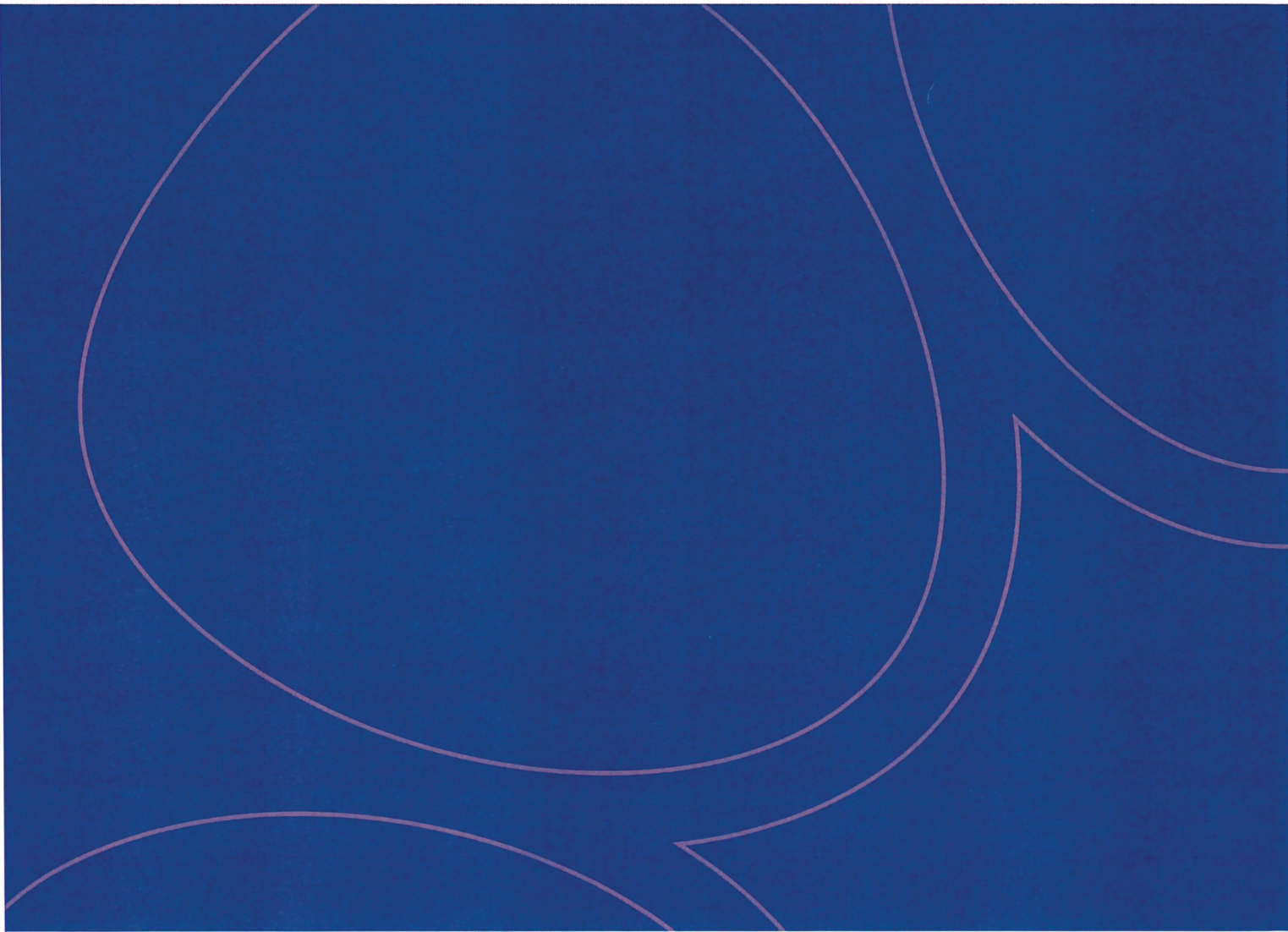


Environmental Approval EP2022/022-001

Holtze Development Area

2023 Compliance Report



Document title	Environmental Approval EP2022/022-001
Document no.	WGHD_NTG_WE8_REP_ENV_WP2_001
Approved by	Daniel Cameron
Date approved	24 June 2024

Version	Date	Author	Changes made
00	24 June 2024	Laura Proos, Department of Infrastructure, Planning and Logistics	Final for Issue. Submitted to Regulators

Contents

- 1. Introduction 4
- 2. Reporting period 4
- 3. Action summary 4
- 4. Compliance with conditions 4
 - 4.1. Condition 1 – Limitations and extent of action 4
 - 4.1.1. Compliance statement 4
 - 4.1.2. Supporting evidence 5
 - 4.1.3. Non-compliance details 5
 - 4.2. Condition 2 – Terrestrial ecosystems 5
 - 4.2.1. Compliance statement 5
 - 4.2.2. Supporting evidence 6
 - 4.2.3. Non-compliance details 6
 - 4.2.4. Achievement of environmental objective 6
 - 4.3. Condition 3 – Inland water environmental quality 6
 - 4.3.1. Compliance statement 6
 - 4.3.2. Supporting evidence 7
 - 4.3.3. Non-compliance details 7
 - 4.4. Condition 4 – Community and economy 7
 - 4.4.1. Compliance statement 7
 - 4.4.2. Supporting evidence 7
 - 4.4.3. Non-compliance details 7
 - 4.5. Condition 5 – Culture and heritage 8
 - 4.5.1. Compliance statement 8
 - 4.5.2. Supporting evidence 8
 - 4.5.3. Non-compliance details 9
 - 4.6. Conditions 6-10 – Administrative conditions 9
 - 4.6.1. Compliance statement 9
 - 4.6.2. Non-compliance details 11

Endorsement

I A. Kirkman delegate of the Chief Executive of Department of Infrastructure, Planning and Logistics and Approval Holder of EP2022/022-001 endorse that this Compliance Report to the best of my knowledge is true and correct.

Signature:



Date:

2/9/24

1. Introduction

This Compliance Report has been prepared by the Department of Infrastructure, Planning and Logistics (DIPL) in accordance with Condition 10 of Environmental Approval Number EP2022/022-001 issued pursuant to Section 69 of the *Environment Protection Act 2019* for the Holtze Development Area.

2. Reporting period

This compliance report covers the period from 1 July 2023 to 31 December 2023.

3. Action summary

During this reporting period, the following preconstruction works were undertaken within the Holtze Development Area:

1. Refined Darwin Cycad density survey was commissioned as per condition 1.1 (3)
2. Archaeological survey

No Land Clearing works were undertaken during this reporting period.

4. Compliance with conditions

4.1. Condition 1 – Limitations and extent of action

4.1.1. Compliance statement

Condition No.	Condition	Compliance statement
1	Limitations and extent of action	
1.1	<p>When implementing the action, the approval holder must ensure the action does not exceed the following extent:</p> <ol style="list-style-type: none"> 1. Land clearing – No more than 116 ha in total to be cleared within the approved extent shown in Figure 1. Avoid clearing significant and sensitive vegetation within the approved extent, to the maximum extent practicable. 2. Direct disturbance of <i>Typhonium praetermissum</i> - All individual <i>Typhonium praetermissum</i> plants within the Typhonium protection area shown at Figure 2 must be retained and protected. 3. Direct disturbance of <i>Cycas armstrongii</i> – No clearing of very high density or high density occurrences of <i>Cycas armstrongii</i> as shown at Figure 3. 	NA

4.1.2. Supporting evidence

Pre construction works included refined Darwin Cycad Mapping. The Darwin Cycad density map provided in Figure 3 of EP2022/022-001 was based on a survey conducted in late May 2023. As the development design progressed a more refined Darwin Cycad density survey was commissioned in the area identified as having high-density of Cycads, in order to ensure compliance against condition 1.1 (3). The updated survey involved a follow-up survey in 10 of original 174 (100 m x 100 m) survey grids, in the south-eastern portion of the site where the high-density area was originally calculated. The area was re-surveyed at a finer resolution of 33.33 m x 33.33 m grids, and within this area only one grid fell within the high-density category. The utilities corridor designed for this area avoids this high-density area. An updated density map with the refined survey area results, and supporting letter, is provided in Appendix A.

No construction works were undertaken relevant to these approval conditions during this reporting period.

4.1.3. Non-compliance details

There were no non-compliances relevant to these approval conditions during the reporting period.

4.2. Condition 2 – Terrestrial ecosystems

4.2.1. Compliance statement

Condition No.	Condition	Compliance statement
2	Terrestrial ecosystems	
2-1	The approval holder must implement the action to meet the following environmental objective: protect terrestrial habitats to maintain flora and fauna values including biodiversity, ecological integrity and ecological functioning.	
2-2	To support achievement of condition 2-1, the approval holder must implement the action in such a manner that: <ol style="list-style-type: none"> (1) the condition of habitat within the Typhonium protection area for <i>Typhonium praetermissum</i> is maintained or improved; (2) the long-term security of <i>Typhonium praetermissum</i> plants within the Typhonium protection area is maintained, through implementing measures such as restrictions on land use and access; (3) habitat quality and condition within the Typhonium protection area is monitored and assessed periodically to measure the viability of the protection area and its capacity to support conservation of capacity to support conservation of <i>Typhonium praetermissum</i> and demonstrate that condition 2-2(1) is achieved; (4) is consistent with any <i>Typhonium praetermissum</i> regional conservation management strategy developed by the Northern Territory Government; (5) the long term security of retained occurrences of high and very high density <i>Cycas armstrongii</i> areas, is maintained through implementing measures such as restrictions on land use and access; (6) is consistent with any regional conservation strategy for woodland species developed by the Northern Territory Government; and 	NA

Condition No.	Condition	Compliance statement
	(7) controls the introduction and spread of declared weeds and invasive exotic plants.	

4.2.2. Supporting evidence

A Typhonium Management Plan for the Typhonium Protection Area is currently under development. Once adopted, this plan will detail management measures to ensure the protection of the plants in accordance with the approval conditions. All future compliance reports provided under this approval will detail any actions undertaken during the reporting period as part of the plan implementation. Development of the Typhonium Management Plan will include engagement with DEPWS and a copy of the plan will be provided once adopted.

No construction works were undertaken relevant to these approval conditions during this reporting period.

4.2.3. Non-compliance details

There were no non-compliances relevant to these approval conditions during the reporting period.

4.2.4. Achievement of environmental objective

Based on the statement of compliance and supporting information, the approval holder believes that the environmental objective to Protect terrestrial habitats to maintain flora and fauna values including biodiversity, ecological integrity and ecological functioning has been met.

4.3. Condition 3 – Inland water environmental quality

4.3.1. Compliance statement

Condition No.	Condition	Compliance statement
3	Inland water environmental quality	
3-1	<p>The approval holder must prepare an Erosion and Sediment Control Plan (ESCP) prior to substantial implementation that:</p> <ul style="list-style-type: none"> (1) has been developed by a Certified Professional in Erosion and Sediment Control (CPESC) in accordance with International Erosion Control Association (IECA) 2008 <i>Best Practice Erosion and Sediment Control</i> document; and (2) provides detail of the design, implementation, monitoring, maintenance and removal of erosion, sediment and drainage controls in all exposed soil areas during construction; (3) reviewed by a CPESC within 12 months of substantial implementation, or at any time if: <ul style="list-style-type: none"> a. ongoing monitoring identifies a failure of the ESCP; or b. an accelerated or changed work program is required. 	NA

4.3.2. Supporting evidence

A Framework ESCP was submitted with the referral that provides the expected minimum standard for drainage, erosion and sediment control practices to be adopted throughout the construction phase of the project. All Contractors engaged to conduct ground-disturbing activities on the site are required to provide an ESCP developed by a CPESC in accordance with this approval condition.

No construction works that required an ESCP were undertaken relevant to these approval conditions during this reporting period.

4.3.3. Non-compliance details

There were no non-compliances relevant to these approval conditions during the reporting period.

4.4. Condition 4 – Community and economy

4.4.1. Compliance statement

Condition No.	Condition	Compliance statement
4	Community and economy	
4-1	The approval holder must implement measures, to mitigate construction noise and vibration, that meet: <ul style="list-style-type: none"> (1) construction noise management levels established using the Northern Territory Noise Management Framework Guideline (NT EPA 2018); (2) vibration criteria established using the Assessing vibration: a technical guideline (NSW Department of Environment and Conservation 2006) (for human exposure); (3) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as applicable to Australian conditions; and (4) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage). 	NA
4-2	In addition to the performance outcomes, commitments and mitigation measures specified in the referral , all reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during the construction and operation of the action.	NA

4.4.2. Supporting evidence

No construction works were undertaken relevant to these approval conditions during the reporting period.

4.4.3. Non-compliance details

There were no non-compliances relevant to these approval conditions during the reporting period.

4.5. Condition 5 – Culture and heritage

4.5.1. Compliance statement

Condition No.	Condition	Compliance statement
5	Cultural and heritage	
5-1	<p>Prior to substantial implementation, the approval holder must:</p> <p>(1) undertake further archaeological investigation and review within the proposal area in proximity to Mitchell Creek (in the southern part of Section 4231); and</p> <p>(2) implement to the extent practicable, the outcomes of the archaeological investigation and review, including recommendations for measures to avoid or minimise disturbance to Aboriginal heritage places or objects where objects are found to be present.</p>	Compliant
5-2	<p>The scope of works for the further archaeological investigation and review required by condition 5-1(1), must:</p> <p>(1) include protocols for the survey, a review of mitigation measures and provisions to recommend new mitigation measures, if required; and</p> <p>(2) be developed in consultation with, and to the satisfaction of, the Heritage Branch of DTFHC.</p>	Non-compliant

4.5.2. Supporting evidence

Ellengowan Enterprises were originally engaged in 2014 to undertake an archaeological assessment of the referral area. The original investigation did not detect any items of Aboriginal cultural heritage however it cited poor ground surface visibility around the headwaters of Mitchell Creek. In light of condition 5-1, a preliminary archaeological investigation was undertaken in August 2023 by On Site Cultural Heritage Management Pty Ltd to understand and characterise the area prior to a formal archaeological investigation undertaken by Ellengowan Enterprises in December 2023, accompanied by Larrakia Traditional Owner Field Officer (TOFO) Donna Jackson.

The surveys identified two Aboriginal archaeological sites containing Aboriginal stone artefacts:

1. Site 1 – named *Mitchell Creek 1* – comprising a low-density scatter of (3) quartzite flakes
1. Site 2 – named *MCB01* – comprising an isolated silcrete core.

A low-density shell midden was also identified adjacent to one of the WWII concrete slabs, which the investigation concluded was of unknown origin. The potential midden site was deemed to be of low significance.

The two investigation reports can be made available upon request.

Correspondence between DIPL and the Heritage Branch has confirmed that the accepted mitigation strategy for the two archaeological sites is avoidance. No development works are proposed that would directly impact on the sites. All works contracts administered by DIPL will identify the two sites as no-go areas.

The Heritage Branch confirmed that they accepted the intended mitigation strategy to avoid the two sites because the planned development works are not within this locality (Appendix B).

4.5.3. Non-compliance details

Non-compliance against condition 5-2

The archaeological investigation undertaken in December 2023 did not provide a plan or scope of works that included:

- a) protocols for the survey, a review of mitigation measures and provisions to recommend new mitigation measures, if required (as per condition 5-2(1)); nor was
- b) developed in consultation with, and to the satisfaction of, the Heritage Branch of DTFHC (as per condition 5-2(2)).

In providing a copy of the investigation report to the Heritage Branch in January 2024, the Heritage Branch identified the non-compliance, however provided confirmation that the survey methodology was sound and have accepted the outcomes of the investigation (Appendix C).

4.6. Conditions 6-10 – Administrative conditions

4.6.1. Compliance statement

Condition No.	Condition	Compliance statement
6	Commencement of action	
6-1	This approval expires five (5) years after the date on which it is granted, unless substantial implementation has commenced on or before that date.	Compliant
6-2	Within 10 business days of substantial implementation of the action the approval holder must provide notification in writing to the Minister .	NA
7	Completion of action	
7-1	The approval holder must provide notification in writing to the Minister within 10 business days of completion of the action .	NA
8	Change of contact details	
8-1	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.	NA
9	Staging, combining and updating plans or programs	
9-1	The approval holder may: <ol style="list-style-type: none"> (1) prepare and submit any plan or program 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 or program applies, the relationship of the stage to any future stages and the trigger for updating the plan or program); (2) combine any plan or program required by this approval (if a clear relationship is demonstrated between the plans or programs that are proposed to be combined); and (3) update any plan or program required by this approval (to ensure the plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the action) 	NA

Condition No.	Condition	Compliance statement
9-2	Updated plans or programs supersede the previous versions of them and must be implemented in accordance with the conditions of this approval that require the plan or program.	NA
10	Annual compliance reporting	
10-1	The approval holder must provide an annual compliance report to the Minister for the purpose of determining whether the conditions of this environmental approval are being complied with.	Compliant
10-2	Unless a different date or frequency is approved by the Minister, the first annual compliance report must be submitted by 30 April addressing the period of the preceding calendar year from 1 January to 31 December, and subsequent reports must be submitted annually from that date.	Non-compliant
10-3	Each annual compliance report must be endorsed by the approval holder, or a person approved by approval holder to be delegated to sign on the approval holder's behalf.	Compliant
10-4	Each annual compliance report must: <ul style="list-style-type: none"> (1) state whether each condition of this approval has been complied with, including: <ul style="list-style-type: none"> a. exceedance of any limits and extents; b. achievement of environmental objectives; c. requirements to implement the action; d. monitoring requirements; and e. reporting requirements. (2) include the results of monitoring (inclusive of any raw data) in order to demonstrate compliance with the each condition of this approval; (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance; (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance; and (5) be provided in a form suitable for publication online by the DEPWS. 	Compliant
11	Provision of environmental data	
11-1	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.	NA
11-2	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.	NA

4.6.2. Non-compliance details

Non-compliance against condition 10-2

An extension to submit the 2023 Compliance report was requested by DIPL on 26 March 2024. As per your reference: NTEPA2023/0186-002~0009, the extension was granted to 30 June 2024. Subsequent reports will revert to 30 April submission.

Appendix A – Refined Darwin Cycad density survey

Appendix B – Heritage Branch communications

Environmental Approval

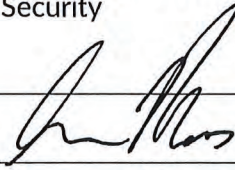
PURSUANT TO SECTION 69 OF THE ENVIRONMENT PROTECTION ACT 2019

Approval number	EP2022/022-001
Approval holder	Chief Executive Officer of the Northern Territory of Australia Department of Infrastructure, Planning and Logistics
Australian Business Number (ABN)	84 085 734 992
Registered business address	Level 3, Manunda Place 38 Cavenagh Street Darwin, Northern Territory 0800
Address for notices	Level 5, Energy House, 18-20 Cavenagh Street, Darwin, Northern Territory 0800
Action	Holtze Development Area
Action description	<p>Urban development of 202 ha, approximately 1.8 km north of Palmerston central business district including:</p> <ul style="list-style-type: none">• land clearing of up to 116 (ha) of native vegetation• construction of enabling infrastructure (sewerage, water supply, power, communications, roads and drainage infrastructure)• subdivision of two vacant Crown land lots (Section 4231 and 4229 Hundred of Bagot) and one freehold lot (Portion 2295) for residential, commercial, public space and community development purposes.
Advisory notes	<ol style="list-style-type: none">i. 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.ii. This approval does not authorise the approval holder to undertake an activity that would otherwise be an offence under the <i>Water Act 1992</i>.iii. 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
Address of action	NT Portion 2295 Sections 273, 3373, 4229, 4231 and 5623 Hundred of Bagot

NT EPA Assessment Report number 102

Person authorised to make decision Hon Lauren Jane Moss MLA,
Minister for Environment, Climate Change and Water
Security

Signature



Date of decision

30th August 2023

Environmental approval conditions

1 Limitations and extent of action

1-1 When implementing the action, the approval holder must ensure the action does not exceed the following extent:

Action element	Context	Limitation or maximum extent
Land clearing	Figure 1	No more than 116 ha in total to be cleared within the approved extent shown at Figure 1 . Avoid clearing significant and sensitive vegetation within the approved extent , to the maximum extent practicable.
Direct disturbance of <i>Typhonium praetermissum</i>	Figure 2	All individual <i>Typhonium praetermissum</i> plants within the Typhonium protection area shown at Figure 2 must be retained and protected.
Direct disturbance of <i>Cycas armstrongii</i>	Figure 3	No clearing of very high density or high density occurrences of <i>Cycas armstrongii</i> as shown at Figure 3 .

2 Terrestrial ecosystems

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

- (1) Protect terrestrial habitats to maintain flora and fauna values including biodiversity, ecological integrity and ecological functioning.

2-2 To support achievement of condition 2-1, the approval holder must implement the action in such a manner that:

- (1) the condition of habitat within the **Typhonium protection area** for *Typhonium praetermissum* is maintained or improved;
- (2) the long-term security of *Typhonium praetermissum* plants within the **Typhonium protection area** is maintained, through implementing measures such as restrictions on land use and access;
- (3) habitat quality and condition within the **Typhonium protection area** is monitored and assessed periodically to measure the viability of the protection area and its capacity to support conservation of *Typhonium praetermissum* and demonstrate that condition 2-2(1) is achieved;
- (4) is consistent with any *Typhonium praetermissum* regional conservation management strategy developed by the Northern Territory Government;
- (5) the long term security of retained occurrences of **high** and **very high density** *Cycas armstrongii* areas, is maintained through implementing measures such as restrictions on land use and access;
- (6) is consistent with any regional conservation strategy for woodland species developed by the Northern Territory Government; and

- (7) controls the introduction and spread of **declared weeds** and invasive exotic plants.

3 Inland water environmental quality

3-1 The approval holder must prepare an Erosion and Sediment Control Plan (ESCP) prior to **substantial implementation** that:

- (1) has been developed by a Certified Professional in Erosion and Sediment Control (CPESC), in accordance with International Erosion Control Association Australasia (IECA) 2008 [Best Practice Erosion and Sediment Control document](#); and
- (2) provides details of the design, implementation, monitoring, maintenance and removal of erosion, sediment and drainage controls in all exposed soil areas during construction;
- (3) reviewed by a CPESC within 12 months of **substantial implementation**, or at any time if:
 - (a) ongoing monitoring identifies a failure of the ESCP; or
 - (b) an accelerated or changed work program is required.

4 Community and economy

4-1 The approval holder must implement measures, to mitigate construction noise and vibration, that meet:

- (1) construction noise management levels established using the [Northern Territory Noise Management Framework Guideline](#) (NT EPA 2018);
- (2) vibration criteria established using the [Assessing vibration: a technical guideline](#) (NSW Department of Environment and Conservation 2006) (for human exposure);
- (3) BS 7385 Part 2-1993 “Evaluation and measurement for vibration in buildings Part 2” as applicable to Australian conditions; and
- (4) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration-effects of vibration on structures (for structural damage).

4-2 In addition to the performance outcomes, commitments and mitigation measures specified in the **referral**, all reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during the construction and operation of the action.

5 Culture and heritage

5-1 Prior to **substantial implementation**, the approval holder must:

- (1) undertake further archaeological investigation and review within the proposal area in proximity to the headwaters of Mitchell Creek (in the southern part of Section 4231); and
- (2) implement to the extent practicable, the outcomes of the archaeological investigation and review, including recommendations for measures to avoid or minimise disturbance to Aboriginal heritage places or objects where objects are found to be present.

5-2 The scope of works for the further archaeological investigation and review required by condition 5-1(1), must:

- (1) include protocols for the survey, a review of mitigation measures and provisions to recommend new mitigation measures, if required; and

- (2) be developed in consultation with, and to the satisfaction of, the Heritage Branch of DTFHC.

6 Commencement of action

6-1 This approval expires five (5) years after the date on which it is granted, unless **substantial implementation** has commenced on or before that date.

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

7 Completion of action

7-1 The approval holder must provide notification in writing to the **Minister** within 10 business days of **completion of the action**.

8 Change of contact details

8-1 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.

9 Staging, combining and updating plans or programs

9-1 The approval holder may:

- (1) prepare and submit any plan or program 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 or program applies, the relationship of the stage to any future stages and the trigger for updating the plan or program);
- (2) combine any plan or program required by this approval (if a clear relationship is demonstrated between the plans or programs that are proposed to be combined); and
- (3) update any plan or program required by this approval (to ensure the plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the action)

9-2 Updated plans or programs supersede the previous versions of them and must be implemented in accordance with the conditions of this approval that require the plan or program.

10 Annual compliance reporting

10-1 The approval holder must provide an annual compliance report to the **Minister** for the purpose of determining whether the conditions of this environmental approval are being complied with.

10-2 Unless a different date or frequency is approved by the **Minister**, the first annual compliance report must be submitted by 30 April addressing the period of the preceding calendar year from 1 January to 31 December, and subsequent reports must be submitted annually from that date.

10-3 Each annual compliance report must be endorsed by the approval holder, or a person approved by approval holder to be delegated to sign on the approval holder's behalf.

10-4 Each annual compliance report must:

- (1) state whether each condition of this approval has been complied with, including:

- (a) exceedance of any limits and extents;
 - (b) achievement of environmental objectives;
 - (c) requirements to implement the action;
 - (d) monitoring requirements; and
 - (e) reporting requirements.
- (2) include the results of monitoring (inclusive of any raw data) in order to demonstrate compliance with the each condition of this approval;
 - (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;
 - (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance; and
 - (5) be provided in a form suitable for publication online by the **DEPWS**.

11 Provision of environmental data

- 11-1 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.
- 11-2 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 *Environment Protection Act 2019* and *Environment Protection Regulations 2020*.

approved extent	The extent identified in Figure 1 of this approval which includes equipment, plant and structures, whether stationary or portable, and the land on which the action is situated.
completion of the action	The point in time that the approval holder has completed all construction and operational components of the action as described in the referral information.
DEPWS	Department of Environment, Parks and Water Security
DTFHC	Department of Territory Families, Housing and Communities
EP Act	<i>Environment Protection Act 2019</i> .
high density	Between 400 and 699 <i>Cycas armstrongii</i> (Darwin cycad) stems per hectare.
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 story or group of storeys in whole or in part.
life of action	The period of time from substantial implementation 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.
NT EPA	Northern Territory Environment Protection Authority.
referral	The approval holder's referral to the NT EPA under section 48 of the EP Act .
sensitive or significant and sensitive vegetation	Has the same meaning as in section 6 of the NT Freehold Land clearing guidelines i.e. sensitive or significant vegetation communities such as rainforest, vine thicket, closed forest or riparian vegetation (clause 3.2 of the NTPS). The terms are used in the guidelines to also include mangroves, monsoon vine forest, sandsheet heath and vegetation containing large trees with hollows suitable for fauna habitat.
substantial implementation	The initial works to implement the proposed action defined as any ground disturbing activity relating to the action within the approved extent , including, but not limited to, land clearing , civil works or construction works. Substantial implementation does not include preliminary works such as geotechnical investigations and other pre-construction activities where no land clearing is required.
Typhonium protection area	The area shown at Figure 2 of this environmental approval
very high density	Greater than 700 <i>Cycas armstrongii</i> (Darwin cycad) stems per hectare.

Location and approved extent of action

Spatial data depicting information provided in this environmental approval are held by DEPWS:

- NTEPA2022/0178-005: 05 Spatial files - -DIPL - Holtze Development Area.

All coordinates are provided in the Universal Transverse Mercator map projection, Map Grid of Australia Zone 52 (MGA Zone 52) and datum Geocentric Datum of Australia 1994 (GDA94).

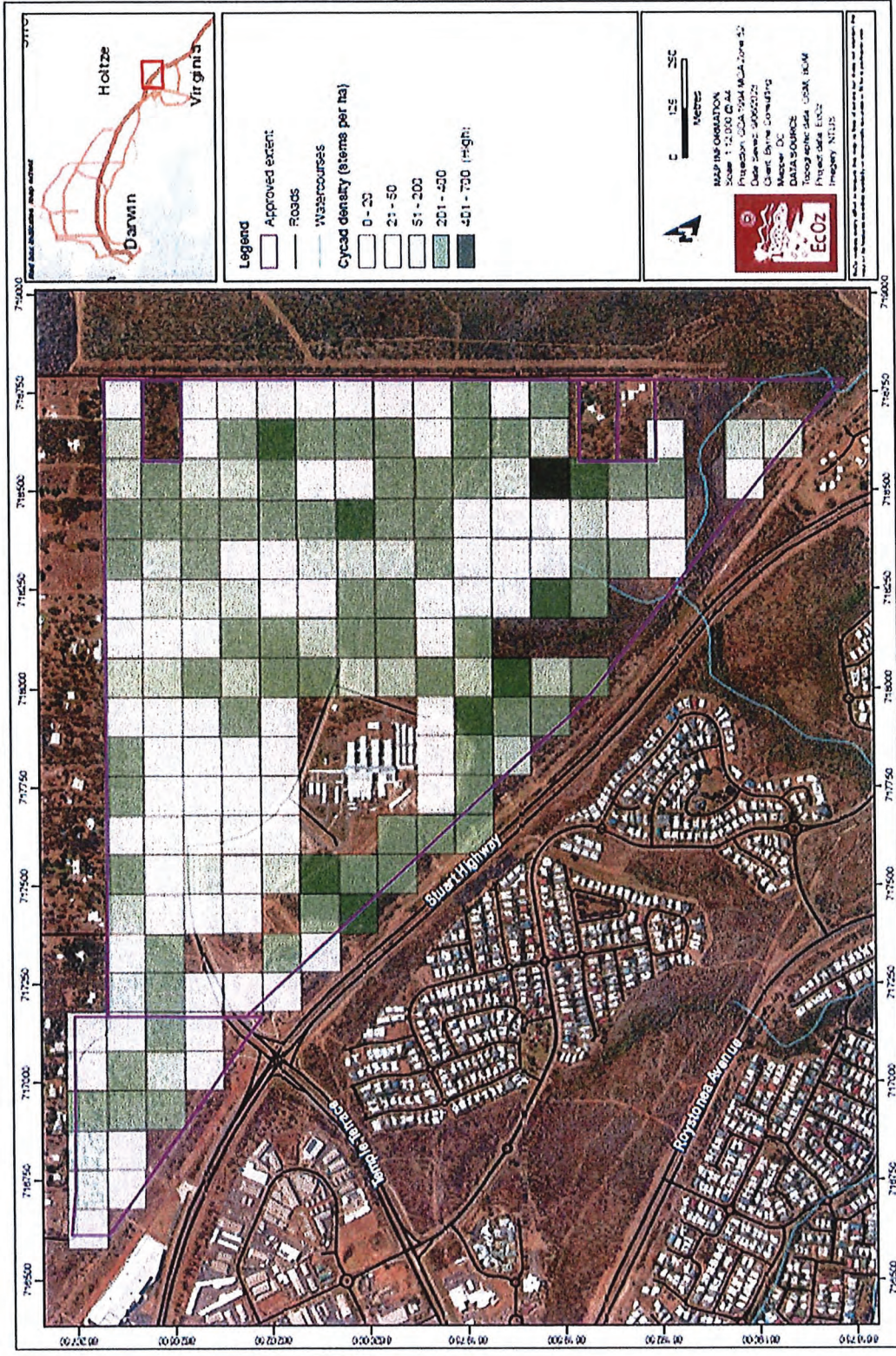


Figure 3 Map of *Cycas armstrongii* (Darwin Cycad) density within approved extent (note one grid square of high density occurrences in dark green)



EcOz Environmental Consultants

T: (08) 8981 1100
E: ecoz@ecoz.com.au
W: www.ecoz.com.au

Darwin, Northern Territory
Level 1, 70 Cavenagh St,
GPO Box 381, Darwin, NT 0801

05 September 2023

Our ref.: EZ22249

Valerie Nullet
Senior Project Manager
Byrne Consulting
v.nullet@byrneconsultants.com.au

Re: *Cycas armstrongii* survey for the Holtze Development Area utilities corridor

Dear Valerie,

This letter presents the results of a survey for Darwin Cycad (*Cycas armstrongii*) that was undertaken to assess corridor clearing options within the south-eastern section of the Holtze Development Area. The approval conditions for the Holtze Development Area (Sections 4231 and 4229, and Portion 2295, Hundred of Bagot) stipulate that no areas supporting high densities of Darwin Cycad. The conditions define a high density to be 400 to 700 stems per hectare.

A cycad density survey was first undertaken in the development area during late May 2023, with a report of the methods and results prepared in June 2023. This letter reports the methods and results of a Darwin Cycad survey undertaken at a finer resolution in early September 2023. The survey found only one area of high density – the same area identified in the May 2023 survey.

Methods

The survey undertaken on 1 September 2023 employed the same methodology as the May 2023 survey provided by EcOz in June 2023. On the advice of Brydie Hill from the Flora and Fauna Branch of DEPWS, the method employed was a more detailed adaptation of that used by DEPWS in a survey of Middle Arm Peninsula. The survey was undertaken in accordance with Section 6.2.2 of the *Guidelines for Assessment of Impacts on Terrestrial Biodiversity* (NT EPA 2013).

In the May 2023 survey, the development area was divided into a 100 x 100 m grid across all possible Darwin Cycad habitat. Areas containing existing infrastructure were excluded, as was the drainage area associated with the headwaters of Mitchell Creek which is not suitable habitat for the Darwin Cycad. This resulted in 174 grids – one of which was found to support a high density of Darwin cycads. In the follow-up September survey, 10 of the 174 grids in the south-eastern section – namely the high-density grid, a line of grids intersected by a proposed utilities corridor, and all grids adjacent to those – were re-surveyed at a finer resolution of 33.33 x 33.33 m grids. This resulted in 90 grids¹ – see Figure 1.

Within the centre of each of grid, Bitterlich point sampling was used to obtain stem counts of Darwin Cycad. This involves the surveyor undertaking a 360° 'sweep' using a tool known as a Bitterlich wedge (with a basal area factor of 0.1) held ~50 cm from the observer's eye. This tool ensures that only Darwin Cycads greater than 50 cm tall (i.e. adult plants) are counted, which is in accordance with the method used by DEPWS at Middle Arm and with how populations of threatened species are determined by the NT and Commonwealth governments.

¹ Of the 90 grids, 10 grids were not resurveyed; the basal sweep count of these 10 grids were acquired from the May 2023 survey which employed the same methodology and therefore same effective search radius.

The use of the Bitterlich wedge results in an effective search radius of 15.8 m, and therefore a survey area of 785.4 m² per grid. The results of each sweep were then scaled up to give a density per hectare, such that a high density of Darwin Cycad would be within the range of 31 to 55 counts per sweep.

Results

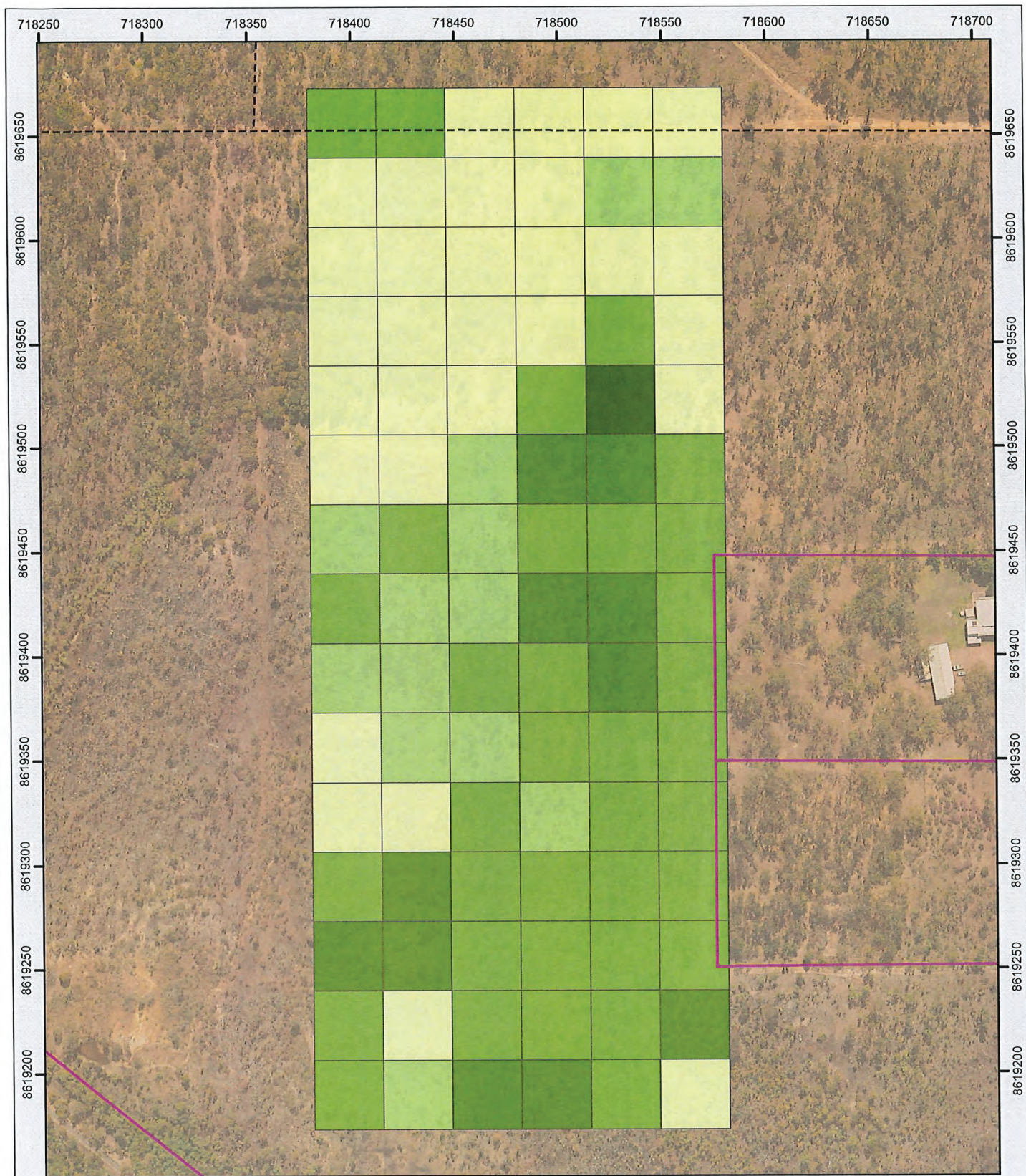
The survey was conducted by EcOz ecologists Glenn Low and Simon Aylott familiar with Darwin Cycad, which is a very distinctive species and could not be mistaken for any other species within the development area.

The results of the survey are shown in Figure 1. Only one grid cell fell within the high category. The sweep in that grid cell resulted in 46 counts of adult Darwin Cycads, with a density estimate of 586 m²/ha. Located in the south-east of the project area, that grid cell is not within any the area that will be developed.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Glen Ewers', followed by a small black square symbol.

Glen Ewers
Managing Consultant – Ecology
EcOz Environmental Consultants
Glen.ewers@ecoz.com.au



Topographic data

- Track
- ▭ Excluded infrastructure

Cycad density (stems per ha)

- 0 - 20
- 20 - 50
- 50 - 200
- 200 - 400
- 400 - 700

MAP INFORMATION
 Scale: 1:2,500 @ A4
 Projection: GDA 1994 MGA Zone 52
 Date Saved: 4/09/2023
 Client: Byrne Consulting
 Mapper: DC

DATA SOURCE
 Topographic data: OSM
 Project data: EcOz
 Imagery: NTLIS

Figure 1. Map of Darwin Cycad density in the utilities corridor (Holtze Development Area)

From: [Samantha Wells](#)
To: [Courtney Chin](#)
Subject: RE: Holtze - further archaeological investigation
Date: Monday, 12 February 2024 10:35:56 AM

Thanks for the update Courtney

Heritage Branch accepts Land Development's intended strategy for the items marked as *Mitchell Creek 1* which is to avoid them because the currently planned works are not within this locality.

Thanks, Sam

Samantha Wells

Senior Heritage Officer
Community Participation and Inclusion
Territory Families, Housing and Communities

Floor 1, JH1/2- Jape Home Maker Village, 356
Bagot Road, Millner
PO Box 37037, Winnellie, NT 0821

t. 08 8999 5041
e. samantha.wells@nt.gov.au
w. nt.gov.au



I acknowledge Aboriginal people as the Traditional Owners of the country I work on, and their connection to land and community. I pay my respect to all Traditional Owners, and to the Elders both past and present.

cid:image003.jpg@01D924D7.B1840C50



Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient, any use, disclosure or copying of this message or any attachments is unauthorised. If you have received this document in error, please advise the sender and delete the email. No representation is given that attached files are free from viruses or other defects. Scanning for viruses is recommended.

From: Courtney Chin <Courtney.Chin@nt.gov.au>
Sent: Monday, 12 February 2024 10:29 AM
To: Samantha Wells <Samantha.Wells@nt.gov.au>
Subject: RE: Holtze - further archaeological investigation

Hi Sam,

No worries. I've passed on the information to Geoff Thomas from Land Servicing and Engineering, this team are responsible for tendering and managing the successful contractor. They have advised they can exclude the GPS locations from public documents and can notify the successful contractor once they are on board.

Can you please confirm if the Heritage Branch accepts Land Development's intended strategy for the items marked as Mitchell Creek 1?

Thanks,

Kind regards,

Courtney Chin
Project Officer

Land Development
Department of Infrastructure, Planning and Logistics

Floor 5, Energy House, 18-20 Cavenagh Street, Darwin
GPO Box 1680, Darwin, NT 0810

t. 08 8999 6473

nt.gov.au

The information in this e-mail is intended solely for the addressee named. It may contain legally privileged or confidential information that is subject to copyright. Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient you must not use, disclose copy or distribute this communication. If you have received this message in error, please delete the e-mail and notify the sender. No representation is made that this e-mail is free of viruses. Virus scanning is recommended and is the responsibility of the recipient.

From: Samantha Wells <Samantha.Wells@nt.gov.au>
Sent: Thursday, 8 February 2024 12:07 PM
To: Courtney Chin <Courtney.Chin@nt.gov.au>
Subject: RE: Holtze - further archaeological investigation

Hi Courtney

Apologies for the late response.

The site locations should not be included in a public document. Is it possible that the GPS location are given out as part of a site induction/management briefing to the successful contractors?

Thanks, Sam

Samantha Wells

Senior Heritage Officer,
Community Participation and Inclusion
Territory Families, Housing and Communities

Floor 1, IIIV2- Tape Lorne Maker Village, 356
Bagot Road, Millner
PO Box 37037, Winnellie, NT 0821

t. 08 8999 5071
e. samantha.wells@nt.gov.au
w. tffc.nt.gov.au



I acknowledge Aboriginal people as the Traditional Owners of the country I work on, and their connection to land and community. I pay my respect to all Traditional Owners, and to the Elders both past and present.



Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient, any use, disclosure or copying of this message or any attachments is unauthorised. If you have received this document in error, please advise the sender and delete the email. No representation is given that attached files are free from viruses or other defects. Scanning for viruses is recommended.

From: Courtney Chin <Courtney.Chin@nt.gov.au>
Sent: Thursday, 8 February 2024 11:45 AM
To: Samantha Wells <Samantha.Wells@nt.gov.au>
Cc: Nasim Jahanfar <Nasim.Jahanfar@nt.gov.au>; Rohan Langworthy <Rohan.Langworthy@nt.gov.au>
Subject: FW: Holtze - further archaeological investigation

Hi Samantha,

Have you had a chance to review the additional information sent through and if we should include GPS coordinates of the archaeological sites in public documents?

Thank you

Kind regards,

Courtney Chin
Project Officer
Land Development
Department of Infrastructure, Planning and Logistics

Floor 5, Energy House, 18-20 Cavenagh Street, Darwin
GPO Box 1680, Darwin, NT 0810

t. 08 8999 6473

nt.gov.au

The information in this e-mail is intended solely for the addressee named. It may contain legally privileged or confidential information that is subject to copyright. Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient you must not use, disclose copy or distribute this communication. If you have received this message in error, please delete the e-mail and notify the sender. No representation is made that this e-mail is free of viruses. Virus scanning is recommended and is the responsibility of the recipient.

From: Courtney Chin
Sent: Tuesday, 30 January 2024 1:09 PM
To: Samantha Wells <Samantha.Wells@nt.gov.au>
Cc: Rohan Langworthy <Rohan.Langworthy@nt.gov.au>; Nasim Jahanfar <Nasim.Jahanfar@nt.gov.au>
Subject: RE: Holtze - further archaeological investigation

Hi Sam,

Thank you for your response.

As requested, attached is the 2023 report by OnSite Cultural Heritage Management. The location of the items marked at *Mitchell Creek 1* is not in the report but the coordinates are 52 717931 E, 8619546 N (GDA 94) and the KMZ file is attached.

Land Development's intended strategy for the items marked as *Mitchell Creek 1* is to avoid them as our currently planned works are not within this locality.

Can you please advise whether we should include the GPS coordinates of the location of the two sites on our design documentation to flag to Contractors to avoid these areas? These drawings will be public documents, so there is a risk that it may encourage people to go looking there if it is noted in the documents.

Thank you

Kind regards,

Courtney Chin

Project Officer

Land Development

Department of Infrastructure, Planning and Logistics

Floor 5, Energy House, 18-20 Cavenagh Street, Darwin

GPO Box 1680, Darwin, NT 0810

t. 08 8999 6473

nt.gov.au

The information in this e-mail is intended solely for the addressee named. It may contain legally privileged or confidential information that is subject to copyright. Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient you must not use, disclose copy or distribute this communication. If you have received this message in error, please delete the e-mail and notify the sender. No representation is made that this e-mail is free of viruses. Virus scanning is recommended and is the responsibility of the recipient.

From: Samantha Wells <Samantha.Wells@nt.gov.au>

Sent: Thursday, 25 January 2024 2:21 PM

To: Courtney Chin <Courtney.Chin@nt.gov.au>

Cc: Rohan Langworthy <Rohan.Langworthy@nt.gov.au>; Nasim Jahanfar <Nasim.Jahanfar@nt.gov.au>

Subject: RE: Holtze - further archaeological investigation

Hi Courtney

Thank you for your request for review and advice regarding the 2023 archaeological report and recommendations provided to you by Ellengowan Consultants in regard to further archaeological investigation of the Holtze development area.

Just a note - as per 5.2(2) of the Environmental Approval EP2022/022-001 the consultant did not consult the Heritage Branch to develop the scope of works for the archaeological survey. Nor does the Addendum Report include the Scope of Works and Protocols. Having said that, Heritage Branch can confirm that the survey methodology was sound.

I have reviewed the 2023 addendum to the 2014 report and note that an isolated stone artefact was located during the two-day survey in December 2023. The GPS coordinates of the isolated stone artefact will be entered into the archaeological sites database managed by the Heritage Branch.

Reference is made in the Ellengowan report to a survey carried out in 2023 by OnSite Cultural Heritage Management which identified an archaeological site consisting of three quartzite flakes. It is unclear whether this is the same archaeological site that was identified in the Ellengowan report. The site description suggests not.

It does not look like the 2023 OnSite Cultural Heritage Management report including the GPS coordinates for this archaeological site have been provided to the Heritage Branch. If you have this report could you please send it to us and we will plot the location of the two archaeological sites?

In regard to the Conclusions and the Recommendations in the 2023 Ellengowan Report:

Recommendation - The isolated stone artefact (MCBS1) should be avoided. Alternatively, it should be re-located to an approved keeping place within the project area that will not be developed.

It is not really correct for the consultant to advise that the 'proposed development area is cleared for works'. The recommendation regarding relocation of the artefact to an approved keeping place should be identified as a mitigation strategy only. If this path were to be followed, an Application to Carry out Works on a heritage place would have to be submitted to the Heritage Council, and this should be identified in the report.

Having said that, Heritage Branch accepts the advice from DIPL that the archaeological site (MCBS1) will be avoided and accepts this as a mitigation strategy. In regard to the archaeological site located by OnSite Cultural Heritage Management, can you please advise of the management or mitigation procedures identified for this recorded archaeological place?

In regard to:

Recommendation - Photogrammetry recording of the historic concrete slabs should be completed post-vegetation clearance to allow an unimpeded flight path.

Recommendation - As per the above point, the Sidney Williams hut should be recorded prior to its destruction, post vegetation clearance.

There is very little historical information regarding the heritage significance of the concrete slabs or the Sidney Williams Hut. The archaeological report did not provide any background detail as to the relative heritage significance of these places. Extensive photographing of the Sidney Williams Hut occurred in 2023.

As per the advice provided previously by the Heritage Branch, the Sidney Williams Hut and the concrete slabs are not declared heritage places and are not protected by the *Heritage Act 2011*. The Sidney Williams Hut has some historical significance due to its likely associations with the Second World War. However, the extent of deterioration and the number of more complete, representative examples of Sidney Williams Huts in the Top End reduces its significance. The significance of the concrete slabs is not clear. Heritage Branch accepts that the concrete slabs and Sidney Williams hut are to be removed as part of land remediation works.

Please do not hesitate to get in contact for any further clarification.

Kind regards, Sam

Samantha Wells

Senior Heritage Officer,
Community Participation and Inclusion
Territory Families, Housing and Communities

Floor 1, J11/2- Jape Home Maker Village, 356
Bagal Road, Milner
PO Box 37037, Winnellie, NT 0821

t. 08 8999 5071
e. samantha.wells@nt.gov.au
w. tfs.nt.gov.au



I acknowledge Aboriginal people as the Traditional Owners of the country I work on, and their connection to land and community. I pay my respect to all Traditional Owners, and to the Elders both past and present.

cid:image003.jpg@01D924D7.B1840C50



Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient, any use, disclosure or copying of this message or any attachments is unauthorised. If you have received this document in error, please advise the

sender and delete the email. No representation is given that attached files are free from viruses or other defects. Scanning for viruses is recommended.

From: Courtney Chin <Courtney.Chin@nt.gov.au>
Sent: Thursday, 18 January 2024 11:55 AM
To: Samantha Wells <Samantha.Wells@nt.gov.au>
Cc: Rohan Langworthy <Rohan.Langworthy@nt.gov.au>; Nasim Jahanfar <Nasim.Jahanfar@nt.gov.au>
Subject: Holtze - further archaeological investigation

Hi Samantha,

I am emailing with reference to a phone conversation you had with Rohan Langworthy on Tuesday afternoon about the Holtze Development Area.

The Holtze Development Area NT EPA referral submission from the Department of Territory Families, Housing and Communities – Heritage Branch noted:

- *While no Aboriginal archaeological sites were identified within the project boundary, it is noted that ground surface visibility was very low (5%) at the time of the 2014 archaeological survey. The existence of recorded Aboriginal archaeological sites on adjacent land south of the project boundary suggests the possibility of archaeological sites near the headwaters of Mitchell Creek in the southern part of Lot 4321. If that area is proposed for future development, Heritage Branch recommends further archaeological survey when there is greater ground surface visibility as an additional mitigation procedure.*

Condition 5 in the Environmental Approval (EP2022/022-001, attached) for the Holtze Development Area follows:

cid:image004.jpg@01DA529A.30205F00



cid:image005.jpg@01DA529A.30205F00



As per the Environmental Approval condition 5-1, DIPL engaged Ellengowan Enterprises to conduct further archaeological investigation and review within the proposal area in proximity to the headwaters of Mitchell Creek (in the southern part of Section 4231). The additional survey was conducted in December 2023. Ellengowan Enterprises conducted the original archaeological assessment in 2014 which was used in the referral. The December 2023 field survey report was included as an addendum to the original 2014 report (attached).

DIPL is seeking advice on our approach to the recommendations that have been provided in the 2023 addendum. The recommendations are:

- *The isolated stone artefact (MCBS1) should be avoided. Alternatively, it should be re-located to an approved keeping place within the project area that will not be developed.*
- *Photogrammetry recording of the historic concrete slabs should be completed post-vegetation clearance to allow an unimpeded flight path for the UAV.*
- *As per the above point, the Sidney Williams hut should be recorded prior to its destruction, post vegetation clearance.*

DIPL accept the first recommendation and do not intend to interfere with the stone artefact (MCBS1).

Based on previous advice received from the Heritage Branch (attached):

- The slabs are unlikely to be of significance and therefore no further assessment is required.
- The Sidney Williams Hut appears almost completely dilapidated now and there are no impediments from a heritage perspective to its proposed removal or development. It is not necessary to document this hut any further.

The current property owner, Crown Land Estate, has been consulted and they do not have an interest in preserving the Sidney Williams Hut or moving it to another location.

Aerial views of the slabs and Sidney Williams hut have been recorded through the NTG land visualiser tool (Google Earth EC). Attached are the most recent images. The 2014 report by Ellengowan Enterprises notes the location of the slabs and Sidney Williams Hut, as well as providing photos and sketches.

Pending this advice, DIPL is intending for the slabs and Sidney Williams hut to be removed as part of land remediation works that will commence in the next few months. Widespread clearing will not occur until development of the area is imminent to minimise weed and erosion issues. Therefore, it is preferred not to undertake any vegetation clearing and further recording of the slabs and Sidney Williams hut.

Please note that Silvano Jung (of Ellengowan Enterprises) had not been provided the previous communications attached between the Heritage Branch, EcOz and DIPL prior to conducting the survey in December 2023 and providing his recommendations.

Can you please review and provide advice regarding our approach to the recommendations, and if the Heritage Branch is satisfied with the further archaeological investigation and review undertaken in December 2023, as per the Environmental Approval for the Holtze Development Area.

Kind regards,

Courtney Chin

Project Officer

Land Development

Department of Infrastructure, Planning and Logistics

Floor 5, Energy House, 18-20 Cavenagh Street, Darwin

GPO Box 1680, Darwin, NT 0810

t. 08 8999 6473

nt.gov.au

The information in this e-mail is intended solely for the addressee named. It may contain legally privileged or confidential information that is subject to copyright. Use or transmittal of the information in this email other than for authorised NT Government business purposes may constitute misconduct under the NT Public Sector Code of Conduct and could potentially be an offence under the NT Criminal Code. If you are not the intended recipient you must not use, disclose copy or distribute this communication. If you have received this message in error, please delete the e-mail and notify the sender. No representation is made that this e-mail is free of viruses. Virus scanning is recommended and is the responsibility of the recipient.