

# Attachment 2 - Preliminary onshore ecology assessment

## Map book

Star of the South Offshore Wind Farm Project EES referral





# **Star of the South Wind Farm - Onshore Infrastructure**

## **Initial Biodiversity Assessment for Referrals - MAP BOOK**

**Prepared for:**

**Star of the South Wind Farm  
Pty. Ltd.**

April 2020

Report No. 19200 (2.3)

Prepared in Association with:

**AECOM**



**Nature  
Advisory**

(Formerly Brett Lane & Associates Pty Ltd)

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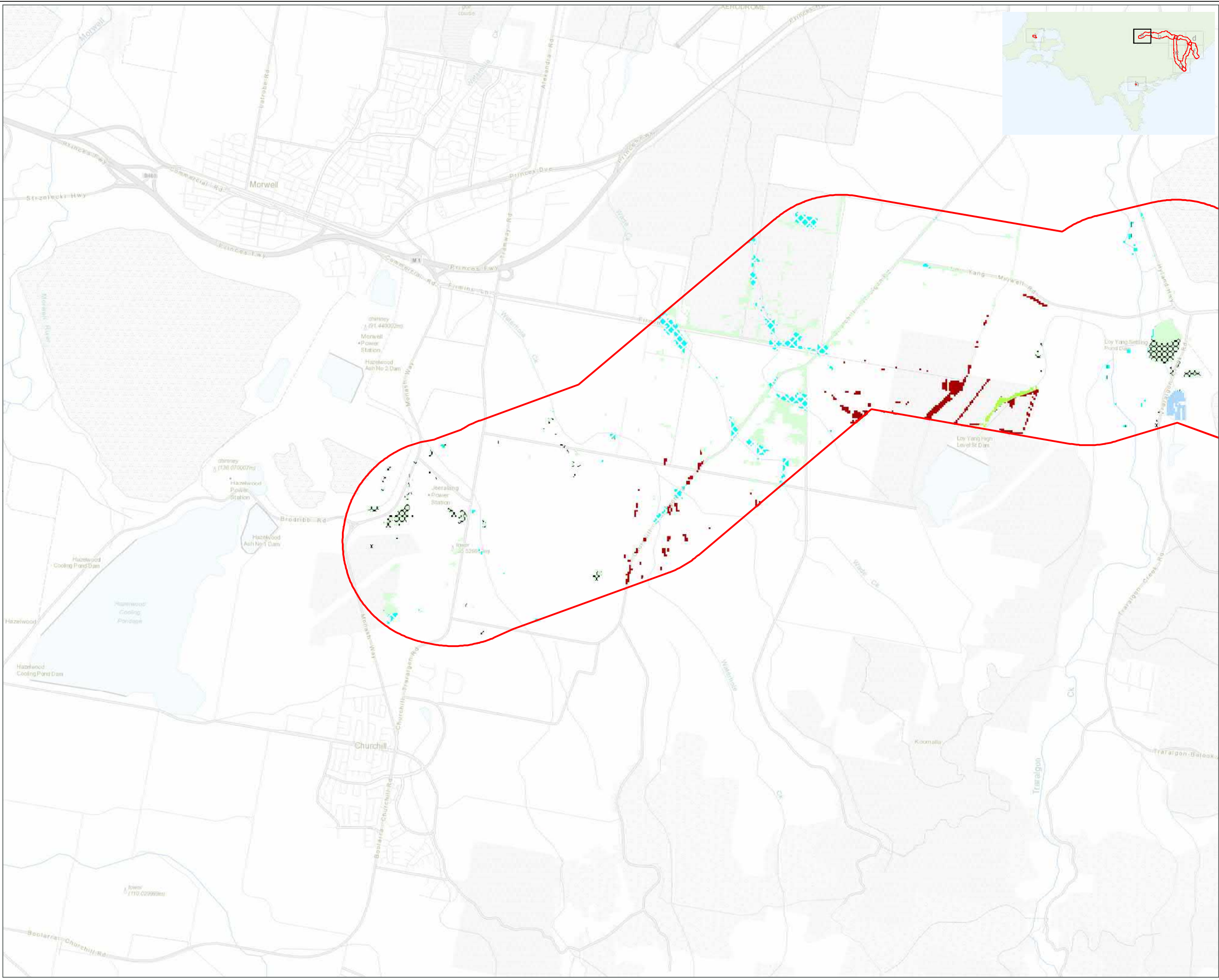
## Map Book

Figure 3: Ecological Vegetation Classes modelled within the referral area (source: DELWP 2005 modelling)

Figure 4: Map showing areas where EVC validation will be required during detailed assessment









Figure 5: Victorian Biodiversity Atlas records of threatened flora and fauna species, and migratory fauna species.



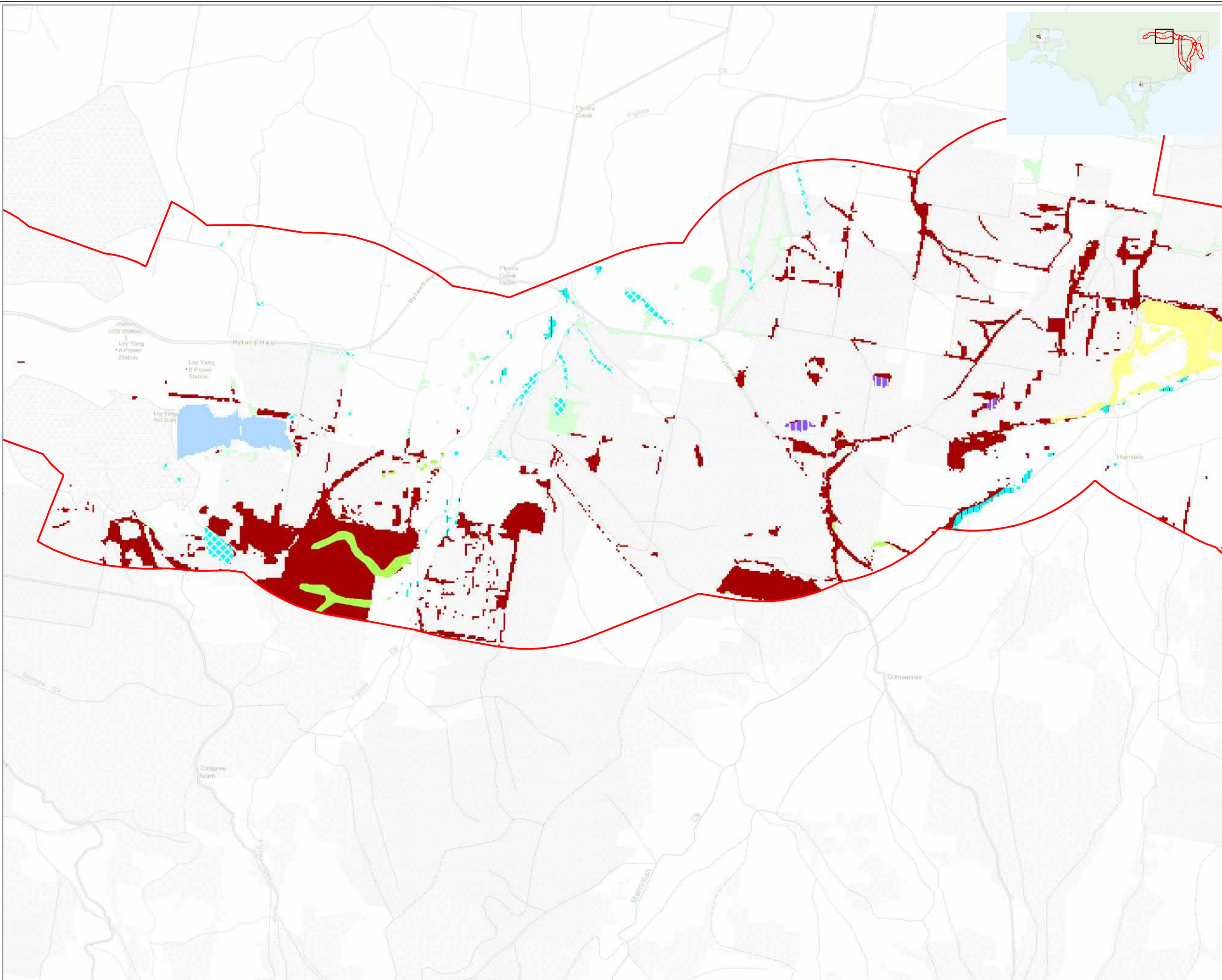


**Figure 3a: Flora and Fauna records**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  151 Plains Grassy Forest
  -  16 Lowland Forest
  -  29 Damp Forest
  -  53 Swamp Scrub
  -  55 Plains Grassy Woodland
  -  83 Swampy Riparian Woodland
  -  998 Water Body - man-made





**Figure 3b: Flora and Fauna records**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- EVC 2005**
- 136 Sedge Wetland
  - 16 Lowland Forest
  - 191 Riparian Scrub
  - 29 Damp Forest
  - 48 Heathy Woodland
  - 53 Swamp Scrub
  - 55 Plains Grassy Woodland
  - 83 Swampy Riparian Woodland
  - 998 Water Body - man-made

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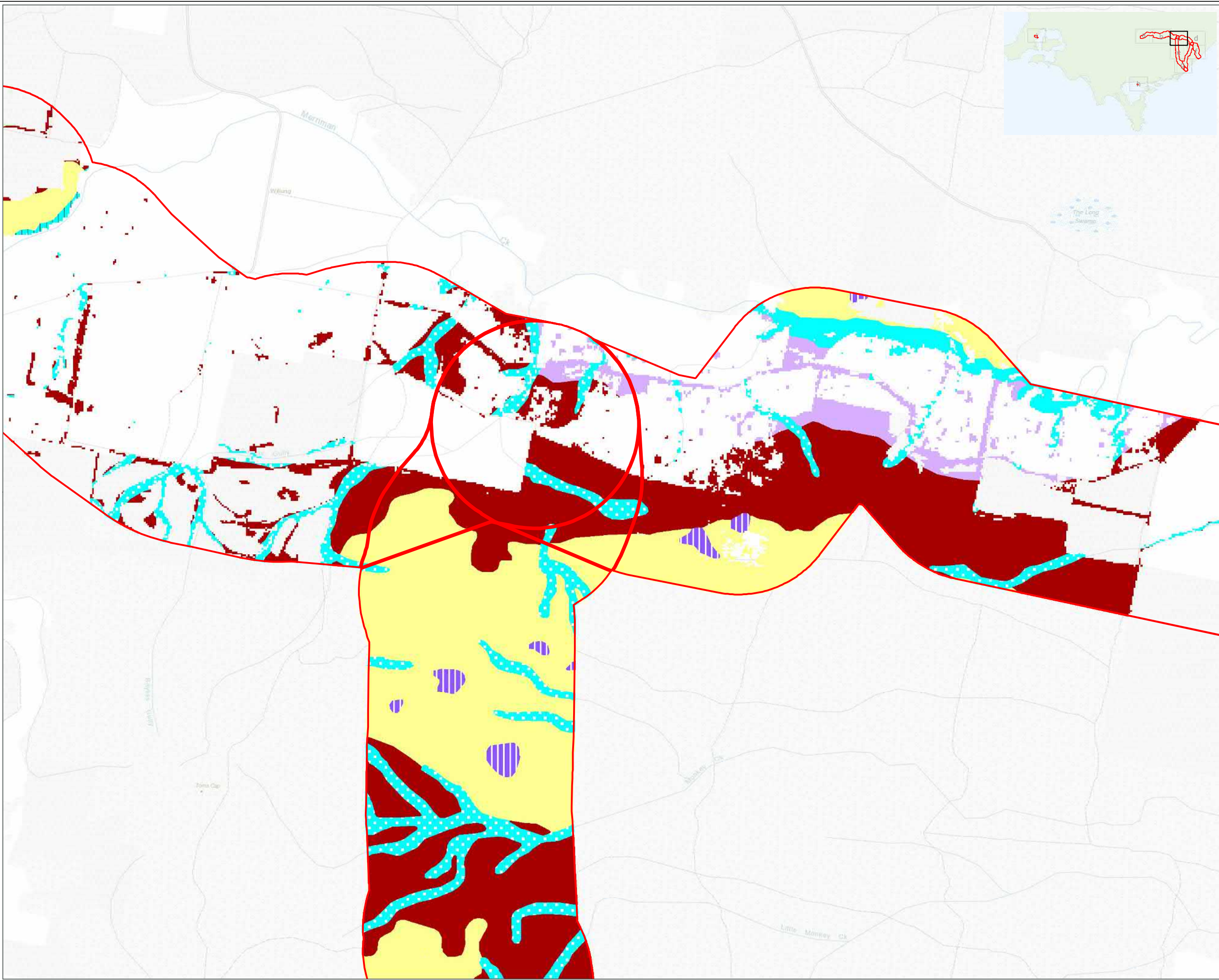
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**Figure 3c: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- EVC 2005**
- 136 Sedge Wetland
  - 16 Lowland Forest
  - 18 Riparian Forest
  - 191 Riparian Scrub
  - 3 Damp Sands Herb-rich Woodland
  - 48 Heathy Woodland
  - 55 Plains Grassy Woodland
  - 83 Swampy Riparian Woodland

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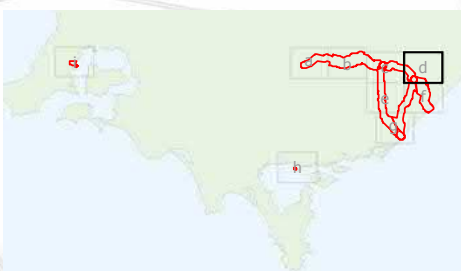
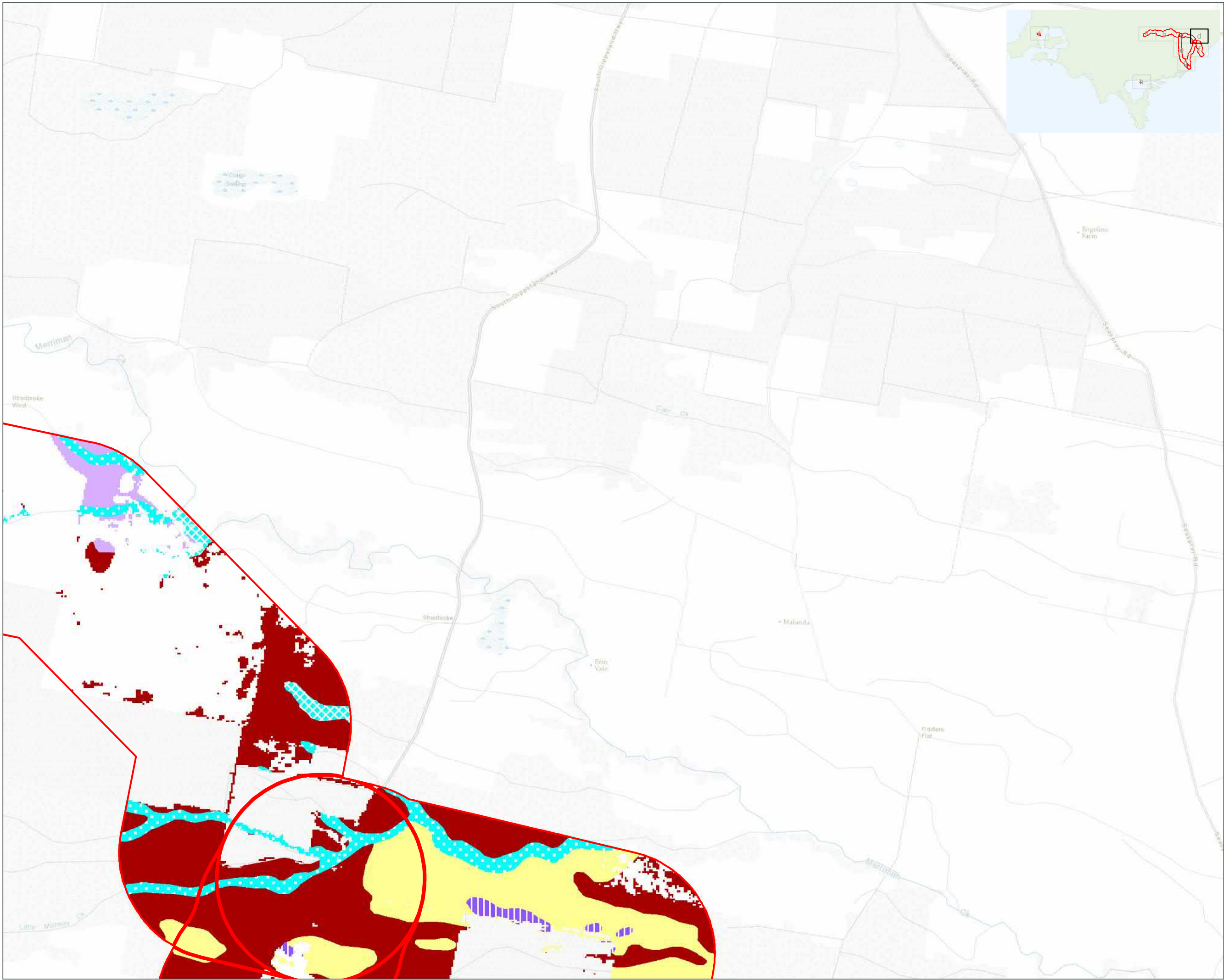
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**Figure 3d: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  136 Sedge Wetland
  -  16 Lowland Forest
  -  191 Riparian Scrub
  -  3 Damp Sands Herb-rich Woodland
  -  48 Heathy Woodland
  -  53 Swamp Scrub

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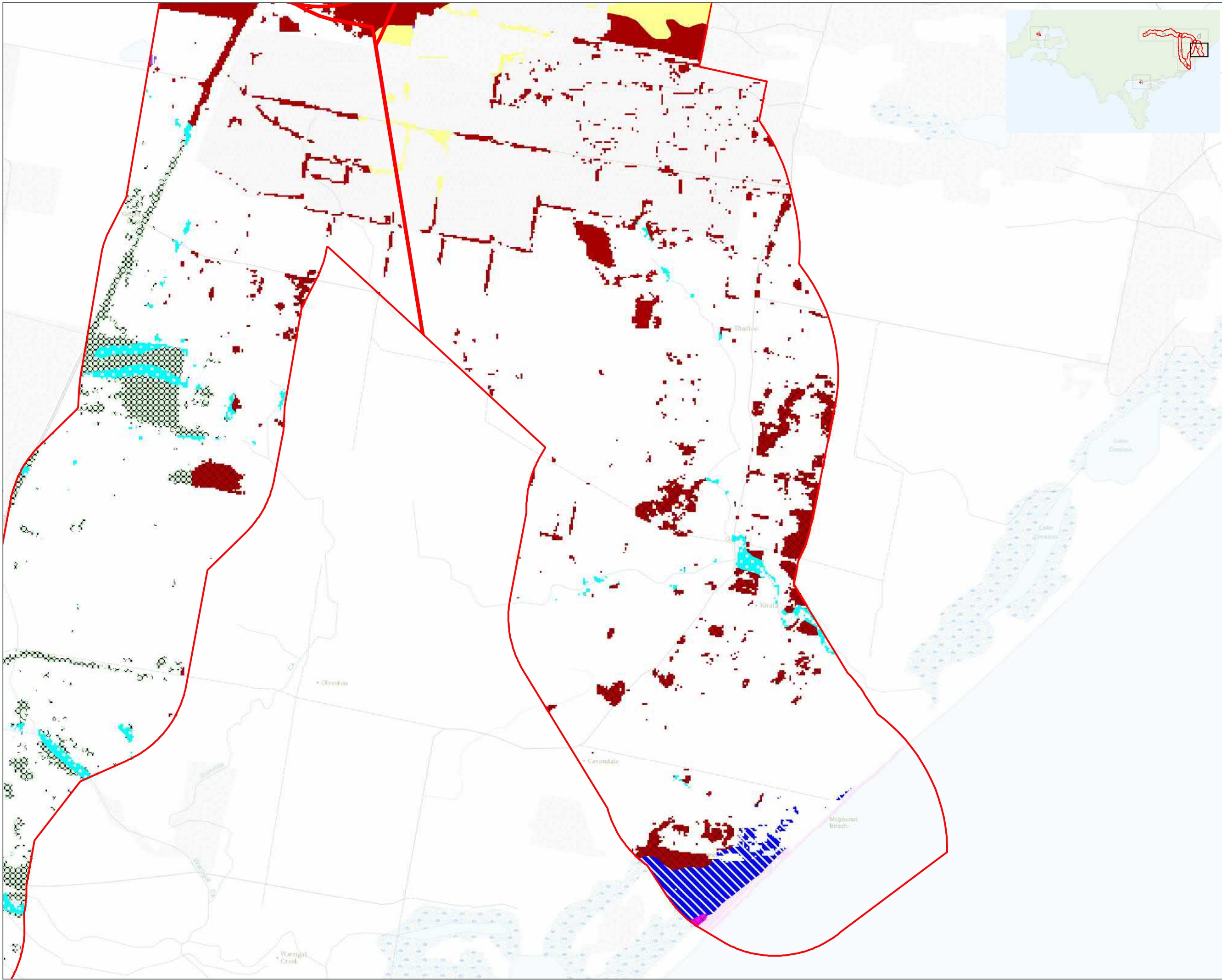
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**Figure 3f: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- EVC 2005**
- 1 Coastal Dune Scrub/Coastal Dune Grassland Mosaic
  - 10 Estuarine Wetland
  - 136 Sedge Wetland
  - 151 Plains Grassy Forest
  - 16 Lowland Forest
  - 191 Riparian Scrub
  - 48 Heathy Woodland
  - 53 Swamp Scrub
  - 698 Lowland Forest/Heathy Woodland Mosaic
  - 9 Coastal Saltmarsh

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**Figure 3g: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  1 Coastal Dune Scrub/Coastal Dune Grassland Mosaic
  -  10 Estuarine Wetland
  -  151 Plains Grassy Forest
  -  191 Riparian Scrub
  -  2 Coast Banksia Woodland
  -  3 Damp Sands Herb-rich Woodland
  -  53 Swamp Scrub
  -  56 Floodplain Riparian Woodland
  -  687 Swamp Scrub/Plains Grassland Mosaic
  -  9 Coastal Saltmarsh
  -  985 Sandy Beach
  -  992 Water Body - Fresh

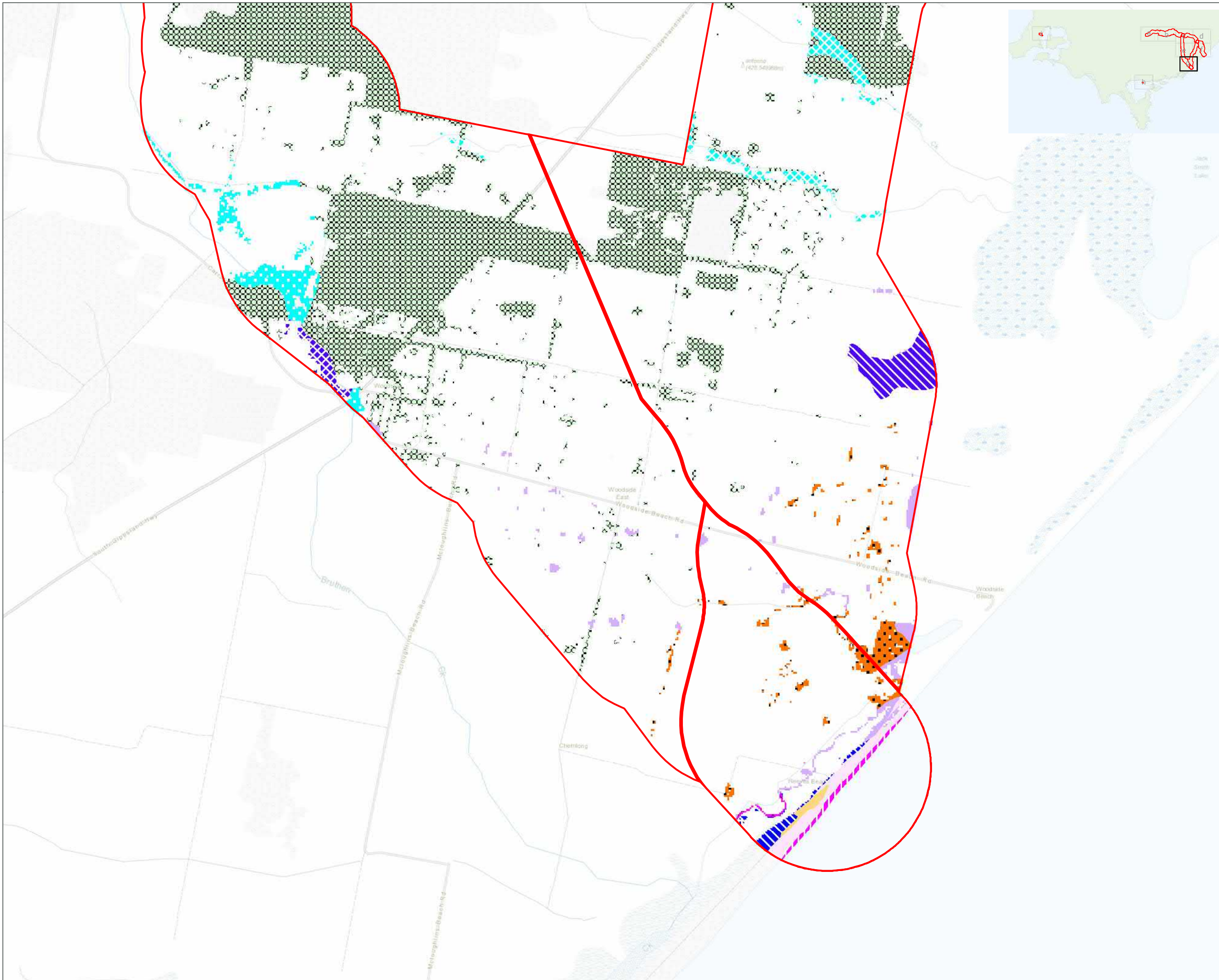
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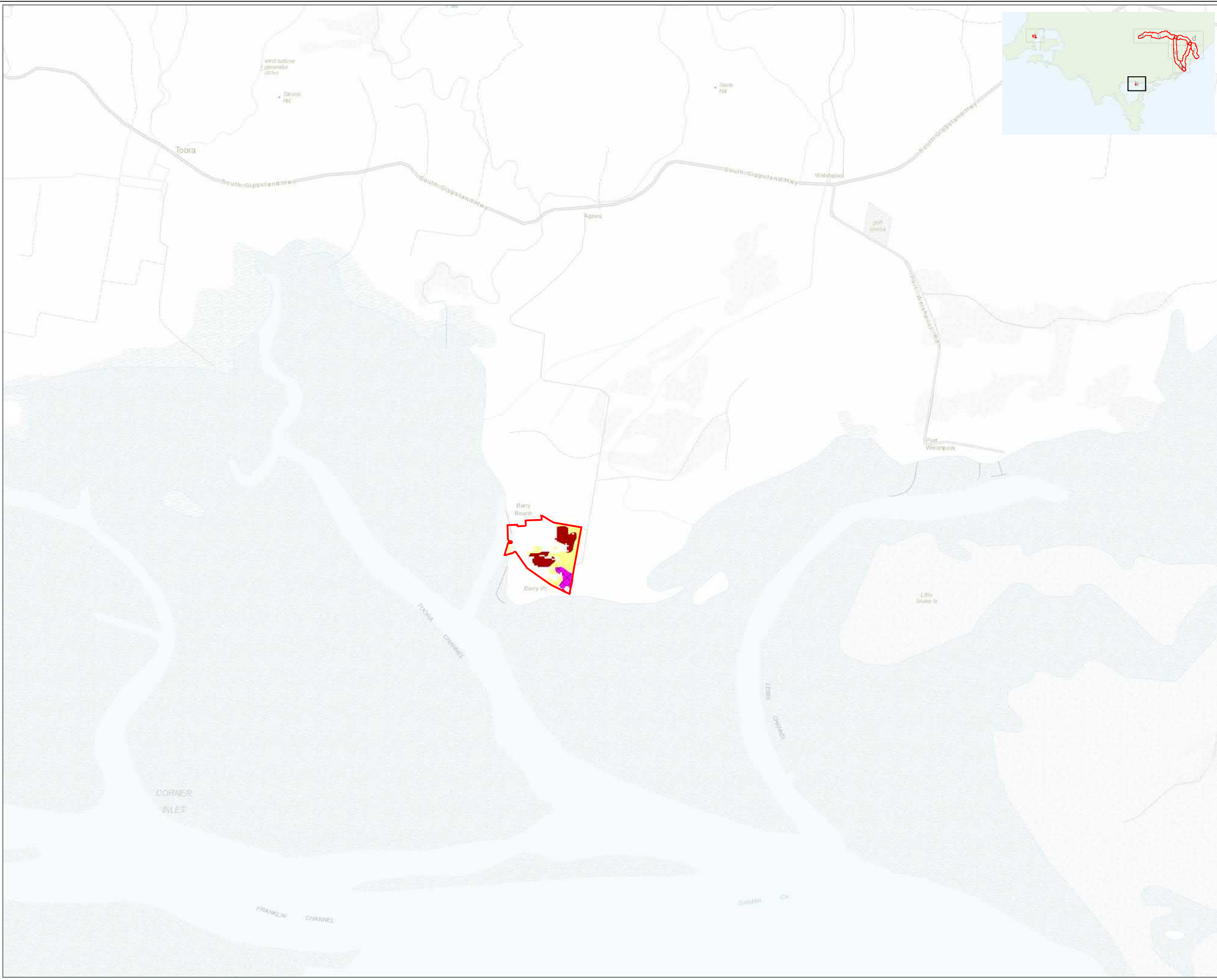
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








**Figure 3h: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  16 Lowland Forest
  -  48 Heathy Woodland
  -  53 Swamp Scrub
  -  9 Coastal Saltmarsh

N

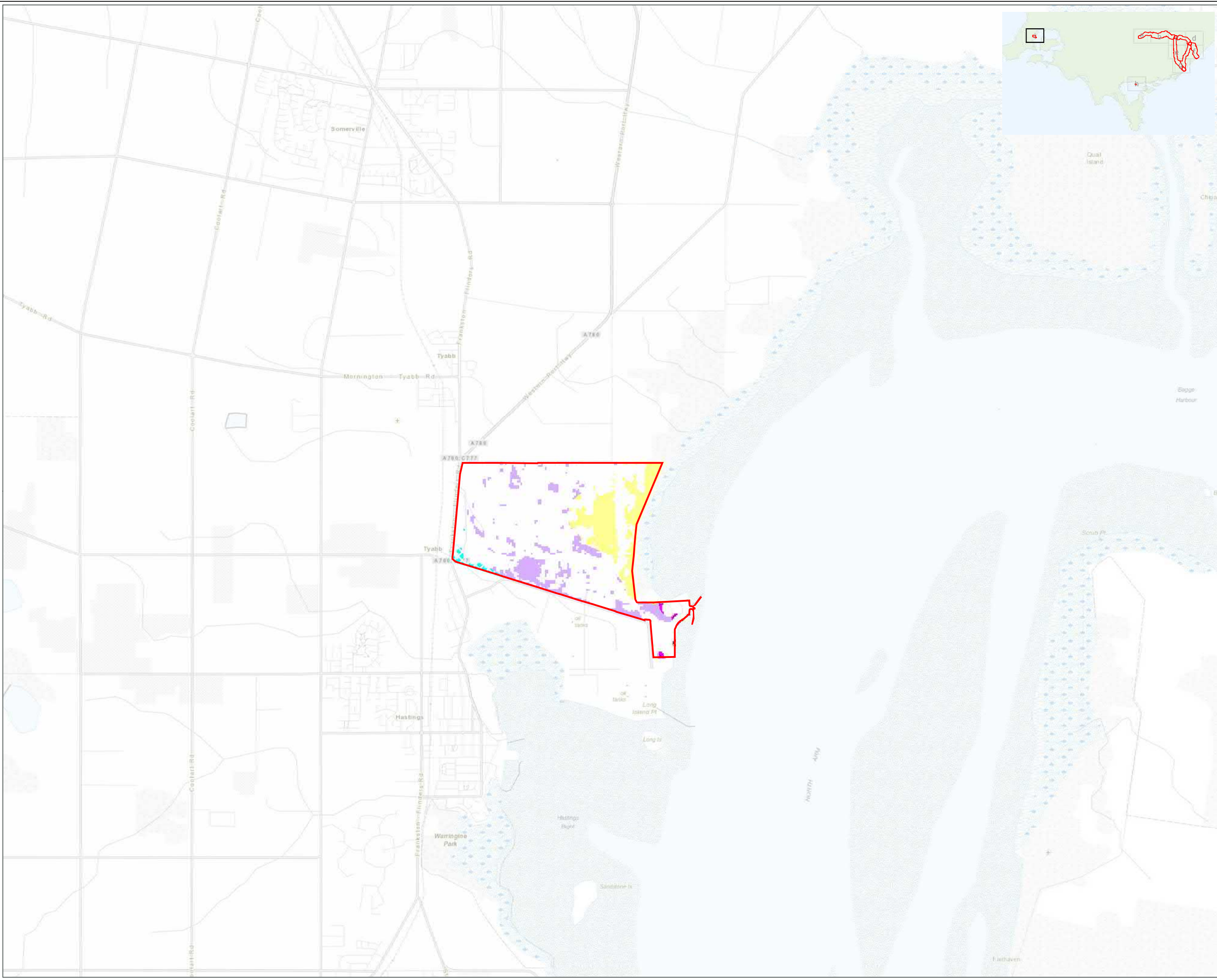
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**Figure 3i: Flora and Fauna records**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  140 Mangrove Shrubland
  -  3 Damp Sands Herb-rich Woodland
  -  48 Heathy Woodland
  -  53 Swamp Scrub
  -  9 Coastal Saltmarsh

N

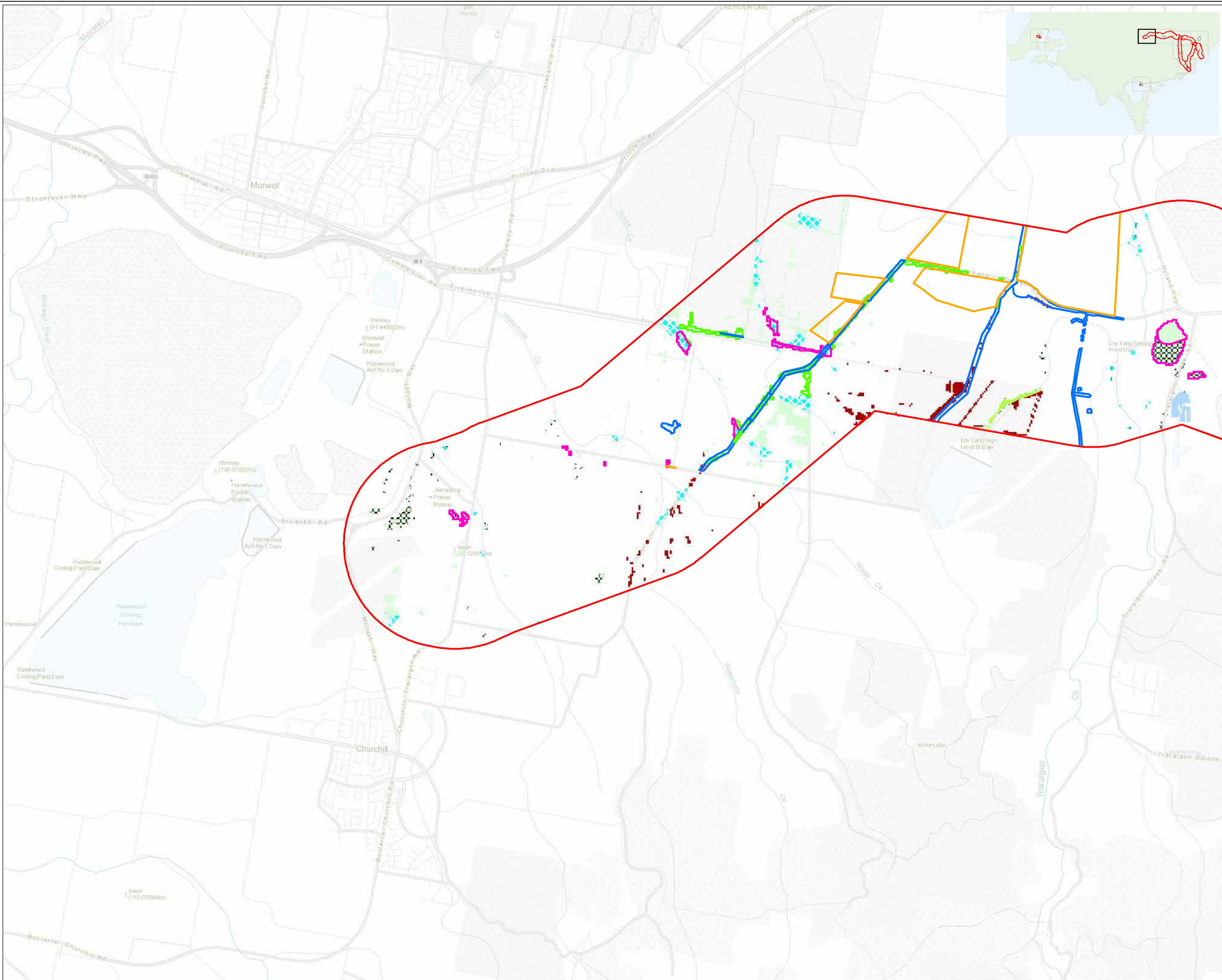
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**Figure 4a: 2005 EVCs and validation**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- EVC Validation**
- Decreased Extent
  - EVC Change
  - Increased Extent
  - Scattered Trees
- EVC 2005**
- 151 Plains Grassy Forest
  - 16 Lowland Forest
  - 29 Damp Forest
  - 53 Swamp Scrub
  - 55 Plains Grassy Woodland
  - 83 Swampy Riparian Woodland
  - 998 Water Body - man-made

N

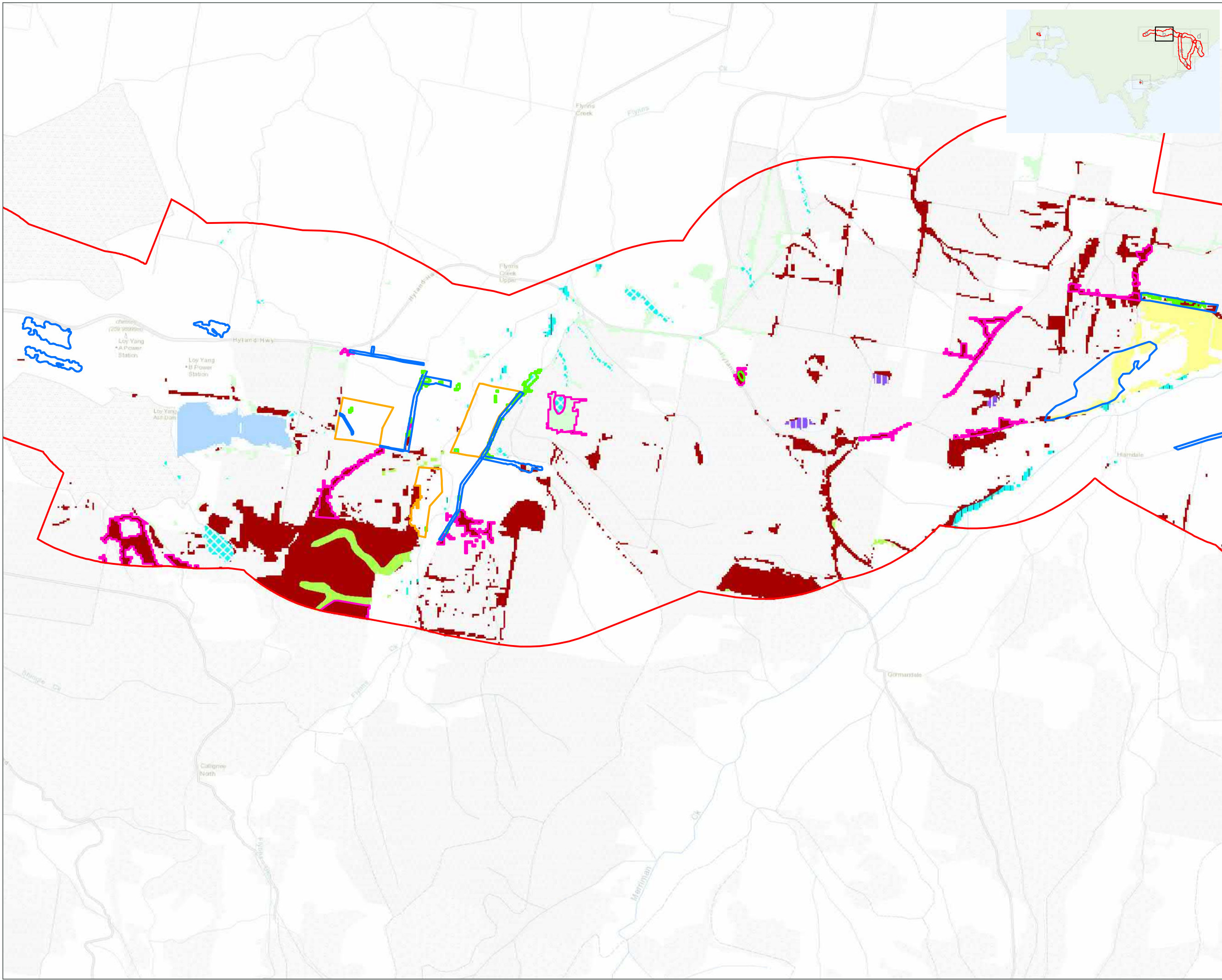
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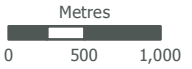
**Figure 4b: 2005 EVCs and validation**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020


- Onshore referral area
- EVC Validation**
  - Decreased Extent
  - EVC Change
  - Increased Extent
  - Scattered Trees
- EVC 2005**
  - 136 Sedge Wetland
  - 16 Lowland Forest
  - 191 Riparian Scrub
  - 29 Damp Forest
  - 48 Heathy Woodland
  - 53 Swamp Scrub
  - 55 Plains Grassy Woodland
  - 83 Swampy Riparian Woodland
  - 998 Water Body - man-made



N



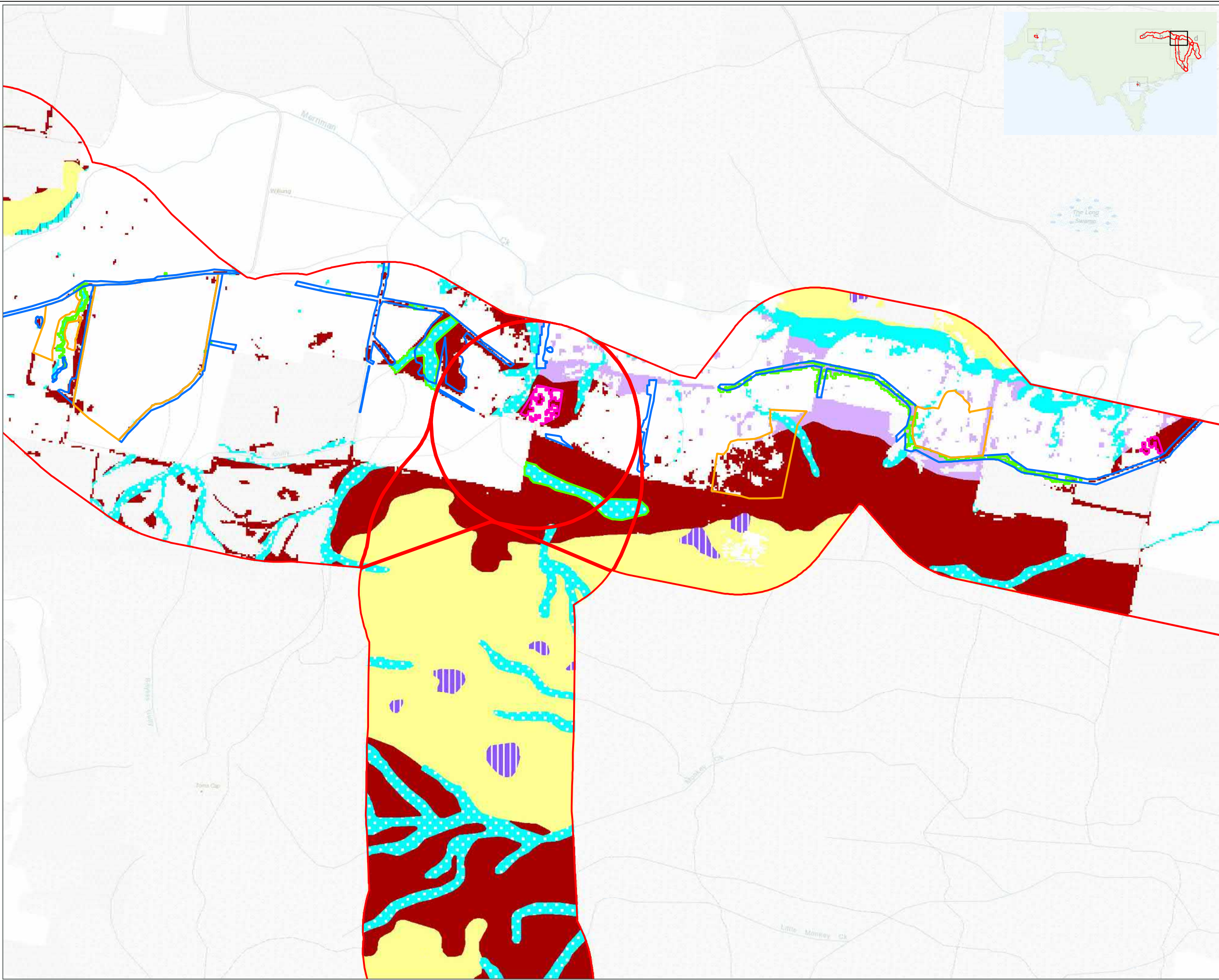
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**Figure 4c: 2005 EVCs and validation**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- EVC Validation**
- Decreased Extent
  - EVC Change
  - Increased Extent
  - Scattered Trees
- EVC 2005**
- 136 Sedge Wetland
  - 16 Lowland Forest
  - 18 Riparian Forest
  - 191 Riparian Scrub
  - 3 Damp Sands Herb-rich Woodland
  - 48 Heathy Woodland
  - 55 Plains Grassy Woodland
  - 83 Swampy Riparian Woodland

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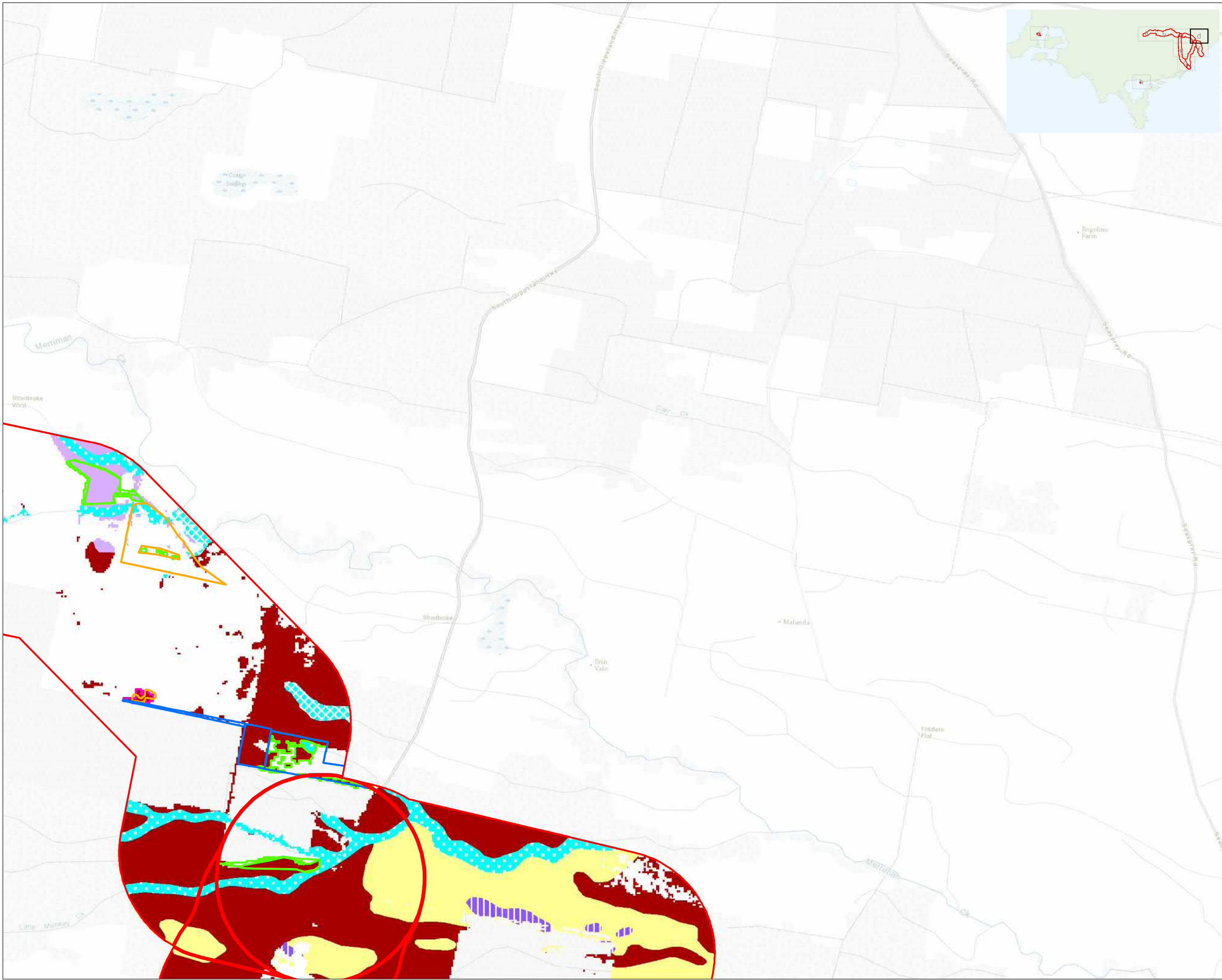
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**Figure 4d: 2005 EVCs and validation**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- EVC Validation**
  - Decreased Extent
  - EVC Change
  - Increased Extent
  - Scattered Trees
- EVC 2005**
  - 136 Sedge Wetland
  - 16 Lowland Forest
  - 191 Riparian Scrub
  - 3 Damp Sands Herb-rich Woodland
  - 48 Heathy Woodland
  - 53 Swamp Scrub

N

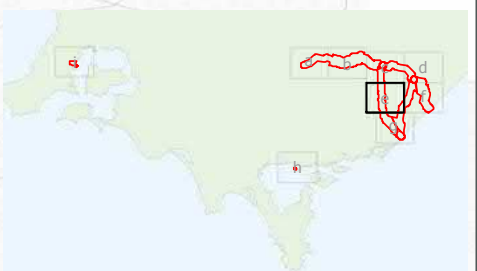
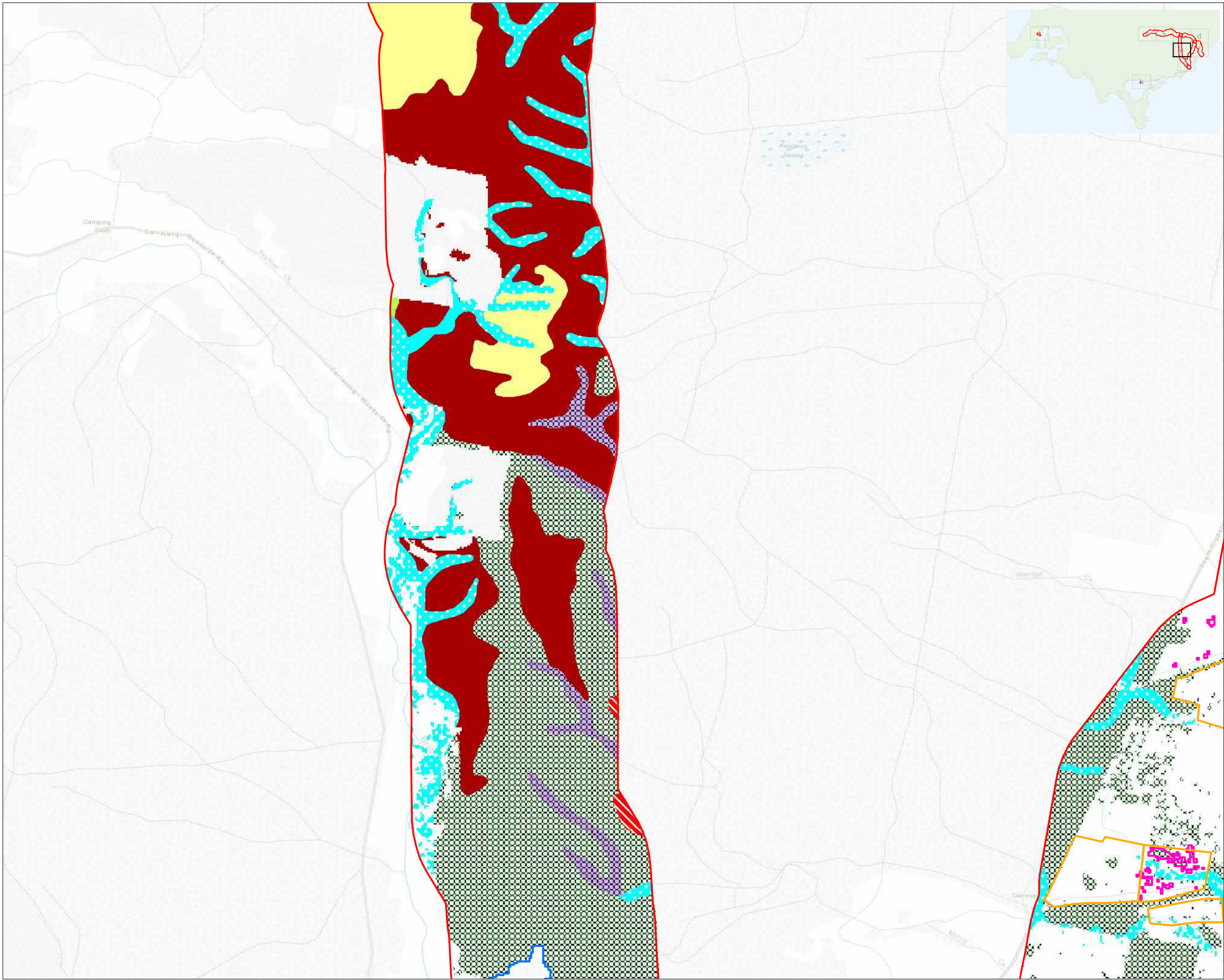
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**Figure 4e: 2005 EVCs and validation**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- Onshore referral area
- EVC Validation**
- Decreased Extent
  - Increased Extent
  - Scattered Trees
- EVC 2005**
- 151 Plains Grassy Forest
  - 16 Lowland Forest
  - 164 Creekline Herb-rich Woodland
  - 18 Riparian Forest
  - 191 Riparian Scrub
  - 29 Damp Forest
  - 48 Heathy Woodland
  - 53 Swamp Scrub
  - 7 Clay Heathland

N

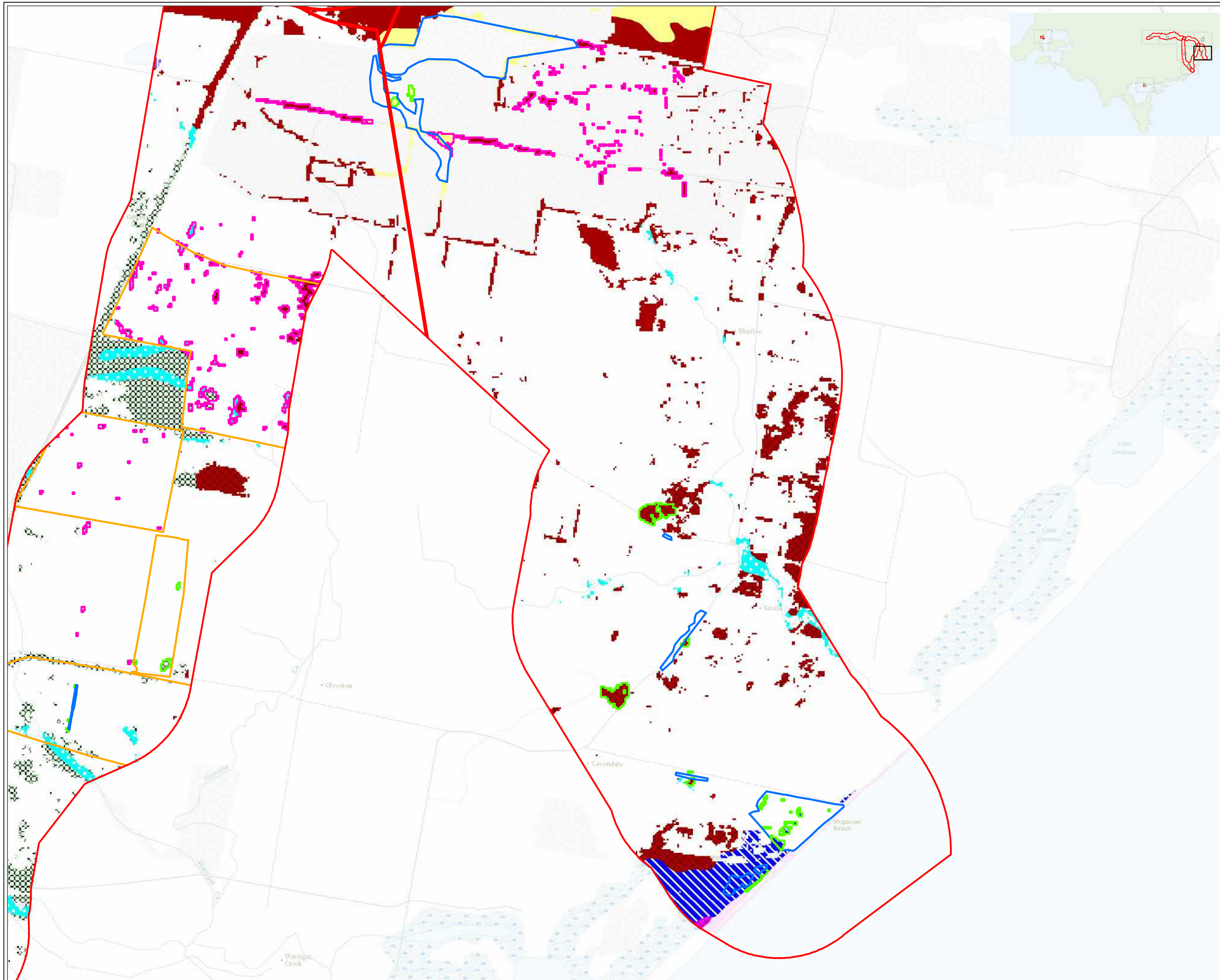
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**Figure 4f: 2005 EVCs and validation**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

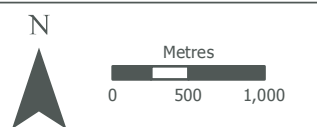
**Onshore referral area**

**EVC Validation**

- Decreased Extent
- EVC Change
- Increased Extent
- Scattered Trees

**EVC 2005**

- 1 Coastal Dune Scrub/Coastal Dune Grassland Mosaic
- 10 Estuarine Wetland
- 136 Sedge Wetland
- 151 Plains Grassy Forest
- 16 Lowland Forest
- 191 Riparian Scrub
- 48 Heathy Woodland
- 53 Swamp Scrub
- 698 Lowland Forest/Heathy Woodland Mosaic
- 9 Coastal Saltmarsh




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**Figure 4g: 2005 EVCs and validation**


**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

 Onshore referral area


**EVC Validation**


 Decreased Extent

 EVC Change


 Increased Extent


**EVC 2005**


 1 Coastal Dune Scrub/Coastal Dune Grassland Mosaic


 10 Estuarine Wetland


 151 Plains Grassy Forest


 191 Riparian Scrub


 2 Coast Banksia Woodland


 3 Damp Sands Herb-rich Woodland


 53 Swamp Scrub

 56 Floodplain Riparian Woodland

 687 Swamp Scrub/Plains Grassland Mosaic

 9 Coastal Saltmarsh

 985 Sandy Beach

 992 Water Body - Fresh

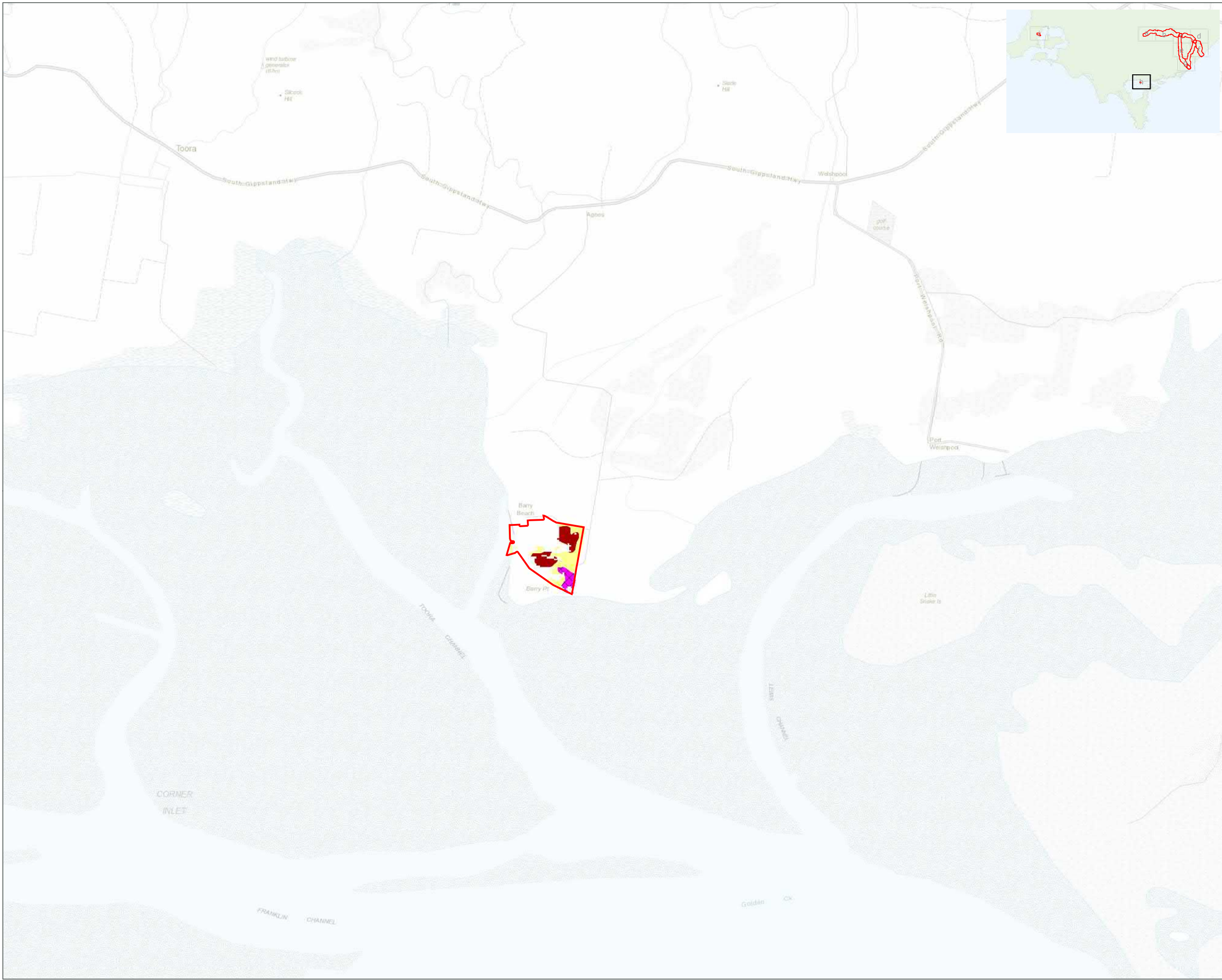


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


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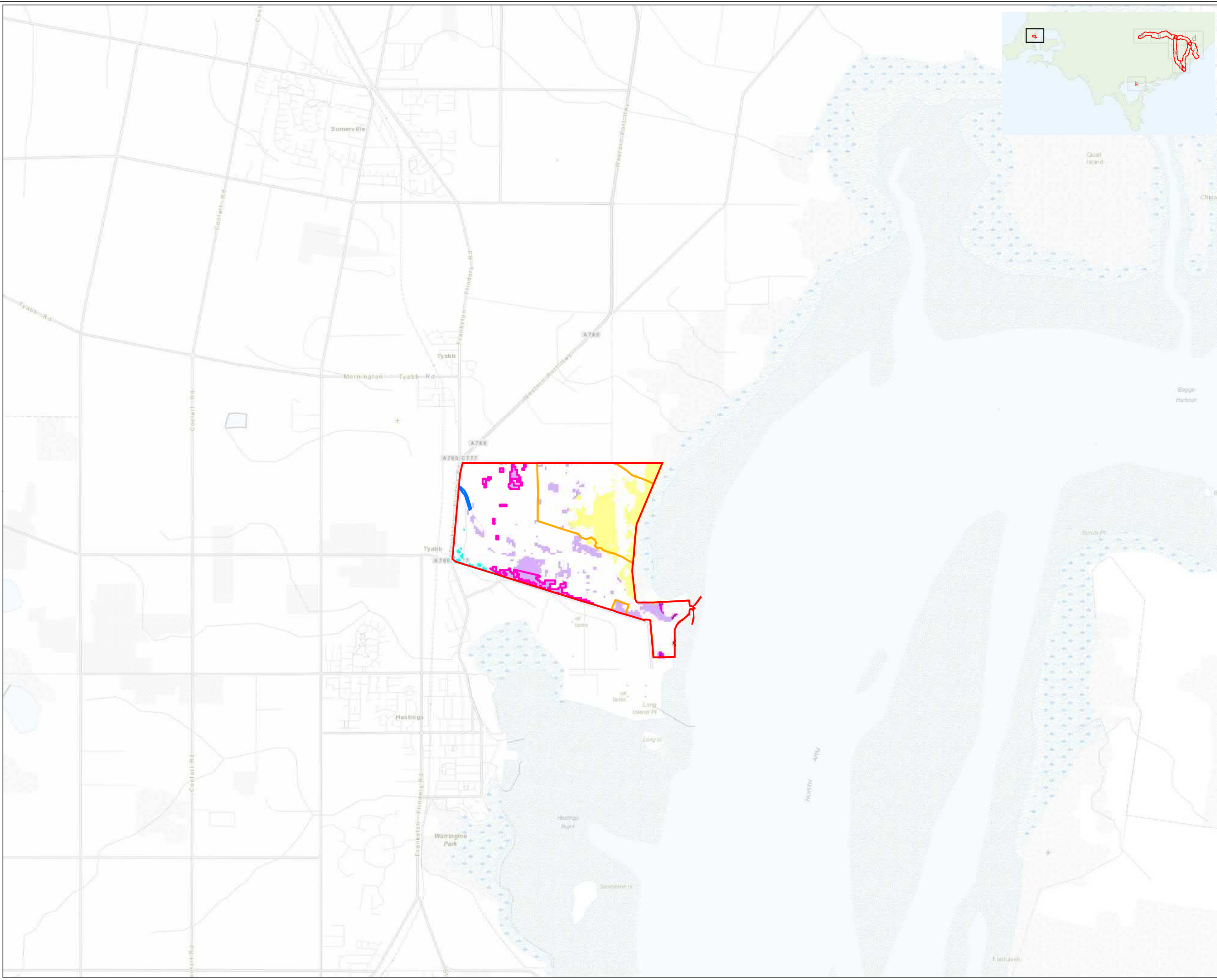


**Figure 4h: 2005 EVCs and validation**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

-  Onshore referral area
- EVC 2005**
-  16 Lowland Forest
  -  48 Heathy Woodland
  -  53 Swamp Scrub
  -  9 Coastal Saltmarsh



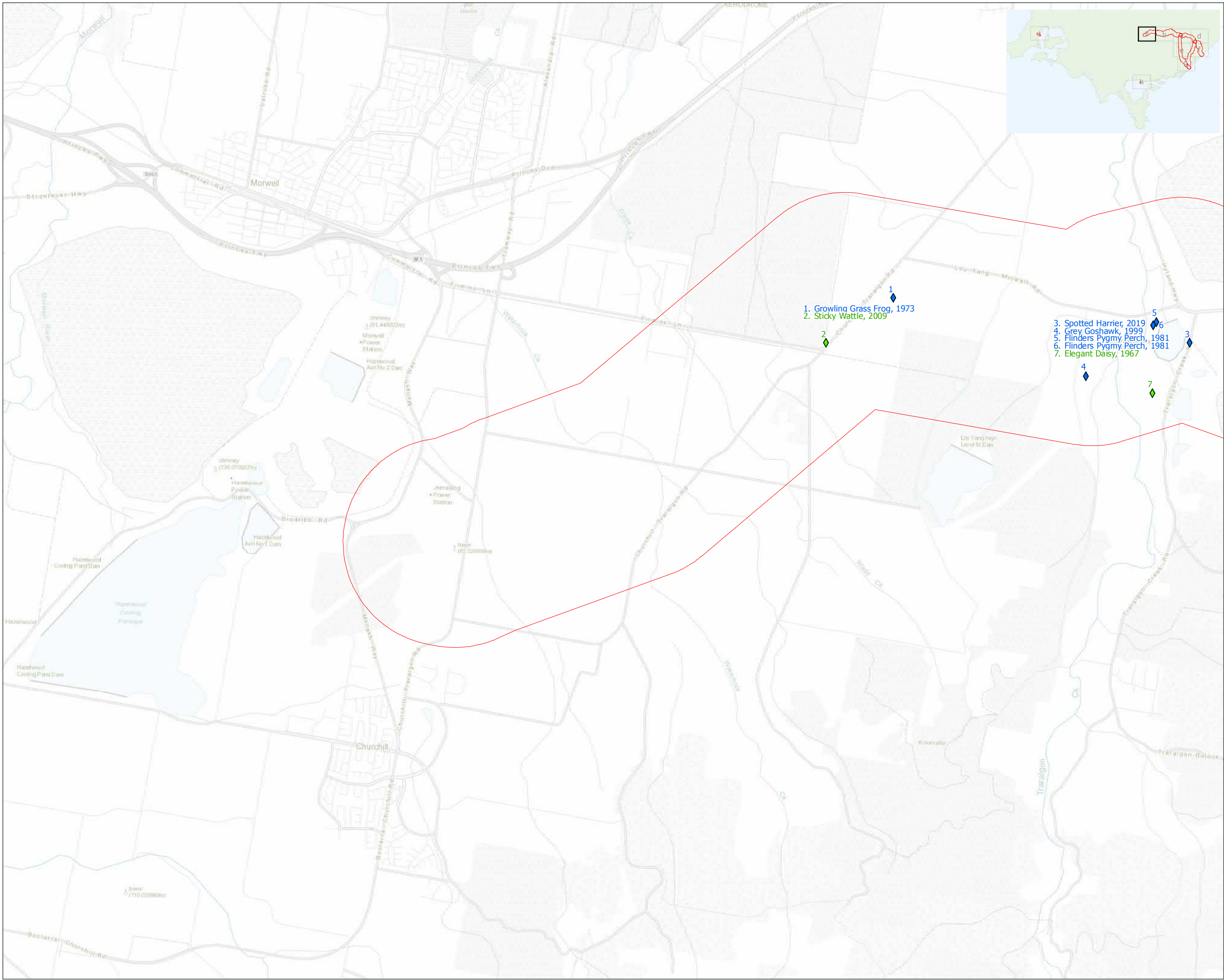


**Figure 4i: 2005 EVCs and validation**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area**
- EVC Validation**
- Decreased Extent
  - Increased Extent
  - Scattered Trees
- EVC 2005**
- 140 Mangrove Shrubland
  - 3 Damp Sands Herb-rich Woodland
  - 48 Heathy Woodland
  - 53 Swamp Scrub
  - 9 Coastal Saltmarsh





**Figure 5a: Listed or threatened Flora and Fauna records**

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (5)
- Flora records (2)


- 1. Growling Grass Frog, 1973
- 2. Sticky Wattle, 2009
- 3. Spotted Harrier, 2019
- 4. Grey Goshawk, 1999
- 5. Flinders Pygmy Perch, 1981
- 6. Flinders Pygmy Perch, 1981
- 7. Elegant Daisy, 1967

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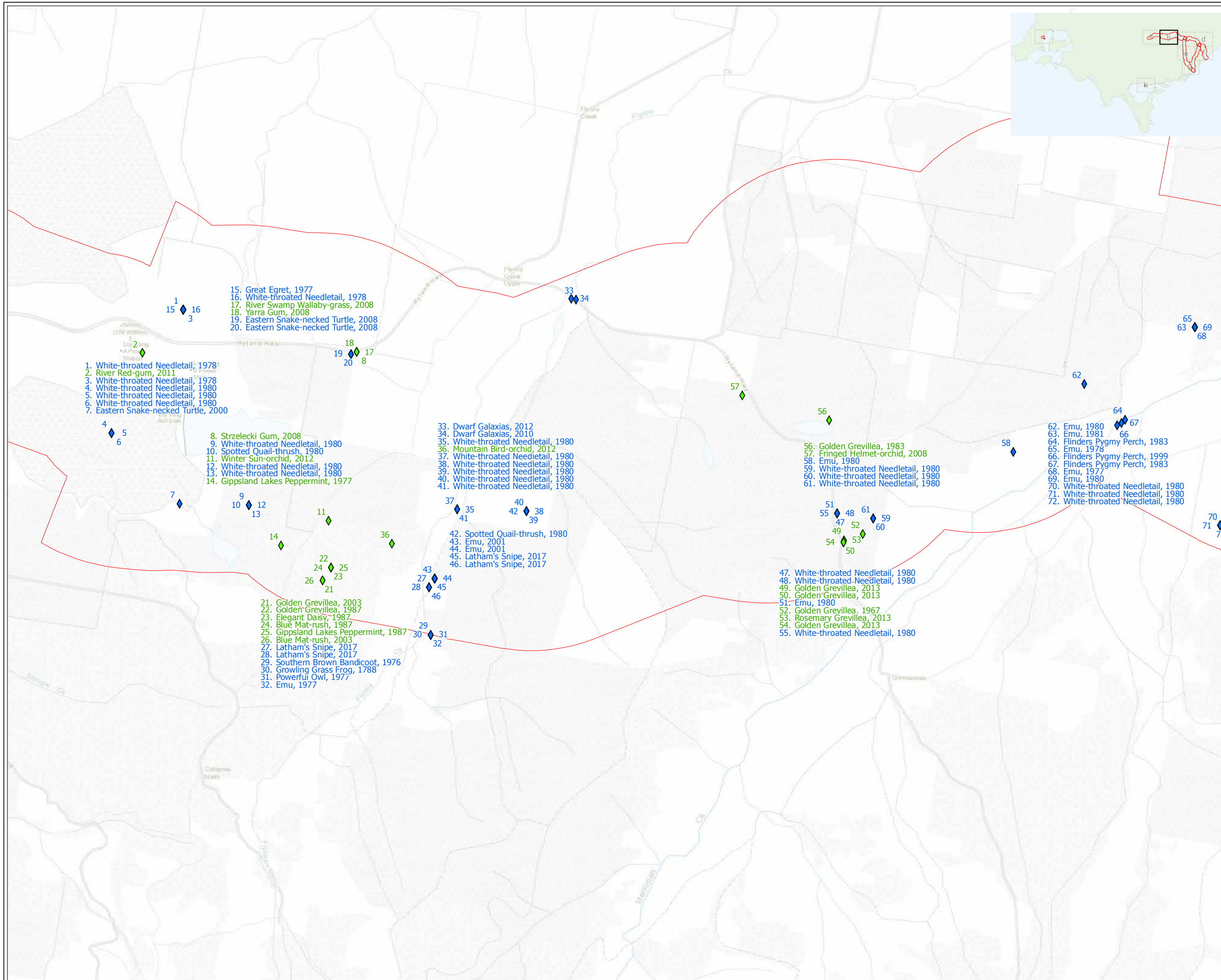
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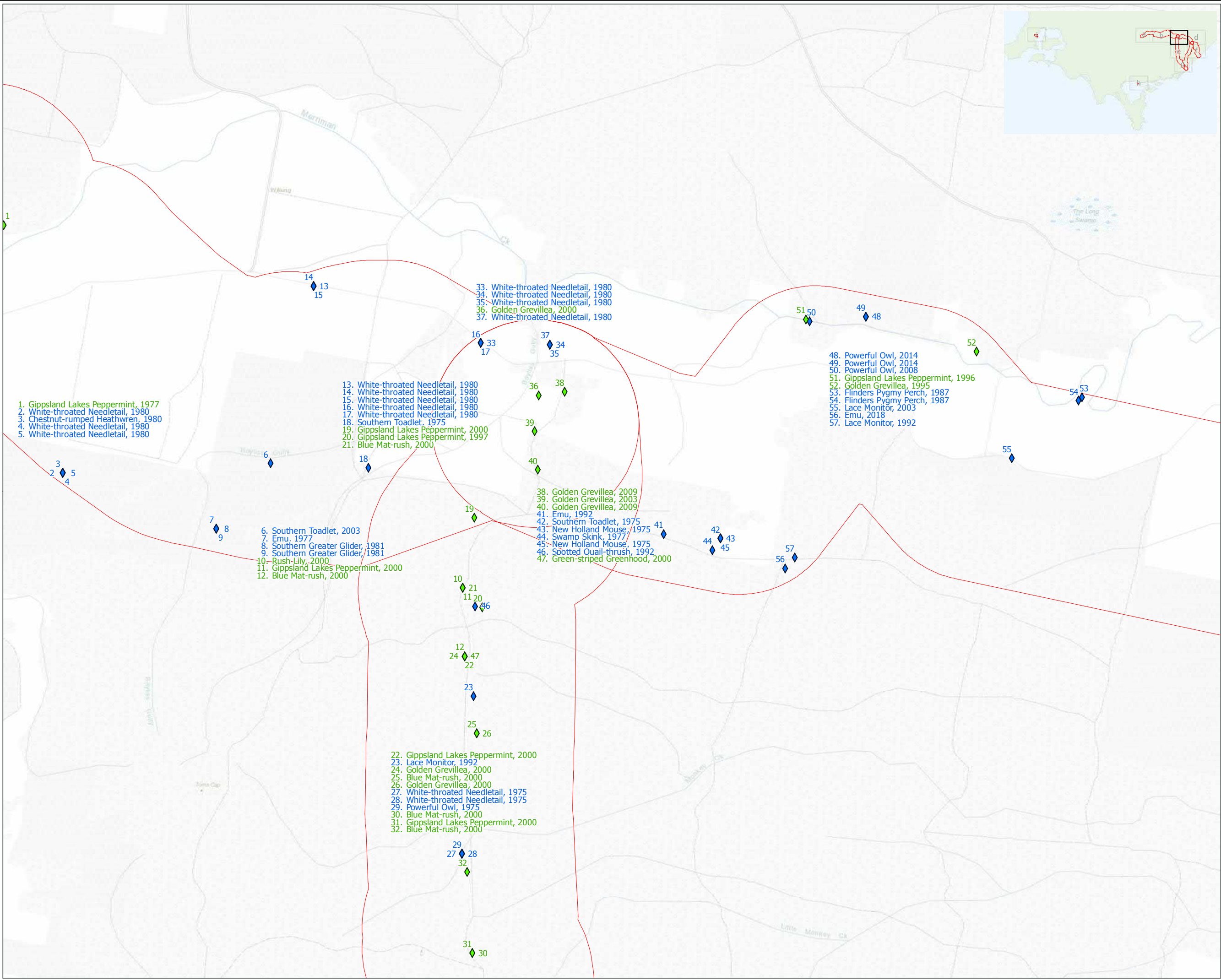
**Figure 5b:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- ◆ Fauna records (162)
- ◆ Flora records (22)







**Figure 5c:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (39)
- Flora records (21)

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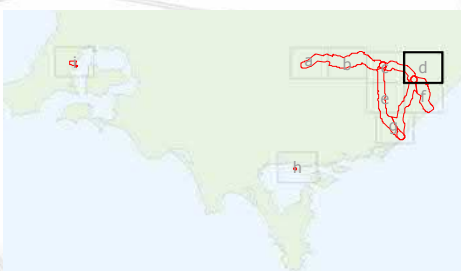
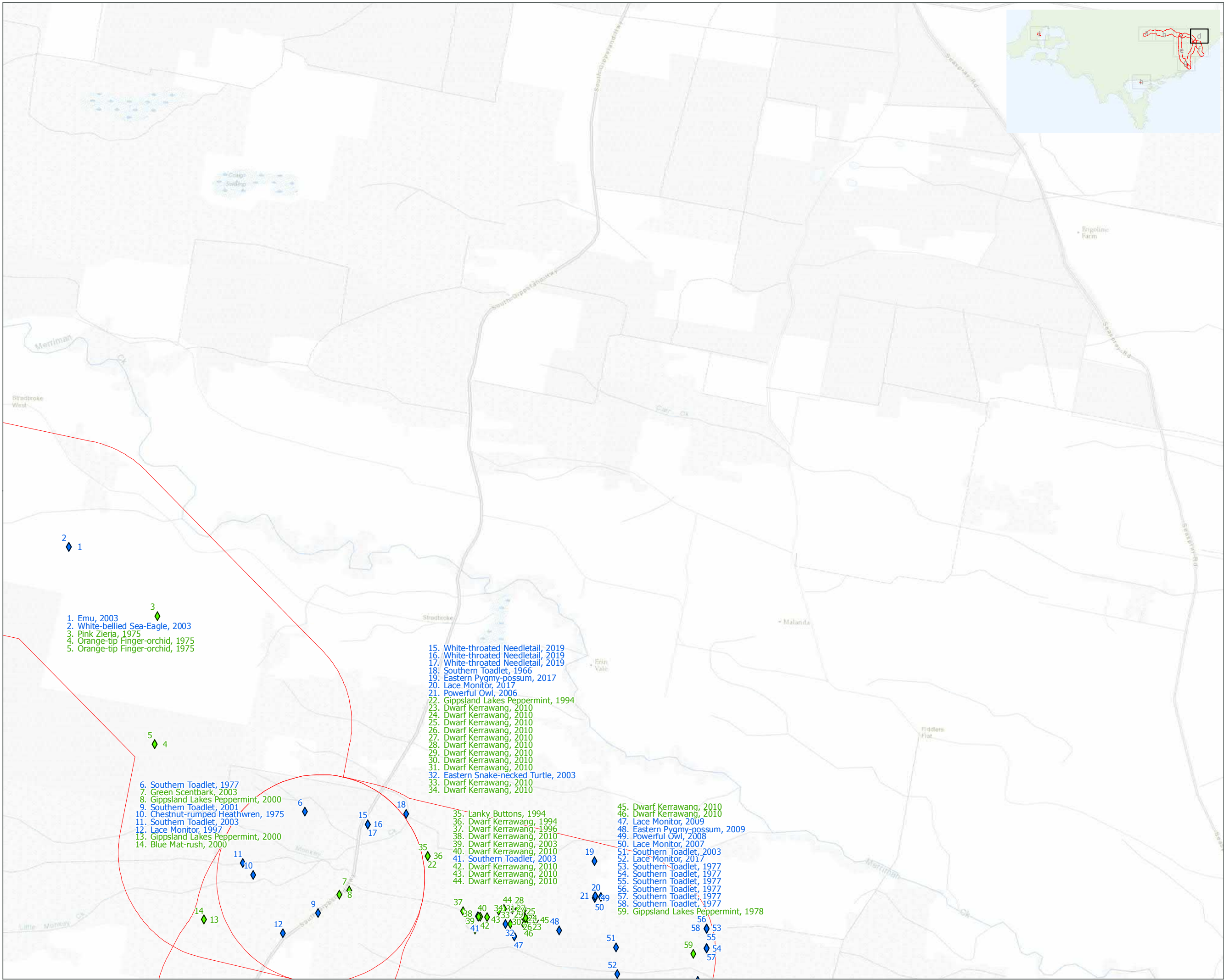
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**Figure 5d:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (39)
- Flora records (35)


- 1. Emu, 2003
- 2. White-bellied Sea-Eagle, 2003
- 3. Pink Zieria, 1975
- 4. Orange-tip Finger-orchid, 1975
- 5. Orange-tip Finger-orchid, 1975

- 6. Southern Toadlet, 1977
- 7. Green Scentbark, 2003
- 8. Gippsland Lakes Peppermint, 2000
- 9. Southern Toadlet, 2001
- 10. Chestnut-rumped Heathwren, 1975
- 11. Southern Toadlet, 2003
- 12. Lace Monitor, 1997
- 13. Gippsland Lakes Peppermint, 2000
- 14. Blue Mat-rush, 2000

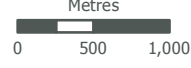
- 15. White-throated Needletail, 2019
- 16. White-throated Needletail, 2019
- 17. White-throated Needletail, 2019
- 18. Southern Toadlet, 1966
- 19. Eastern Pygmy-possum, 2017
- 20. Lace Monitor, 2017
- 21. Powerful Owl, 2006
- 22. Gippsland Lakes Peppermint, 1994
- 23. Dwarf Kerrawang, 2010
- 24. Dwarf Kerrawang, 2010
- 25. Dwarf Kerrawang, 2010
- 26. Dwarf Kerrawang, 2010
- 27. Dwarf Kerrawang, 2010
- 28. Dwarf Kerrawang, 2010
- 29. Dwarf Kerrawang, 2010
- 30. Dwarf Kerrawang, 2010
- 31. Dwarf Kerrawang, 2010
- 32. Eastern Snake-necked Turtle, 2003
- 33. Dwarf Kerrawang, 2010
- 34. Dwarf Kerrawang, 2010

- 35. Lanky Buttons, 1994
- 36. Dwarf Kerrawang, 1994
- 37. Dwarf Kerrawang, 1996
- 38. Dwarf Kerrawang, 2010
- 39. Dwarf Kerrawang, 2003
- 40. Dwarf Kerrawang, 2010
- 41. Southern Toadlet, 2003
- 42. Dwarf Kerrawang, 2010
- 43. Dwarf Kerrawang, 2010
- 44. Dwarf Kerrawang, 2010

- 45. Dwarf Kerrawang, 2010
- 46. Dwarf Kerrawang, 2010
- 47. Lace Monitor, 2009
- 48. Eastern Pygmy-possum, 2009
- 49. Powerful Owl, 2008
- 50. Lace Monitor, 2007
- 51. Southern Toadlet, 2003
- 52. Lace Monitor, 2017
- 53. Southern Toadlet, 1977
- 54. Southern Toadlet, 1977
- 55. Southern Toadlet, 1977
- 56. Southern Toadlet, 1977
- 57. Southern Toadlet, 1977
- 58. Southern Toadlet, 1977
- 59. Gippsland Lakes Peppermint, 1978




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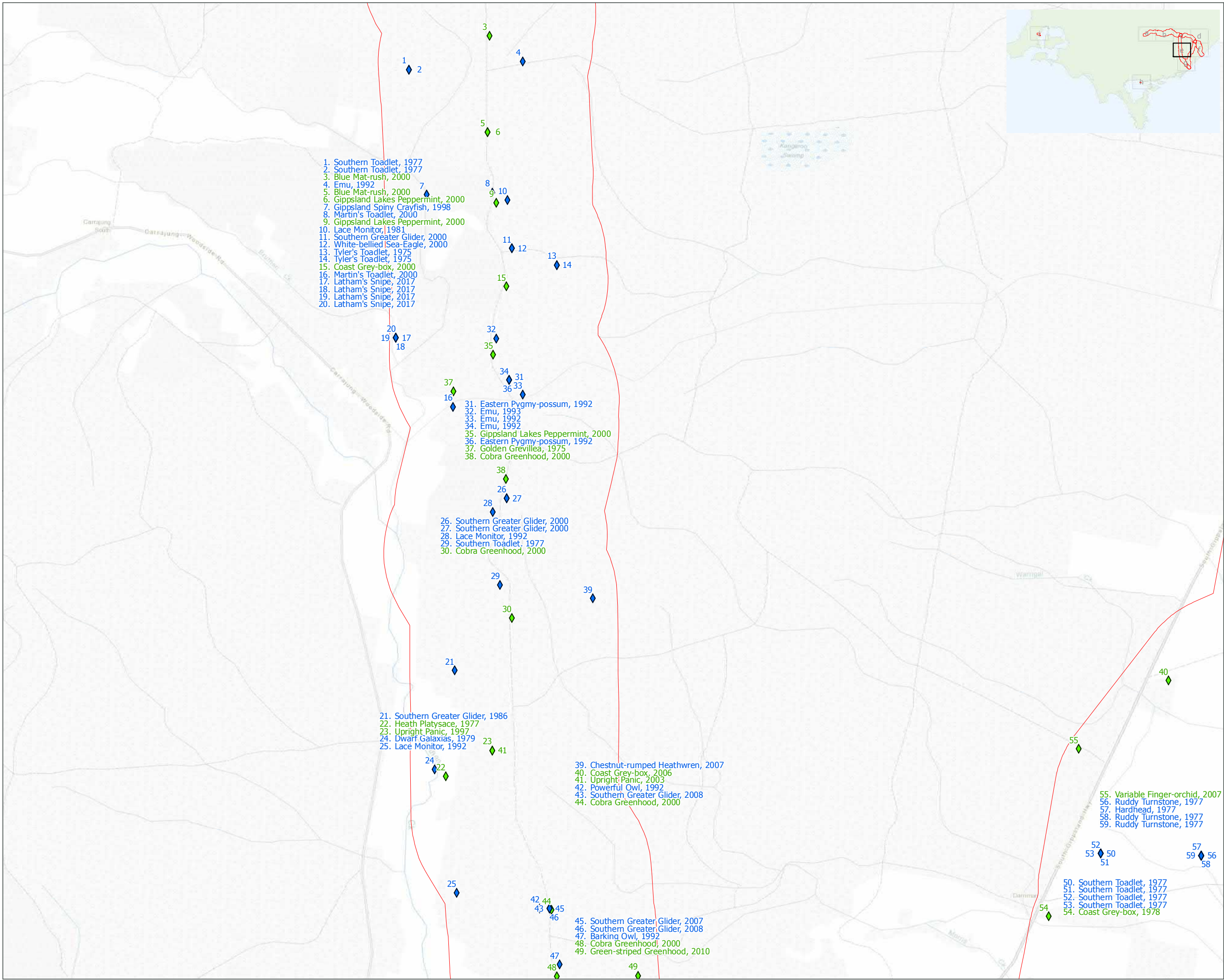
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**Figure 5e:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (54)
- Flora records (18)

N

Metres

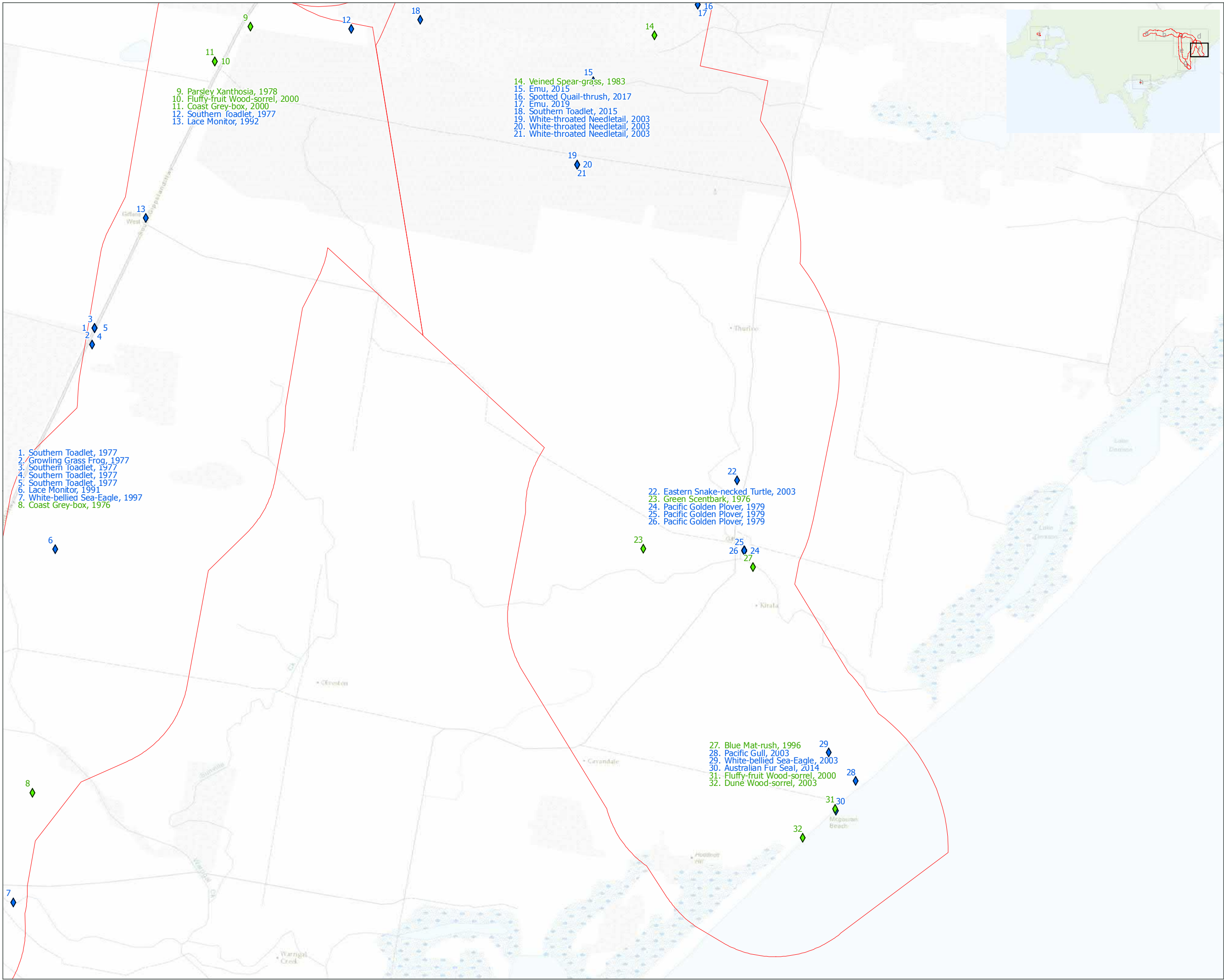
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**Figure 5f:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (69)
- Flora records (9)

N

Metres

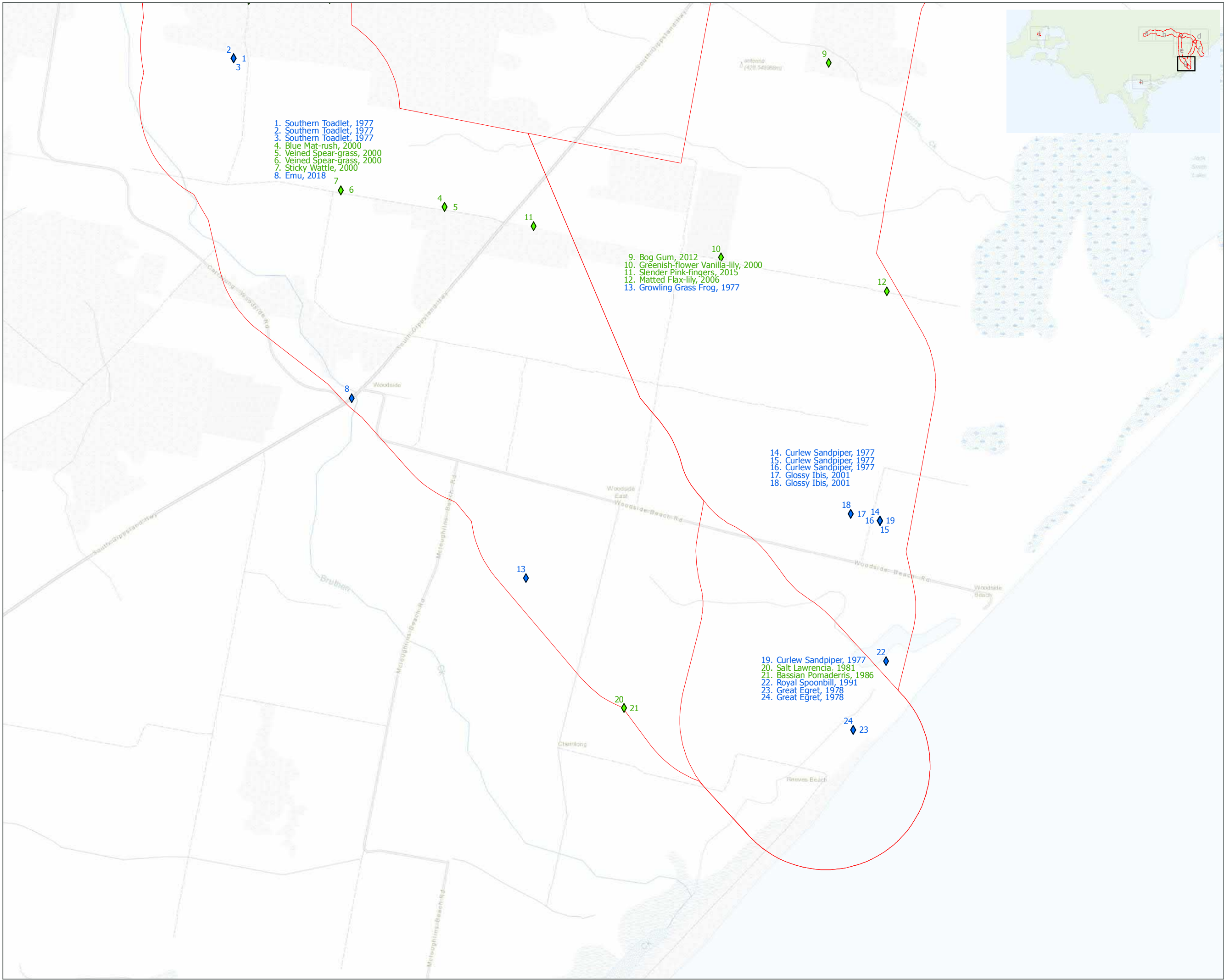
0 500 1,000

1:50,000

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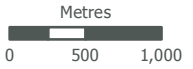
**Figure 5g:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (40)
- Flora records (12)




N



Metres  
0 500 1,000

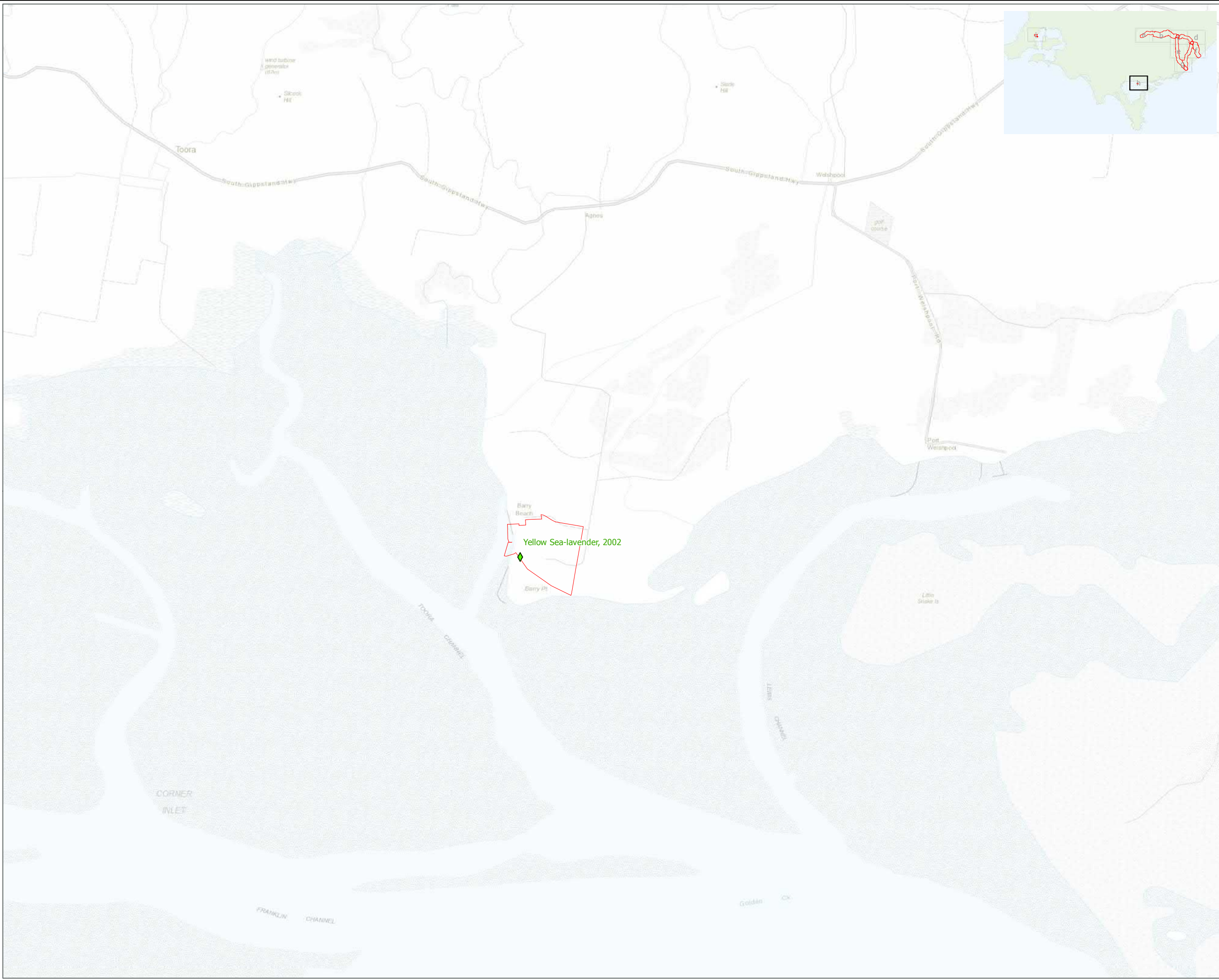
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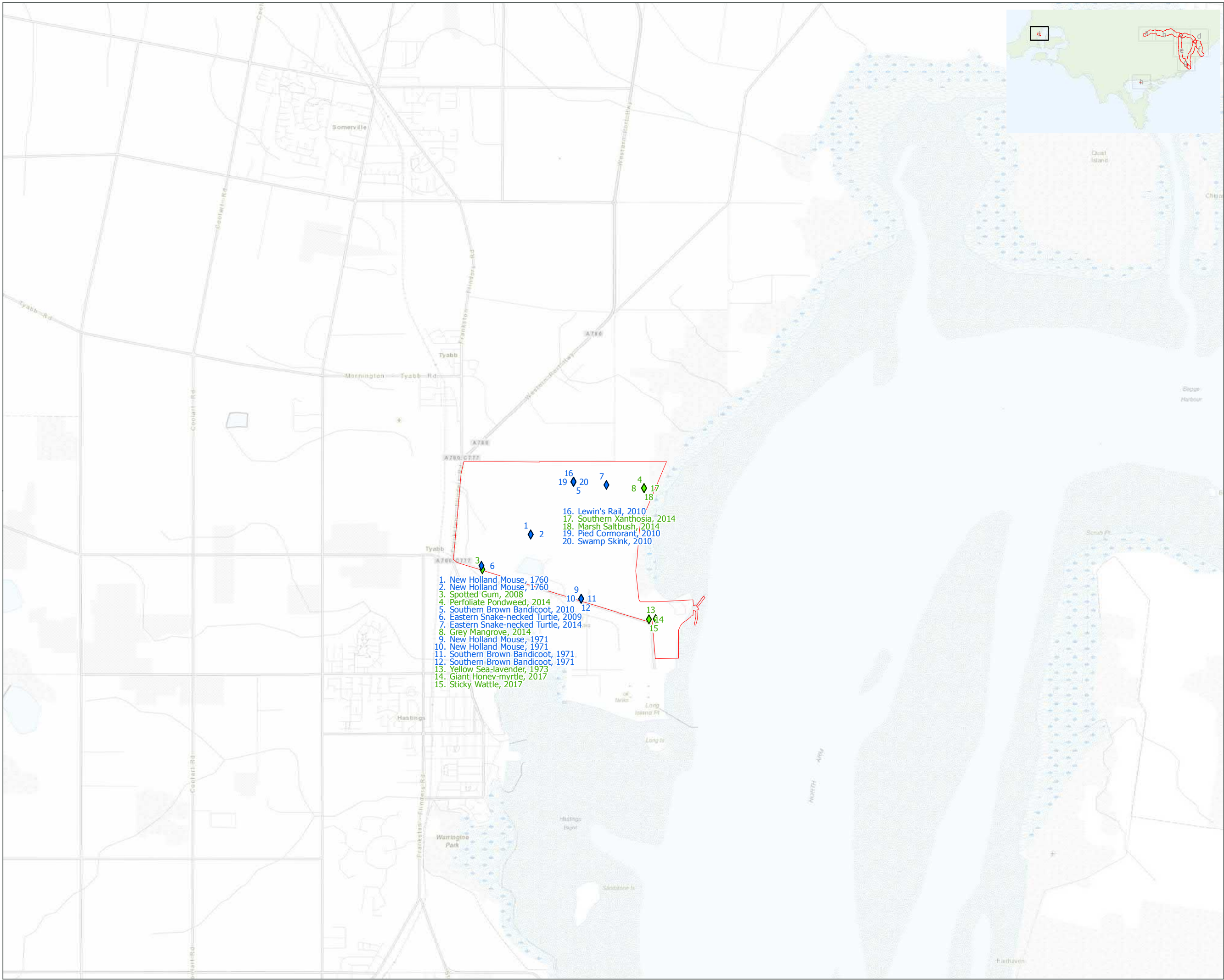


**Figure 5h:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 26/03/2020

- Onshore referral area
- Fauna records (0)
- Flora records (1)





**Figure 5i:** Listed or threatened Flora and Fauna records

**Project:** Star of the South  
**Client:** Aecom Australia Pty Ltd  
**Date:** 25/03/2020

- Onshore referral area
- Fauna records (25)
- Flora records (9)


1. New Holland Mouse, 1760  
2. New Holland Mouse, 1760  
3. Spotted Gum, 2008  
4. Perfoliate Pondweed, 2014  
5. Southern Brown Bandicoot, 2010  
6. Eastern Snake-necked Turtle, 2009  
7. Eastern Snake-necked Turtle, 2014  
8. Grey Mangrove, 2014  
9. New Holland Mouse, 1971  
10. New Holland Mouse, 1971  
11. Southern Brown Bandicoot, 1971  
12. Southern Brown Bandicoot, 1971  
13. Yellow Sea-lavender, 1973  
14. Giant Honey-myrtle, 2017  
15. Sticky Wattle, 2017  
16. Lewin's Rail, 2010  
17. Southern Xanthosia, 2014  
18. Marsh Saltbush, 2014  
19. Pied Cormorant, 2010  
20. Swamp Skink, 2010

N

Metres

0 500 1,000

1:50,000

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