

**LEGEND**

**Estuary Zones**

- Marine Tidal Delta
- Central Mud Basin
- Fluvial Delta
- Riverine Channel
- Freshwater Reach
- Study Area LGAs

**DATE** 13/04/2010

**SCALE** 1:70,000

**PAGE SIZE** A3

**COORDINATE SYSTEM** MGA Z56

**FIG NO.** 8.0

**FIGURE TITLE** Estuary zones of the Georges River Catchment

**PROJECT NO.** 3001765

**PROJECT TITLE** Georges River Estuary Process Study

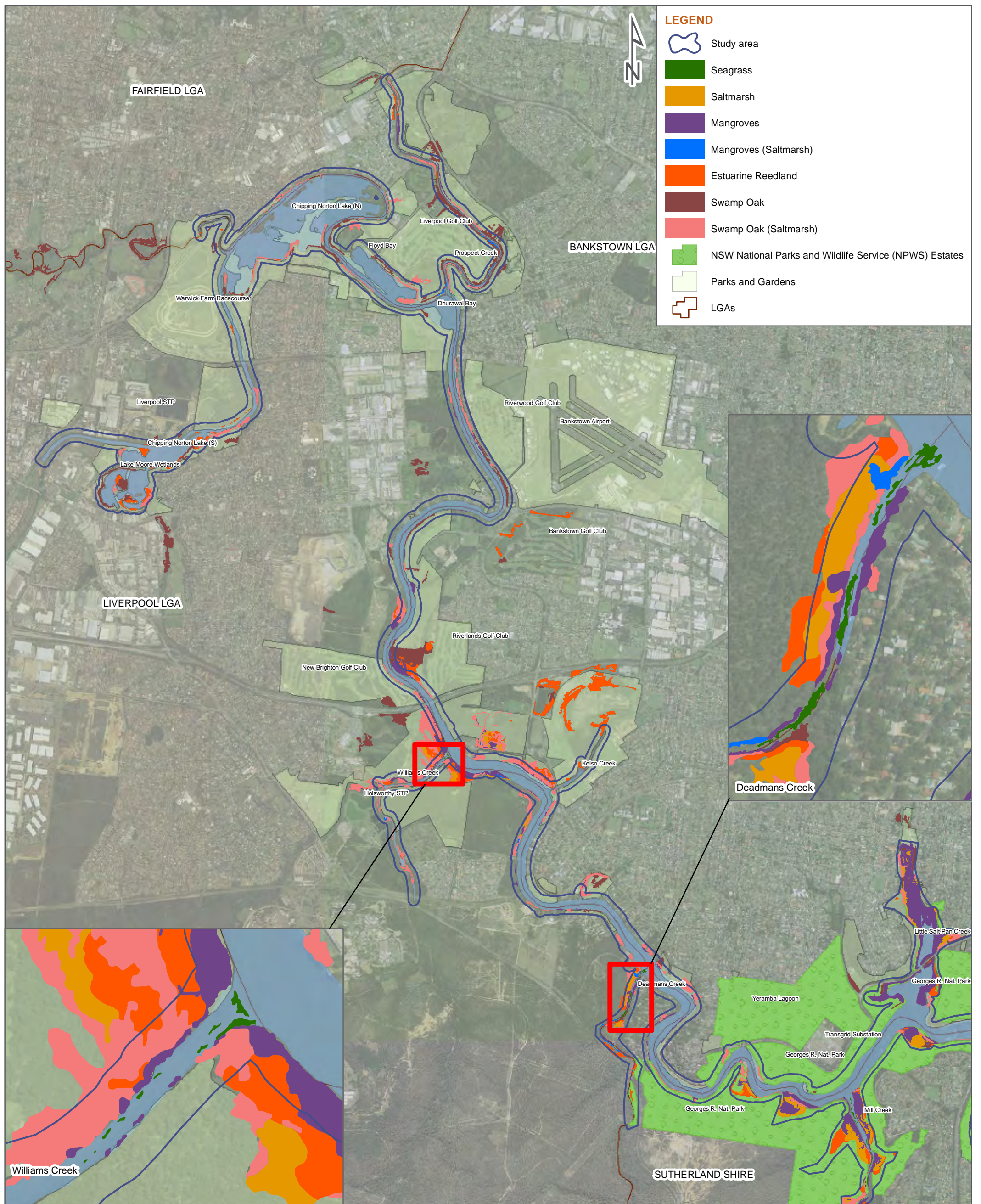
**CREATED BY** E. Kirchner

**LOCATION** I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

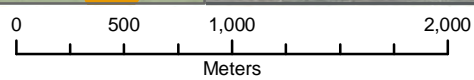
© SMEC Australia Pty Ltd 2010. All Rights Reserved.

Note: Adapted from Williams, R.J., A. Bryant and D. Ledlin (Eds.) (2004). Biodiversity of the Georges River Catchment. Aquatic biodiversity. Department of Infrastructure, Planning and Natural Resources: Sydney.





DATE 13/04/2010 SCALE 1:35,000



PAGE SIZE A3 COORDINATE SYSTEM MGA Z56

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.1a

FIGURE TITLE Estuarine Vegetation Communities 2009

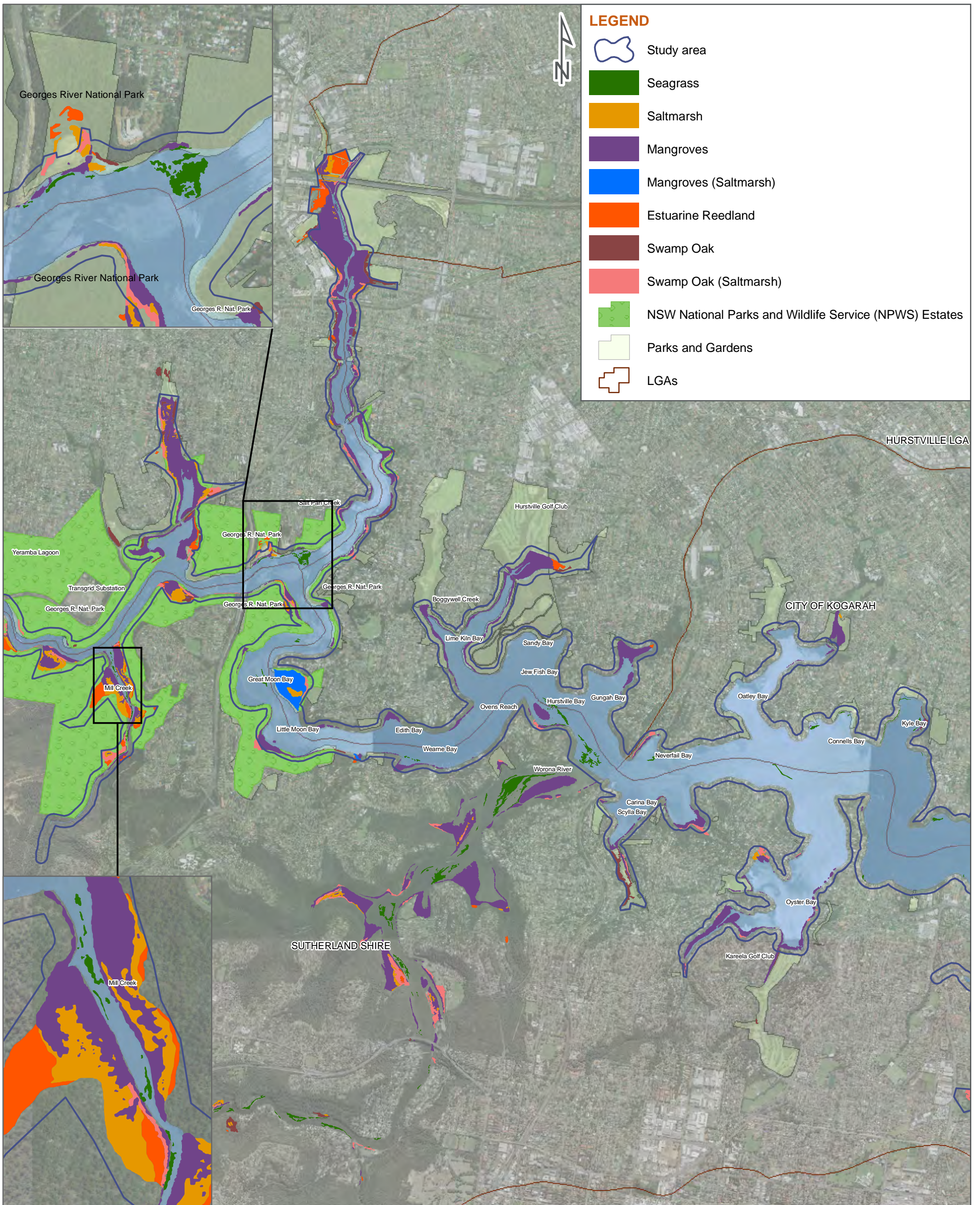
CREATED BY E. Kirchner

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

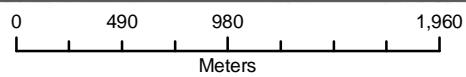


Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009), NSW Department of Environment, Climate Change and Water, Hurstville, NSW Australia.





DATE 13/04/2010 SCALE 1:35,000



PAGE SIZE A3

COORDINATE SYSTEM  
MGA Z56

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.1b

FIGURE TITLE Estuarine Vegetation Communities 2009

CREATED BY E. Kirchner

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

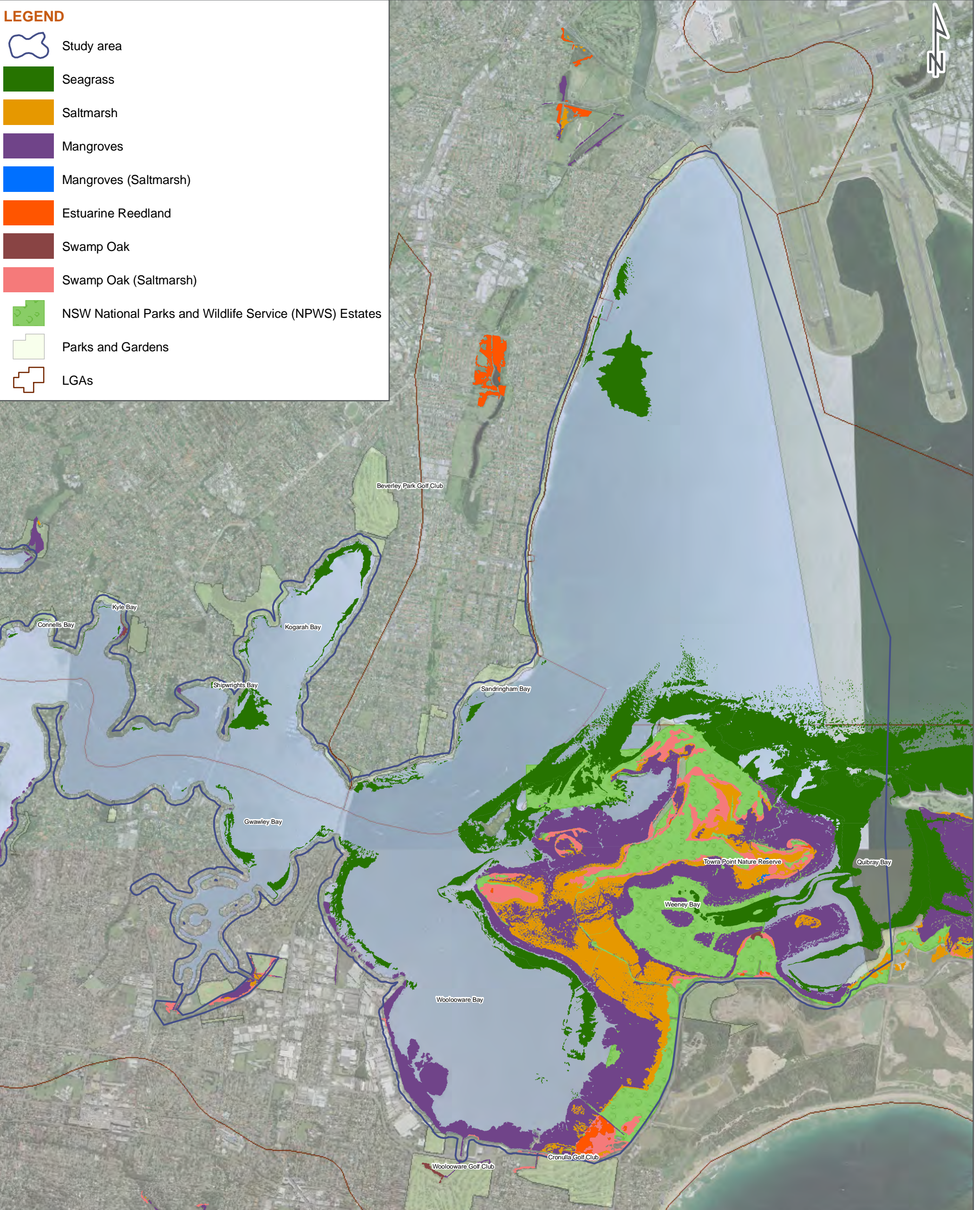


© SMEC Australia Pty Ltd 2010.  
All Rights Reserved

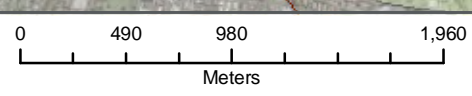


Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009), NSW Department of Environment, Climate Change and Water, Hurstville, NSW Australia.





DATE 13/04/2010 SCALE 1:35,000



PAGE SIZE A3 COORDINATE SYSTEM MGA Z56

© SMEC Australia Pty Ltd 2010. All Rights Reserved.

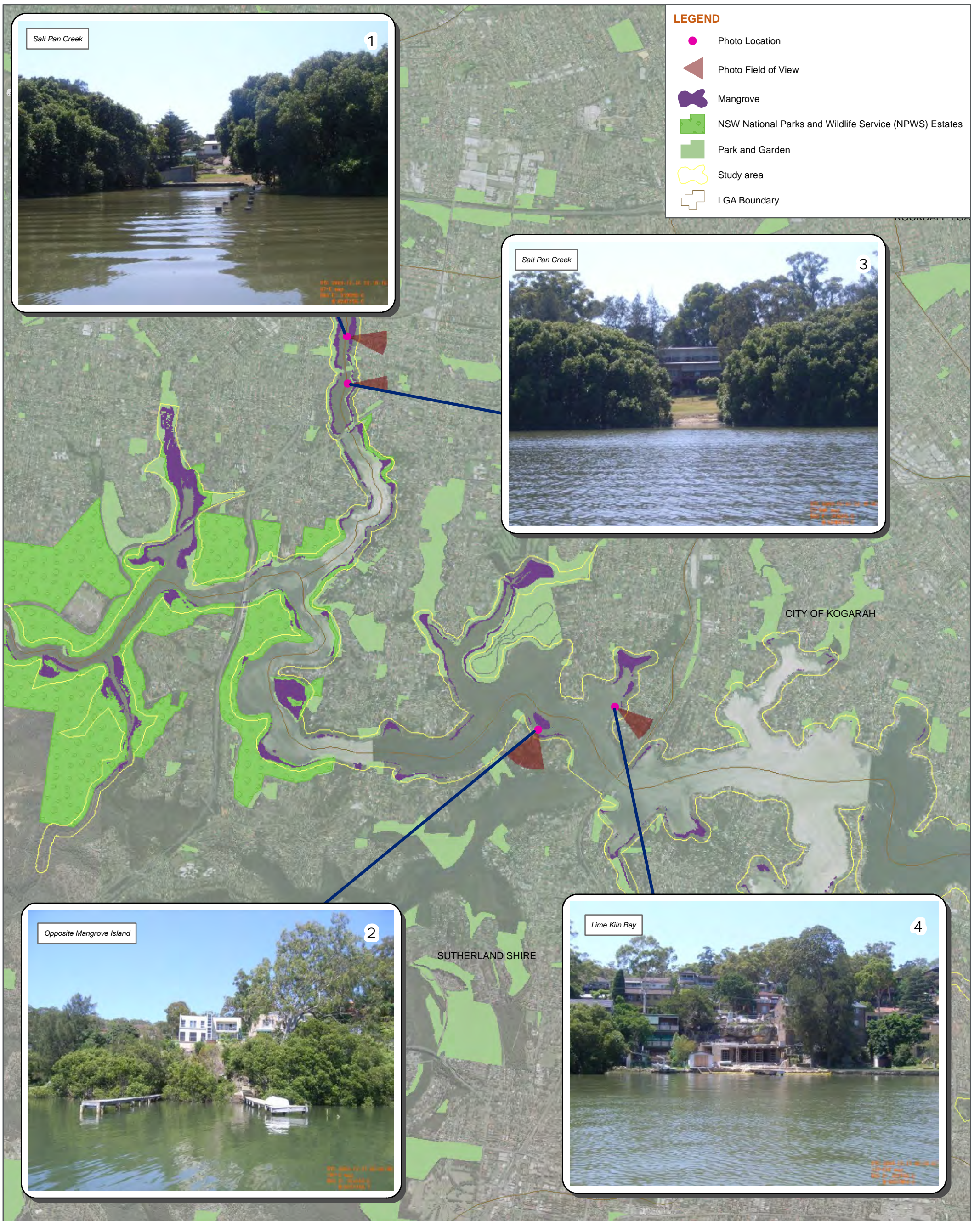
PROJECT NO. 3001765 PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.1c FIGURE TITLE Estuarine Vegetation Communities 2009

CREATED BY E. Kirchner LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS \ArcView Files\working files

Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009). NSW Department of Environment, Climate Change and Water. Hurstville, NSW Australia.





**LEGEND**

- Photo Location
- ▲ Photo Field of View
- Mangrove
- NSW National Parks and Wildlife Service (NPWS) Estates
- Park and Garden
- Study area
- LGA Boundary

DATE 7/01/2010 SCALE 1:35,000

PAGE SIZE A3 COORDINATE SYSTEM MGA Z56

PROJECT NO. 3001765 PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.2 FIGURE TITLE Mangrove Imagery - Middle Study Area

CREATED BY R. Chatfield LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files\photos

© SMEC Australia Pty Ltd 2010. All Rights Reserved.

Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009), NSW Department of Environment, Climate Change and Water, Hurstville, NSW Australia.



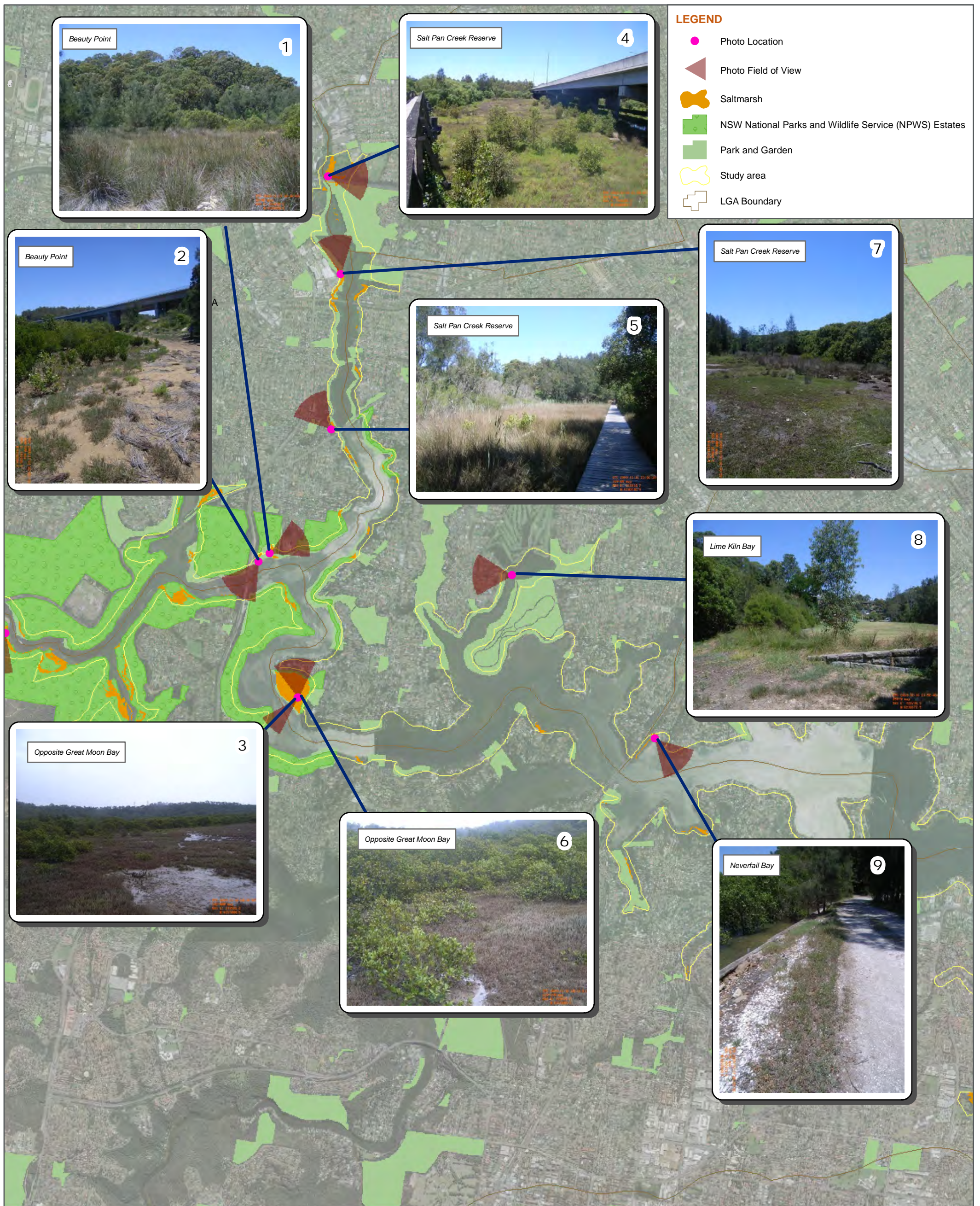
**LEGEND**

- Photo Location
- ▲ Photo Field of View
- Saltmarsh
- NSW National Parks and Wildlife Service (NPWS) Estates
- Park and Garden
- Study area
- LGA Boundary



<p><b>DATE</b> 7/01/2010    <b>SCALE</b> 1:35,000</p>		<p><b>PAGE SIZE</b> A3    <b>COORDINATE SYSTEM</b> MGA Z56</p>	 
<p><b>PROJECT NO.</b> 3001765    <b>PROJECT TITLE</b> Georges River Estuary Process Study</p>			
<p><b>FIG NO.</b> 8.3a    <b>FIGURE TITLE</b> Saltmarsh Imagery - Upper Study Area</p>			
<p><b>CREATED BY</b> R. Chatfield    <b>LOCATION</b> I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files\photos</p>	<p>Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009), NSW Department of Environment, Climate Change and Water, Hurstville, NSW Australia.</p>		





DATE 7/01/2010 SCALE 1:35,000



PAGE SIZE A3 COORDINATE SYSTEM MGA Z56

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.3b

FIGURE TITLE Saltmarsh Imagery - Middle Study Area

CREATED BY R. Chatfield

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files\photos

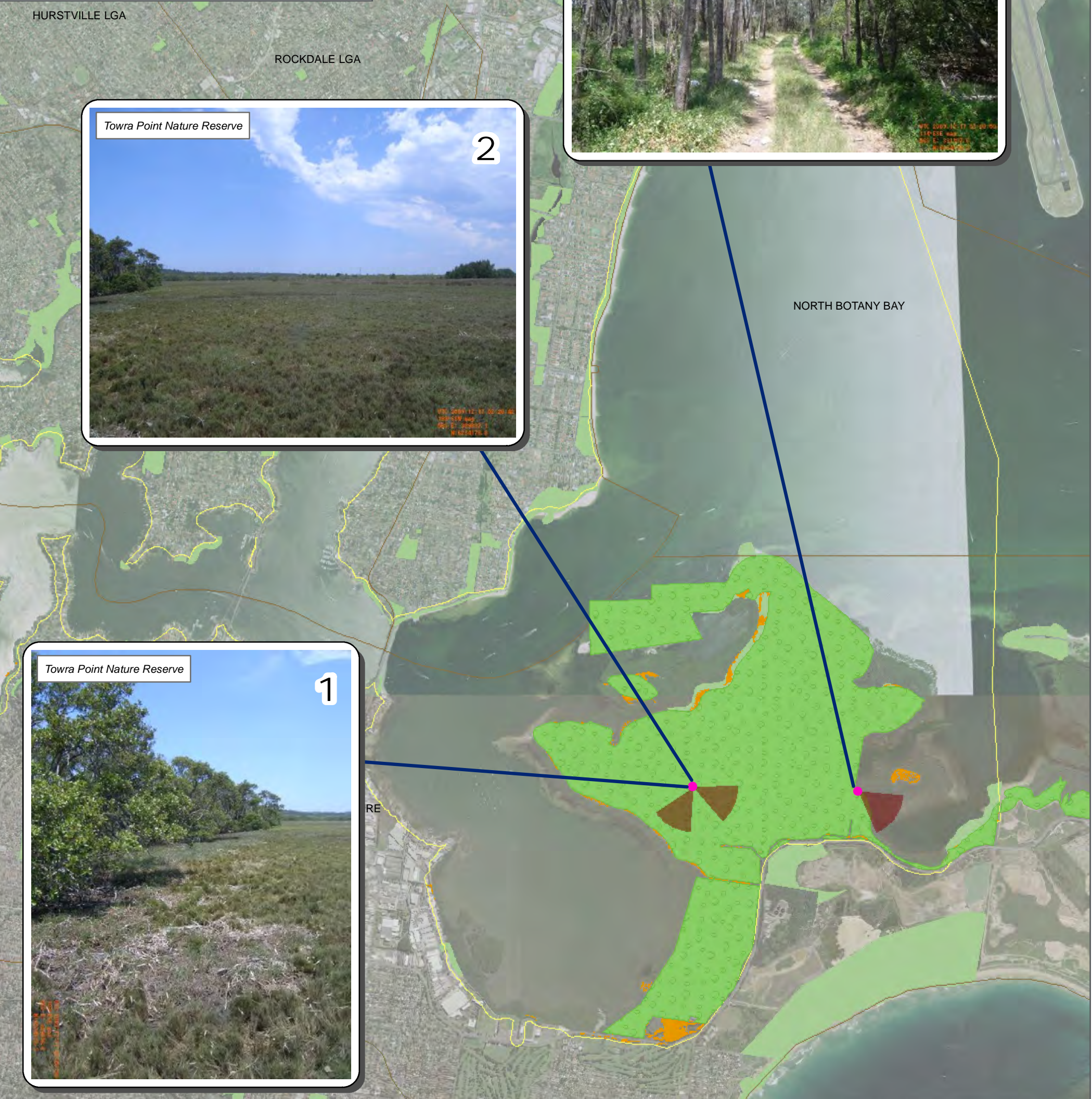


Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009). NSW Department of Environment, Climate Change and Water. Hurstville, NSW Australia.



**LEGEND**

- Photo Location
- ▲ Photo Field of View
- 🍄 Saltmarsh
- NSW National Parks and Wildlife Service (NPWS) Estates
- Park and Garden
- Study area
- LGA Boundary



DATE 7/01/2010 SCALE 1:35,000

PAGE SIZE A3 COORDINATE SYSTEM MGA Z56

PROJECT NO. 3001765 PROJECT TITLE Georges River Estuary Process Study

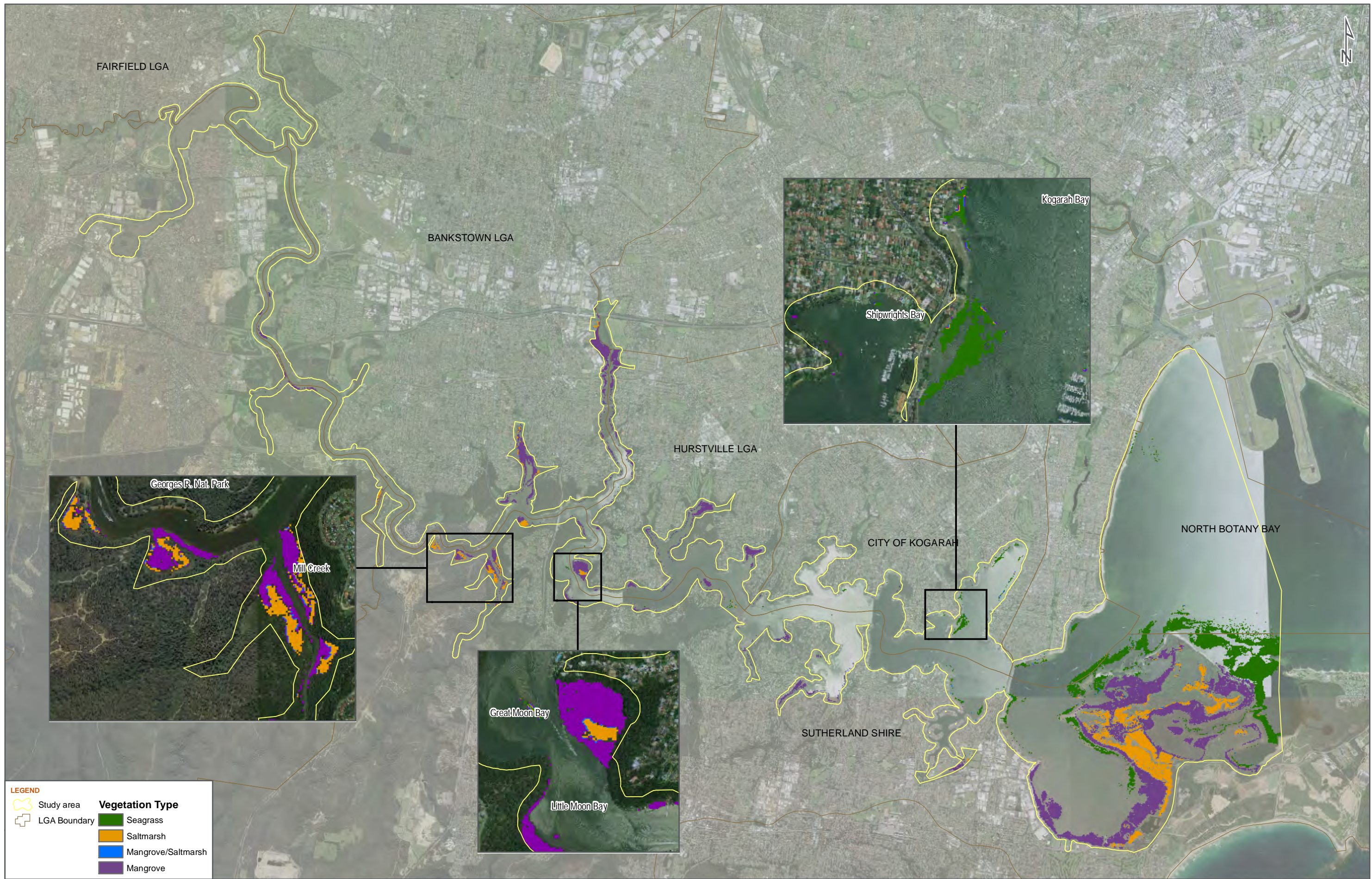
FIG NO. 8.3c FIGURE TITLE Saltmarsh Imagery - Lower Study Area

CREATED BY R. Chatfield LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files\photos

© SMEC Australia Pty Ltd 2010. All Rights Reserved.

Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009), NSW Department of Environment, Climate Change and Water, Hurstville, NSW Australia.





**LEGEND**

Study area	<b>Vegetation Type</b>
LGA Boundary	Seagrass
	Saltmarsh
	Mangrove/Saltmarsh
	Mangrove

**DATE** 6/1/2010  
**SCALE** 1:70,000

**PAGE SIZE** A3  
**COORDINATE SYSTEM** MGA Z56

**FIG NO.** 8.4a  
**CREATED BY** R. Chatfield

**FIGURE TITLE** Persistent In-channel Vegetation Areas, 1986 -2005  
**LOCATION** I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

© SMEC Australia Pty Ltd 2010. All Rights Reserved.

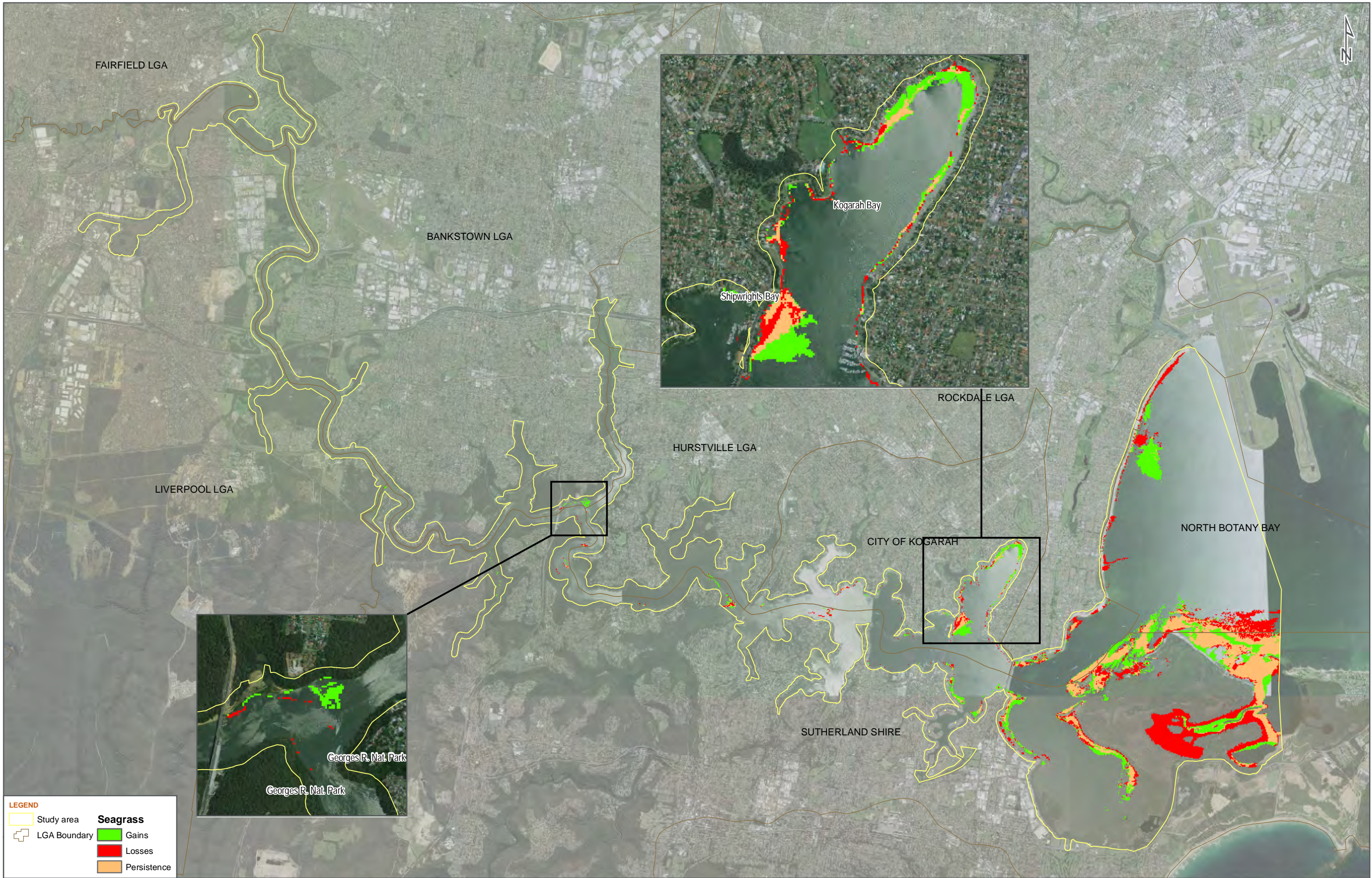
Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009). NSW Department of Industry and Investment. Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.

**PROJECT NO.** 3001765  
**PROJECT TITLE** Georges River Estuary Process Study

**CREATED BY** R. Chatfield

**LOCATION** I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

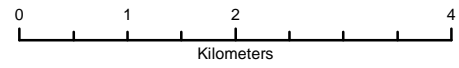




**LEGEND**

Study area	<b>Seagrass</b>
LGA Boundary	Gains
	Losses
	Persistence

**DATE** 6/1/2010  
**SCALE** 1:70,000



**PAGE SIZE** A3  
**COORDINATE SYSTEM** MGA Z56

**FIG NO.** 8.4b

**FIGURE TITLE** Gains and Losses in Seagrass, 1986 -2005

**PROJECT NO.** 3001765

**PROJECT TITLE** Georges River Estuary Process Study

**CREATED BY** R. Chatfield

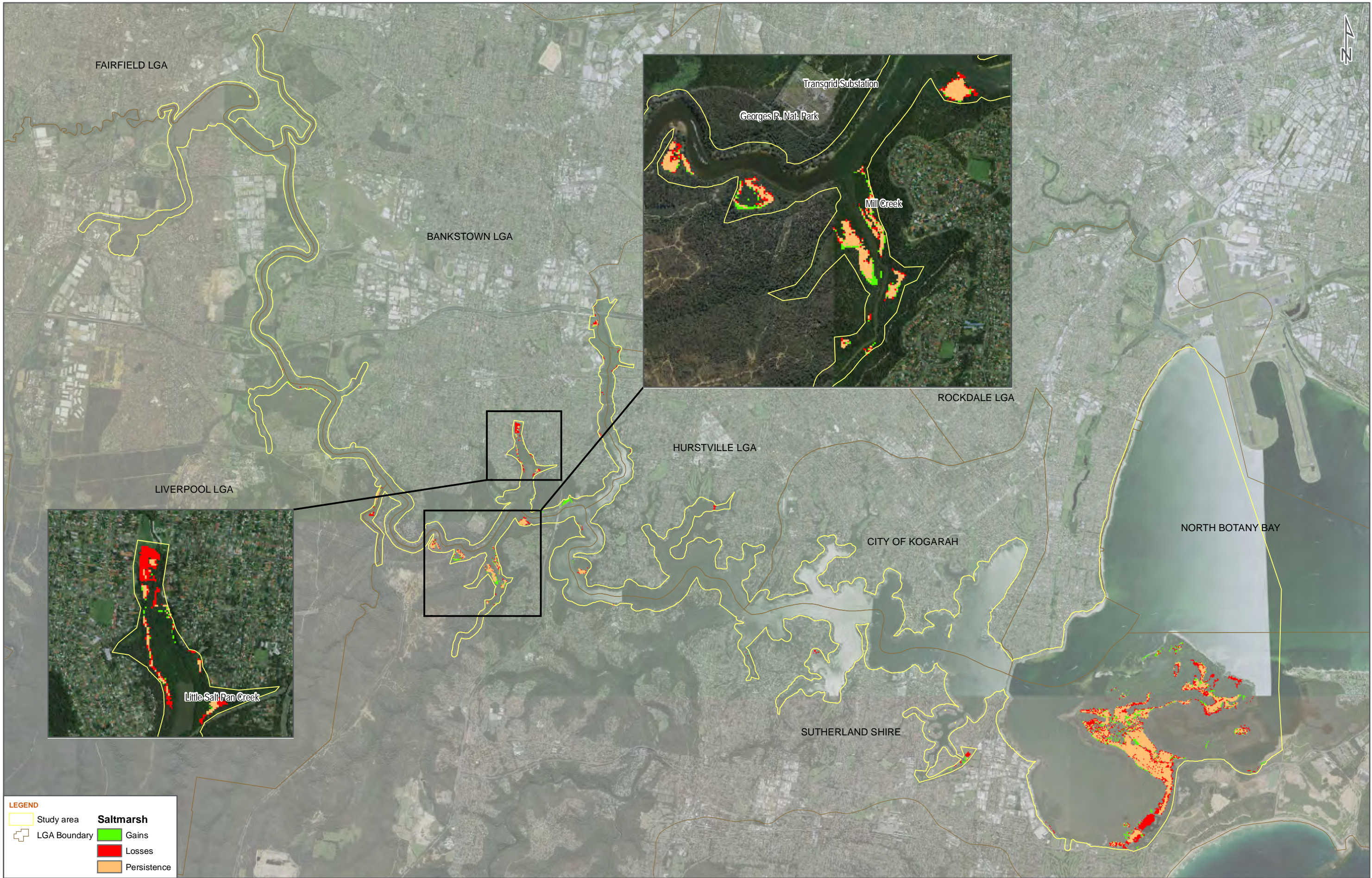
**LOCATION** I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

**SMEC** © SMEC Australia Pty Ltd 2010. All Rights Reserved.

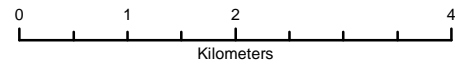
Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009), NSW Department of Industry and Investment, Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.







DATE 6/1/2010  
SCALE 1:70,000



PAGE SIZE A3  
COORDINATE SYSTEM MGA Z56

FIG NO. 8.4c

FIGURE TITLE Gains and Losses in Saltmarsh, 1986 -2005

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

CREATED BY R. Chatfield

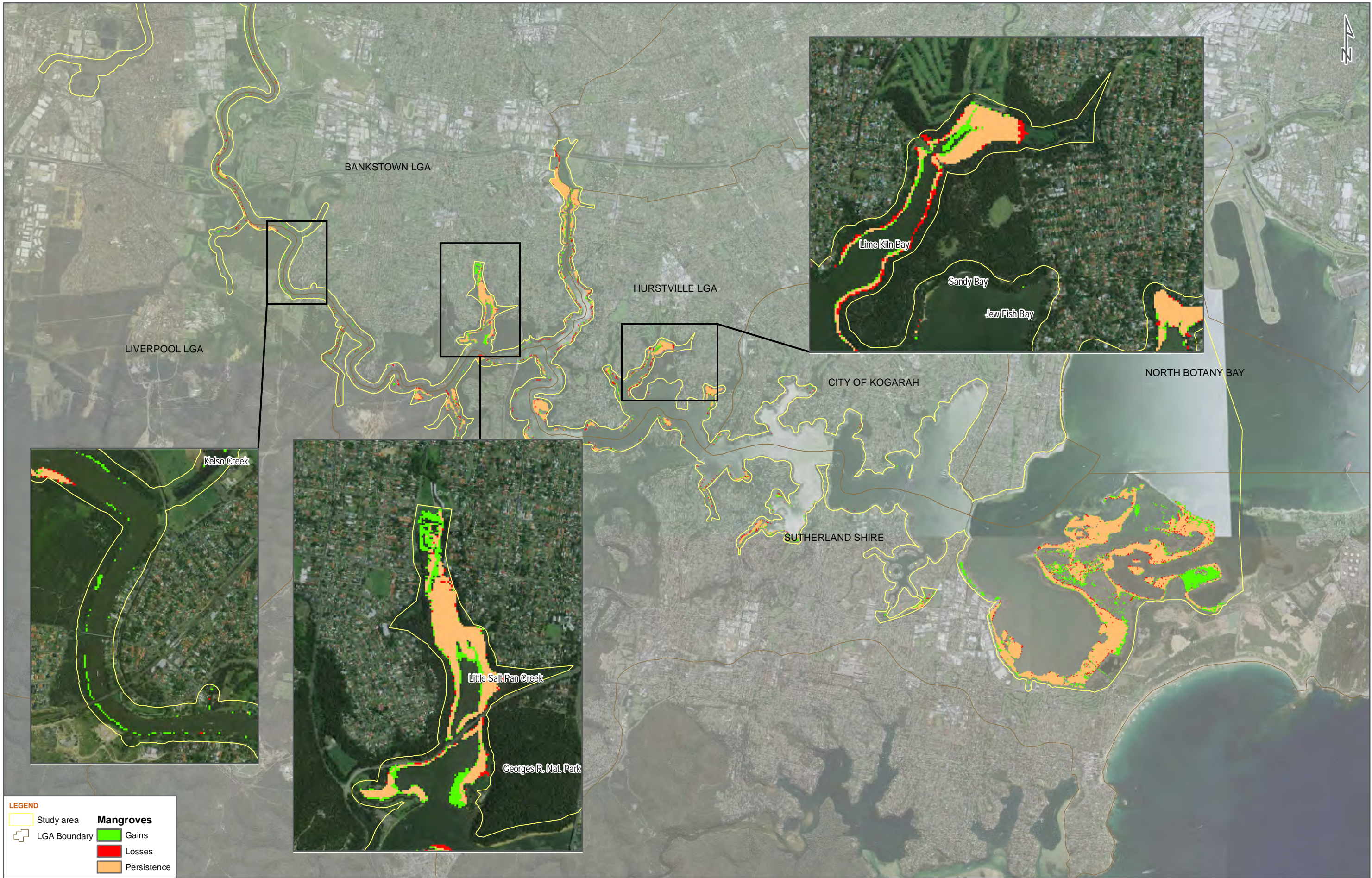
LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files



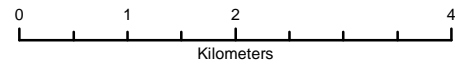
Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009). NSW Department of Industry and Investment. Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.







DATE 6/1/2010  
SCALE 1:70,000



PAGE SIZE A3  
COORDINATE SYSTEM MGA Z56

FIG NO. 8.4d

FIGURE TITLE Gains and Losses in Mangrove, 1986 -2005

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

CREATED BY R. Chatfield

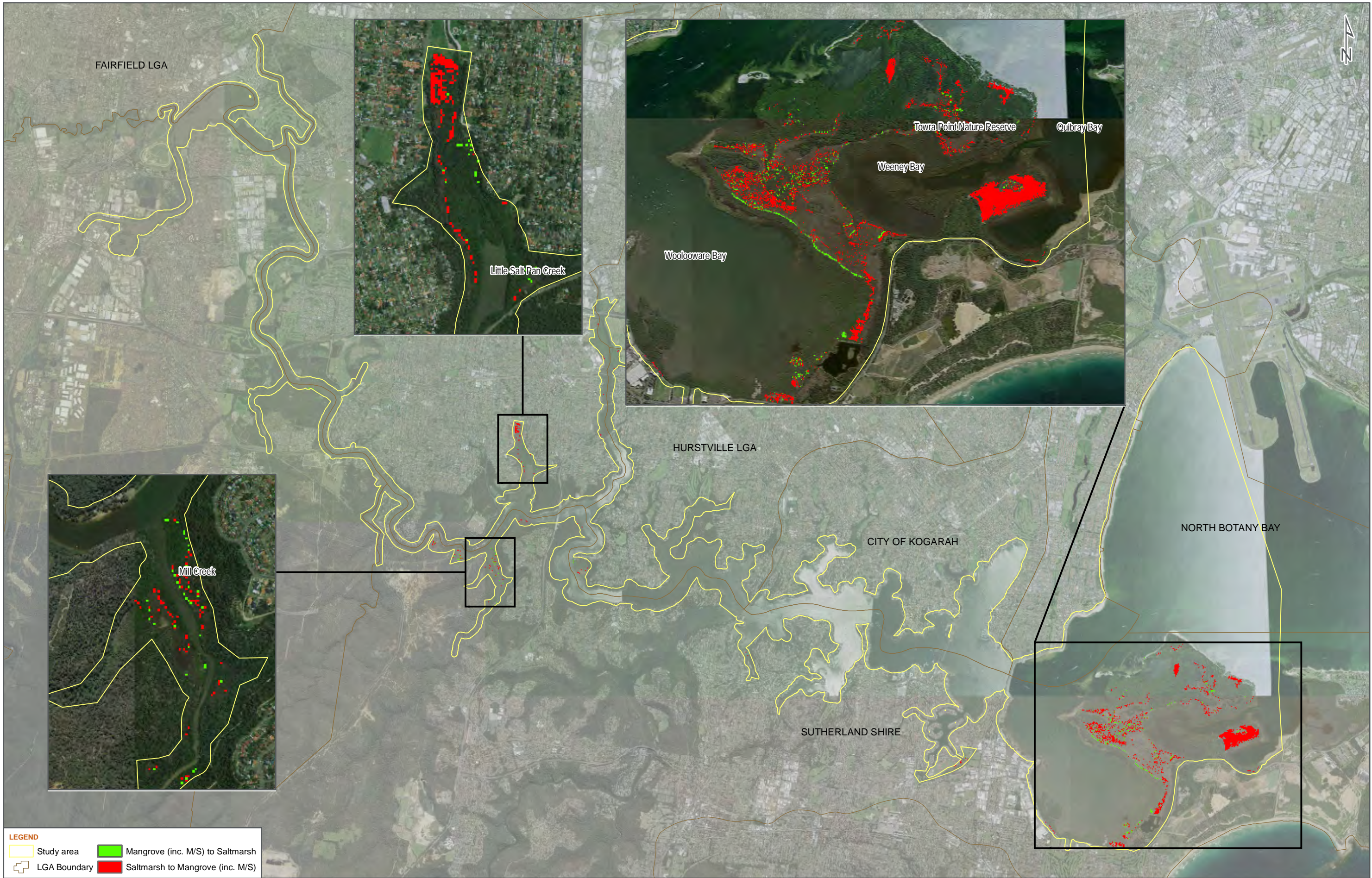
LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files



Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009). NSW Department of Industry and Investment. Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.







**LEGEND**

- Study area
- LGA Boundary
- Mangrove (inc. M/S) to Saltmarsh
- Saltmarsh to Mangrove (inc. M/S)

**DATE** 6/1/2010  
**SCALE** 1:70,000

0 1 2 4  
 Kilometers

**PAGE SIZE** A3  
**COORDINATE SYSTEM** MGA Z56

**FIG NO.** 8.4e

**FIGURE TITLE** Succession of Mangrove and Saltmarsh, 1986 -2005

**PROJECT NO.** 3001765  
**PROJECT TITLE** Georges River Estuary Process Study

**CREATED BY** R. Chatfield

**LOCATION** I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

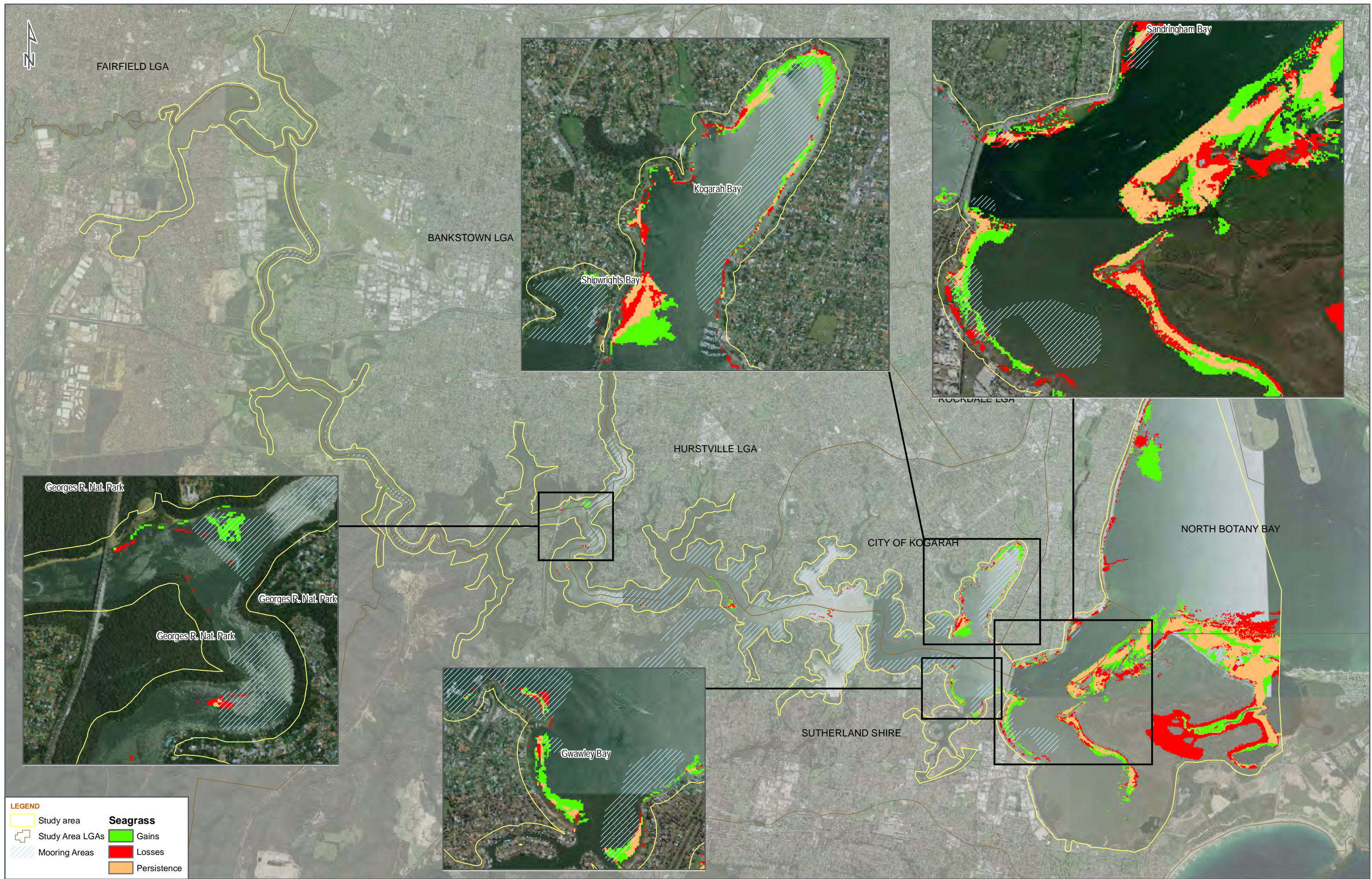


**SMEC** © SMEC Australia Pty Ltd 2010. All Rights Reserved.

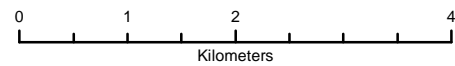
Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009). NSW Department of Industry and Investment. Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.







DATE 13/04/2010  
SCALE 1:70,000



PAGE SIZE A3  
COORDINATE SYSTEM MGA Z56

FIG NO. 8.4f

FIGURE TITLE Gains and Losses in Seagrass, 1986 -2005 with Mooring Locations Overlayed

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

CREATED BY R. Chatfield

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files



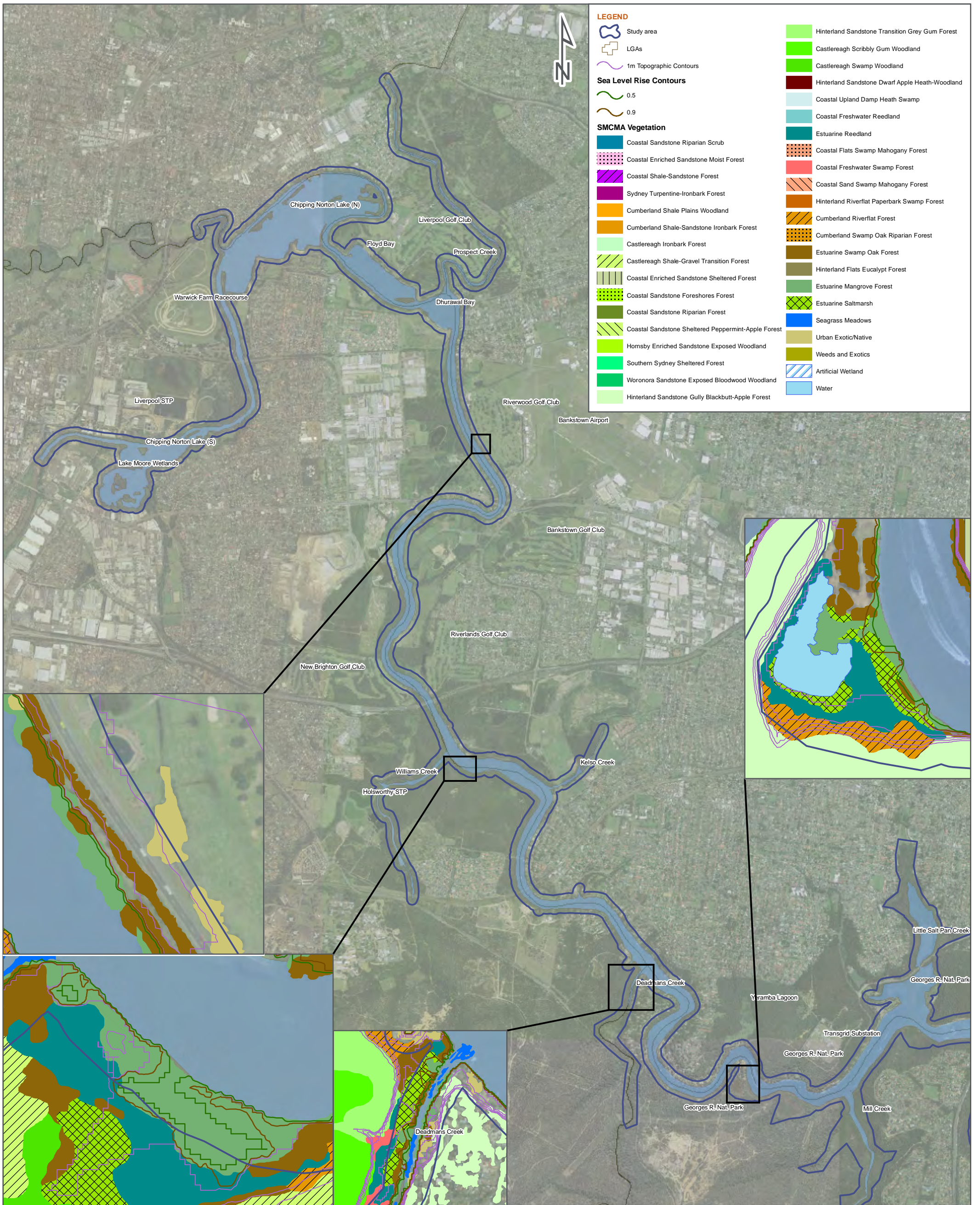
SMEC

© SMEC Australia Pty Ltd 2010. All Rights Reserved

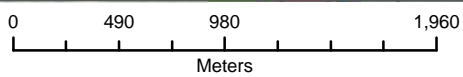
Data Source - Vegetation: Historic Assessment of Estuarine Macrophytes in Botany Bay and the Georges River (2009). NSW Department of Industry and Investment. Port Stephens Fisheries Centre, Taylors Beach, NSW Australia.







DATE 13/04/2010 SCALE 1:35,000



PAGE SIZE A3

COORDINATE SYSTEM  
MGA Z56

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.5a

FIGURE TITLE Sea Level Rise

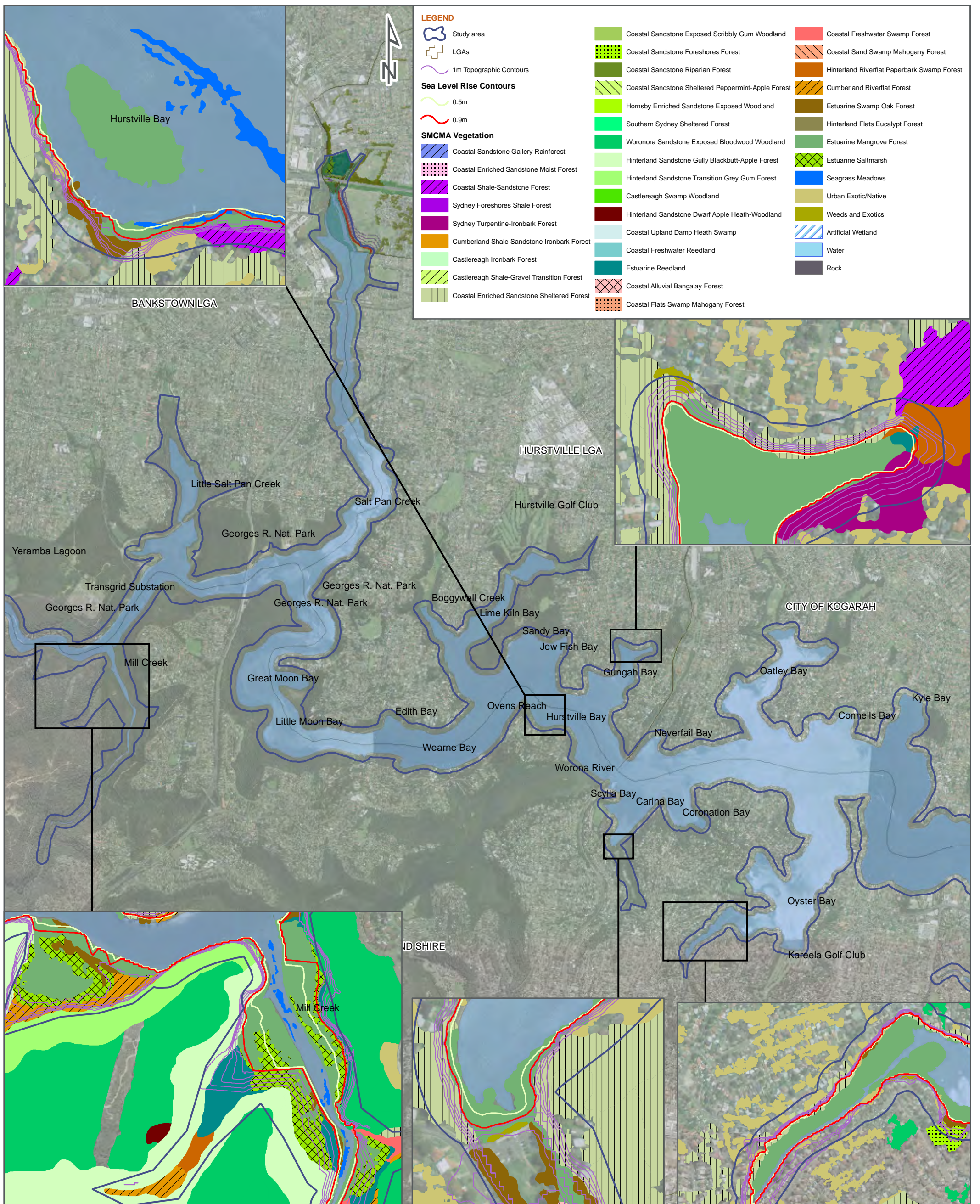
CREATED BY E. Kirchner

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\  
ArcView Files\working files

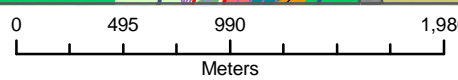


Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009). NSW Department of Environment, Climate Change and Water. Hurstville, NSW Australia.





DATE 15/01/2010 SCALE 1:35,000



PAGE SIZE A3

COORDINATE SYSTEM  
MGA Z56

PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.5b

FIGURE TITLE Sea Level Rise

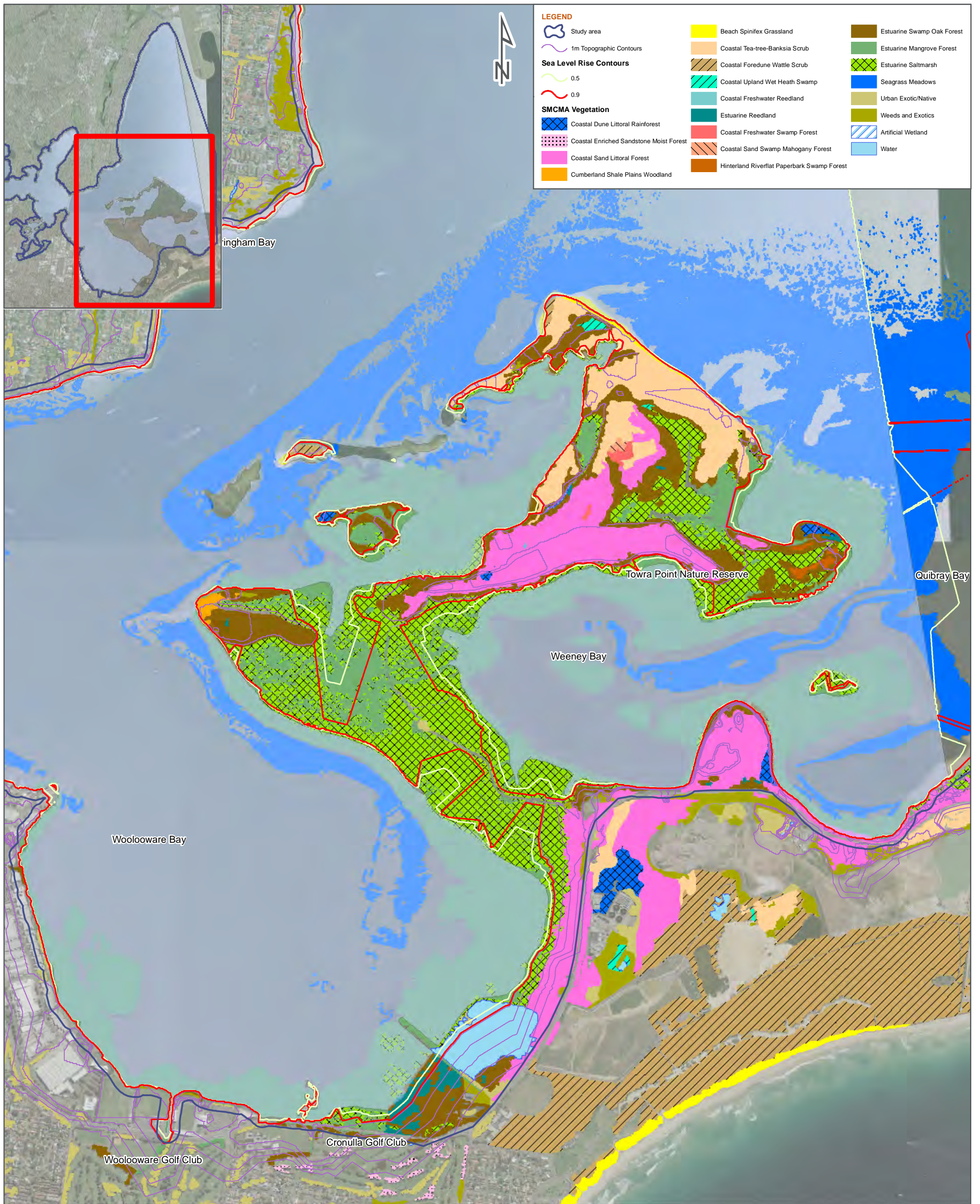
CREATED BY E. Kirchner

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

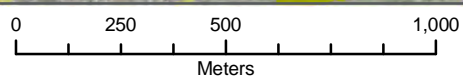


Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009). NSW Department of Environment, Climate Change and Water. Hurstville, NSW Australia.





DATE 13/04/2010 SCALE 1:18,000



PAGE SIZE A3 COORDINATE SYSTEM MGA Z56



PROJECT NO. 3001765

PROJECT TITLE Georges River Estuary Process Study

FIG NO. 8.5c

FIGURE TITLE Sea Level Rise

CREATED BY E. Kirchner

LOCATION I:\Projects\3001765 - Georges River Estuary Process Study\900Data\GIS\ArcView Files\working files

Data Source - Vegetation: The Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (Draft) (2009). NSW Department of Environment, Climate Change and Water. Hurstville, NSW Australia.