NRM North

Natural Resource Management in Northern Tasmania

ATLAS OF COASTAL SALTMARSH WETLANDS IN NORTHERN TASMANIA

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INTRODUCTION TO THE ATLAS

Coastal saltmarshes in subtropical and temperate Australia (including Tasmania) were listed in 2013 as a vulnerable ecological community under Federal environment legislation (*Environment Protection and Biodiversity Conservation Act 1999*). This listing acknowledges that wetlands have suffered habitat fragmentation and loss of community integrity coupled with threats from human activities, invasive species and sea level rise. In Tasmania, studies show that close to half of these important coastal ecosystems have been lost due to these threats. The vulnerability of Tasmanian saltmarshes is further underscored by a lack of broad awareness of the important values provided by these habitats.

Saltmarsh wetlands perform important ecological functions that support a range of ecosystem services and biodiversity values in the coastal landscape, though they remain underappreciated and in many cases, lack baseline mapping information. Particularly in Northern Tasmania, saltmarsh wetlands were unmapped in several areas including the Tamar Estuary. Mapping these wetlands is, therefore, an important activity and also needs to be accompanied by products aimed at both communicating the mapping results and providing tools for better understanding and engagement in conserving these habitats and their ecological services.

This atlas provides a visual summary of mapping undertaken as part of the Steps to Saltmarsh Conservation in Northern Tasmania project (completed in July 2014). Information is drawn from the GIS mapping layer that records the extent and location of saltmarshes and the accompanying database that contains information on a range of attributes pertaining to these mapped natural assets. Detailed information on mapping methodology and the data collected is available in the mapping report produced as part of this project. Both the report and GIS dataset are available from the NRM North website.

While this project has collected as much information within the limits of this first pass assessment, there are still information gaps to be filled. The mapping report highlights areas where further data can be collected in the future. If you are interested in an area of saltmarsh where you are able to facilitate the collection of information or be involved in on-going monitoring of saltmarsh values, please contact NRM North.

This project was undertaken by the University of Tasmania in association with NRM North, with funding through the Australian Government.

CONTENTS

Acknowledgements: Emma Williams, Jill Jones, Lorne Kriwoken, Jamie Kirkpatrick

SALTMARSH COMPLEX MAP LEGEND

Saltmarsh wetland - purple polygon

Reserve areas - grey hatched polygon

Public road access - gold line

Flooding areas* - light blue polygon

Text **Place name** - white text

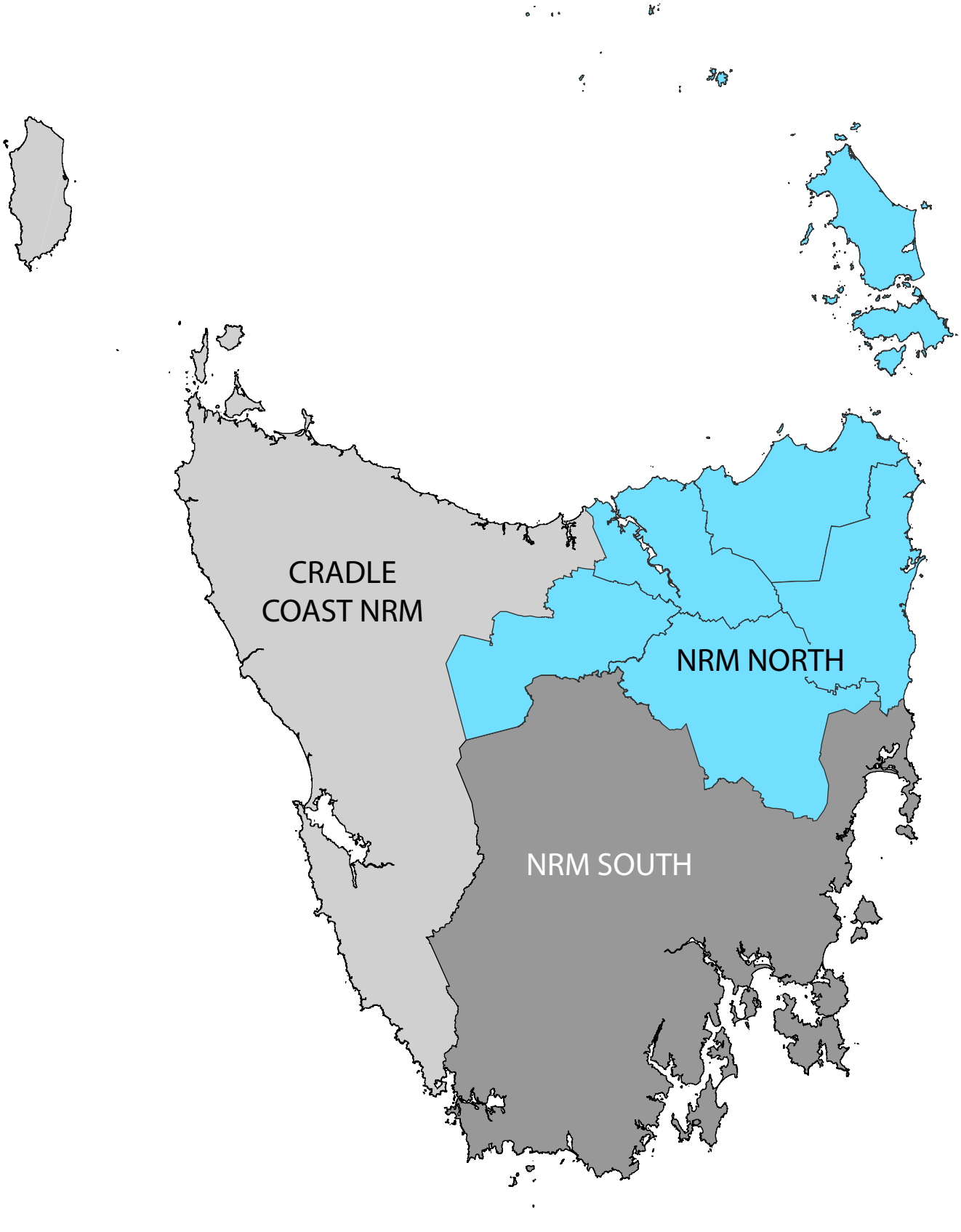
Text **Wetland cluster name** - purple text in rounded box

Text **Geographic location name** - gold text

Text **Reserve name** - black text in box

*Flooding areas indicate low lying land subject to flooding under a sea level rise scenario of 1.1m in the year 2100 prepared by the Tasmanian Department of Premier and Cabinet in 2012.

NATURAL RESOURCE MANAGEMENT OF SALTMARSH WETLANDS IN NORTHERN TASMANIA: STUDY AREA

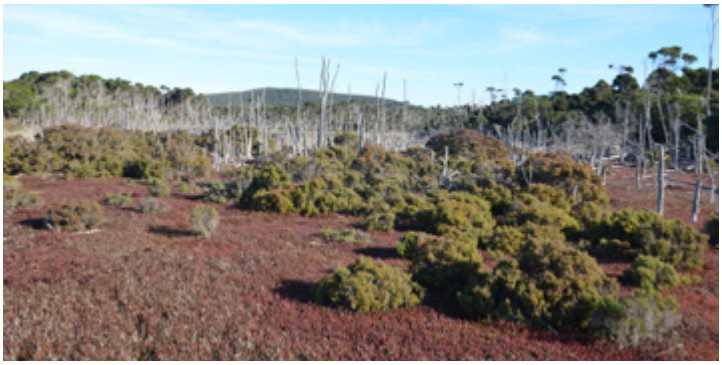


A similar easy-to-use online mapping summary of coastal saltmarshes in Southern Tasmania is available through this link:
http://www.nrmsouth.org.au/uploaded/287/15132017_12mappingcoastalsaltmarsh.pdf

A SNAPSHOT OF NORTHERN TASMANIA'S SALTMARSH WETLANDS

Saltmarsh types

In Tasmania, saltmarshes are formally defined and mapped by two vegetation community types: succulent saltmarsh and grassy saltmarsh.



Succulent saltmarsh in North East River, Flinders Island, dominated by Shrubby Glasswort (*Tecticornia arbuscula*) and Beaded Glasswort (*Sarcocornia quinqueflora*)

Grassy saltmarsh in Scamander River on the east coast of Tasmania, dominated by Sea Rush (*Juncus kraussii*) and Chaffy Sawsedge (*Gahnia filum*) with Beaded Glasswort understorey

Saltmarshes from the air

Aerial view of succulent saltmarsh in Rocky Head Rivulet, Cape Barren Island

View of grassy saltmarsh in Flinders Island from the Strzelecki Peaks

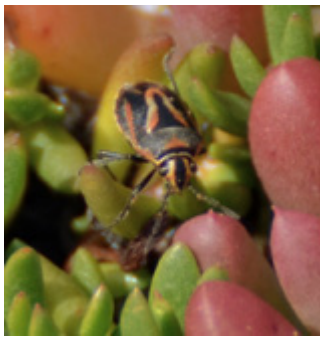
Life in saltmarsh wetlands


Left: Sea-Lavender (*Limonium australe*) with Saltmarshgrass (*Puccinellia stricta*) in Tamar Estuary
Right: Salt Lawrencia (*Lawrencia spicata*) along a marsh pool in Little Musselroe Bay



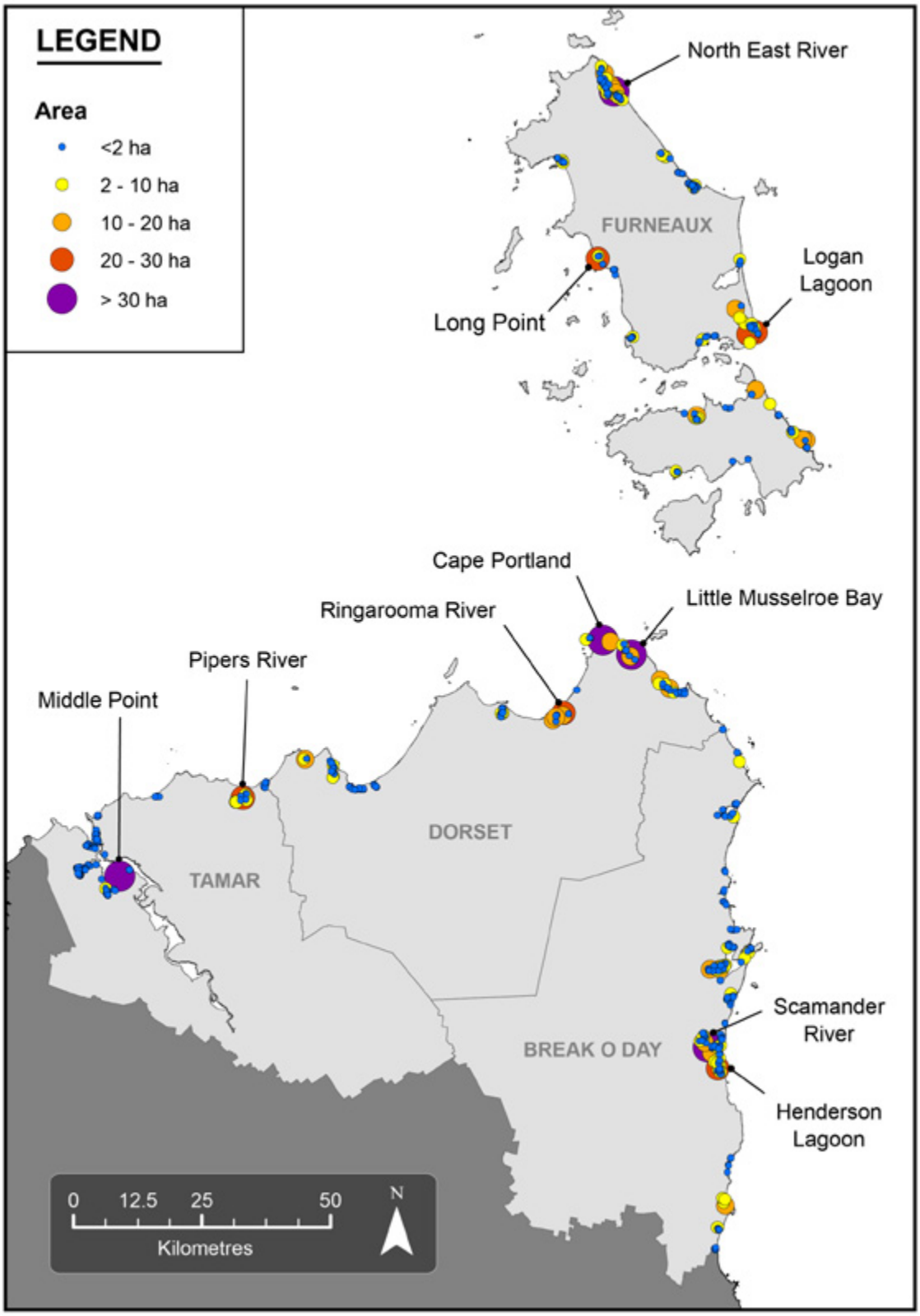
Australian Shelduck **(left)** on *Sarcocornia* herbfield, Blue Wren **(middle)** and White-fronted Chat **(right)**, on *Tecticornia* shrubs





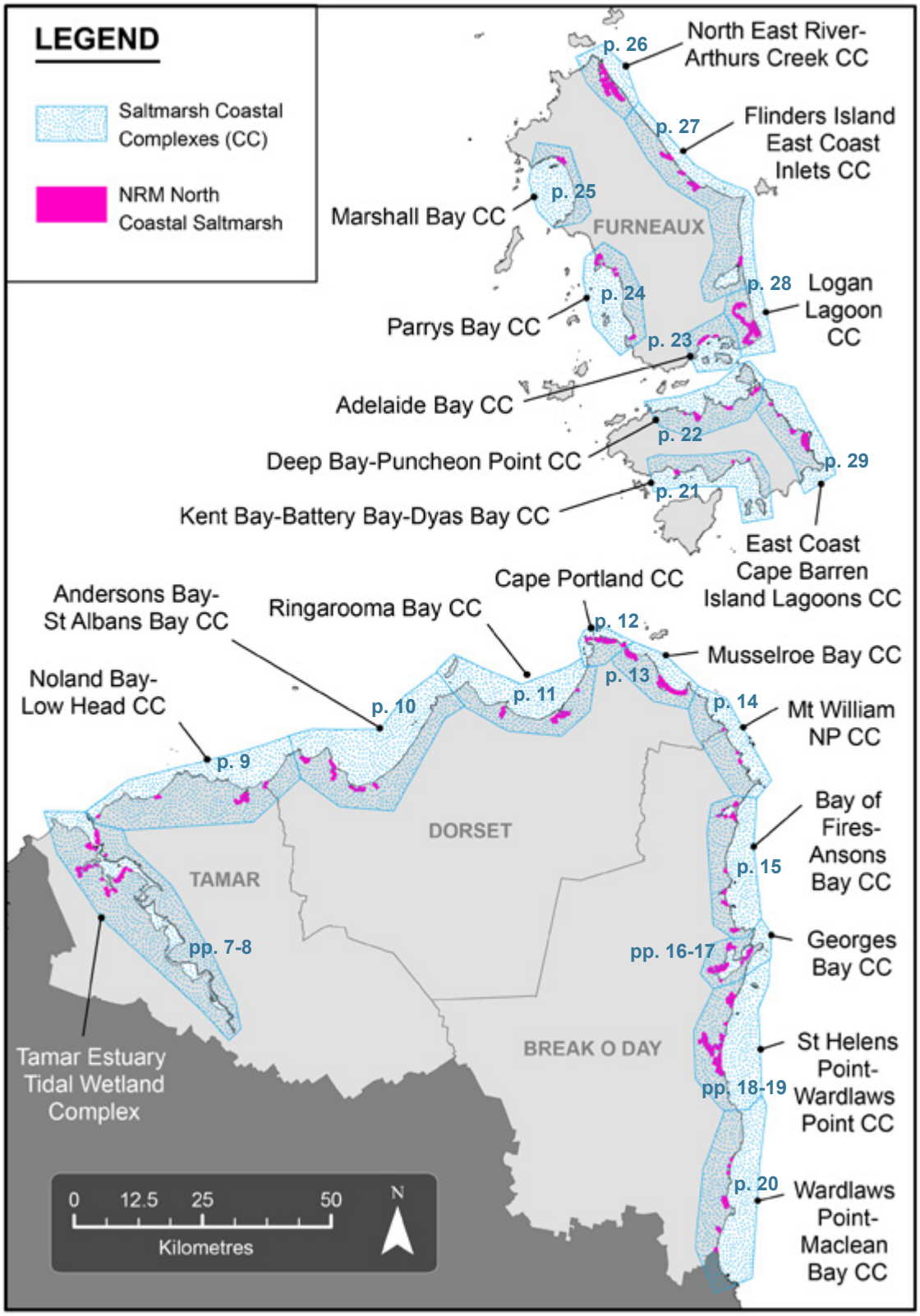

Crabs and snails are the largest and most abundant invertebrate in saltmarshes **(left)**, while insects and spiders can be harder to find and are not well studied **(right)**

DISTRIBUTION OF COASTAL SALTMARSH WETLANDS



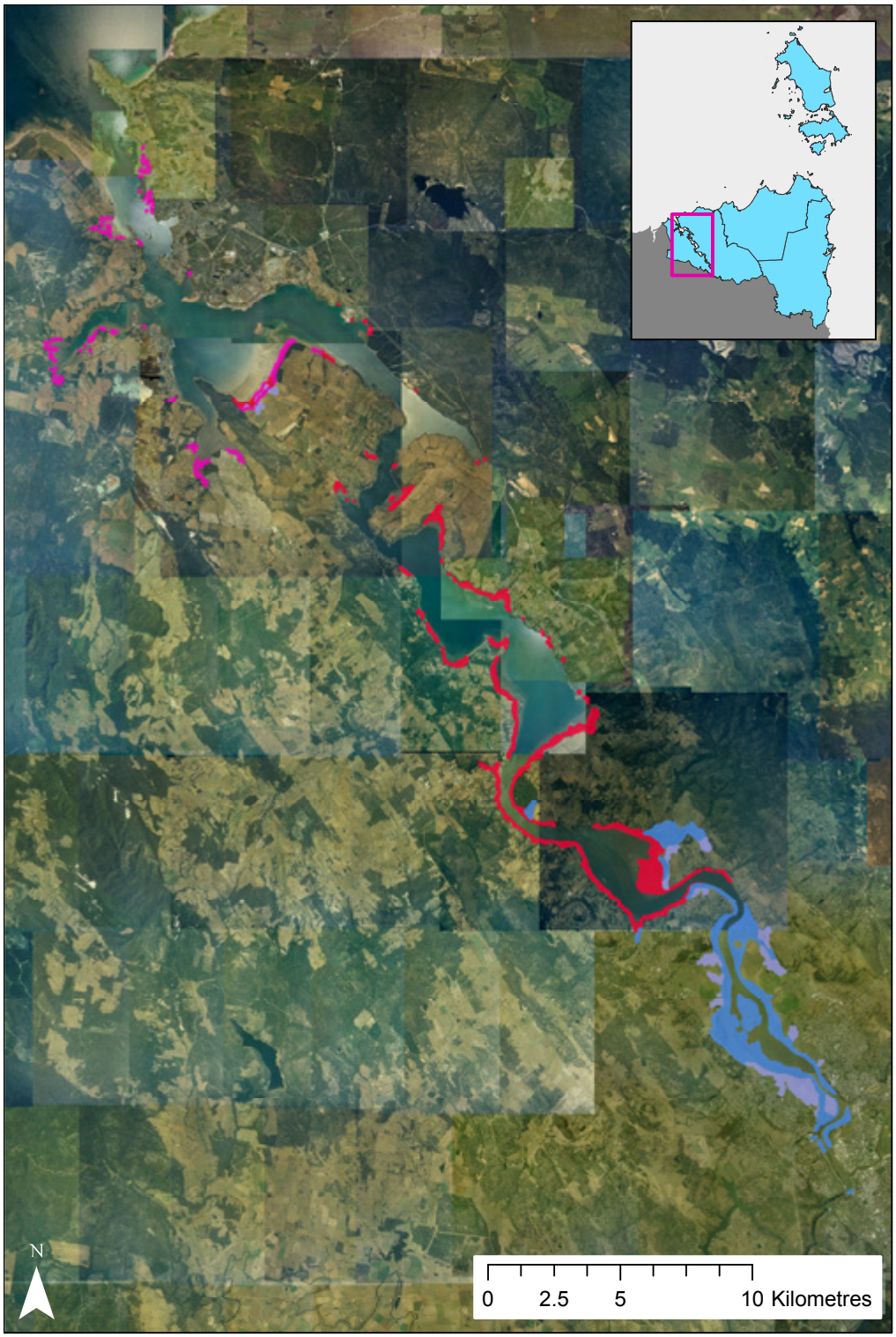
Size class distribution of NRM North coastal saltmarshes (not including tidal freshwater marshes in the Tamar) with the 10 large areas of marshes above 20 ha in extent are highlighted. They include (in order of extent): Cape Portland (66 ha), North East River in Flinders Island (54 ha), Middle Point in Tamar Estuary (52.5 ha), Scamander River (50.4 ha), Logan Lagoon in Flinders Island (two marshes of 29.5 ha and 27 ha), Ringarooma River (27.7 ha), Long Point in Flinders Island (26.7 ha), Henderson Lagoon (23 ha) and Pipers River (20.6 ha).

INDEX OF COASTAL SALTMARSH WETLAND COMPLEXES (CC)



Coastal saltmarshes tend to occur in 'clusters' of more than one patch to up to several patches. These clusters are identified at a scale of 1:25,000-1:100,000 and named after the landscape feature that defines the cluster. Saltmarsh clusters are further aggregated at larger spatial scales of 1:100,000-1:250,000 within 20 'coastal complexes' with each complex made up of a minimum of one cluster to up to several clusters. Click on each complex title to navigate to saltmarsh wetland clusters within the complex.

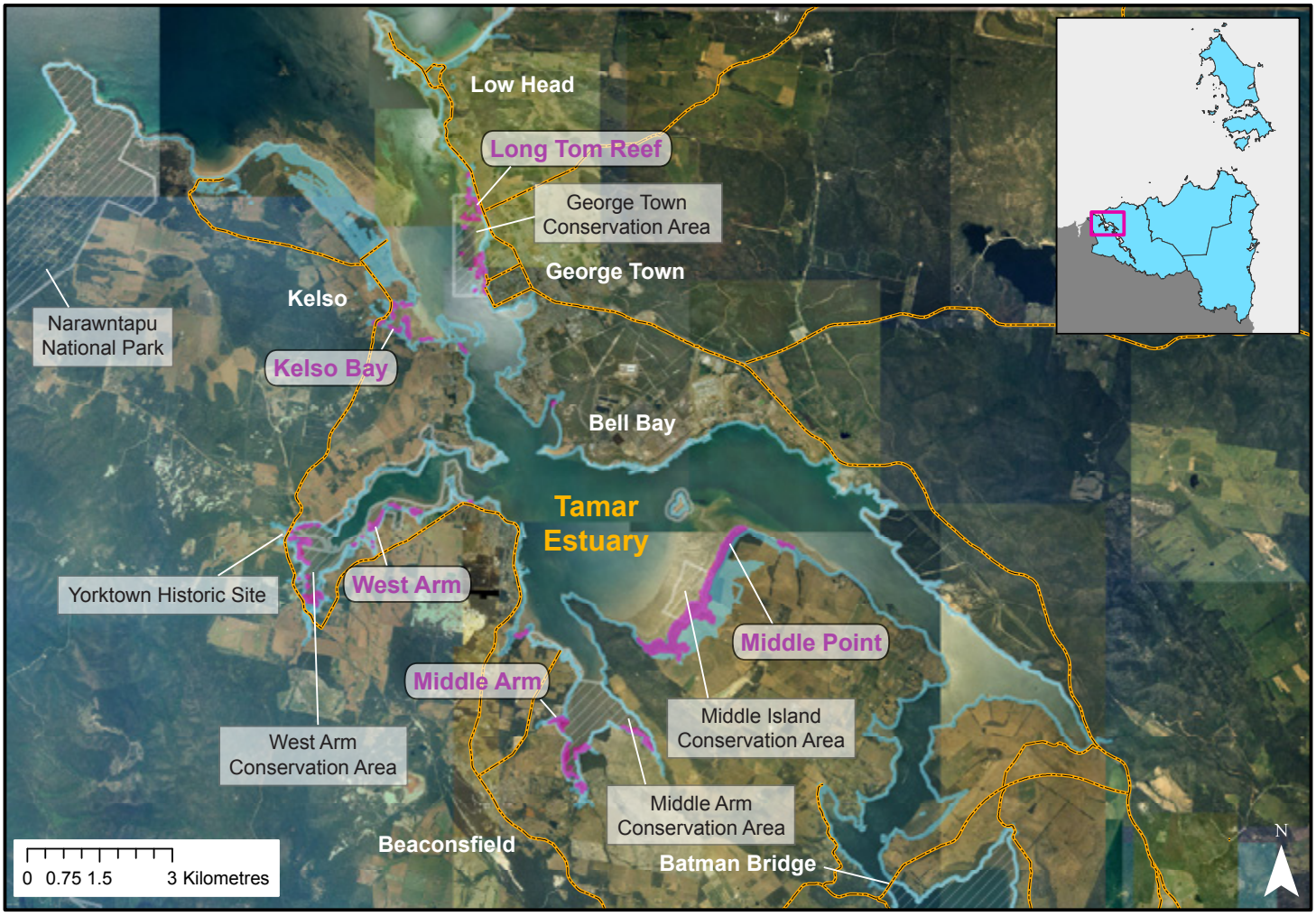
TAMAR ESTUARY TIDAL WETLAND COMPLEX



COMPLEX PROFILE

An overview of the extent and distribution of saltmarsh and other wetland areas (1529 ha) mapped within the Tamar Estuary area. Coastal saltmarshes (pink polygons) represent 86 ha (about 6% of the total wetlands in the area), with freshwater marshes (blue polygons) occupying 760 ha (50%), *Spartina* marshland (red polygons) occupying 437 ha (28%) and cleared wetland area in agricultural land (i.e., area subject to flooding and showing signs of depressed wetland flora) indicated by violet polygons occupying 246 ha (16%).

TAMAR ESTUARY TIDAL WETLAND COMPLEX

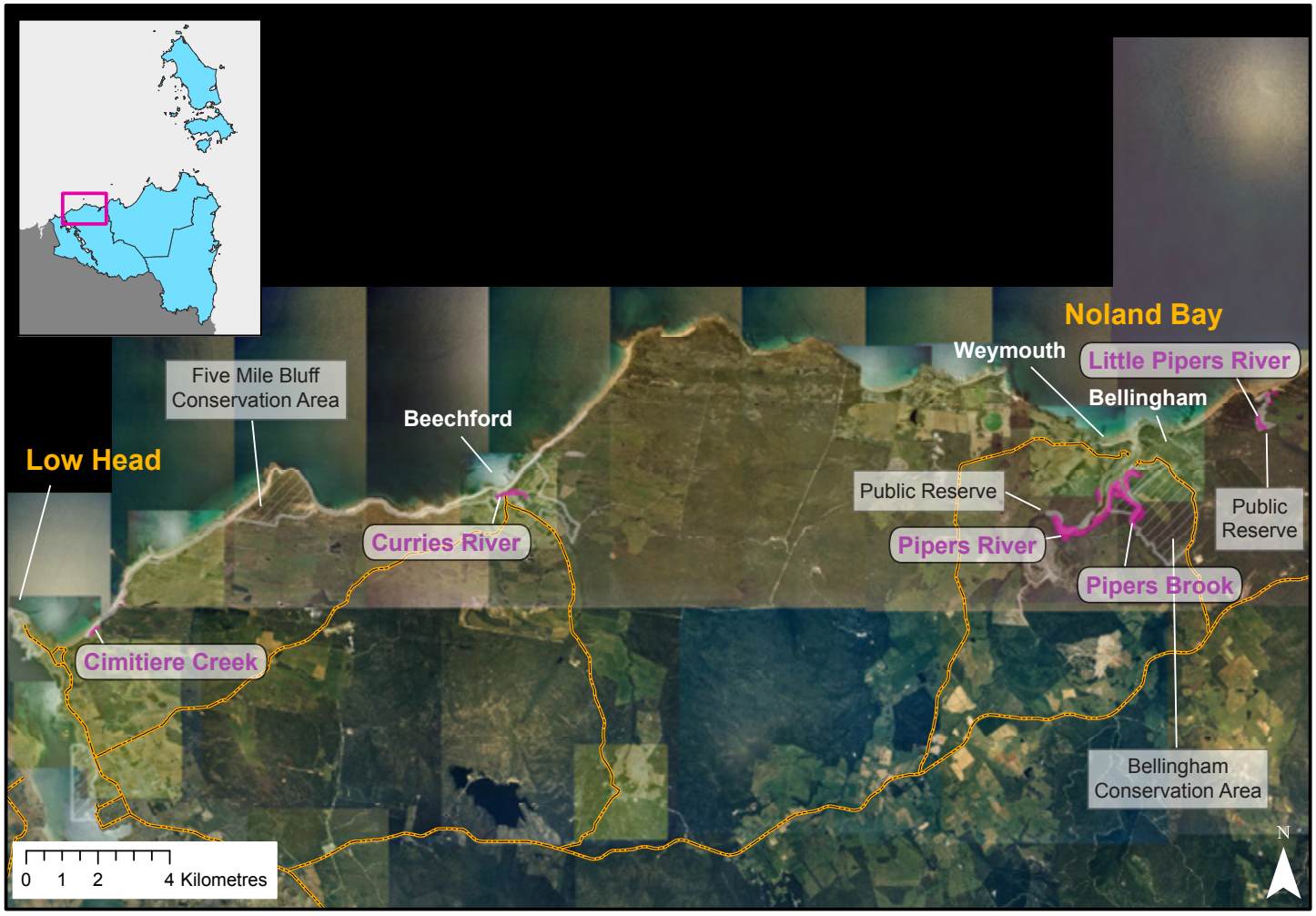


COMPLEX PROFILE

Municipality: George Town, West Tamar
Saltmarsh Area: 86 ha
Associated Waterways: Tamar Estuary, Andersons Creek, York Town Rivulet, Salisbury Creek, Brandy Creek, Clog Toms Creek, Masseys Creek
Dominant Vegetation Type: Mostly grassy saltmarsh with succulent saltmarsh patches in Long Tom Reef Saltmarsh Cluster
Dominant Land Tenure: Conservation Area, Private Land, Public Reserve

Saltmarsh Clusters within the Complex:
Middle Point Saltmarsh (52 ha)
West Arm Saltmarsh Cluster (10 ha)
Middle Arm Saltmarsh Cluster (13 ha)
Long Tom Reef Saltmarsh Cluster (5 ha)
Lower Tamar Fringing Marshes (3 ha)
Kelso Bay Saltmarsh Cluster (2 ha)

NOLAND BAY-LOW HEAD COMPLEX

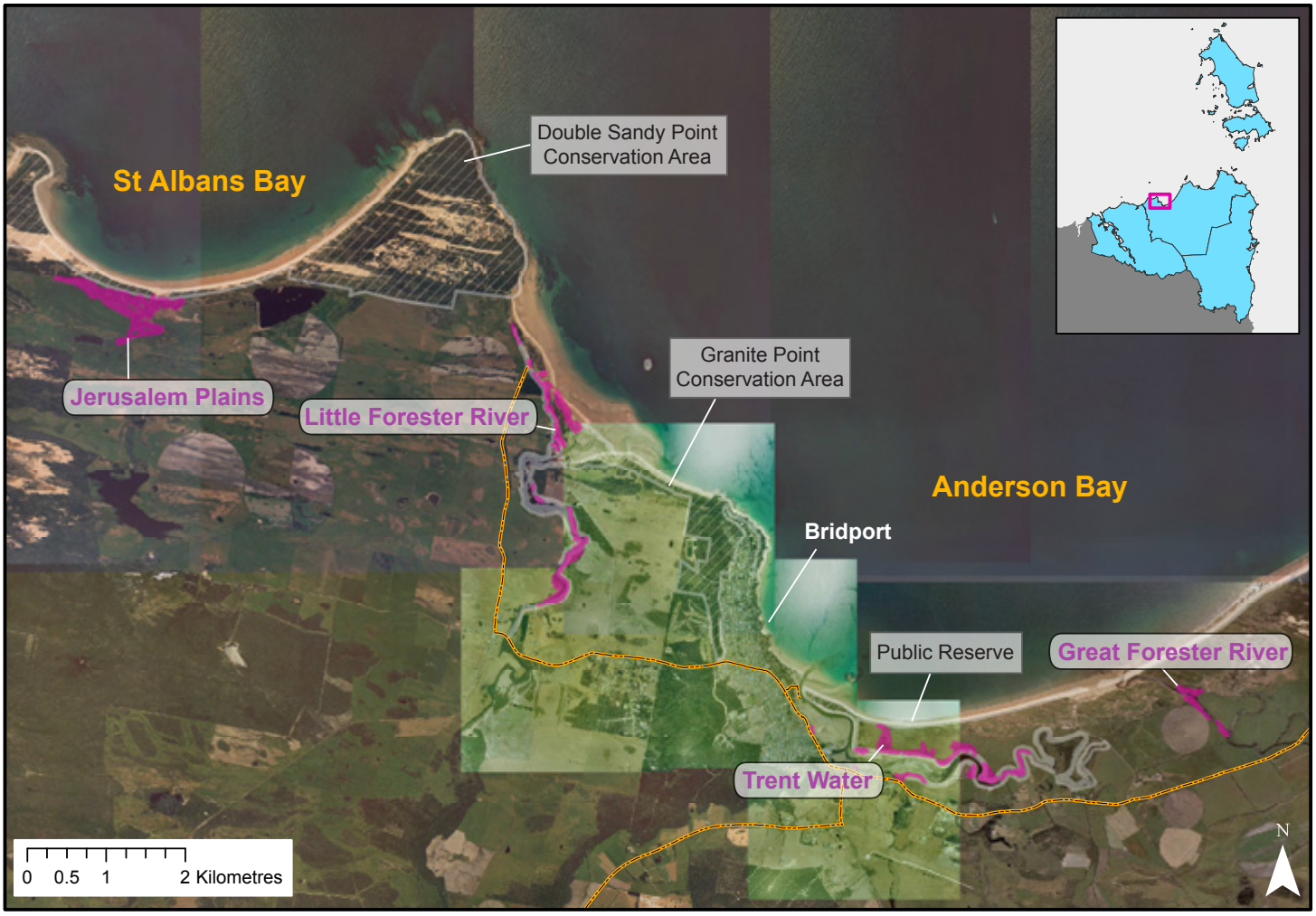


COMPLEX PROFILE

Municipality: Dorset, George Town
Saltmarsh Area: 50 ha
Associated Waterways: Pipers River, Pipers Brook, Curries River, Little Pipers River, Cimitiere Creek
Dominant Vegetation Type: Mostly grassy saltmarsh with minor patches of succulent saltmarsh
Dominant Land Tenure: Private Land, Conservation Area, Crown Land

Saltmarsh Clusters within the Complex:
Pipers River-Pipers Brook Saltmarsh Cluster (46 ha)
Curries River Saltmarsh Cluster (2 ha)
Little Pipers River Saltmarsh Cluster (1.5 ha)
Cimitiere Creek Saltmarsh Cluster (0.5 ha)

ANDERSONS BAY-ST ALBANS BAY COMPLEX

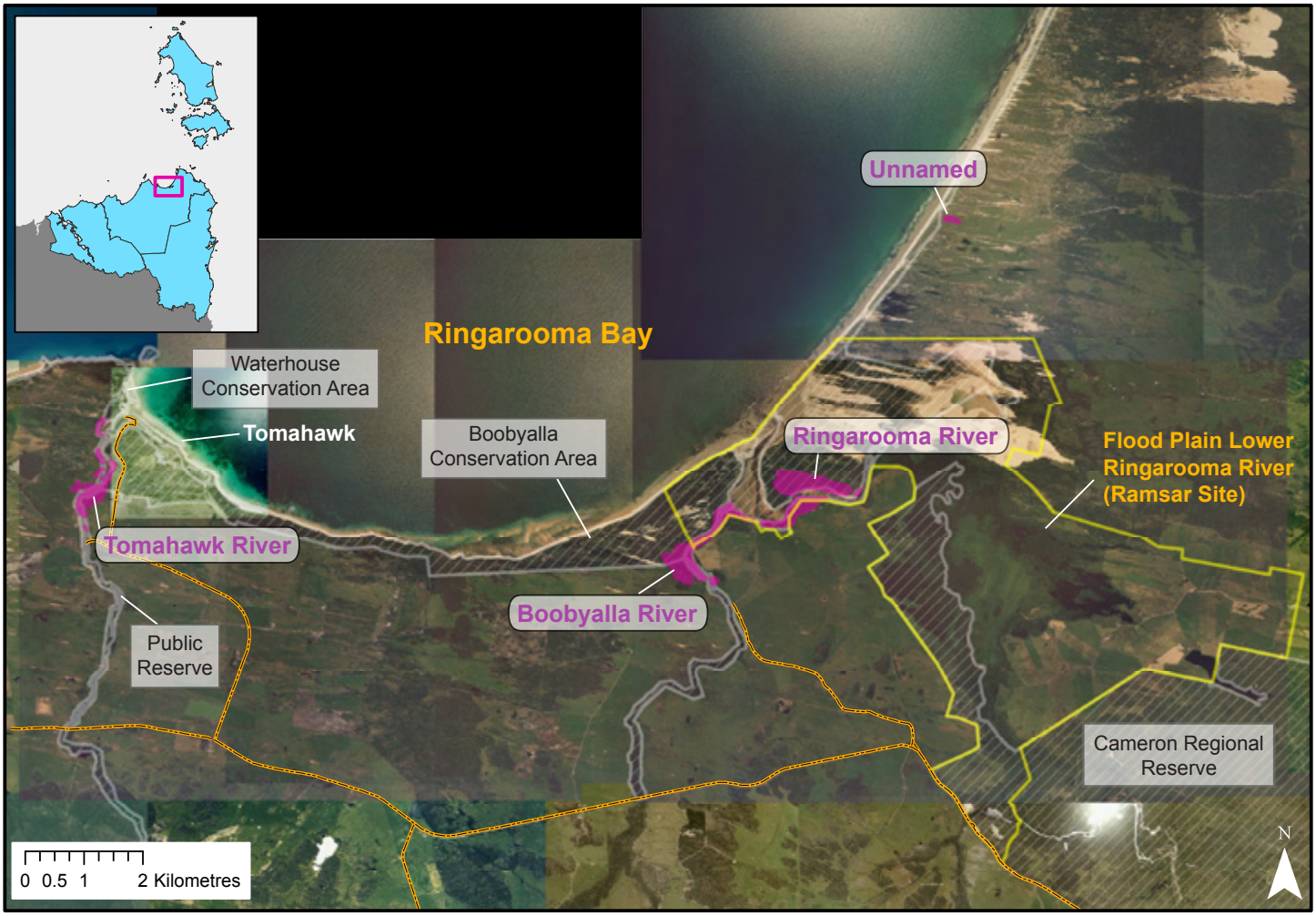


COMPLEX PROFILE

Municipality: Dorset
Saltmarsh Area: 55 ha
Associated Waterways: Little Forester River, Hurst Creek, Brid River, Great Forester River
Dominant Vegetation Type: Mainly grassy saltmarsh with some patches of succulent saltmarsh
Dominant Land Tenure: Private Land, Conservation Area

Saltmarsh Clusters within the Complex:
Jerusalem Plains Saltmarsh Cluster (25 ha)
Great Forester River Saltmarsh Cluster (3 ha)
Little Forester River Saltmarsh Cluster (15 ha)
Trent Water Saltmarsh Cluster (12 ha)

RINGAROOMA BAY COMPLEX

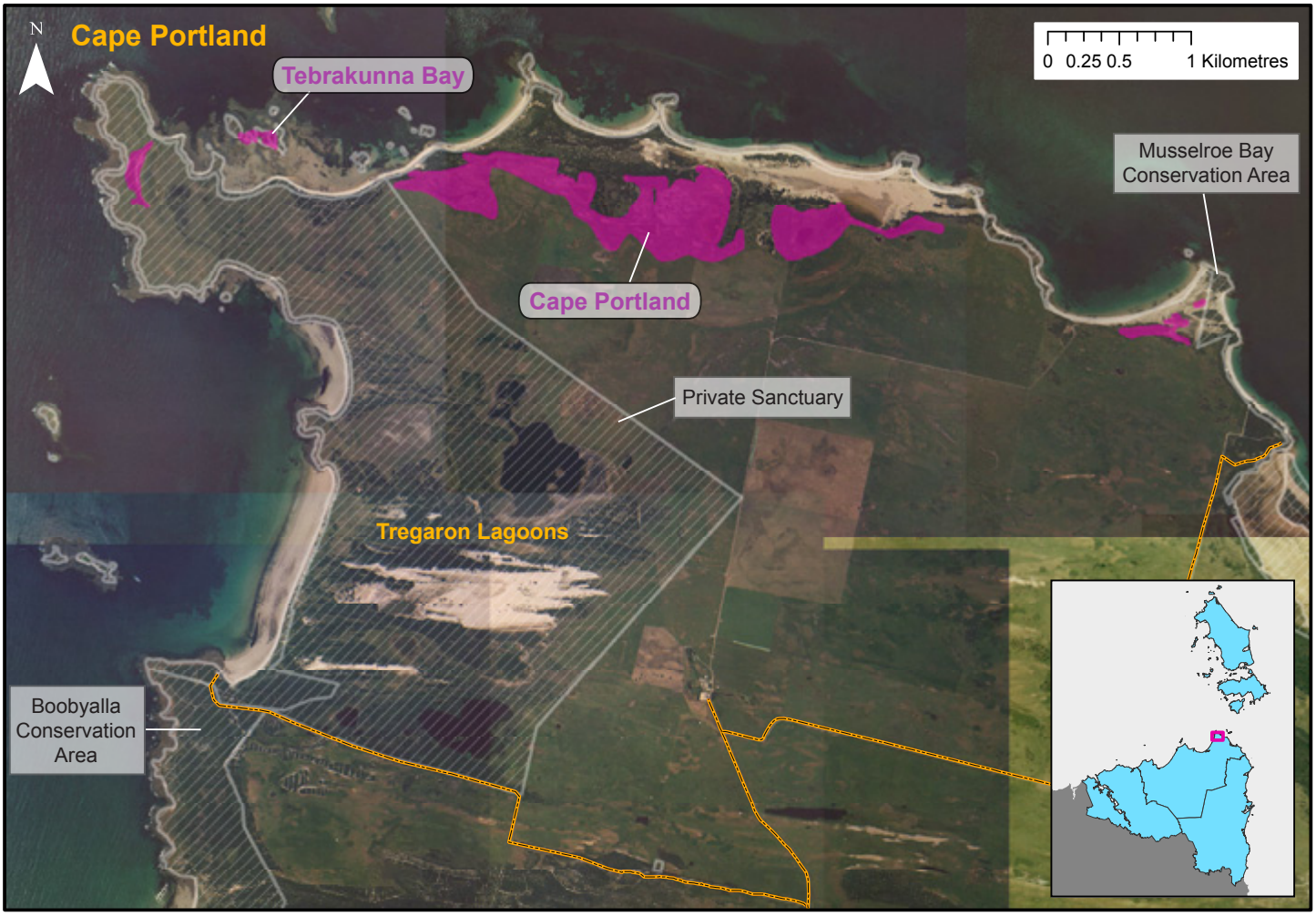


COMPLEX PROFILE

Municipality: Dorset
Saltmarsh Area: 92 ha
Associated Waterways: Ringarooma River, Boobyalla River, Tomahawk River
Dominant Vegetation Type: Mixture of grassy and succulent saltmarsh patches
Dominant Land Tenure: Public Reserve, Conservation Area, Private Land

Saltmarsh Clusters within the Complex:
Ringarooma River Saltmarsh Cluster (44 ha)
Boobyalla River Saltmarsh Cluster (31 ha)
Tomahawk River Saltmarsh Cluster (16 ha)
Ringarooma Bay Unnamed Cluster 1 (1.2 ha)

CAPE PORTLAND COMPLEX

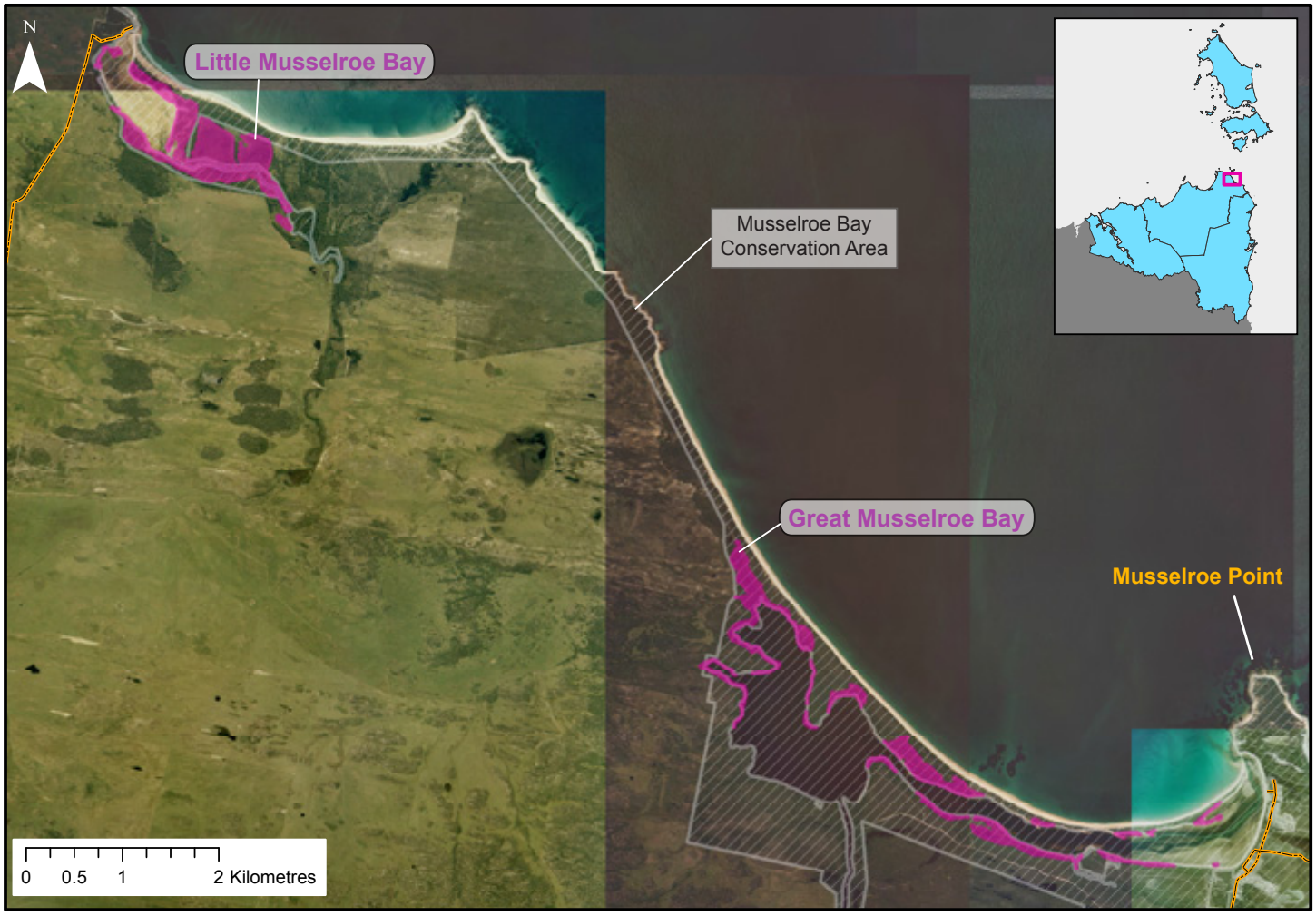


COMPLEX PROFILE

Municipality: Dorset
Saltmarsh Area: 90 ha
Associated Waterways: None
Dominant Vegetation Type: Mainly grassy saltmarsh with some patches of succulent saltmarsh
Dominant Land Tenure: Private Land, Conservation Area
Recognised Values: Parts within the Cape Portland Island Important Bird Area

Saltmarsh Clusters within the Complex:
Cape Portland Saltmarsh Cluster (89 ha)
Tebrakunna Bay Saltmarsh Cluster (1.2 ha)

MUSSELROE BAY COMPLEX

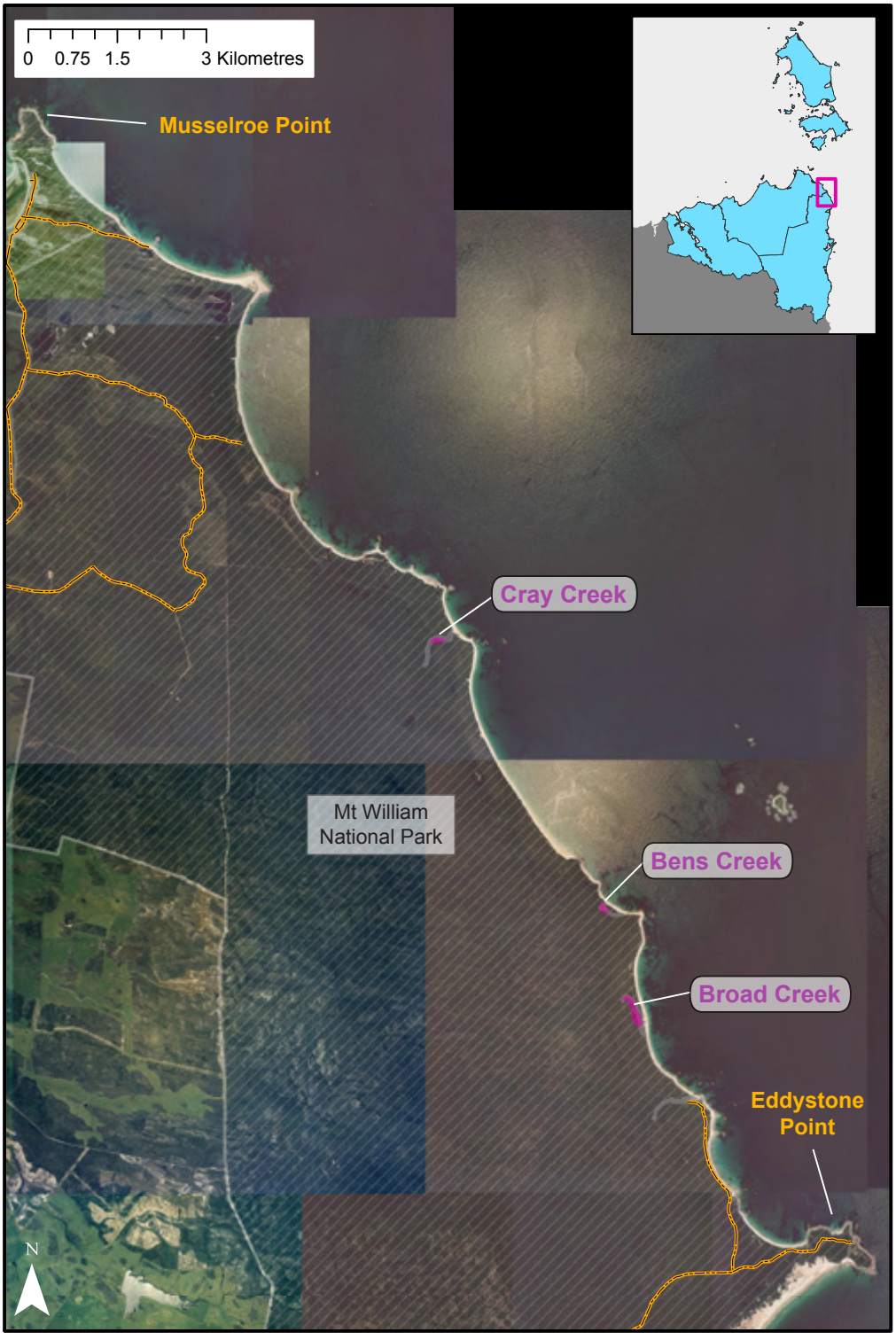


COMPLEX PROFILE

Municipality: Dorset
Saltmarsh Area: 110 ha
Dominant Vegetation Type: Succulent saltmarsh dominated by *Sarcocornia* in Great Musselroe Bay, and by *Tecticornia* in Little Musselroe Bay
Dominant Land Tenure: Conservation Area, Private Land
Recognised Values: Parts within the Cape Portland Important Bird Area

Saltmarsh Clusters within the Complex:
Little Musselroe Saltmarsh Cluster (60 ha)
Great Musselroe Bay Saltmarsh Cluster (50 ha)
Associated Waterways: Great Musselroe River, Cuckoo Creek, Little Musselroe River

MT WILLIAM COMPLEX

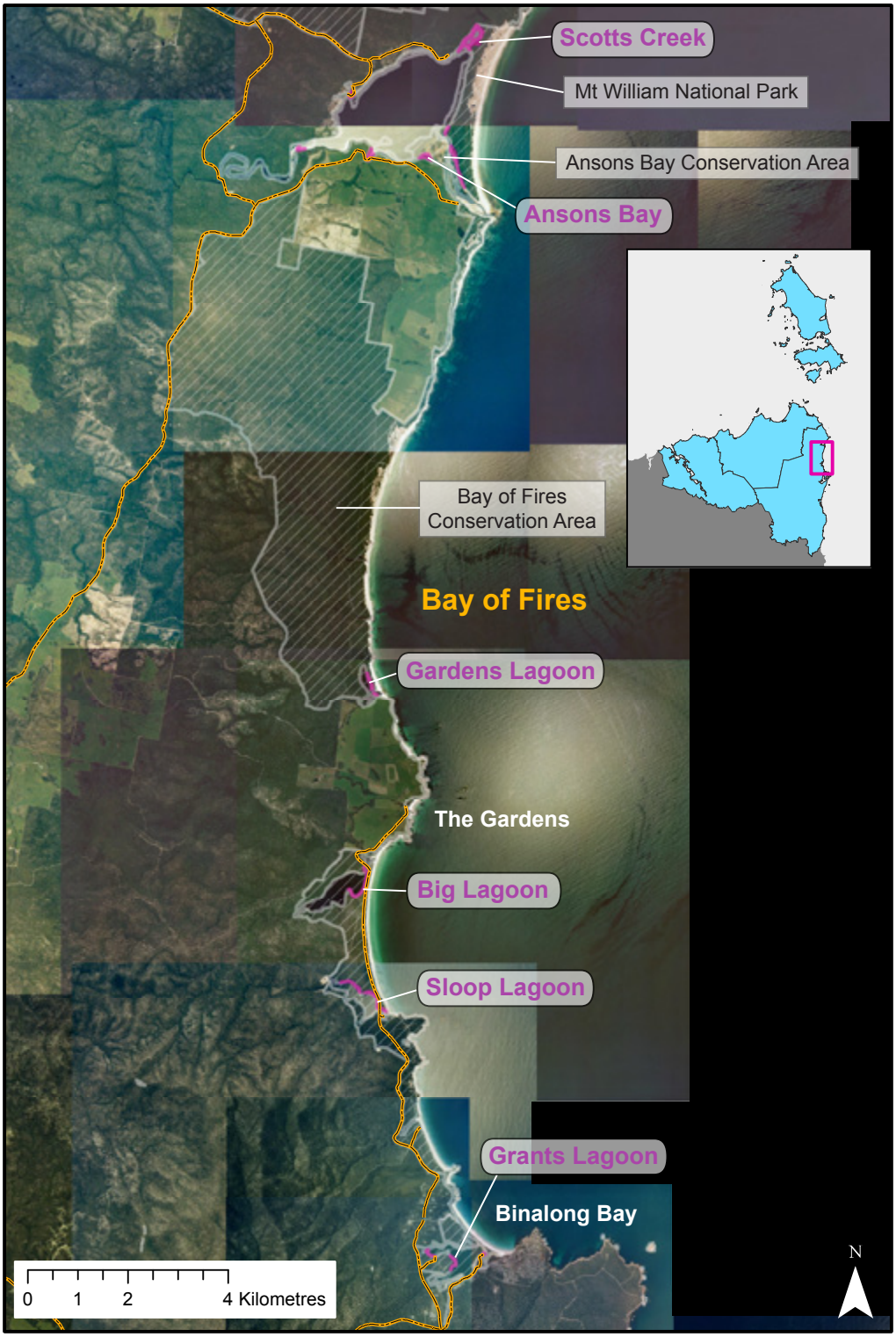


COMPLEX PROFILE

Municipality: Break O'Day
Saltmarsh Area: 4 ha
Associated Waterways: Broad Creek, Bens Creek, Cray Creek
Dominant Vegetation Type: Saltmarsh as marsupial lawns
Dominant Land Tenure: National Park
Recognised Values: Parts within the Cape Portland Island Important Bird Area

Saltmarsh Clusters within the Complex:
Broad Creek Saltmarsh Cluster (3 ha)
Bens Creek Saltmarsh Cluster (0.5 ha)
Cray Creek Saltmarsh Cluster (0.5 ha)

BAY OF FIRES-ANSONS BAY COMPLEX

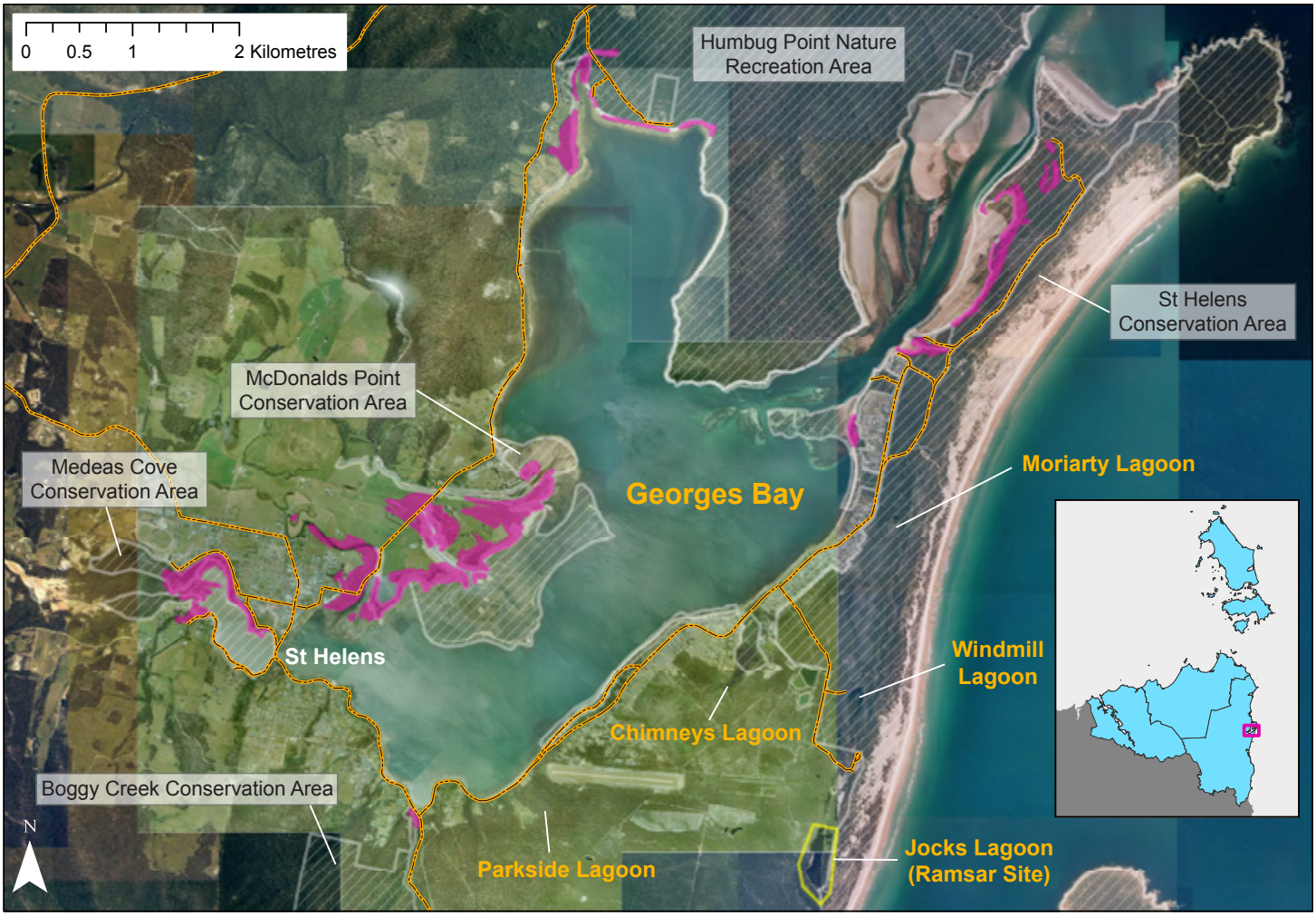


COMPLEX PROFILE

Municipality: Break O'Day
Saltmarsh Area: 13 ha
Associated Waterways: Ansons River, Scotts Creek, Sloop Creek, Baileys Creek, Big Lagoon Creek, Duck Creek, Doctors Creek, Steels Creek
Dominant Vegetation Type: Mixture of grassy and succulent saltmarsh, including some as marsupial lawns
Dominant Land Tenure: Conservation Area, National Park

Saltmarsh Clusters within the Complex:
Ansons Bay Saltmarsh Cluster (5 ha)
Scotts Creek Saltmarsh Cluster (4 ha)
Sloop Lagoon Saltmarsh Cluster (1.5 ha)
Gardens Lagoon Saltmarsh Cluster (1 ha)
Grants Lagoon Saltmarsh Cluster (0.5 ha)
Big Lagoon Saltmarsh Cluster (0.5 ha)

GEORGES BAY COMPLEX

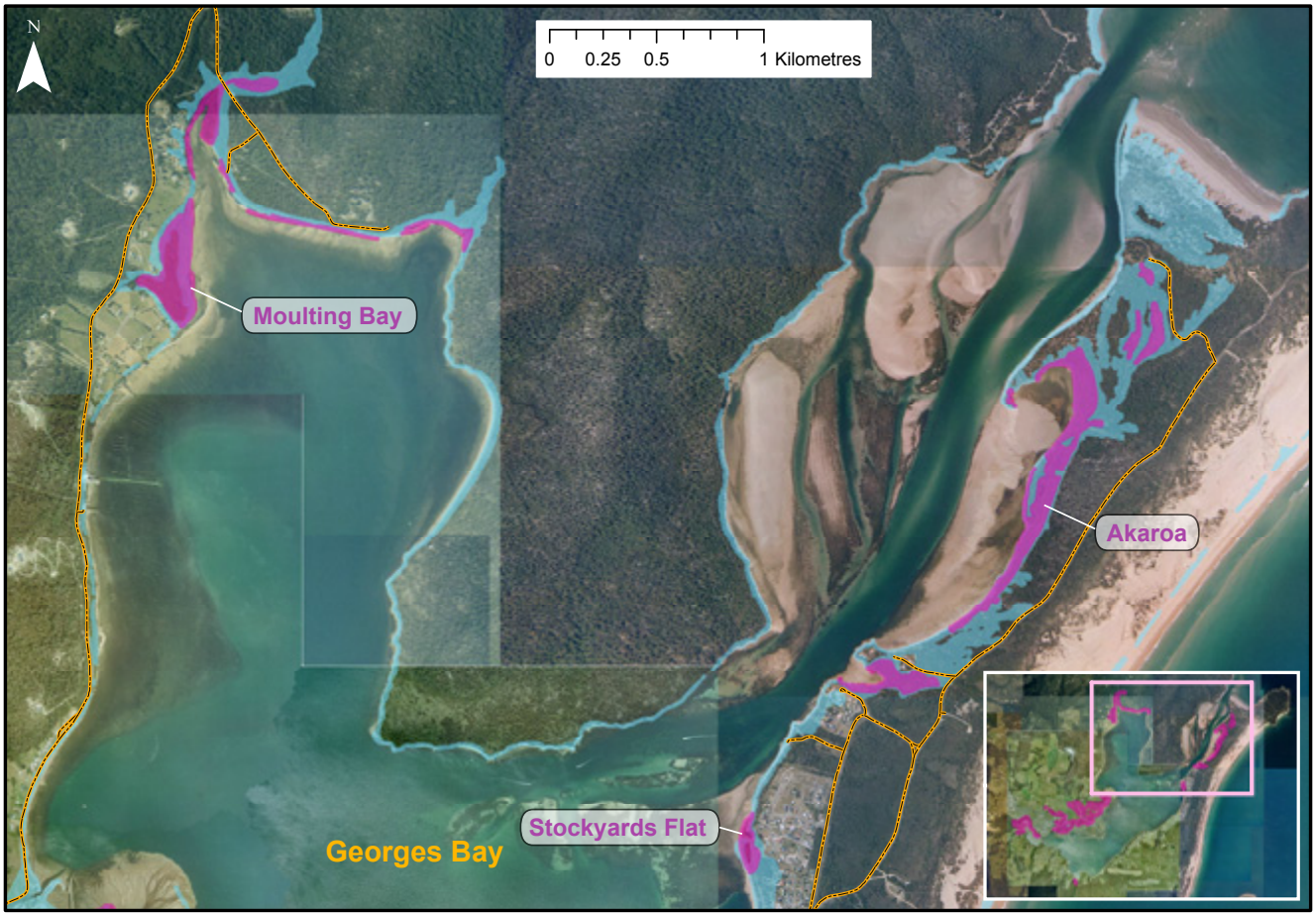


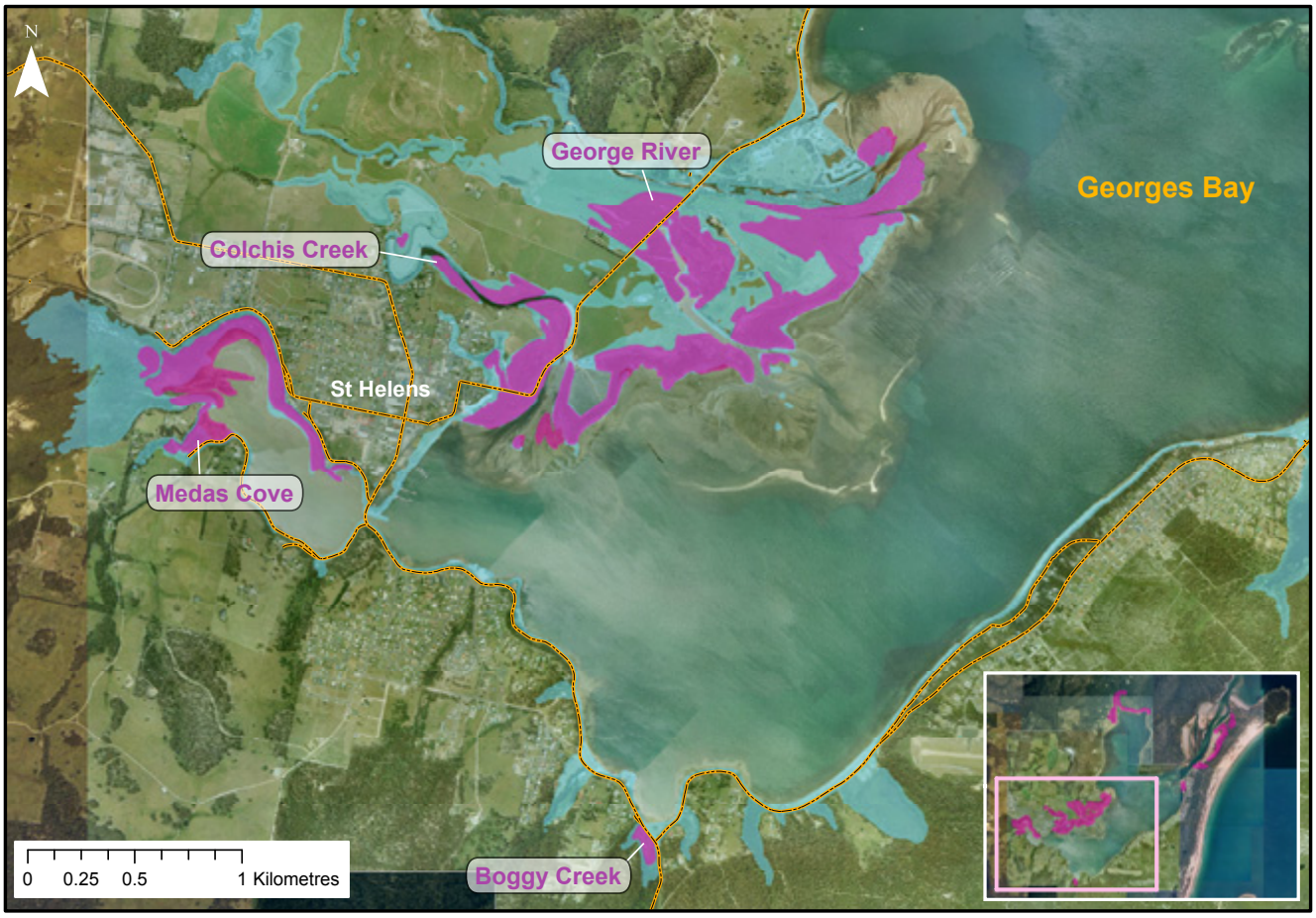
COMPLEX PROFILE

Municipality: Break O'Day
Saltmarsh Area: 103 ha
Associated Waterways: George River, Colchis Creek, Golden Fleece Rivulet, Constable Creek, Boggy Creek, Argo Creek
Dominant Vegetation Type: Mainly succulent saltmarsh with some patches of grassy saltmarsh
Dominant Land Tenure: Conservation Area, Private Land
Recognised Values: Part of St Helens (Tasmania) Important Bird Area

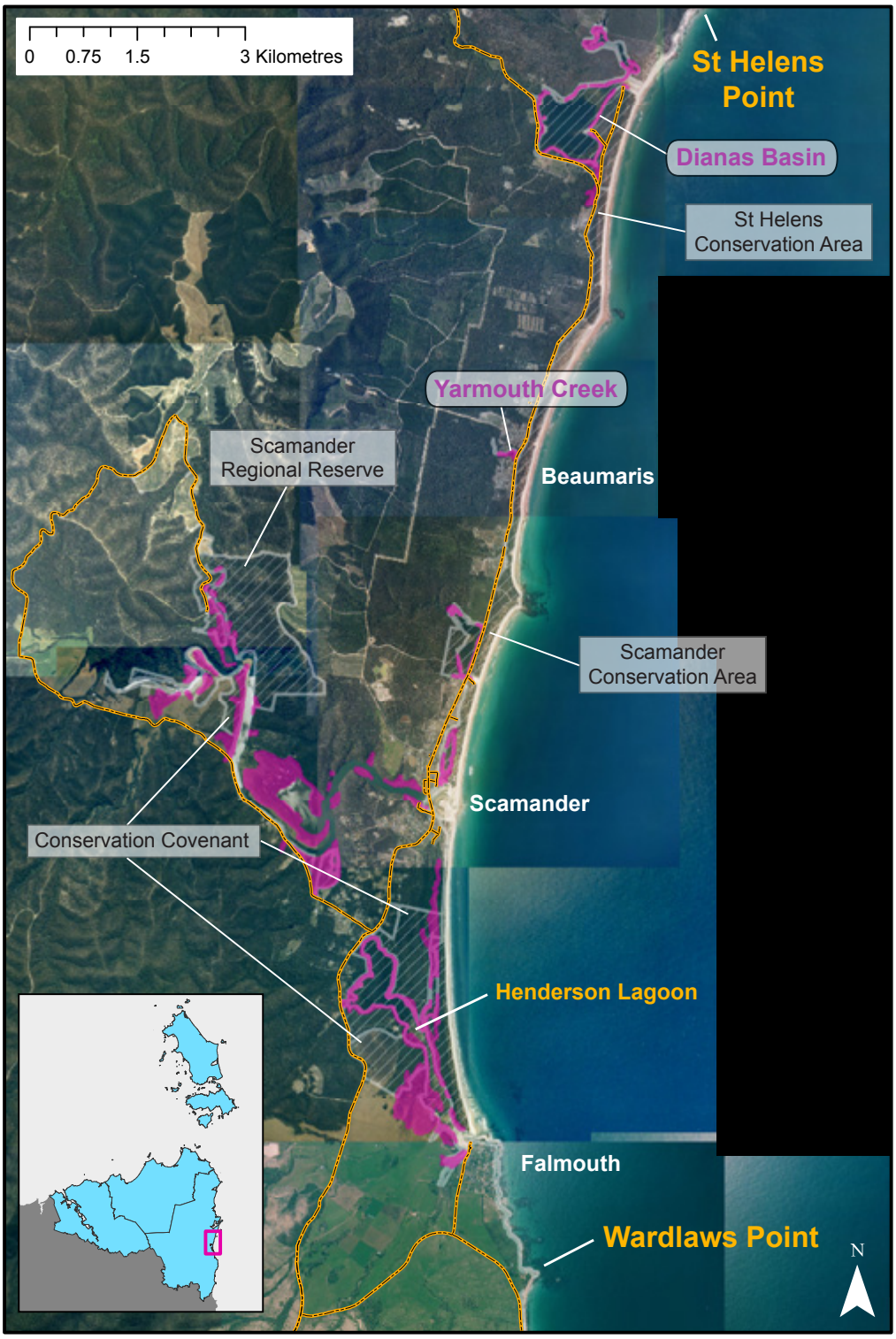
Saltmarsh Clusters within the Complex:
George River-Colchis Creek Saltmarsh Cluster (62 ha)
Medas Cove Saltmarsh Cluster (15 ha)
Akaroa Saltmarsh Cluster (14 ha)
Moulting Bay Saltmarsh Cluster (11 ha)
Stockyards Flat Saltmarsh (1.5 ha)
Boggy Creek Saltmarsh (1 ha)

GEORGES BAY SALTMARSH CLUSTERS





ST HELENS POINT-WARDLAWS POINT COMPLEX

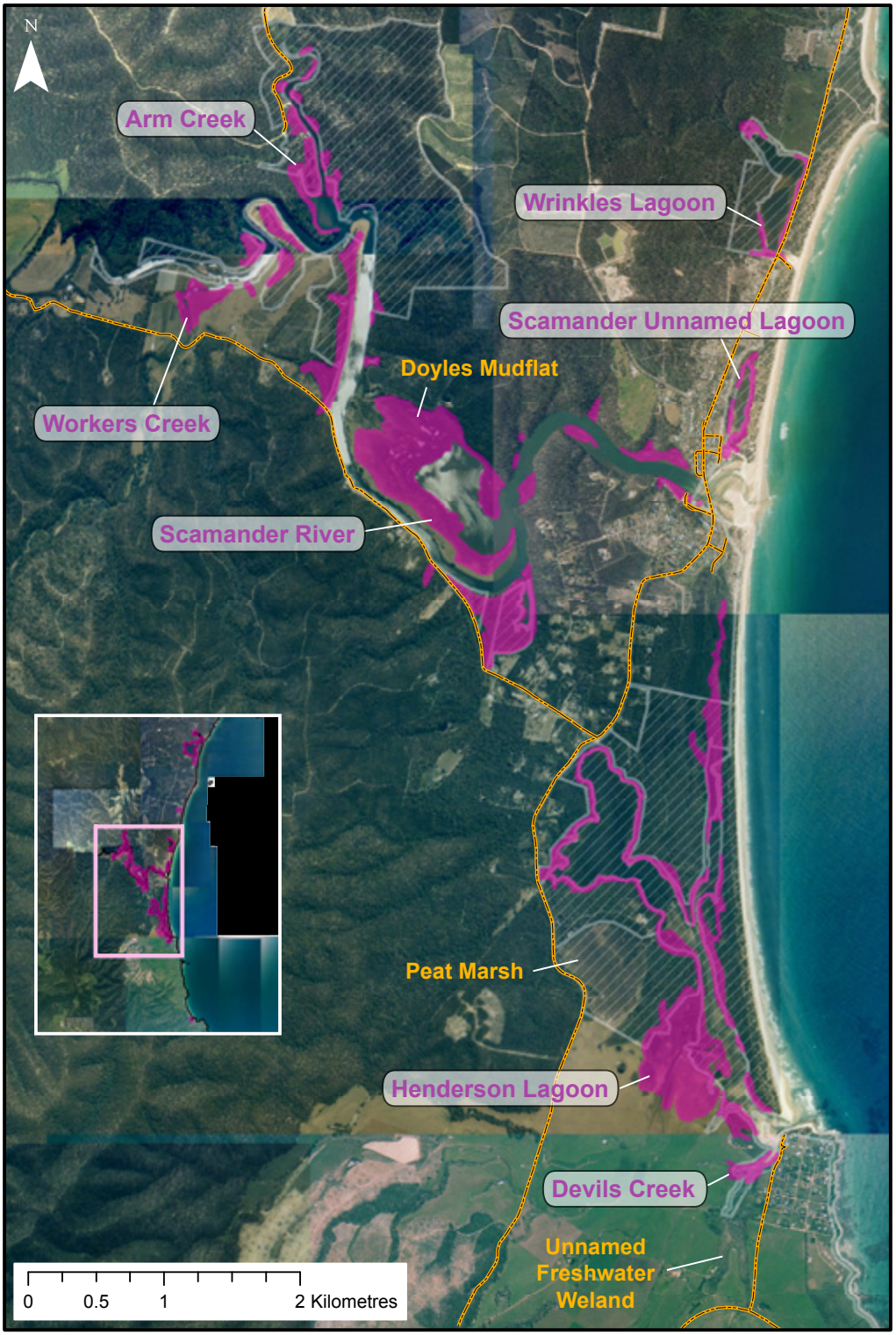


COMPLEX PROFILE

Municipality: Break O'Day
Saltmarsh Area: 193 ha
Associated Waterways: Scamander River, Arm Creek, Devils Creek, Frentree Glen Creek, Basin Creek, Crockers Arm Creek, Yorkys Creek, Styx Creek, Workers Creek, McIntyre Creek
Dominant Vegetation Type: Mostly grassy saltmarsh with minor patches of succulent saltmarsh dominated by *Sarcocornia*
Dominant Land Tenure: Conservation Area, Private Land, Regional Reserve
Recognised Values: Dianas Basin within the St Helens (Tasmania) Important Bird Area

Saltmarsh Clusters within the Complex:
Dianas Basin Saltmarsh Cluster (9 ha)
Yarmouth Creek Saltmarsh Cluster (0.5 ha)
For all other clusters, see page 19.

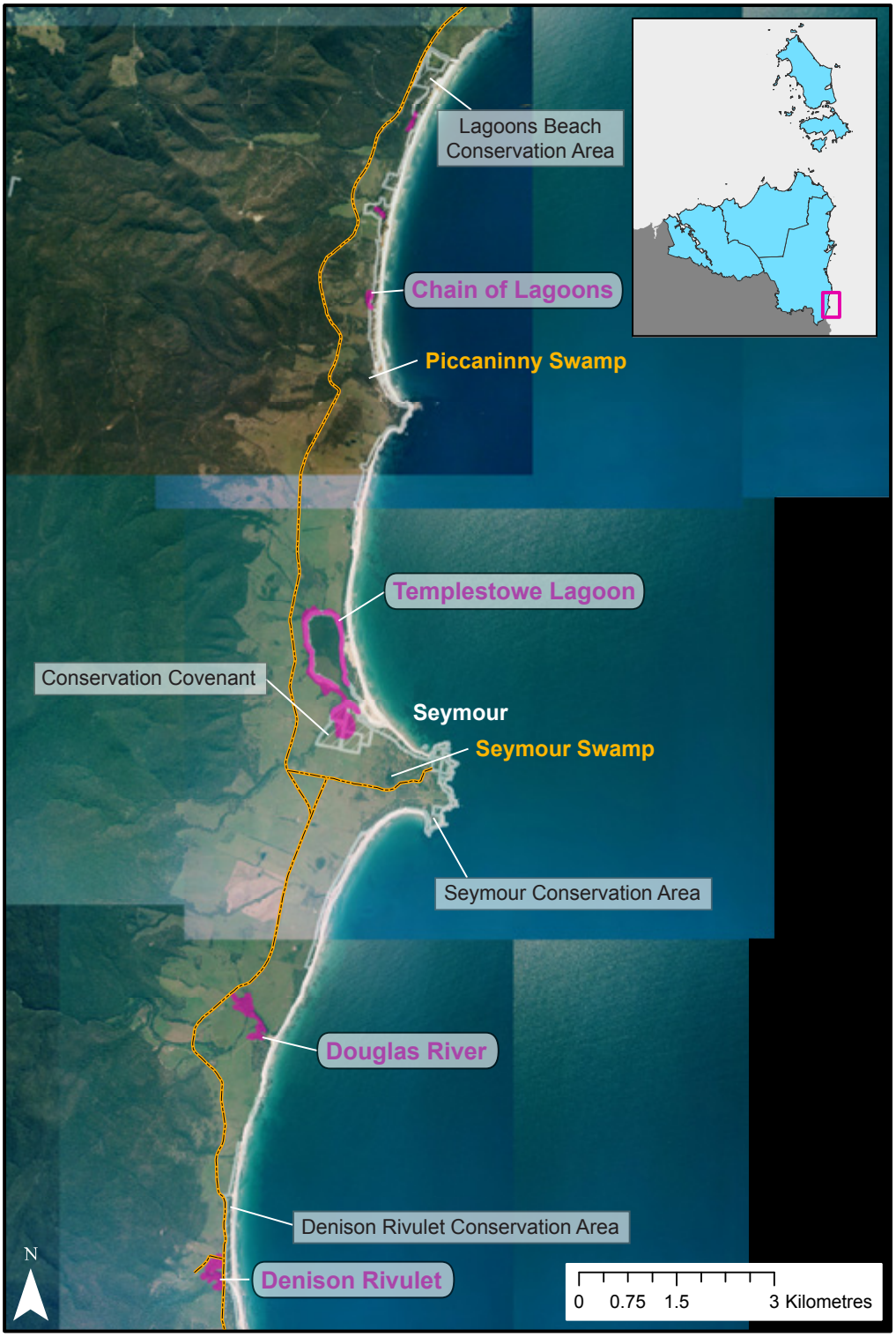
SCAMANDER REGION SALTMARSH CLUSTERS



COMPLEX PROFILE

Saltmarsh Clusters around Scamander, part of the ST HELENS POINT-WARDLAWS POINT COMPLEX:
Scamander River Saltmarsh Cluster (88 ha)
Henderson Lagoon Saltmarsh Cluster (72 ha)
Arm Creek Saltmarsh Cluster (10.5 ha)
Workers Creek Saltmarsh Cluster (5 ha)
Scamander Unnamed Lagoon (2.6 ha)
Devils Creek Saltmarsh Cluster (2 ha)
Wrinklers Lagoon Saltmarsh Cluster (2.3 ha)

WARDLAWS POINT-MACLEAN BAY COMPLEX

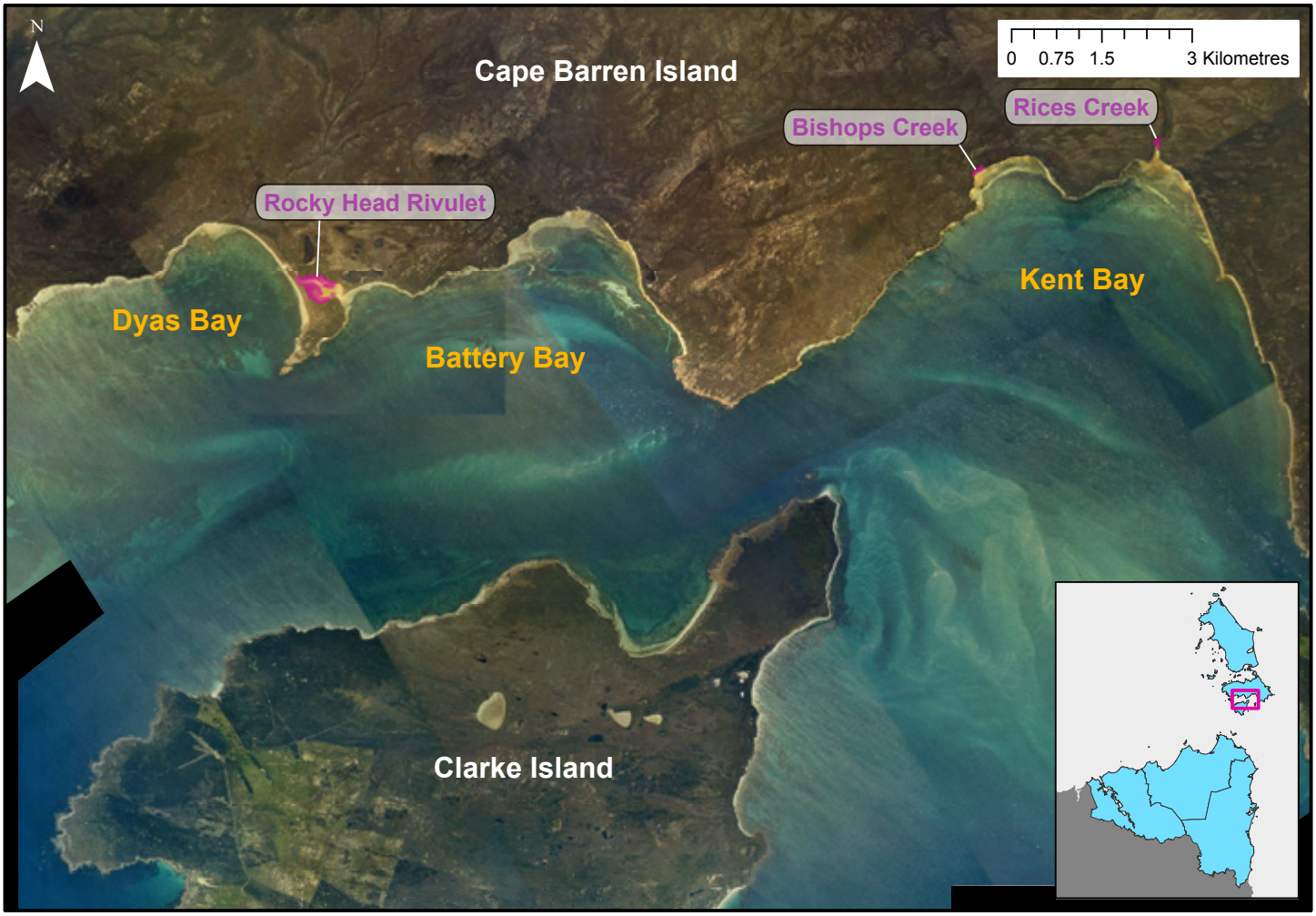


COMPLEX PROFILE

Municipality: Break O'Day
Saltmarsh Area: 40 ha
Associated Waterways: Douglas River, Denison Rivulet, Lower Marsh Creek, Wardlaws Creek, Doctors Creek, Harrys Creek, Stonyford Creek
Dominant Vegetation Type: Mostly grassy saltmarsh with minor patches of succulent saltmarsh
Dominant Land Tenure: Private Land, Conservation Area

Saltmarsh Clusters within the Complex:
Templestowe Lagoon Saltmarsh Cluster (28 ha)
Douglas River Saltmarsh Cluster (6.5 ha)
Denison Rivulet Saltmarsh Cluster (5 ha)
Chain of Lagoons Saltmarsh Cluster (2 ha)

KENT BAY-BATTERY BAY-DYAS BAY COMPLEX

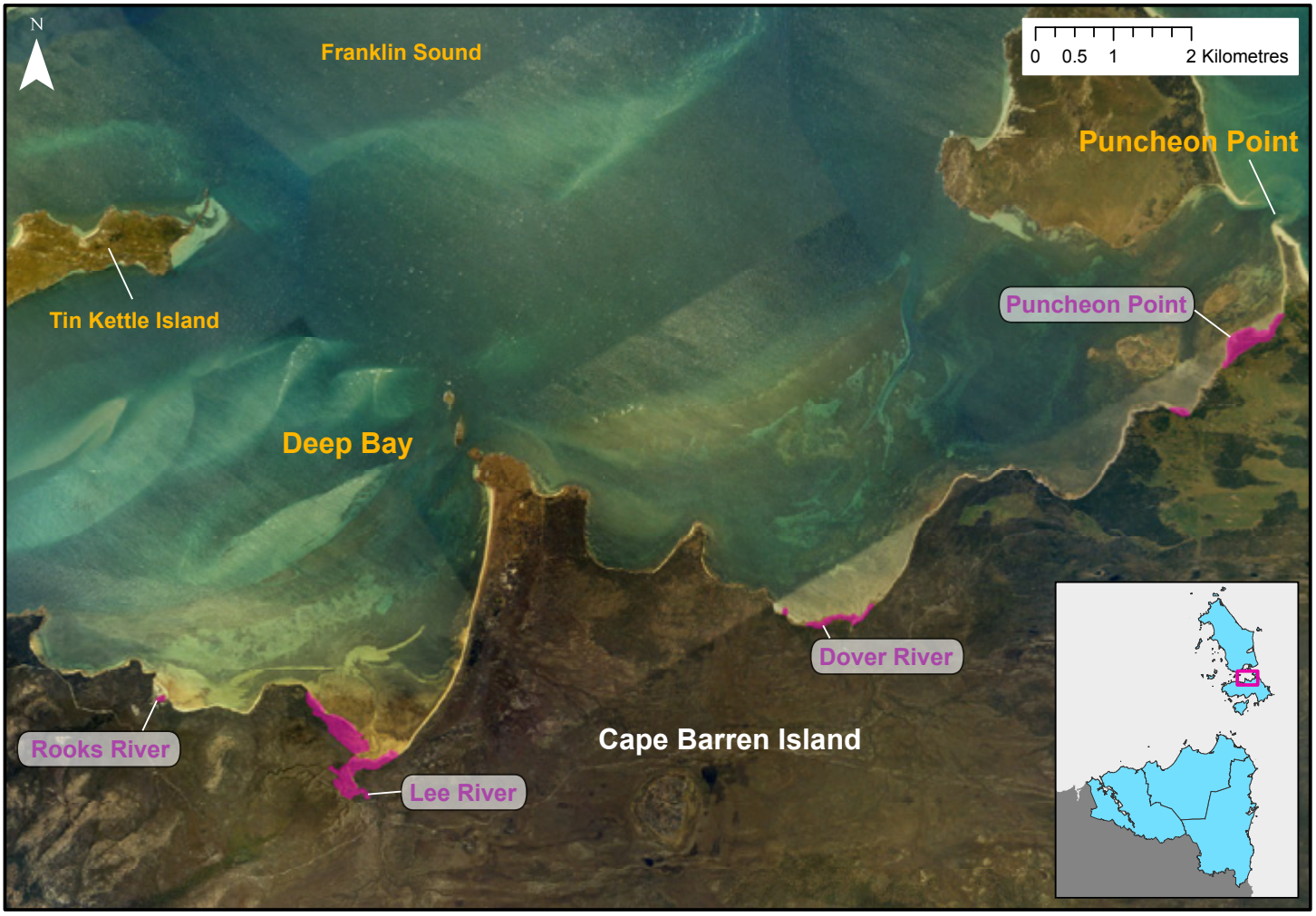


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 8.6 ha
Associated Waterways: Rocky Head Rivulet, Bishops Creek, Rices River
Dominant Vegetation Type: Mainly succulent saltmarsh dominated by *Tecticornia* with some patches of grassy saltmarsh
Dominant Land Tenure: Private Land

Saltmarsh Clusters within the Complex:
Rocky Head Rivulet Saltmarsh Cluster (8 ha)
Bishops Creek Saltmarsh Cluster (0.5 ha)
Rices River Saltmarsh Cluster (0.2 ha)

DEEP BAY-PUNCHEON POINT COMPLEX



COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 40.5 ha
Associated Waterways: Lee River, Ransom Creek, Dover River, Rooks River, East Creek
Dominant Vegetation Type: Mainly grassy saltmarsh with some patches of succulent saltmarsh
Dominant Land Tenure: Private Land

Saltmarsh Clusters within the Complex:
Lee River Saltmarsh Cluster (24 ha)
Puncheon Point Saltmarsh Cluster (14 ha)
Dover River Saltmarsh Cluster (2.3 ha)
Rooks River-East Creek Saltmarsh Cluster (0.2 ha)

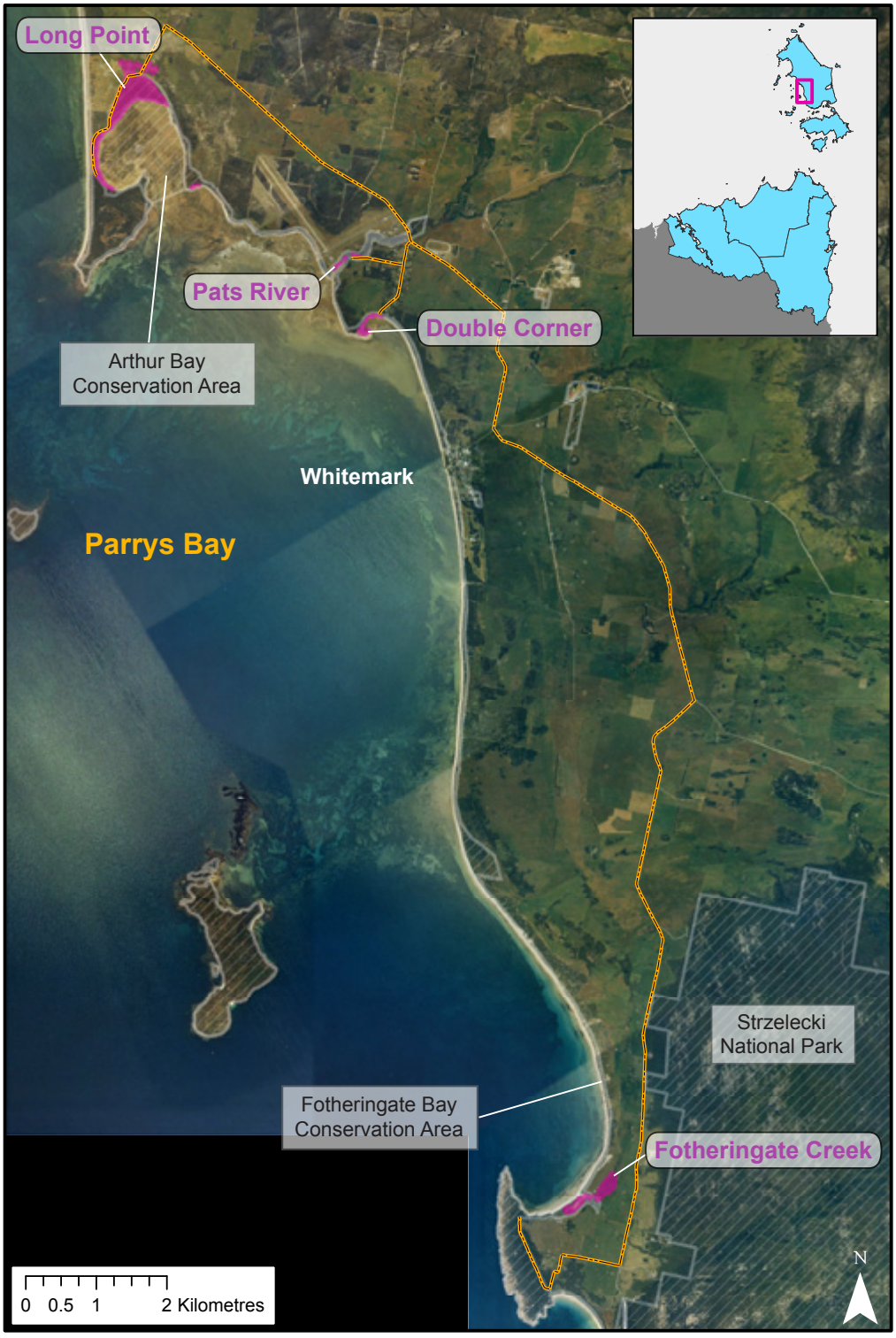
ADELAIDE BAY COMPLEX

COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 6.8 ha
Associated Waterways: Samphire River
Dominant Vegetation Type: Succulent saltmarsh dominated by *Tecticornia*
Dominant Land Tenure: Conservation Area

Saltmarsh Clusters within the Complex:
Petrifaction Bay Saltmarsh Cluster (6.3 ha)
Gunters Bay Saltmarsh Cluster (0.5 ha)

PARRYS BAY COMPLEX

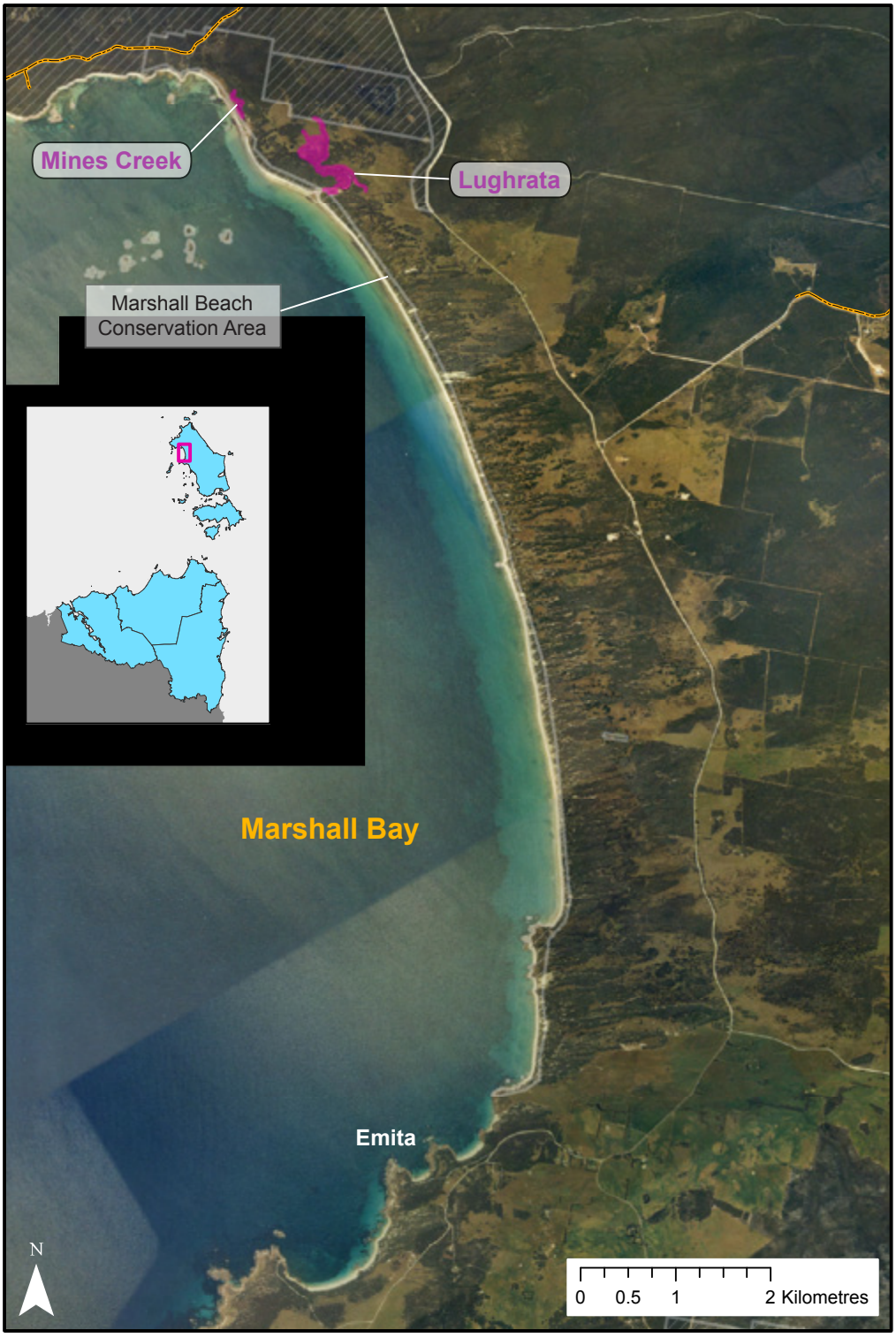


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 39 ha
Associated Waterways: Fotheringate Creek, Pats River
Dominant Vegetation Type: Large patch of succulent saltmarsh at Long Point, otherwise mostly grassy saltmarsh
Dominant Land Tenure: Private Land, Conservation Area

Saltmarsh Clusters within the Complex:
Long Point Saltmarsh Cluster (31 ha)
Fotheringate Creek Saltmarsh Cluster (6 ha)
Double Corner Saltmarsh Cluster (1.2 ha)
Pats River Saltmarsh Cluster (0.3 ha)

MARSHALL BAY COMPLEX

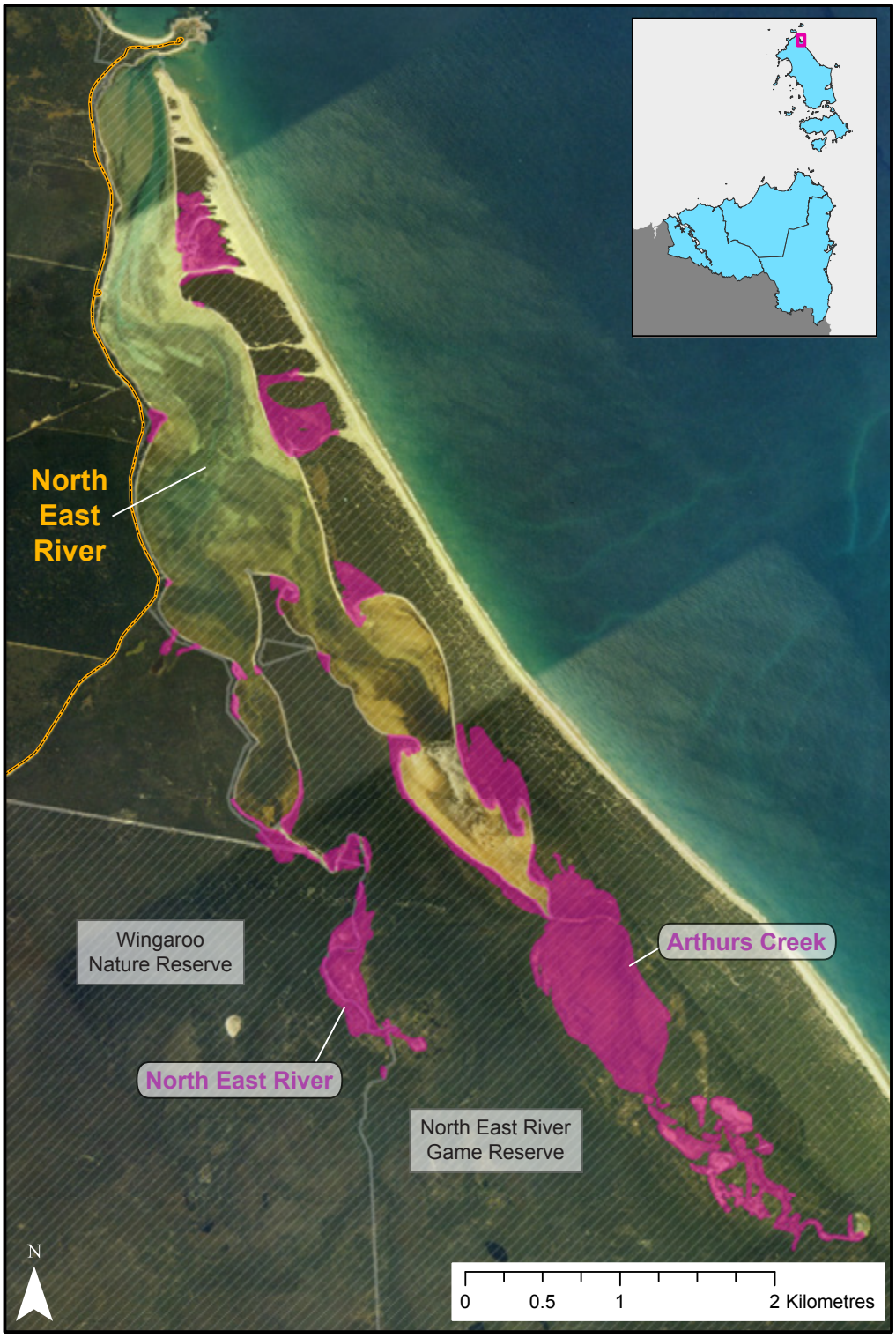


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 11 ha
Associated Waterways: Mines Creek
Dominant Vegetation Type: Mainly grassy saltmarsh with some patches of succulent saltmarsh
Dominant Land Tenure: Private Land

Saltmarsh Clusters within the Complex:
Lughrata Saltmarsh Cluster (10.2 ha)
Mines Creek Saltmarsh Cluster (0.7 ha)

NORTH EAST RIVER-ARTHURS CREEK COMPLEX

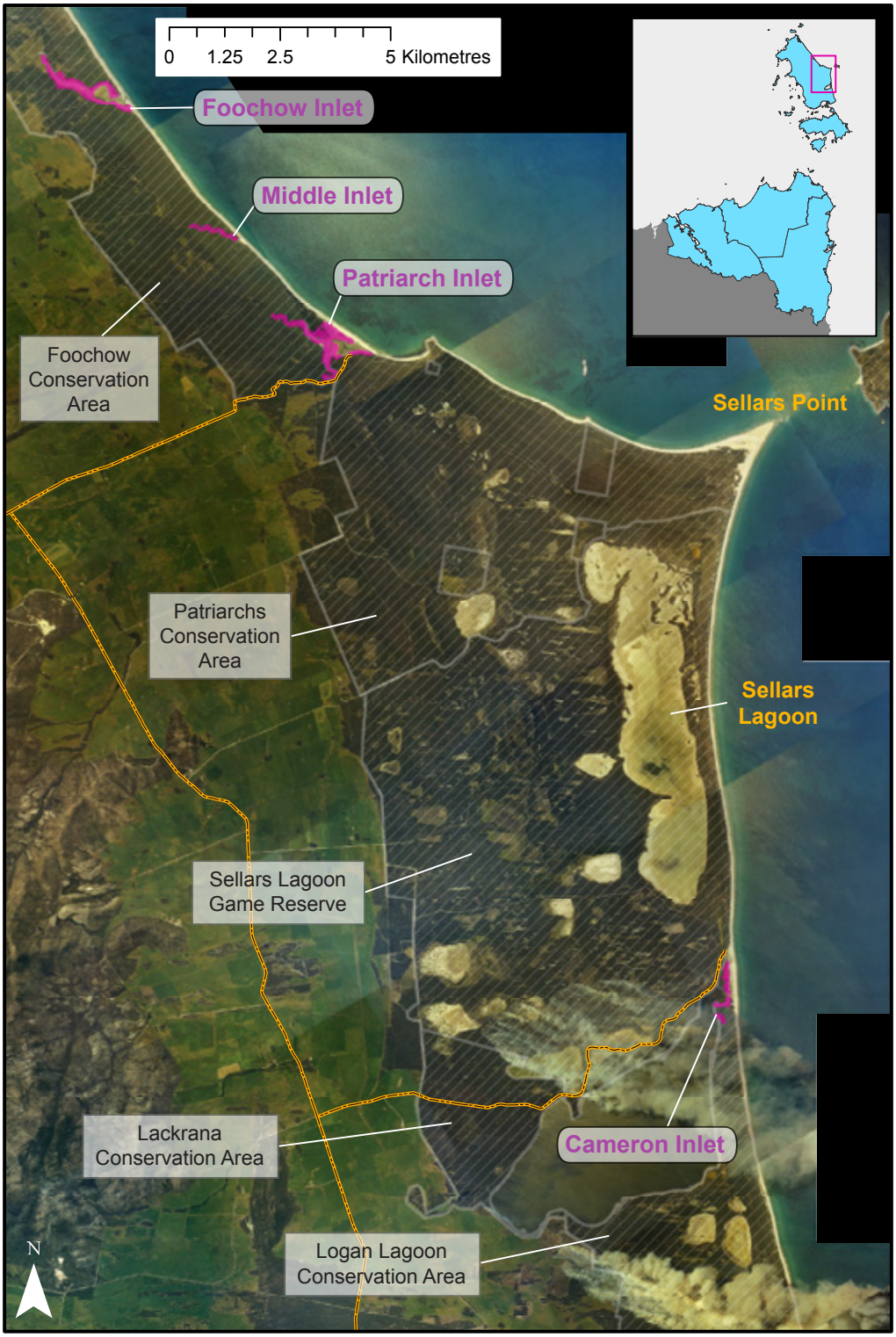


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 165 ha
Associated Waterways: North East River, Arthurs Creek
Dominant Vegetation Type: Succulent saltmarsh dominated by *Tecticornia* and *Sarcocornia*
Dominant Land Tenure: Game Reserve
Recognised Values: Parts within the Eastern Flinders Island Important Bird Area

Saltmarsh Clusters within the Complex:
Arthurs Creek Saltmarsh Cluster (117 ha)
North East River Saltmarsh Cluster (48 ha)

FLINDERS ISLAND EAST COAST INLETS COMPLEX

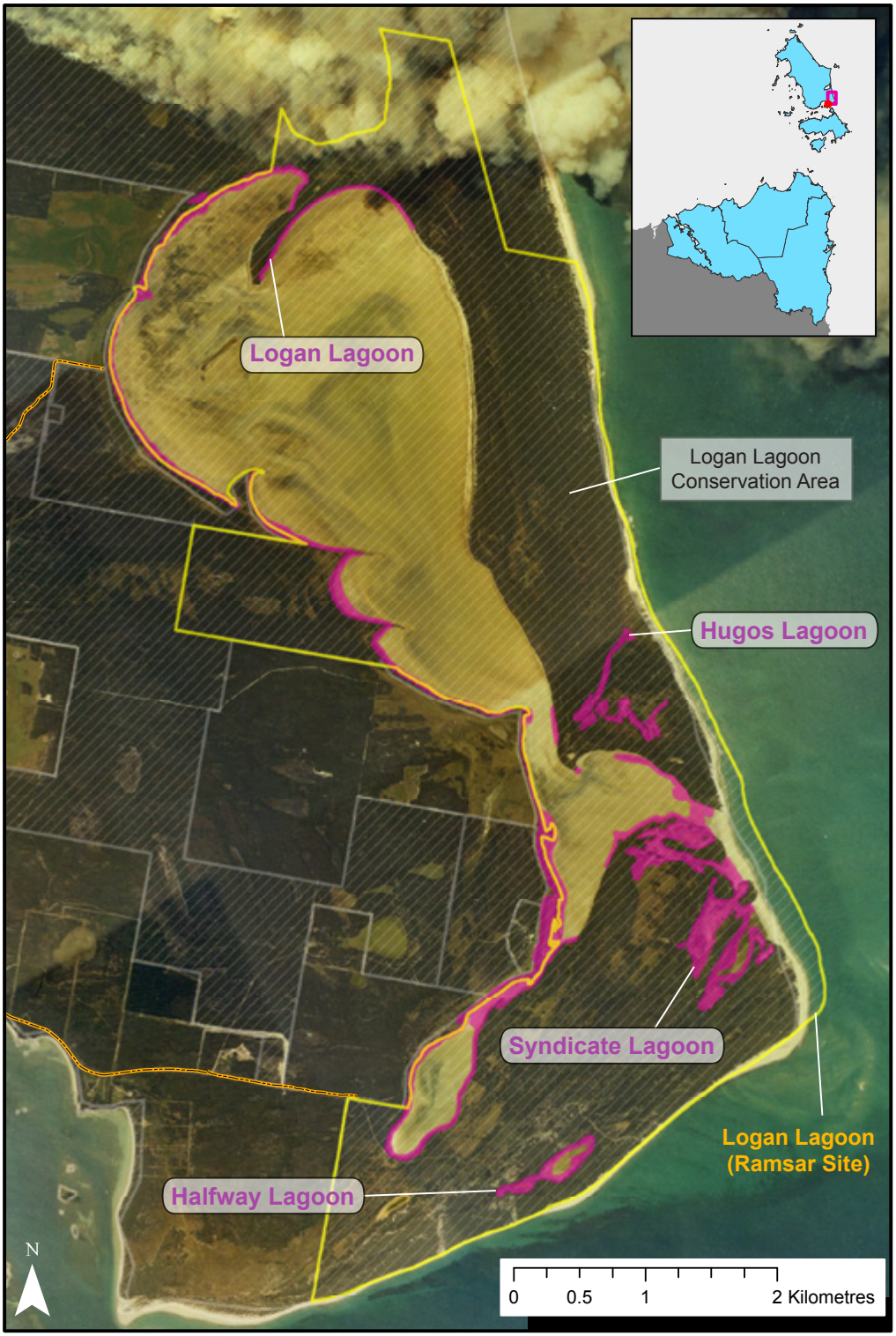


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 49 ha
Associated Waterways: Patriarch River, Leventhorpe Creek, Nelsons Drain, Chew Tobacco Creek
Dominant Vegetation Type: Mainly grassy saltmarsh with some patches of succulent saltmarsh
Dominant Land Tenure: Conservation Area
Recognised Values: Parts within the Eastern Flinders Island Important Bird Area

Saltmarsh Clusters within the Complex:
Patriarch Inlet Saltmarsh Cluster (23 ha)
Foochow Inlet Saltmarsh Cluster (19 ha)
Cameron Inlet Saltmarsh Cluster (5 ha)
Middle Inlet Saltmarsh Cluster (1.5 ha)

LOGAN LAGOON COMPLEX

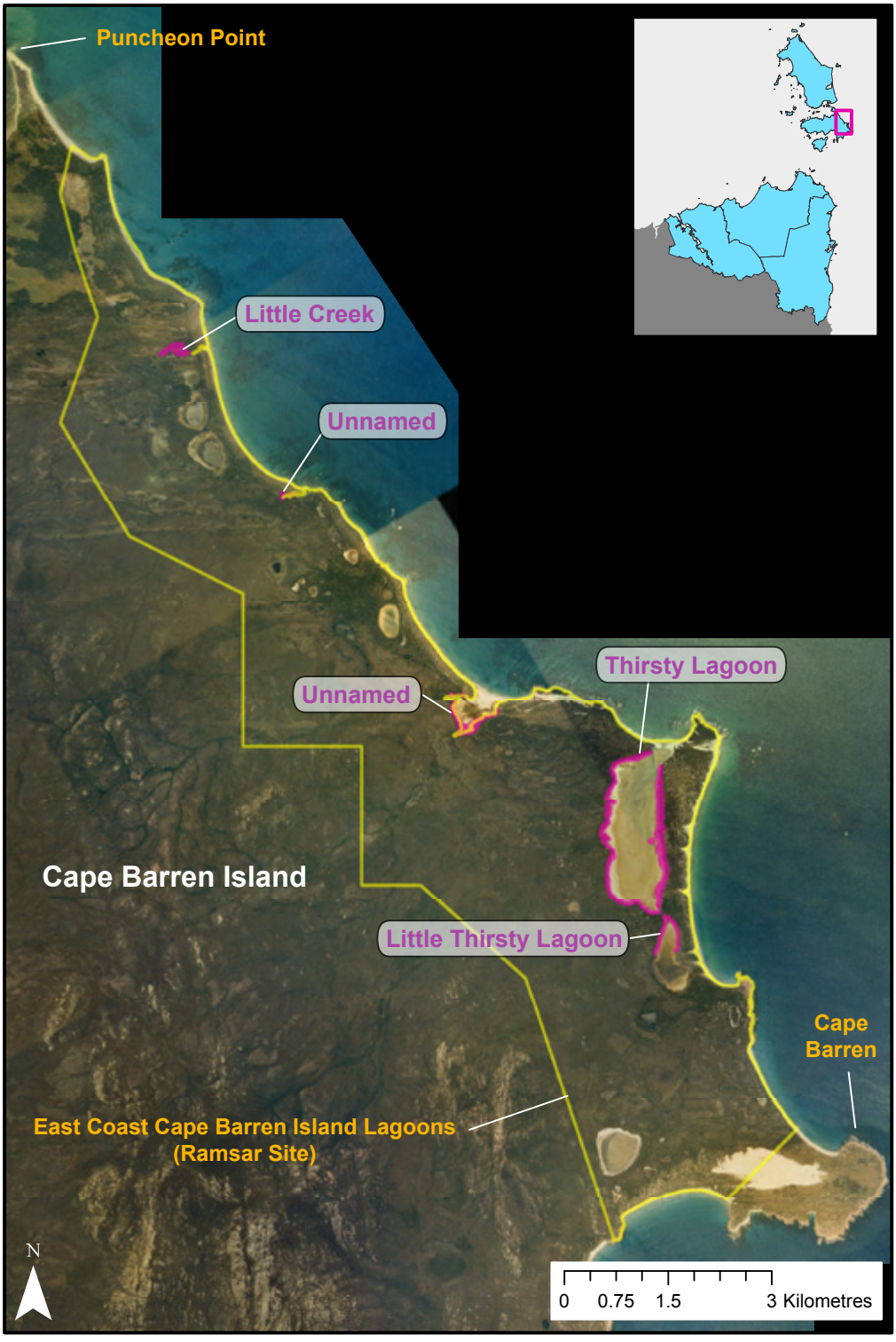


COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 99 ha
Associated Waterways: Pot Boil Creek
Dominant Vegetation Type: Mixture of succulent (*Sarcocornia)* and grassy saltmarsh
Dominant Land Tenure: Conservation Area
Recognised Values: Parts within the Eastern Flinders Island Important Bird Area

Saltmarsh Clusters within the Complex:
Logan Lagoon Saltmarsh Cluster (57.5 ha)
Syndicate Lagoon Saltmarsh Cluster (30 ha)
Hugos Lagoon Saltmarsh Cluster (6 ha)
Halfway Lagoon Saltmarsh (5 ha)

EAST COAST CAPE BARREN ISLAND LAGOONS COMPLEX



COMPLEX PROFILE

Municipality: Flinders
Saltmarsh Area: 36.5 ha
Associated Waterways: Little Creek
Dominant Vegetation Type: Grassy saltmarsh with minor patches of succulent saltmarsh
Dominant Land Tenure: Private Land

Saltmarsh Clusters within the Complex:
Thirsty Lagoon Saltmarsh Cluster (26.5 ha)
Little Thirsty Lagoon Saltmarsh Cluster (2 ha)
Little Creek Saltmarsh Cluster (3 ha)
Unnamed Cluster 1 (0.2 ha)
Unnamed Cluster 2 (5 ha)

NOTES

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