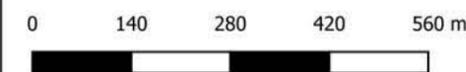
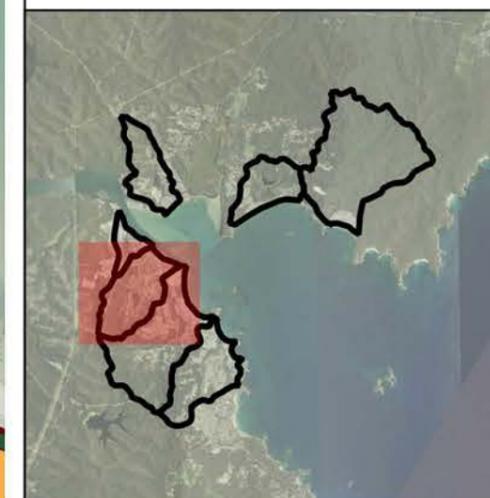


G603-e-1 Catalina Tuflow Roughness

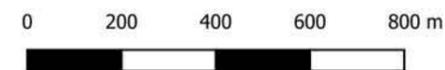
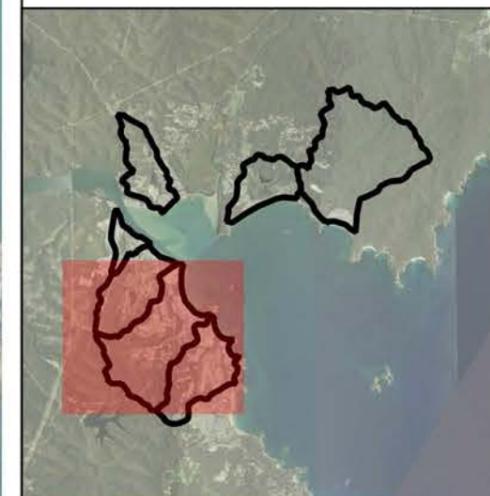
-  Catchment Area
-  Tuflow Model Area
- Roughness Zones**
-  Open Space
-  Neighbourhood Centre
-  Mixed Use
-  Low Density Residential
-  Recreation
-  Vegetation - Dense
-  Vegetation - Light
-  Vegetation - Medium
-  Roads / Carparks



Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56

G603-f-1 Batehaven Tuflow Roughness

-  Catchment Area
-  Tuflow Model Area
- Roughness Zones**
-  Open Space
-  Neighbourhood Centre
-  Mixed Use
-  Low Density Residential
-  Recreation
-  Vegetation - Dense
-  Vegetation - Light
-  Vegetation - Medium
-  Roads / Carparks

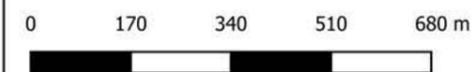
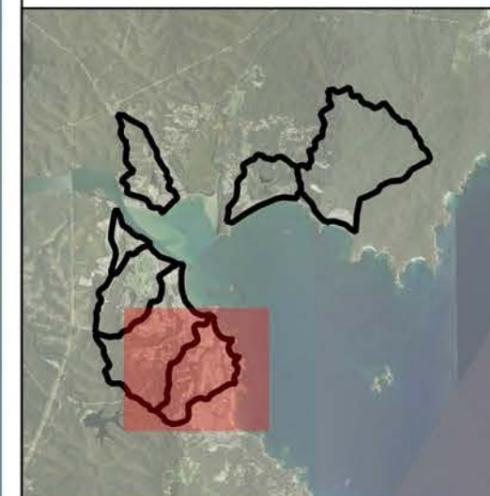


Scale : 1:15000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



G603-g-1 Sunshine Bay Tuflow Roughness

-  Catchment Area
-  Tuflow Model Area
- Roughness Zones**
-  Open Space
-  Neighbourhood Centre
-  Mixed Use
-  Low Density Residential
-  Recreation
-  Vegetation - Dense
-  Vegetation - Light
-  Vegetation - Medium
-  Roads / Carparks

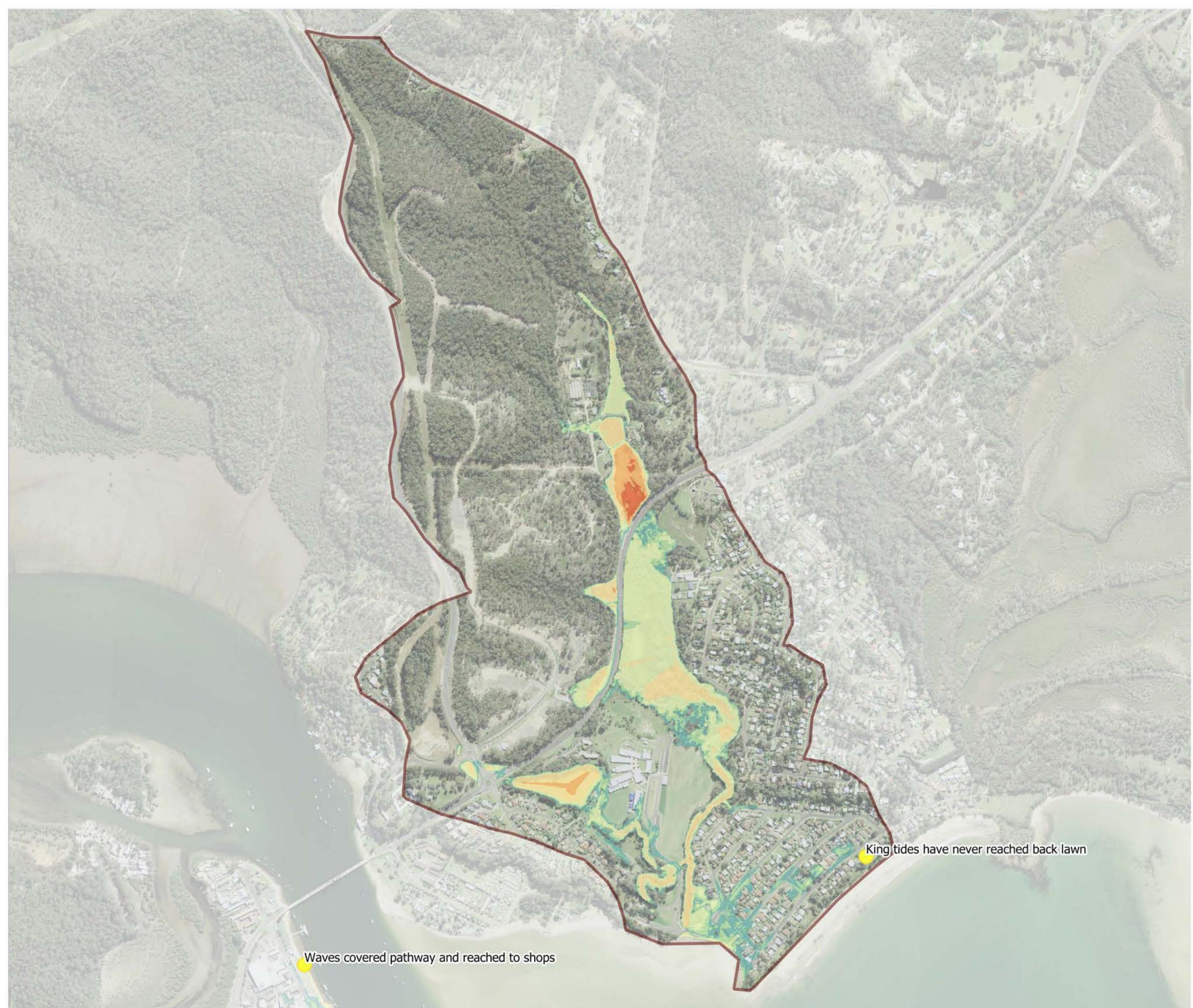


Scale : 1:12000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



G701-c-1 Surfside Community Responses

- Catchment Area
- Community Responses
- 1% AEP Depth
 - 0 - 0.15
 - 0.15 - 0.3
 - 0.3 - 0.5
 - 0.5 - 1
 - 1 - 2
 - 2 - 3
 - 3 - 4
 - >4

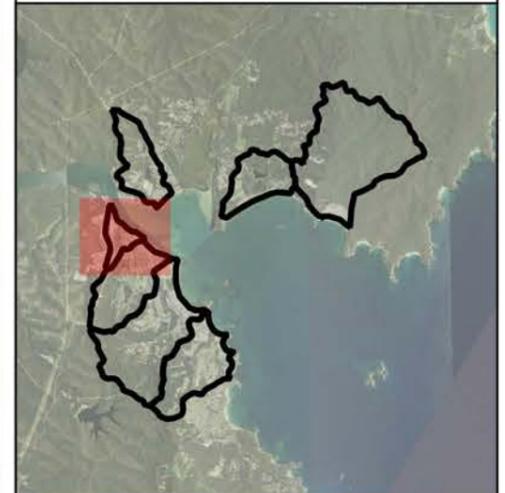


Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



G701-d-1 Water Gardens Community Responses

-  Catchment Area
-  Community Responses
- 1% AEP Depth
 -  0 - 0.15
 -  0.15 - 0.3
 -  0.3 - 0.5
 -  0.5 - 1
 -  1 - 2
 -  2 - 3
 -  3 - 4
 -  >4

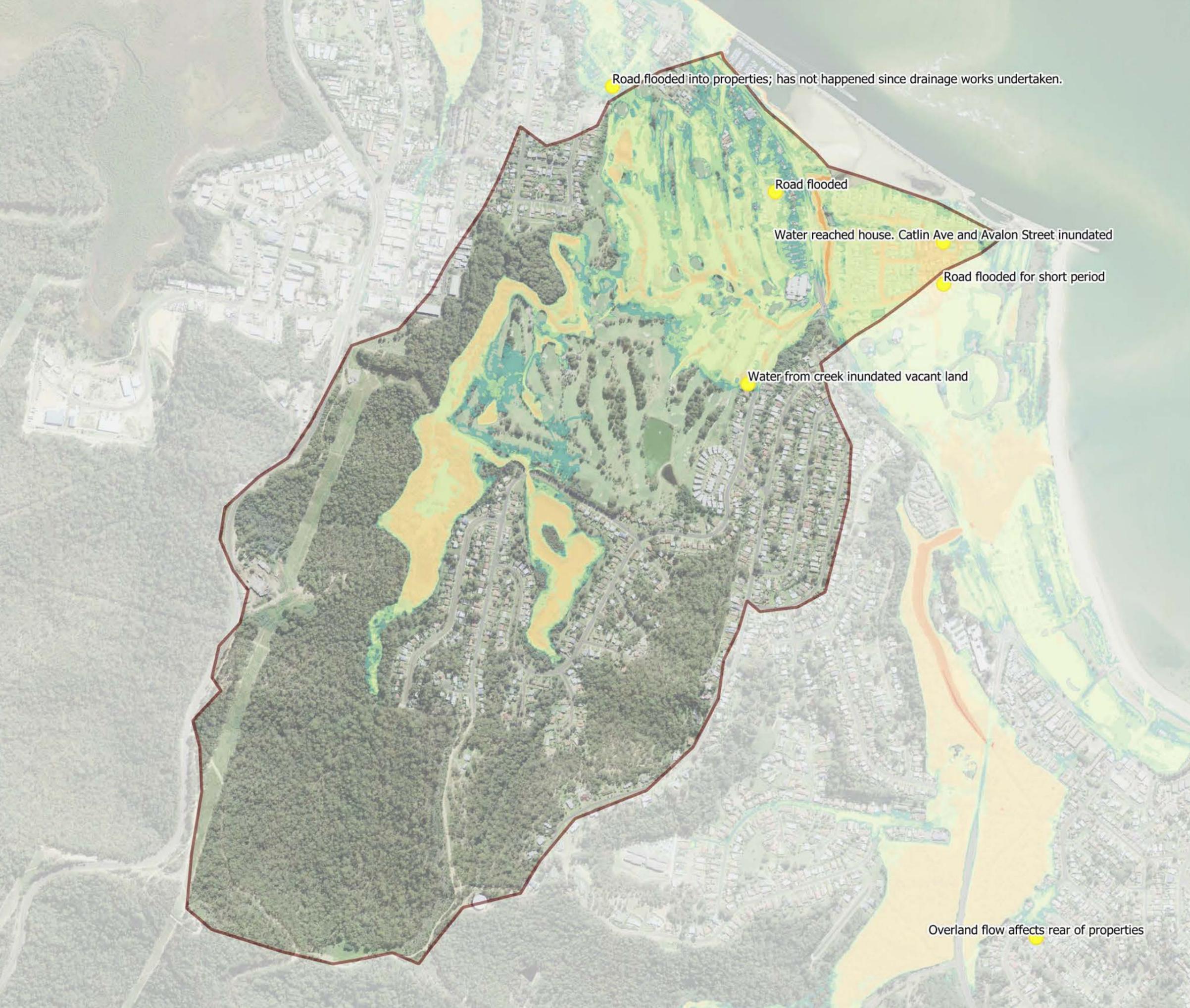


Scale : 1:7500@A3
 Date : 10 September 2019
 Revision : A
 Created by : LRE
 Coordinate System : MGA94 Zone 56



G701-e-1 Catalina Community Responses

-  Catchment Area
 -  Community Responses
- 1% AEP Depth
-  0 - 0.15
 -  0.15 - 0.3
 -  0.3 - 0.5
 -  0.5 - 1
 -  1 - 2
 -  2 - 3
 -  3 - 4
 -  >4



Road flooded into properties; has not happened since drainage works undertaken.

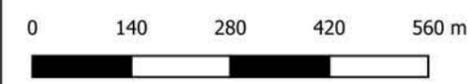
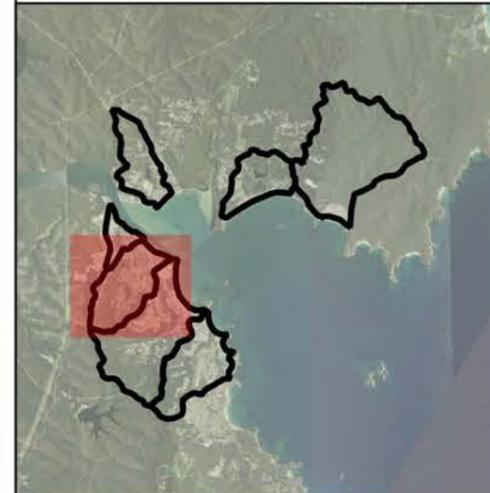
Road flooded

Water reached house. Catlin Ave and Avalon Street inundated

Road flooded for short period

Water from creek inundated vacant land

Overland flow affects rear of properties



Scale : 1:10000@A3
 Date : 10 September 2019
 Revision : A
 Created by : LRE
 Coordinate System : MGA94 Zone 56



G701-f-1 Batehaven Community Responses

-  Catchment Area
 -  Community Responses
- 1% AEP Depth
-  0 - 0.15
 -  0.15 - 0.3
 -  0.3 - 0.5
 -  0.5 - 1
 -  1 - 2
 -  2 - 3
 -  3 - 4
 -  >4

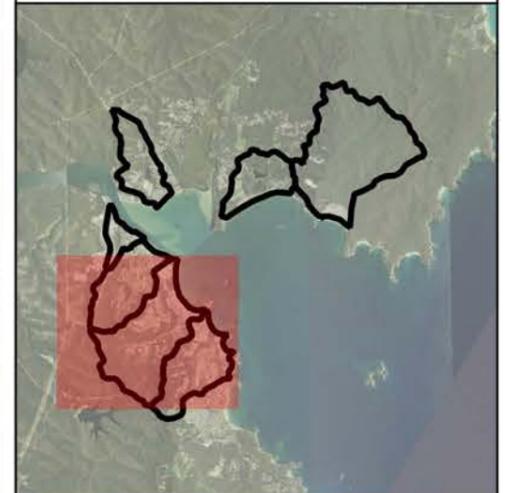
Water reached house. Catlin Ave and Avalon Street inundated

Road flooded for short period

Water from creek inundated vacant land

Overland flow affects rear of properties

Road flooded at Vet Clinic



Scale : 1:15000@A3
 Date : 10 September 2019
 Revision : A
 Created by : LRE
 Coordinate System : MGA94 Zone 56

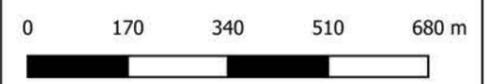


G701-g-1 Sunshine Bay Community Responses

-  Catchment Area
 -  Community Responses
- 1% AEP Depth
-  0 - 0.15
 -  0.15 - 0.3
 -  0.3 - 0.5
 -  0.5 - 1
 -  1 - 2
 -  2 - 3
 -  3 - 4
 -  >4

Overland flow affects rear of properties

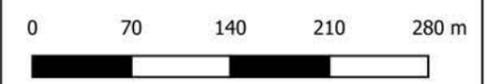
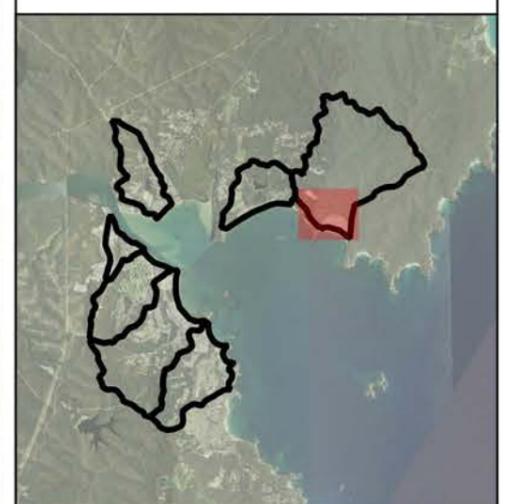
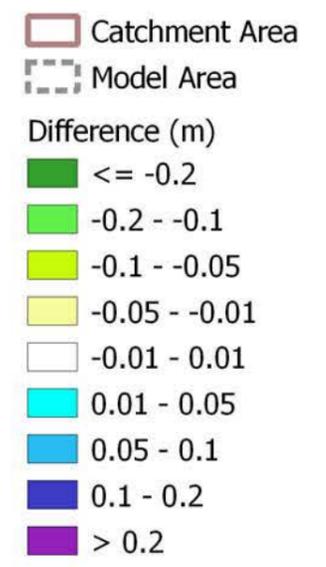
Road flooded at Vet Clinic



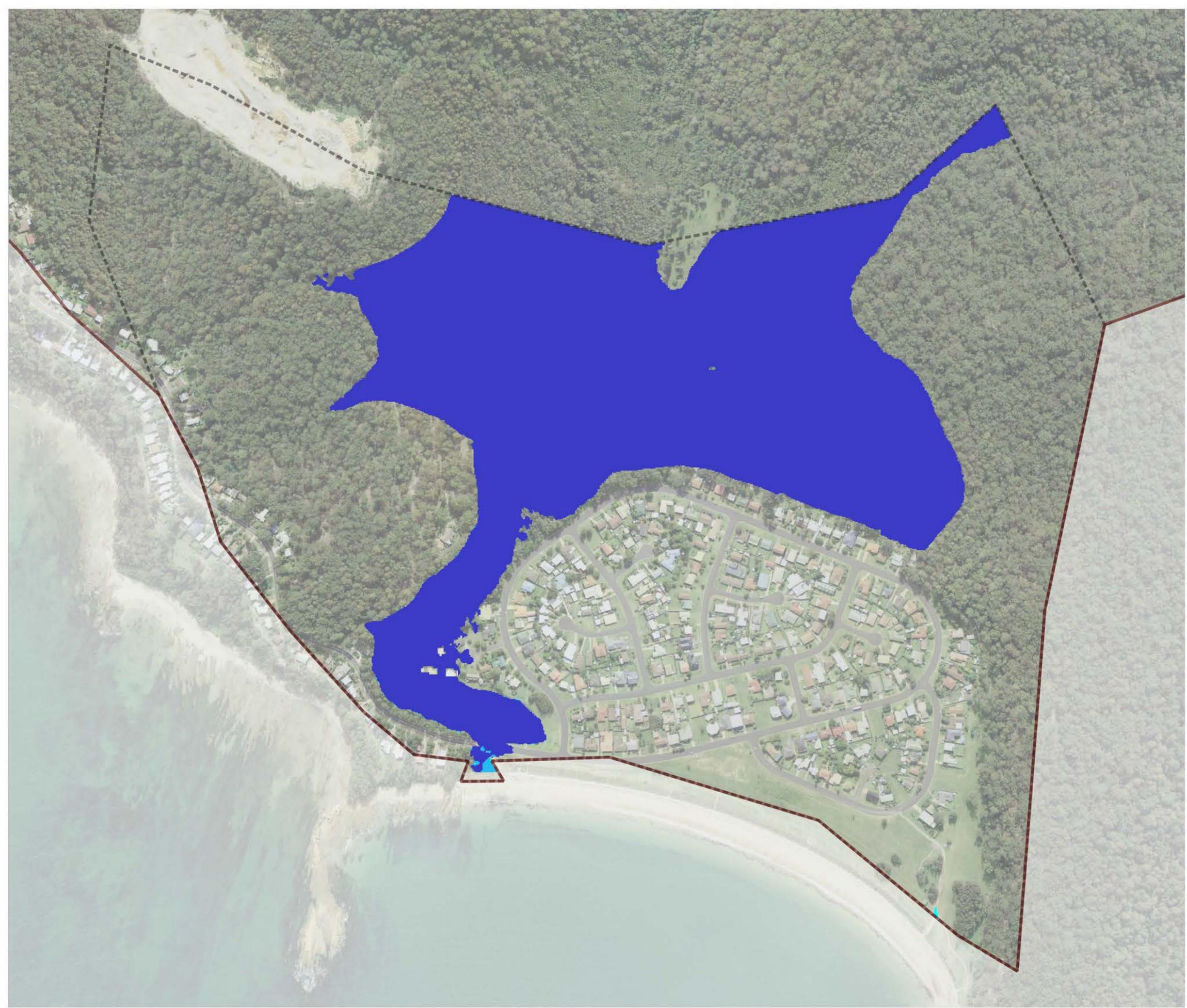
Scale : 1:12000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



**G702-a-1
Maloneys Beach
Sensitivity Inflows +20%**



Scale : 1:5000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56

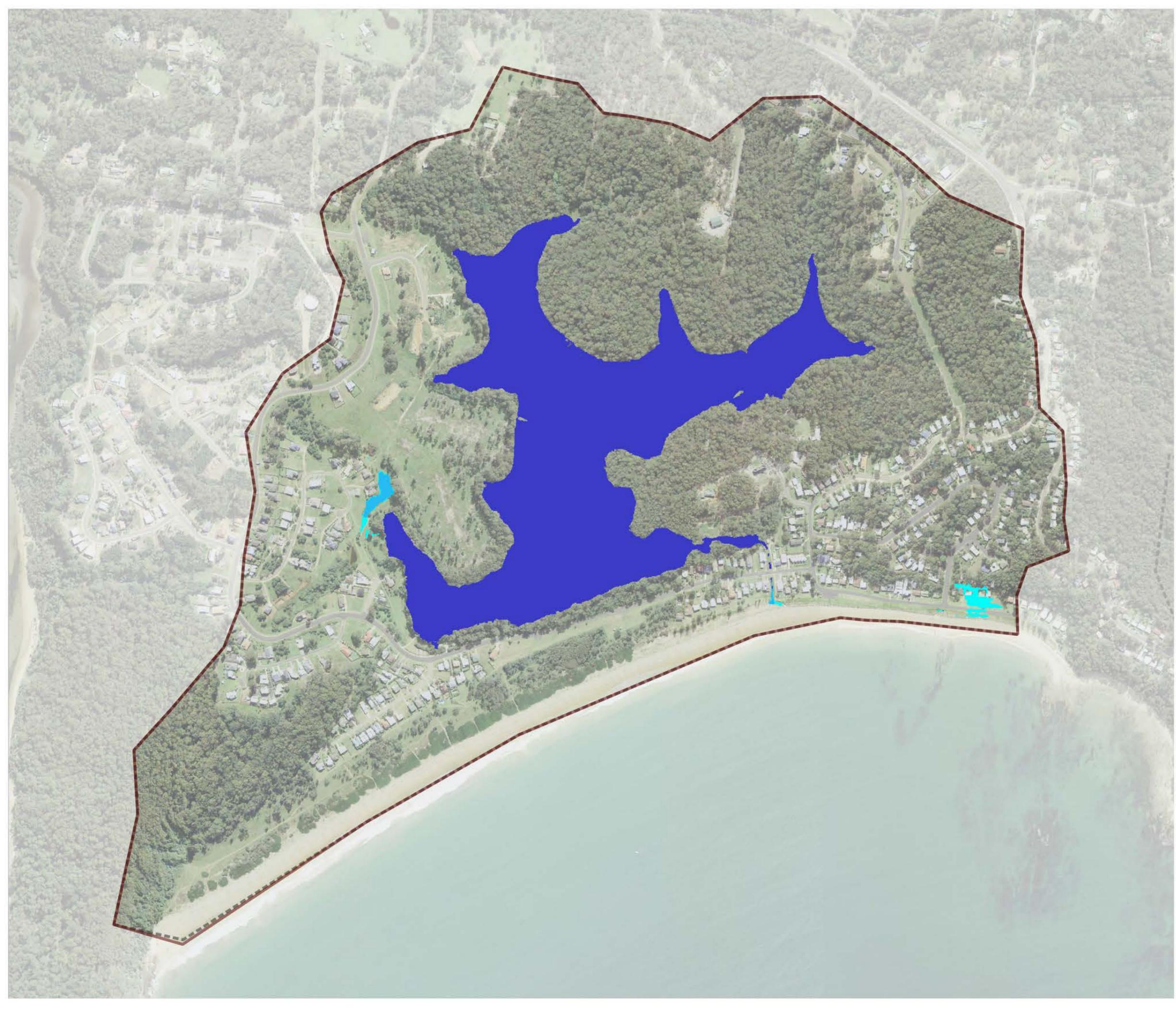


**G702-b-1
Long Beach
Sensitivity Inflows +20%**

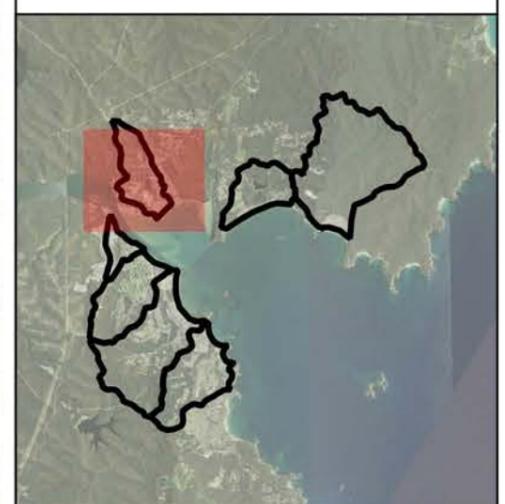
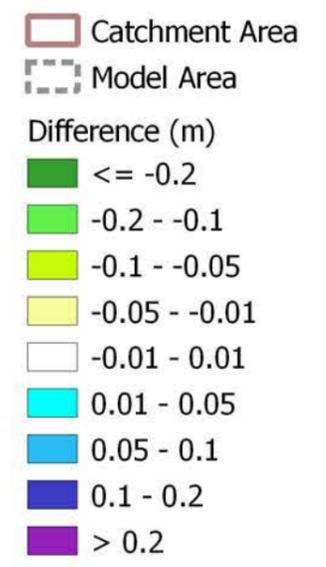
-  Catchment Area
-  Model Area
- Difference (m)**
-  ≤ -0.2
-  -0.2 - -0.1
-  -0.1 - -0.05
-  -0.05 - -0.01
-  -0.01 - 0.01
-  0.01 - 0.05
-  0.05 - 0.1
-  0.1 - 0.2
-  > 0.2



Scale : 1:7500@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



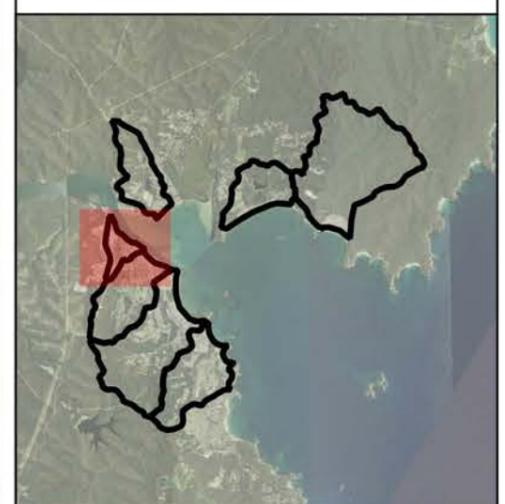
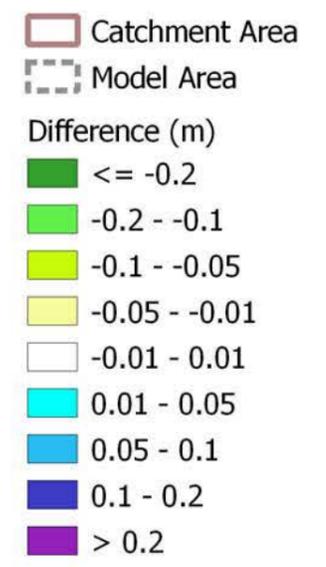
**G702-c-1
Surfside
Sensitivity Inflows +20%**



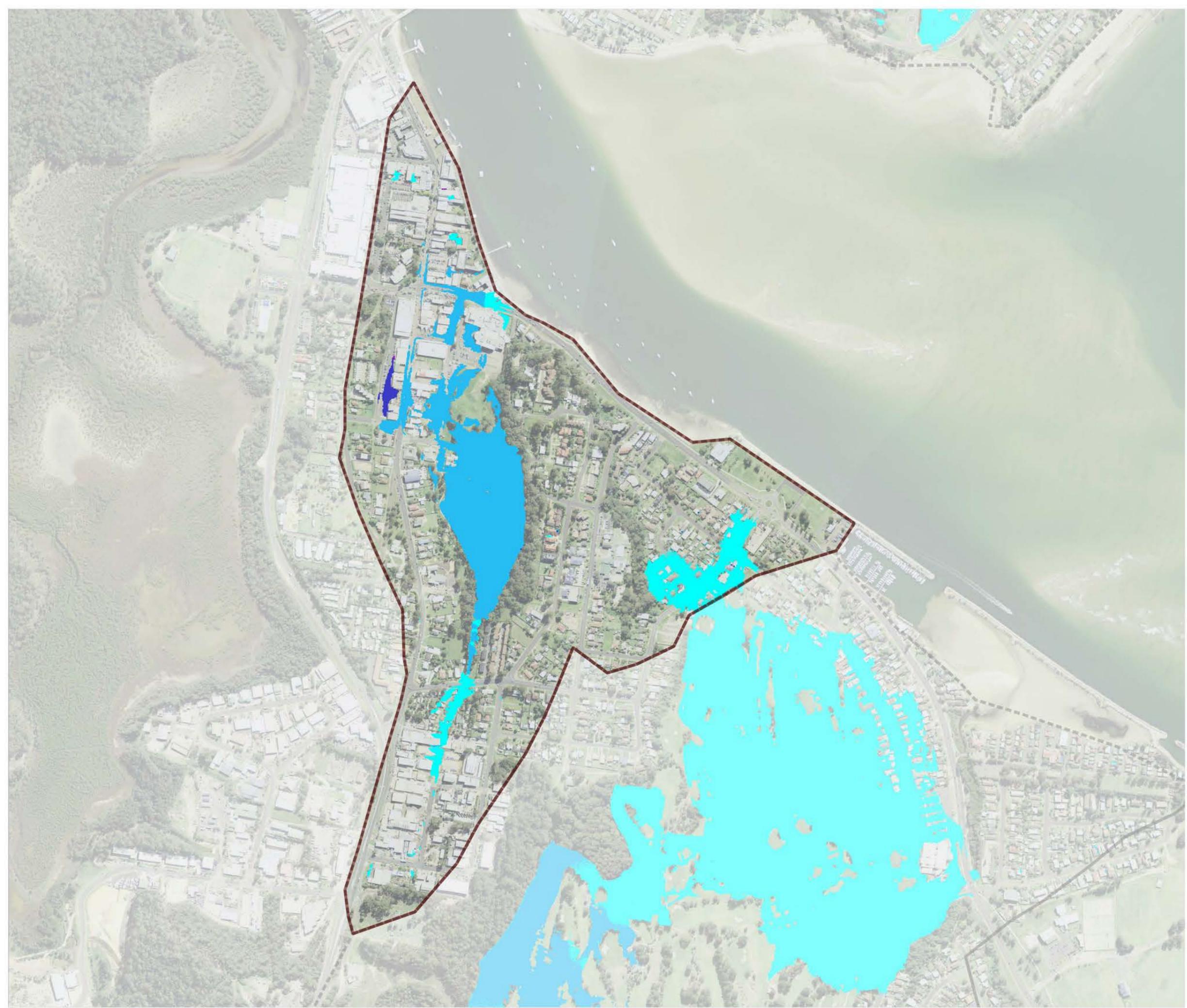
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Date : 10 September 2019
Revision : A
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Coordinate System : MGA94 Zone 56



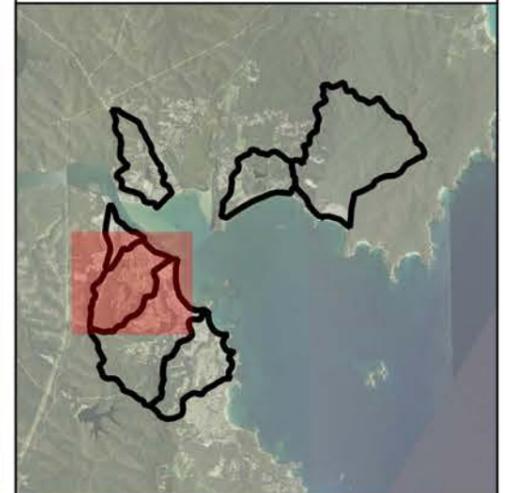
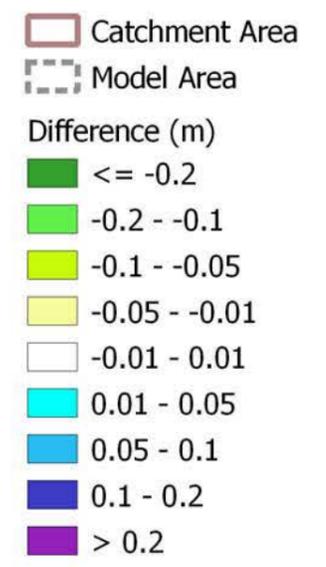
G702-d-1 Water Gardens Sensitivity Inflows +20%



Scale : 1:7500@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



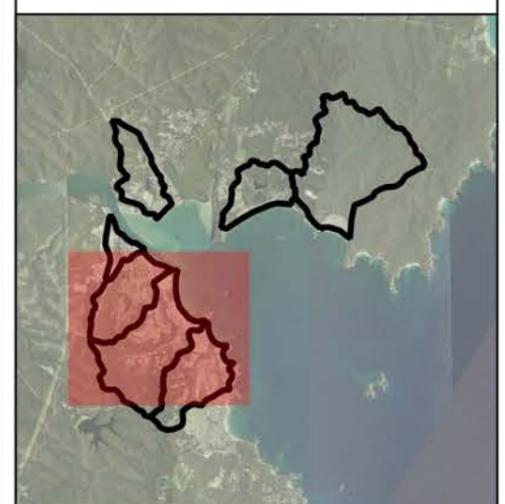
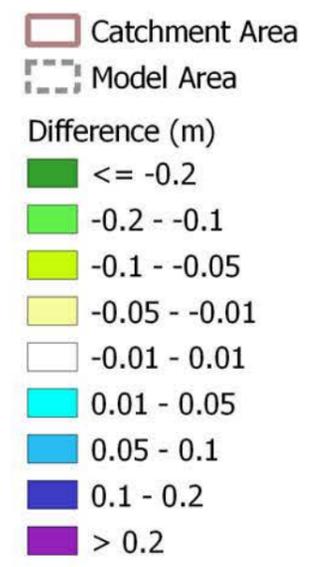
**G702-e-1
Catalina
Sensitivity Inflows +20%**



Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



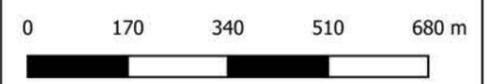
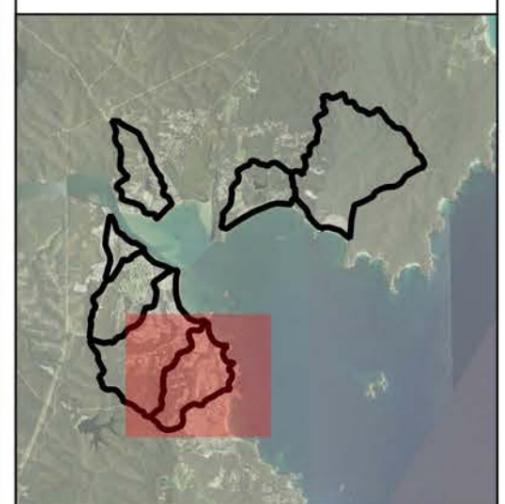
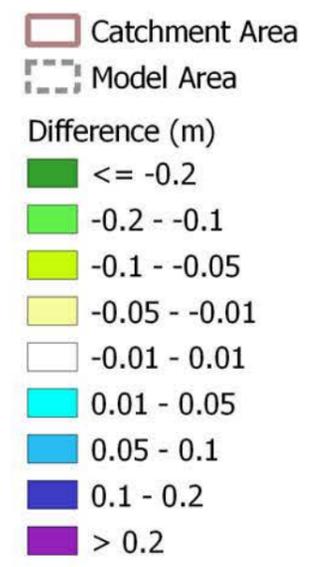
**G702-f-1
Batehaven
Sensitivity Inflows +20%**



Scale : 1:15000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



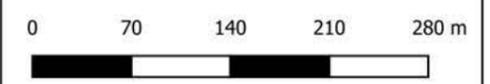
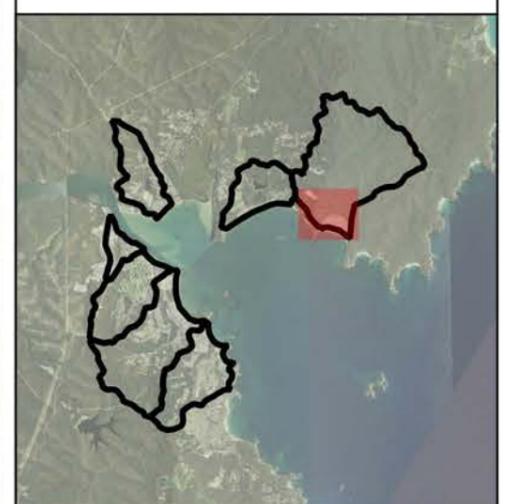
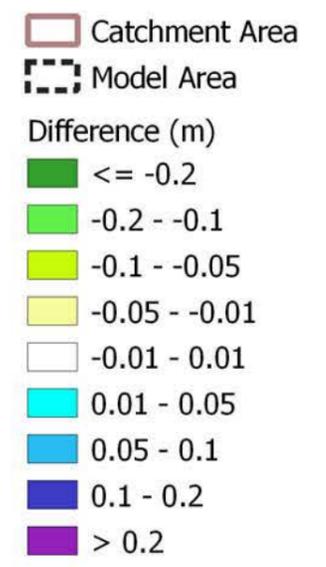
**G702-g-1
Sunshine Bay
Sensitivity Inflows +20%**



Scale : 1:12000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



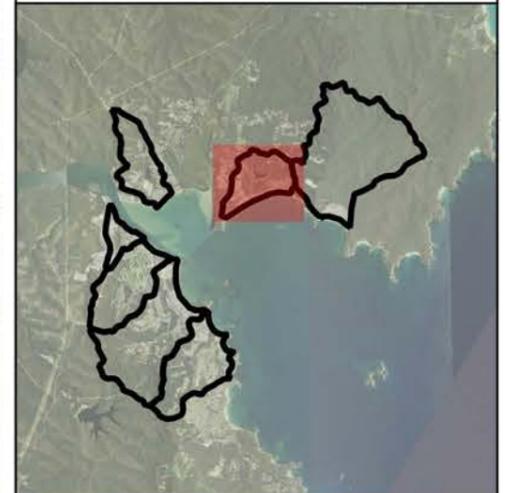
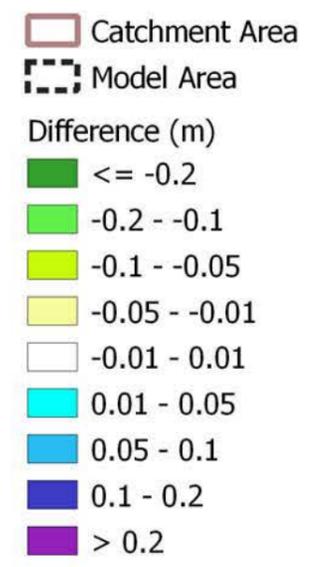
**G703-a-1
Maloneys Beach
Sensitivity Inflows -20%**



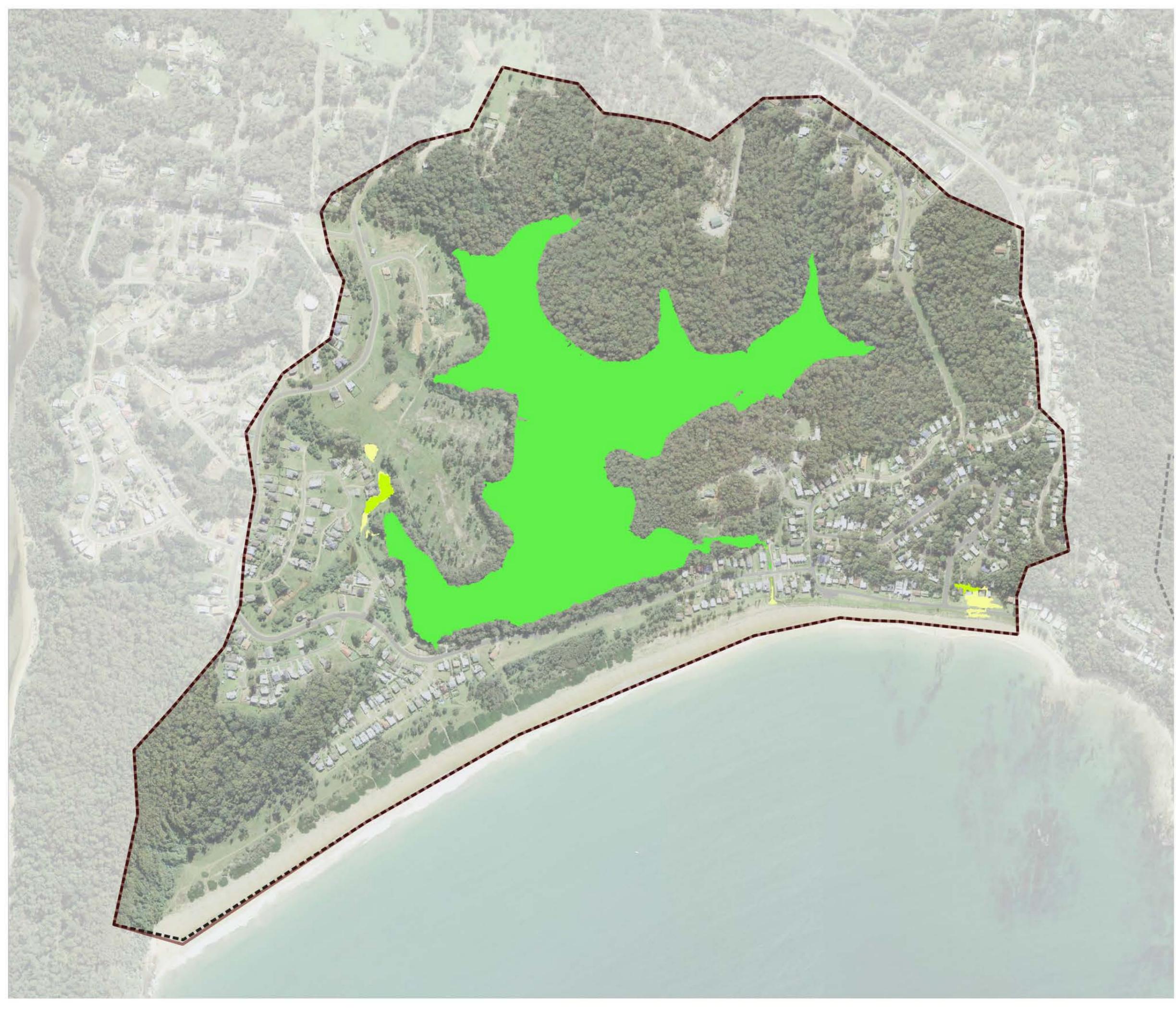
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Date : 10 September 2019
Revision : A
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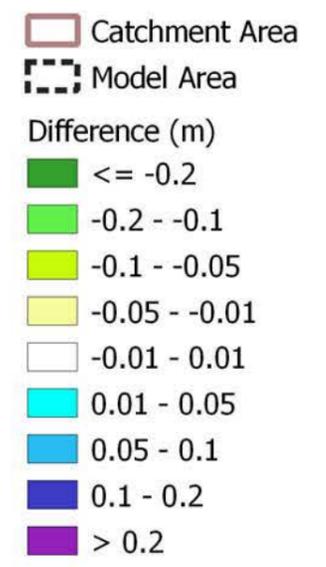
**G703-b-1
Long Beach
Sensitivity Inflows -20%**



Scale : 1:7500@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



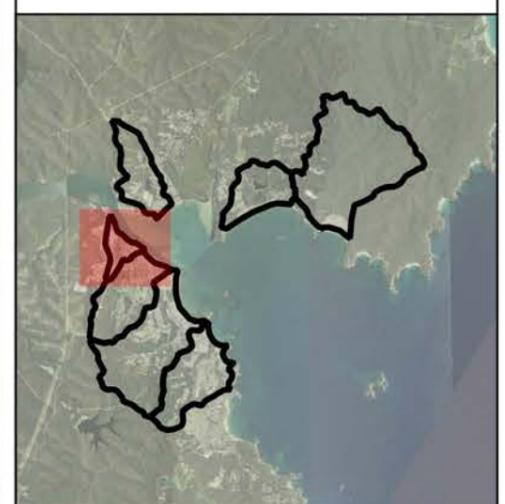
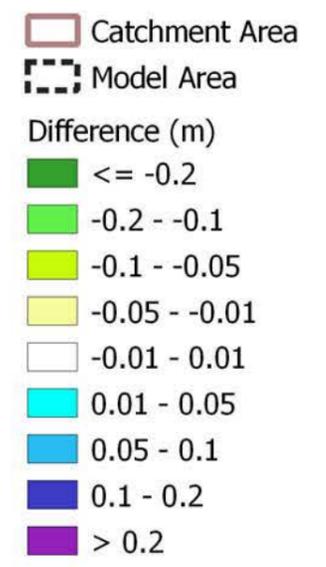
**G703-c-1
Surfside
Sensitivity Inflows -20%**



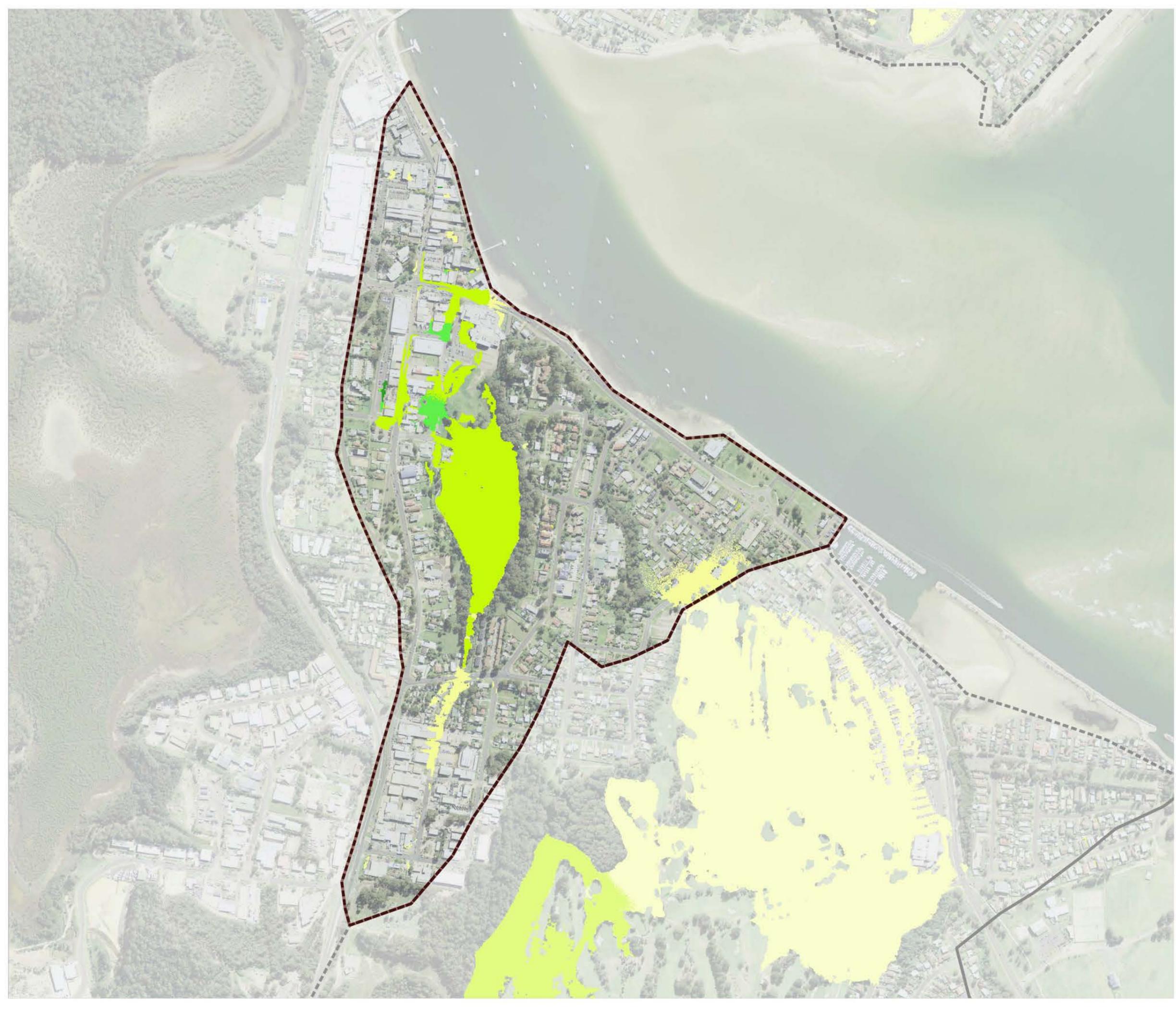
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Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



G703-d-1 Water Gardens Sensitivity Inflows -20%

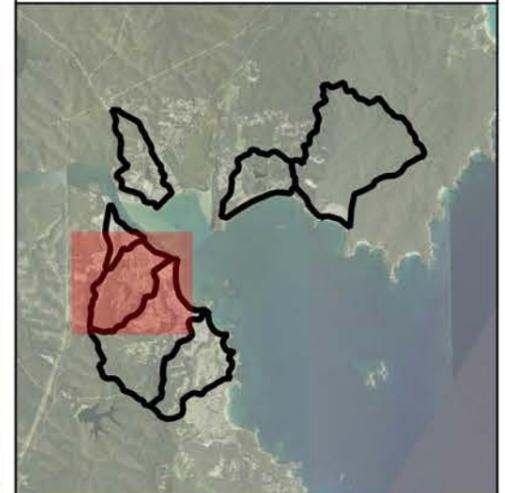


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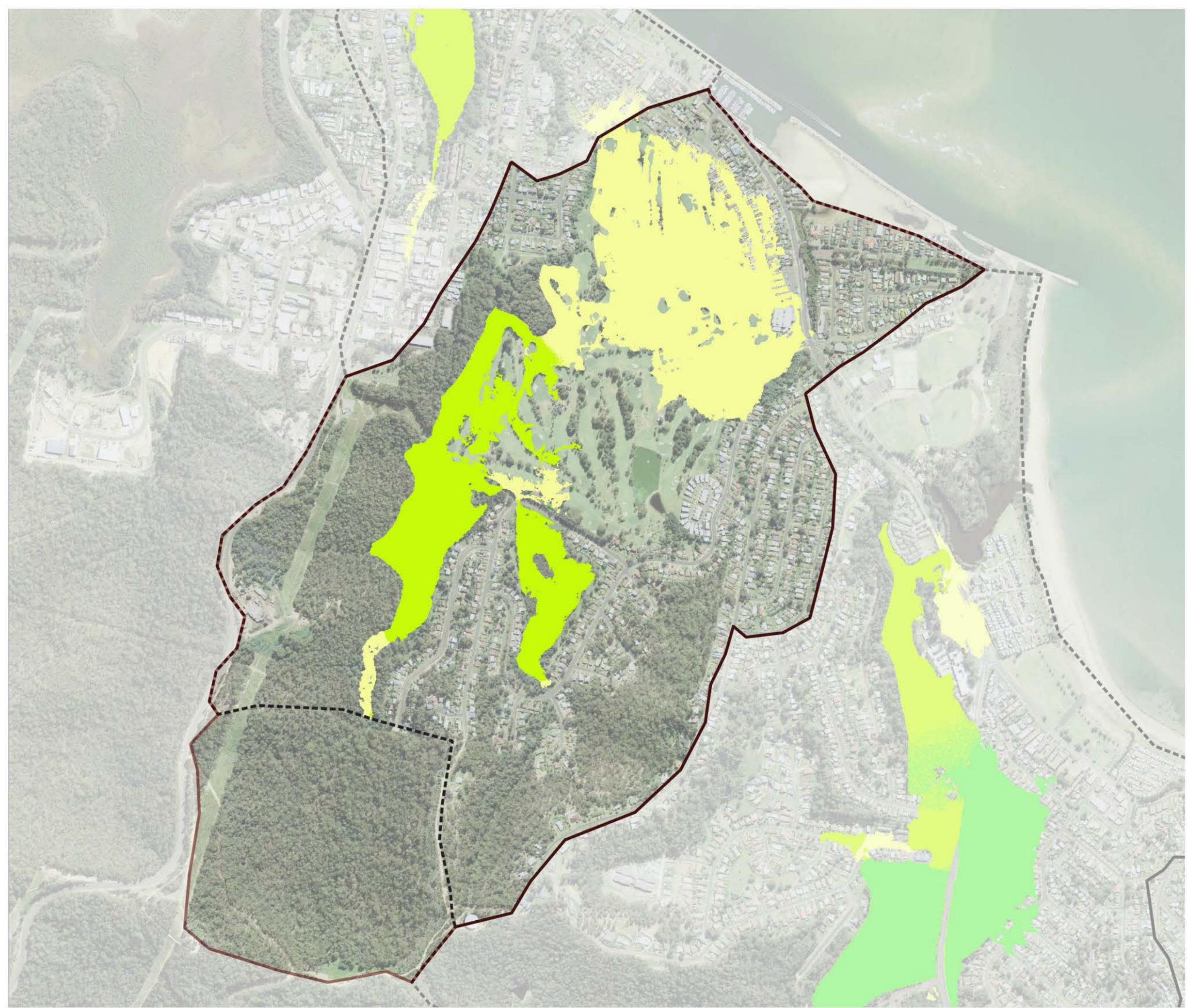


**G703-e-1
Catalina
Sensitivity Inflows -20%**

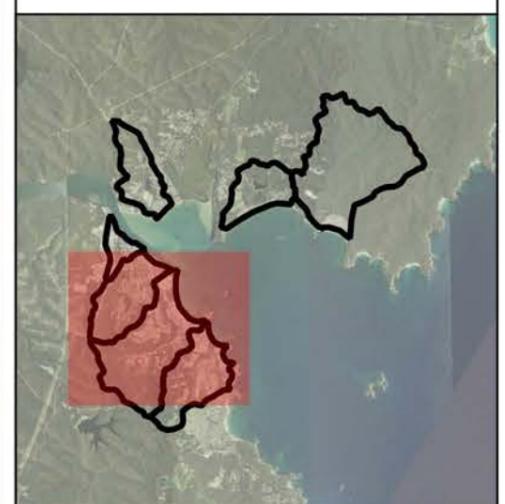
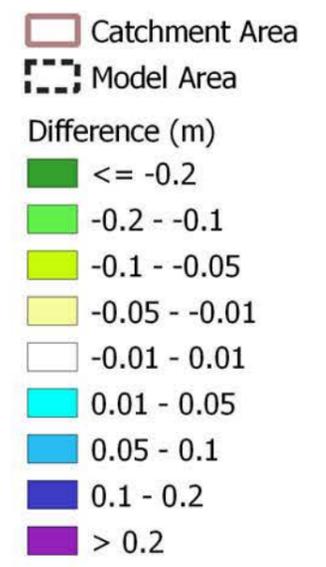
-  Catchment Area
-  Model Area
- Difference (m)**
-  ≤ -0.2
-  $-0.2 - -0.1$
-  $-0.1 - -0.05$
-  $-0.05 - -0.01$
-  $-0.01 - 0.01$
-  $0.01 - 0.05$
-  $0.05 - 0.1$
-  $0.1 - 0.2$
-  > 0.2



Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



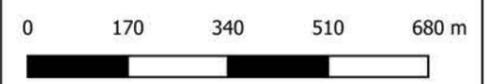
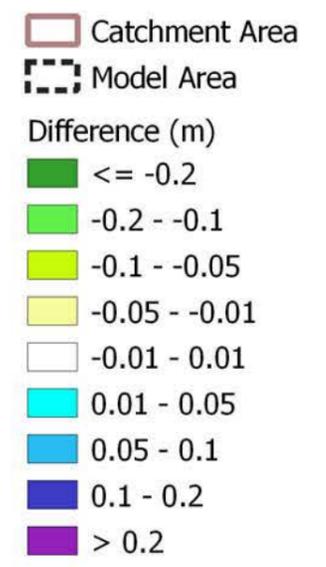
**G703-f-1
Batehaven
Sensitivity Inflows -20%**



Scale : 1:15000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



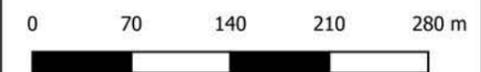
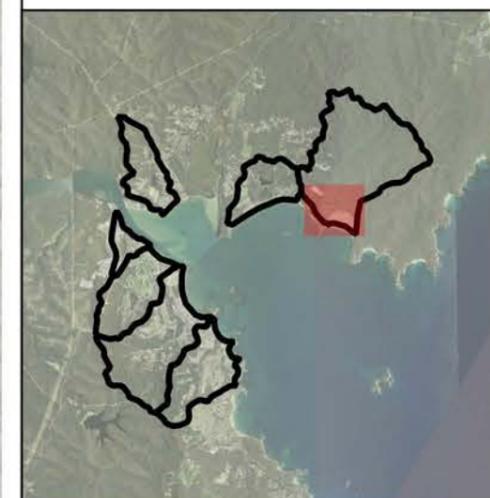
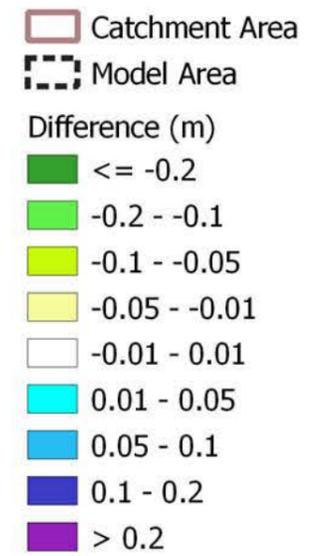
**G703-g-1
Sunshine Bay
Sensitivity Inflows -20%**



Scale : 1:12000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



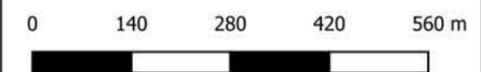
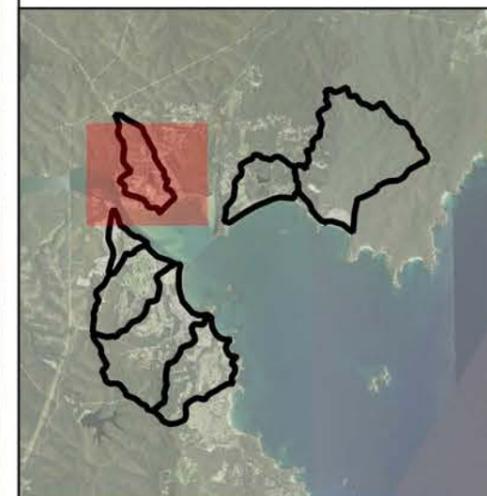
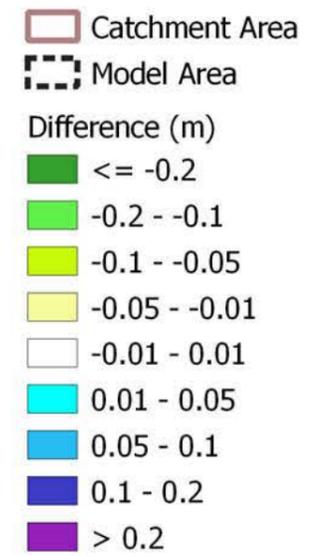
**G704-a-1
Maloneys Beach
Sensitivity Rough +20%**



Scale : 1:5000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56

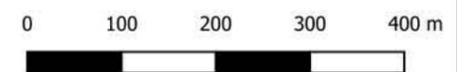
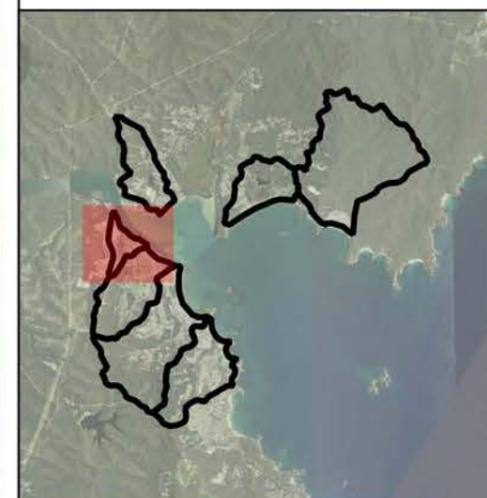
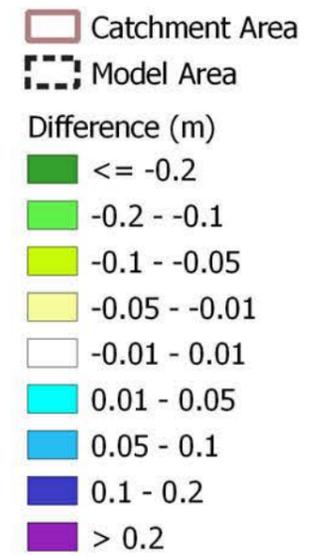


**G704-c-1
Surfside
Sensitivity Rough +20%**



Scale : 1:10000@A3
Date : 10 September 2019
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Created by : LRE
Coordinate System : MGA94 Zone 56

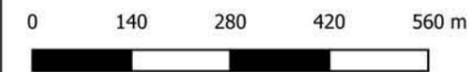
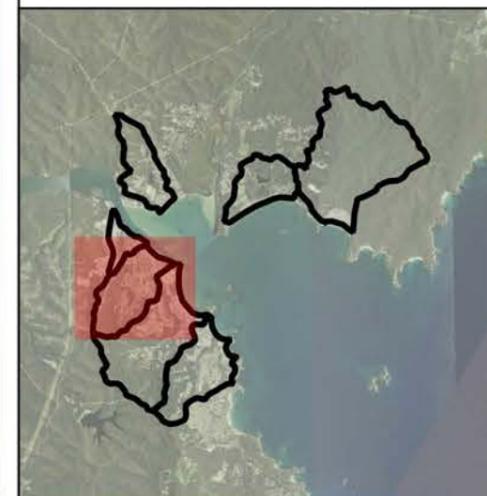
**G704-d-1
Water Gardens
Sensitivity Rough +20%**



Scale : 1:7500@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56

**G704-e-1
Catalina
Sensitivity Rough +20%**

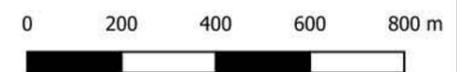
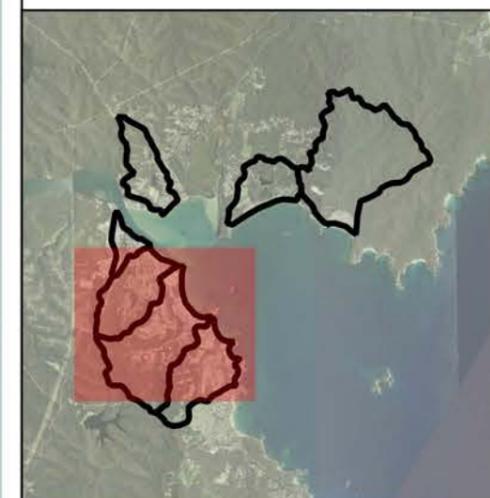
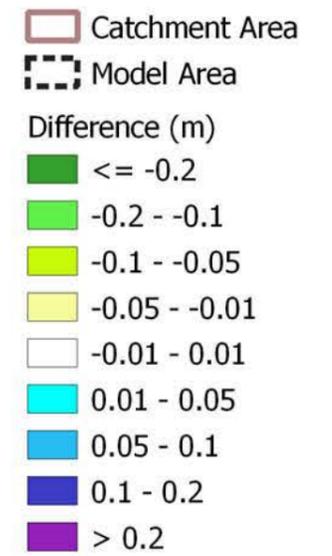
-  Catchment Area
-  Model Area
- Difference (m)**
-  ≤ -0.2
-  $-0.2 - -0.1$
-  $-0.1 - -0.05$
-  $-0.05 - -0.01$
-  $-0.01 - 0.01$
-  $0.01 - 0.05$
-  $0.05 - 0.1$
-  $0.1 - 0.2$
-  > 0.2



Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



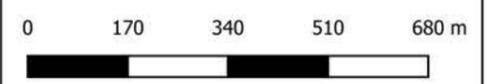
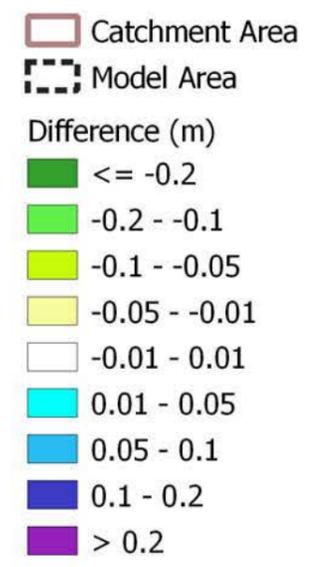
**G704-f-1
Batehaven
Sensitivity Rough +20%**



Scale : 1:15000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



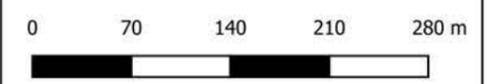
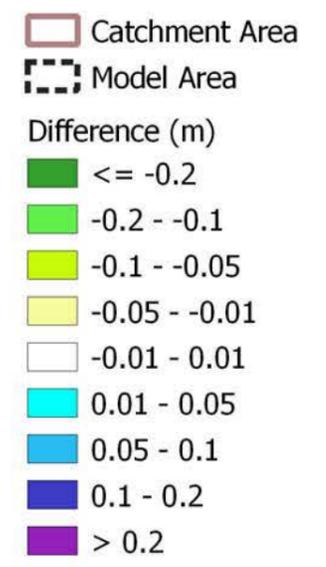
**G704-g-1
Sunshine Bay
Sensitivity Rough +20%**



Scale : 1:12000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



**G705-a-1
Maloneys Beach
Sensitivity Rough -20%**



Scale : 1:5000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56



**G705-c-1
Surfside
Sensitivity Rough -20%**

-  Catchment Area
-  Model Area
- Difference (m)**
-  ≤ -0.2
-  $-0.2 - -0.1$
-  $-0.1 - -0.05$
-  $-0.05 - -0.01$
-  $-0.01 - 0.01$
-  $0.01 - 0.05$
-  $0.05 - 0.1$
-  $0.1 - 0.2$
-  > 0.2



Scale : 1:10000@A3
Date : 10 September 2019
Revision : A
Created by : LRE
Coordinate System : MGA94 Zone 56

