html&metadata_id=ECEEDF0AD4826221E0532144CD9BC059

# Attachment 1

| | |
|---|---|
| | Potential impacts were assessed based on the Project_Area_GDA20_Z53_20241018 file extent, which overlaps two properties: Hayfield and Shenandoah. This analysis overestimates the potential impacts of clearing (including total hectares based on a 500m wide corridor) required for the actual pipeline corridor.<br><br>Hayfield (NT Portions 342, 833, 1077, 4272, 7504 and 7513) has a total area of 183,827.42ha, of which 183,684.97ha (99.92%) is intact native vegetation. The application proposes to impact up to an additional 539.32ha, which would result in 99.63% of the property remaining as intact native vegetation. Five vegetation communities have been mapped within the proposed impact area. All five communities would have at least 96% of their baseline area in the property remaining intact.<br><br>Shenandoah (NT Portion 7026) has a total area of 136,068.36ha, of which 135,995.89ha (99.95%) is intact native vegetation. The application proposes to impact up to an additional 1,428.05ha, which would result in 98.9% of the property remaining as intact native vegetation. Six vegetation communities have been mapped within the proposed impact area. All six communities would have at least 97% of their baseline area in the property remaining intact.<br><br>Hayfield and Shenandoah are situated within the Sturt Plateau bioregion which currently has intact native vegetation across 98.93% of its extent. The six vegetation communities affected would have at least 99% of their baseline areas in the bioregion remaining intact.<br><br>Hayfield and Shenandoah are situated within the Newcastle subregion which currently has intact native vegetation across 99.45% of its extent. The six vegetation communities affected would have at least 99% of their baseline areas in the subregion remaining intact.<br><br>Hayfield and Shenandoah are situated within the Wiso catchment which currently has intact native vegetation across 99.78% of its extent. The six affected vegetation communities would have at least 99% of their baseline areas in the catchment remaining intact.<br><br>The proposed clearing is considered unlikely to have a significant impact, including cumulative impact, on the regional extent of vegetation communities and associated biodiversity values. |
| Terrestrial ecosystems (threatened species) | Based on a search of DLPE databases within 20km of the project, expert knowledge of species' habitat requirements, and information about habitats occurring within the proposed locality, the threatened species listed in Table 1 are deemed likely to occur within, or immediately adjacent to, the proposed development area. |

# Attachment 1

**Table 1** - Species listed as threatened under the TPWC Act/EPBC Act

| Common Name | Scientific Name | TPWC Act status | EPBC Act status |
|---|---|---|---|
| Australian Painted Snipe | *Rostratula australis* | Endangered | Critically Endangered |
| Crested Shrike-tit (northern) | *Falcunculus frontatus whitei* | Near Threatened | Vulnerable |
| Gouldian Finch | *Chloebia gouldiae* | Vulnerable | Endangered |
| Grey Falcon | *Falco hypoleucos* | Vulnerable | Vulnerable |
| Northern Blue-tongued Skink | *Tiliqua scincoides intermedia* | - | Critically Endangered |
| Painted Honeyeater | *Grantiella picta* | Vulnerable | Vulnerable |
| Common Brushtail Possum (north-western) | *Trichosurus vulpecula arnhemensis* | - | Vulnerable |
| Yellow-spotted Monitor | *Varanus panoptes* | Vulnerable | - |

Australian Painted Snipe: The Flora and Fauna Division agree with the assessment in the referral that there is a moderate likelihood of Australian Painted Snipe occurring in areas adjacent to the Project Area, but suitable habitat for this species (wetlands and associated vegetation communities) are not present within the Project Area. The Flora and Fauna Division consider that the proposal poses a low risk to the species.

Crested Shrike-tit (northern): The Flora and Fauna Division consider that the likelihood of suitable habitat for the species being present within or immediately adjacent to the proposed pipeline alignment is low based on species distribution modelling undertaken for the Strategic Regional Environmental Baseline Assessment (SREBA; Young *et al* 2022). This modelling suggested that the climate and habitat within the area of the proposed works is generally unsuitable for this species.

Gouldian Finch: The Gouldian Finch has specific habitat requirements, including suitable nesting trees (generally *Eucalyptus leucophloia* or *E. tintinnans*) which are in proximity to appropriate sources of grass seed and water. Although observation records show the species occurs in the broader region, species distribution modelling for the Gouldian Finch undertaken as part of SREBA (Young *et al* 2022) indicates that the referral area has 'low suitability' for the species. Vegetation mapping of the referral area further supports the modelling and suggests that suitable nesting habitat is unlikely to occur within or immediately adjacent to the disturbance footprint.

# Attachment 1

| | |
|---|---|
| | While this species has been recorded in the broader region, the Flora and Fauna Division considers that the proposal poses a low risk to the species and any potential impact is unlikely to be significant for the following reasons:<br>a) the project area is unlikely to support important populations or breeding habitat;<br>b) the surrounding landscape contains large areas of relatively contiguous woodland; and<br>c) the area of habitat proposed for removal is very small compared to the area of suitable foraging habitat in the broader region.<br><br>Grey Falcon: The Flora and Fauna Division agrees with the assessment in the referral that the Project Area does not support an important population or known nesting sites of this species. Given the small area of clearing proposed and the large area of potential habitat within the region, the proposal does not pose a significant risk to regional populations of this species. However, if a Grey Falcon nest (or suspected nest) is encountered, the Flora and Fauna Division recommends a minimum buffer of 300m should be maintained to reduce disturbance and any impact.<br><br>Northern Blue-tongued Skink: The Flora and Fauna Division agrees with the assessment in the referral that there is a high likelihood that Northern Blue-tongued Skink occurs within or near the proposed development area. The Flora and Fauna Division considers that the proposed development is unlikely to result in a significant impact to this species as the area of habitat proposed for removal is very small compared to the area of suitable habitat in the broader region. Additionally, the proposed development will not exacerbate existing impacts of cane toads, which have been the primary cause of decline in the distribution and abundance of this species.<br><br>While the risk to this species is considered to be low there is potential for mortality of individuals that become trapped while pipeline trenches are open during construction. Recommendations targeted at reducing the risk of mortality for individual Northern Blue Tongue Skink are provided below:<br>• minimise the total length of open trench and the period of time any section of trench is open;<br>• install trench plugs and ramps at maximum intervals of 500m as recommended by studies on entrapment of fauna in trenches (e.g. Doody et al. 2003, Swan and Wilson 2012, Woinarski et al. 2000);<br>• install fauna shelters with at least one per 500m interval between trench plugs, and preferably include funnel traps to help trap and subsequently remove animals;<br>• inspect the entire length of open trenches daily and within five hours of sunrise; and |

# Attachment 1

| | |
|---|---|
| | • ensure an adequate number of qualified fauna spotter-catcher teams are available to inspect and clear the entire length of open trench each day, within the conditions of their wildlife permits.<br><br>Painted Honeyeater: The Flora and Fauna Division agree with the assessment in the referral that there is a moderate likelihood that Painted Honeyeater may (occasionally) occur within the proposed development area. This species typically inhabits well-developed Acacia or Eucalypt dominated woodlands which supports higher densities of mistletoes, their preferred food. The species occurs in the lower rainfall parts of the Top End and semi-arid zones of the NT, however there is no evidence of a breeding population in the NT. The Flora and Fauna Division considers that the proposed pipeline poses a low risk to the species as the area is unlikely to support suitable breeding habitat or important foraging habitat for the species.<br><br>Common Brushtail Possum (north-western): This species was recently recorded during SREBA surveys (Young *et al* 2022) within Shenandoah Station and approximately 25km north of the proposed pipeline. While the status of the species and presence of important population(s) regionally is yet to be established, the Flora and Fauna Division is satisfied that the proposal poses a low risk to individuals and is unlikely to have a significant impact on local population(s) due to the small footprint and extensive area of suitable habitat in the broader region.<br><br>Yellow-spotted Monitor: This species has a broad distribution and is generally associated with riparian systems and the margins of wetland habitats on floodplains. The Flora and Fauna Division agrees with the assessment that the proposed development area contains highly suitable habitat for this species. Given the small area of clearing proposed and the large area of potential habitat within the region, the proposal does not pose a significant risk to regional populations of this species. Additionally, the proposed development will not exacerbate existing impacts of cane toads, which have been the primary cause of decline in the distribution and abundance of this species.<br><br>**References:**<br>• Doody JS, West P, Stapley J, Welsh M, Tucker A, Guarino E, Pauza M, Bishop N, Head M, Dennis S, West G, Pepper A, and Jones A (2003). Fauna by-catch in pipeline trenches: conservation, animal ethics, and current practices in Australia. *Australian Zoologist* **32**:410-419.<br>• Swan G, and Wilson S (2012). The results of fauna recovery from a gas pipeline trench, and a comparison with previously published reports. *Australian Zoologist* **36**:129-136.<br>• Young L, Patykowski J, Leiper I, Nano C, Fisher A, Gillespie G, Barnett G, Buckley K, Hanrahan N, McDonald P, Miller A, Ribot R, Ruykys L, Stewart A, Zimny A (2022). *Terrestrial Ecosystems Baseline Report: Strategic Regional Environmental and Baseline Assessment for the Beetaloo Sub-basin*. DEPWS Technical Report 36/2022. Flora and Fauna Division, Northern Territory Department of Environment, Parks and Water Security, Darwin. |

# Attachment 1

| | |
|---|---|
| | • Woinarski JC Z, Armstrong M, Brennan K, Connors G, Milne D, McKenzie G and Edwards K (2000). A different fauna?: Capture of vertebrates in a pipeline trench, compared with conventional survey techniques; and a consideration of mortality patterns in a pipeline trench. *Australian Zoologist* **31**:421-431. |
| Terrestrial ecosystems (sensitive and/or significant vegetation) | Interpretation of aerial imagery, DLPE mapping, and ground-truthed mapping supplied by SLR Ecological Assessment indicates that *Eucalyptus microtheca* open woodland on floodplains, *Eucalyptus microtheca* and *Lophostemon grandiflora* open woodland on floodplain fringes and *Macropteranthes kekwickii* closed woodland occurs within the proposed development area.<br><br>*Eucalyptus microtheca* open woodland on floodplains (estimated area of impact 20.42ha) are prevalent in non-lateritic areas characterised by clay soils and are closely associated with persistent or ephemerally waterlogged sites. They are considered of moderate ecological value within the regional context (Young *et al.* 2022). *Eucalyptus microtheca* and *Lophostemon grandiflora* open woodland on floodplain fringes (estimated area of impact 2.06ha) are a type of wetland with high ecological value (Young *et al.* 2022) with a widespread distribution but limited extent.<br><br>The Flora and Fauna Division agrees with the assessment that the proposed development poses a low risk to the persistence and ecological function of *E. microtheca* open woodland on floodplains and *E. microtheca* and *L. grandiflora* open woodland on floodplain fringes, provided that construction is undertaken following proposed methods, including the follow characteristics: a short-term impact of disturbance; the timing of the disturbance occurs during the dry season; the disturbance does not alter or interrupt surface water flow paths; and, the disturbance footprint is rehabilitated with flora appropriate to each original vegetation type following completion of the works. Additionally, each of these two communities are locally common, and the relatively small clearing footprint will not result in a meaningful reduction in the overall extent of either of these communities in the region.<br><br>Overall, the Project has a high likelihood of impacting riparian and floodplain vegetation, with low long-term risk. It is recommended that the clearing of riparian vegetation is avoided, and buffers as specified in DEPWS (2024) are applied where possible. Should clearing of riparian vegetation be unavoidable, it is recommended that impact management strategies described in APGA (2022) for water (e.g., hydrology and watercourses) and soil (erosion) are adopted to minimise the risk of impacts. These include applying appropriate sediment and erosion control on slopes, regular monitoring of the area, reduction of the extent and duration of soil disturbance, control of water movement through the area and stabilisation of areas immediately after works. Additionally, it is recommended that native groundcover vegetation and non-woody shrubs be reinstated via natural top-soil seedbank after any clearing occurs. This will aid in managing the risk of impacts to riparian vegetation, watercourses, and water quality via erosion.<br><br>*Macropteranthes kekwickii* closed woodland (estimated area of impact 2.332ha) are a type of dry inland monsoon forest and are of moderate ecological value (Young *et al.* 2022) due to its status as a NT endemic vegetation type and ecological |

# Attachment 1

| | |
|---|---|
| | values derived from its dense, shady canopy and its low flammability. The clearing of *Macropteranthes kekwickii* closed woodland should generally be avoided. It is uncertain whether this community can successfully be rehabilitated following clearing. However, considering the relatively small area of clearing and relative abundance of this vegetation type in the region, it is unlikely that the disturbance will have a significant effect on the regional persistence or function of this vegetation type. The Flora and Fauna Division recommends that, where practicable, the trench is sited so as to avoid larger patches of Bullwaddy plants.<br><br>**References**:<br><br>APGA (2022) *Code of Environmental Practice, Onshore Pipelines Revision 5*, Australian Pipelines and Gas Association, Ltd.<br><br>DEPWS (2024) *Land clearing guidelines: Northern Territory planning scheme*. (Department of Environment, Parks and Water Security, Northern Territory Government: Palmerston, Australia) https://nt.gov.au/__data/assets/pdf_file/0007/236815/land-clearing-guidelines.pdf.<br><br>Young L, Patykowski J, Leiper I, Nano C, Fisher A, Gillespie G, Barnett G, Buckley K, Hanrahan N, McDonald P, Miller A, Ribot R, Ruykys L, Stewart A, Zimny A (2022). *Terrestrial Ecosystems Baseline Report: Strategic Regional Environmental and Baseline Assessment for the Beetaloo Sub-basin. DEPWS Technical Report 36/2022*. Flora and Fauna Division, Northern Territory Department of Environment, Parks and Water Security, Darwin. |

# Attachment 1

**Table 2** - Cumulative Impacts Assessment results calculated at the property, bioregion, subregion and catchment scale. *Percentage value relative to baseline area.

| Assessment level | Level name | Vegetation community | Baseline area (ha) | Current area (ha) of intact native vegetation | Current area (ha) cleared | Proposed area (ha) of additional clearing | Area (ha) that would remain intact |
|---|---|---|---|---|---|---|---|
| Property | Hayfield | All vegetation communities | 183,827.42 | 183,684.97 (99.92%)* | 142.44 (0.08%)* | 539.32 | 183,145.65 (99.63%)* |
| | | U+ ^Melaleuca citrolens,Melaleuca minutifolia+/-Euc pruinosa\^tree\6\i;M Carissa lanceolata,^Melaleuca citrolens,Melaleuca stenostachya\^shrub\3\r;G ^Eulalia aurea,Chrysopogon fallax,Triodia microstachya\forb,^tussock grass,hummock grass\1\i | 41,680.66 | 41,680.66 (100.0%)* | 0.0 (0.0%)* | 126.87 | 41,553.79 (99.7%)* |
| | | U+ ^Cory dichromophloia,Euc leucophloia+/-Corymbia ferruginea\^tree\6\i;M ^Terminalia canescens,Petalostigma pubescens,Erythrophleum chlorostachys\^shrub\3\r;G ^Chrysopogon fallax,Triodia bitextura,Grewia retusifolia\^tussock grass,hummock grass,shrub\1\ | 10,124.17 | 10,098.87 (99.75%)* | 25.3 (0.25%)* | 304.51 | 9,794.36 (96.74%)* |
| | | U+ ^Acacia shirleyi+/-Macropteranthes kekwickii+/-Corymbia dichromophloia\^tree\7\c;M ^Acacia shirleyi,Flueggea virosa,Acacia lysiphloia\^shrub\4\i;G ^Chrysopogon fallax,Enneapogon oblongus,Aristida pruinosa\^tussock grass\1\i | 37,437.29 | 37,399.31 (99.9%)* | 37.98 (0.1%)* | 5.61 | 37,393.7 (99.88%)* |
| | | U+ ^Acacia shirleyi,Macropteranthes kekwickii\^tree\6\i;G ^Eragrostis cumingii,Mnesithea formosa,Paspalidium rarum\^tussock grass\1\i | 29,296.85 | 29,270.88 (99.91%)* | 25.97 (0.09%)* | 74.44 | 29,196.44 (99.66%)* |
| | | U+ ^Euc microtheca+/-Lophostemon grandiflorus+/-Ventilago viminalis\^tree\6\r;M ^Acacia holosericea,Atalaya hemiglauca+/-Ventilago viminalis\^shrub\3\r;G Eulalia aurea,Chrysopogon fallax,^Astrebla spp.\^tussock grass\1\c | 2,513.05 | 2,513.05 (100.0%)* | 0.0 (0.0%)* | 27.89 | 2,485.16 (98.89%)* |
| | Shenandoah | All vegetation communities | 136,068.36 | 135,995.89 (99.95%)* | 72.47 (0.05%)* | 1,428.05 | 134,567.84 (98.9%)* |
| | | U+ ^Melaleuca citrolens,Melaleuca minutifolia+/-Euc pruinosa\^tree\6\i;M Carissa lanceolata,^Melaleuca citrolens,Melaleuca stenostachya\^shrub\3\r;G ^Eulalia aurea,Chrysopogon fallax,Triodia microstachya\forb,^tussock grass,hummock grass\1\i | 43,764.99 | 43,764.96 (100.0%)* | 0.03 (0.0%)* | 94.45 | 43,670.51 (99.78%)* |
| | | U+ ^Cory dichromophloia,Euc leucophloia+/-Corymbia ferruginea\^tree\6\i;M ^Terminalia canescens,Petalostigma pubescens,Erythrophleum chlorostachys\^shrub\3\r;G ^Chrysopogon fallax,Triodia bitextura,Grewia retusifolia\^tussock grass,hummock grass,shrub\1\ | 37,542.32 | 37,509.85 (99.91%)* | 32.47 (0.09%)* | 1,035.73 | 36,474.12 (97.15%)* |
| | | U+ ^Acacia shirleyi+/-Macropteranthes kekwickii+/-Corymbia dichromophloia\^tree\7\c;M ^Acacia shirleyi,Flueggea virosa,Acacia lysiphloia\^shrub\4\i;G ^Chrysopogon fallax,Enneapogon oblongus,Aristida pruinosa\^tussock grass\1\i | 18,925.98 | 18,923.07 (99.98%)* | 2.91 (0.02%)* | 70.78 | 18,852.29 (99.61%)* |
| | | U+ ^Macropteranthes kekwickii,Acacia shirleyi\^tree\6\i;G ^Chrysopogon fallax,Paspalidium rarum,Mnesithea formosa\^tussock grass\2\i | 7,687.01 | 7,686.39 (99.99%)* | 0.62 (0.01%)* | 84.2 | 7,602.2 (98.9%)* |
| | | U+ ^Acacia shirleyi,Macropteranthes kekwickii\^tree\6\i;G ^Eragrostis cumingii,Mnesithea formosa,Paspalidium rarum\^tussock grass\1\i | 15,586.70 | 15,557.8 (99.81%)* | 28.9 (0.19%)* | 116.83 | 15,440.97 (99.07%)* |

# Attachment 1

| Assessment level | Level name | Vegetation community | Baseline area (ha) | Current area (ha) of intact native vegetation | Current area (ha) cleared | Proposed area (ha) of additional clearing | Area (ha) that would remain intact |
|---|---|---|---|---|---|---|---|
| | | U+ ^Euc microtheca+/-Lophostemon grandiflorus+/-Ventilago viminalis\^tree\6\r;M ^Acacia holosericea,Atalaya hemiglauca+/-Ventilago viminalis\^shrub\3\r;G Eulalia aurea,Chrysopogon fallax,^Astrebla spp.\^tussock grass\1\c | 3,689.08 | 3,689.07 (100.0%)* | 0.01 (0.0%)* | 26.06 | 3,663.02 (99.29%)* |
| Bioregion | Sturt Plateau | All vegetation communities | 9,857,530.83 | 9,751,995.36 (98.93%)* | 105,535.47 (1.07%)* | 1,968.56 | 9,750,026.8 (98.91%)* |
| | | U+ ^Euc microtheca+/-Lophostemon grandiflorus+/-Ventilago viminalis\^tree\6\r;M ^Acacia holosericea,Atalaya hemiglauca+/-Ventilago viminalis\^shrub\3\r;G Eulalia aurea,Chrysopogon fallax,^Astrebla spp.\^tussock grass\1\c | 31,885.18 | 31,814.67 (99.78%)* | 70.51 (0.22%)* | 53.95 | 31,760.72 (99.61%)* |
| | | U+ ^Melaleuca citrolens,Melaleuca minutifolia+/-Euc pruinosa\^tree\6\i;M Carissa lanceolata,^Melaleuca citrolens,Melaleuca stenostachya\^shrub\3\r;G ^Eulalia aurea,Chrysopogon fallax,Triodia microstachya\forb,^tussock grass,hummock grass\1\i | 201,425.24 | 200,402.41 (99.49%)* | 1,022.82 (0.51%)* | 221.32 | 200,181.1 (99.38%)* |
| | | U+ ^Cory dichromophloia,Euc leucophloia+/-Corymbia ferruginea\^tree\6\i;M ^Terminalia canescens,Petalostigma pubescens,Erythrophleum chlorostachys\^shrub\3\r;G ^Chrysopogon fallax,Triodia bitextura,Grewia retusifolia\^tussock grass,hummock grass,shrub\1\ | 1,034,003.86 | 1,029,882.01 (99.6%)* | 4,121.86 (0.4%)* | 1,340.24 | 1,028,541.77 (99.47%)* |
| | | U+ ^Acacia shirleyi+/-Macropteranthes kekwickii+/-Corymbia dichromophloia\^tree\7\c;M ^Acacia shirleyi,Flueggea virosa,Acacia lysiphloia\^shrub\4\i;G ^Chrysopogon fallax,Enneapogon oblongus,Aristida pruinosa\^tussock grass\1\i | 769,213.99 | 764,692.0 (99.41%)* | 4,521.99 (0.59%)* | 76.39 | 764,615.61 (99.4%)* |
| | | U+ ^Macropteranthes kekwickii,Acacia shirleyi\^tree\6\i;G ^Chrysopogon fallax,Paspalidium rarum,Mnesithea formosa\^tussock grass\2\i | 675,437.97 | 671,751.29 (99.45%)* | 3,686.68 (0.55%)* | 84.2 | 671,667.09 (99.44%)* |
| | | U+ ^Acacia shirleyi,Macropteranthes kekwickii\^tree\6\i;G ^Eragrostis cumingii,Mnesithea formosa,Paspalidium rarum\^tussock grass\1\i | 689,096.21 | 682,381.03 (99.03%)* | 6,715.18 (0.97%)* | 192.46 | 682,188.57 (99.0%)* |
| Subregion | Newcastle | All vegetation communities | 4,333,835.64 | 4,310,134.11 (99.45%)* | 23,701.54 (0.55%)* | 1,968.56 | 4,308,165.55 (99.41%)* |
| | | U+ ^Euc microtheca+/-Lophostemon grandiflorus+/-Ventilago viminalis\^tree\6\r;M ^Acacia holosericea,Atalaya hemiglauca+/-Ventilago viminalis\^shrub\3\r;G Eulalia aurea,Chrysopogon fallax,^Astrebla spp.\^tussock grass\1\c | 31,162.80 | 31,092.3 (99.77%)* | 70.51 (0.23%)* | 53.95 | 31,038.35 (99.6%)* |
| | | U+ ^Melaleuca citrolens,Melaleuca minutifolia+/-Euc pruinosa\^tree\6\i;M Carissa lanceolata,^Melaleuca citrolens,Melaleuca stenostachya\^shrub\3\r;G ^Eulalia aurea,Chrysopogon fallax,Triodia microstachya\forb,^tussock grass,hummock grass\1\i | 120,765.72 | 120,210.98 (99.54%)* | 554.74 (0.46%)* | 221.32 | 119,989.67 (99.36%)* |
| | | U+ ^Cory dichromophloia,Euc leucophloia+/-Corymbia ferruginea\^tree\6\i;M ^Terminalia canescens,Petalostigma pubescens,Erythrophleum chlorostachys\^shrub\3\r;G ^Chrysopogon fallax,Triodia bitextura,Grewia retusifolia\^tussock grass,hummock grass,shrub\1\ | 640,179.92 | 637,917.27 (99.65%)* | 2,262.66 (0.35%)* | 1,340.24 | 636,577.03 (99.44%)* |

# Attachment 1

| Assessment level | Level name | Vegetation community | Baseline area (ha) | Current area (ha) of intact native vegetation | Current area (ha) cleared | Proposed area (ha) of additional clearing | Area (ha) that would remain intact |
|---|---|---|---|---|---|---|---|
| | | U+ ^Acacia shirleyi+/-Macropteranthes kekwickii+/-Corymbia dichromophloia\^tree\7\c;M ^Acacia shirleyi,Flueggea virosa,Acacia lysiphloia\^shrub\4\i;G ^Chrysopogon fallax,Enneapogon oblongus,Aristida pruinosa\^tussock grass\1\i | 749,190.24 | 744,711.29 (99.4%)* | 4,478.95 (0.6%)* | 76.39 | 744,634.89 (99.39%)* |
| | | U+ ^Macropteranthes kekwickii,Acacia shirleyi\^tree\6\i;G ^Chrysopogon fallax,Paspalidium rarum,Mnesithea formosa\^tussock grass\2\i | 524,697.08 | 522,400.38 (99.56%)* | 2,296.7 (0.44%)* | 84.2 | 522,316.18 (99.55%)* |
| | | U+ ^Acacia shirleyi,Macropteranthes kekwickii\^tree\6\i;G ^Eragrostis cumingii,Mnesithea formosa,Paspalidium rarum\^tussock grass\1\i | 628,552.45 | 622,887.76 (99.1%)* | 5,664.69 (0.9%)* | 192.46 | 622,695.3 (99.07%)* |
| Catchment | Wiso | All vegetation communities | 22,931,076.37 | 22,880,644.97 (99.78%)* | 50,431.4 (0.22%)* | 1,968.56 | 22,878,676.41 (99.77%)* |
| | | U+ ^Euc microtheca+/-Lophostemon grandiflorus+/-Ventilago viminalis\^tree\6\r;M ^Acacia holosericea,Atalaya hemiglauca+/-Ventilago viminalis\^shrub\3\r;G Eulalia aurea,Chrysopogon fallax,^Astrebla spp.\^tussock grass\1\c | 95,505.14 | 95,381.52 (99.87%)* | 123.62 (0.13%)* | 53.95 | 95,327.57 (99.81%)* |
| | | U+ ^Melaleuca citrolens,Melaleuca minutifolia+/-Euc pruinosa\^tree\6\i;M Carissa lanceolata,^Melaleuca citrolens,Melaleuca stenostachya\^shrub\3\r;G ^Eulalia aurea,Chrysopogon fallax,Triodia microstachya\forb,^tussock grass,hummock grass\1\i | 164,674.47 | 164,119.73 (99.66%)* | 554.74 (0.34%)* | 221.32 | 163,898.42 (99.53%)* |
| | | U+ ^Cory dichromophloia,Euc leucophloia+/-Corymbia ferruginea\^tree\6\i;M ^Terminalia canescens,Petalostigma pubescens,Erythrophleum chlorostachys\^shrub\3\r;G ^Chrysopogon fallax,Triodia bitextura,Grewia retusifolia\^tussock grass,hummock grass,shrub\1\ | 390,555.17 | 389,953.59 (99.85%)* | 601.58 (0.15%)* | 1,340.24 | 388,613.35 (99.5%)* |
| | | U+ ^Acacia shirleyi+/-Macropteranthes kekwickii+/-Corymbia dichromophloia\^tree\7\c;M ^Acacia shirleyi,Flueggea virosa,Acacia lysiphloia\^shrub\4\i;G ^Chrysopogon fallax,Enneapogon oblongus,Aristida pruinosa\^tussock grass\1\i | 577,224.38 | 574,636.44 (99.55%)* | 2,587.94 (0.45%)* | 76.39 | 574,560.04 (99.54%)* |
| | | U+ ^Macropteranthes kekwickii,Acacia shirleyi\^tree\6\i;G ^Chrysopogon fallax,Paspalidium rarum,Mnesithea formosa\^tussock grass\2\i | 550,842.47 | 549,717.73 (99.8%)* | 1,124.74 (0.2%)* | 84.2 | 549,633.53 (99.78%)* |
| | | U+ ^Acacia shirleyi,Macropteranthes kekwickii\^tree\6\i;G ^Eragrostis cumingii,Mnesithea formosa,Paspalidium rarum\^tussock grass\1\i | 511,747.65 | 507,480.06 (99.17%)* | 4,267.58 (0.83%)* | 192.46 | 507,287.6 (99.13%)* |

# Submission under the *Environment Protection Act 2019*

## APA SPP Pty Ltd – Sturt Plateau Pipeline

This submission is made under regulation 53 of the Environment Protection Regulations 2020

**NT EPA reference number:** EP2024/040

**Government authority:** Department of Lands, Planning and Environment – Heritage Branch

**Summary:** Minor revisions, primarily in relation to the unexpected finds protocols. Generally, the Heritage Branch is satisfied that the proponent has met the expectations of the *Heritage Act 2011* in regard to archaeological surveying and management

| Section of Referral | Theme or issue | Comment |
|---|---|---|
| | Environmental Referral<br>• Table 10,<br>• Table 11,<br>• Section 5.2.2,<br>• Table 27.<br>'Cultural heritage' not the most suitable term used. | • 'Cultural heritage' is a collective term that covers tangible and intangible forms of heritage. While appropriate for most states and territories, it is not generally suitable in a regulatory context for the NT as it amalgamates the respective work and remit of the Heritage Branch and the Aboriginal Areas Protection Authority (AAPA).<br>• In simplest terms, the AAPA and the Land Councils are responsible for Sacred Sites under their respective legislation, while in this context the Heritage Branch are responsible for Heritage Places and Objects (including all Aboriginal archaeological places and objects) under the *Heritage Act 2011*. We recommend changing the language throughout to reflect this distinction as there are very different management and reporting obligations under the respective acts. |

# Attachment 2

| | | |
|---|---|---|
| | | • We note that the commissioned reports in Appendix C and D erroneously label themselves as 'Cultural Heritage Assessments'. We recommend that they are referred to as 'archaeological reports' or 'archaeological assessments' throughout the body of the application, mirroring the justification above that they refer to a specific assessment type under a particular Act. |
| | Environmental Referral<br>Table 12<br>Heritage Branch not included as a key stakeholder in the table. | • While there are no known archaeological places or objects recorded in the project area, the possibility of undiscovered (and protected) archaeological materials exists; as such, the Heritage Branch will remain an interested party for the life of the project. |
| | Environmental Referral<br>Table 15<br>Language choice regarding the risk of project impacts. | • Table states that, "The Project will therefore not have a significant impact on culture and heritage. No further assessment is required."<br>Recommend that, "The Project is unlikely to have a significant impact on culture and heritage. No further assessment is required. "<br>The undiscovered nature of some archaeological places and objects means that they may be identified during active works. The risk of avoidable impact and damage is reduced by surveying and appropriate stop work procedures. That does not mean there is no risk of significant impact, but that the risk will be appropriately managed. |
| | Environmental Referral<br>Table 15<br>Language choice regarding unexpected finds protocols. | • Table states that, "…protection of items of heritage value or Aboriginal artifacts."<br>Recommend that "…protection of undiscovered Aboriginal archaeological places and objects."<br>This phrasing is in line with the stipulations of the *Heritage Act 2011*, under which all Aboriginal archaeological places and objects are protected. |
| | Environmental Referral<br>Section 5.2.3.1<br>Cultural Heritage Protection | • Recommend adding, "Strict adherence to unexpected finds and human remains protocols in the Cultural Heritage Management Plans." |

# Attachment 2

| | | |
|---|---|---|
| | Appendix D – Section 6.1<br><br>Amendments to the unexpected finds protocol | The following amendments should be adopted into the "Discovery of a previously unrecorded heritage feature or object" section before it is incorporated into the project Cultural Heritage Management Plan.<br><br>Alternatively, the Heritage Branch can help the proponent develop a suitable protocol for the duration of the project.<br><br>• Remove 'Pre-construction activities', the protocol should be in effect for all stages of a project.<br><br>• Step 6 should involve the notification of the Heritage Branch on (08) 8999 5039 or at heritage.branch@nt.gov.au. The Northern Land Council (NLC) are not authorised under the *Heritage Act 2011* to provide advice regarding the discovery or nature of archaeological materials (*Heritage Act 2011*, Part 5.5, Section 114).<br><br>All stages past Step 8 should be disregarded. The Heritage Branch will provide advice on how to proceed when unexpected finds are reported. This includes whether an Application to Carry Out Works is necessary if further impacts to archaeological places or objects are unavoidable (*Heritage Act 2011*, Part 3.2, Section 72). The stop work order will remain in place until an application has been approved, or further advice from the Heritage Branch. We note that all Aboriginal archaeological places and objects are protected under the *Heritage Act 2011*, and it is an offence to cause any further impact to a protected place or object upon discovery (*Heritage Act 2011*, Part 5.5, Section 111). |
| | Appendix D – Section 6.2<br><br>Amendments to the discovery of human remains | The following amendments should be adopted into the "Unexpected discovery of human skeletal remains" section before it is incorporated into the project Cultural Heritage Management Plan. Alternatively, the Heritage Branch can help the proponent develop a suitable protocol for the duration of the project.<br><br>• Step 1: Upon the discovery of suspected human remains, all work in the area should stop immediately. The NT Police should be notified on 131 444 and shall provide advice as to how to proceed. Under no circumstances should the remains be disturbed or interfered with unless directed to do so by NT Police.<br><br>• Step 2: If the NT Police advise that the remains are not related to an ongoing police matter, then the NT Heritage Branch should be contacted on (08) 8999 5039 or heritage.branch@nt.gov.au. A Heritage Officer will make a determination as to the ancestry of the remains. The Heritage Branch may involve the Aboriginal Areas Protection Authority at this stage, if necessary. |

# Attachment 2

| | | |
|---|---|---|
| | | • Step 3: The Heritage Branch will advise on the ancestry of the remains, and how to appropriately proceed. This may involve liaising with Traditional Owners and Custodians if Aboriginal ancestral remains cannot be avoided and need to be exhumed and reburied. Works cannot recommence in the area until the NT Police and the Heritage Branch advise that it is safe to proceed.<br><br>The protocol in Appendix D, while valuable in detailing steps past this stage, is complex. The above three points list in order the critical stages to follow on the discovery of human remains, and the NT Police and Heritage Branch will communicate on discovery how to proceed past this stage. |