

4 June 2018

The Hon John Mansfield AM QC Aboriginal Land Commissioner Level 4, Jacana House 39-41 Woods Street DARWIN NT 0800

By email: AboriginalLandCommissioner@network.pmc.gov.au

Dear Sir

Review of detriment issues – Seven Emu Region Land Claim No. 186, Wollogorang Area II Land Claim No. 187 and part of Manangoora Region Land Claim No. 185 (Relevant Land Claims)

We refer to your letter dated 21 March 2018 regarding the review that you are conducting into the status of detriment issues relating to 16 land claims previously recommended for grant by the Aboriginal Land Commissioner, but not yet finalised, including the Relevant Land Claims.

Australian Wildlife Conservancy (AWC) acquired Pungalina Pastoral Lease 774 NT Portion 1352 (Pungalina), and entered into a sublease of Seven-Emu Pastoral Lease 1215 NT Portion 1351 (Seven-Emu) from indigenous landholder Mr Frank Shadforth in 2008. AWC also licences part of Seven-Emu back to Mr Shadforth for pastoral and related tourism operations.

We understand the Relevant Land Claims include areas that are adjacent to Pungalina and Seven-Emu.

The Australian Government provided substantial funds for the acquisition of Pungalina by AWC to help ensure that its management, consistent with the terms of the pastoral lease, will promote the conservation of nationally significant conservation values including listed threatened species.

AWC did not have an interest in Pungalina or Seven-Emu at the time of the original inquiry into the Relevant Land Claims in 2002. We appreciate the opportunity to provide comments on detriment concerns in Report No. 66 relating to the Relevant Land Claims (**Report 66**), and also to provide new or additional issues of detriment.

Background

The Relevant Land Claims include:

- the intertidal zone adjacent to Seven-Emu;
- part of the beds and banks of the Calvert River, adjacent to both Pungalina and Seven-Emu; and
- part of the beds and banks of the Robinson River adjacent to Seven-Emu.

A map from Report 66 showing the Relevant Land Claims in relation to Pungalina and Seven-Emu is included as Annexure A for your reference.

The following comments address the matters referred to in the Schedule to your letter dated 20 April 2018 in relation to the Relevant Land Claims.

1 Timing Issues

- (a) AWC acquired Pungalina and a sublease of Seven-Emu in 2008, and continues to hold those interests in the properties. Copies of title searches for Pungalina and Seven-Emu showing AWC's interested are attached as Annexures B and C respectively.
- (b) AWC did not have any interest in either Pungalina or Seven-Emu at the time of the original inquiry into the Relevant Land Claims in 2002:
 - (i) AWC entered into a contract to purchase Pungalina on 27 September 2007, and completed the acquisition in 2008.
 - (ii) AWC entered into a sublease of Seven-Emu on 24 December 2008.
- (c) AWC was not aware of the Land Claims at the time of the acquisition of Pungalina or the sublease of Seven-Emu. We have confirmed with Clayton Utz, who advised AWC on these transactions, that this information was not provided, and was not identified in searches at the time.

2 Financial Detriment

(a) Loss of property value

While AWC has no current intention to deal with its interests in either Pungalina or Seven-Emu, if the exclusive access is granted for the Relevant Land Claims, AWC will have no automatic right to access the sea or the Robinson and Calvert Rivers from Seven-Emu. Access to the Calvert River from Pungalina will also be reduced. Removal of access to the rivers and sea from Seven-Emu, and from part of the river in Pungalina, will significantly impact on the market value of AWC's interest in those properties.

The extent of the impact on the value of Pungalina and Seven-Emu will depend on use of the Relevant Land Claim areas. Significant new operations on the Relevant Land Claim area will have a greater impact, as compared with the more traditional use of this land by the claimants.

(b) Cost to access areas of Relevant Land Claims

If exclusive access is granted for the Relevant Land Claims, and a licencing system is implemented to allow access to the sea and rivers from Pungalina and Seven-Emu, AWC, a not-for-profit charity, will incur the additional cost of obtaining any required licences to access these areas and additional administration and delays to process access requests.

(c) Increased costs, or reduced revenue from stock

As outlined in section 3 below, if access to river banks and intertidal zones is prevented, or significantly impeded, it will require a fundamental change to the way in which these properties are managed. Financial detriment that may be incurred includes new fencing, reduced stock capacity, and additional costs for weed and fire management.

3 Physical / access detriment

(a) Impact on operations generally

Access to the river banks and intertidal zones is an integral part of operations at Seven-Emu and Pungalina. As outlined below, these areas are accessed for water and stock feed, fire and weed management. They form a natural barrier to neighbouring properties. If access to these areas is prevented, or significantly impeded, it will require a fundamental change to the way in which these properties are managed.

Additional impacts may arise depending on the use of the Relevant Claim Land by the claimants following grant. As mentioned above, significant new operations on the Relevant Land Claim area

will have a greater potential to impact AWC operations, as compared with the more traditional use of this land by the claimants. For example, if the claimants were to conduct activities that were not consistent with AWC's continued access to these areas, AWC would need to restructure its operations to avoid access. We are unable to assess the potential detriment without knowing what may be planned for these areas.

(b) Access to water and food for stock

AWC and AWC's licensee Mr Shadforth currently use the Calvert and Robinson Rivers for the purpose of watering cattle. The river banks also provide a small but high quality source of food for stock. If exclusive access is granted for the Relevant Land Claims, access to these important water and food sources would no longer be available.

The river provides an important natural property boundary and barrier to grazing and wandering stock. This is a critical part of AWC's management of stock between Pungalina, Seven- Emu and neighbouring property Wollogorang.

These issues were outlined in the original inquiry in 2002, in the submissions by the Director Pastoral Land Management Division in the Northern Territory Department of Infrastructure, Planning and Environment, which is quoted at paragraph 103 of Report 66.

As outlined in paragraph 104 of Report 66, if the current access for Pungalina and Seven-Emu to the Relevant Land Claims is not continued, the loss or restriction of access would have the potential to impact negatively on the operations Pungalina and Seven-Emu. While Report 66 concluded that previous experience suggested that suitable arrangements are likely to be agreed between the traditional owners and pastoralists, the Blue Mud Bay decision has the potential to significantly impact on the likelihood of agreed access on reasonable terms, absent legislative intervention. Regardless, any arrangement for access will no doubt result in additional cost to AWC, and involve additional administration and delays to process access requests.

(c) Land management activities

AWC has implemented fire, feral animal and weed management regimes that have significantly reduced the impact of wildfires, feral animals and weeds at both Pungalina and Seven-Emu.

If exclusive access is granted for the Relevant Land Claims, AWC will not be able to conduct its land management activities in the areas of the Relevant Land Claims. In particular, this will impact on AWC's ability to:

- (i) manage the potential spread of weeds on river banks and beds, and the intertidal zone, which are high risk areas for the spread of water-borne weeds such as Parkinsonia;
- (ii) remove feral animals from the river banks and intertidal zone; and
- (iii) manage fire risks on the river banks and intertidal zones.

The result will be that AWC will have to incur additional costs to manage weeds, fire and feral animals, with reduced effectiveness.

The river provides a critical natural barrier to the management of fire and the mitigation of wildfire later in the dry season. Costs of management and mitigation will be significantly affected, as will the effectiveness of protection of infrastructure and landscape values affected by large-scale wildfires originating in this part of the property.

(d) Monitoring and research

AWC is required under section 39(b) of the *Pastoral Lands Act* NT to take all reasonable measures to conserve and protect features of environmental, cultural, heritage or ecological significance.

Pungalina and Seven-Emu have a high conservation value and environmental sensitivity, including a number of threatened species and critically important habitats that we are protecting. In particular, Pungalina and Seven-Emu is home to the Gouldian Finch and Gulf Snapping Turtle, which are listed as an Endangered under the Environment Protection and Biodiversity Conservation Act (EPBC Act), and the Crested Shrike-tit (subspecies whitei), Carpentarian False Antechinus, Ghost Bat, Flatback Turtle and Green Turtle, which are listed as Vulnerable under the EPBC Act. The coastline at Seven Emu, that is subject to the Relevant Land Claims, has also been identified as a nationally significant area for shorebirds (Barden P (2016) Survey of Migratory Shorebirds and other Wetland Birds — Pungalina — Seven-Emu Wildlife Sanctuary. Gulf of Carpentaria, Summer 2016 — attached as Annexure D), with the presence of the Critically Endangered Eastern Curlew and Great Knot, and threatened species like the Lesser Sand Plover having been confirmed.

As part of AWC's efforts to conserve and protect these significant environmental and ecological features, AWC regularly conducts monitoring across Pungalina and Seven-Emu, including on river banks and beds, and in the intertidal zones. If exclusive access is granted for the Relevant Land Claims, AWC will not be able to conduct its monitoring in these areas, reducing our ability to effectively conserve and protect these significant areas.

(e) Pastoral and related tourism activities on licensed land

Mr Shadforth currently conducts pastoral-based tourism operations on an area of Seven-Emu that is licensed from AWC. The pastoral and related tourism activities include use of the river and also access to the sea. If the Relevant Land Claims are granted unconditionally, this access will be removed, reducing the activities available to Mr Shadforth's pastoral and related tourism operations.

4 Benefits to local community

Seven-Emu represents a historic partnership between AWC and the indigenous landholder, Mr Frank Shadforth and his family. Seven-Emu is Aboriginal pastoral land, owned by Mr Shadforth, that is leased to AWC for nearly 30 years. Through the lease of Seven-Emu, AWC is contributing funds to allow Mr Shadforth and his family to continue pastoral and related tourism operations on the licenced area of Seven-Emu.

AWC has a strong history of working with traditional owners to recognise their rights, and involve them in the work being undertaken by AWC.

Seven-Emu was the first parcel of indigenous pastoral land to be leased by a private conservation group, establishing an important new model for conservation on indigenous land. AWC has since replicated this model at Tableland in Western Australia, and has recently entered into an agreement to deliver land management and science programs at Dambimangari country, also in Western Australia, in collaboration with the Dambimangari traditional owners.

AWC has undertaken joint surveys with the Garawa rangers at Pungalina and Seven-Emu in 2010 and 2012. These surveys were aimed at measuring a number of indicators relating to the ecological health of the sanctuary, and to progress the relationship between AWC and the Garawa rangers, including facilitating the exchange of ideas, skills and information. Garawa rangers have also assisted in fire management since AWC commenced operations at Pungalina and Seven-Emu.

5 Detriment to the wider community

Pungalina and Seven-Emu are located in a very remote area, with exceptional values. As mentioned above, a number of EPBC listed threatened species are found in this area, such as the Carpentarian False Antechinus, which is not found in any other protected area on mainland Australia. Within the pastoral lease framework, AWC is mobilising private finance to continue to protect national significant values, building on the substantial initial investment in Pungalina by the Australian Government. If AWC does not have access to the river banks, beds and intertidal zone, the protection of unique conservation

values will be compromised, and cannot be replaced. Government funding is unlikely to be available for the ongoing management of key conservation values. If these critical conservation values are lost, the wider community will lose.

6 Detriment review in Report 66

While AWC did not have an interest in Pungalina or Seven-Emu at the time of the original inquiry into the Relevant Land Claims, we understand that the nature of the interest being claimed and the potential detriment changed significantly after Report 66 was prepared, as a result of the High Court decision in Northern Territory of Australia v Arnhem Land Aboriginal Land Trust [2008] HCA 29 (Blue Mud Bay decision).

The High Court determined in the Blue Mud Bay decision that the claimants had exclusive access rights to the intertidal zone. Report 66 did not envisage exclusive access rights to the intertidal zone, and accordingly, the assessment of potential detriment in Report 66 needs to be reconsidered in light of the Blue Mud Bay decision.

7 AWC submissions

AWC supports the recognition of traditional owner rights, and has a strong history of working with traditional owners. However, the grant of the Relevant Land Claims without allowing for continued unfettered access to those areas by AWC as pastoral lease holder of Pungalina and sublessee of Seven-Emu, will result in significant detriment to AWC, as outlined above.

AWC is seeking either a conditional grant or legislative change to allow AWC to retain its access to the areas the subject of the Relevant Land Claims without additional cost or conditions, for the purposes permitted under the pastoral leases and associated permits, including:

- (a) access to water and food for stock;
- (b) land management activities;
- (c) monitoring and research;
- (d) pastoral and related tourism activities, including authorised visitor programs; and
- (e) all other activities permitted in accordance with the pastoral lease.

AWC also seeks the right to be consulted on proposed activities on the Relevant Claim Lands where those activities are inconsistent with the ongoing use of that land by AWC.

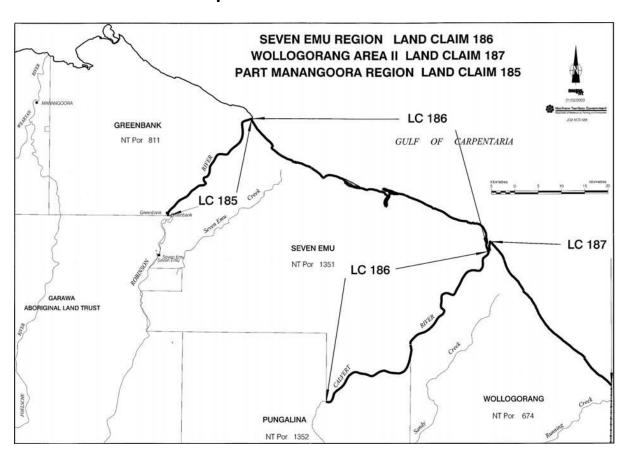
AWC appreciates the opportunity to provide submissions in relation to this review. Please do not hesitate to contact me should you have any queries, or require additional information.

Yours sincerely

Ruth Cairns Legal Counsel

cc. Poppi Gatis, Senior Lawyer, Solicitor for the Northern Territory Poppi.Gatis@nt.gov.au
David Avery, Lawyer, Northern Land Council david.avery@nlc.org.au
Matilda Hunt, Lawyer, Northern Land Council huntma@nlc.org.au

Annexure A Map of Relevant Land Claims



Annexure B

Title Search Pungalina

Duplicate Certificate as to Title issued? Yes 12/11/2008

SEARCH CERTIFICATE

PASTORAL LEASE 00774

N.T. Portion 1352

Date Registered: 12/11/2008

Area under title is 1937 square kilometres 31 hectares 1106 square metres

Owner:

Australian Wildlife Conservancy (ACN 068 572 556) of PO Box 8070, Subiaco East WA 6008

| Registered Date | Dealing Number | Description |
|--------------------|-------------------|--|
| | | Previous title is Volume 730 Folio 550 |
| 12/11/2008 | 685761 | Request to issue Certificate as to Title |
| 04/03/2005 | 572889 | Variation - term extended to 30/6/2036 |
| End of Dealing | gs | |

Commencement Date: 1st July, 1971

Expiring Date: 30th June, 2036

Reservations and Other Special Provisions:

The lease is, pursuant to section 129 of the Pastoral Land Act, subject to the reservations and conditions, to the extent that they are not inconsistent with the Pastoral Land Act, applicable as at 25 June 1992 to Pastoral Lease Number 0774 entered in the Register Volume 100 Folio 036, being conditions not relating to the development of the lease; and

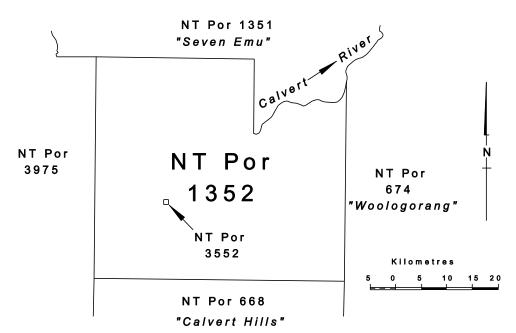
The lease is subject to the conditions and reservations set out in section 38 & Dry 39 of the Pastoral Land Act.

Volume 730 Folio 550

Date Registered: 12/11/2008

Duplicate Certificate as to Title issued? Yes 12/11/2008

NOTE: Lease excludes NT Portion 3552



NOTE: The trigonometric surveys not being sufficiently advanced to enable the preparation of correct plans, this plan is issued on the distinct understanding that it is liable to correction on completion of surveys so as to secure original boundaries to prior applicants. All corrections of boundaries and areas to be subject to the approval of the Surveyor-General whose decisions in all cases shall be final.

Date Registered: 12/11/2008 Volume 730 Folio 550 **Duplicate Certificate as to Title issued?** Yes 12/11/2008



Record of Administrative Interests and Information

Record of Administrative Interests and Information

The information contained in this record of Administrative Interests only relates to the below parcel reference.

Parcel Reference: N.T. Portion 01352

(See section 38 of the Land Title Act)

Note: The Record of Administrative Interests and Information is not part of the Land Register and is not guaranteed by the Northern Territory of Australia, and the NT Government accepts no Liability for any omission, misstatement or inaccuracy contained in this statement.

Registrar General

Government Land Register

(none found)

Custodian - Registrar General (+61 8 8999 6252)

Current Title

CUFT 730 550 (order 2)

Tenure Type

PASTORAL LEASE 774

Tenure Status

Current

Area Under Title

1937 square kilometres 31 hectares 1106 square metres

Owners

Australian Wildlife Conservancy (ACN 068 572 556) PO Box 8070, Subiaco East WA 6008

Easements

(none found)

Scheme Name

(none found)

Scheme Body Corporate Name

(none found)

Reserved Name(s)

(none found)

Unit Entitlements

(none found)

Transfers

30/09/2008 for \$6,600,000 (includes \$600,000 GST)

16/06/2004 for \$342,605

31/03/2000 for \$300,000

02/06/1978 for n/a

21/05/1974 for

Tenure Comments

(none found)

Historic Titles

CUFT 730 550 (order 1)

CUFT 729 244 (order 1)

CUFT 684 263 (order 1)

CUFT 675 348 (order 1)

CUFT 625 685 (order 1)

CUFT 604 012 (order 1)

CUCL 100 036 (order 3)

CUCL 100 036 (order 2)

CUCL 100 036 (order 1)

Visit the website http://www.nt.gov.au/justice/bdm/land_title_office/

Custodian - Surveyor General (+61 8 8995 5362)

Address

CALVERT

Property Name

PUNGALINA

Survey Plan

S 000000

Survey Status

File Only

Parcel Status

CURRENT

Parcel Area

1937 square kilometres, 31 hectares, 1106 square metres

Map Reference

Code 520 Scale 500000 Sheet 00.12

Parent Parcels

(none found)

Parcel Comments

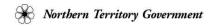
PROPERTY NAME 'PUNGALINA'. NT PORTION 3552 EXCISED - S88/258. NOTE: RESPONSIBILITY FOR INTERNAL LEASE ACCESS ROAD TRANSFERRED FROM DEPT T&W TO LESSEE FROM 30/09/2000 - 2000/14/149. PROP ROAD EXCISION - S2003/176.

Survey Comments

NO SURVEY FOR THIS PARCEL - REFER TO TITLE DIAGRAM WHERE APPLICABLE.

Proposed Easements

(none found)



Municipality

ROPER GULF SHIRE

Region

KATHERINE

Custodian - Valuer General (+61 8 8995 5375)

Owner's Last Known Address

Australian Wildlife Conservancy, PO BOX 8070, SUBIACO EAST WA 6008

Parcels in Valuation

N.T. Portion 01352

Unimproved Capital Value

\$300,000 on 01/07/2015

\$300,000 on 01/07/2012

\$470,000 on 01/07/2010

\$550,000 on 01/07/2009

\$260,000 on 01/07/2006

\$60,000 on 01/07/2003

\$50,000 on 01/07/2000

\$45,000 on 01/07/1997

\$35,000 on 01/07/1994

\$35,000 on 01/07/1991

Valuation Improvements

(none found)

Custodian - Property Purchasing (+61 8 8999 6886)

Acquisitions

(none found)

Custodian - Building Advisory Service (+61 8 8999 8965)

Building Control Areas

(none found)

Building Permits

(none found)

Visit the website http://www.nt.gov.au/building/

Custodian - Town Planning and Development Assessment Services (+61 8 8999 6046)

Planning Scheme Zone

NOZONE (No NT Planning Scheme zone applies)

Interim Development Control Orders

(none found)

Planning Notes

The NT Planning Scheme may apply to development on this land.

Planning Applications

(none found)

Custodian - Power and Water Corporation (1800 245 092)

Meters on Parcel

Power Water - Electricity (none found)
Power Water - Water (none found)

For Account balances, contact the Power and Water Corporation.

Custodian - Pool Fencing Unit (+61 8 8924 3641)

Swimming Pool/Spa Status

(none found)

For more information, contact the Pool Fencing Unit (+61 8 8924 3641).

Custodian - Mines and Energy (+61 8 8999 5322)

For information on possible Exploration Licences, contact Mines & Energy or visit the website http://www.nt.gov.au/d/Minerals Energy/

For information on possible Petroleum Titles, contact Mines & Energy for further details.

Custodian - NT Environment Protection Authority (+61 8 8924 4218)

Results of site contamination assessment

(none found)

For further information contact Environment Protection Authority or visit the website https://ntepa.nt.gov.au/waste-pollution/contaminated-land

Custodian - Heritage Branch (+61 8 8999 5039)

Heritage Listing:

(none found)

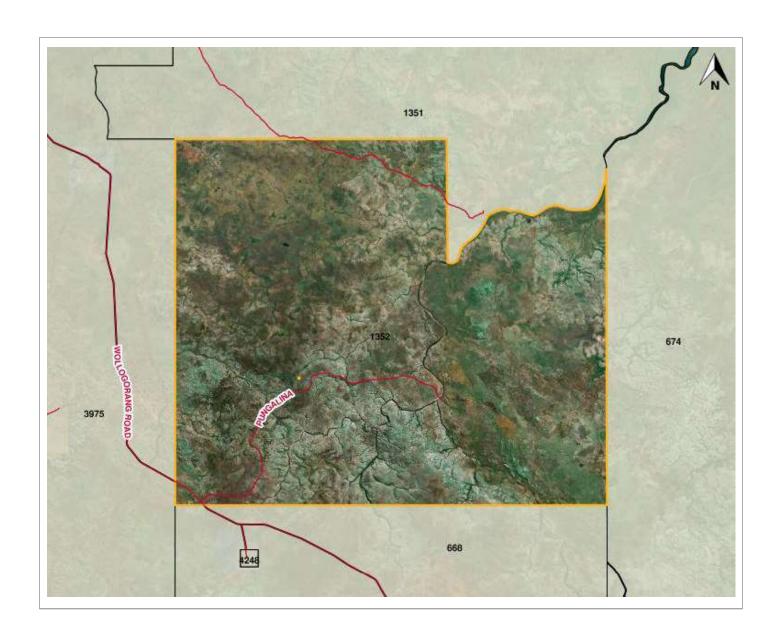
For further information on heritage places contact Heritage Branch or visit the website https://nt.gov.au/property/land/heritage-register-search-for-places-or-objects

Other Interests

For Account balances, contact Roper Gulf Shire Council

All or part of this parcel is contained within the boundary of a native title application. Contact National Native Title Tribunal on (08) 8936 1600.

All or part of this parcel is contained within the boundary of a native title application. Contact National Native Title Tribunal on (08) 8936 1600.



Annexure C

Date Registered: 14/10/2014 Title Search Seven-Emu Volume 793 Folio 799

Duplicate Certificate as to Title issued? No

SEARCH CERTIFICATE

PERPETUAL PASTORAL LEASE 01215

N.T. Portion 1351 from plan(s) S 000000 Area under title is 2092 square kilometres 71 hectares 393 square metres

Owner:

Francis Thomas Shadforth of PO Box 412, Borroloola NT 0854

| Registered Date | Dealing Number | Description |
|--------------------|-------------------|---|
| 14/10/2014 | 833847 | Previous title is Volume 672 Folio 817 |
| 24/12/2008 | 689232 | Notice of a Right to a Grant of Interest |
| End of Dealing | gs | Sublease to Australian Wildlife Conservancy - expiring 29/06/2036 |

Commencement Date: 14th October 2014

Expiry Date: In Perpetuity

Reservations and Other Special Provisions

The conditions and reservations contained in sections 38 and 39 of the Pastoral Land Act apply to the lease.



Record of Administrative Interests and Information

Record of Administrative Interests and Information

The information contained in this record of Administrative Interests only relates to the below parcel reference.

Parcel Reference: N.T. Portion 01351 plan(s) S 000000

(See section 38 of the Land Title Act)

Note: The Record of Administrative Interests and Information is not part of the Land Register and is not guaranteed by the Northern Territory of Australia, and the NT Government accepts no Liability for any omission, misstatement or inaccuracy contained in this statement.

Registrar General

Government Land Register

(none found)

Custodian - Registrar General (+61 8 8999 6252)

Current Title

CUFT 793 799 (order 1)

Tenure Type

PERPETUAL PASTORAL LEASE 1215

Tenure Status

Current

Area Under Title

2092 square kilometres 71 hectares 393 square metres

Owners

Francis Thomas Shadforth PO Box 412, Borroloola NT 0854

Easements

(none found)

Scheme Name

(none found)

Scheme Body Corporate Name

(none found)

Reserved Name(s)

(none found)

Unit Entitlements

(none found)

Transfers

04/01/2002 for \$115,000

Tenure Comments

(none found)

Historic Titles

CUFT 672 817 (order 1)

CUFT 643 259 (order 1)

CUFT 643 227 (order 1)

CUCL 100 035 (order 1)

Visit the website http://www.nt.gov.au/justice/bdm/land title office/

Custodian - Surveyor General (+61 8 8995 5362)

Address

CALVERT

Property Name

SEVEN EMU

Survey Plan

S 000000

Survey Status

File Only

Parcel Status

CURRENT

Parcel Area

2092 square kilometres, 71 hectares, 393 square metres

Map Reference

Code 520 Scale 500000 Sheet 00.12

Parent Parcels

(none found)

Parcel Comments

PROPERTY NAME 'SEVEN EMU'. 15 SQUARE MILE PROP ABORIGINAL RESERVE EXCISED S84/1125/34 (BECAME PART NT POR 3975 - S91/151). ABUTTING INTERTIDAL ZONE LAND CLAIM - LI2002/19/69.

Survey Comments

NO SURVEY FOR THIS PARCEL - REFER TO TITLE DIAGRAM WHERE APPLICABLE.

Proposed Easements

(none found)

Municipality

ROPER GULF SHIRE

Region

KATHERINE

Custodian - Valuer General (+61 8 8995 5375)

Owner's Last Known Address

Francis T Shadforth, PO BOX 412, BORROLOOLA NT 0854

Parcels in Valuation

N.T. Portion 01351

Unimproved Capital Value

\$870,000 on 01/07/2015

\$685,000 on 01/07/2012

\$1,060,000 on 01/07/2010

\$1,250,000 on 01/07/2009

\$340,000 on 01/07/2006

\$135,000 on 01/07/2003

\$115,000 on 01/07/2000

\$100,000 on 01/07/1997

\$75,000 on 01/07/1994

\$75,000 on 01/07/1991

Valuation Improvements

(none found)

Custodian - Property Purchasing (+61 8 8999 6886)

Acquisitions

(none found)

Custodian - Building Advisory Service (+61 8 8999 8965)

Building Control Areas

(none found)

Building Permits

(none found)

Visit the website http://www.nt.gov.au/building/

Custodian - Town Planning and Development Assessment Services (+61 8 8999 6046)

Planning Scheme Zone

NOZONE (No NT Planning Scheme zone applies)

Interim Development Control Orders

(none found)

Planning Notes

The NT Planning Scheme may apply to development on this land.

Planning Applications

(none found)

Custodian - Power and Water Corporation (1800 245 092)

Meters on Parcel

Power Water - Electricity (none found)
Power Water - Water (none found)

For Account balances, contact the Power and Water Corporation.

Custodian - Pool Fencing Unit (+61 8 8924 3641)

Swimming Pool/Spa Status

(none found)

For more information, contact the Pool Fencing Unit (+61 8 8924 3641).

Custodian - Mines and Energy (+61 8 8999 5322)

For information on possible Exploration Licences, contact Mines & Energy or visit the website http://www.nt.gov.au/d/Minerals Energy/

For information on possible Petroleum Titles, contact Mines & Energy for further details.

Custodian - NT Environment Protection Authority (+61 8 8924 4218)

Results of site contamination assessment

(none found)

For further information contact Environment Protection Authority or visit the website https://ntepa.nt.gov.au/waste-pollution/contaminated-land

Custodian - Heritage Branch (+61 8 8999 5039)

Heritage Listing:

(none found)

For further information on heritage places contact Heritage Branch or visit the website https://nt.gov.au/property/land/heritage-register-search-for-places-or-objects

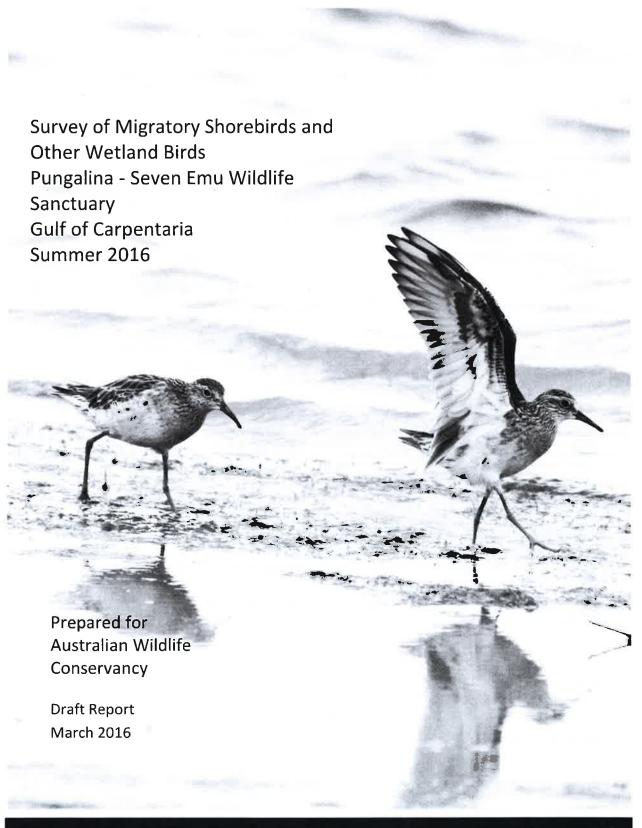
Other Interests

For Account balances, contact Roper Gulf Shire Council

All or part of this parcel is contained within the boundary of a native title application. Contact National Native Title Tribunal on (08) 8936 1600.



Annexure D Shorebirds Report



Project

Survey of Migratory Shorebirds and Other Wetland Birds

Pungalina - Seven Emu Wildlife Sanctuary, Gulf of Carpentaria

Summer 2016

Report Author/s

Paul Barden

Ecological Management Services Pty Ltd

Field Surveys

Paul Barden

Dr Jon Coleman

Ecological Management Services Pty Ltd

Prepared for

Australian Wildlife Conservancy

Client Contact

Jeanette Kemp

Version

Draft

Date of Issue

7 March 2016

Document History

Draft: 7 March 2016

Final:

Disclaimer

Ecological Management Services Pty Ltd has prepared this report for the use of the Australian Wildlife Conservancy (AWC). The report has been prepared in accordance with the scope of work and for the purpose agreed in the scientific survey approval negotiated between EMS and AWC. Ecological Management Services Pty Ltd does not warrant in any way whatsoever that the material contained in this report is fit for use for any other purpose or by any other party. This report should not be reproduced in whole or part for any use whatsoever without the express written permission of Ecological Management Services Pty Ltd.

The methodology adopted and sources of information used by Ecological Management Services Pty Ltd are outlined in this report. Ecological Management Services Pty Ltd has made no independent verification of this information beyond the agreed proposed research schedule and Ecological Management Services Pty Ltd accepts no responsibility for any inaccuracies, errors or omissions in any data or information that is in the public domain or that otherwise was obtained by or prepared for Ecological Management Services Pty Ltd. This document does not constitute legal advice and must not be used as a substitute for the advice of a qualified legal practitioner.

This report was prepared in February – March 2016 and is based on data reviewed and information compiled during field surveys undertaken during January 2016. Ecological Management Services Pty Ltd disclaims any responsibility for any changes that have occurred after this time.

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Coolum Beach QLD 4573 Australia

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Acknowledgements

We are grateful to:

- AWC and Jeanette Kemp for permission to conduct the surveys and provision of logistical support (fuel and helicopter time).
- · Leo Clear, Pilot: Northern Australian Helicopters

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1. Introduction

Australian Wildlife Conservancy (AWC) has managed the Pungalina – Seven Emu Wildlife Sanctuary in the Gulf of Carpentaria, northern Australia since 2009. The sanctuary covers 300,000 ha and is located in the catchments of the Calvert and Robinson Rivers. It supports extensive savanna woodlands and a range of other habitats including rocky escarpments, gorges, riparian forests, springs, coastal scrubs and wetlands. The coastal section of the sanctuary includes approximately 32,000 hectares of saline and brackish tidal habitats, including estuaries, tidal flats, mangroves, salt marsh, salt pan, beach foreshore and sand spits. While the AWC commenced fauna surveys and ecological monitoring within the sanctuary in 2009, the shorebirds and other wetland birds inhabiting these coastal areas remain poorly known (Kemp *et al.* 2015).

1.1. Objectives

Survey of shorebirds and wetland birds have been undertaken on the Port McArthur Important Bird Area to the east of the Pungalina – Seven Emu Wildlife Sanctuary bi-annually commencing in 2010 (Barden 2015). This survey represents the most comprehensive recent data for shorebirds on the lower Gulf of Carpentaria since surveys undertaken by the Northern Territory Government (Chatto 2003; 2000). Earlier surveys included aerial counts between the Robinson River and the Queensland border (Chatto 2000; 2003), an area that has not been surveyed in recent years. The current survey provided an opportunity to extend the Port McArthur IBA survey to the east of the Robinson River by 60 km in order to provide additional data on the shorebirds and wetland birds present on this section of coastline within the Pungalina – Seven Emu Wildlife Sanctuary. The objectives were to:

- Conduct aerial (helicopter) counts of shorebirds and other wetland birds in the area between the Robinson and Calvert Rivers;
- Provide an updated assessment of the importance of this area for shorebirds and wetland birds;
- Compile data on feral animals and livestock with the coastal areas of the Pungalina Seven Emu
 Wildlife Sanctuary;
- Compile sightings of other species of significance, including marine turtles, dugong and sawfish.

1.2. Previous Surveys

A number of previous surveys of shorebirds and wetland birds have been conducted on the Northern Territory lower Gulf of Carpentaria coastline. Garnett (1987) conducted shorebird surveys of the entire Gulf coast using aerial counts in fixed wing aircraft. Chatto (2003; 2006) summarised assessments of shorebirds and wetland birds on the Northern Territory coastline using aerial (fixed wing and helicopter) and ground

counts between 1990 and 2001. Garnett (2008) and Barden (2015) conducted surveys of shorebirds in the area between the Limmen Bight River and the Robinson River using a combination of ground counts and aerial (helicopter) counts between 2008 and 2015. These surveys were designed to sample the Port McArthur IBA which has its eastern extremity to the west of the Robinson River.

Surveys of the Pungalina – Seven Emu Wildlife Sanctuary conducted by the AWC between 2009 and 2015 have recorded a large percentage of the non-migratory wetland birds expected to occur in coastal habitats on the lower gulf, however many shorebirds remain listed as "likely" to occur within the sanctuary (Kemp et al. 2015; Kanowski 2009). Surveys of wetland areas within the sanctuary have been largely restricted to brackish or freshwater wetlands to the south of the main saline/coastal habitats, in part due to the difficulty in accessing the latter areas (Kemp et al. 2015).

2. Methodology

2.1. Study area and habitat

The Pungalina – Seven Emu Wildlife Sanctuary includes an area of coastal foreshore and saline wetlands located on the south-west coast of the Gulf of Carpentaria. The current coastal study area exceeds 32,000 hectares and approximately 60 km of coastline between the lower Robinson River to the west and the lower Calvert River to the east (Figure 1). This area includes a complex coastline supporting extensive areas of tidal channels, chenopod low shrubland (samphire), mangrove, *Melaleuca acacioides* low open-woodland, open saline flats, saline grassland, mangroves, sand spits and intertidal flats.

2.2. Significance of the Region for Migratory Shorebirds

The lower Gulf of Carpentaria has been recognised as an important area for wetland birds and migratory shorebirds. The Port McArthur IBA, located to the west of the Pungalina – Seven Emu Wildlife Sanctuary coastal area, is recognised as one of the most extensive areas of saline coastal flats in the Northern Territory (Ward 2009). It has been listed as an Important Bird Area (IBA) due to internationally significance as a site for migratory shorebirds and a priority site for bird conservation (Dutson *et al.* 2009). The Port McArthur area is also listed in the Directory of Important Australian Wetlands (Port McArthur Tidal Wetlands System - NT008) (Whitehead & Chatto 1995). Chatto (2003) also reported small aggregations of shorebirds along the coastal margin and salt pan systems between the Robinson River and Calvert River.

Under Criterion 6 of the Ramsar convention 'a wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird' (Bamford *et al.* 2008). Based on data largely derived from Chatto (2000; 2003), the Port McArthur IBA area is recognised as an internationally important site for a number of migratory shorebird species, including the black-tailed

godwit (*Limosa limosa*), eastern curlew (*Numenius madagascariensis*), marsh sandpiper (*Tringa stagnatilis*), common greenshank (*Tringa nebularia*), grey-tailed tattler (*Heteroscelus brevipes*) and sharp-tailed sandpiper (*Calidris acuminata*) (Bamford *et al.* 2008).

Recent surveys conducted of the Port McArthur IBA recorded significant counts for a number of shorebird species at the global, flyway and staging criteria threshold level, including globally significant counts of rednecked stint (*Calidris ruficollis*) and sharp-tailed sandpiper (*Calidris acuminata*) (Barden 2015). Based on flyway criteria (Bamford *et al.* 2008) and WPE4 criteria (Delany & Scott 2006) these surveys also recorded significant counts for white-headed stilt (*Himantopus leucocephalus*), black-tailed godwit, red knot (*Calidris canutus*), marsh sandpiper, curlew sandpiper (*Calidris ferruginea*), Asian dowitcher (*Limnodromus semipalmatus*), grey-tailed tattler (*Tringa brevipes*), lesser sand plover (*Charadrius mongolus*), greater sand plover (*Charadrius leschenaultii*) and little tern (*Sternula albifrons*) (Barden 2015). Eleven migratory shorebird species exceeded staging (migration period) threshold numbers within the Port McArthur IBA during a number of northern migration period surveys, highlighting the significance of the gulf coast as habitat for migratory shorebirds during migration staging (Barden 2015).

2.3. February 2015 Aerial Shorebird Counts, Pungalina – Seven Emu Wildlife Sanctuary

Aerial counts were conducted on the 28 January 2016 across 6 designated aerial count areas from the Robinson River to the Calvert River (Figure 1; Table 2.1). The survey methodology is based on the aerial survey count methods and aerial survey sections described in Barden (2015). The coastline and adjacent tidal/saline habitats were divided into sections using markers entered into a GPS, allowing sampling to be restricted to a specific area during a count period. Representative photographs of aerial count sections are included in Appendix 1.

Aerial counts were conducted by flying slow (~50 nautical miles/hour) transects within each aerial count section at 150 to 200 feet flight altitude, with an attempt made to survey representative sections of the coastal tidal flats and inland saline wetlands in each section. The coastal edge and inland saline flats within a section were surveyed separately on the same day during the outbound and inbound survey transect in order to increase efficiency and minimise flight time (Table 3.1). Each aerial count section was searched for a period enabling reasonable assessment of the birds present (average aerial section count time 27.6 minutes, total aerial count time 2.8 hours). Differences in survey timing for each survey section are related to the ability to assess areas with narrow bands of suitable habitat more rapidly than sections with broad areas of coastal salt pan and saline wetland habitat. Additional time is also required to identify and quantify birds when large flocks are encountered. The flight transect was interrupted to obtain a more accurate count and to enable identification where larger groups of birds were detected.

Migratory shorebirds and other wetland birds encountered during the aerial surveys were identified and counted from the air using binoculars where possible. Care was taken not to double count flocks of moving birds. Shorebirds that could not be positively identified were assigned to classes based on size and general appearance. Identifications were confirmed by enlarging digital photographic images of birds taken in flight during the aerial counts.

Table 2-1. Robinson River to Calvert River Aerial Count Area Data 28 January 2016

| Aerial Count Section | Count Date | Survey T1 Coastal (Hrs) | Survey T2 Inland (Hrs) | Count Time (Mins) | Tide T1 | Tide T2 | Wind Speed (kmph)/ Direction | Site Area |
|----------------------------|------------|-------------------------------|---------------------------|-------------------------|--------------|------------|------------------------------------|----------------------|
| 1 | 28/01/2016 | 0810/0817 | 1407/1417 | 17 | Mid-Dropping | Low-Rising | 13/SW | Robinson-Shark Creek |
| 2 | 28/01/2016 | 0817/0823 | 1235/1248 | 19 | Mid-Dropping | Low | 13/SW | Seven Emu Creek |
| 3 | 28/01/2016 | 0823/0836 | 1214/1235 | 34 | Mid-Dropping | Low-Rising | 13/SW | Stockyard Creek |
| 4 | 28/01/2016 | 0836/0843 | 1148/1214 | 33 | Mid-Dropping | Low-Rising | 13/SW | Skeleton Creek |
| 5 | 28/01/2016 | 0843/0856 | 1131/1148 | 30 | Mid-Dropping | Low | 13/SW | Calvert West |
| 6 | 28/01/2016 | 0856/0918 | 1120/1131 | 33 | Mid-Dropping | Low | 13/SW | Calvert River |
| | | Total | 166 minutes | (2.8 hours) | | 16. | • | 7/ |

2.4. Seasonality and Tides

The survey was designed to sample shorebirds present on the northern Australian coastline during the southern hemisphere summer. During this period migratory shorebirds are present in their summer feeding grounds and are generally in non-breeding plumage. The survey was conducted during warm-humid wet season conditions, with occasional storm cells producing rainfall on the coastal wetlands. Low tide occurred at midday, with tides dropping throughout the morning and rising in the early afternoon. During the survey aggregations of shorebirds were feeding on coastal sand and mudflats and smaller numbers were spread out on salt marsh and salt pan habitats to the south of the coast.

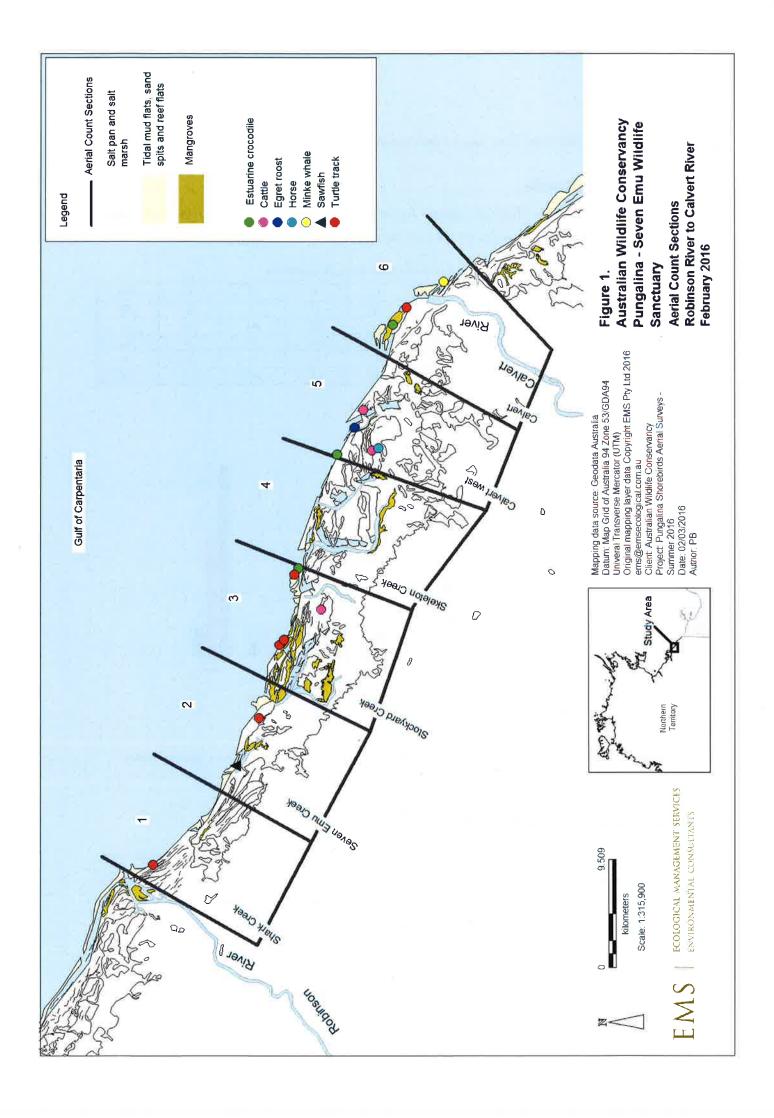
The 2015 – 2016 wet season was relatively poor in terms of rainfall and subsequently some areas of the study area that might typically be inundated by water flowing from the land during the wet season were dry. Observations in the Port McArthur IBA to the west of the study area indicate that the suitability and condition of shorebird foraging habitats on salt pans on the Gulf coast may have been impacted by combined effects of poor wet seasons in 2014/2015 and 2015/2016.

Tide, weather and climate data from the nearest meteorological recording station (Centre Island) is included in Appendix 2 and 3.

2.5. Limitations

A number of limitations are associated with conducting counts of birds from aircraft. Aerial count errors can be exacerbated by some climatic conditions. However during the current survey conditions were highly suited to conducting aerial shorebird counts, with light cloud cover and light to moderate winds. Aerial counts across broad areas combined with ground counts at representative sites offer the only effective method of conducting surveys across extensive areas of inaccessible habitat. Green *et al.* (2008) suggest that a combination of ground counts and aerial counts conducted from helicopters provide less biased, more precise estimates of wetland birds across large areas of habitat. This approach is a standard method used to conduct surveys of shorebirds in remote areas of the northern Australian coastline.

Ground counts were not undertaken during this survey, due to an absence of suitable aggregations of shorebirds at suitable sites. The identity of the birds comprising the largest flocks encountered, mostly consisting of great knot, were confirmed with aerial observations and digital photography. Other shorebirds were dispersed in small groups across large areas of habitat. However while suitable sites for ground counts were not located within the Pungalina – Seven Emu Wildlife Sanctuary, data from nearby sections of the Port McArthur IBA was used to generate estimates of flock composition for unidentified small to medium shorebirds



3. Survey Results

A total of 2,131 migratory shorebirds, resident shorebirds, raptors and other wetland birds (43 species) were recorded during aerial surveys (Table 3.1, 3.2 and Figure 2).

Table 3-1. Aerial Count Summary Pungalina – Seven Emu Wildlife Sanctuary, 28 January 2016

| Таха | 1 | 2 | 3 | 4 | 5 | 6 | Total |
|------------------------|----|-----|-----|-----|-----|-----|-------|
| Migratory Shorebirds | 14 | 462 | 578 | 57 | 13 | 67 | 1191 |
| Resident Wetland Birds | 17 | 16 | 122 | 230 | 244 | 132 | 761 |
| Sub-Total | 31 | 478 | 700 | 287 | 257 | 199 | 1952 |
| Terns and Gulls | 8 | 1 | 0 | 22 | 22 | 126 | 179 |
| Total | 39 | 479 | 700 | 309 | 279 | 325 | 2131 |

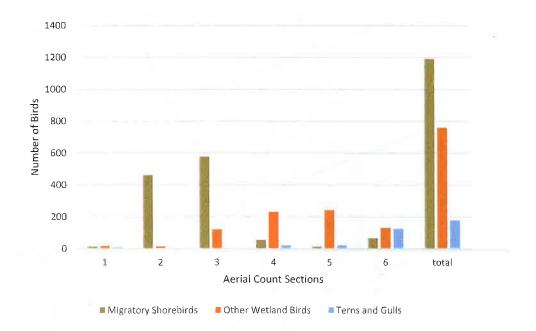


Figure 2. Numbers of Migratory Shorebirds, Wetland Birds and Terns and Gulls counted in the Pungalina – Seven Emu Wildlife Sanctuary, February 2016

3.1. Aerial Counts - Migratory Shorebirds

A total of 1,191 migratory shorebirds in the Families Charadriidae and Scolopacidae (12 species) were counted during the January 2016 aerial surveys (Table 3.1 and 3.2). This includes ten species not previously recorded within the Pungalina – Seven Emu Wildlife Sanctuary based on Kemp *et al.* (2015). Due to the difficulties of identifying a subset of small to medium sized shorebirds from the air 16.2 % (194) of the total migratory shorebirds counted from the air could not be assigned to a species. The aerial shorebird count was

corrected by allocating these unidentified small and medium shorebirds to species based on proportions identified in the ground counts from adjacent areas of the Port McArthur IBA. Ground counts in the Port McArthur IBA in February 2016 were dominated by small-medium shorebirds including red-necked stint (40.6%), lesser sand plover (29.8%) and sharp-tailed sandpiper (15.6%) with these three species accounting for 86% of the smaller migratory shorebirds counted. It is likely that the unidentified proportion of the aerial count within the Pungalina – Seven Emu Wildlife Sanctuary includes additional migratory shorebird species that are commonly recorded in adjacent areas of the coast and that have not been recorded in the sanctuary to date. Potential species include the critically endangered (*EPBC Act 1999*) curlew sandpiper, red knot and broad-billed sandpiper.

The most abundant migratory shorebird species identified during aerial counts were the great knot (63.9%), sharp-tailed sandpiper (9.2%), red-necked stint (7.3%), marsh sandpiper (5.9%), common greenshank (5%) and lesser sand plover (4.9%). The majority of migratory shorebirds observed during aerial counts were concentrated on tidal coastal flats in aerial count sections 2 and 3. Moderately large flocks (up to 200 birds) of great knot were observed feeding in these areas during the surveys. Other shorebirds were spread widely over suitable habitat in coastal habitats, where they were observed feeding or roosting in small groups. Few birds were observed along creek edges or in mangroves, however these habitats may conceal birds that remain undetected during aerial counts.

3.2. Aerial Counts – Resident Wetland Birds and Raptors

A total of 761 wetland birds and raptors (26 species, excluding terns and gulls) were recorded during the aerial survey. The most abundant non-migratory wetland birds based on aerial counts were the little egret (*Egretta garzetta*) (50.19%), eastern great egret (*Ardea modesta*) (7.8%), Australian pelican (*Pelecanus conspicillatus*) (7.3%), Australian white ibis (*Threskiornis molucca*) (6.6%) and pied cormorant (*Phalacrocorax varius*) (5.1%). A roost supporting numbers of little egret, eastern great egret and nankeen night heron was identified in aerial count section 5 on the lower reaches of an un-named creek west of the Calvert River (Table 3.2, Figure 1).

Wetland birds were associated with creek margins and brackish wetlands near the coast, with common species in these habitats including brolga (*Ephippiorhynchus asiaticus*), black-necked stork (*Ephippiorhynchus asiaticus*), ibis, egrets and ducks. Beach stone-curlew (*Esacus neglectus*) and Australian pied oystercatcher (*Haematopus longirostris*) were occasionally observed on beaches and sand-spits on the coastal margin of the sanctuary. A small number of common raptor species were observed hunting over coastal areas and wetlands, including eastern osprey (*Pandion cristatus*), white-bellied sea-eagle (*Haliaeetus leucogaster*), brahminy kite (*Haliastur indus*) and whistling kite (*Haliastur sphenurus*).

3.3. Aerial Counts - Gulls and Terns

179 terns and gulls of five species were recorded within the study area during aerial count, with the crested tern (*Thalasseus bergii*) (75.4%) being the most abundant species. Terns and gulls were predominantly associated with coastal beaches and sand-spits. Tern and gull numbers were relatively low compared to numbers observed in adjacent areas of the Port McArthur IBA, an area which occasionally supports large numbers of terns on the coast between Pelican Spit and the Robinson River. Tern numbers were reduced when compared to previous surveys in the Port McArthur IBA during February 2016.

3.4. Feral Animals and Stock

During the current survey 24 cattle (8.5 cattle per aerial survey hour) and 5 horses (1.7 horses per aerial survey hour) were sighted during the aerial count transects (Table 3.2; Figure 1). Sightings of stock (cattle and horses) were generally less frequent within the Pungalina – Seven Emu Wildlife Sanctuary than in adjacent areas which are currently stocked or not subject to control. Other feral animals were not observed, however low density cattle tracks and pig wallows were observed at other locations, the latter often associated with wetlands and stream margins.

3.5. Incidental Observations

Eight turtle tracks were sighted on beaches within the Pungalina – Seven Emu Wildlife Sanctuary (Table 3.2; Figure 1). Most were characteristic of larger green/loggerhead turtles however one track near the mouth of Skeleton Creek (ACS4) was identified as being characteristic of the hawksbill turtle (*Eretmochelys imbricata*) (Plate 10). A sawfish (*Pristis sp*) was observed in shallow water near the mouth of Seven Emu Creek in aerial count section 2. The bones of a rorqual whale, considered likely to be a dwarf minke whale (*Balaenoptera acutorostrata* subsp), were observed on the beach to the east of the Calvert River mouth (Figure 1; Plate 8).

During the February 2016 shorebird surveys on the gulf coast it was noticed that extensive areas of grey mangrove (*Avicennia marina*) were subject to partial or complete defoliation, and this issue was prevalent in some mangrove areas within the Pungalina – Seven Emu Wildlife Sanctuary (Plate 7). The defoliation event was observed along the Gulf coast from the Limmen Bight River to the Calvert River. The cause is unknown but observations on the ground and patterns of occurrence indicate that it is the result of abiotic factors rather than a pest or pathogen. The event is possibly related to stress from poor wet seasonal conditions, tidal conditions or a combination of these two factors.

Table 3-2. Incidental Sightings of Feral Animals, Livestock and Other Wildlife, 28 February 2016 (UTM GDA 94, Zone 53)

| ACS | Observation | Scientific Name | Comment | Number | Easting | Northing |
|-----|---------------------|----------------------------|----------------------------|--------|-----------|-----------|
| 1 | Turtle track | | Beach | 1 | 743765.85 | 8224031.2 |
| 1 | Cattle | Bos taurus | Tracks only | | 748456.13 | 8218640.7 |
| 2 | Turtle track | | | 1 | 756596.98 | 8214834.7 |
| 2 | Sawfish | Pristis sp | In shallow water off beach | 1 | 752408.79 | 8216890.5 |
| 3 | Cattle | Bos taurus | | 12 | 766122.31 | 8209351.7 |
| 3 | Turtle track | | | 1 | 763018.78 | 8213025.6 |
| 3 | Turtle track | | | 1 | 763473.19 | 8212590.5 |
| 4 | Turtle track | | | 1 | 769721.48 | 8211357 |
| 4 | Estuarine crocodile | Crocodylus porosus | | 1 | 769736.4 | 8211360.2 |
| 4 | Cattle | Bos taurus | Tracks only | | 775083.28 | 8209914 |
| 4 | Cattle | Bos taurus | Tracks only | | 778426.76 | 8208582.2 |
| 4 | Turtle track | Eretmochelys imbricata | | 1 | 769178.82 | 8211705.3 |
| 5 | Estuarine crocodile | Crocodylus porosus | | 1 | 779694.72 | 8207925.4 |
| 5 | Egret roost | | In mangroves | | 782072.5 | 8206451.4 |
| 5 | Cattle | Bos taurus | Tracks only | | 782463,69 | 8206735.4 |
| 5 | Cattle | Bos taurus | | 11 | 783613.39 | 8205694 |
| 5 | Dingo | Canis dingo | | 1 | 784134.04 | 8206000.6 |
| 5 | Horse | Equus caballus | | 5 | 780076.36 | 8204931.8 |
| 5 | Cattle | Bos taurus | | 1 | 780076.36 | 8204931.8 |
| 6 | Estuarine crocodile | Crocodylus porosus | | 1 | 791101.66 | 8203151.3 |
| 6 | Minke whale | Balaenoptera acutorostrata | Whale bones | | 794857,92 | 8198589.3 |
| 6 | Turtle track | | | 1 | 792590.01 | 8201906.4 |

Draft: 7 March 2016

Table 3-3. Aerial counts of shorebirds and wetland birds within aerial count sections 1 - 6, 28 January 2016

| Family | Common Name | Scientific Name | Threat Status EPBC | Migratory/Marine Status EPBC | Status NT | New* | 12 | P2 | æ | P4 | PS | P6 | Total |
|-------------------|-------------------------------|----------------------------|-----------------------|---------------------------------|------------|------|----|----|-----|-----|-----|----|-------|
| Anatidae | Magpie Goose | Anseranas semipalmata | | | | | | | | | 2 | | 2 |
| Anatidae | Radjah Shelduck | Tadorna radjah | | | | | | | 1 | | | | 1 |
| Anatidae | Pacific Black Duck | Anas superciliosa | | | | | | | 10 | 2 | | | 12 |
| Anhingidae | Australasian Darter | Anhinga novaehollandiae | | | | | | | | | | 1 | 1 |
| Phalacrocoracidae | Pied Cormorant | Phalacrocorax varius | | | | | | | 21 | | 2 | 16 | 39 |
| Pelecanidae | Australian Pelican | Pelecanus conspicillatus | | Marine | | | | 1 | 7.7 | | 28 | | 95 |
| Ciconiidae | Black-necked Stork | Ephippiorhynchus asiaticus | | | | | 2 | | 2 | 4 | | 2 | 10 |
| Ardeidae | Great-billed Heron | Ardea sumatrana | | | | | | | 2 | 2 | | 2 | 9 |
| Ardeidae | Eastern Great Egret | Ardea modesta | | Migratory/Marine | | | | | 2 | 30 | 14 | 13 | 59 |
| Ardeidae | Pied Heron | Egretta picata | | | | | | | 4 | 13 | 3 | | 20 |
| Ardeidae | Little Egret | Egretta garzetta | | Marine | | | | 2 | 56 | 127 | 163 | 63 | 381 |
| Ardeidae | Striated Heron | Butorides striata | | | | | | | 1 | | | 2 | Э |
| Ardeidae | Nankeen Night-Heron | Nycticorax caledonicus | | Marine | | | | 12 | 1 | 6 | 11 | | 21 |
| Threskiornithidae | Australian White Ibis | Threskiornis molucca | | Marine | | | 00 | | 11 | 2 | 7 | 19 | 20 |
| Threskiornithidae | Glossy Ibis | Plegadis falcinellus | | Marine | | | | | | 25 | | | 25 |
| Threskiornithidae | Royal Spoonbill | Platalea regia | | | | | | | 1 | | | | 1 |
| Accipitridae | Eastern Osprey | Pandion cristatus | | Marine | | | | 1 | 1 | | | | 2 |
| Accipitridae | Whistling Kite | Haliastur sphenurus | | | | | | 1 | | 1 | | | 2 |
| Accipitridae | Brahminy Kite | Haliastur indus | | | | | | | | | | 1 | 1 |
| Accipitridae | White-bellied Sea-Eagle | Haliaeetus leucogaster | | Marine | | | | | 2 | | 1 | 4 | 7 |
| Gruidae | Brolga | Grus rubicunda | | | | | | | 2 | 2 | 7 | | 11 |
| Burhinidae | Beach Stone-curlew | Esacus neglectus | | Marine | | | | е | | | | 4 | 7 |
| Haematopodidae | Australian Pied Oystercatcher | Haematopus longirostris | | | | | 5 | 4 | 2 | | м | 4 | 18 |
| Charadriidae | Masked Lapwing | Vanellus miles | | | | | 2 | | 2 | ∞ | 1 | 1 | 14 |
| Charadriidae | Red-capped Plover | Charadrius ruficapillus | | | | | | 4 | 4 | 2 | | | 10 |
| Charadriidae | Lesser Sand Plover | Charadrius mongolus | | Migratory/Marine | Vulnerable | × | 3 | 36 | 00 | 2 | 1 | ∞ | 58 |
| | | | | | | | | | | | | | |

Shorebirds and Other Wetland Birds Pungalina - Seven Emu Wildlife Sanctuary: Summer 2016

Draft: 7 March 2016

| Family | Common Name | Scientific Name | Threat Status EPBC | Migratory/Marine Status EPBC | Status NT | New* | P1 | P2 | P3 | P4 | PS | 9d | Total |
|--------------|------------------------|-----------------------------------|--------------------------|---------------------------------|------------|------|----|-----|-----|-----|-----|-----|-------|
| Charadriidae | Greater Sand Plover | Charadrius leschenaultii | | Migratory/Marine | Vulnerable | × | | 5 | 1 | | | 1 | 7 |
| Scolopacidae | Whimbrel | Numenius phaeopus | | Migratory/Marine | | | 2 | ж | 9 | 7 | 1 | 1 | 20 |
| Scolopacidae | Eastern Curlew | Numenius madagascariensis | Critically Endangered | Migratory/Marine | Vuinerable | | | | 1 | 1 | | | 2 |
| Scolopacidae | Marsh Sandpiper | Tringa stagnatilis | | Migratory/Marine | | × | 1 | 2 | 38 | 10 | 3 | 13 | 70 |
| Scolopacidae | Common Greenshank | Tringa nebularia | | Migratory/Marine | | × | | 3 | 23 | 21 | 2 | ∞ | 9 |
| Scolopacidae | Wood Sandpiper | Tringa glareola | | Migratory/Marine | | × | | | | | 1 | | 1 |
| Scolopacidae | Common Sandpiper | Actitis hypoleucos | | Migratory/Marine | | × | | | 2 | 1 | | 1 | 4 |
| Scolopacidae | Grey-tailed Tattler | Tringa brevipes | | Migratory/Marine | | × | | | 10 | | | | 10 |
| Scolopacidae | Great Knot | Calidris tenuirostris | | Migratory/Marine | Vuinerable | × | | 300 | 450 | | | 12 | 762 |
| Scolopacidae | Red-necked Stint | Calidris ruficollis | | Migratory/Marine | | × | 4 | 54 | 12 | 3 | 2 | 12 | 87 |
| Scolopacidae | Sharp-tailed Sandpiper | Calidris acuminata | | Migratory/Marine | | × | 3 | 22 | 27 | 11 | 1 | 11 | 110 |
| Glareolidae | Australian Pratincole | Stiltia isabella | | Marine | | | | | | | 2 | | 2 |
| Laridae | Gull-billed Tern | Gelochelidon nilotica | | Migratory/Marine | | | | | | 2 | | | 2 |
| Laridae | Caspian Tern | Hydroprogne caspia | | Migratory/Marine | | | 1 | 1 | | 3 | 6 | 11 | 25 |
| Laridae | Crested Tern | Thalasseus bergii | | Marine | | | 3 | | | 17 | 5 | 110 | 135 |
| Laridae | Little Tern | Sternula albifrons | | Migratory/Marine | | | 1 | | | | | | 1 |
| Laridae | Silver Gull | Croicocephalus novaehollandiae | | Marine | | | 8 | | | | 00 | 5 | 16 |
| | | | | | Total | 10 | 39 | 479 | 700 | 309 | 279 | 325 | 2131 |

* Taxa listed not previously confirmed as present within the Pungalina – Seven Emu Wildlife Sanctuary based on Kemp et al. (2015). Numbers in red have been corrected to incorporate unidentified shorebird numbers based on ground count percentages.

3.6. International and Flyway Significance of the Sanctuary Based on Population Thresholds

The 1971 Ramsar Convention on Wetlands provides a global mechanism for the recognition of Wetlands of International Importance through the identification and designation of sites meeting criteria established under the convention (Ramsar Convention Secretariat 2006). The Convention has a number of criteria for identifying Wetlands of International Importance, including criteria based specifically on birds (Ramsar Convention Secretariat 2006):

- Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000
 or more waterbirds.
- Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Internationally important sites are defined as those which meet relevant criteria under the Ramsar Convention. However, it is as important to consider regional and flyway significance as well as international significance. Where population estimates are available, population threshold significance figures are developed for each bird species based on estimated global numbers and flyway numbers (Bamford *et al.* 2008).

This study used flyway, staging and regional (Australian) thresholds to indicate the importance of the Pungalina – Seven Emu Wildlife Sanctuary. The threshold levels used in this report have been developed with reference to a number of existing studies and reports that provide population estimates and threshold numbers for species, including Bamford *et al.* (2008), Wetlands International Waterbird Population Estimates Fourth Edition (WPE4) (Delany & Scott 2006) and the Commonwealth EPBC Wildlife Conservation Plan for Migratory Shorebirds (DoE 2016a). Threshold levels and corrected aerial count totals for January 2016 are presented in Table 3.4.

During January 2016 great knot and marsh sandpiper were recorded at EPBC significance levels (> 0.1 % of the estimated flyway population) based on criteria in the Wildlife Conservation Plan for Migratory Shorebirds (DoE 2016a). An estimated 0.2 % of the flyway population of great knot and 0.1% of the flyway population of marsh sandpiper were present within the Pungalina – Seven Emu Wildlife Sanctuary during the January 2016 survey period. This identifies the coastal wetlands of the Pungalina – Seven Emu Wildlife Sanctuary as being of national importance for migratory shorebirds (DoE 2016a).

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Table 3-4. International flyway and Australian threshold criteria indicating site significance based on shorebird count numbers, January 2016.

| 22 | | Bamford <i>et al.</i> 2008 | | | | Delany & Scott 2006 | cott 2006 | DoE 2015 | | Meets Sig Summer a | Meets Significance Threshold Criteria Summer 2016 Survey Pungalina – Seven Emu ACS 1 - 6 | hreshold Cri nu ACS 1 - 6 | teria | |
|------------------------|--------|----------------------------|---------------------|-----------------------|----------------------------------|--------------------------------|-----------|------------------------------------|--|---|--|-----------------------------------|--------------|---|
| Common Name | sufef2 | Global Estimate | Flyway Estimate | 1% Flyway Estimate | %2S.O gniget2 esemise3 yewyl3 | WPE4 Population Estimate | Apreshold | ePBC Guideline +blodeshort %1.0 | Summer 2016 Corrected Aerial Counts Pungalina/ Seven Emu ACS 1 - 6 | Exceeds Staging 0.25% Flyway Estimate | Exceeds 1% Global blodeshdT | Exceeds 1% Flyway Threshold | Exceeds WPE4 | Exceeds EPBC Guldeline 0.1% Threshold + |
| Little Egret | œ | | | | | | 1 000 | | 381 | N/A | | | | |
| Lesser Sand Plover | Σ | 130 000 - 150 000 | 130 000 | 1 300 | 325 | 40 000 | 400 | 140 | 58 | N/A | | | | |
| Greater Sand Plover | Σ | 175 000 - 360 000 | 110 000 | 1 100 | 275 | 100 000 | 1 000 | 110 | 00 | N/A | | | | |
| Whimbrel | Σ | 1 007 000 - 2 132 000 | 100 000 | 1 000 | 250 | 25 000 | 550 | 100 | 20 | N/A | | | | |
| Eastern Curlew | Σ | 38 000 | 38 000 | 380 | 95 | 38 000 | 380 | 38 | 2 | N/A | | | | |
| Marsh Sandpiper | Σ | 186 000 - 1 242 000 | 100 000 - 1 000 000 | 1 000 | 250 | | 10 000 | 1 000 | 70 | N/A | | | | |
| Common Greenshank | Σ | 399 000 - 1 550 000 | 000 09 | 009 | 150 | 100 000 | 1 000 | 09 | 09 | N/A | | | | 1 |
| Wood Sandpiper | Σ | 72 | 100 000 | 1000 | 250 | 100 000 | 1000 | 100 | 1 | N/A | | | | |
| Common Sandpiper | Σ | 2 455 000 - 4 030 000 | 25 000 - 100 000 | 250 | 62 | 20 000 | 200 | 25 | 4 | N/A | | | | |
| Grey-tailed Tattler | Σ | 40 000 | 20 000 | 200 | 125 | 40 000 | 400 | 40 | 10 | N/A | | | | |
| Great Knot | Σ | 382 000 - 385 000 | 380 000 | 3 800 | 950 | 380 000 | 3 800 | 375 | 762 | N/A | | | | 1 |
| Red-necked Stint | Σ | 315 000 | 325 000 | 3 250 | 813 | 315 000 | 3 200 | 325 | 87 | N/A | | | | |
| Sharp-tailed Sandpiper | Σ | 160 000 | 160 000 | 1 600 | 400 | 160 000 | 1 600 | 160 | 110 | N/A | | | | |
| Little Tern | Σ | | | | | 15 000 | 150 | | 1 | N/A | | | | |
| | | | | | | | | | | N/A | 0 | 0 | 0 | 2 |
| | | | | | | | | | | | | | | |

+ Based on threshold levels identified in the Conservation Plan for Migratory Birds (DoE 2015) and DEWHA (2009); Migratory Status: M = Listed as a migratory species under EPBC Act 1999 (DoE 2016b), R = resident.

4. Discussion

4.1. Species and Habitat Significance

The February 2016 aerial bird surveys recorded ten species of migratory shorebird that had not been previously recorded within the Pungalina – Seven Emu Wildlife Sanctuary, and confirmed that the coastal wetland areas of the sanctuary are of national significance as migratory shorebird habitat (DoE 2016a). One of the species present (eastern curlew) is listed as critically endangered under the *EPBC Act 1999* and four species are listed as vulnerable under Northern Territory legislation, including the great knot, greater sand plover and lesser sand plover. Sixteen shorebird and wetland bird species recorded during this survey are listed under the Commonwealth *EPBC Act 1999* as migratory species (Table 3.3; DoE 2016b). Twenty-seven shorebird and wetland bird species recorded during this survey are listed under the Commonwealth *EPBC Act 1999* as marine species (Table 3.3; DoE 2016b).

Surveys of shorebirds undertaken within the Port McArthur IBA in February 2016 indicate that numbers of shorebirds and wetland birds present on the gulf coast were low when compared to previous years, with a count of 20,000 birds from February 2015 compared to 13,000 birds from February 2016 for the IBA area. This suggests that numbers of birds within the Pungalina – Seven Emu Wildlife Sanctuary during the survey period may have been atypically low, providing an underestimate of the significance of local habitat and habitat use by migratory and other shorebirds. Long term monitoring within the Port McArthur IBA also indicates that there can be large influxes of wetland birds and shorebirds at certain times, partly linked to regional rainfall and climatic conditions (Barden 2015). Significant sites for foraging and roosting can also shift significantly depending on seasonal conditions, tidal conditions, rainfall and water depth (Barden 2015).

4.2. Comparison with the Port McArthur IBA

Surveys within the Pungalina – Seven Emu Wildlife Sanctuary during February 2016 recorded 2131 birds (43 species). This is similar in terms of species numbers but lower in terms of bird abundance when compared to similar sized count areas in the Port McArthur IBA and Limmen Bight IBA for the same sampling period (Table 4.1). The four eastern Port McArthur IBA count sections, which incorporate a comparable area of coastal habitat to the Pungalina – Seven Emu Wildlife Sanctuary count area, supported approximately 1500 extra birds (Table 4.1). The Port McArthur IBA supports a greater area and diversity of coastal habitats when compared to the Pungalina – Seven Emu Wildlife Sanctuary, including extensive salt marsh, salt pan and tidal mud flat habitat. These areas support higher abundances of shorebirds and wetland birds than other areas of the lower gulf coast (Chatto 2003; Barden 2015).

Habitats in the Pungalina – Seven Emu Wildlife Sanctuary appear to be similar to coastal areas of the eastern Limmen Bight IBA, an area that is important for species such as knot (*Calidris* sp) and godwit (*Limosa* sp) while supporting lower numbers of smaller migratory shorebirds.

Table 4-1. Pungalina - Seven Emu/Port McArthur IBA/Limmen Bight IBA February 2016 Aerial Counts: Shorebird and Wetland Birds

| Area | ACS Sections | Approx. Area (hectares) | Number of Birds | Number of Species |
|--|--------------|-------------------------|-----------------|-------------------|
| Pungalina – Seven Emu Wildlife Sanctuary | 1 - 6 | 32,000 | 2131 | 43 |
| Port McArthur IBA Eastern | 15 - 18 | 32,000 | 3725 | 43 |
| Limmen Bight IBA Western | L1 – L3 | 30,000 | 2625 | 44 |

4.3. Future Monitoring

It is possible that the sanctuary is an important site for migratory birds on passage (staging). It is also likely that additional migratory shorebird species occur within the sanctuary, including the critically endangered curlew sandpiper, red knot, broad-billed sandpiper, black-tailed and bar-tailed godwit and Asian dowitcher. The coastal wetlands within the sanctuary are also potentially of international importance (rather than national importance) for migratory shorebirds under specific criteria. Elevated numbers of shorebirds present on the gulf coast during northern staging typically increase counts by 30 – 40% as birds arrive from southern Australia. Additional species may also be present at this time. It is therefore recommended that an additional survey of the sanctuary be undertaken during the northern staging period (April) 2015.

Shorebird and wetland bird monitoring provides on-going data regarding local populations of birds and the significance of habitats within the study area, and may contribute to overall population trends throughout the EAA flyway's significant shorebird sites. Emerging and ongoing global threats to migratory shorebirds are likely to result in observable changes in shorebird abundance and distribution in northern Australia. Long term monitoring of important sites is an important component of planning for the conservation of migratory shorebirds and is also essential to the development of the Shorebird Site Network on the EAA Flyway (Bamford *et al.* 2008). Long term monitoring data on migratory shorebirds and wetland birds may also become increasingly important in identifying changes and assessing the impacts of threatening processes that can impact populations at a regional and global level.

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Appendix 1 Plates



1. Aerial Count Area (ACA) 1: Shark Creek coastal flats



2. ACA 2: Seven Emu Creek coastal



3. ACA 3: mangroves in the Lower Stockyard Creek Area



4. ACA 4: Sand spit in the lower Skeleton Creek Area



5. ACA 5: Calvert West Area



6. ACA 6: Calvert River coastal



7. Mangroves (Avicennnia marina) showing defoliation (ACS4)

8. Whale bone east of the Calvert River (ACS6)



9. Great knot in flight

10. Hawksbill tracks near Skeleton Creek (ACS4)





11. Horses in coastal dunes west of the Calvert (ACS5)

12. Cattle in the coastal section of the sanctuary (ACS5)

Shorebirds and Other Wetland Birds Pungalina - Seven Emu Wildlife Sanctuary: Summer 2016

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| 7 | 2.84 | 0354 | 2.78 | 0435 | 2.70 | 0512 | 2.59 | 0047 | 1.93 |
| 0 | 96.0 | 1113 | 1.07 | 1141 | 1.17 | 1209 | 1.28 | 0552 | 2.46 |
| 2 | 2.56 | 1802 | 2.57 | 1830 | 2.59 | 1858 | 2.61 | 1233 | 1.41 |
| 2 | 2.16 | 2308 | 2.08 | 2358 | 2.01 | 0512 | 2.59 | 1925 | 2.62 |

Shorebirds and Other Wetland Birds Pungalina - Seven Emu Wildlife Sanctuary: Summer 2016

Appendix 3 Centre Island Weather Data, 25 – 31 January 2016 (Source: Northern Territory Bureau of Meteorology)

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| Date | Day | Min | Max | | Dir | pds | Time | Temp | H# | Dir | pds | MSLP | Temp | 돭 | Dir | PdS | MSLP |
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| 25 | Мо | 25.8 | 35,3 | 5.4 | SSW | 43 | 05:02 | 28,6 | 81 | M | 17 | 1010.0 | 34.2 | 59 | SE | 6 | 1006.3 |
| 56 | Tu | 28.4 | 35.4 | 0.2 | MNN | 33 | 09:46 | 32,9 | 89 | NNN | 70 | 1009,5 | 33,9 | 89 | MNN | 13 | 1006.7 |
| 77 | We | 29.9 | 38.5 | 0 | М | 76 | 23:37 | 33.5 | 7.1 | WNW | 15 | 1008.9 | 37.8 | 53 | MNN | 20 | 1004.8 |
| 28 | Th | 24.4 | 36.1 | 41.4 | S | 63 | 18:01 | 30.6 | 72 | SW | 13 | 1008.9 | 35.5 | 99 | NE | 17 | 1005,3 |
| 59 | Fr | 24.5 | 36.9 | 30.8 | MSS | 26 | 20:53 | 30.4 | 70 | MS. | 6 | 1008.2 | 36.6 | 53 | sw | 15 | 1004.3 |
| 30 | Sa | 27.0 | 34.9 | 0.2 | NE | 31 | 21:54 | 30.2 | 74 | WSW | 11 | 1007.4 | 33.2 | 65 | ENE | 20 | 1003.5 |
| 31 | ηS | 26.6 | 34.4 | 1.2 | MNM | 41 | 95:50 | 28.8 | 81 | MSM | 17 | 1007.2 | 33.9 | 59 | ENE | 13 | 1002 |
| | | | | | | | | | | | | | | | | | |

MAROVICH-TADIC, Isabella

From: Ruth Cairns < Ruth. Cairns@australianwildlife.org>

Sent: Tuesday, 7 August 2018 1:20 PM
To: AboriginalLandCommissioner

Cc:

Subject: FW: Detriment Review - Grouping 4 - NLC reply [SEC=UNCLASSIFIED]

Dear Commissioner

I refer to your letter of 24 July, and confirm that Australian Wildlife Conservancy considers a licence like that suggested by the Northern Land Council is a workable and reasonable arrangement, provided it allows AWC to continue the current activities as suggested in the NLC's submissions, and does not expose AWC to additional obligations or liability for the activities of others within the licence area.

Regards

Ruth Cairns Legal Counsel Australian Wildlife Conservancy

PO Box 8070 Subiaco East, WA 6008

P: 08 9380 9633 | M: 041 620 4562 | F: 08 9380 9631

E: ruth.cairns@australianwildlife.org | www.australianwildlife.org



From: ZOLA, Elena < Elena. ZOLA@network.pmc.gov.au>

Sent: Tuesday, 24 July 2018 10:49 AM

To: Ruth Cairns < Ruth. Cairns@australianwildlife.org>

Cc:

Subject: Detriment Review - Grouping 4 - NLC reply [SEC=UNCLASSIFIED]

Dear Ruth,

Please see attached letter from the Aboriginal Land Commissioner in respect of the submissions on behalf of the claimants for land claim nos. 185, 186 and 187.

Also attached to this email are the submissions on behalf of the claimants + attachments.

Kind regards,

Elena Zola | Associate to the Aboriginal Land Commissioner Office of the Aboriginal Land Commissioner Department of the Prime Minister and Cabinet p. 08 8208 0331 | e. elena.zola@network.pmc.gov.au www.dpmc.gov.au | www.indigenous.gov.au

| The Department acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present. |
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