

Assessment Report 105

Assessment by referral information

**Pancho Beef
Mathison Station Land Clearing
November 2023**

This assessment report has been prepared by the Northern Territory Environment Protection Authority (NT EPA) pursuant to section 64 of the *Environment Protection Act 2019* (EP Act). It describes the outcomes of the NT EPA's assessment of the Mathison Station Land Clearing proposal.

The proposed action is for clearing of 4,517 ha of land on Mathison Station (NT Portion 7061, Perpetual Pastoral Lease 1224) for the purpose of growing hay and fodder crops including cavalcade, jarrah, forage sorghum and Rhodes grass. The NT EPA's method for assessment of the proposed action is by referral information.

The assessment report documents potential environmental impacts and risks identified during the environmental impact assessment process, focusing on those that could be significant, and the measures and recommended conditions required to address potentially significant impacts.

In accordance with section 65 of the EP Act, the assessment report is for the Northern Territory Minister for Environment to consider when making a decision about whether to approve the action under the EP Act.



Dr Paul Vogel AM
NT EPA Chairperson

16 November 2023

Northern Territory Environment Protection Authority
GPO Box 3675
Darwin
Northern Territory 0801

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Summary

This assessment report has been prepared by the Northern Territory Environment Protection Authority (NT EPA) pursuant to section 64 of the *Environment Protection Act 2019* (EP Act). This Assessment Report and the draft Environmental Approval are provided to the Minister for Environment, Climate Change and Water Security (Minister) for consideration in deciding whether to grant an environmental approval for the Mathison Station Land Clearing proposal (proposed action).

NTR Ag Pty Ltd & The trustee for Mohr-Bell Family Trust & The trustee for Pancho Trust trading as Pancho Beef (proponent) proposes an action to clear 4,517 ha of land on Mathison Station (NT Portion 7061, Perpetual Pastoral Lease 1224) for the purpose of growing hay and fodder crops including cavalcade, jarrah, forage sorghum and Rhodes grass. No irrigation is planned for this proposed action.

The clearing would be staged over 10 years with approximately 450 ha cleared each year subject to seasonal conditions. Each cleared plot will be under production approximately two years after it is cleared.

The NT EPA assessed the proposed action by referral information in accordance with the EP Act. The environmental impact assessment examined the potential for significant direct, indirect and cumulative impacts on the environment.

The NT EPA identified and examined potential significant impacts on the following three environmental factors:

1. Terrestrial ecosystems
2. Atmospheric processes
3. Culture and heritage.

To address potential significant impacts of the proposed action on the key environmental factors, the NT EPA has recommended conditions for the Minister to consider in deciding whether to grant or refuse an environmental approval for the proposed action. The proponent and statutory decision-makers were consulted on the draft Environmental Approval as required by regulation 160 of the Environment Protection Regulations 2020.

The NT EPA considers that the clearing configuration proposed by the proponent is not acceptable and has proposed an alternative configuration in the draft environmental approval, to include appropriate wildlife corridors and boundary buffers. Appropriate wildlife corridors are necessary to enhance connectivity within the wider landscape, provide shelter, facilitate movement and promote population viability. Appropriate boundary buffers are best practice and necessary for a range of interconnected and complementary environmental functions. Amendment of the clearing configuration reduces the area that can be acceptably cleared in the project area from 4,517 ha to 4,060 ha.

The NT EPA's assessment concludes that the proposed action can be implemented and managed in a manner that is environmentally acceptable and therefore recommends that environmental approval be granted, subject to the recommendations and conditions detailed in the draft Environmental Approval (Appendix 1).

The NT EPA's assessment also includes other advice for the Minister's consideration.

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1. Introduction

This assessment report has been prepared by the Northern Territory Environment Protection Authority (NT EPA) in accordance with section 64 of the *Environment Protection Act 2019* (EP Act). It provides an evaluation of the potential significant environmental impacts of the Mathison Station Land Clearing proposal (proposed action).

The proponent is NTR Ag Pty Ltd & The trustee for Mohr-Bell Family Trust & The trustee for Pancho Trust trading as Pancho Beef. The NT EPA assessed the proposed action by referral information in accordance with the EP Act and Environment Protection Regulations 2020 (EP Regulations).

The purpose of this assessment report is:

- to assess whether the proposed action is likely to meet the environmental objectives
- to assess the potential significant environmental impacts of the proposed action
- to make recommendations for avoiding, mitigation and managing those impacts
- to advise the Minister as to the acceptability of the proposed action.

The assessment report must assess the potential environmental impacts and risks of the proposed action and whether there are any significant residual impacts remaining after all reasonable measures to avoid and then mitigation and manage the risks have been taken.

On completion of its environmental impact assessment, the NT EPA provides this assessment report, (including the draft Environmental Approval at Appendix 1), to the Minister for Environment, Climate Change and Water Security (Minister) for consideration in deciding whether to grant an environmental approval for the proposed action. Matters taken into account during the assessment are tabulated in section 9. An environmental impact assessment timeline is provided at Appendix 2.

2. Proposed action

2.1. Overview

The proponent proposes to clear 4,517 ha of native vegetation on Mathison Station for the purpose of growing hay and fodder crops including cavalcade, jarrah, forage sorghum and Rhodes grass.

The clearing would be staged over 10 years with approximately 450 ha cleared each year subject to seasonal conditions. Each cleared plot will be under production approximately two years after it is cleared. No irrigation is planned for this proposed action.

Figure 1 shows the layout of clearing and total extent of the proposed action. The Department of Environment, Parks and Water Security Land Assessment Branch advised that a land capability assessment indicates that the proposed action area is suitable for non-irrigated improved pasture for grazing and hay production.

A detailed description of the proposed action is provided in section 2.2 of the referral report.

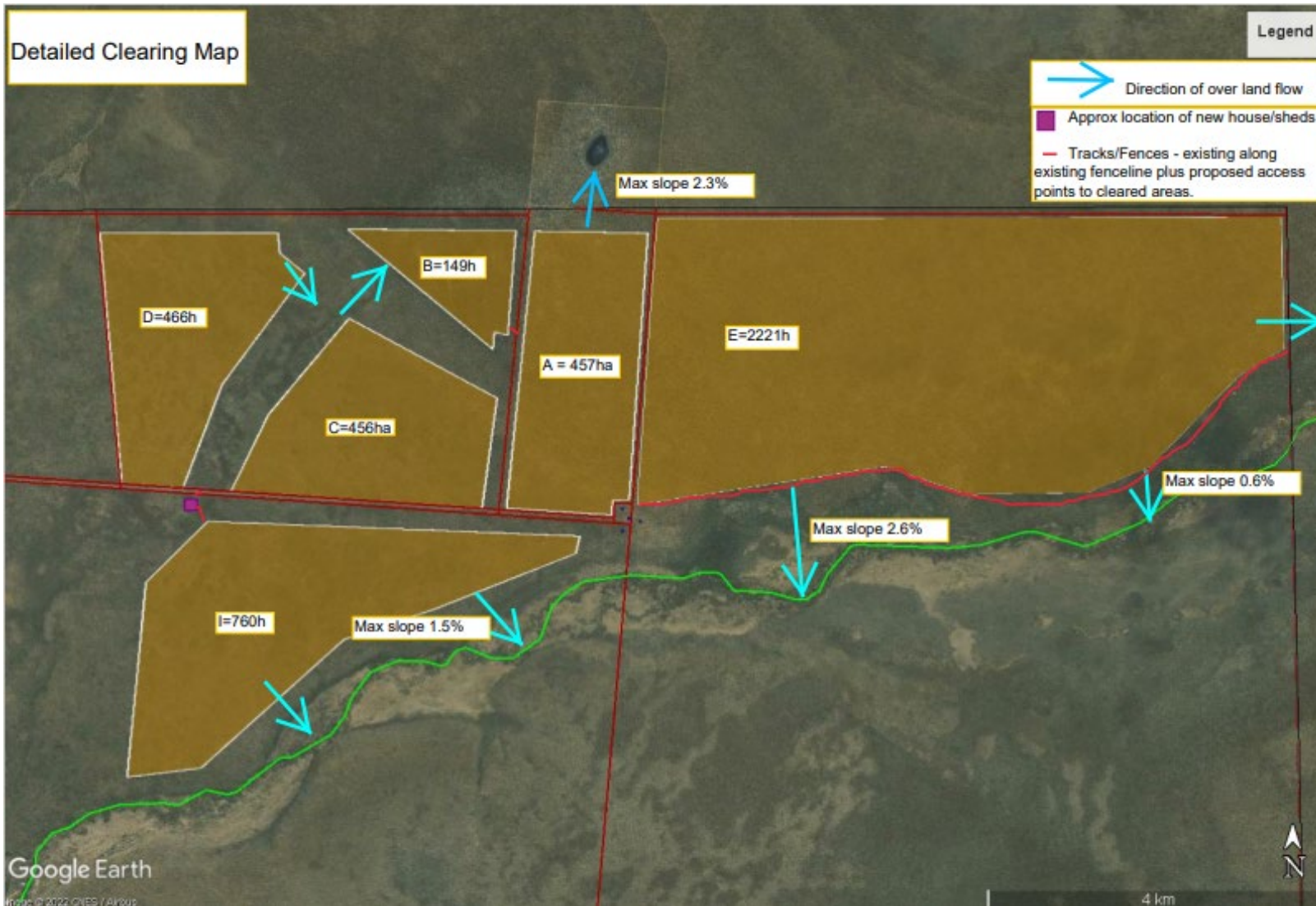


Figure 1 Proposed extent of clearing (Source: Pancho Beef – Mathison Station Land Clearing Proposal Appendix E)

2.2. Local context

The proposed action is located 100 km south west of Katherine on NT Portion 7061 (Perpetual Pastoral Lease 1224) in the Victoria Daly Shire local government area. The proposed action area is unzoned. The nearest residence to the proposed action is approximately 10 km north east, on an adjacent property (**Figure 2**). The proposed action is bordered by 'Aldersyde' creek in the south, Duckhole swamp in the north, and a drainage channel between clearing polygons B, C and D.

Land surrounding NT Portion 7061 includes the Victoria Highway road corridor and:

- Stapleton Station (NT Portion 7060, Perpetual Pastoral Lease 1206)
- Dixie Station (NT Portion 7062, Perpetual Pastoral Lease 1207)
- Delamere Air Weapons Range (NT Portion 3413, Crown Lease in Perpetuity 2399)
- Willeroo Station (NT Portion 3983, Perpetual Pastoral Lease 1040)
- Aroona Station (NT Portion 3982, Perpetual Pastoral Lease 1038).

Pastoral activity is the main land use in the surrounding area with a Commonwealth training facility comprising the other main land use in the area.

The proposed action is within the Birdum subregion of the Sturt Plateau Bioregion. The Sturt Plateau bioregion mostly comprises a gently undulating plain on lateritised Cretaceous sandstones. Soils are predominantly neutral sandy red and yellow earths. Small wetlands associated with the intermittent drainage systems occur throughout the bioregion. Some of these drainage systems probably have regional value for flora and fauna (NT Government 2005).

Two nationally significant wetlands occur just outside the Sturt Plateau Bioregion:

- approximately 300 km south east of the proposed action, Lake Woods wetland (NT013) occurs on the border of this bioregion and the Mitchell Grass Downs bioregion; and
- approximately 125 km north east of the proposed action, the Mataranka Thermal Pools (NT003) occurs on the border of this bioregion and the Gulf Fall and Uplands bioregion.

Environmental values which require protection from the proposed action include small wetlands associated with the intermittent drainage systems throughout the bioregion, biodiversity, atmospheric processes supported by the terrestrial carbon cycle in tropical savannahs, and Aboriginal culture and heritage.

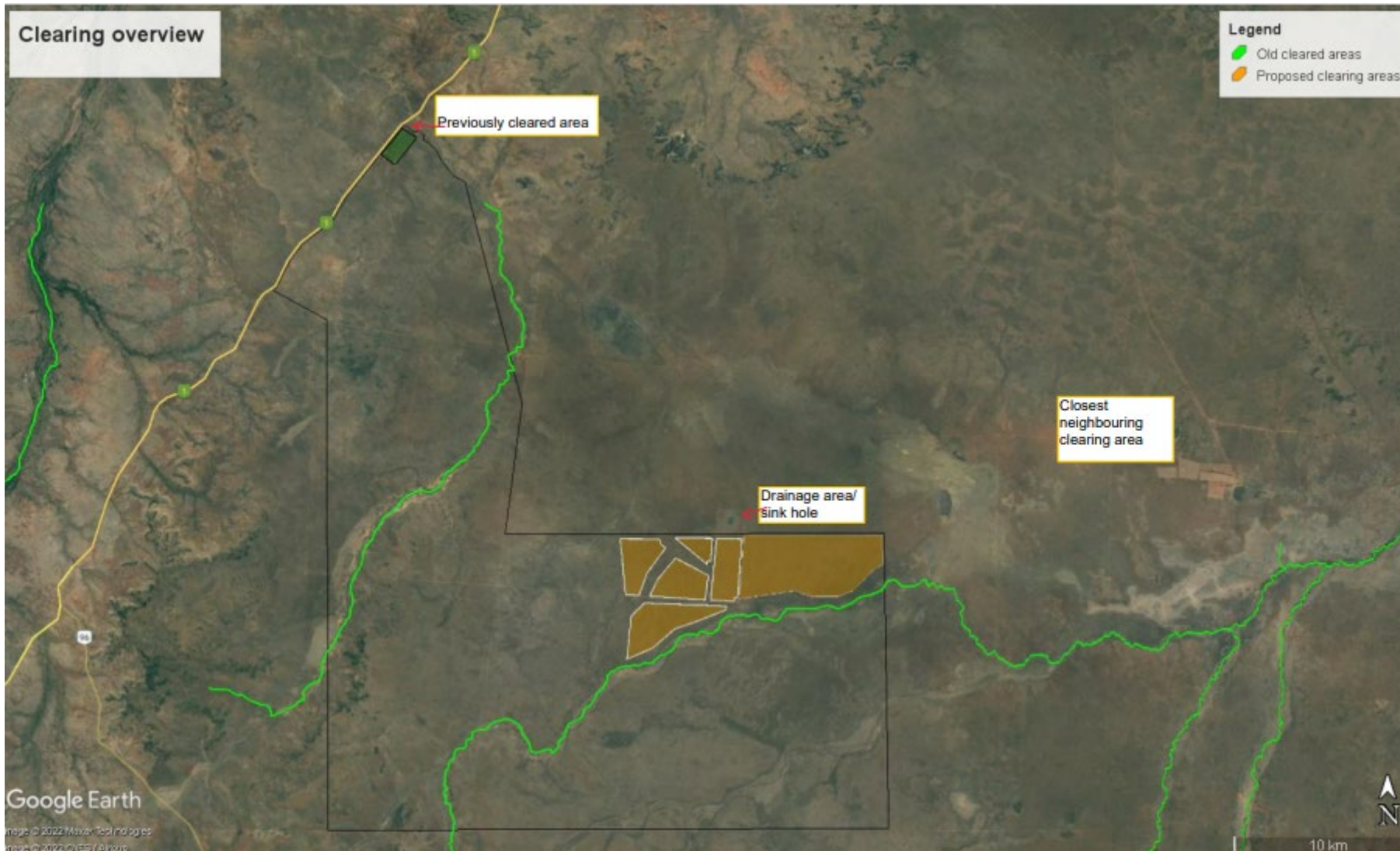


Figure 2 Location and footprint of proposed action (Source: Pancho Beef – Mathison Station Land Clearing Proposal Appendix E)

2.3. Alternatives

Alternatives to land clearing were not provided in the referral. The referral indicates the scale of the proposed action is required to justify the investment in the required equipment and infrastructure.

3. Strategic context

The proposed action is consistent with the NT Government's commitment to creating jobs and economic growth. In November 2020, Territory Economic Reconstruction Commission (TERC) released its report with recommendations to accelerate economic recovery. The report identified agribusiness as a key industry sector that could be leveraged to grow the Territory economy. The TERC report highlighted the opportunity to extend and expand the Territory's foundations in mining and agribusiness, with Territory cattle exports representing 20% of Australia's total live export. The proposed action is also consistent with strategic priorities and actions contained in the NT Agribusiness Strategy which was produced in response to the TERC report.

3.1. Proposed action benefits

The Department of Industry, Tourism and Trade advised that proposed action is in line with the economic objectives of the NT Government. The identified improved pasture species are suited to the climatic conditions and soil types of the area. The proposed action will add to the proponent's self-sufficiency of fodder and reduce the introduction of biosecurity risks including weeds to Mathison Station.

3.2. Emissions reduction

Australia is a signatory to the Paris Agreement treaty on climate change. The goal of the agreement is to limit increases of global average temperature by reducing greenhouse gas (GHG) emissions. The Australian and NT government's both have a target of net zero emissions by 2050.

The *Northern Territory Climate Change Response: Towards 2050* provides a policy framework for the Government's strategic management of climate change risks and opportunities. A key objective of the policy is to achieve net zero emissions by 2050.

The proposed action is classed as a 'large GHG emitter' under the NT Government *Greenhouse Gas Emissions Management for New and Expanding Large Emitters policy* (Large Emitters policy). The proposed action is a land use project that involves the clearing of native vegetation and will generate more than 500 000 tCO₂-e scope 1 emissions from a single land clearing action. This is the first land use proposed action that meets the criteria for a large GHG emitter under the Large Emitters policy and is subject to an environmental impact assessment under the EP Act.

Australia's net greenhouse gas emissions from all sectors was 498.1 million tonnes of carbon dioxide equivalent (MtCO₂ -e) in 2020–21 (DCCEEW, 2022). The Australian land use, land-use change and forestry sector was a net sink in 2020-21 with net emissions of -39.0 Mt CO₂-e for the same reporting period.

Total annual emissions from the NT were approximately 14.1 MtCO₂-e in 2020-21 (DCCEEW 2023).

4. Statutory context

The proposed action requires assessment by the NT EPA under the EP Act. The NT Minister for Environment, Climate Change and Water Security is the approval authority.

Pursuant to section 92 of the EP Act, if an environmental approval under the EP Act is granted, it will prevail over other statutory authorisations that the proponent may be required to obtain. It is the responsibility of the proponent to obtain all relevant statutory authorisations which may include, but are not limited to:

- clearing of native vegetation permit(s) under the *Pastoral Land Act 1992*
- approval(s) to carry out work on a heritage place or object under the *Heritage Act 2011*.

4.1. Mandatory matters for consideration

In preparing this assessment report, the NT EPA considered the referral information and submissions received on the referral information and draft environmental approval, in accordance with regulation 157 of the EP Regulations.

In carrying out its assessment, the NT EPA took into account the purpose of the environmental impact assessment process under section 42 of the EP Act including consideration of:

- the objects (EP Act, section 3)
- the principles of ecologically sustainable development (EP Act, Part 2 Division 1)
- the environmental decision-making hierarchy (EP Act section 26)
- the waste management hierarchy (EP Act section 27)
- ecosystem-based management
- impacts of a changing climate.

Refer to section 9 for further detail about matters that the NT EPA has taken into account during its assessment.

5. Consultation

Based on the information in the referral and matters raised in submissions to the NT EPA, indicates the proponent did not conduct its own consultation with stakeholders in accordance with the NT EPA *Stakeholder Engagement and Consultation Guideline*.

The Pastoral Land Board and NT EPA administered statutory consultation processes on the referral and land clearing application, as discussed below.

On 30 November 2022 the proponent submitted a pastoral land clearing application to the Pastoral Land Board under the *Pastoral Land Act 1992*. Public comment was invited on the pastoral land clearing application from 11 December 2022 to 20 January 2023. Submissions on the pastoral land clearing application are included in the referral report as Appendices A-D.

The NT EPA invited public and government authority comment on the proponent's referral information during the consultation period from 28 June to 26 July, 2023. Five government authority and two public submissions were received.

In preparing this assessment report, matters raised in the submissions on the referral were considered in relation to the potential significant environmental impacts of the proposed action. The issues raised in submissions are discussed in section 6.

The NT EPA consulted with the proponent and statutory decision-makers who the NT EPA consider may have a view on the draft Environmental Approval, in line with EP Regulation 160. The NT EPA considered the submissions in finalising its advice and recommendations to the Minister.

6. Assessment of key environmental factors

6.1. Overview

The NT EPA identified that the proposed action has the potential to have a significant impact on environmental values associated with three key environmental factors¹ (Table 1).

Table 1 Key environmental factors

THEME	FACTOR	ENVIRONMENTAL OBJECTIVE
LAND	Terrestrial ecosystems	Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.
AIR	Atmospheric processes	Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.
PEOPLE	Culture and heritage	Protect culture and heritage.

The NT EPA considered other environmental factors during its environmental impact assessment; however, the impact on those factors was not considered to be significant.

6.2. Terrestrial ecosystems

6.2.1. Environmental values

The proposed action area occurs within the Sturt Plateau Bioregion. DEPWS Flora and Fauna Division advised that a total of 1.1% of the bioregion is currently mapped as cleared. Sensitive and/or significant vegetation (wetlands and riparian vegetation) are present adjacent to the clearing area.

Vegetation within the proposed action area consists primarily of a mixed *Corymbia*, *Eucalyptus tetradonta* and *Erythrophleum chlorostachys* open woodland. An exception is an imperfectly drained *Melaleuca viridiflora*, *Melaleuca nervosa* low open forest. Significant *E. tetradonta* dieback is evident across most of the clearing area.

The DEPWS Flora and Fauna Division submission on the referral identified 11 species (Table 2) classified as threatened under the *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act)

¹ [NT EPA Environmental factors and objectives](#)

and/or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that may occur within or immediately adjacent to the site.

Table 2 Threatened species with the potential to occur within or adjacent to the proposed action

Common Name	Scientific Name	TPWC Act	EPBC Act
Australian Painted Snipe	<i>Rostratula australis</i>	Endangered	Endangered
Gouldian Finch	<i>Erythrura gouldiae</i>	Vulnerable	Endangered
Victoria River Squat Snail	<i>Trachiopsis victoriana</i>	Vulnerable	-
Grey Falcon	<i>Falco hypoleucos</i>	Vulnerable	Vulnerable
Pale Field-rat	<i>Rattus tunneyi</i>	Vulnerable	-
Crested Shrike-tit (northern)	<i>Falcunculus frontatus whitei</i>	Near Threatened	Vulnerable
Mertens' Water Monitor	<i>Varanus mertensi</i>	Vulnerable	-
Red Goshawk	<i>Erythroriorchis radiatus</i>	Vulnerable	Vulnerable
Ghost Bat	<i>Macrotis lagotis</i>	Near Threatened	Vulnerable
Yellow-spotted Monitor	<i>Varanus panoptes</i>	Vulnerable	-
Common Brushtail Possum (north-western)	<i>Trichosurus vulpecula arnhemensis</i>	Near Threatened	Vulnerable

The proposed action area has not been comprehensively surveyed. The DEPWS Flora and Fauna Division's assessment was informed by a search of DEPWS databases within a 50 km radius of the site, expert knowledge of species' habitat requirements, and information about habitats occurring within the site.

6.2.2. Consultation

Submissions on the referral information raised the following key issues in relation to terrestrial ecosystems:

- the area has not been comprehensively surveyed
- 11 threatened species may occur within 50 km of the proposed action area
- the potential for future cumulative impacts on native vegetation corridors in the context of potential future clearing applications on adjoining properties
- the potential for impacts to wildlife or landscape corridors posed by the current configuration of Polygons A and E
- concern about the potential for cumulative impacts of broad scale land clearing on threatened species.

6.2.3. Factor assessment and recommended regulation

In assessing whether the residual impacts of the proposed action will meet the NT EPA environmental factor and objective, and whether reasonable and appropriate regulatory conditions can be imposed, the assessment findings and recommended conditions of approval are presented in **Table 3**.

Table 3 Assessment for terrestrial ecosystems, recommendations and conditions of approval

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
<p>Terrestrial ecosystem values have the potential to be impacted through:</p> <ul style="list-style-type: none"> • direct removal of up to 4,517 ha of native vegetation that is likely to include habitat for 11 threatened species • land clearing to the extent that it would cause habitat fragmentation and reduce landscape connectivity. 	<p>The proponent has generally designed the proposed action in accordance with the NTPS Land Clearing Guidelines except where the guidelines were deemed by the proponent to be counter-productive to weed and pest control, wildfire prevention and optimal use of the available land types.</p>	<p>Reduction of landscape connectivity impacting biodiversity due to:</p> <ul style="list-style-type: none"> • inadequate property boundary buffers • inadequate wildlife corridors. 	<p>The proposed action will increase the total cleared area of the bioregion by <0.1%. The affected vegetation community is currently 98.4% intact.</p> <p>The proposed action will contribute to a reduction in landscape connectivity.</p> <p>Appropriate wildlife corridors are necessary to maintain connectivity within the wider landscape, provide shelter, facilitate movement and promote population viability. Appropriate boundary buffers are necessary for a range of interconnected and complementary environmental functions.</p> <p>Property boundary buffers and wildlife corridors are also necessary to further reduce impacts to the 11 threatened species that are likely to occur.</p> <p>To ensure landscape connectivity is achieved, the NT EPA recommends two 500 m wide north/south wildlife corridors within Polygon E. The recommended corridors provide increased connectivity between the sinkhole/swamp north</p>	<p>Regulated through recommended conditions.</p> <p>Condition 1: Limitation and extent</p> <ul style="list-style-type: none"> • Limitations and extent to limit the area of land clearing. <p>The proposed action will also be regulated under a permit to clear native vegetation under the <i>Pastoral Land Act 1992</i>.</p>

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
			of Polygon A and the 3rd order stream south of Polygon E. The NT EPA acknowledges that by incorporating the recommended wildlife corridors, the amended clearing area is considered acceptable – albeit the extent of clearing in the assessed area (proposed action area that is subject to this environmental impact assessment) is reduced to ~4,060 ha.	

6.2.4. Conclusion against the NT EPA objective

With the retention of additional native vegetation buffers and wildlife corridors, implementation of the proponent's proposed management measures, commitments, and recommended conditions for avoiding and mitigating impacts identified in the draft Environmental Approval (Appendix 1), the NT EPA considers that the proposed action can be conducted in such a manner that its objective for terrestrial environmental quality is likely to be met.

6.3. Atmospheric processes

6.3.1. Environmental values

The causal link between GHG emissions and climate change is well established. The NT EPA acknowledges that climate change impacts are being experienced globally and across the Territory. There has been a significant increase in the number of extremely hot days, in both the Top End and central Australia, and climate modelling indicates that these trends will continue.

6.3.2. Consultation

The submissions on the referral information raised the following key issues in relation to atmospheric processes:

- criticism of the lack of genuine GHG abatement solutions in the proposed Greenhouse Gas Abatement Plan (GGAP)
- there are currently no approved methodologies for offsetting emissions from land clearing in the NT
- a ten-year baseline from 2012 – 2022 being the most appropriate ten-year period to use in setting an emissions baseline
- the need to scientifically verify the potential for the proposed action to sequester over 8,100 tCO₂-e per year under full production
- concern that the 623,714.3 tCO₂-e is unable to be mitigated or abated
- whether the proposed action is able to demonstrate a meaningful contribution to the NT's goal of achieving net zero GHG emissions by 2050
- cumulative impacts of land clearing on atmospheric processes jeopardising the NT Government's commitment to net zero by 2050 and contributing to climate change.

6.3.3. Factor assessment and recommended regulation

The policy and guidance framework around the development and assessment of GGAPs for large scale land use proposals in the NT is in an early stage of development. Similarly, projects in the NT have had little opportunity to apply emissions accounting standards and methods for calculating baseline emissions from land clearing. The NT EPA is aware that the NT Government is prioritising work in these areas to support industry to meet its objectives. Ideally this work would be pursued in partnership with industry.

There is also uncertainty about reasonable and practicable options available to the pastoral sector to reduce GHG emissions from land clearing in the NT. The NT EPA considers that this is a further opportunity for the NT Government to partner with industry to support the pastoral industry to contribute to the Territory's target of net zero emissions by 2050.

The assessment findings and recommended conditions of approval are presented below in **Table 4**.

Table 4 Assessment for atmospheric processes and recommended conditions

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
<p>Land clearing and land use change impacts terrestrial carbon sinks. Consequently, the exchange of carbon dioxide (carbon cycle) between the terrestrial biosphere and the atmosphere would be altered by the proposed action.</p> <p>The proposed action is estimated to produce ~ 623,714 tCO₂-e scope 1 emissions over 10 years from:</p> <ul style="list-style-type: none"> clearing and burning vegetation plant and equipment used 	<p>The proponent prepared a GGAP and identified the following measures to mitigate GHG emissions:</p> <ul style="list-style-type: none"> reduced, late season, hot fires increased soil organic carbon sequestration from improved pasture productivity <p>The proponent estimated that a net sequestration (mitigation) of 8,100 tCO₂-e per year would be achieved under full production. Full production is expected within 12 years' of commencing the proposed action.</p> <p>The proponent's long term emissions target is to mitigate 127,773 tCO₂-e (the amount above the large emitters threshold of 500,000 tCO₂-e) within 22 years' of project commencement through sequestration under full production.</p>	<p>Residual emissions from the proposed action are 497,227 tCO₂-e.</p> <p>Emissions from the proposal will contribute to climate change.</p>	<p>The proposed action will make a substantial contribution to the NT's GHG emissions through clearing and burning of vegetation.</p> <p>The proponent's measures to reduce emissions from the proposed action do not account for a majority of the emissions, 497,227 tCO₂-e.</p> <p>Opportunities for the proponent to minimise its scope 1 emissions are limited.</p> <p>Research indicates that there is uncertainty about the rate of soil organic carbon sequestration under pastures compared to savannah woodlands in the NT (Henry 2023), and scientific data, including baseline data is required to address this uncertainty.</p> <p>The NT EPA considers that scientific data from a monitoring plan could inform a more accurate estimate of GHG emissions from land clearing and the development of options to avoid or mitigate GHG emissions for the ongoing</p>	<p>Regulation through recommended conditions:</p> <p>Condition 1: Limitation and extent</p> <ul style="list-style-type: none"> Limitations and extent to limit the area of land clearing. <p>Condition 3 Atmospheric processes</p> <ul style="list-style-type: none"> Develop and implement a monitoring plan capable of: <ul style="list-style-type: none"> documenting baseline conditions prior to land clearing and monitoring performance of the GGAP

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
<p>in the clearing of vegetation.</p>	<p>The proponent acknowledged that data supporting the estimated rate of soil organic carbon sequestration under pastures compared to savannah woodlands in the NT is limited. To address this uncertainty, the proponent identified the need for additional research.</p> <p>The proponent expects that findings from a joint research initiative will address uncertainty in measures to mitigate GHG emissions from the proposed action. The proponent considers that the research needs to run concurrently with the proposed action to demonstrate the extent of mitigation.</p>		<p>implementation of the proposed action. The collection of baseline data consistent with the methodologies used by DEPWS is intended to inform the development of options for the pastoral industry in the future.</p> <p>The NT EPA acknowledges that a meaningful contribution by the proponent, to scientific data to address the uncertainty in the modelling and effectiveness of the chosen mitigation method or to identify other potential options to minimise or otherwise mitigate GHG emissions from the proposal is a reasonable, practicable contribution.</p> <p>Recommended conditions support this approach.</p> <p>The outcomes of a monitoring plan must be used by the proponent to inform a revised GGAP, which must be implemented before the GHG emissions from the proposed action are projected to be greater than 500,000 tCO₂-e.</p>	<ul style="list-style-type: none"> ○ informing continuous improvement. • Revise the GGAP based on the outcomes of the monitoring plan and in situ monitoring. • Implement a revised GGAP that has been reviewed and endorsed by an independent qualified person. • Independent qualified person to provide environmental performance report every ~5 years.

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
			<p>The NT EPA's recommendations under the Terrestrial ecosystem factor would reduce the clearing area by 441.04 ha (from 4501.07 ha to 4060.03 ha). DEPWS advises that the calculations of the estimated GHG emissions determined that clearing the amended footprint of 4060.03 ha would emit approximately 554 716.72 tCO₂-e. Despite the reduction, the NT EPA's recommendations regarding the Atmospheric processes factor remain unchanged.</p>	

6.3.4. Conclusion against the NT EPA objective

With the implementation of the recommended conditions identified in the draft Environmental Approval (Appendix 1), the NT EPA considers that the proposed action can be conducted in such a manner that its objective for atmospheric processes is likely to be met.

6.4. Culture and heritage

6.4.1. Environmental values

The proposed action is located in an area of relatively intact tropical savannah. The area has not been cleared previously. No anthropological research or on-ground archaeological surveys have been undertaken in the proposed action area.

The proponent has, among other obligations, the following general duties under section 43 of the EP Act to:

- consult with affected communities, including Aboriginal communities, in a culturally appropriate manner;
- seek and document community knowledge and understanding (including scientific and traditional knowledge and understanding) of the natural and cultural values of areas that may be impacted by the proposed action
- address Aboriginal values and the rights and interests of Aboriginal communities in relation to areas that may be impacted by the proposed action.

A search of the Heritage Branch of the Department of Territory Families, Housing and Communities database showed there are no declared heritage places and no previously recorded Aboriginal archaeological sites located within Mathison Station (NT Portion 7061). The lack of Aboriginal archaeological sites may be due to no archaeological surveys having ever been conducted of that proposed action area.

6.4.2. Consultation

During NT EPA consultation on the referral information, submissions raised the following key issues in relation to culture and heritage:

- The AAPA advised that there is a registered site around 3-5 kilometres from the subject land, and another one 10-15 kilometres away, as well as a recorded site 20-30 kilometres away.
- The AAPA strongly recommended that the proponent apply for an Authority Certificate for the proposed works.
- Aboriginal archaeological sites are present in the broader vicinity.
- The proponent should develop and implement an unexpected archaeological finds procedure as a mitigation measure.

6.4.3. Factor assessment and recommended regulation

The potential significant impacts of the proposed action on cultural and heritage values have been considered. In assessing whether the residual impacts of the proposed action will meet the NT EPA environmental factor and objective, and whether reasonable and appropriate regulatory conditions can be imposed, the assessment findings and recommended conditions of approval are presented below in **Table 5**.

Table 5 Assessment for Culture and heritage, recommendations and conditions of approval

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
<ul style="list-style-type: none"> Land clearing leading to the impact on cultural values including sacred sites. Disturbance of unexpected heritage places or objects. 	<p>The referral did not identify measures to avoid or mitigate potential impacts to culture and heritage.</p>	<p>In the absence of engagement with custodians and other Aboriginal stakeholders, there is uncertainty about the presence or absence of heritage values and Aboriginal cultural values therefore residual impacts are potentially significant.</p>	<p>The proposed action involves clearing of greenfield land.</p> <p>Registered and recorded sacred sites occur within the vicinity of the proposed action.</p> <p>The proposed action area has not been comprehensively surveyed for the presence or absence of sacred sites under the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i>. Therefore the presence of sacred sites is uncertain.</p> <p>The proposed action has the potential to cause irreversible damage to a sacred site (if present). The consequence of damaging a previously unrecorded sacred site is potentially significant impact to culture and heritage.</p> <p>The environmental outcome is unlikely to be consistent with the NT EPA's objective for this factor and a condition is necessary.</p>	<p>Condition 1: Limitation and extent</p> <ul style="list-style-type: none"> Limitations and extent to limit the area of land clearing. <p>Condition 2 Culture and heritage</p> <ul style="list-style-type: none"> Obtain an AAPA Authority Certificate for the proposed action <p>Sacred sites are protected under the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i>.</p> <p>Archaeological places or objects are protected under the <i>Heritage Act 2011</i>. The proponent has an obligation to report unexpected heritage finds to the Heritage Branch of the Department of Territory Families, Housing and Communities.</p>

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
			<p>The AAPA is the body established under the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i> with regulatory responsibility for the protection of sacred sites throughout the Territory.</p> <p>The process to obtain an AAPA Authority Certificate includes identification of custodians and culturally appropriate consultation with them to identify any sacred sites and measures to protect them.</p> <p>The potential for significant impacts to Aboriginal cultural values could be avoided or minimised by obtaining an AAPA Authority Certificate.</p> <p>As advised by the Heritage Branch of the Department of Territory Families, Housing and Communities, <i>if archaeological materials are located a stop works protocol will occur</i>. The potential for significant heritage impacts would be avoided through implementation of an unexpected</p>	

Potentially significant impact	Proponent's measures to avoid and mitigate impacts	Residual impact to environmental value	Assessment finding	Recommended conditions and regulation by other statutory decision-makers
			heritage finds protocol during land clearing.	

6.4.4. Conclusion against the NT EPA objective

With the implementation of the recommended conditions for avoiding, monitoring and mitigating impacts identified in the draft Environmental Approval (Appendix 1), and regulation under the *Northern Territory Aboriginal Sacred Sites Act 1989*, the NT EPA considers that the proposed action can be conducted in such a manner that its objective for the culture and heritage factor is likely to be met.

7. Whole of environment considerations

The NT EPA considered connections and interactions between key factors to inform its view of impacts to the whole of environment.

Carbon soil sequestration would reduce significant adverse effects on the terrestrial carbon cycle from land use change, contributing to protection of terrestrial ecosystem health. Research indicates that there is uncertainty about the rate of soil organic carbon sequestration under pastures in the NT and scientific data, including from baseline data, is required to address this uncertainty. The collection of baseline data consistent with the methodologies used by DEPWS is intended to inform the development of options for the pastoral industry in the future. This in turn supports other environmental values and beneficial uses for culture and heritage and promoting ecologically sustainable development of the pastoral industry in the NT.

The NT EPA considered that the impacts from the proposed action with respect to the whole of environment would not alter the NT EPA's views as assessed in section 6.

8. Other advice – collaborative NT Government-industry research project

The NT EPA provides the following advice for consideration by the proponent, the Minister and other statutory decision-makers.

The residual impacts from this proposal, combined with potential impacts from other industrial and land use projects in the near future, may result in significant cumulative GHG emissions and jeopardise the NT Government's target of net zero emissions by 2050 if not managed carefully.

The NT EPA expects that the relevant Government agencies will partner with the proponent and interested industry stakeholders to research measures to measure and manage GHG emissions from land clearing in the interest of promoting ecologically sustainable development of the pastoral industry in the NT.

Opportunities for the proponent to minimise its emissions from land clearing are limited. There is uncertainty about the effectiveness of soil organic carbon sequestration under pastures in the NT. Scientific data collected via a monitoring plan will contribute to research and inform the development of improved emissions modelling and future sequestration options for the pastoral industry. There are also potential knowledge gaps related to the release of soil carbon gas due to the clearing of vegetation. The NT EPA recommends that Government consider further investigation of soil carbon gas as part of its research into soil carbon.

It is essential that the NT Government collaborates with the proponent to support the development of the monitoring plan and ensure its alignment with broader research. This will enable the Territory to make increasingly better-informed decisions that will assist the Territory to meet its target of net zero GHG emissions by 2050.

This is reflected in the recommended conditions of the draft Environmental Approval (Appendix 1) which require the proponent to implement a monitoring plan, including the collection of baseline data and reporting of resultant data. The NT EPA considers that by undertaking this work the proponent will contribute to broader research to address this uncertainty and that this is a reasonable and practicable contribution.

9. Matters taken into account during the assessment

Matters taken into account during the assessment	Consideration
Objects of the EP Act	
To protect the environment of the Territory	The proponent's referral and this assessment report, including the NT EPA's recommended conditions for an environmental approval, provide detail about how the environment of the Territory would be protected from potentially significant environmental impacts that could occur as a result of implementation of the proposed action.
To promote ecologically sustainable development so that the wellbeing of the people of the Territory is maintained or improved without adverse impact on the environment of the Territory	Consideration of the principles of ecologically sustainable development in relation to the proposed action is addressed below.
To recognise the role of environmental impact assessment and environmental approval in promoting the protection and management of the environment of the Territory	<p>The NT EPA recognises the importance of environmental impact assessment and approval processes in the protection and management of the environment of the Territory.</p> <p>The NT EPA has assessed the potential environmental impacts of the proposed action to inform an environmental approval decision by the Minister that, in the NT EPA's view, promotes protection and management of the Territory.</p> <p>The recommended conditions would allow the proponent to better quantify the emissions, mitigation and sequestration options to inform appropriate and practical means to minimise emissions from land clearing and pastoral activities.</p>
To provide for broad community involvement during the process of environmental impact assessment and environmental approval	The NT EPA's public consultation undertaken during its assessment of the proposed action provides for community involvement during the environmental impact assessment process. Submissions received in relation to the proposed action have been taken into account in the NT EPA's assessment and the preparation of the recommended conditions for an environmental approval.
To recognise the role that Aboriginal people have as stewards of their country as conferred under their traditions and recognised in law, and the importance of participation by Aboriginal people and communities in	The NT EPA recognises the role of Aboriginal people as stewards of their country and the importance of participation by Aboriginal people and communities in environmental decision-making. The public consultation process provided an

Matters taken into account during the assessment	Consideration
environmental decision-making processes.	<p>opportunity for interested persons to make a submission in relation to the proposed action.</p> <p>Protection of cultural heritage is promoted through recommended conditions for an environmental approval including the requirement for an AAPA Authority Certificate.</p>
Principles of ecologically sustainable development	
<p>Decision-making principle</p> <ol style="list-style-type: none"> 1. Decision-making processes should effectively integrate both long-term and short-term environmental and equitable considerations. 2. Decision-making processes should provide for community involvement in relation to decisions and actions that affect the community. 	<p>The NT EPA has considered the decision-making principle in its assessment and has had particular regard to this principle in its assessment of terrestrial ecosystems.</p> <p>The NT EPA notes the interconnectedness between environmental factors and recognises that the mitigation measures to avoid and minimise impacts on the factors listed above may also reduce the significance of impacts on other environmental factors.</p> <p>The NT EPA has recommended conditions for environment protection outcomes to be achieved through design, construction, and ongoing management.</p> <p>The NT EPA considers that its environmental impact assessment and recommended conditions (including the requirement for a GGAP, property boundary buffers and wildlife corridors, and an Authority Certificate) have identified and mitigated both short-term and long-term environmental impacts.</p> <p>The community has been provided the opportunity for involvement in the environmental impact assessment process during public consultation on the proposed action, and the submissions received have been taken into account in the preparation of this report and the recommended conditions to inform the Minister's decision on environmental approval.</p>
<p>Precautionary principle</p> <ol style="list-style-type: none"> 1. If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. 	<p>This principle was considered by the NT EPA when assessing the impacts of the proposed action on the key environmental factors.</p> <p>The proponent has identified measures to avoid or minimise impacts on the environment. The NT EPA has considered these measures during its assessment, and has recommended conditions for environment protection. From its assessment of this</p>

Matters taken into account during the assessment	Consideration
<p>2. Decision-making should be guided by:</p> <ul style="list-style-type: none"> (a) careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and (b) an assessment of the risk-weighted consequences of various options. 	<p>proposed action the NT EPA has concluded that the environmental values will be protected provided its recommended conditions, and the proponent's commitments, are implemented.</p> <p>The proposed action may result in some irreversible impacts associated with loss of vegetation from clearing, however those residual impacts are not considered significant.</p>
<p>Principle of evidence-based decision-making</p> <p>Decisions should be based on the best available evidence in the circumstances that is relevant and reliable.</p>	<p>The NT EPA has considered the available evidence during the course of its assessment of the proposed action, and this scientific evidence provides the foundation for its decision-making and recommended conditions. This includes best available information on the presence of threatened species and estimated GHG emissions from the proposed action.</p> <p>In its assessment of the proposed action, where the NT EPA considered that further evidence is required to inform the management of potentially significant impacts on atmospheric processes, and culture and heritage, the NT EPA has recommended conditions requiring the proponent to undertake additional work to provide further evidence about how the impact would be effectively avoided and/or mitigated.</p>
<p>Principle of intergenerational and intragenerational equity</p> <p>The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of present and future generations.</p>	<p>It is important to minimise adverse impacts to atmospheric processes and protect culture and heritage values for the benefit of future generations. The NT EPA considers that the recommended conditions for an environmental approval would provide an appropriate degree of protection for these values.</p> <p>The NT EPA has considered the principle of intergenerational equity and intragenerational equity in its assessment. From the assessment of this proposed action the NT EPA has concluded that the environmental values will be protected and that the health, diversity and productivity of the environment will be maintained for the benefit of future generations.</p>
<p>Principle of sustainable use</p>	<p>The NT EPA has considered the importance of sustainable development and use of resources and this principle during the environmental impact</p>

Matters taken into account during the assessment	Consideration
Natural resources should be used in a manner that is sustainable, prudent, rational, wise and appropriate.	assessment process. The NT EPA considers that this principle is closely linked to the principles of intergeneration and intragenerational equity, and conservation of biological diversity and ecological integrity.
<p>Principle of conservation of biological diversity and ecological integrity</p> <p>Biological diversity and ecological integrity should be conserved and maintained.</p>	<p>This principle was considered when assessing the impacts of the proposed action on the environmental values, particularly in relation to terrestrial ecosystems. The assessment of these impacts is provided in this report.</p> <p>Biological diversity and ecological integrity are likely to be conserved due to the avoidance, minimisation and mitigation measures that will be implemented by the proponent and the conditions recommended by the NT EPA.</p>
<p>Principle of improved valuation, pricing and incentive mechanisms</p> <ol style="list-style-type: none"> 1. Environmental factors should be included in the valuation of assets and services. 2. Persons who generate pollution and waste should bear the cost of containment, avoidance and abatement. 3. Users of goods and services should pay prices based on the full life cycle costs of providing the goods and services, including costs relating to the use of natural resources and the ultimate disposal of wastes. 4. Established environmental goals should be pursued in the most cost-effective way by establishing incentive structures, including market mechanisms, which enable persons best placed to maximise benefits or minimise costs to develop solutions and responses to environmental problems. 	<p>This principle was considered by the NT EPA when assessing the impacts of the proposed action, and reflected in draft conditions requiring the approval holder to develop and implement a GGAP.</p>
Environmental decision-making hierarchy	
<ol style="list-style-type: none"> 1. In making decisions in relation to actions that affect the environment, decision-makers, 	<p>The extent to which the proponent has applied the environmental decision-making hierarchy in its design of the proposed action and the proposed</p>

Matters taken into account during the assessment	Consideration
<p>proponents and approval holders must apply the following hierarchy of approaches in order of priority:</p> <ul style="list-style-type: none"> (a) ensure that actions are designed to avoid adverse impacts on the environment; (b) identify management options to mitigate adverse impacts on the environment to the greatest extent practicable; (c) if appropriate, provide for environmental offsets in accordance with this Act for residual adverse impacts on the environment that cannot be avoided or mitigated. 	<p>measures to avoid and then mitigate significant impacts has been considered.</p> <p>Where the NT EPA was not satisfied that this hierarchy had been applied, it has recommended conditions requiring that the proponent take reasonable measures to avoid and/or mitigate impacts.</p> <p>The NT EPA has had regard to this hierarchy during the assessment of the proposed action and considered that a research pathway / collection of baseline and scientific data, would provide greater certainty about the effectiveness and practicability of mitigation options to be implemented in an updated GGAP.</p>
<p>2. In making decisions in relation to actions that affect the environment, decision-makers, proponents and approval holders must ensure that the potential for actions to enhance or restore environmental quality is identified and provided for to the extent practicable.</p>	<p>The proposed action is located in an area where historic land management practices increased the risk of wildfires. The proponent has committed to undertake land management strategies to actively manage the risk of late season wildfires.</p>
Waste management hierarchy	
<ul style="list-style-type: none"> 1. In designing, implementing and managing an action, all reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment. 2. For subsection (1), waste should be managed in accordance with the following hierarchy of approaches in order of priority: 	<p>GHG emissions from the proposed action are largely unavoidable. The referral has committed to mitigate GHG emissions over time with the potential to abate GHG emissions from the proposed action in the long-term.</p>

Matters taken into account during the assessment	Consideration
<ul style="list-style-type: none"> (a) avoidance of the production of waste; (b) minimisation of the production of waste; (c) re-use of waste; (d) recycling of waste; (e) recovery of energy and other resources from waste; (f) treatment of waste to reduce potentially adverse impacts; (g) disposal of waste in an environmentally sound manner. 	
Ecosystem-based management	
<p>Management that recognises all interactions in an ecosystem, including ecological and human interactions.</p>	<p>The NT EPA considered the importance of ecosystem-based management for achieving both sustainable development and biodiversity protection goals.</p> <p>With consideration of the link between atmospheric processes, terrestrial ecosystems, and culture and heritage, the NT EPA also considered the connections and interactions between parts of the environment to inform a holistic view of impacts to the whole environment.</p> <p>The NT EPA formed the view that the impacts from this proposed action can be managed to be consistent with the NT EPA’s environmental factors and objectives.</p>
The impacts of a changing climate	
<p>The effects of a changing climate on the proposed action and resilience of the proposed action to a changing climate</p>	<p>The effects of a changing climate may impact on the proposed action by exacerbating land degradation due to increasing frequency and intensity of extreme weather events like droughts and floods.</p> <p>The NT EPA recommended conditions to protect property boundary buffers and wildlife corridors could increase biodiversity resilience to climate change impacts.</p> <p>The NT EPA considered the impacts of a changing climate through its assessment of GHG emissions.</p>

Matters taken into account during the assessment	Consideration
	The NT EPA recommended conditions to manage GHG emissions from the proposed action, document baseline conditions prior to commencement of the action and monitoring performance of the GGAP. .

10. Conclusion and recommendation

The NT EPA has considered the Mathison Station Land Clearing proposed action by Pancho Beef. The NT EPA's assessment of the proposed action identified potentially significant environmental impacts associated with the key environmental factors:

- Terrestrial ecosystems
- Atmospheric processes
- Culture and heritage.

The NT EPA considers that with the recommended conditions, the proposed action (as amended) can be implemented and managed in a manner that is environmentally acceptable and therefore recommends that environmental approval be granted subject to the conditions recommended in Appendix 1.

The monitoring program required under the conditions recommended in Appendix 1 will provide an opportunity to increase certainty about the effectiveness of mitigation measures.

11. References

- Commonwealth of Australia (Clean Energy Regulator) (2023) National Greenhouse and Energy Reporting 2021-22 published data highlights
<https://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/Data-highlights/2021-22-published-data-highlights>
- Commonwealth of Australia (Department of the Environment) (2015) Conservation Management Zones of Australia North Australian Tropical Savanna
<https://www.dcceew.gov.au/sites/default/files/env/resources/cdae9dcc-7af7-4cb5-85fe-f4c9100e913d/files/cmz-north-australian-tropical-savanna.pdf>
- Department of Climate Change, Energy, the Environment and Water (2023): State and Territory Greenhouse Gas Inventory <https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-2020/state-and-territory-greenhouse-gas-inventories-data-tables-and-methodology>
- Henry, B. (2023) Potential for soil carbon sequestration in Northern Australian grazing lands: A review of the evidence. Department of Agriculture and Fisheries, Queensland
www.futurebeef.com.au
- Northern Territory Government (2005) Northern Territory Bioregions - assessment of key biodiversity values and threats
- Northern Territory Government (2021) Northern Territory *Greenhouse Gas Emissions Management for New and Expanding Large Emitters policy*

Appendix 1 – Draft Environmental Approval

Draft Environmental Approval

PURSUANT TO SECTION 69 OF THE ENVIRONMENT PROTECTION ACT 2019 (EP Act)

Approval number	EP2023/026- 001
Approval holder	NTR AG PTY LTD & THE TRUSTEE FOR MOHR-BELL FAMILY TRUST & THE TRUSTEE FOR PANCHO TRUST (trading as Pancho Beef)
Australian Business Number (ABN)	81 243 084 385
Registered business address	Address for service of documents: PO Box 238 Katherine NT 0851
Action	Mathison Station Land Clearing
Action description	Clearing of 4,060.03 hectares (ha) of native vegetation, at a rate of ~450 ha/year for the purposes of growing hay and fodder crops.
Advisory notes	
<p>Approval is granted under section 69 of the EP Act for the action to be undertaken in the manner described, including with implementation of the environmental management measures, commitments and safeguards documented in the referral. If there is an inconsistency between the referral and this environmental approval, the requirements of this environmental approval prevail.</p> <p>Submission of all notices, reports, documents or other correspondence required to be provided to the CEO or Minister as a condition of this approval must be provided in electronic form by emailing environmentalregulation@nt.gov.au</p>	
Address of action	Mathison Station, 9437 Victoria Highway, Delamere NT 0852 (NT Portion 7061)
NT EPA Assessment Report number	105
Person authorised to make decision	Hon Kate Worden MLA, Minister for Environment, Climate Change and Water Security
Signature	NOT FOR SIGNING
Date of decision	NOT FOR APPROVING

Environmental approval conditions

1 Limitations and extent of action

1-1 The action is to be within the following limitations and extent:

Action element	Limitation or maximum extent
Land clearing	No more than 4,060.03 ha in total to be cleared of native vegetation, and clearing must be within the approved extent .

2 Culture and heritage

2-1 The approval holder must implement the action to meet the following environmental objective:

(1) Protect culture and heritage.

2-2 To support achieving the environmental objective required by condition 2-1, prior to commencement of the action, the approval holder must obtain an **Authority Certificate** for the action.

2-3 At least 10 business days prior to the commencement of the action, the approval holder must provide the Minister evidence that it has obtained an **Authority Certificate** required by condition 2-2.

3 Atmospheric processes

3-1 The approval holder must implement the action to meet the following environmental objective:

(1) Minimise greenhouse gas (GHG) emissions so as to contribute to the Northern Territory Government's goal of achieving net zero GHG emissions by 2050.

3-2 To support achievement of condition 3-1 the approval holder must:

(1) develop and implement a **monitoring plan** that includes the collection of **baseline data** prior to the commencement of the action; and

(2) implement its **Greenhouse Gas Abatement Plan** for the **life of action**.

3-3 The **monitoring plan** must be developed and implemented by a qualified person.

3-4 The **monitoring plan** must be reviewed by an **independent qualified person** who must prepare a report summarising their review and any recommendations for amendments.

3-5 At least 10 business days prior to the commencement of the action, the approval holder must provide the Minister:

(1) its **monitoring plan**;

(2) the **independent qualified person's** report required under condition 3-4; and

(3) where the recommendations included in the **independent qualified person's** report required under condition 3-4 have not been adopted, justification for not incorporating the recommendations into the **monitoring plan**.

3-6 The approval holder must submit a **revised Greenhouse Gas Abatement Plan** to the Minister either:

- (1) within five years of the commencement of the action;
- (2) at least 60 business days before total cumulative **land clearing** reaches 3,500 ha; or
- (3) where the results of the **monitoring plan** indicate that the targets within the **Greenhouse Gas Abatement Plan** need to be revised

whichever occurs first.

3-7 The **revised Greenhouse Gas Abatement Plan** must:

- (1) include revised carbon accounting based on:
 - (a) site specific monitoring data, including **baseline data** obtained via the **monitoring plan** required under condition 3-2; or
 - (b) contemporary best practice design, process, technology and management methods to:
 - (i) estimate **scope 1 emissions** from the action; or
 - (ii) avoid, minimise, mitigate or abate GHG emissions from the action;
- (2) include an overarching long-term emissions reduction target;
- (3) include regular interim targets to minimise, mitigate and/or abate GHG emissions generated by the action;
- (4) include the methods that will be applied to achieve the interim targets to minimise, mitigate and/or abate GHG emissions generated by the action, to the greatest extent practicable;
- (5) include a schedule for periodic public reporting on implementation and progress against the interim and overarching long-term targets;
- (6) include a timetable for review of the **revised Greenhouse Gas Abatement Plan** that is considerate of the **life of the action** and the identified interim and overarching targets; and
- (7) be prepared in accordance with the most recent version of the NT EPA Environmental Factor: Atmospheric Greenhouse Gas Emissions guideline and the NT Government Greenhouse Gas Emissions Management for New and Expanding Large Emitters policy.

4 Reporting

4-1 The approval holder must provide an annual report on the results of the **monitoring plan** (inclusive of any raw data) to the **Minister**.

4-2 Unless a different date or frequency is approved by the Minister, the first annual report required under condition 4-1 must be submitted by 31 October addressing the period of the preceding financial year from 1 July to 30 June, and subsequent reports must be submitted annually from that date.

4-3 Every five year period ending 30 June after the submission of the **revised Greenhouse Gas Abatement Plan** to the Minister in accordance with condition 3-6, the approval holder must:

- (1) obtain from an **independent qualified person**, a report on the results of the **monitoring plan**; and

- (2) submit the report required by condition 4-3(1) to the Minister within 30 business days of its completion.
- 4-4 The report required by condition 4-3(1), must be submitted by 31 October addressing the period of the preceding five financial years, or part thereof, from 1 July to 30 June, and subsequent reports must be submitted:
 - (1) 10 years;
 - (2) 15 years; and
 - (3) 20 yearsfollowing the submission of the **revised Greenhouse Gas Abatement Plan** to the Minister in accordance with condition 3-6.
- 4-5 The Minister may approve a different date or frequency for the submission of reports in accordance with condition 4-4.
- 4-6 The report required by condition 4-3(1) must:
 - (1) provide all monitoring data (inclusive of any raw and processed data) required by the conditions of this approval;
 - (2) provide an analysis and interpretation of monitoring data to demonstrate the effectiveness of monitoring and management measures implemented in accordance with the **monitoring plan** and **revised Greenhouse Gas Abatement Plan**;
 - (3) provide a comparison between the actual and predicted **scope 1 emissions**; and
 - (4) be provided in a form suitable for publication online by the CEO.
- 5 Staging, combining and revision of plans**
- 5-1 The approval holder may review and revise any plan required by this approval and must provide:
 - (1) the revised plan to the Minister within 10 business days prior to any amendment(s) being implemented;
 - (2) a tabulated summary of the amendment(s) with document references;
 - (3) reasons for the amendment(s); and
 - (4) a description of how the plan will meet the conditions of this environmental approval.
- 5-2 The approval holder may:
 - (1) prepare and submit any plan required by this approval on a staged basis (if a clear description is provided as to the specific stage and scope of the action to which the plan applies, the relationship of the stage to any future stages and the trigger for updating the plan);
 - (2) combine any plan required by this approval (if a clear relationship is demonstrated between the plans that are proposed to be combined); and

- (3) update any plan required by this approval (to ensure the plans required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the action).

5-3 The approval holder must implement the action to comply with the latest revision of any plans required by this approval.

6 Commencement of action

6-1 This approval expires five years after the date on which it is granted, unless the action has commenced on or before that date.

6-2 Within 10 business days of the commencement of the action the approval holder must provide notification in writing to the Minister.

7 Change of contact details

7-1 The approval holder must provide notification in writing to the Minister of any change of its name, physical address or postal address for the serving of notices or other correspondence within 10 business days of such change.

8 Provision of environmental data

8-1 All environmental monitoring data required to be collected or obtained under this environmental approval and the approval holder's commitments, standards and management plans must be retained by the approval holder for a period of not less than 10 years commencing from the date that the data is collected or obtained.

8-2 The approval holder must, as and when directed by the Minister, provide any environmental data (including sampling design, sampling methodologies, empirical data and derived information products such as maps) relevant to the assessment of the action and implementation of this environmental approval, to the Minister in the form and manner and at the intervals specified in the direction.

Definitions

The terms used in this approval have the same meaning as the terms defined in the EP Act and Environment Protection Regulations 2020.

<p>approved extent</p>	<p>The extent identified in Figure 1 , comprising polygons A, B, C, D, E1, E2 and I</p>
<p>Authority Certificate</p>	<p>Has the same meaning as in section 3 of the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i>.</p>
<p>baseline data</p>	<p>Baseline data are site specific information, collected before the action commences. These data serve as a point of reference for subsequent monitoring data, that are collected after the action commences.</p> <p>Baseline data are obtained via environmental surveys to record and collate statistics and other relevant information about the existing environmental conditions within the approved extent, relevant control sites, and/or offset sites. Baseline data must include:</p> <ul style="list-style-type: none"> • high resolution (minimum scale 1:25,000) vegetation and soil mapping; or • integrated land unit mapping (consistent with the DEPWS approach to land unit mapping in the NT). <p>Baseline data survey standards must comply with the following:</p> <ul style="list-style-type: none"> • Survey standard - Schoknecht, N, Wilson, PR and Heiner, I 2008, 'Chapter 14: Survey specification and planning', in McKenzie, NJ, Grundy, MJ, Webster, R and Ringrose-Voase, AJ (Eds). <i>Guidelines for Surveying Soil and Land Resources</i>. Second Edition. Australian Soil and Land Survey Handbook Series, CSIRO Publishing, Melbourne. • Soil, land and vegetation description - National Committee on Soil and Terrain (NCST) 2009, <i>Australian Soil and Land Survey Field Handbook</i>. Third Edition. Australian Soil and Land Survey Handbook Series, CSIRO Publishing, Melbourne. <p>Vegetation field assessments must also include diameter at breast height (DBH) and tree height to enable calculation of Above Ground Biomass (AGB).</p> <ul style="list-style-type: none"> • Soil classification - Isbell, RF and the National Committee on Soil and Terrain (NCST) 2021, <i>The Australian Soil Classification</i>. 3rd Edition. Australian Soil and Land Survey Handbook Series, CSIRO Publishing, Melbourne. • Soil chemical laboratory testing (eg. soil carbon (%)) - Rayment, GE and Lyons, D 2011, <i>Soil Chemical Methods – Australasia</i>. Australian Soil and Land Survey Handbook Series, CSIRO Publishing, Melbourne. <p>Laboratory testing must be undertaken by an Australasian Soil and Plant Analysis Council (ASPAC) accredited laboratory.</p> <ul style="list-style-type: none"> • Soil physical sampling (soil bulk density) - McKenzie, NJ, Coughlan, KJ and Cresswell, HP (Ed.) 2002, <i>Soil Physical Measurement and Interpretation for Land Evaluation</i>. Australian

	<p>Soil and Land Survey Handbook Series, CSIRO Publishing, Melbourne.</p> <p>Based on the above established soil physical sampling methods for measuring soil bulk density, DEPWS has developed methods for particular soils in the Northern Territory. These locally applicable methods can be acquired from DEPWS and utilised during investigations.</p>
DEPWS	Department of Environment, Parks and Water Security
Greenhouse Gas Abatement Plan	Referral Appendix A. Mathison Station – Greenhouse Gas Abatement Plan. November 2022
independent qualified person	<p>A qualified person as defined under section 4 of the EP Act; and who also meets the following requirements:</p> <ol style="list-style-type: none"> a) was not involved in the preparation of the approval holder's referral; and b) is independent of the personnel involved in the design, construction and operation of the action; and c) has obtained written approval from the CEO to be the qualified person to satisfy the independent qualified person reporting requirements under this approval.
land clearing	The removal or destruction, by any means, of native vegetation on an area of land. Land clearing includes the selective removal of a species of plant, a group of species of plants, a storey or group of storeys in whole or in part.
life of action	The period of time from the commencement of the action until the issue of a closure certificate under section 213 of the EP Act, or revocation of the environmental approval by the Minister at the request of the approval holder under section 114 of the EP Act.
monitoring plan	<p>A program to monitor performance of the current revision of the Greenhouse Gas Abatement Plan that includes:</p> <ul style="list-style-type: none"> • monitoring indicators and methods; • sampling locations, timing and frequency; • prior to the commencement of land clearing, the collection of representative baseline data; and • a schedule to review and revise the monitoring plan based on the monitoring results.
NT EPA	Northern Territory Environment Protection Authority.
referral	The approval holder's referral to the NT EPA under section 48 of the EP Act.
revised Greenhouse Gas Abatement Plan	The revised Greenhouse Gas Abatement Plan required by condition 3-6.

scope 1 emissions	GHG emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility/site/project level (e.g. production of electricity by the burning of gas, or the burning of diesel in trucks operating on a project's site).
qualified person	As defined under section 4 of the EP Act qualified person means: <ul style="list-style-type: none"> (a) a registered environmental auditor; or (b) a registered environmental practitioner; or (c) a person or class of persons, who have the qualifications and experience determined by the CEO for the purpose of this definition.

Location and extent of action

Spatial data depicting information provided in Figure 1 is held by the Department of Environment, Parks and Water Security as follows:

- NTEPA2023/0073-013 – Spatial Files – Pancho Beef – Mathison Station Land Clearing

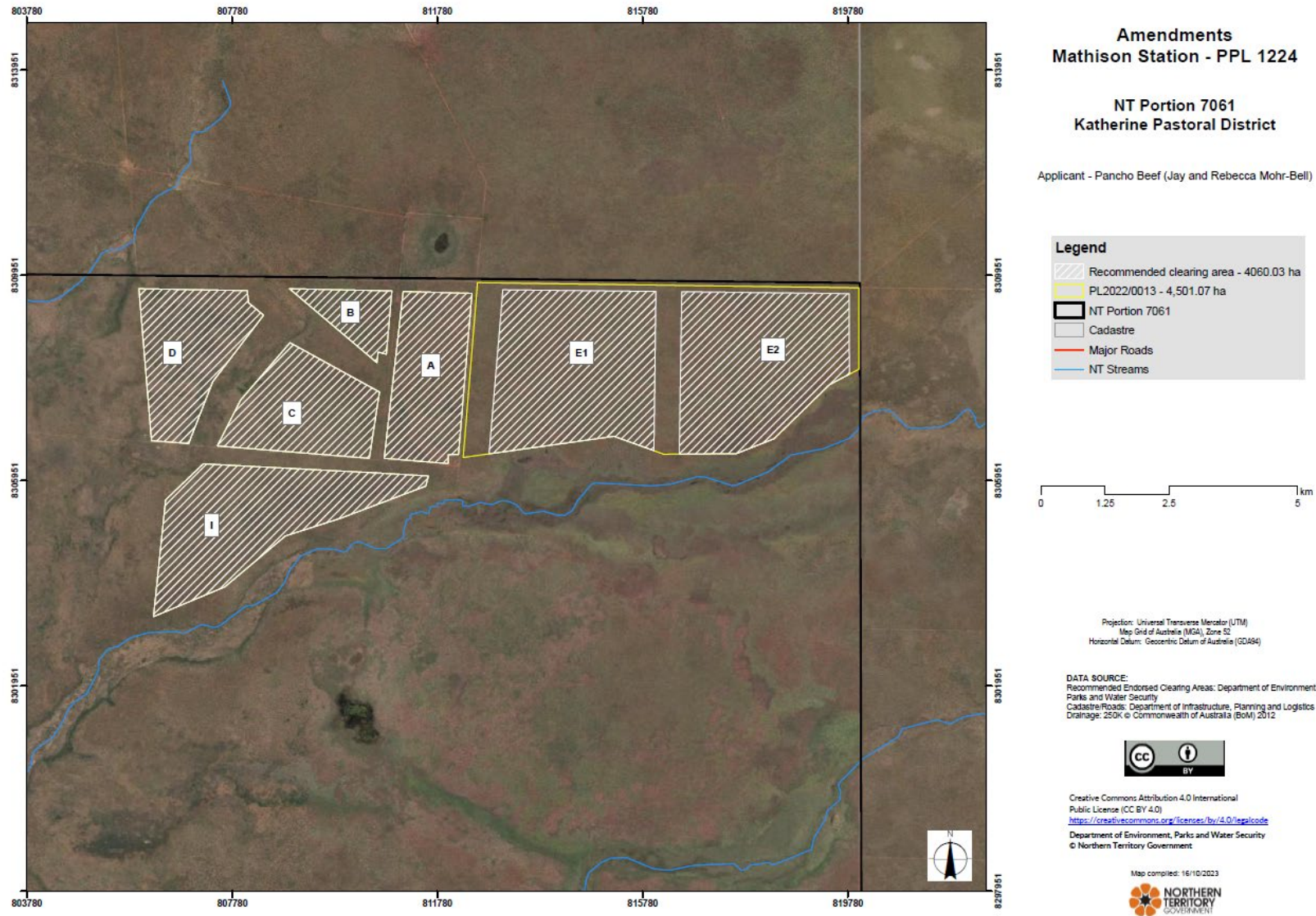


Figure 1 Location and approved extent (subject to conditions of this approval)

Appendix 2 – Environmental impact assessment timeline

Date	Assessment stages
23 June 2023	Referral accepted
29 June to 26 July 2023	Consultation submissions period
16 August 2023	NT EPA decided environmental impact assessment required by referral information method
25 September to 20 October 2023	Consultation with proponent and statutory decision-maker on draft environmental approval
16 November 2023	Extended statutory timeframe for the NT EPA's assessment report to be provided to the Minister for Environment, Climate Change and Water Security
30 business days after receiving the NT EPA's advice	Minister's decision on environmental approval due (if the Minister does not make a decision within 30 business days after receiving the assessment report the Minister is taken to have accepted the NT EPA's recommendation for approval)