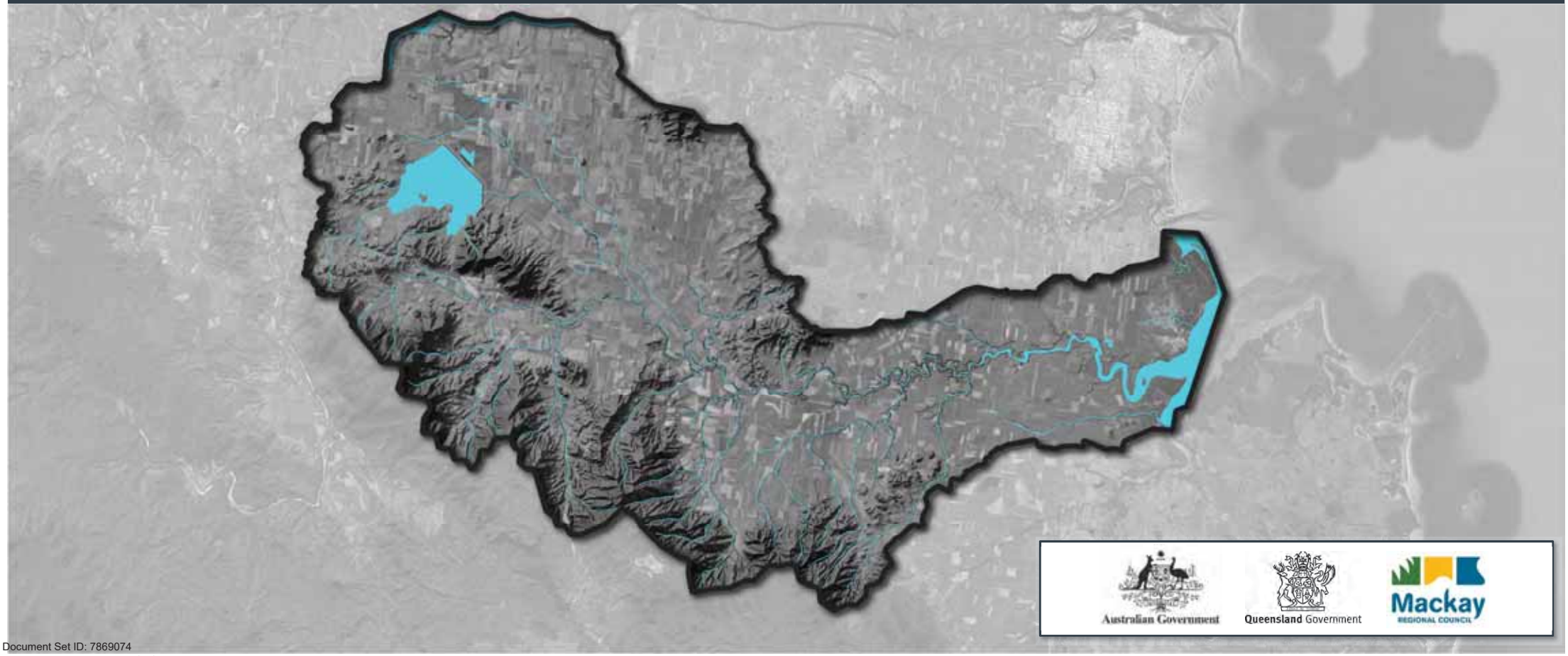
Mackay Regional Council
21-Jan-2020
Doc No. M052-19

AECOM

SANDY CREEK CATCHMENT

VOLUME 2 REPORT
TROPICAL CYCLONE DEBBIE FLOOD STUDIES

Prepared for Mackay Regional Council as part of the Tropical Cyclone Debbie Flood Studies with funding assistance from the Australian and Queensland Governments through the 2017-2018 Natural Disaster Resilience Program.



Australian Government
Queensland Government
Mackay Regional Council

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020

Sandy Creek Catchment

Tropical Cyclone Debbie Flood Study

Client: Mackay Regional Council

ABN: 56 240 712 069

Prepared by

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21-Jan-2020

Job No.: 60598460

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Quality Information

Document Sandy Creek Catchment

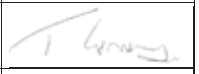
Ref M052-19

Date 21-Jan-2020

Prepared by Hayden Brigg

Reviewed by Trevor Corney / Wes Bailey

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
A	18-Oct-2019	Draft for Client Comment	Trevor Corney Principal Project Manager	Original Signed
0	21-Jan-2020	Original Issue	Trevor Corney Principal Project Manager	

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Explanatory Notes and Disclaimer

These maps are to be viewed in conjunction with the Sandy Creek Catchment – Tropical Cyclone Debbie Flood Study Report (AECOM, 2019). Study methodology and assumptions are outlined in the Volume 1 report.

This mapping has been developed to represent local catchment flood behaviour in the Sandy Creek area, particularly around the residential areas.

Information presented in this mapping may vary, depending upon development within the floodplain over time. It is suggested that the TUFLOW model and these associated maps be updated by Mackay Regional Council as development occurs.

The development of the TUFLOW hydraulic model is detailed in Sandy Creek Catchment – Tropical Cyclone Debbie Flood Study Report – Volume 1 (AECOM, 2019). This report outlines input data, modelling assumptions and schematisation parameters adopted.

All information presented in this mapping is expressed in meters Australian Height Datum (AHD).

Hydraulic model results used in this mapping is based on an 8-metre fixed Cartesian grid hydraulic model. Use of the mapping to determine hydraulic parameters in sub-grid scale applications is not recommended.

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Any person using these maps and associated data accepts the risk of:

1. Using the map/s and associated data in electronic form without requesting and checking them for accuracy against the original hard copy version.
2. Using the map/s and associated data for any purpose not agreed to in writing by Mackay Regional Council.

Notes on Flood Frequency

The frequency of flood events is generally referred to in terms of their Annual Exceedance Probability (AEP) or Average Recurrence Interval (ARI). For example, for a flood magnitude having 5% AEP, there is a 5% probability that there will be floods of equal or greater magnitude each year. As another example, for a flood having 5-year ARI, there will be floods of equal or greater magnitude once in 5 years on average. Events more frequent than 50% AEP should be expressed as X Exceedances per Year (EY). The correspondence between the two systems is below. The frequency flood events from 10% AEP to 0.02% AEP used in this study.

Table 1 Flood Frequency Comparison

Annual Exceedance Probability (AEP), %	Average Recurrence Interval (ARI), Years
63 (1EY)	1
39	2
18	5
2	50
1	100
0.5	200
0.2	500

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Hydraulic Model Results Mapping

Existing Conditions Model Results Mapping

Map Number	Map Title
1	Peak Water Surface Elevation (PWSE) – 63% AEP (1 EY) – 18 Hour Storm
2	Peak Water Surface Elevation (PWSE) – 39% AEP (2 Year ARI) – 18 Hour Storm
3	Peak Water Surface Elevation (PWSE) – 18% AEP (5 Year ARI) – 18 Hour Storm
4	Peak Water Surface Elevation (PWSE) – 2% AEP (50 Year ARI) – 18 Hour Storm
5	Peak Water Surface Elevation (PWSE) – 1% AEP (100 Year ARI) – 18 Hour Storm
6	Peak Water Surface Elevation (PWSE) – 0.5% AEP (200 Year ARI) – 18 Hour Storm
7	Peak Water Surface Elevation (PWSE) – 0.2% AEP (500 Year ARI) – 18 Hour Storm
8	Peak Water Surface Elevation (PWSE) – PMF Event – 48 Hour Storm
9	Peak Flood Depth – 1EY (63% AEP) – 18 Hour Storm
10	Peak Flood Depth – 39% AEP (2 Year ARI) – 18 Hour Storm
11	Peak Flood Depth – 18% AEP (5 Year ARI) – 18 Hour Storm
12	Peak Flood Depth – 2% AEP (50 Year ARI) – 18 Hour Storm
13	Peak Flood Depth – 1% AEP (100 Year ARI) – 18 Hour Storm
14	Peak Flood Depth – 0.5% AEP (200 Year ARI) – 18 Hour Storm
15	Peak Flood Depth – 0.2% AEP (500 Year ARI) – 18 Hour Storm
16	Peak Flood Depth – PMF Event – 48 Hour Storm
17	Peak Depth Averaged Velocity – 1EY (63% AEP) – 18 Hour Storm
18	Peak Depth Averaged Velocity – 39% AEP (2 Year ARI) – 18 Hour Storm
19	Peak Depth Averaged Velocity – 18% AEP (5 Year ARI) – 18 Hour Storm
20	Peak Depth Averaged Velocity – 2% AEP (50 Year ARI) – 18 Hour Storm
21	Peak Depth Averaged Velocity – 1% AEP (100 Year ARI) – 18 Hour Storm
22	Peak Depth Averaged Velocity – 0.5% AEP (200 Year ARI) – 18 Hour Storm
23	Peak Depth Averaged Velocity – 0.2% AEP (500 Year ARI) – 18 Hour Storm
24	Peak Depth Averaged Velocity – PMF Event – 48 Hour Storm
25	Flood Hazard Mapping – 18% AEP (5 Year ARI) – 18 Hour Storm
26	Flood Hazard Mapping – 1% AEP (100 Year ARI) – 18 Hour Storm

Tropical Cyclone Debbie Model Results Mapping

Map Number	Map Title
27	Peak Water Surface Elevation – Tropical Cyclone Debbie Event
28	Peak Flood Depth - Tropical Cyclone Debbie Event
29	Peak Velocity and Flow Direction - Tropical Cyclone Debbie Event

Sensitivity Mapping

Map Number	Map Title
30	Difference in Peak Water Surface – Climate Change Sensitivity – Climate Change Scenario minus Existing Conditions 1% AEP (100 Year ARI)
31	Difference in Peak Water Surface – Climate Change Sensitivity – Climate Change Scenario minus Existing Conditions 0.2% AEP (500 Year ARI)
32	Difference in Peak Water Surface – Manning's Roughness Sensitivity (+20%) – Increased Roughness minus Basecase 1% AEP (100 Year ARI)
33	Difference in Peak Water Surface – Manning's Roughness Sensitivity (-20%) – Decreased Roughness minus Basecase 1% AEP (100 Year ARI)
34	Difference in Peak Water Surface – Blockage Sensitivity – Increased Blockage Scenario minus Basecase 1% AEP (100 Year ARI)

Planning Scheme Flood Hazard Overlay

Map Number	Map Title
35	Peak Water Surface Elevation (PWSE) – Climate Change Scenario – 1% AEP (100 Year ARI)
36	Peak Flood Depth – Climate Change Scenario – 1% AEP (100 Year ARI)
37	Peak Depth Averaged Velocity – Climate Change Scenario – 1% AEP (100 Year ARI)
38	Flood Hazard Mapping – Climate Change Scenario – 1% AEP (100 Year ARI)
39	Peak Water Surface Elevation (PWSE) – Climate Change Scenario – 0.2% AEP (500 Year ARI)
40	Peak Flood Depth – Climate Change Scenario – 0.2% AEP (500 Year ARI)
41	Peak Depth Averaged Velocity – Climate Change Scenario – 0.2% AEP (500 Year ARI)
42	Flood Hazard Mapping – Climate Change Scenario – 0.2% AEP (500 Year ARI)

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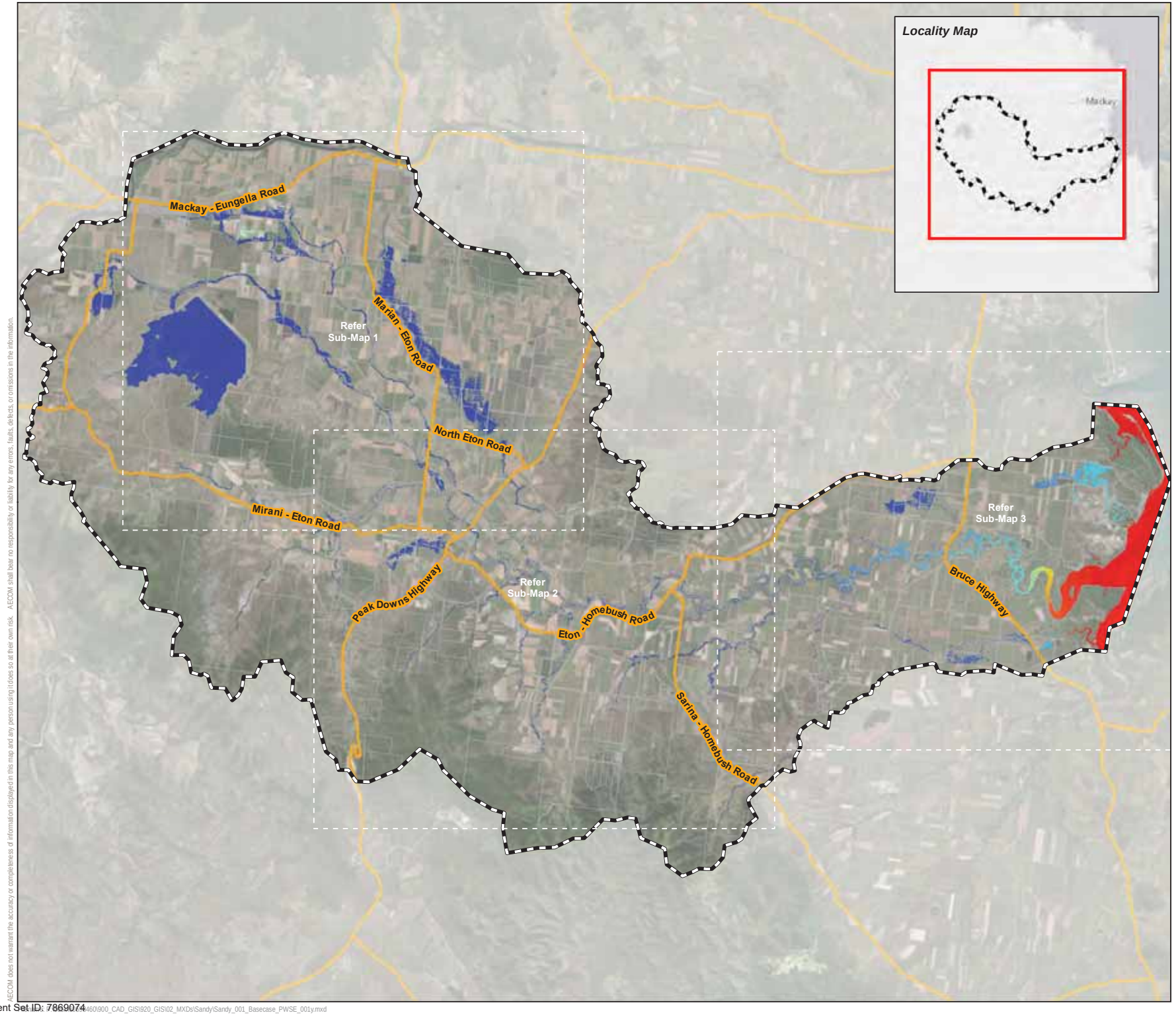

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 39.476

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

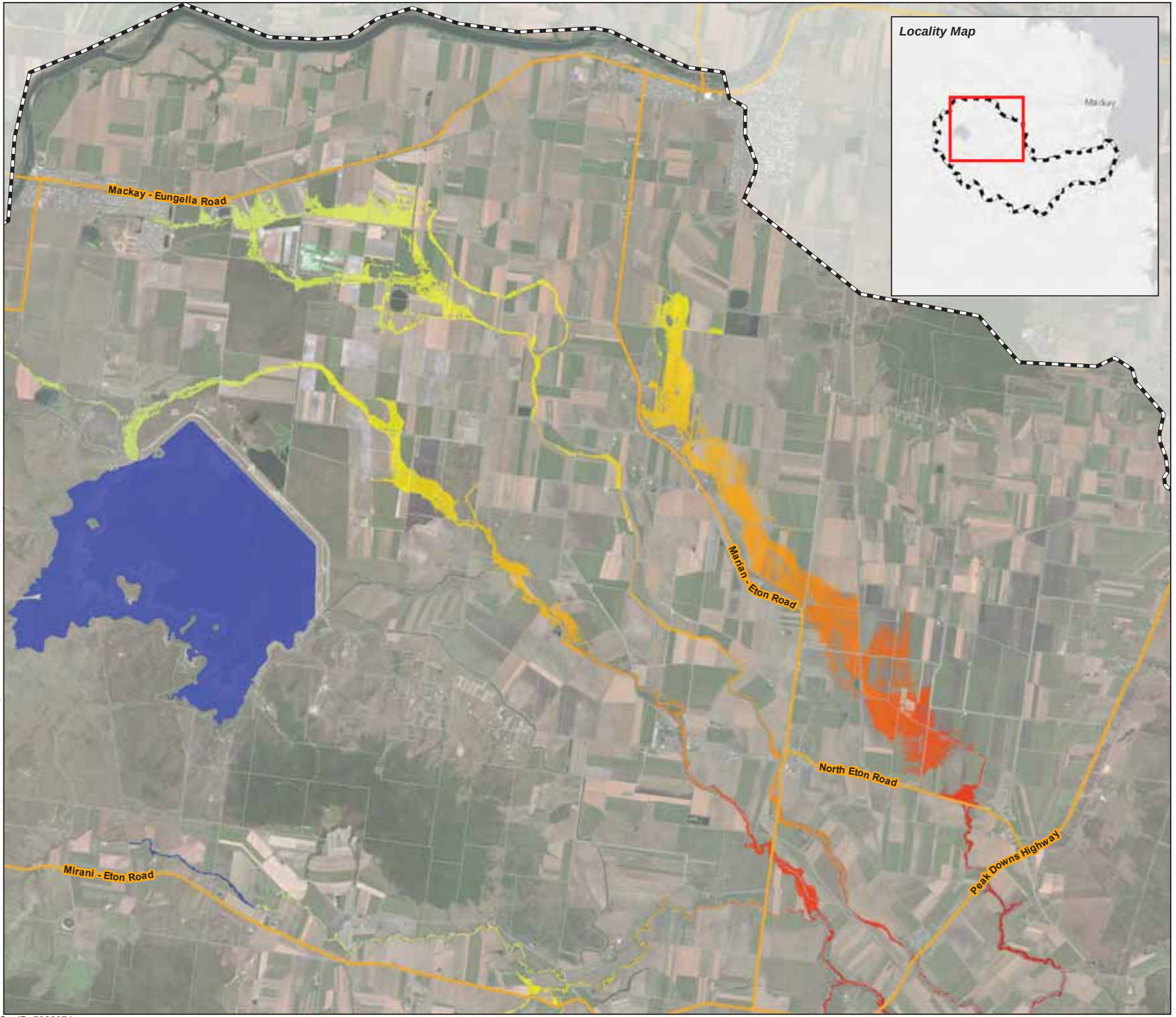
Peak Water Surface Elevation (PWSE)
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	28/09/2019
VERSION:	v01

Map
01.0

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 65.9934

Low : 24.1956

Data sources:
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Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	28/09/2019
VERSION:	v01

Map
01.1

A3 size

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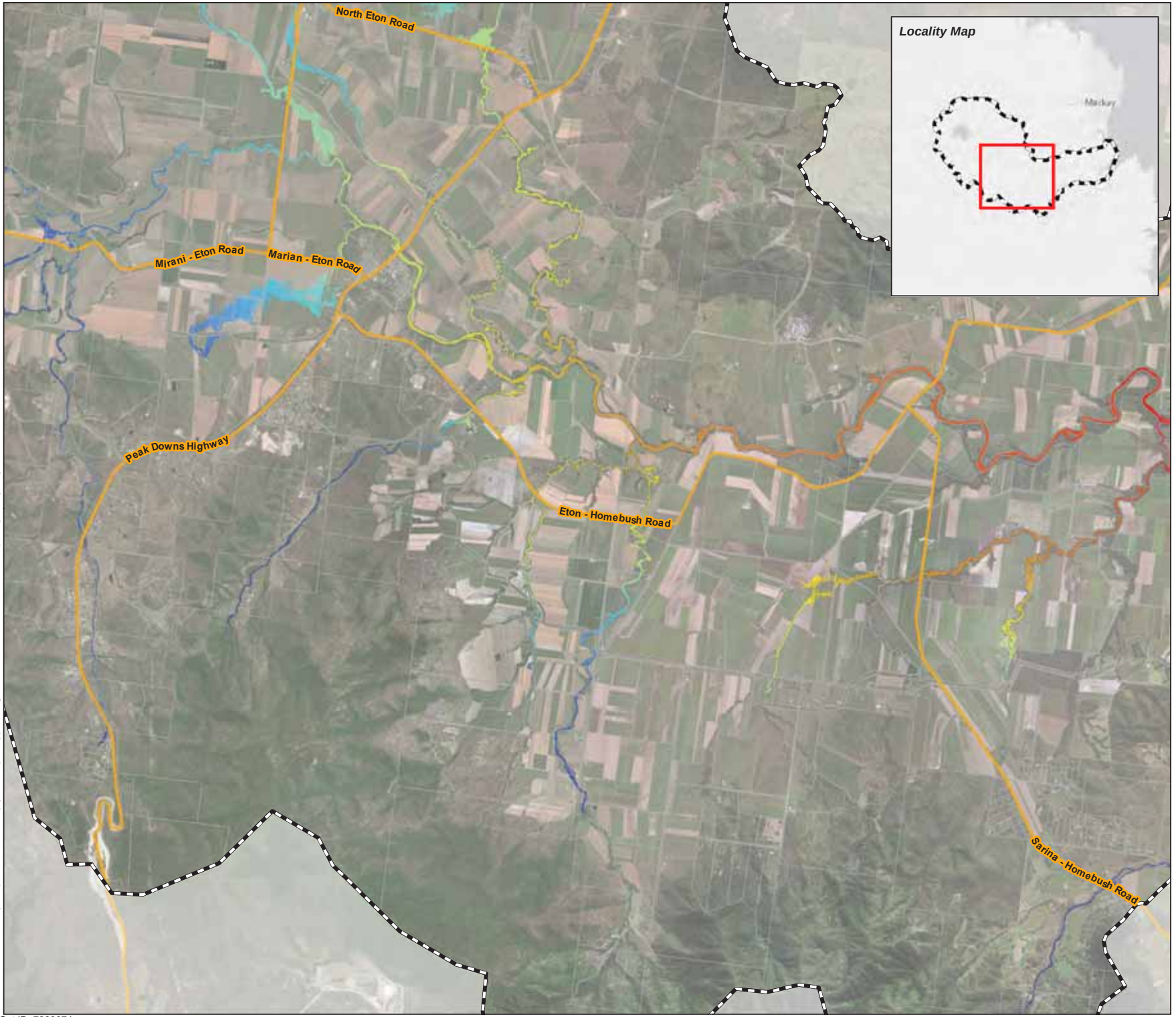

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 110.836

Low : 8.07351

Data sources:
Base Data: (c) 2019 (MRC)
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Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
1EY Event - 18 Hour Storm

PROJECT ID	60598460
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LAST MODIFIED	28/09/2019
VERSION:	v01

Map
01.2

A3 size

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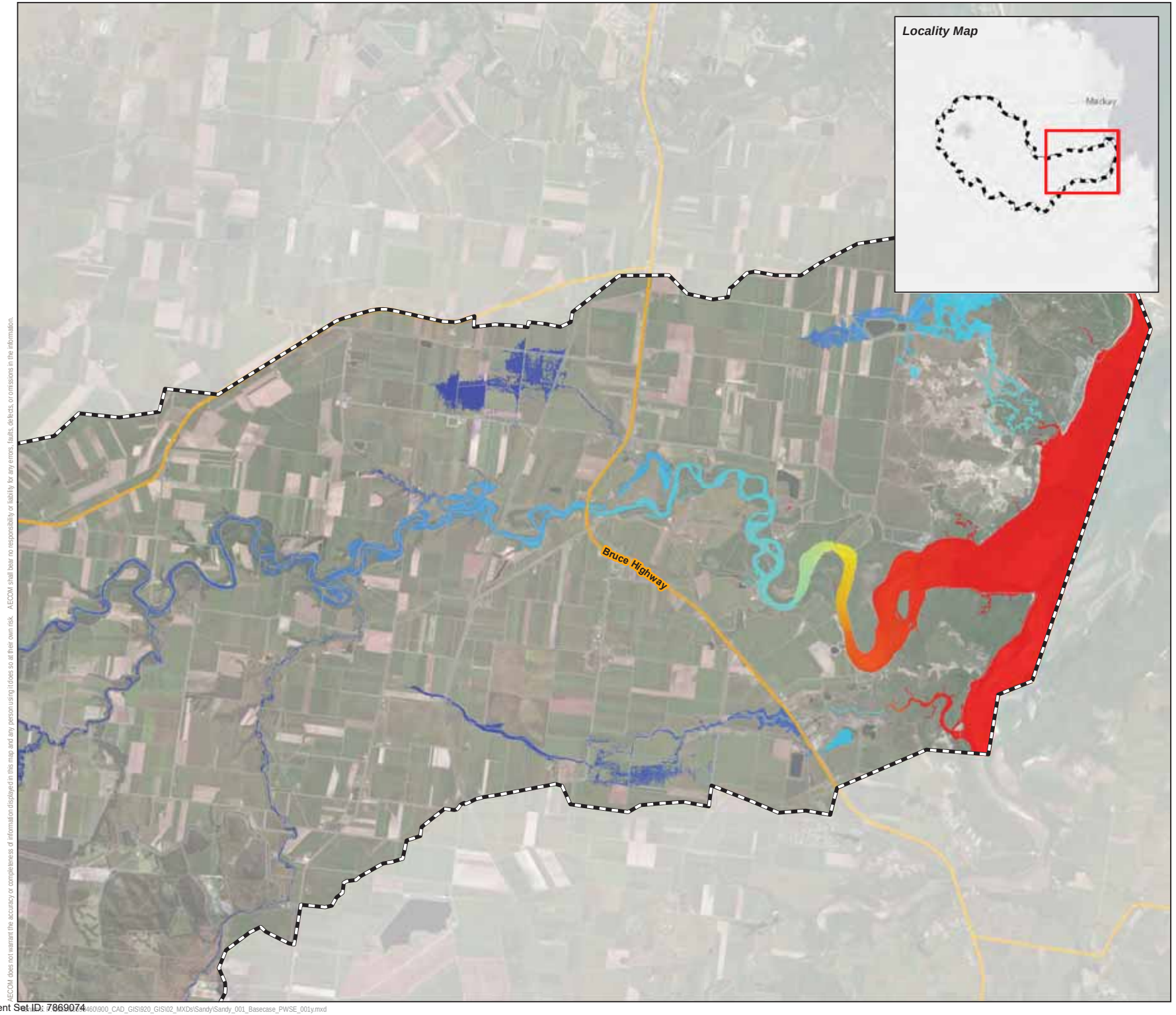

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0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 39.476

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
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Peak Water Surface Elevation (PWSE)
1EY Event - 18 Hour Storm

PROJECT ID	60598460
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VERSION:	v01

Map
01.3

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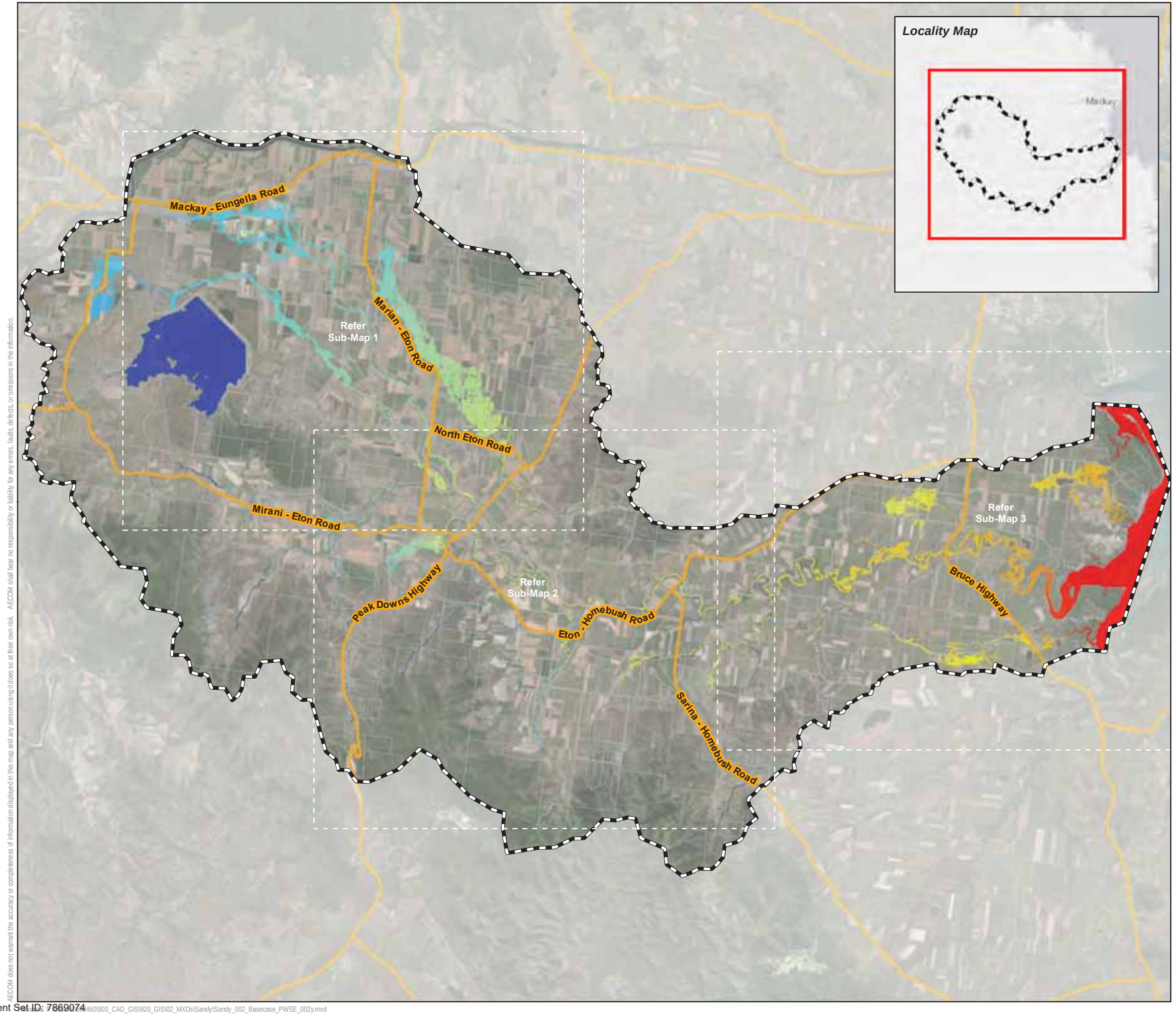

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 107.232

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
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Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
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LAST MODIFIED	28/09/2019
VERSION:	v01

Map
02.0

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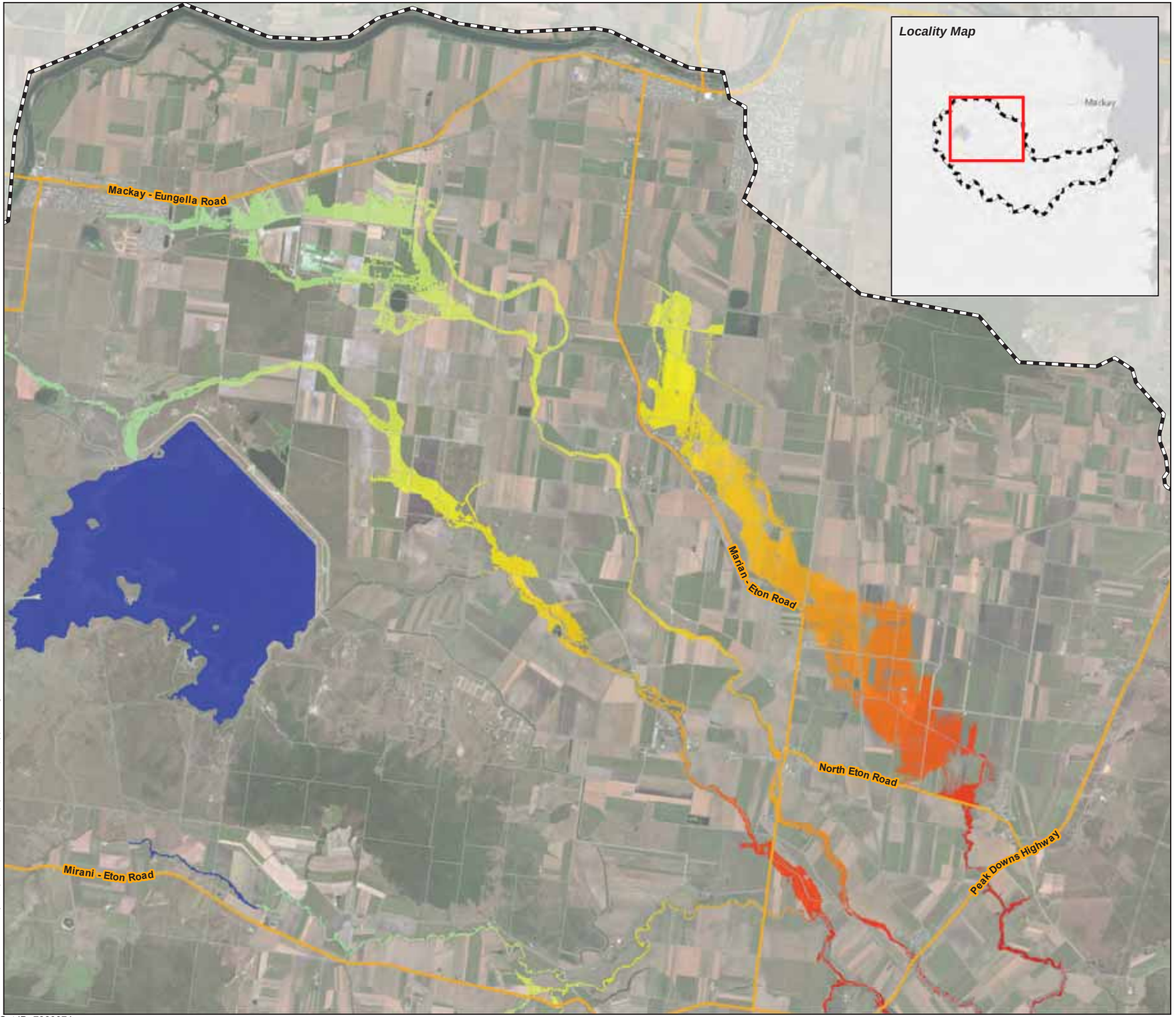

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 66.2525

Low : 24.6837

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
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VERSION:	v01

Map
02.1

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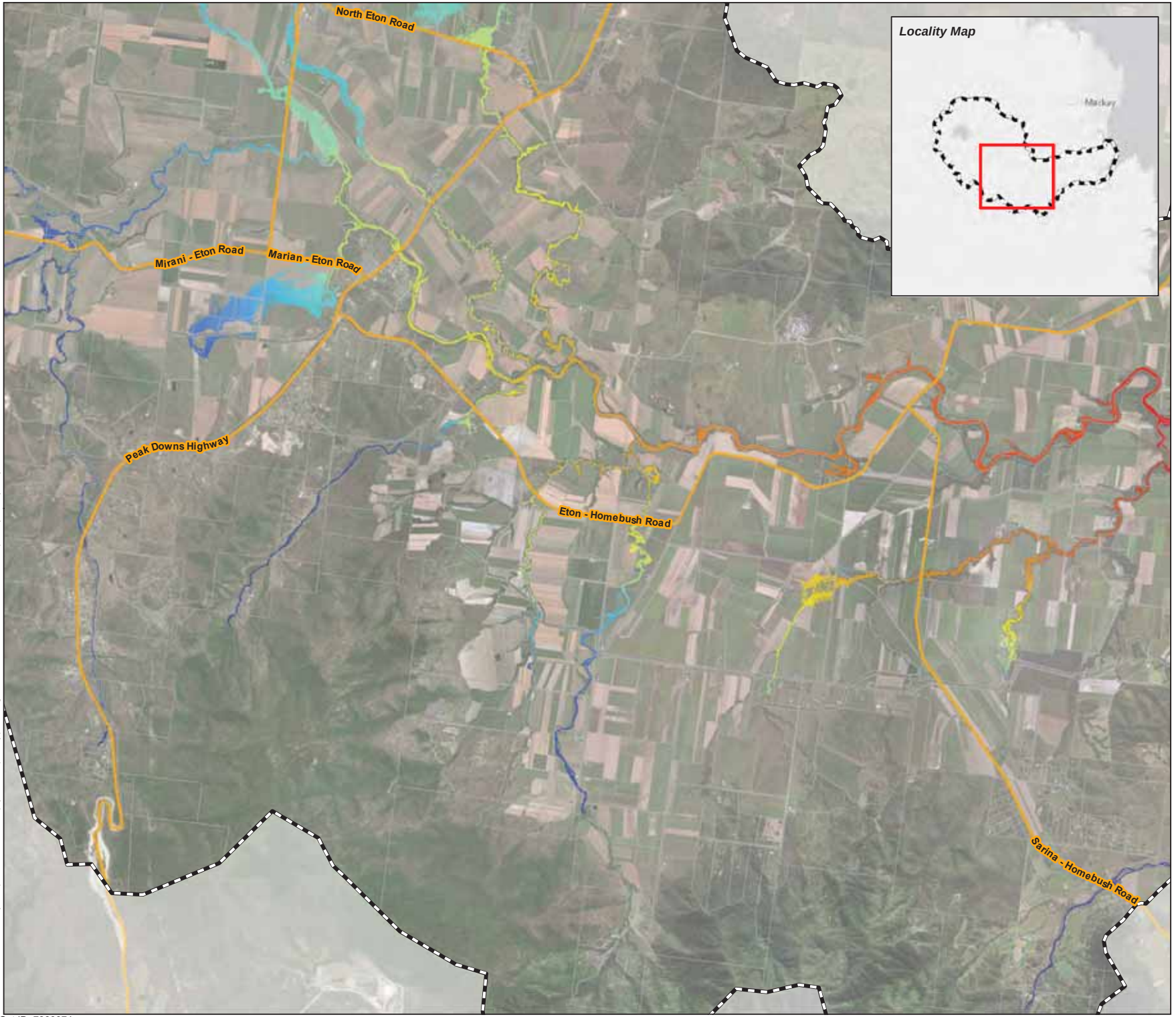

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0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 110.873

Low : 9.25348

Data sources:
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MACKAY REGIONAL COUNCIL
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39% AEP Event - 18 Hour Storm

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02.2

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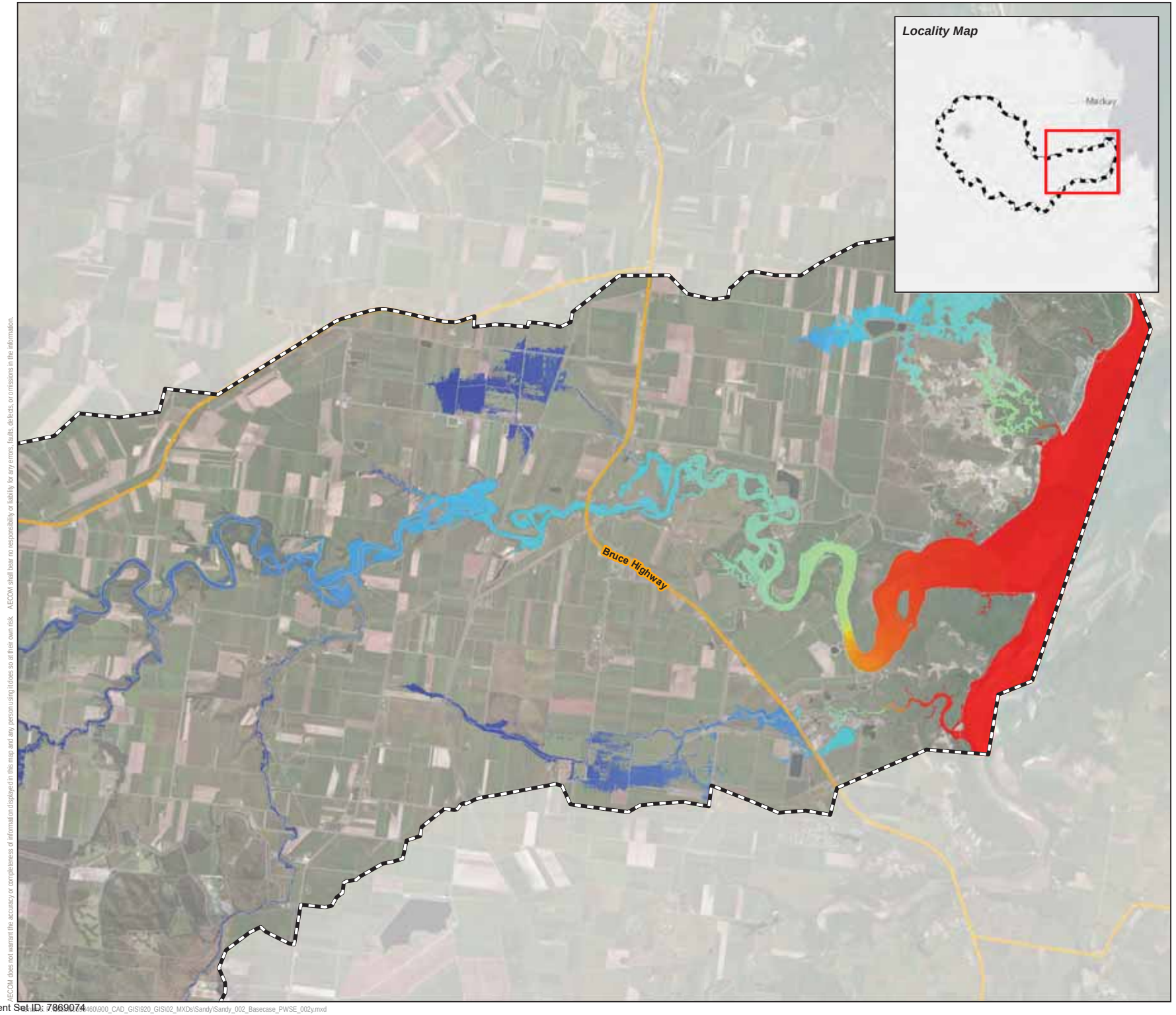

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0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 39.7255

Low : 2.35

Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
39% AEP Event - 18 Hour Storm

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02.3

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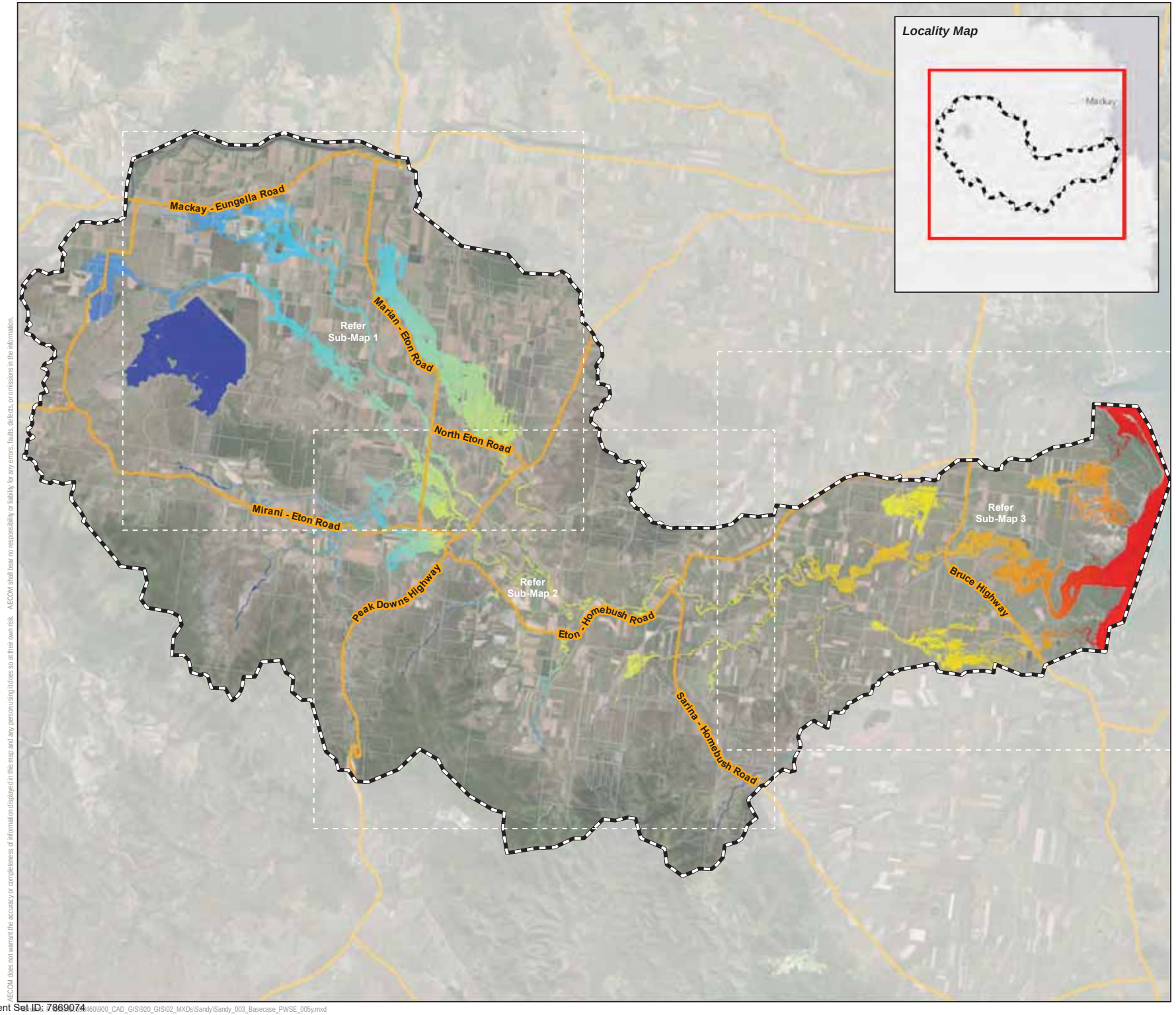

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0 1,550 3,100 6,200

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 107

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
18% AEP Event - 18 Hour Storm

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Map
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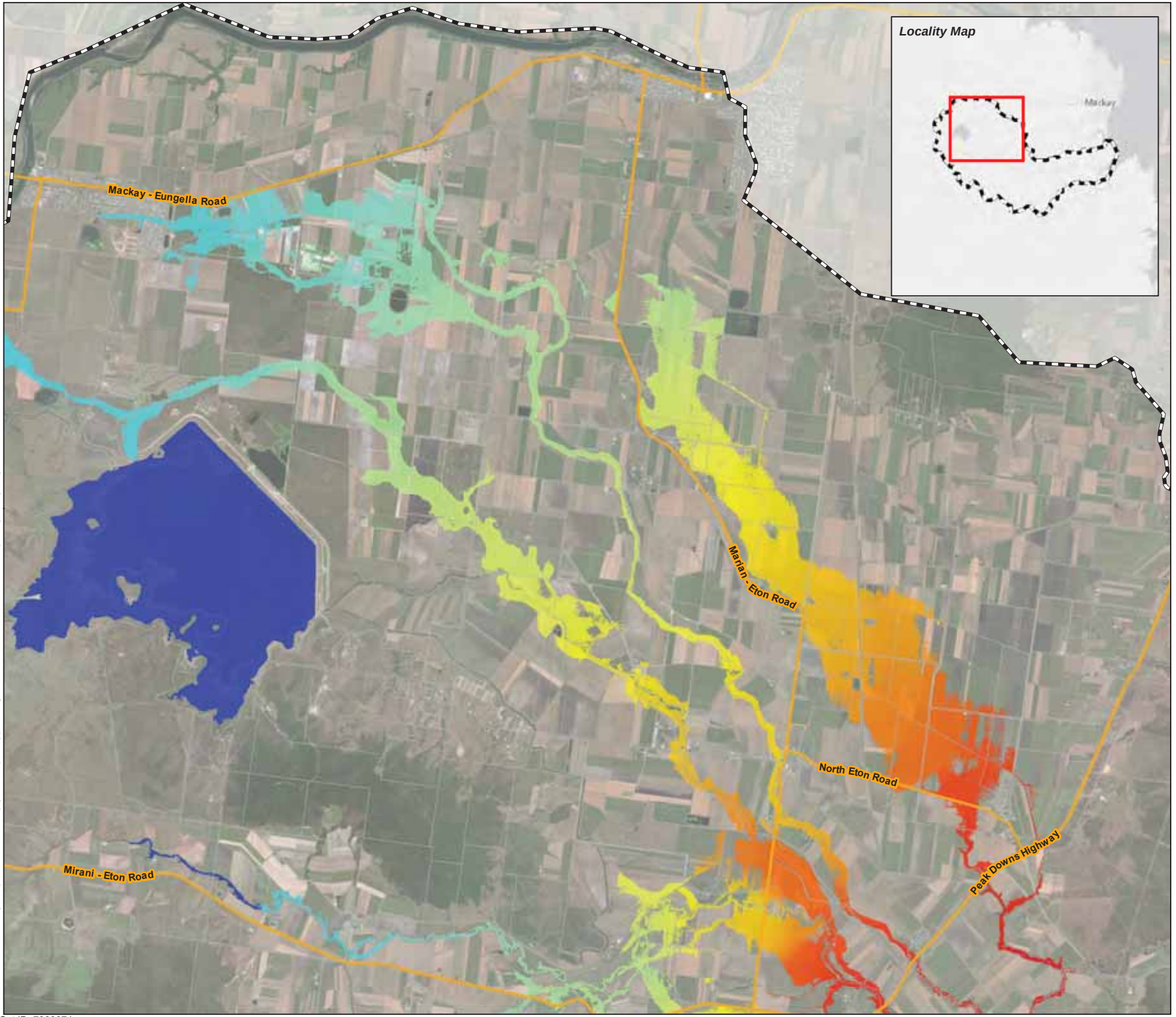

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0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 66.8004

Low : 25.1953

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
18% AEP Event - 18 Hour Storm

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Map
03.1

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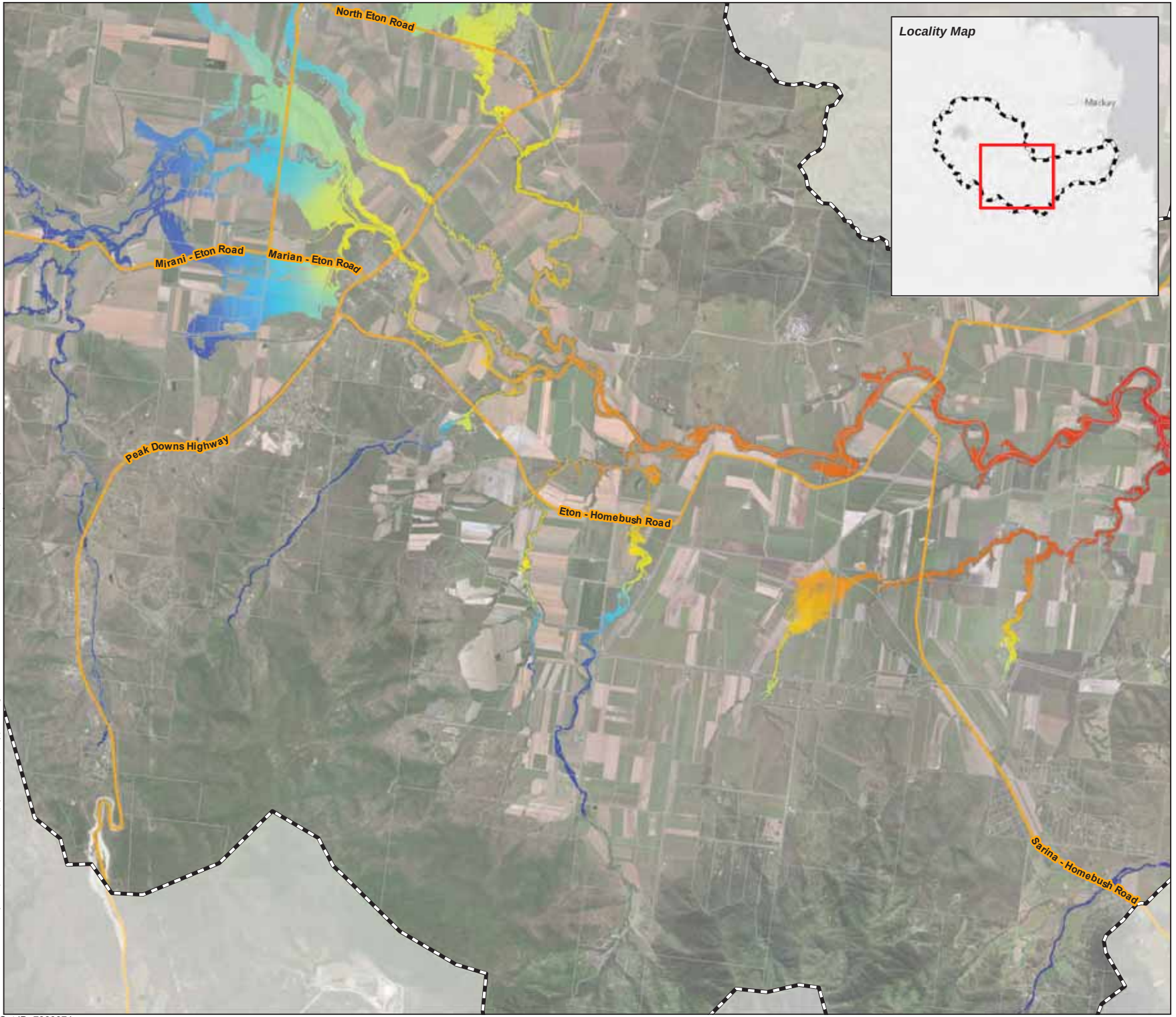

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 111.971

Low : 11.0065

Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
18% AEP Event - 18 Hour Storm

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03.2

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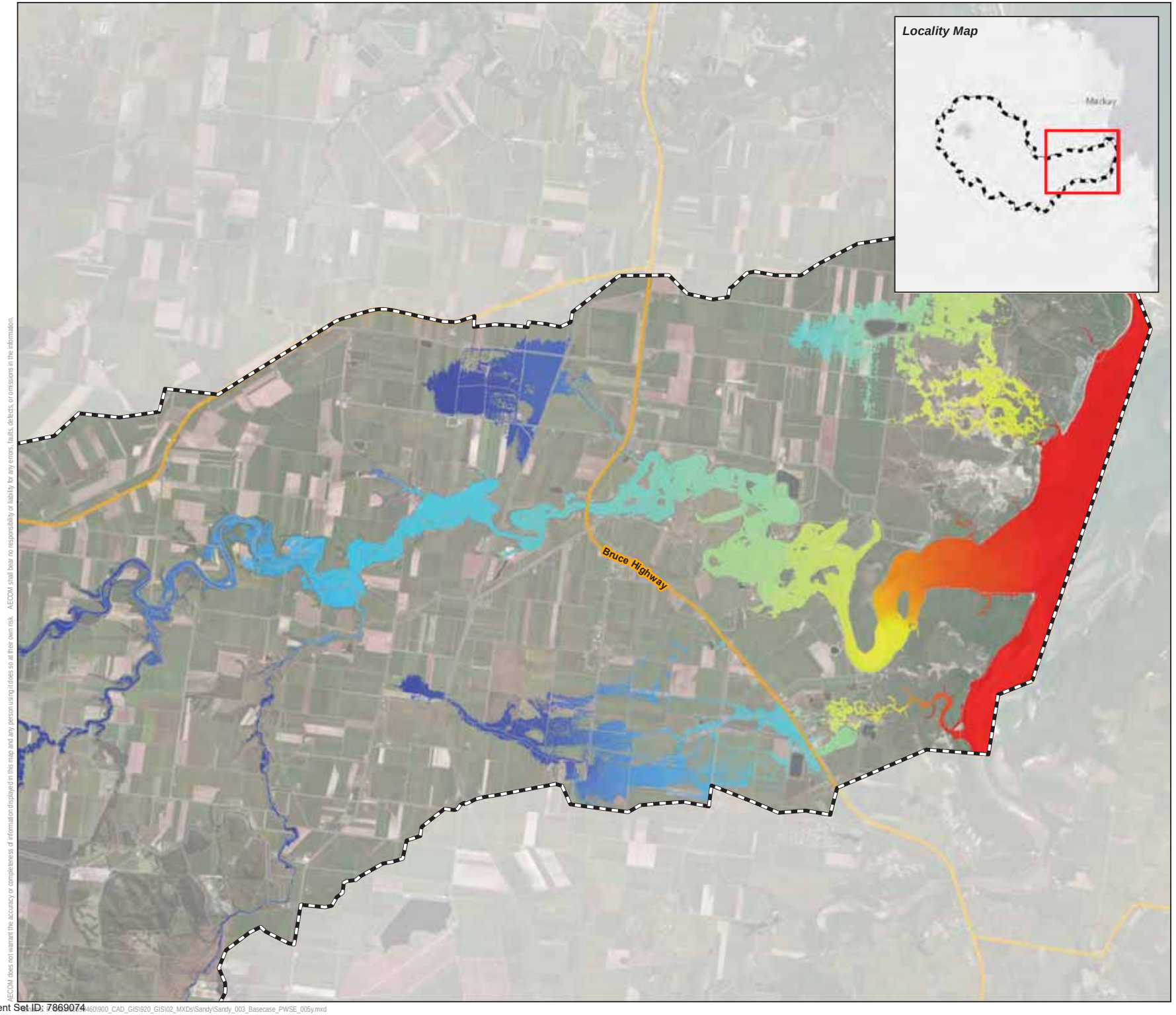
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 40.2203

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	28/09/2019
VERSION:	v01

Map
03.3

A3 size

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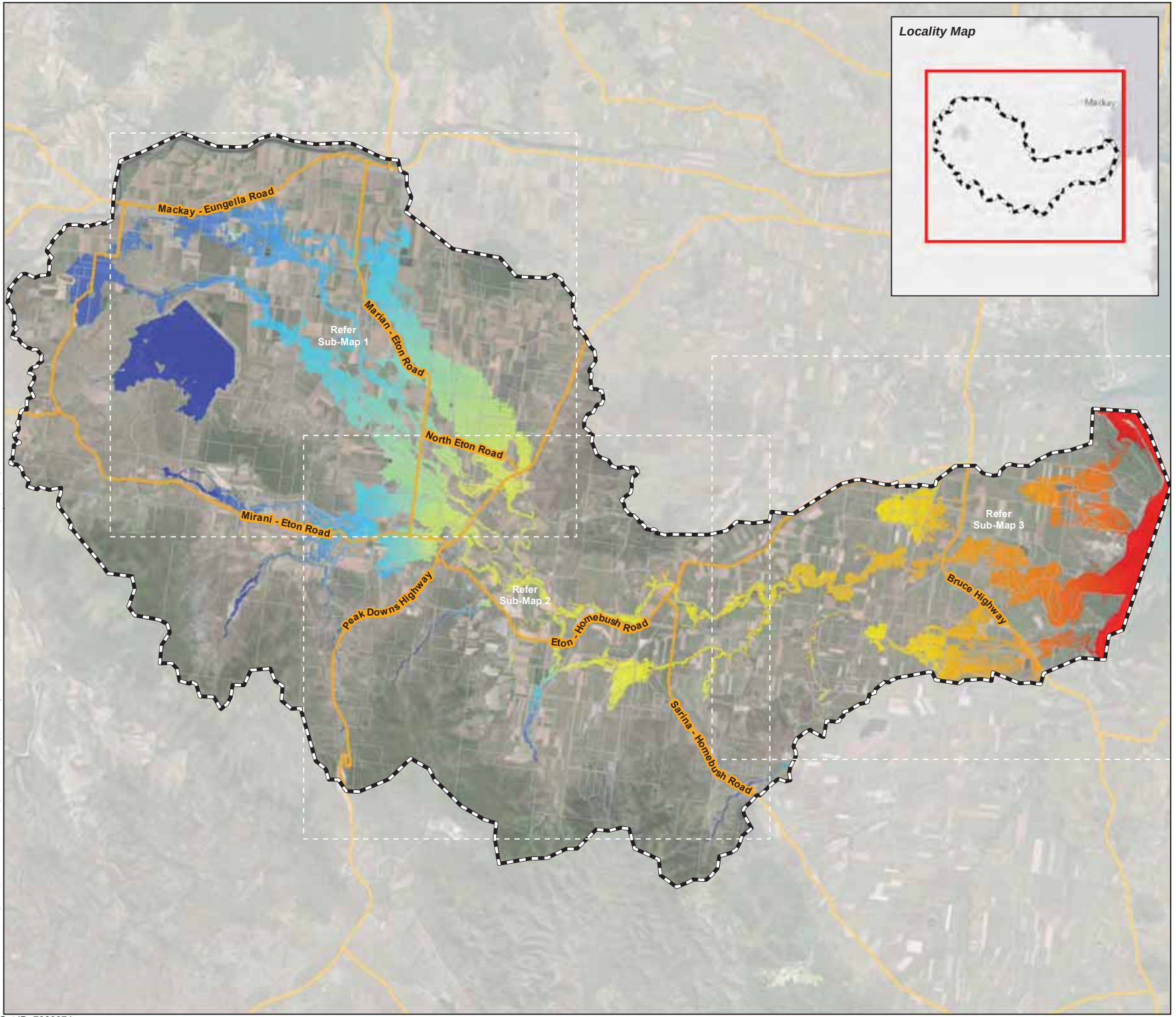
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 107.687

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
04.0

A3 size

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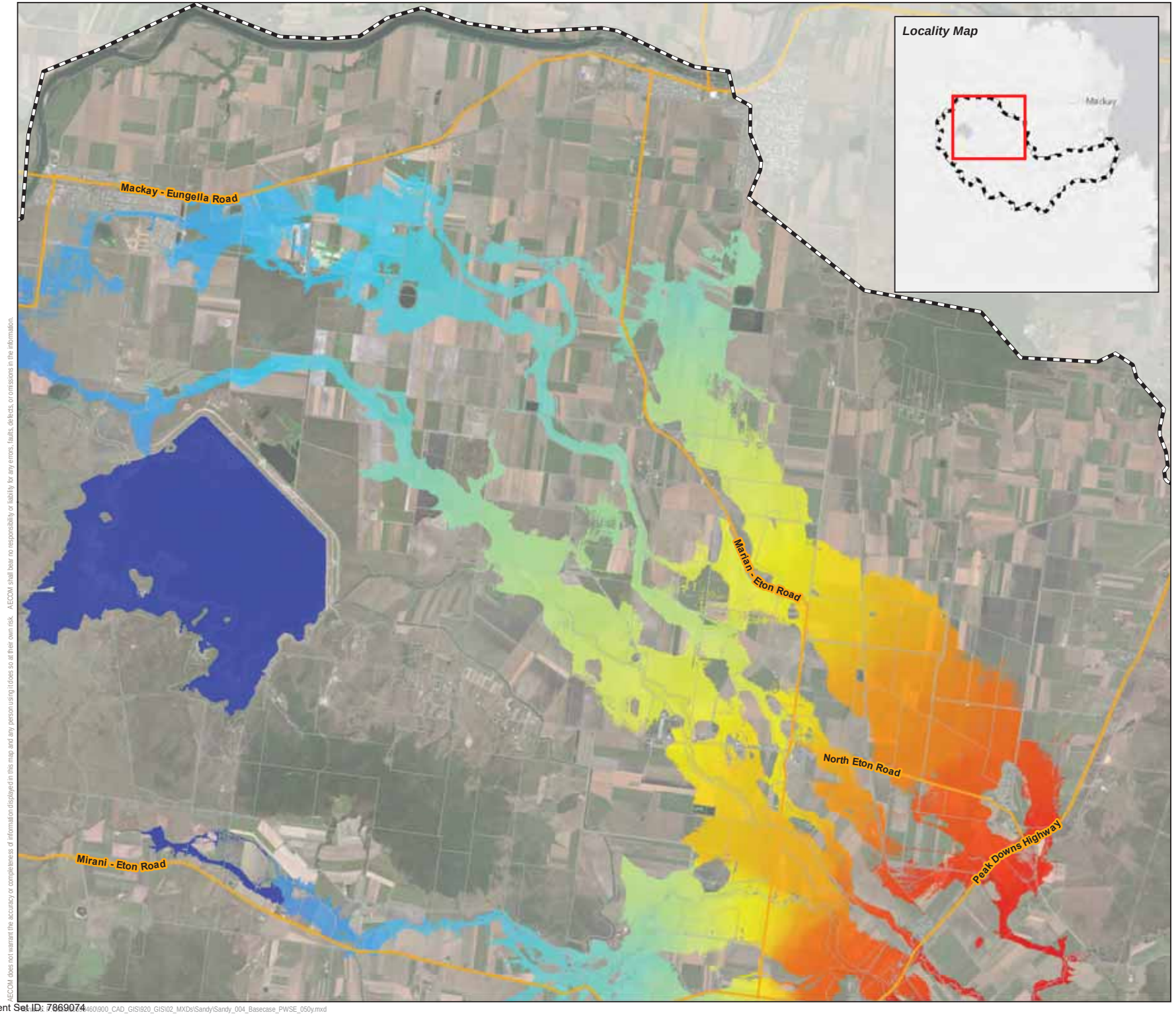
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.5169

Low : 26.2833

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
04.1

A3 size

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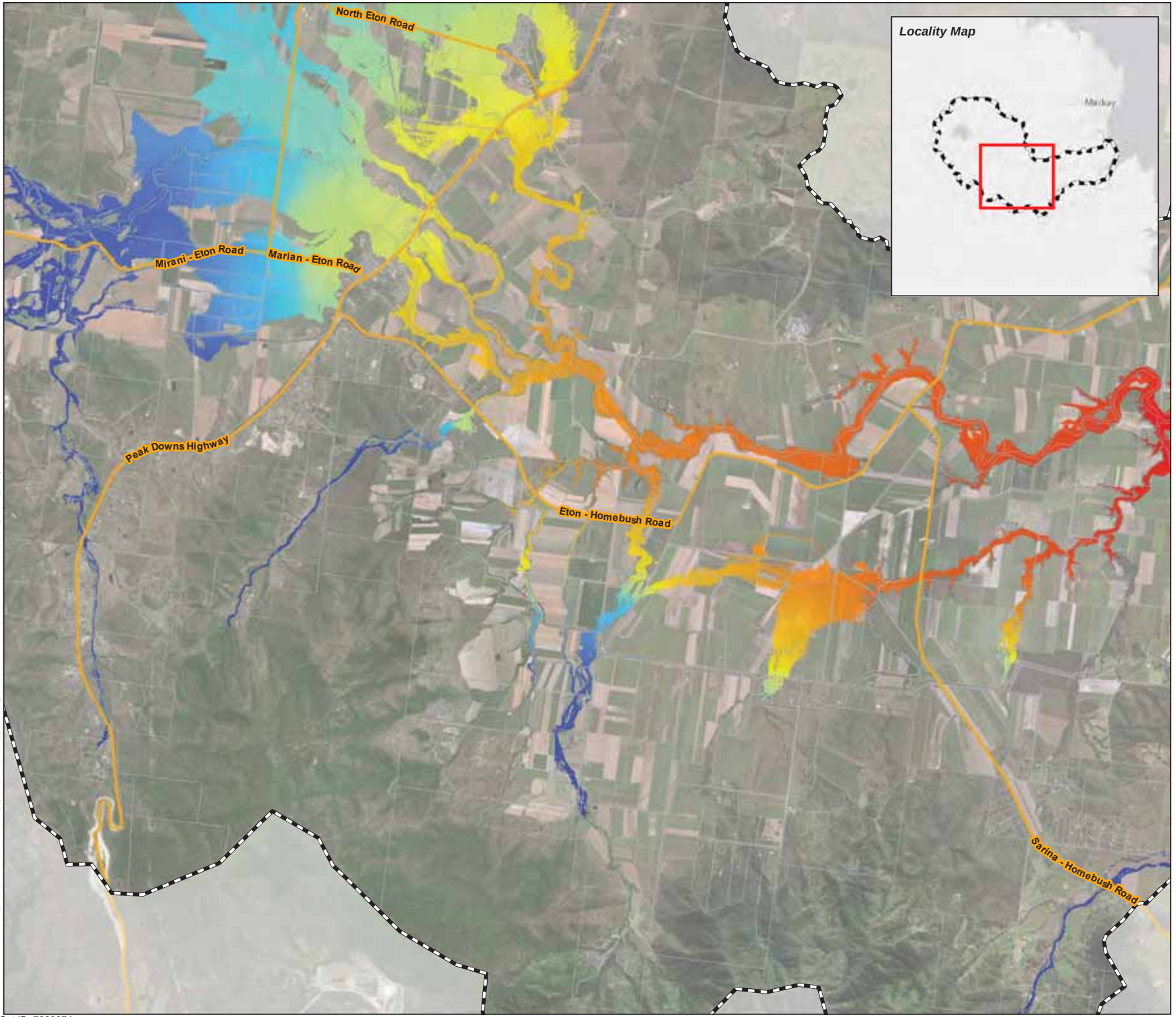

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 115.57

Low : 13.6142

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
04.2

A3 size

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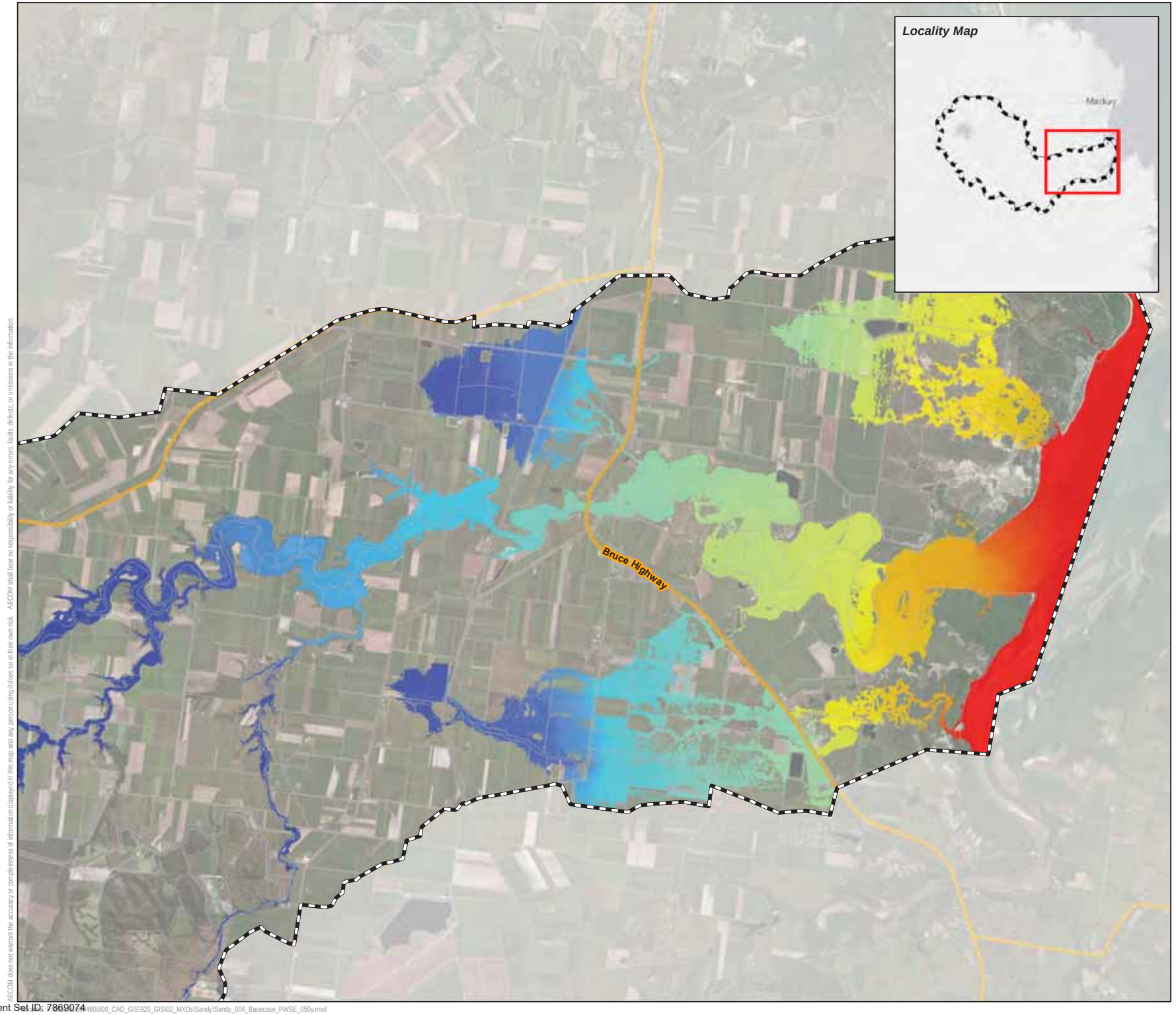
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 41.0203

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
04.3

A3 size

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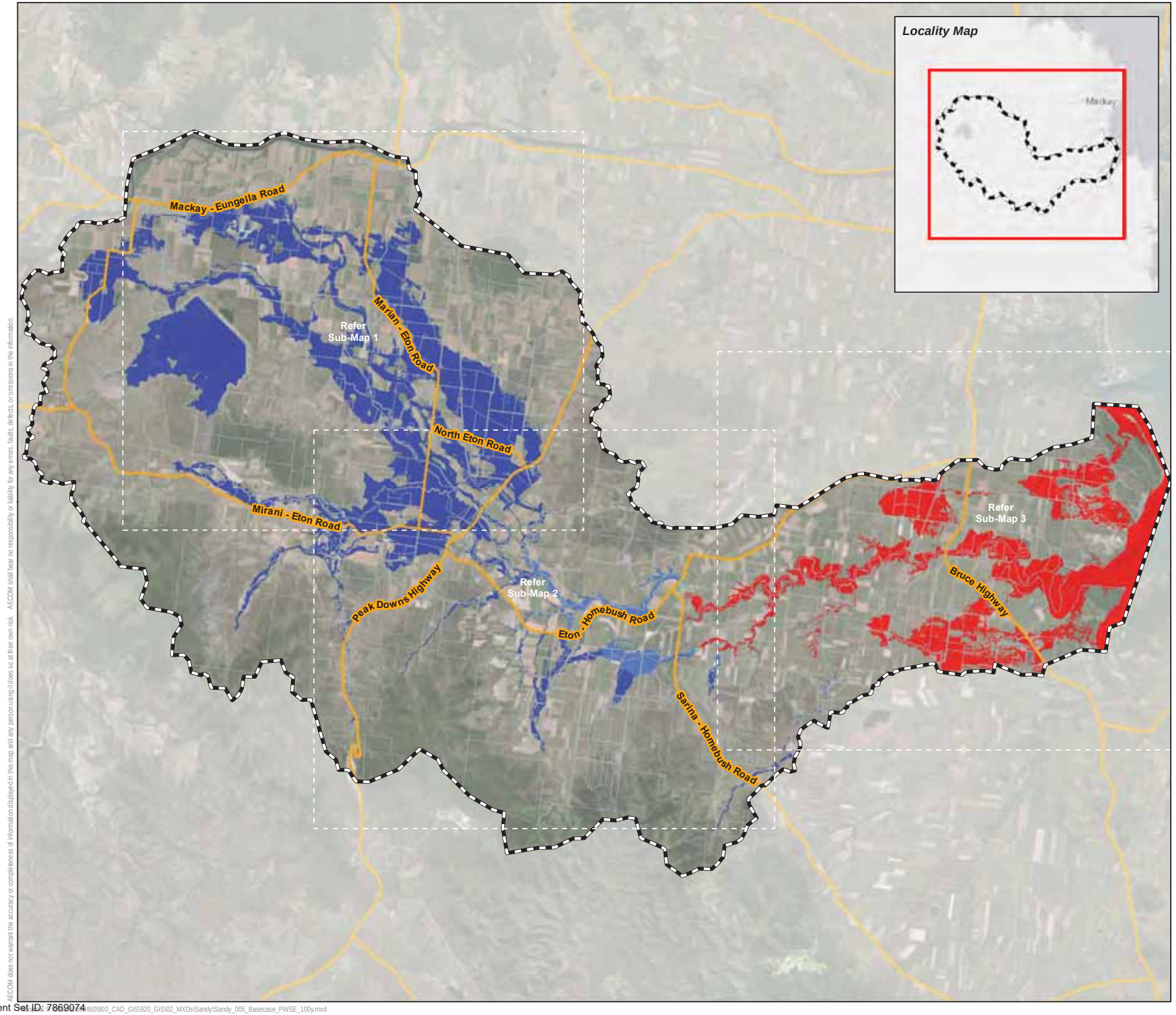
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 25.8462

Low : 19.1856

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
05.0

A3 size

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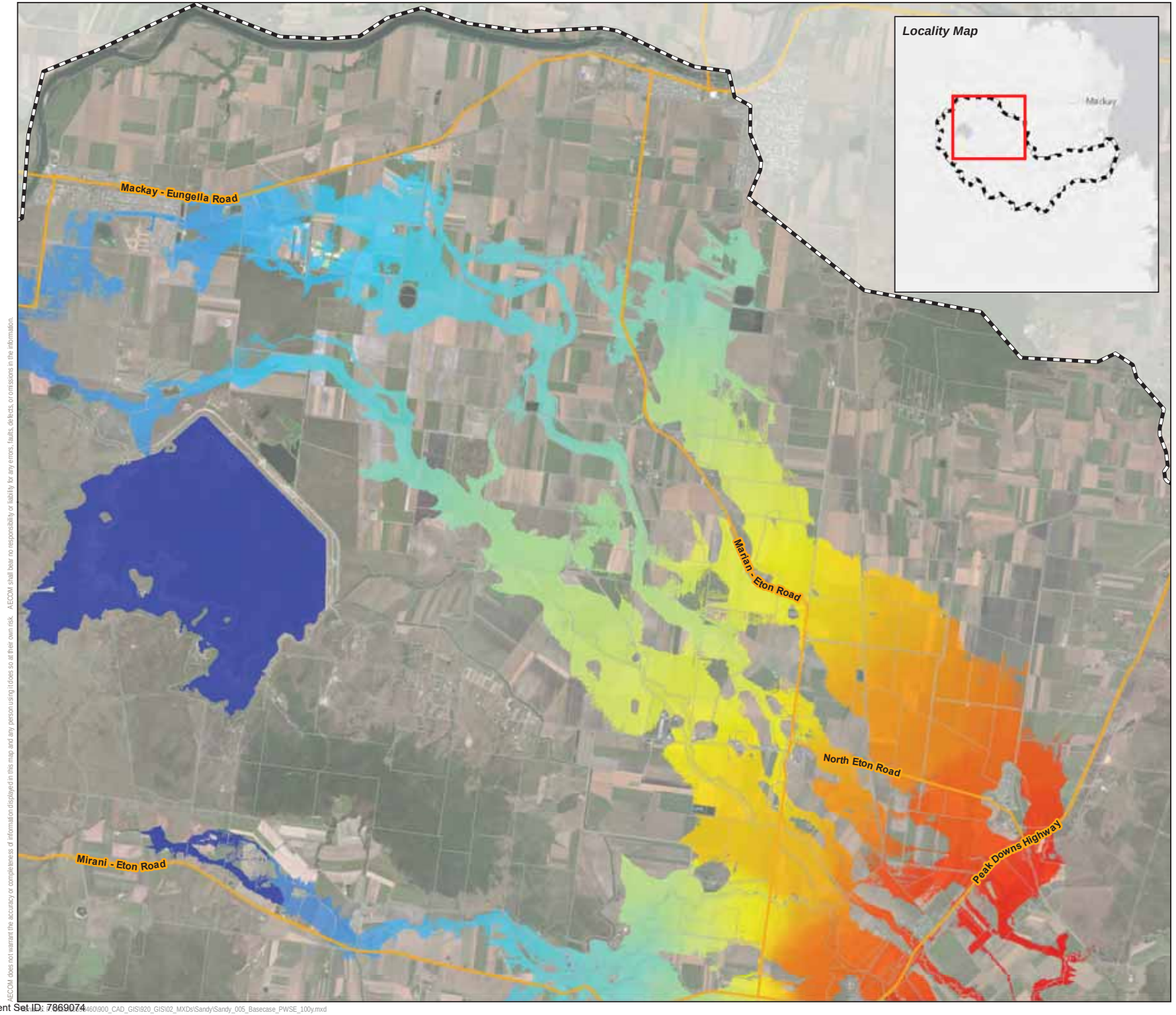
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.6609

Low : 26.2174

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
05.1

A3 size

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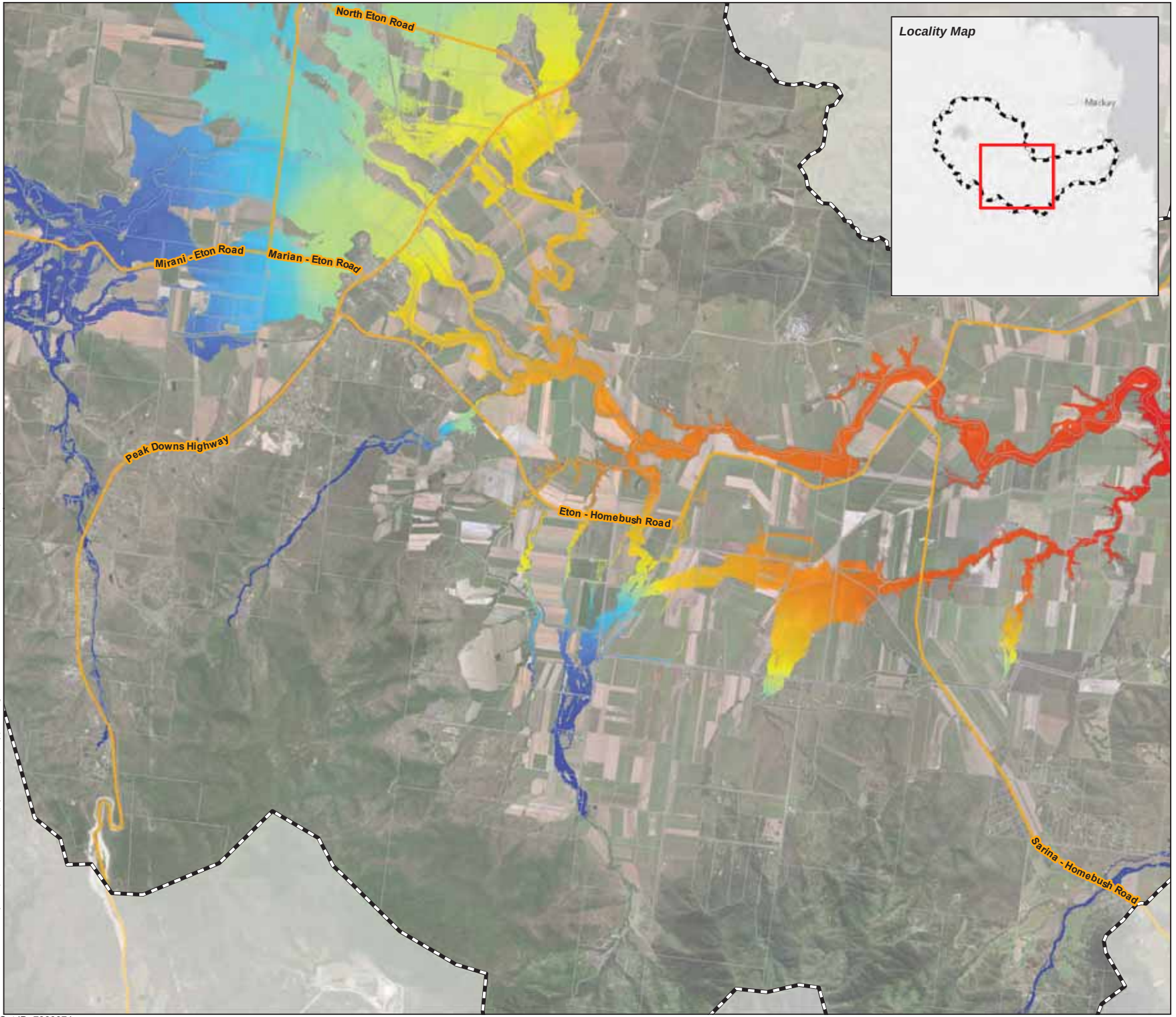

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.635

Low : 14.2919

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
05.2

A3 size

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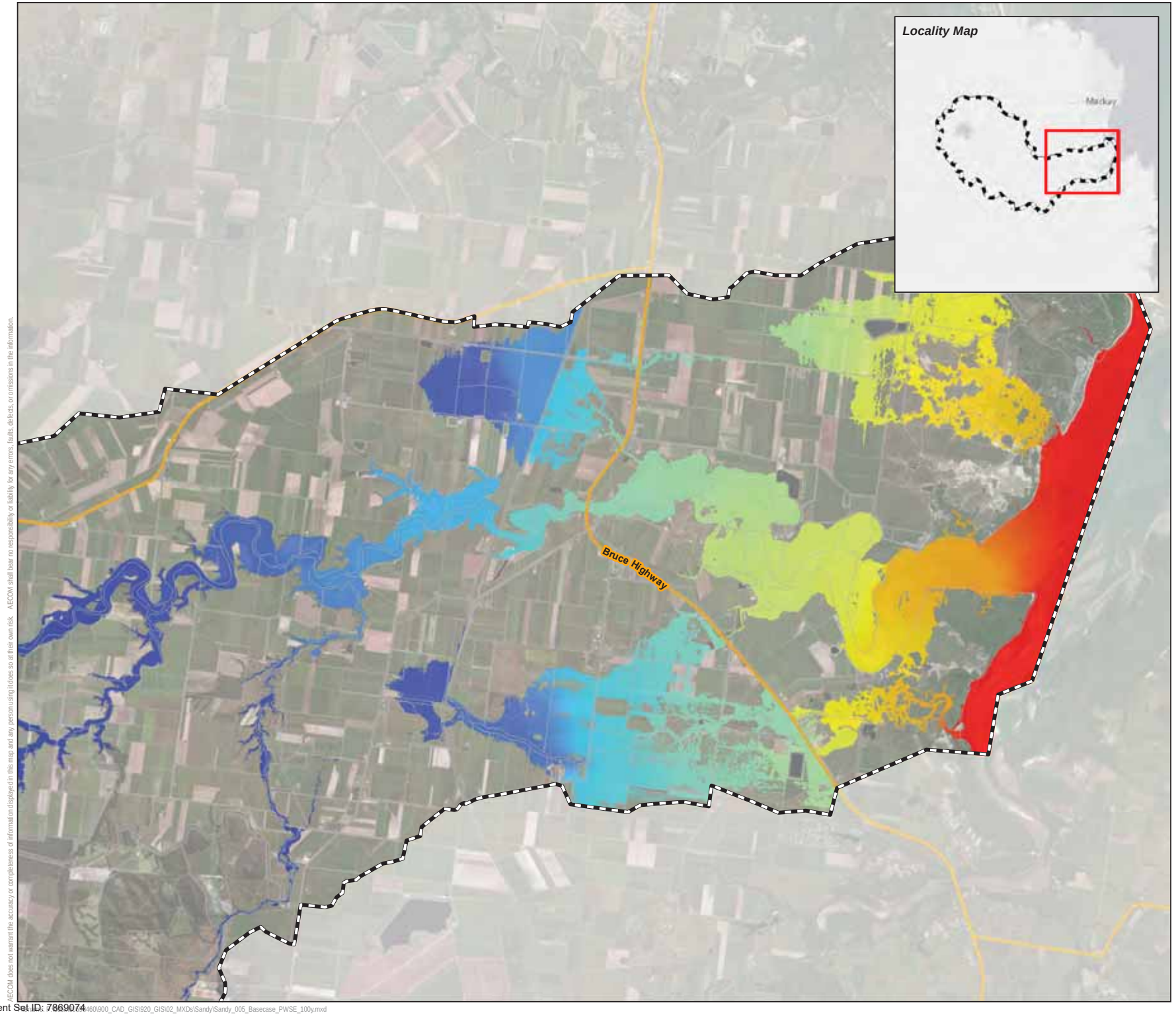
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 41.2924

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

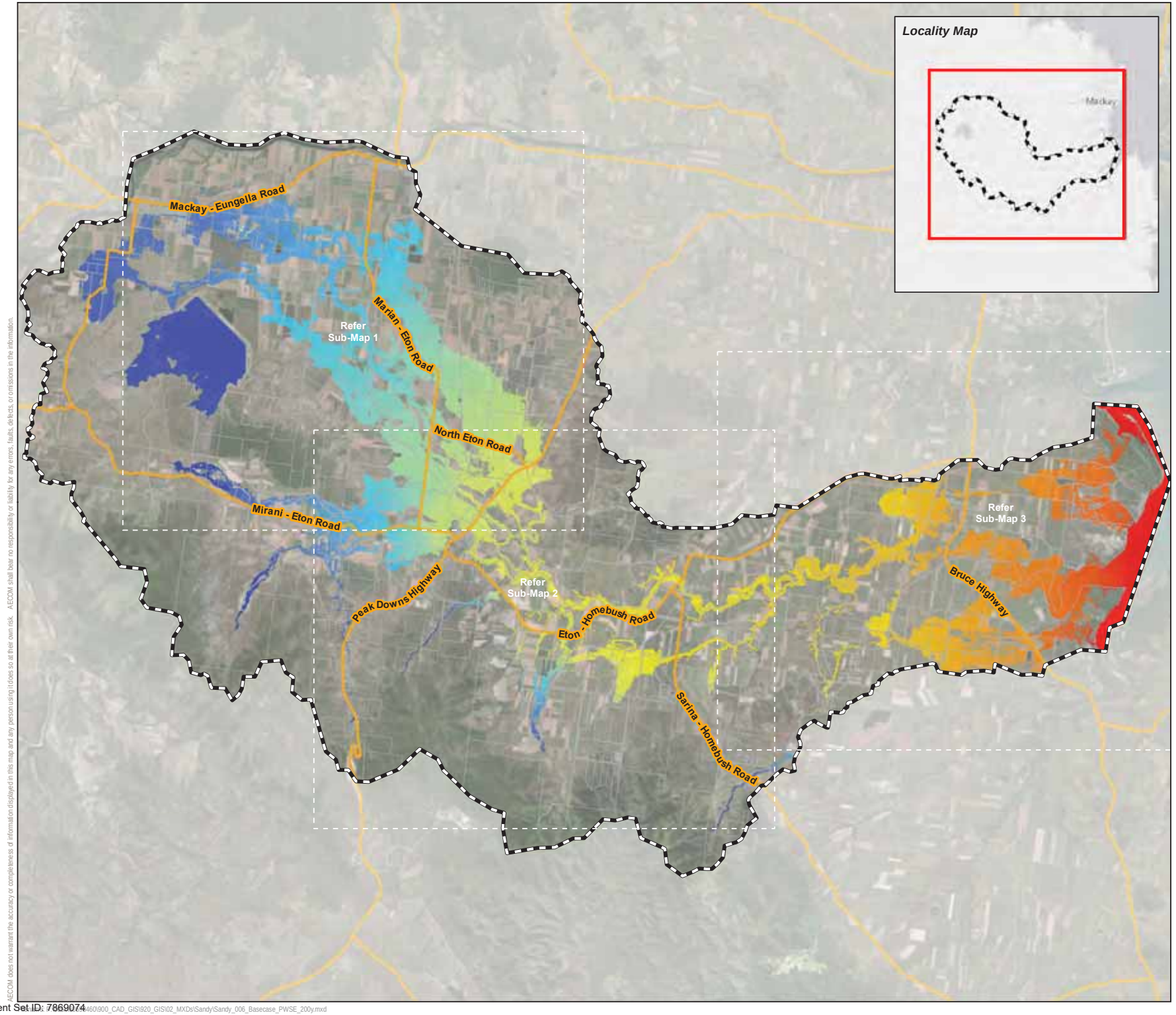
Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
05.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.065

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
06.0

A3 size

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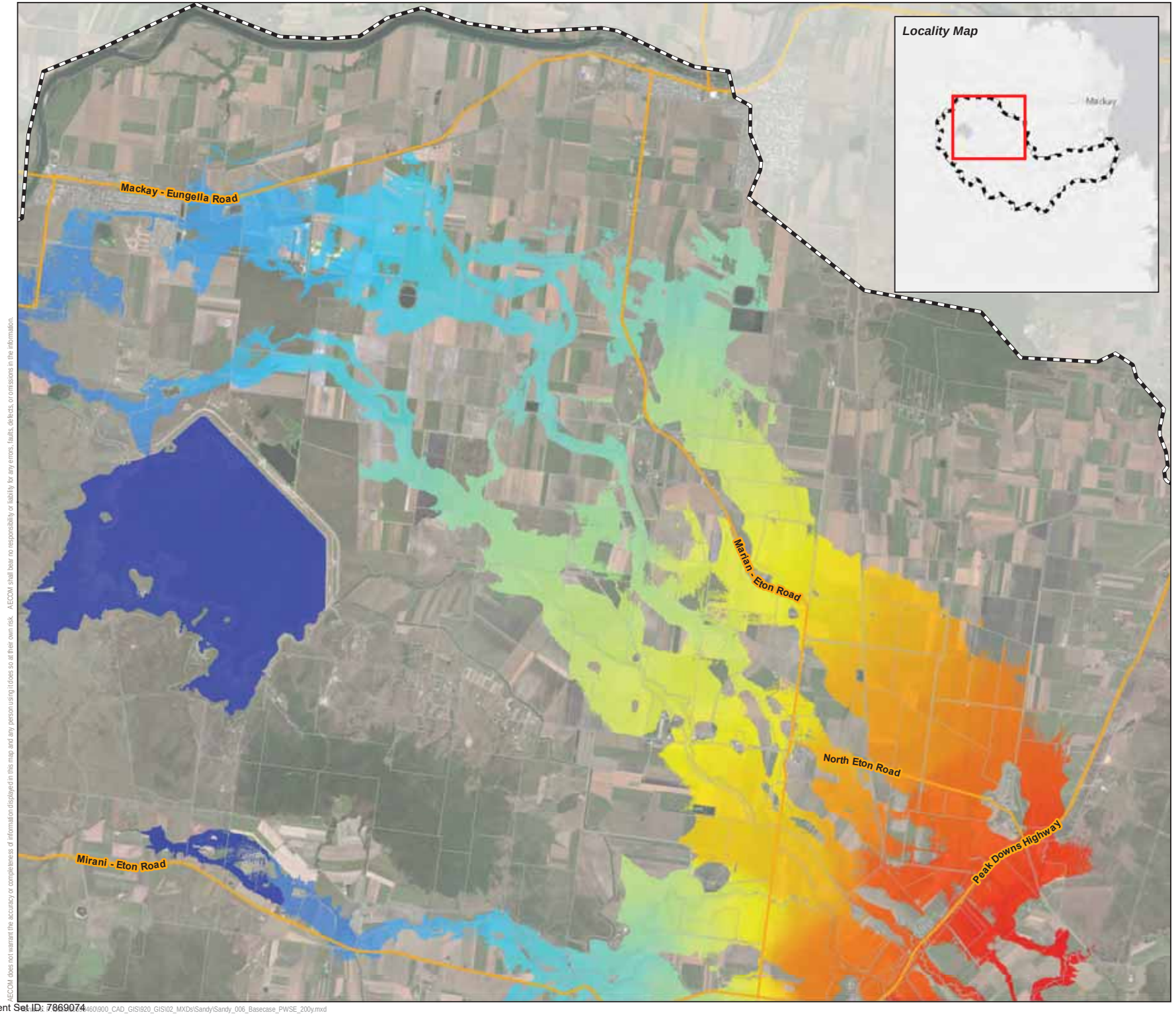
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.752

Low : 26.7502

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
06.1

A3 size

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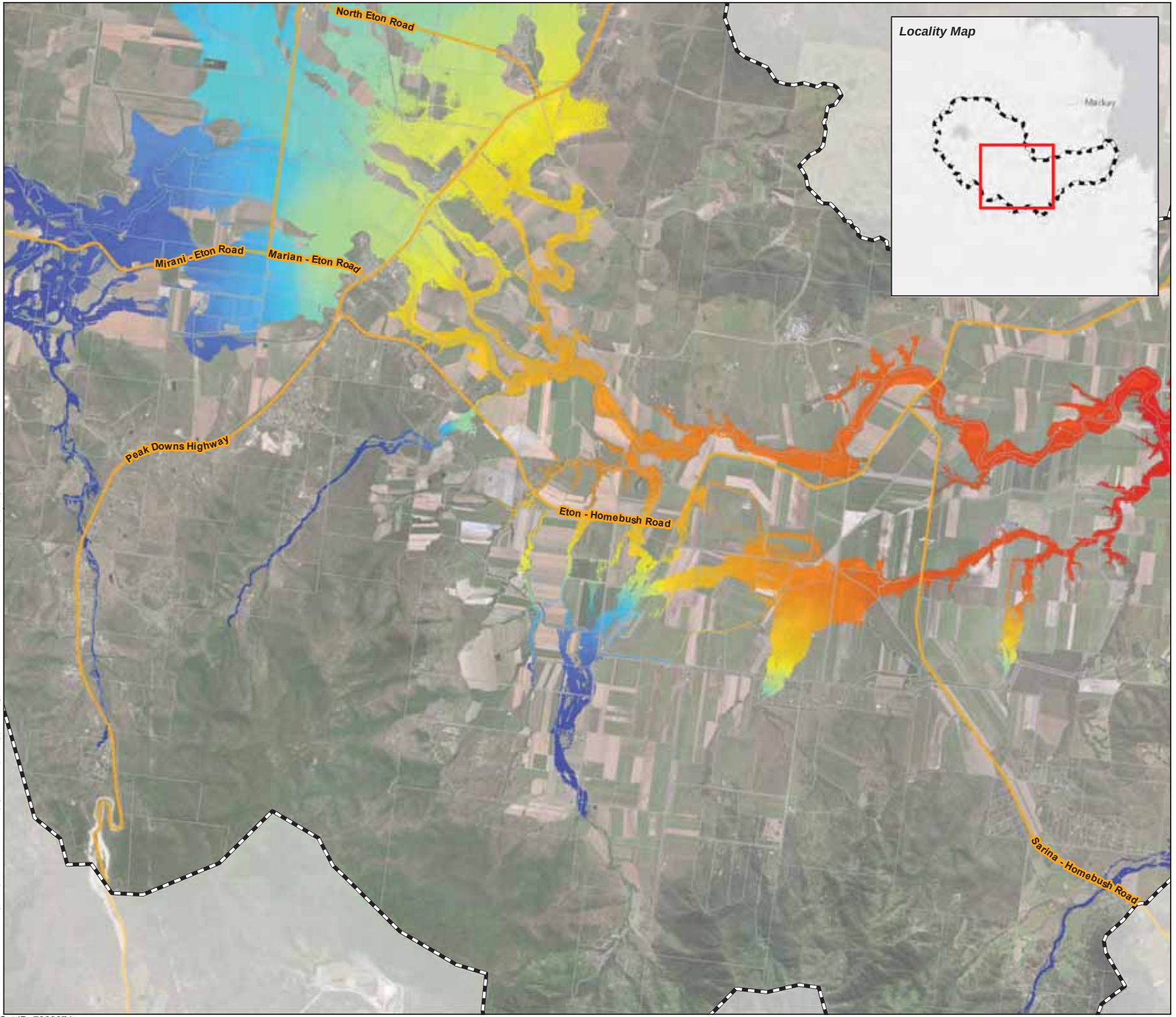
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 115.67

Low : 15.1297

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
06.2

A3 size

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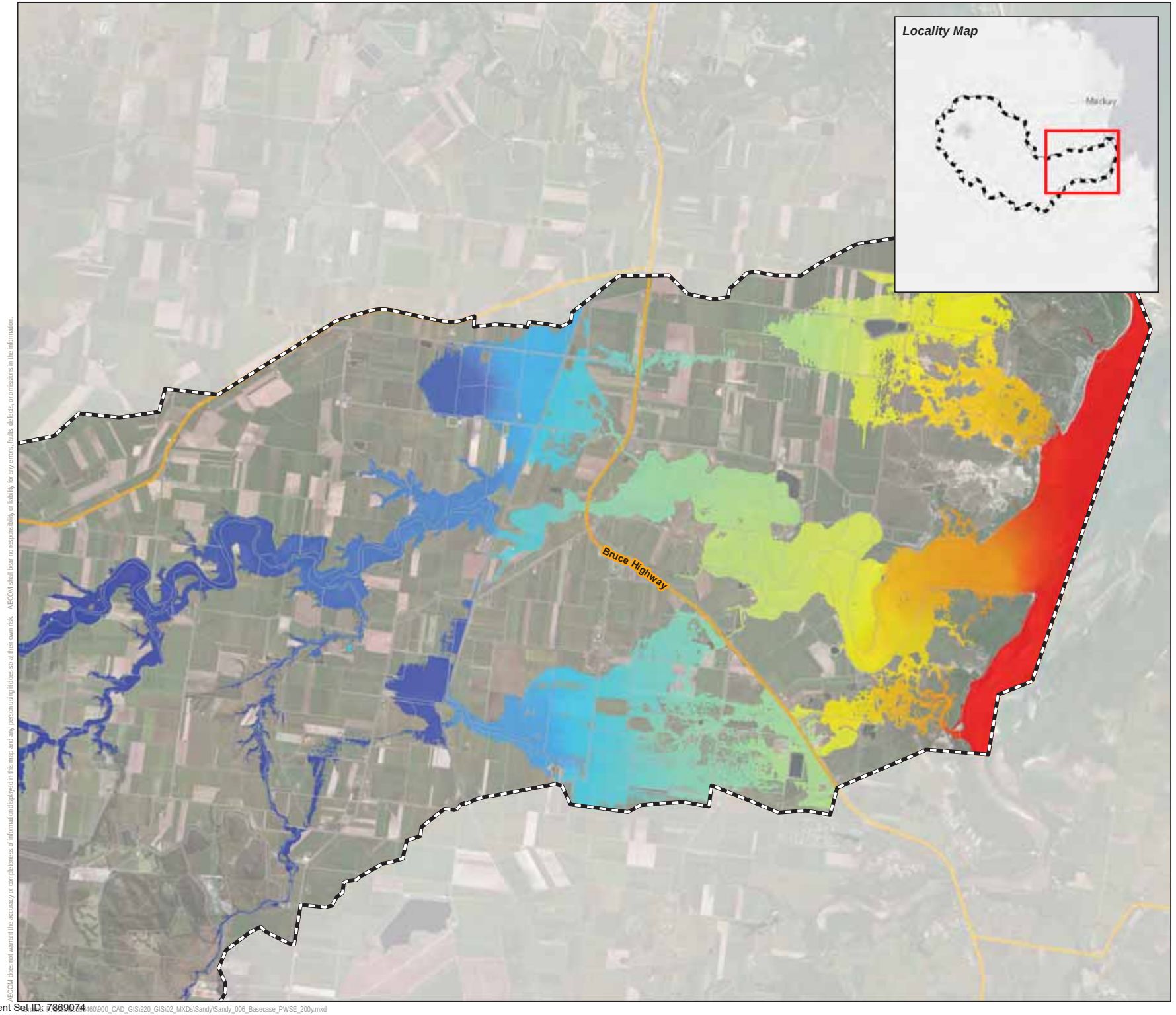

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 41.3557

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

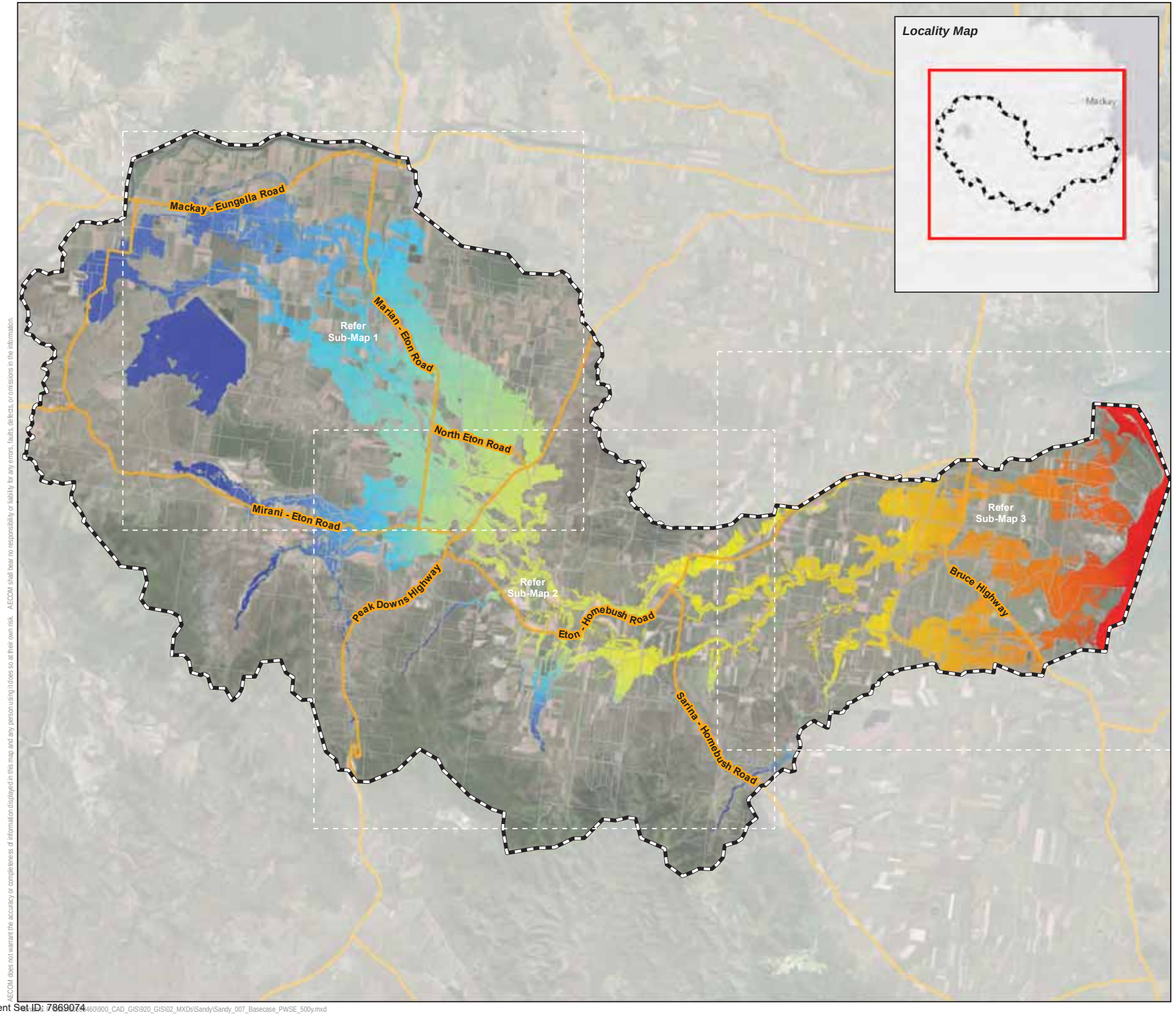
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
06.3

A3 size



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.135

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

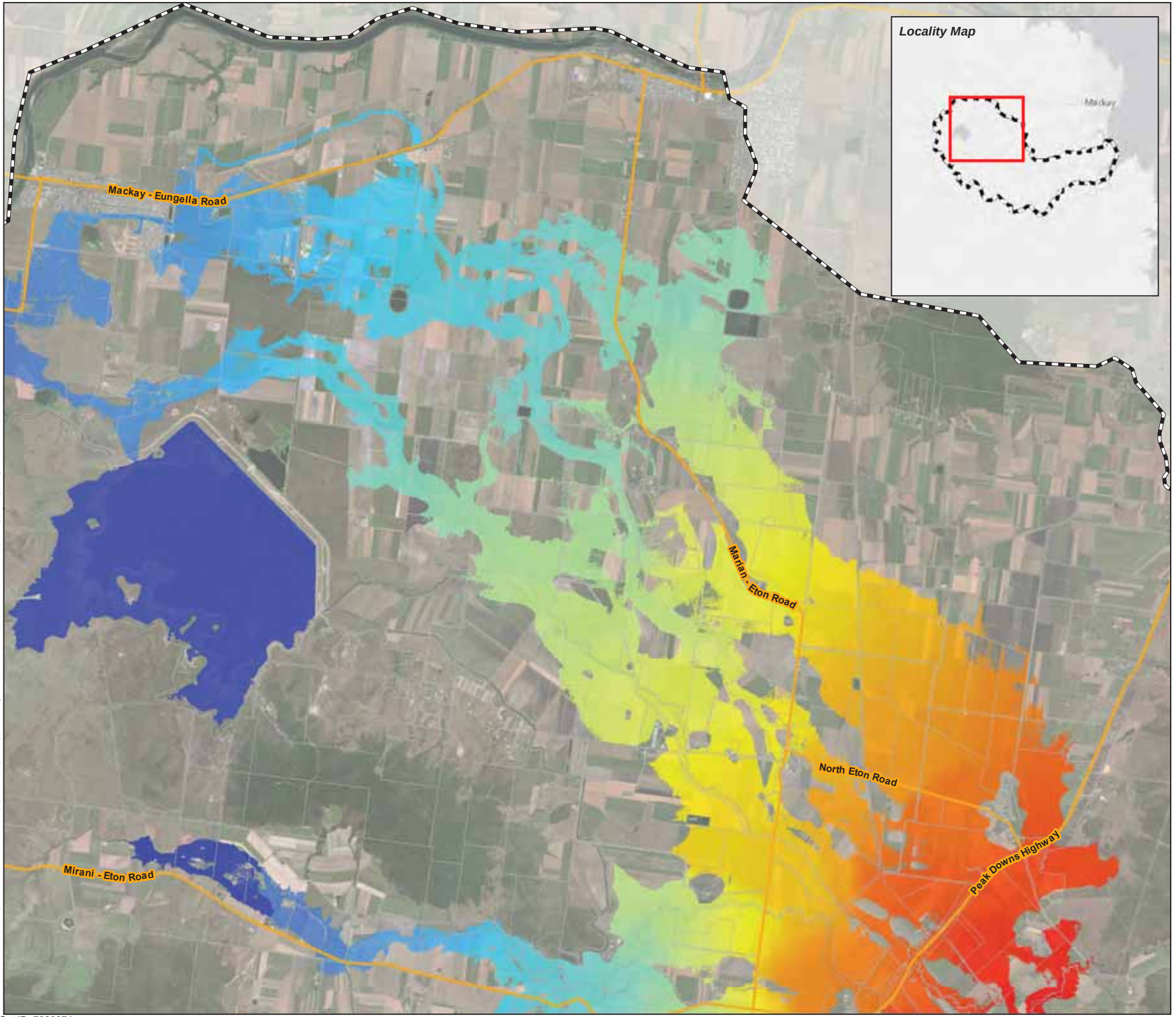
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
07.0

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.8882

Low : 27.6872

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
07.1

A3 size

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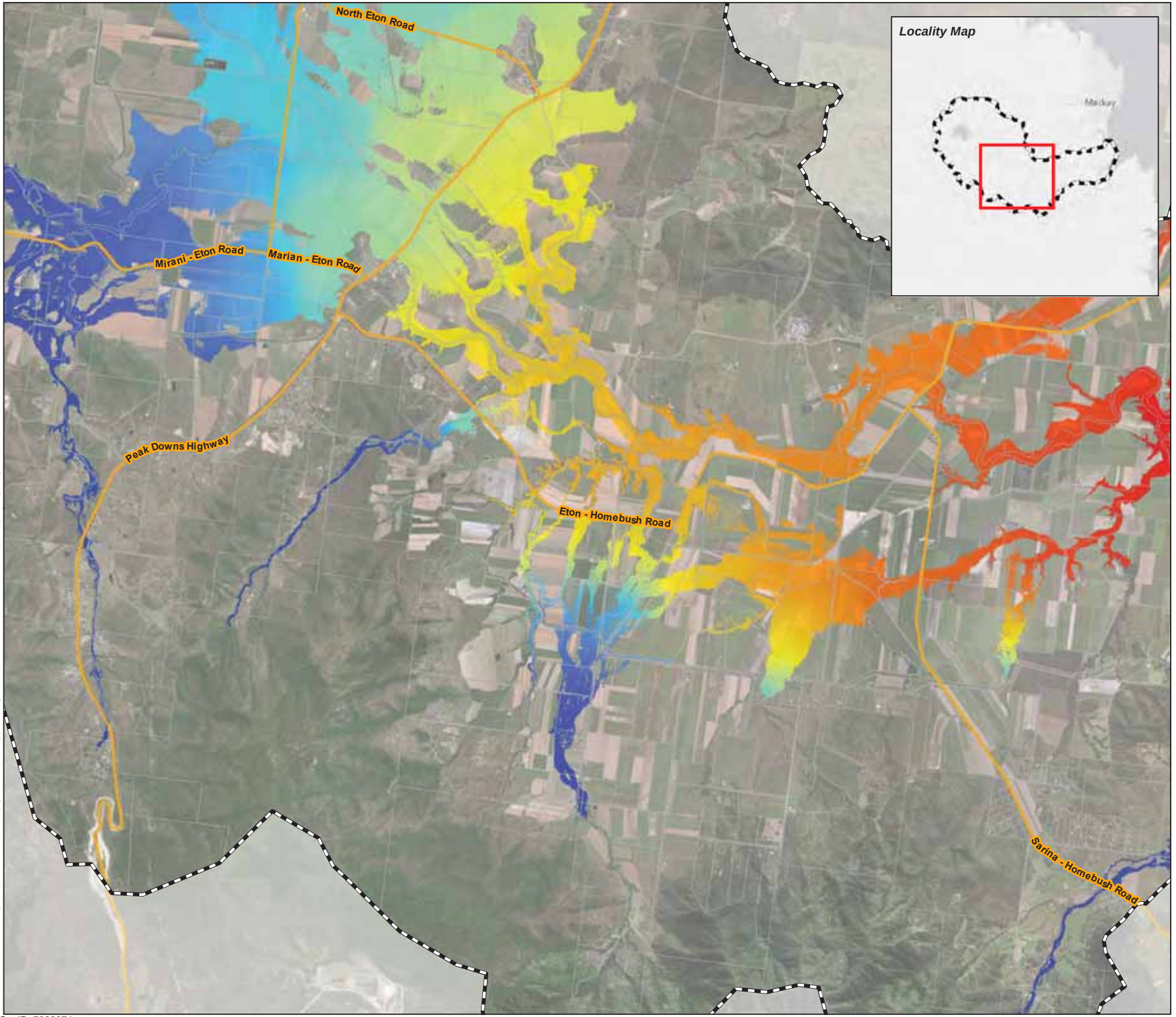

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.735

Low : 15.9568

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
07.2

A3 size

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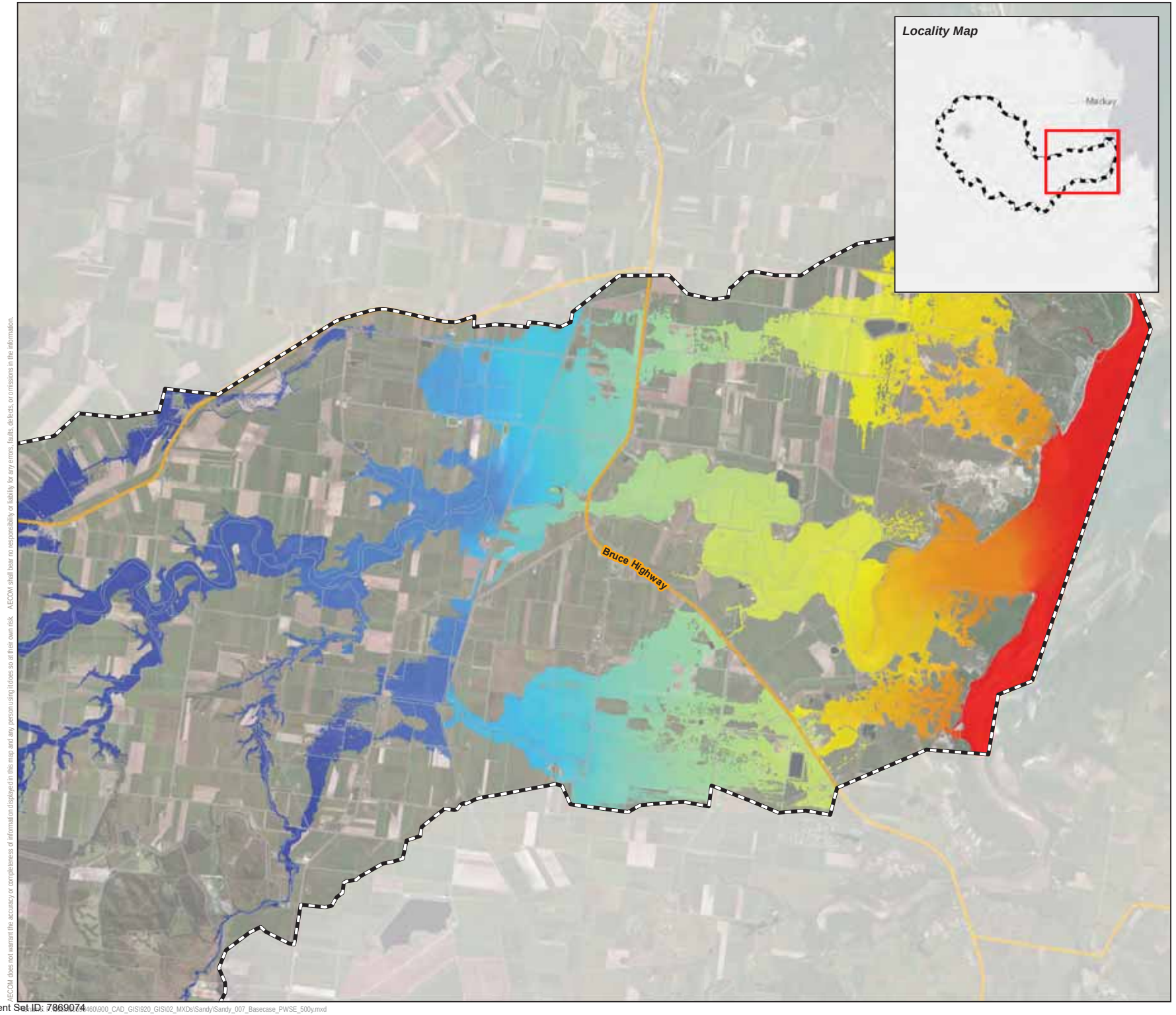

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 41.6523

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

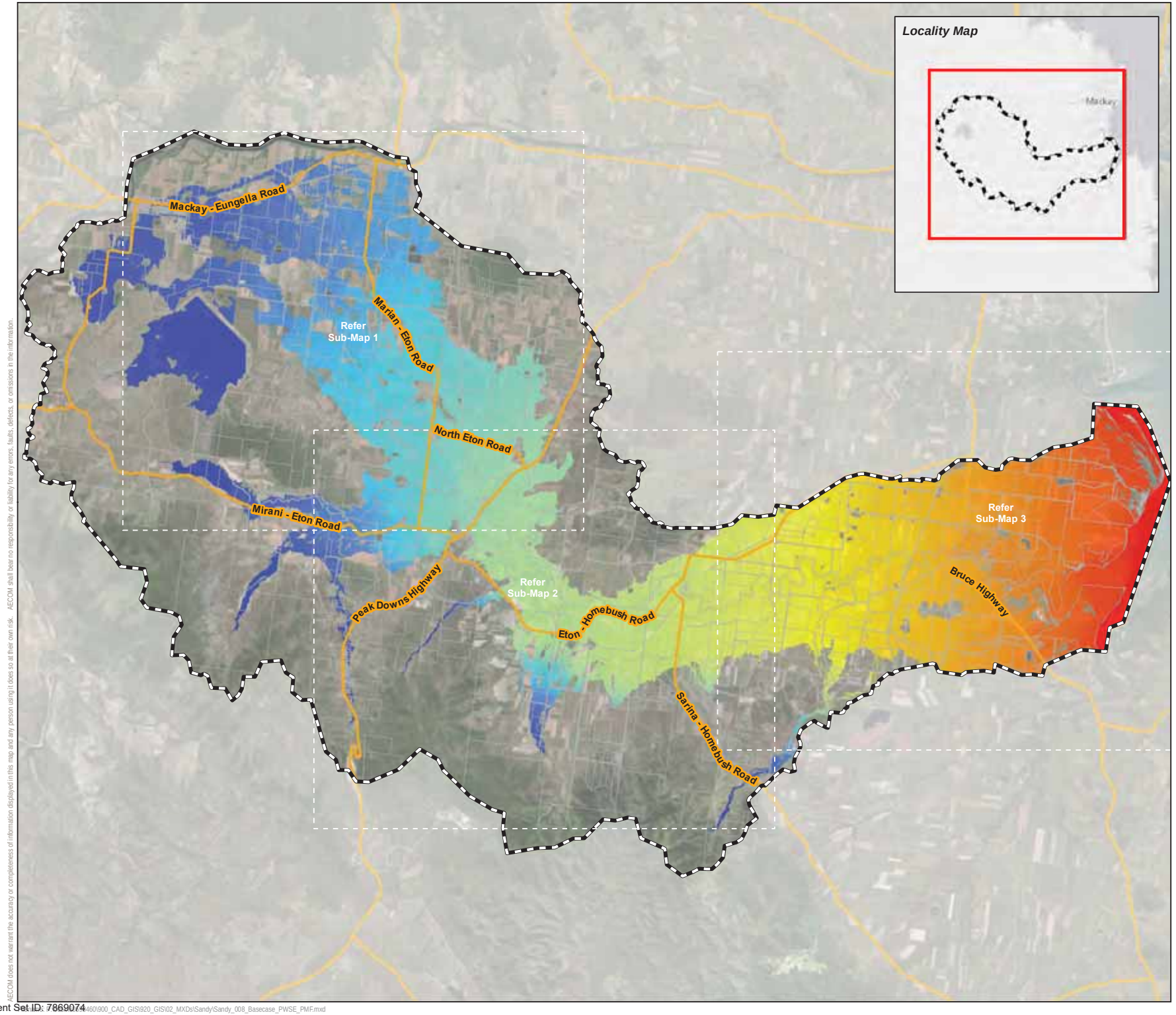
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
07.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 111.649

Low : 2.35

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
08.0

A3 size

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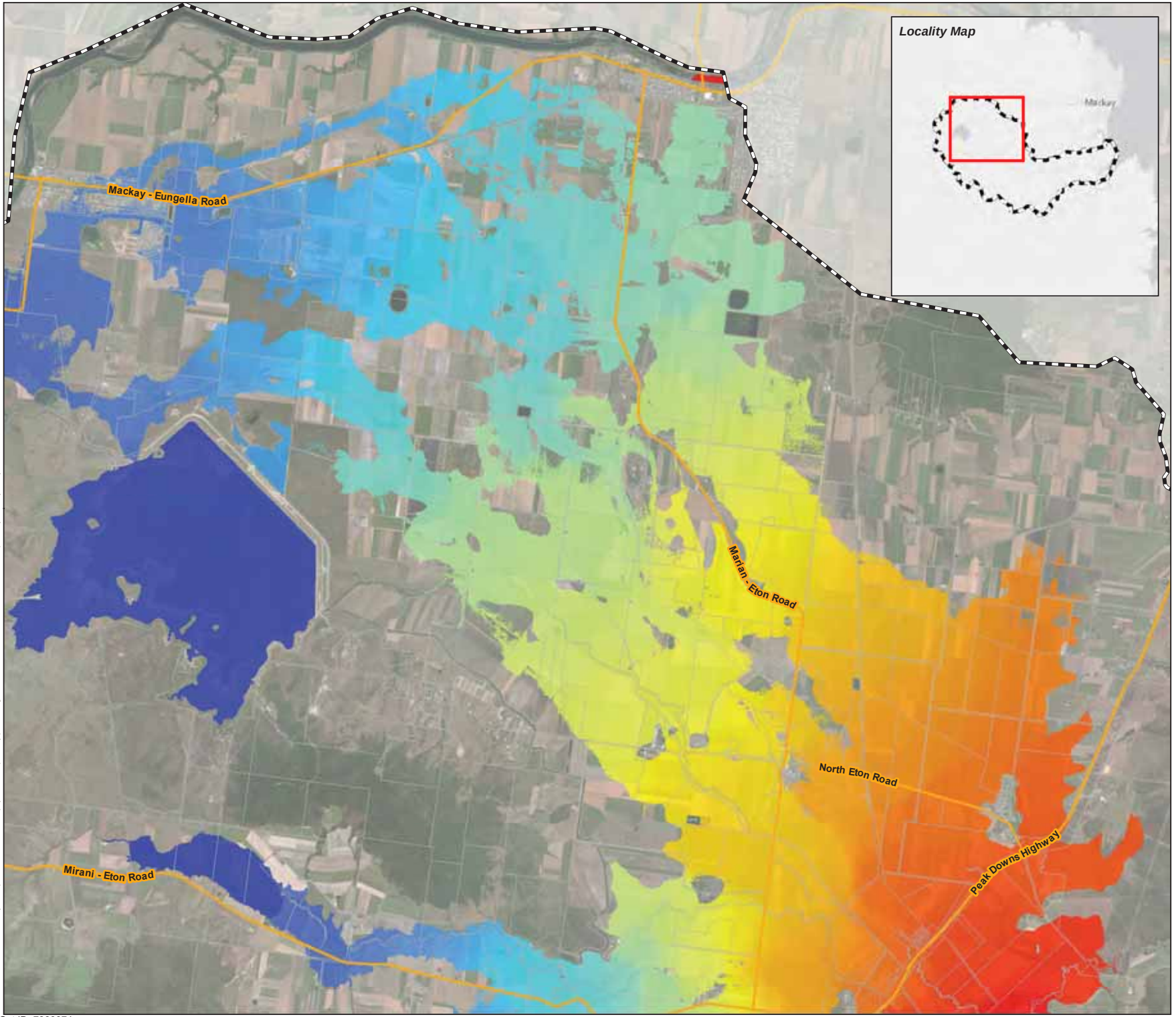

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 68.6212

Low : 26.052

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
08.1

A3 size

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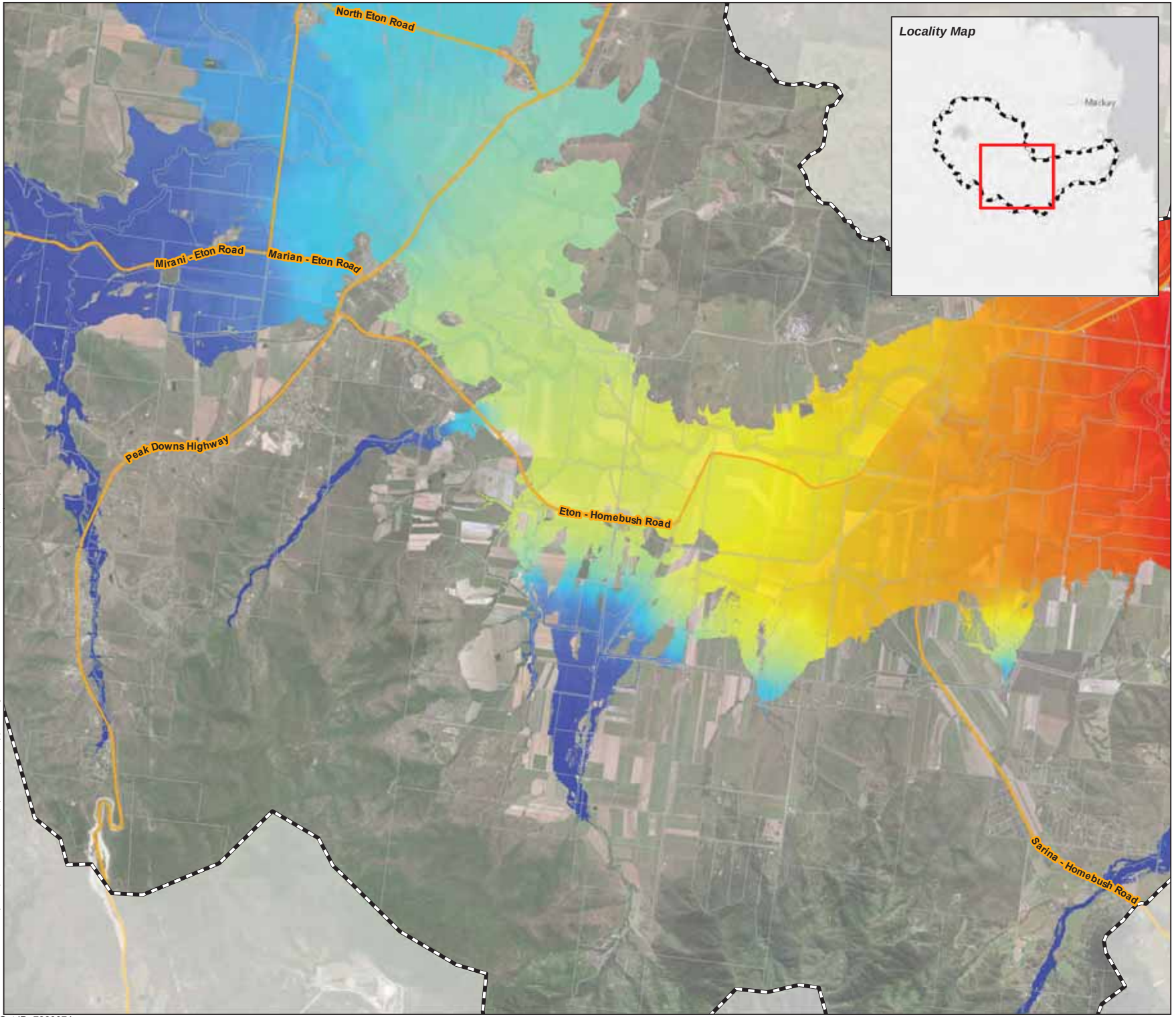
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 116.235

Low : 19.0162

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
08.2

A3 size

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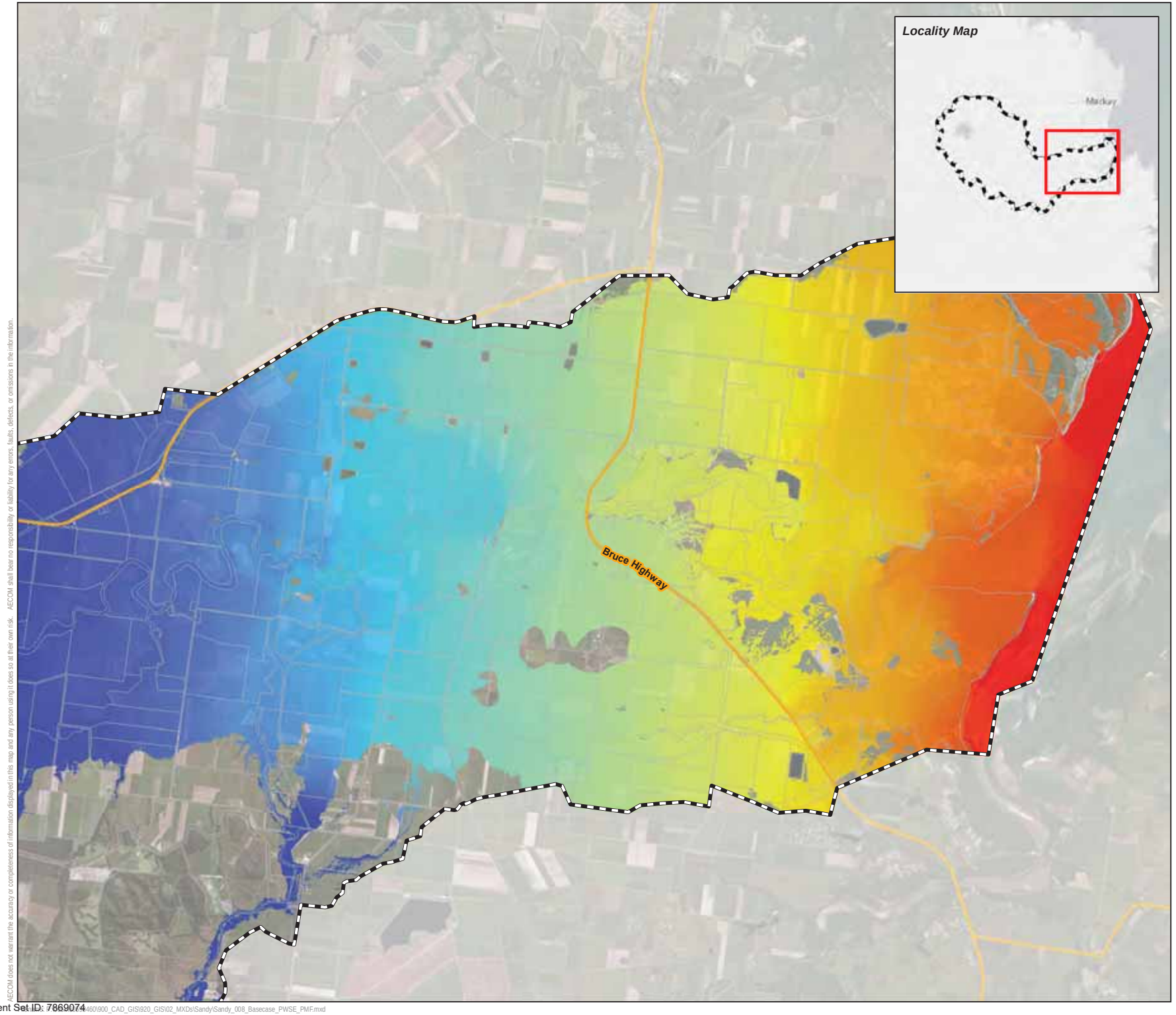

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 42.429

Low : 2.35

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

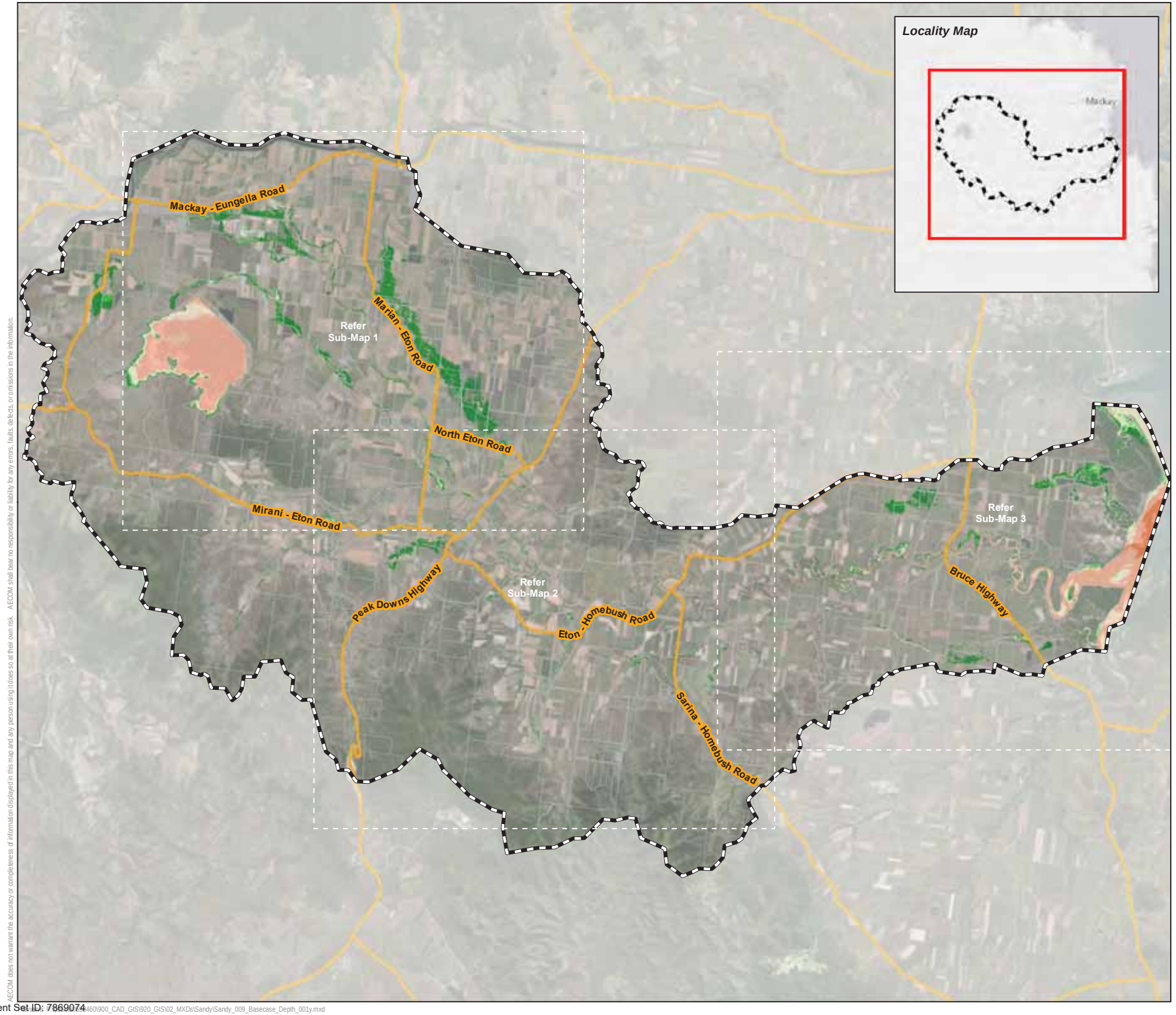
Peak Water Surface Elevation (PWSE)
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
08.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
09.0

A3 size

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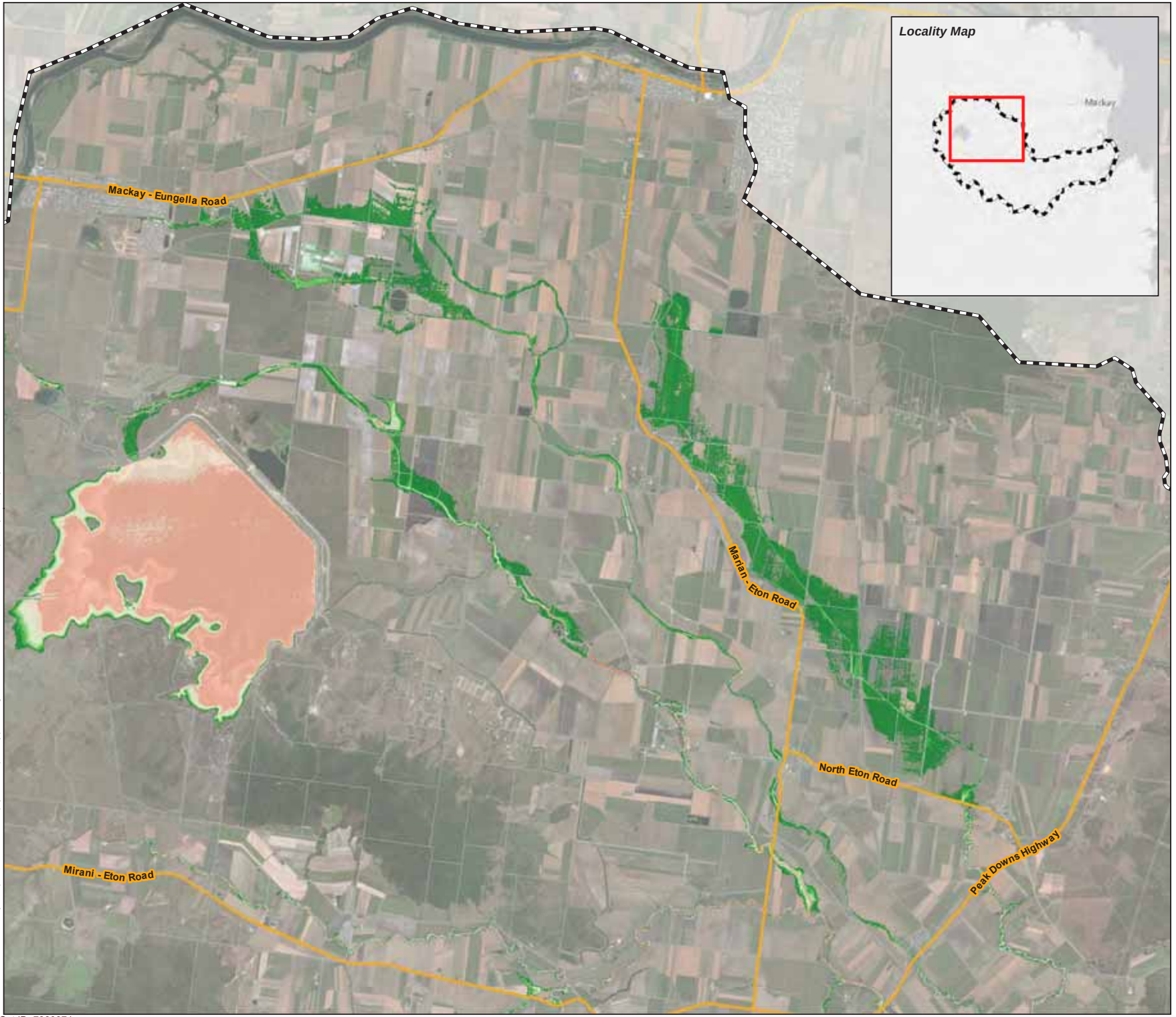
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
09.1

A3 size

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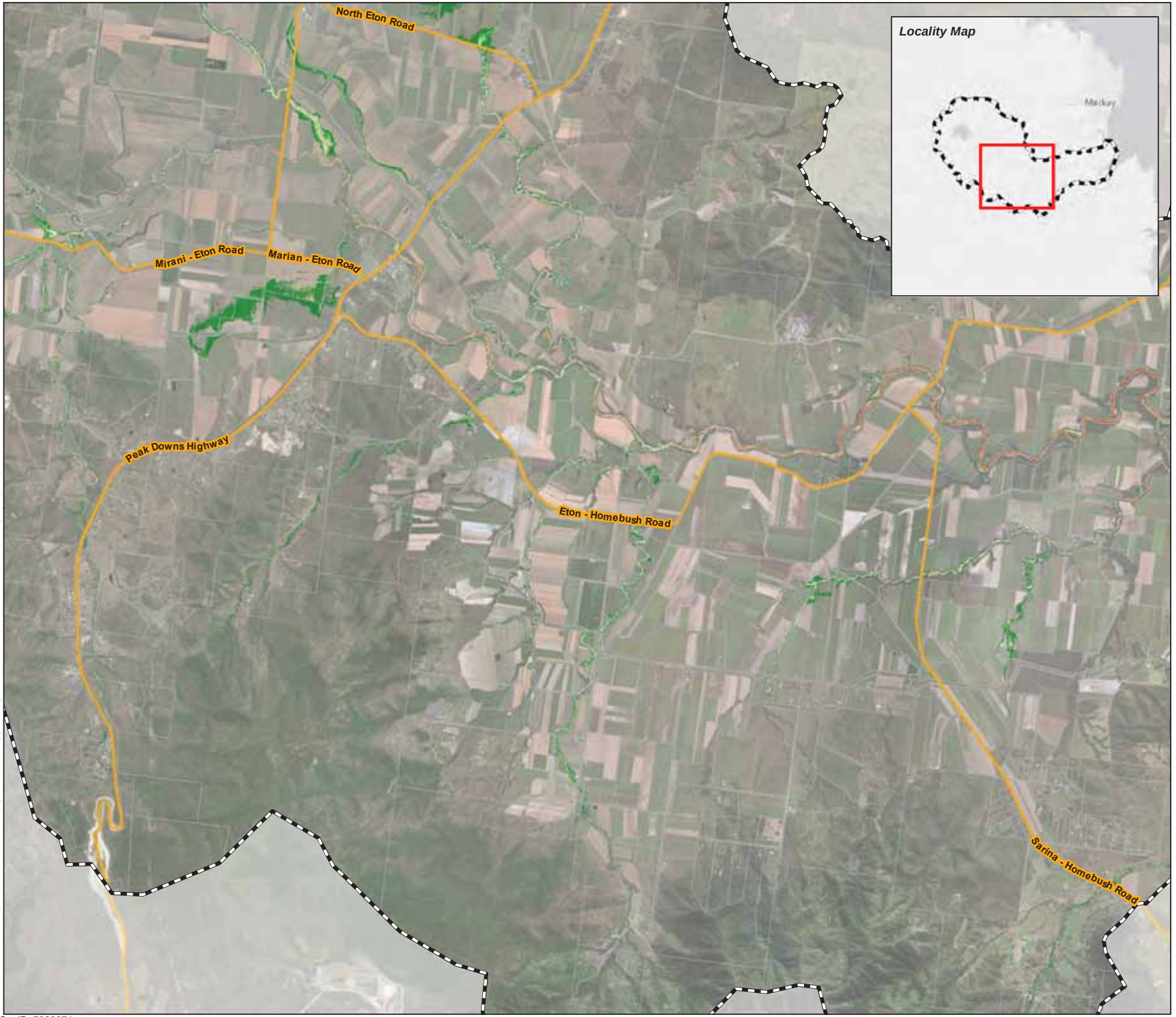

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
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A3 size

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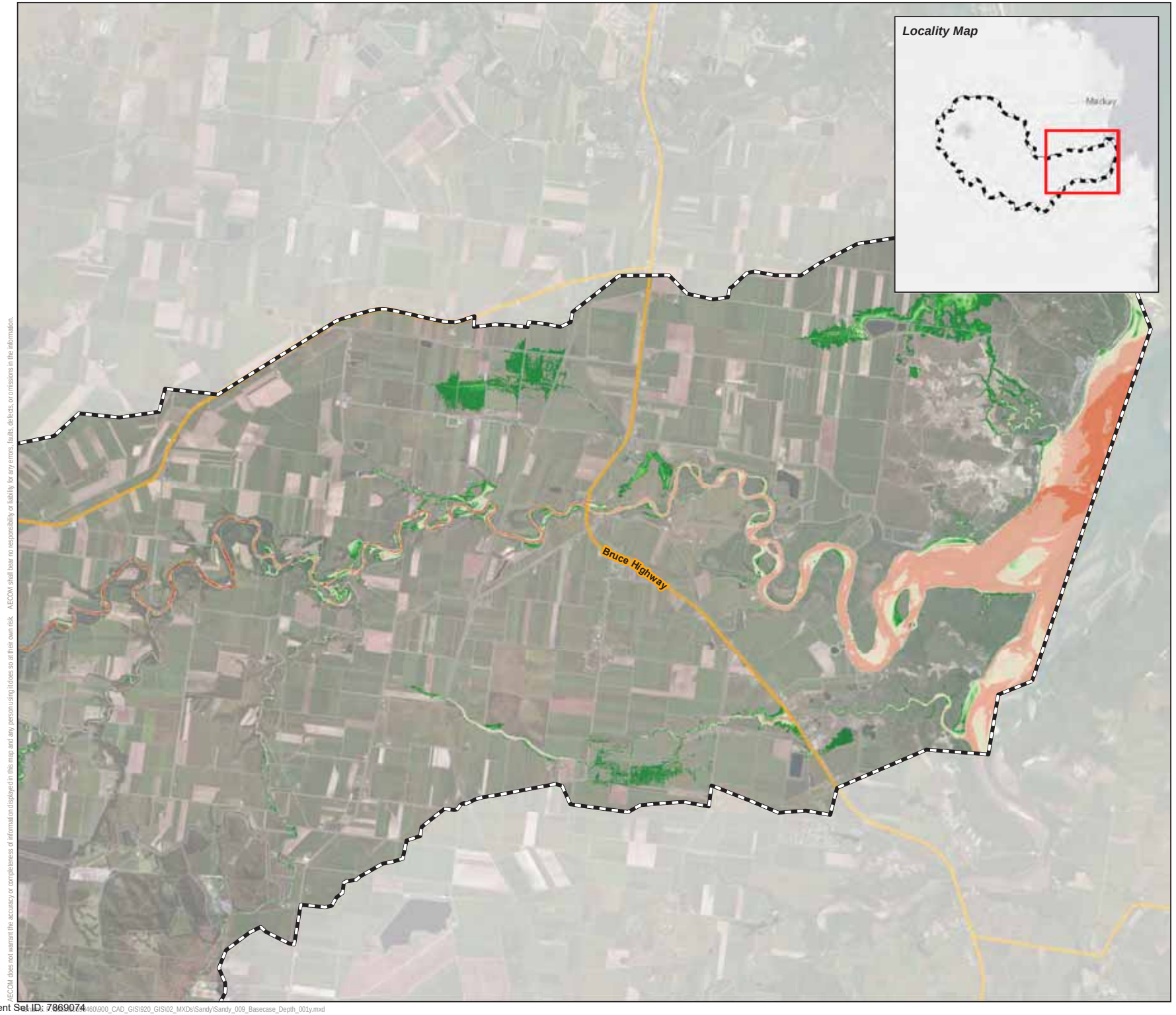

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
09.3

A3 size

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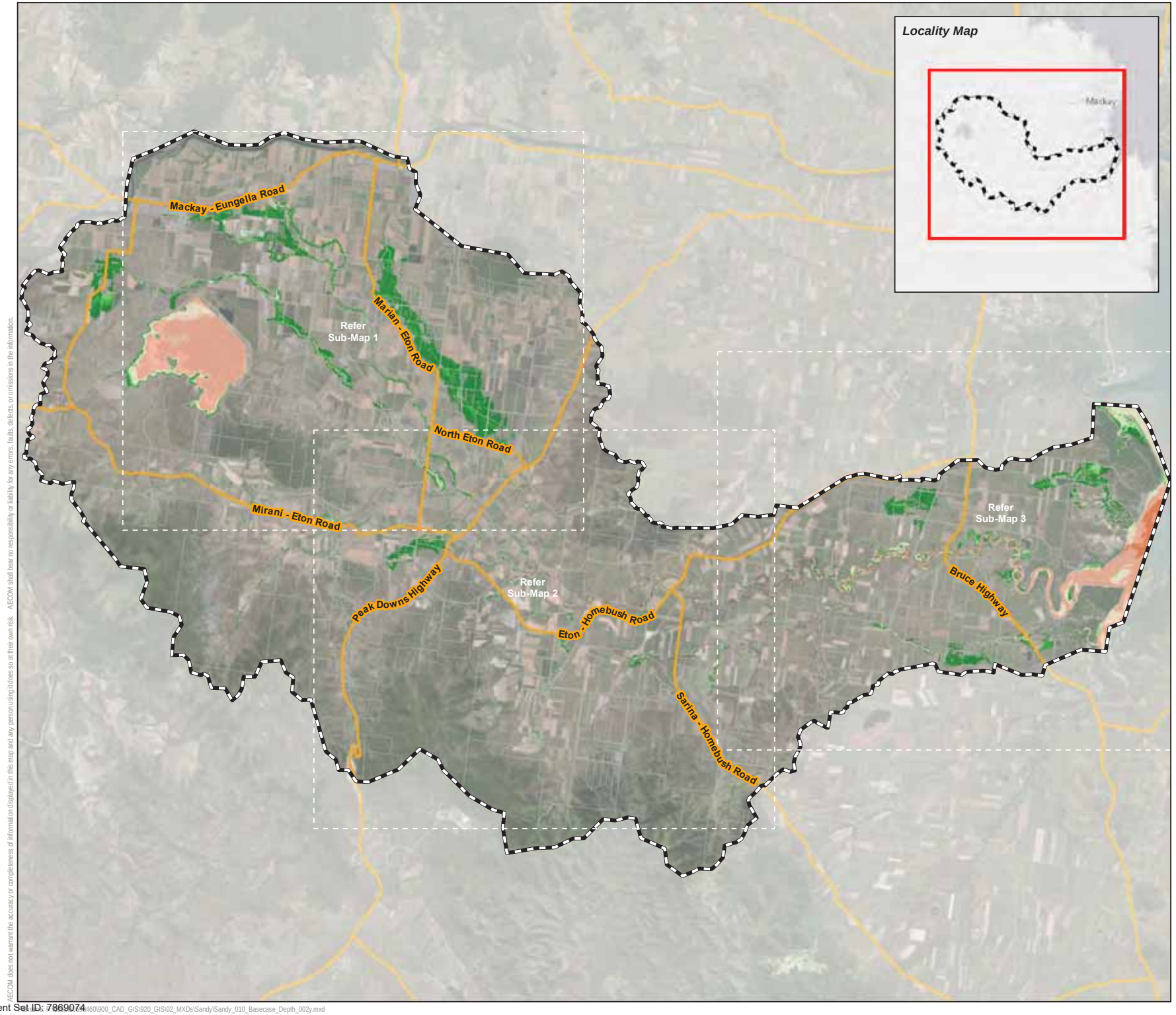
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



Locality Map

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
10.0

A3 size

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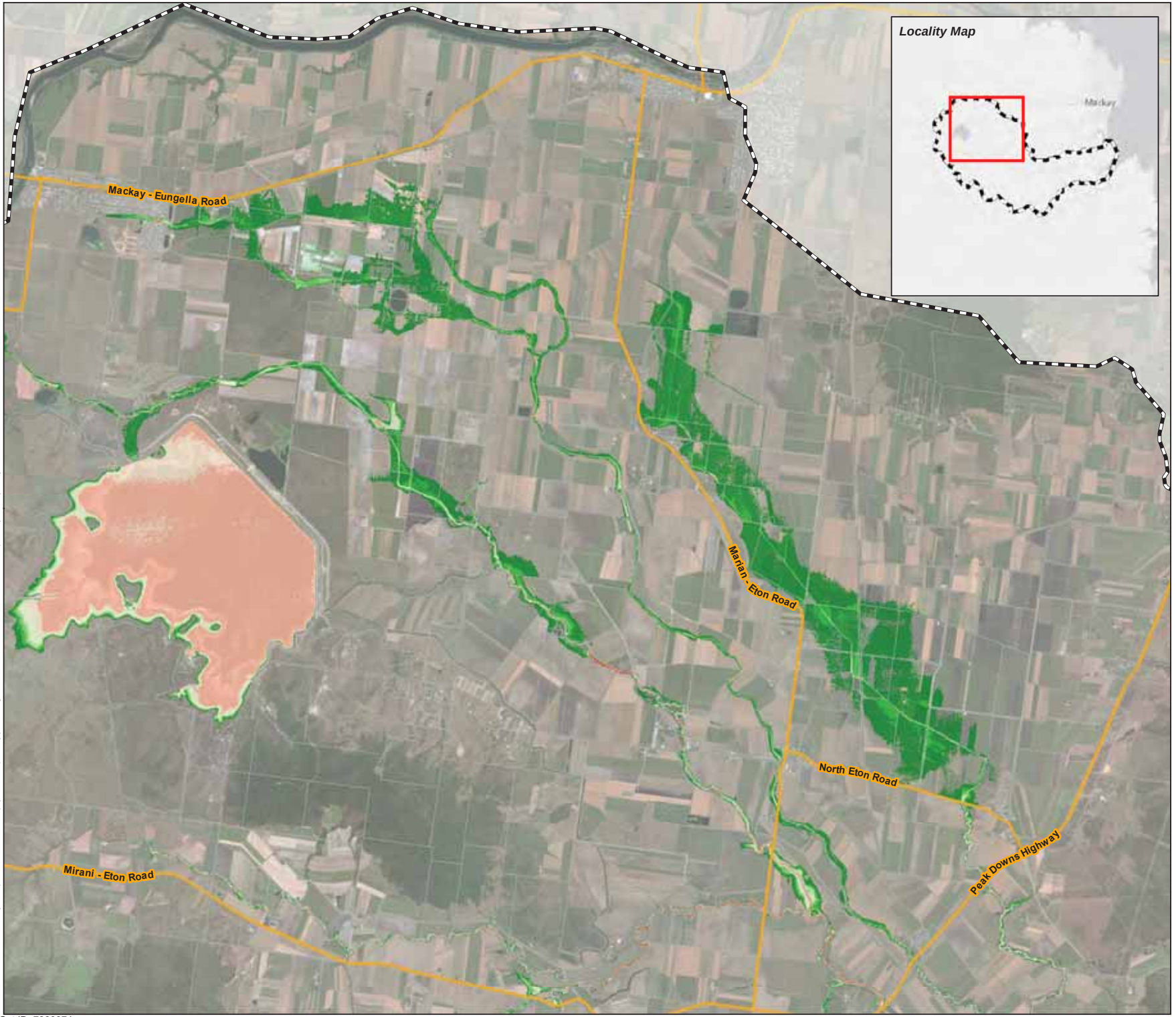
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
10.1

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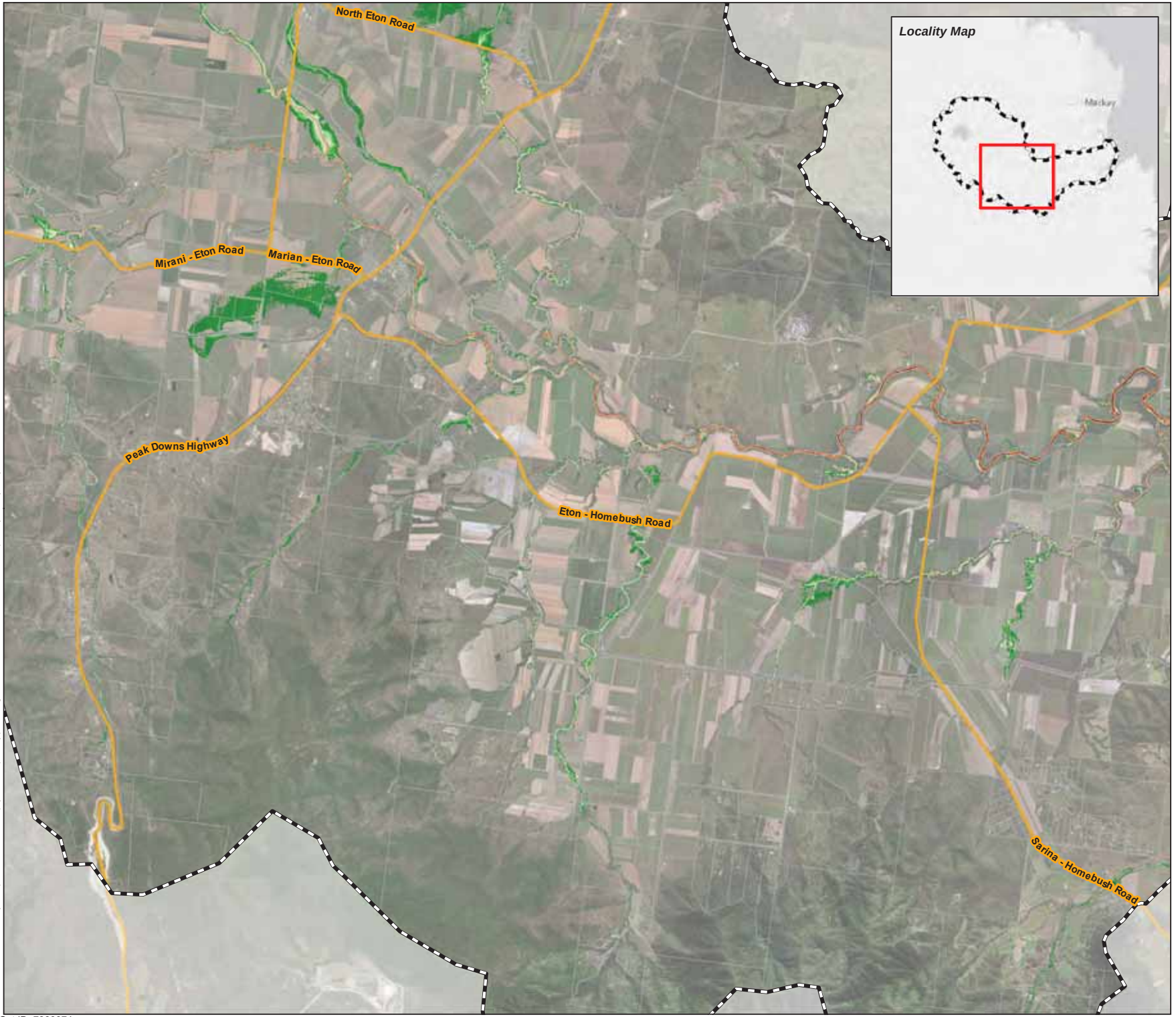

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
10.2

A3 size

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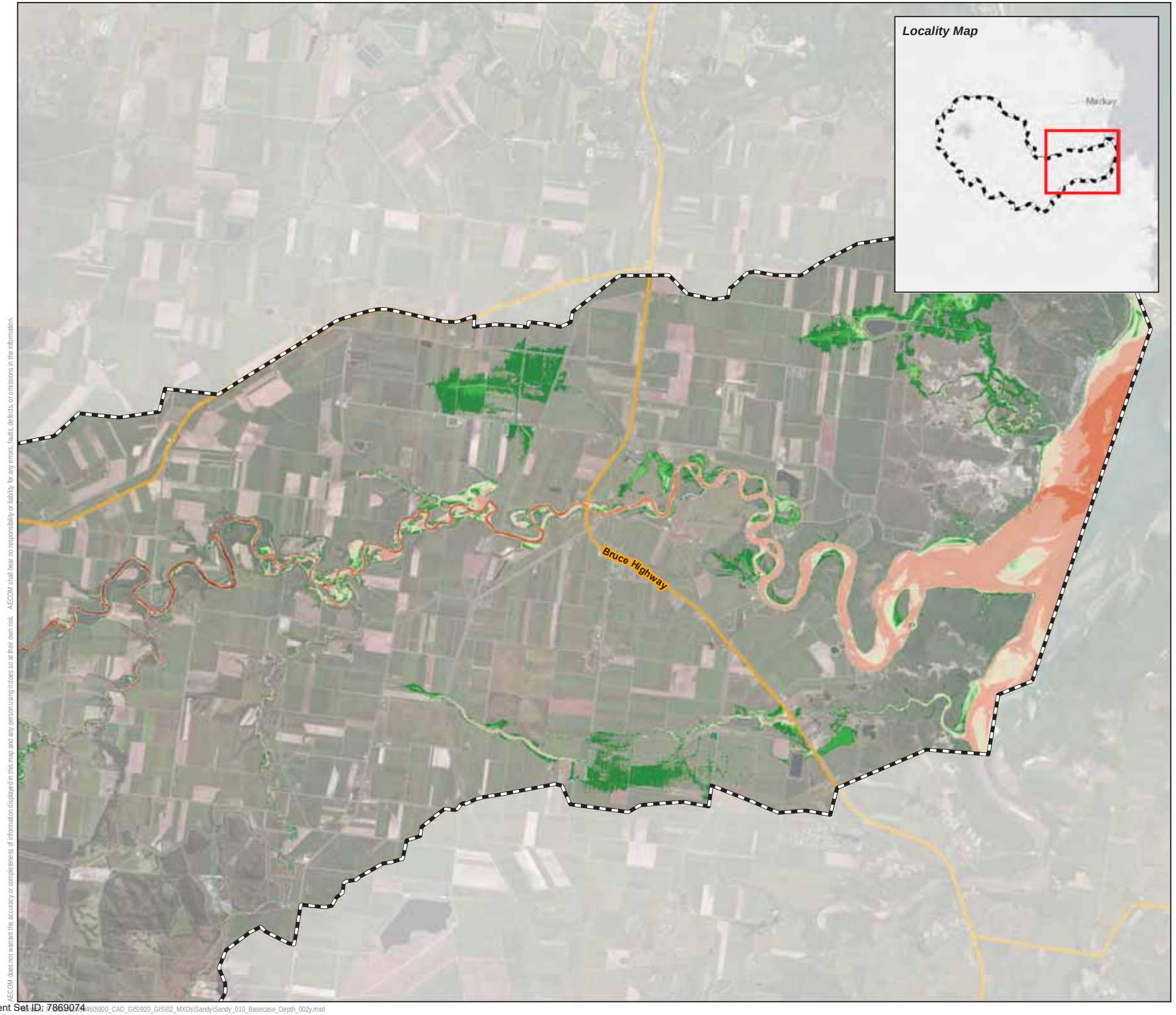
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 10.3

A3 size

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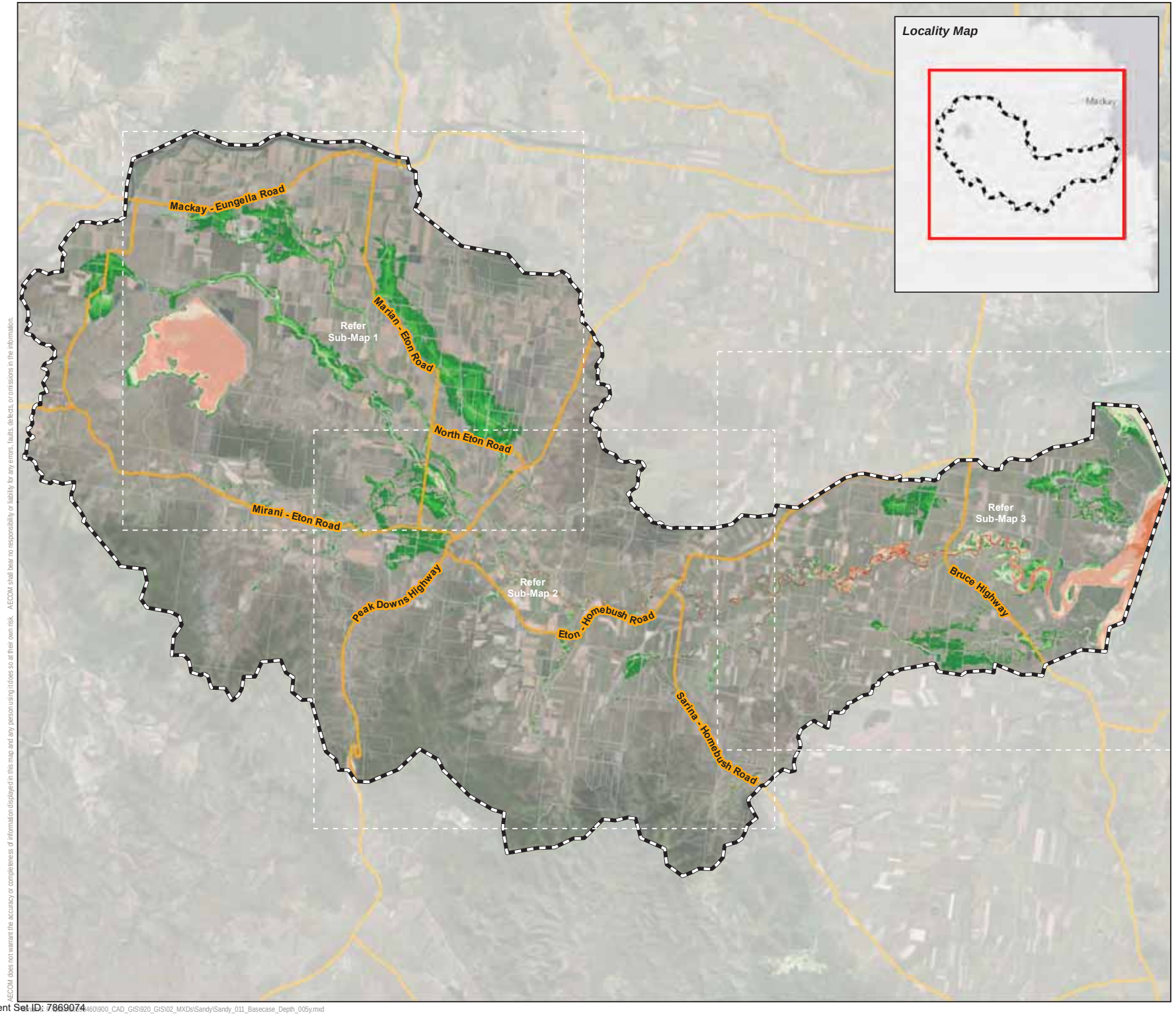
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



Locality Map

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 11.0

A3 size

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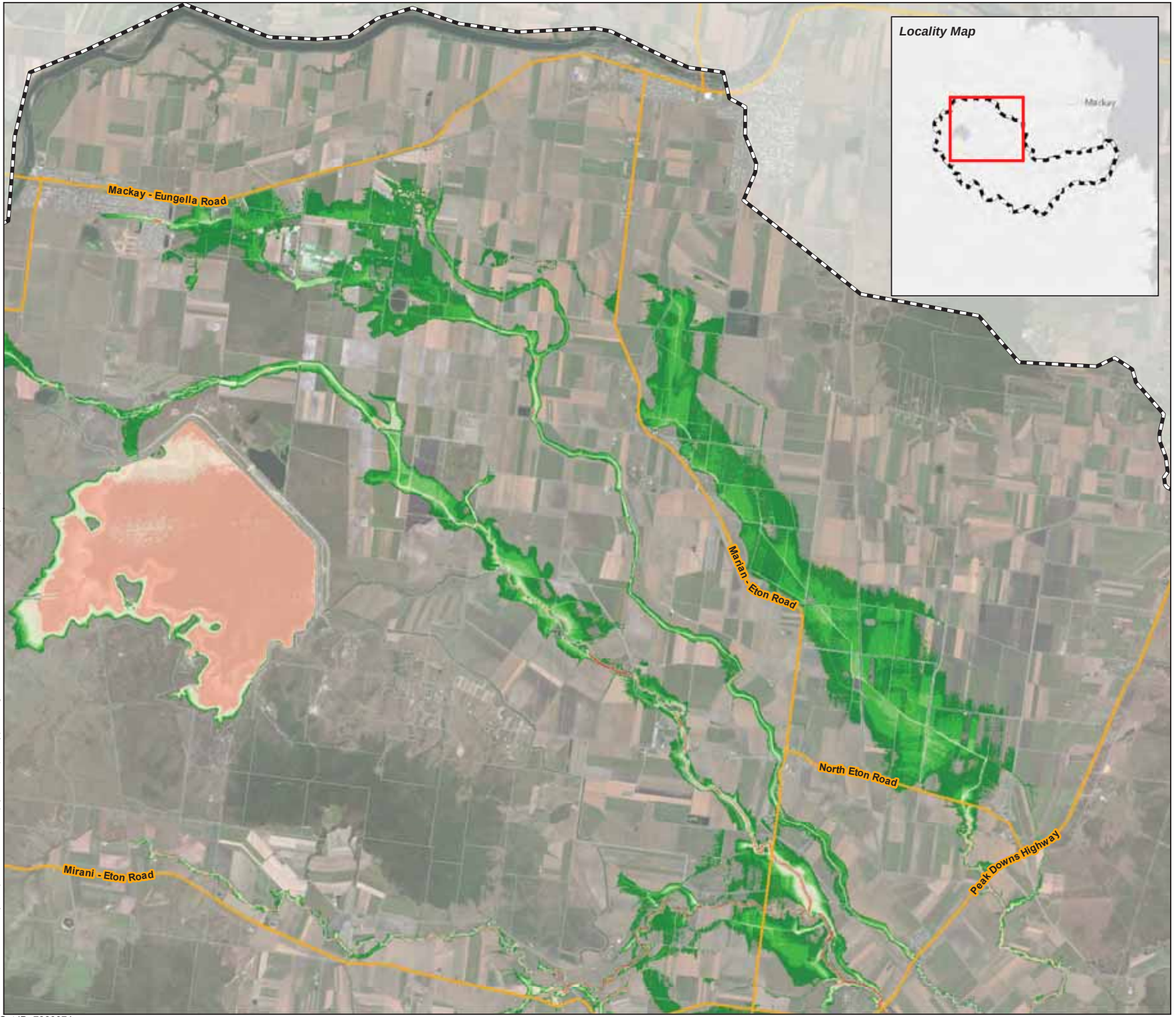
Version: 1, Version Date: 24/01/2020



AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 11.1

A3 size

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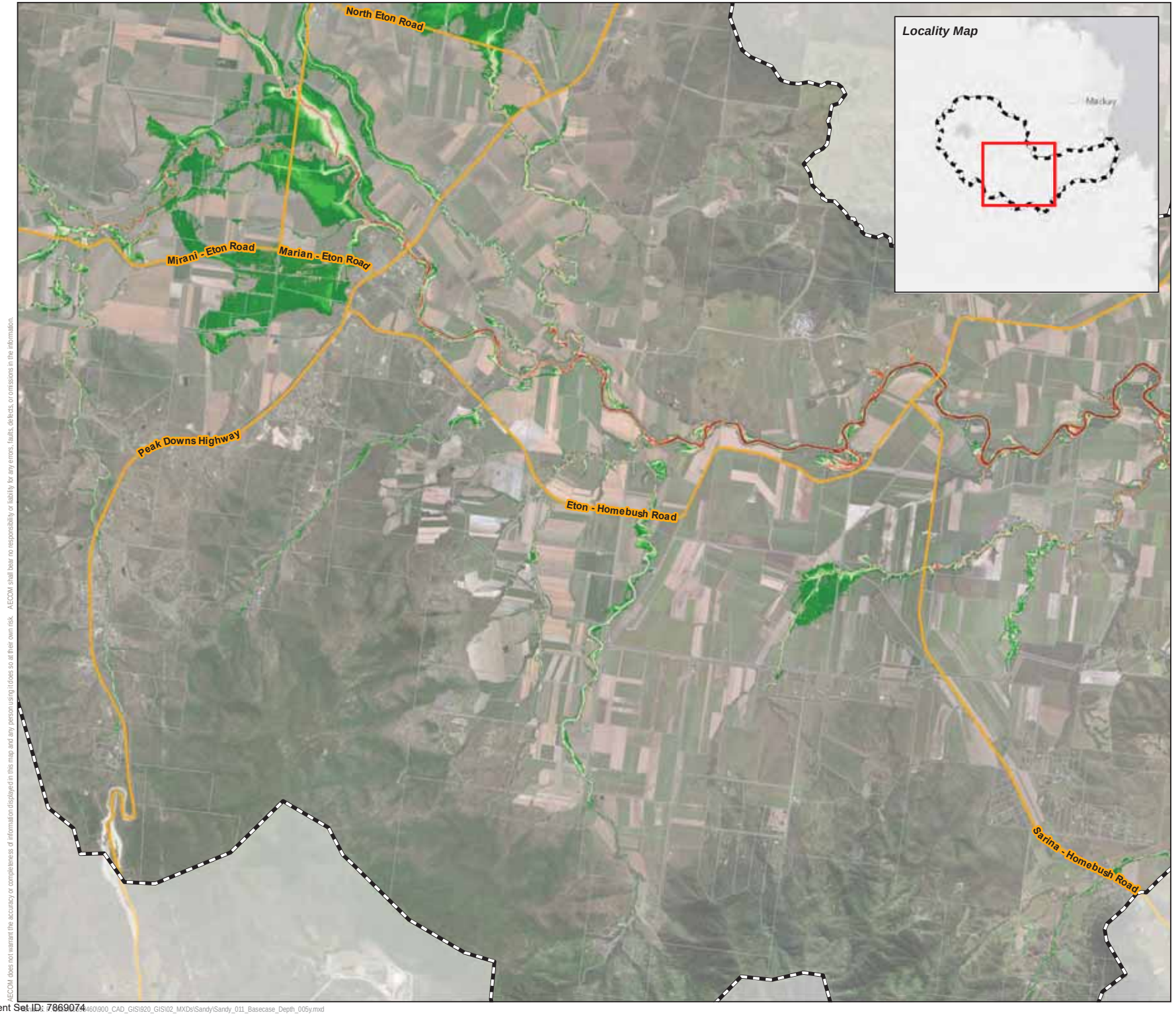

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
11.2

A3 size

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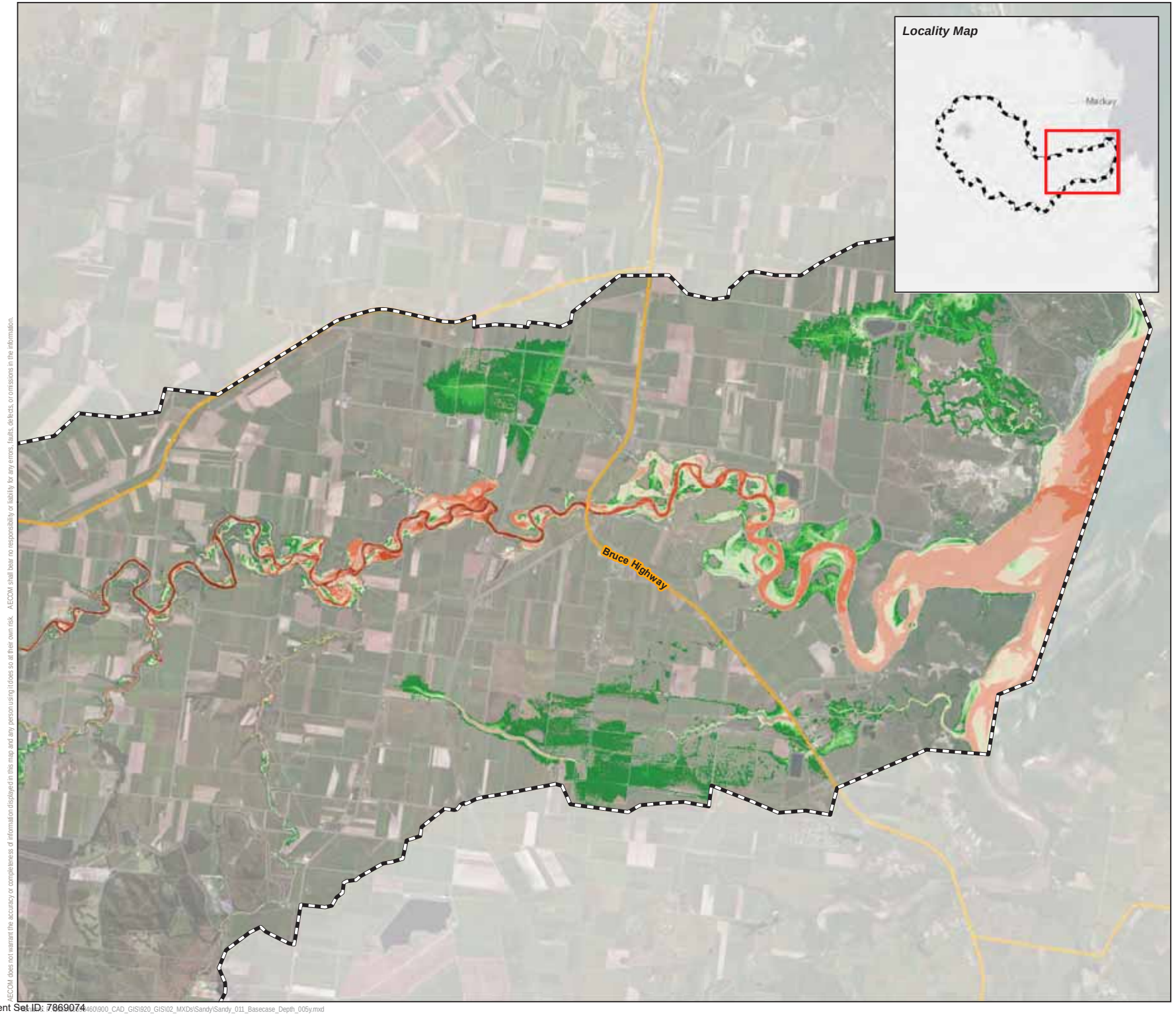

AECOM

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 11.3

A3 size

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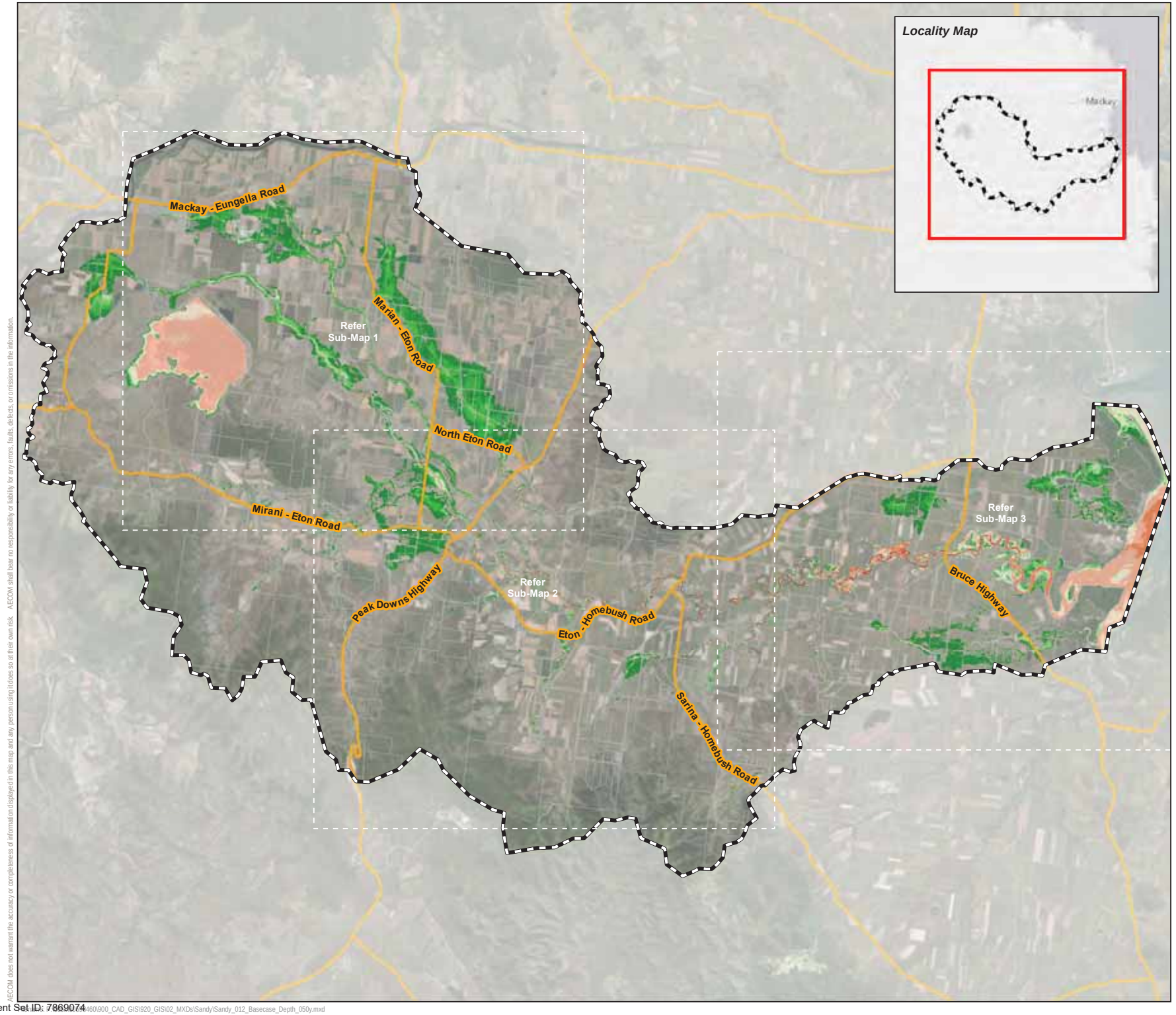

Locality Map

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
12.0

A3 size

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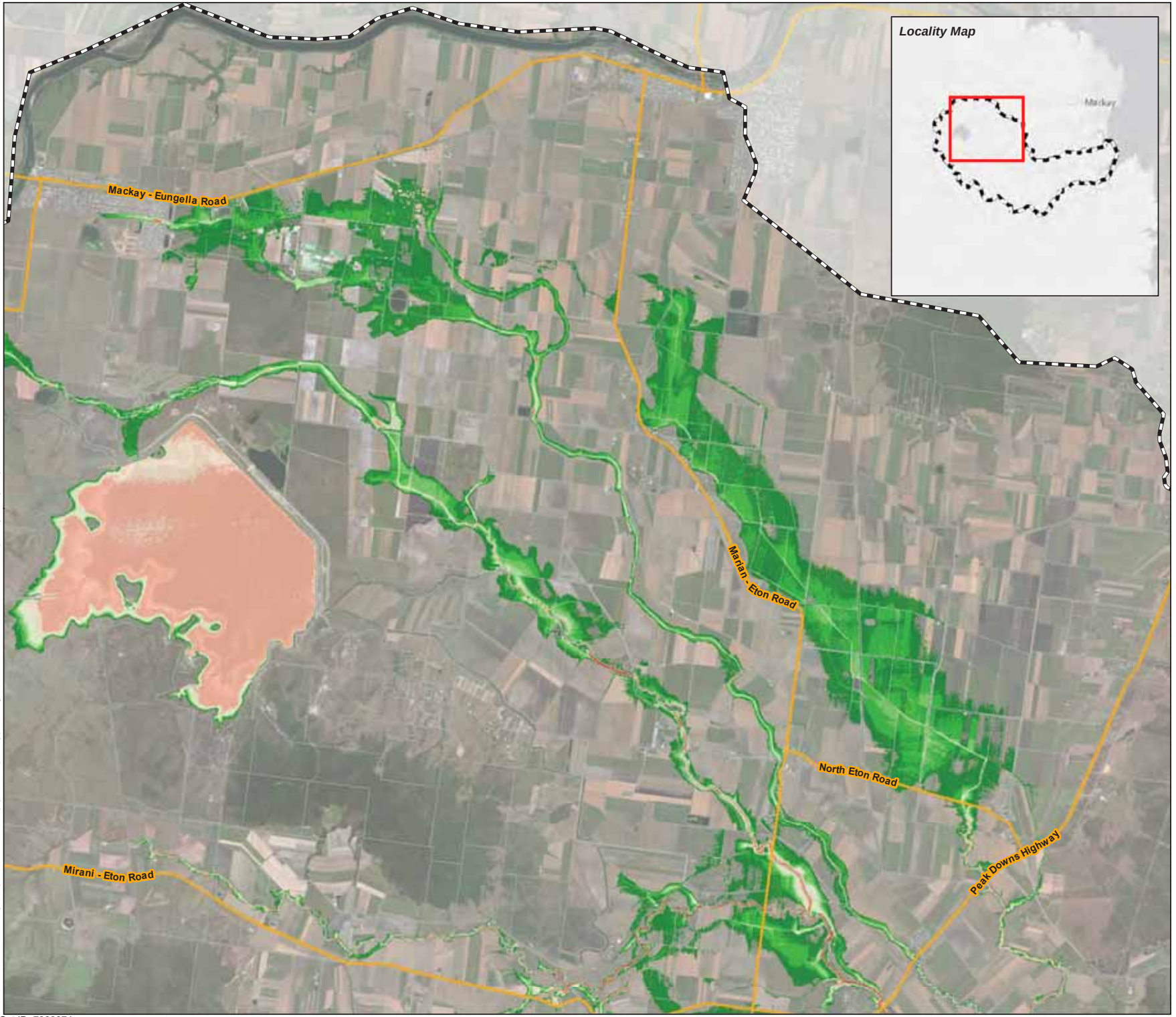
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 12.1

A3 size

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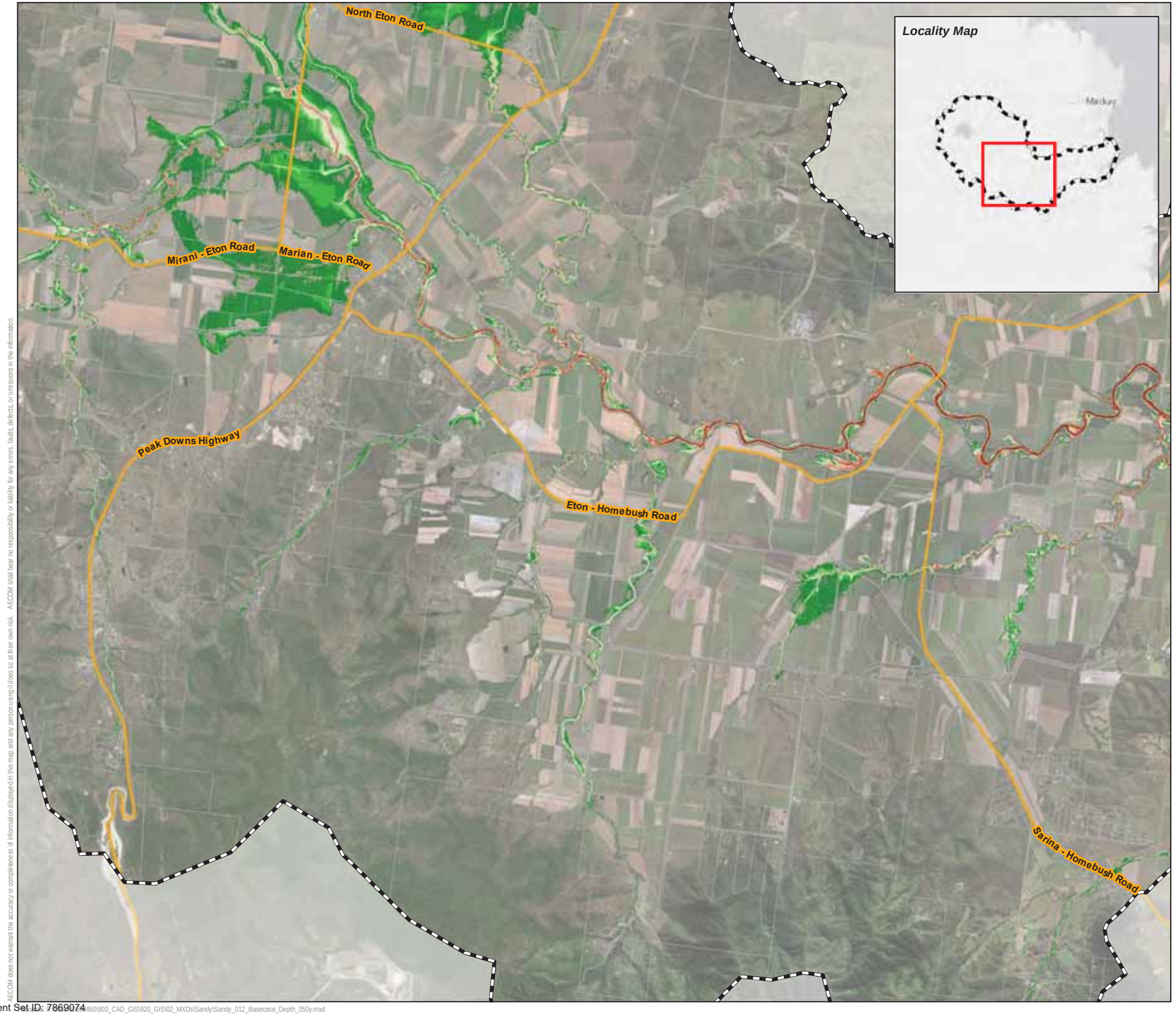

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 12.2

A3 size

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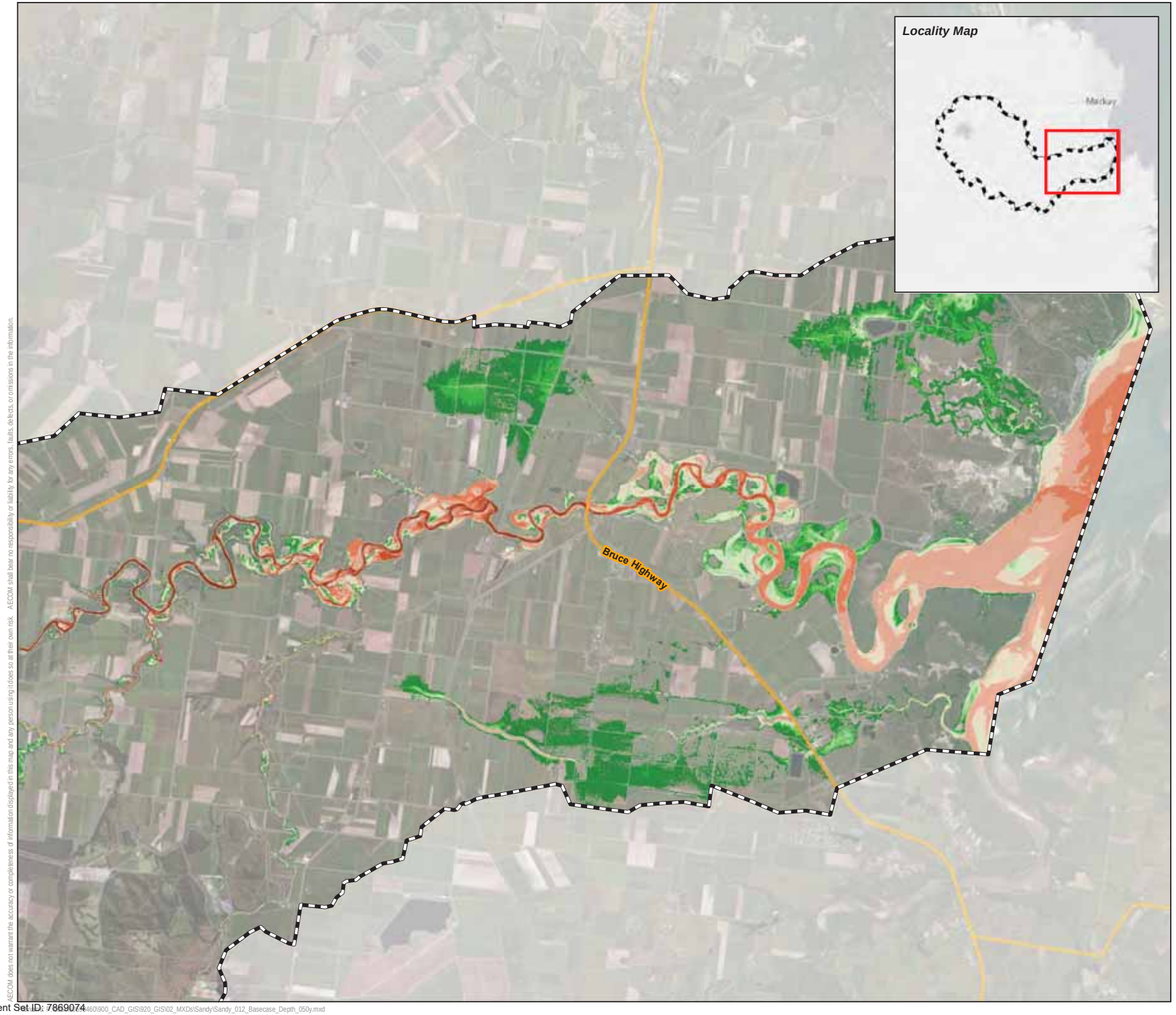

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GDA 1994 MGA Zone 55

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Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

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Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 12.3

A3 size

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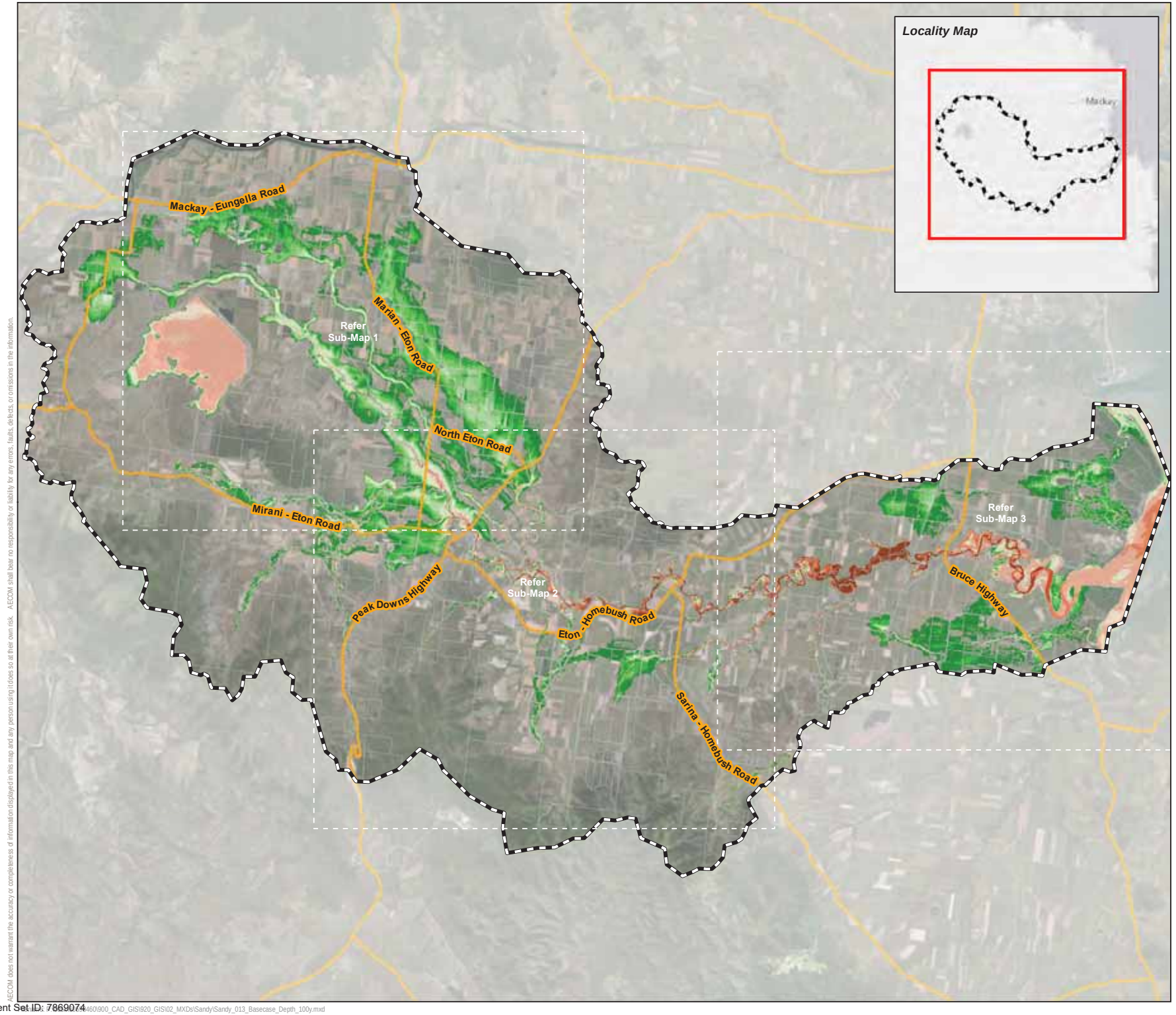
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
13.0

A3 size

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Document Set ID: 7869074
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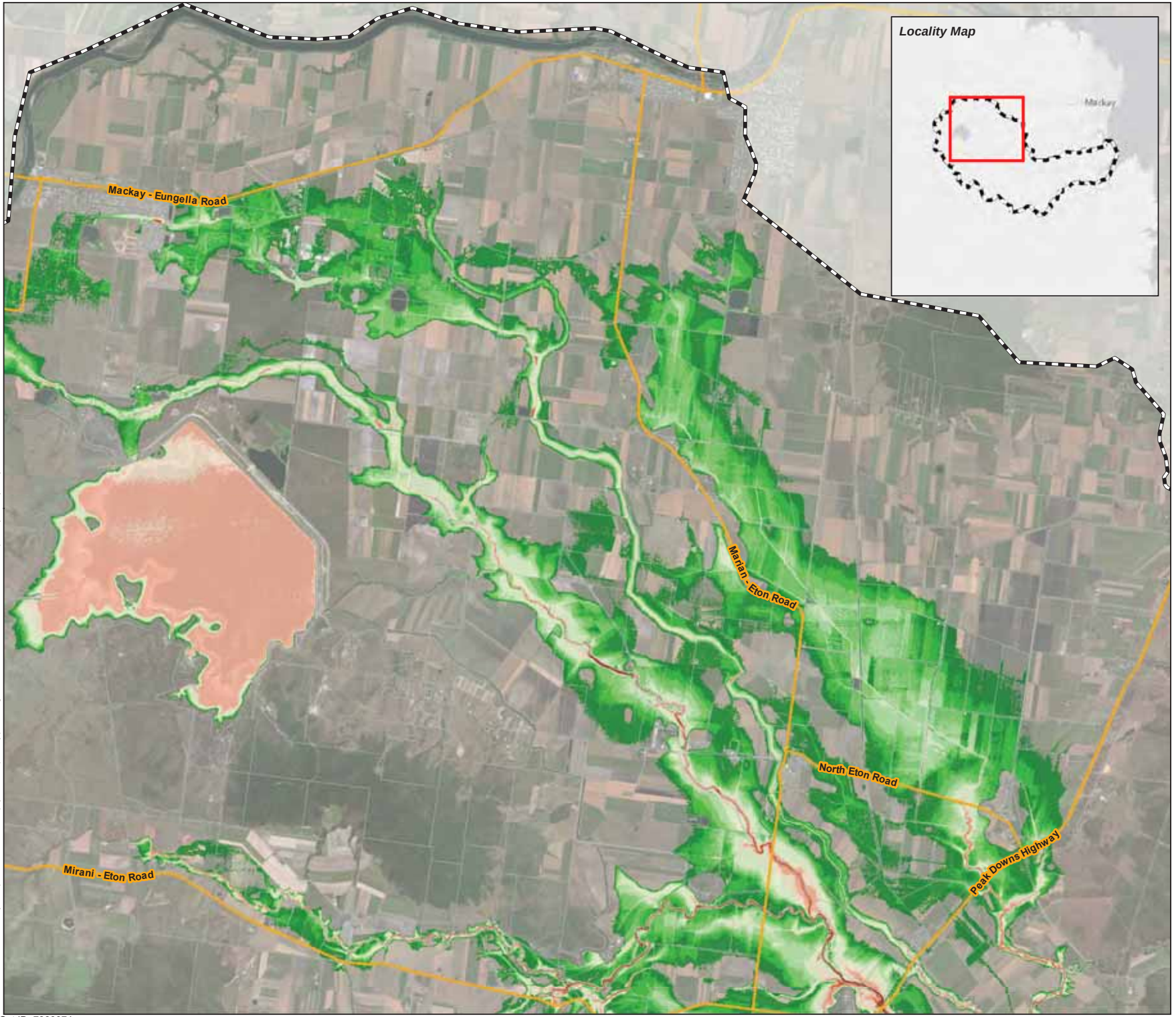

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
13.1

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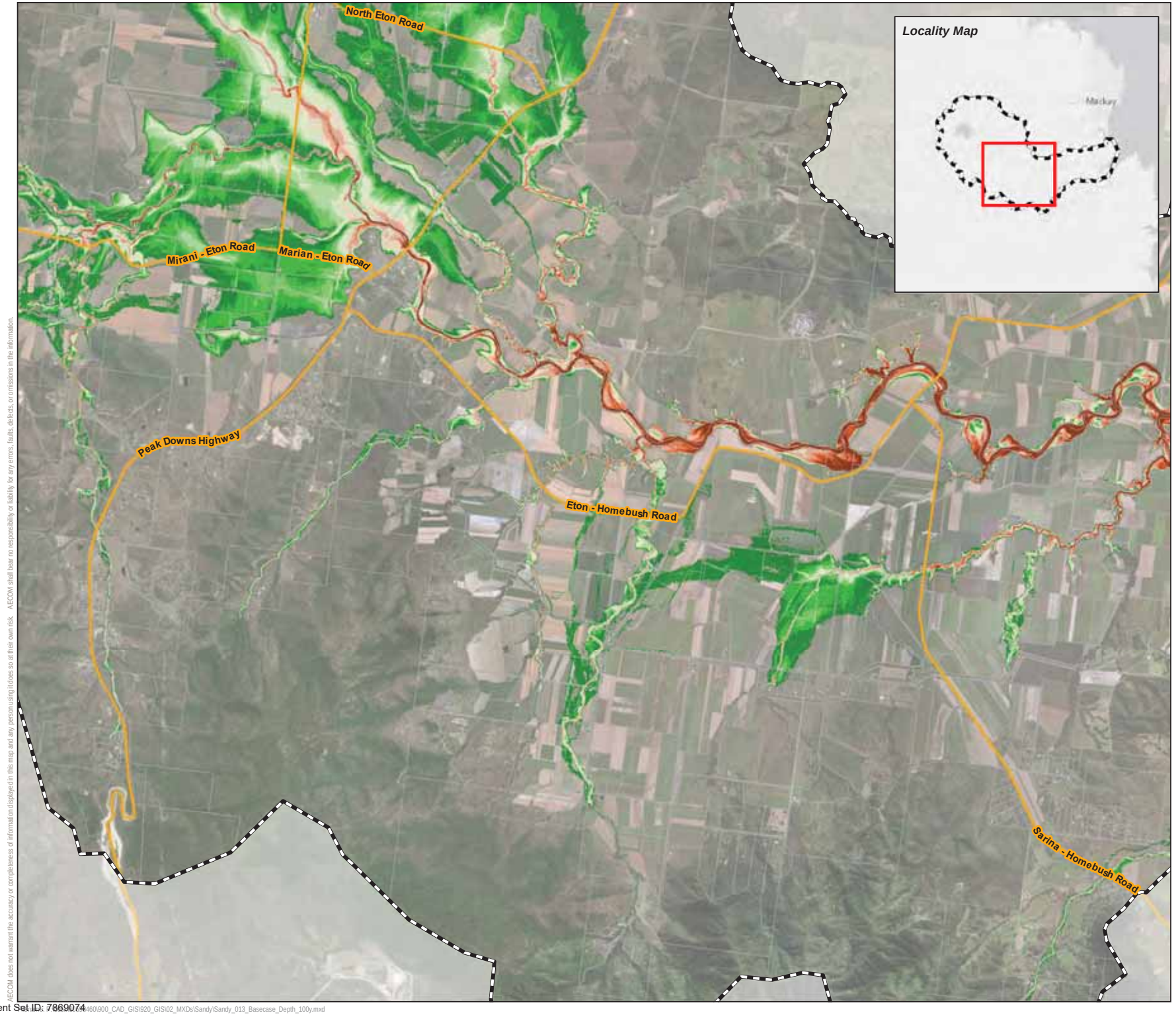

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GDA 1994 MGA Zone 55

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Metres

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LEGEND

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
13.2

A3 size

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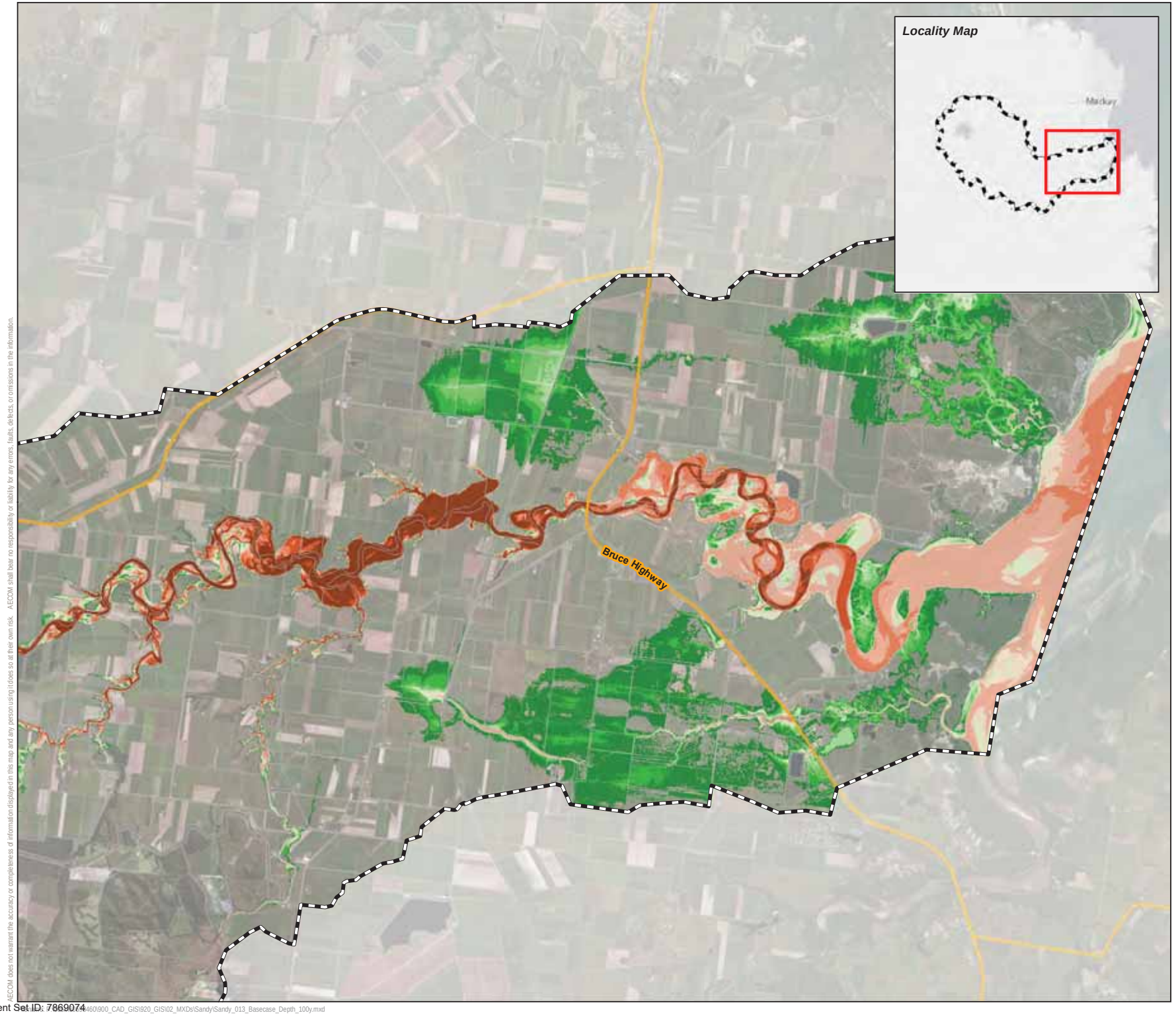

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
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Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
13.3

A3 size

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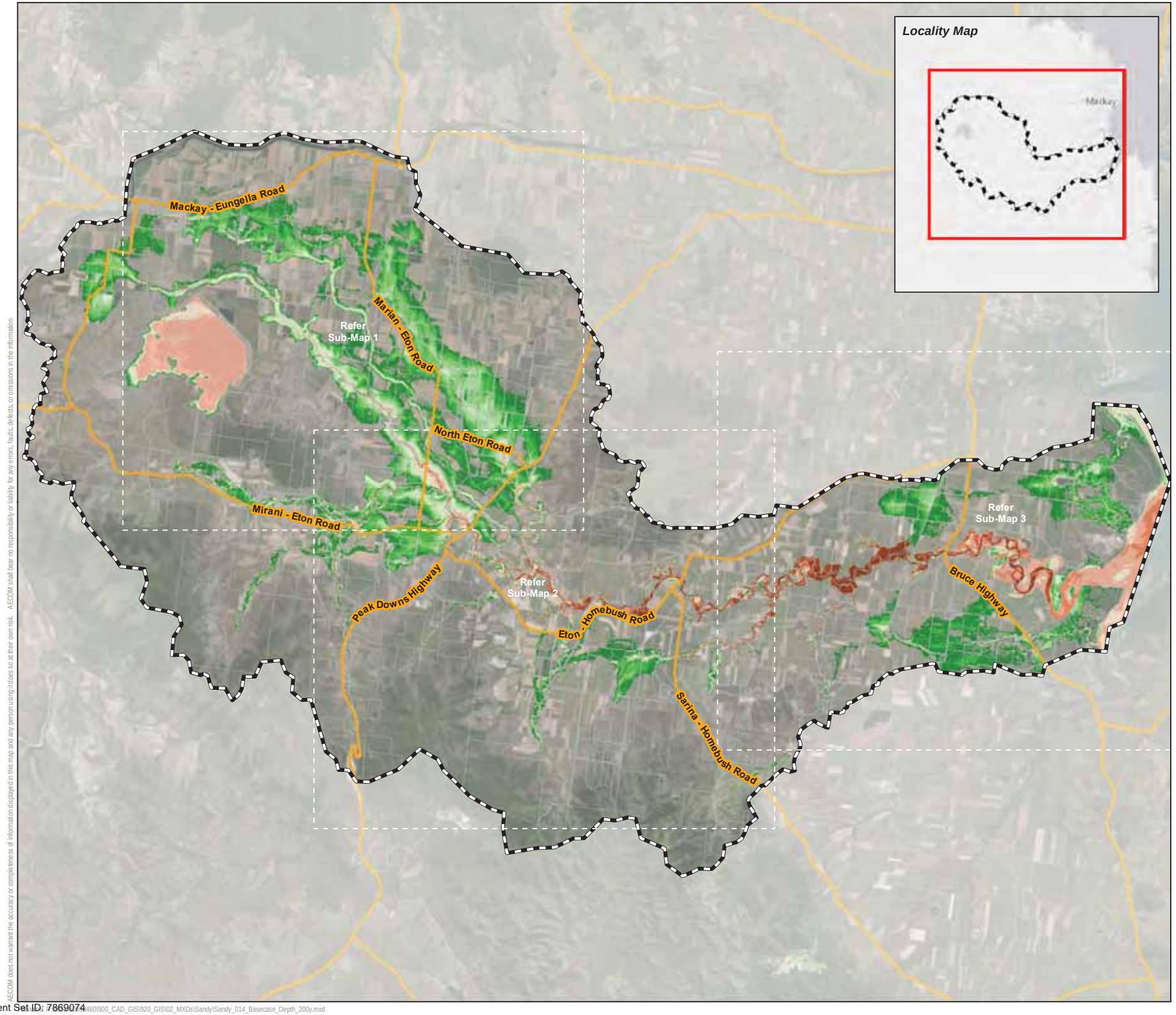
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



Locality Map

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 14.0

A3 size

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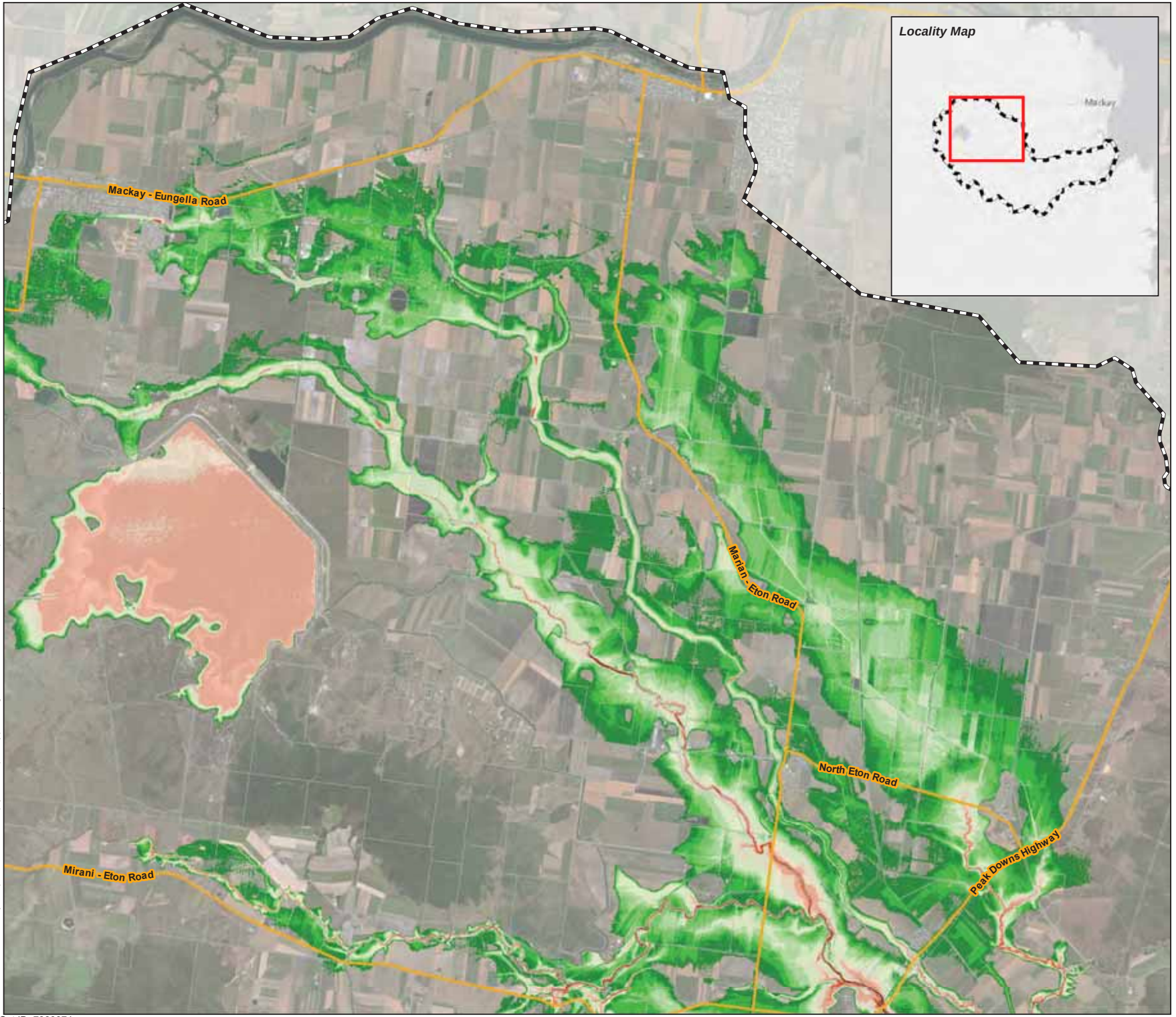
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
14.1

A3 size

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Document Set ID: 7869074
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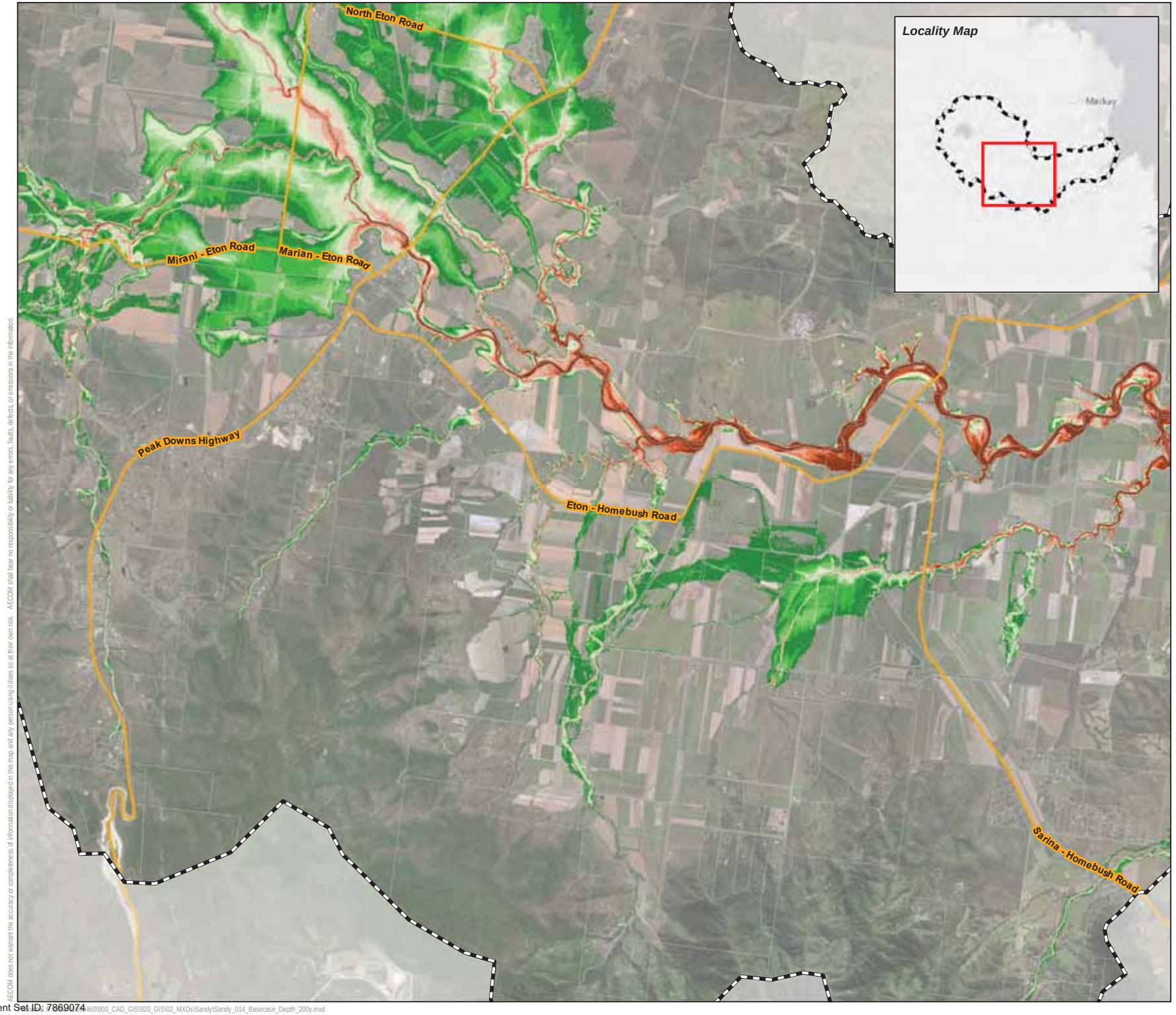

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
14.2

A3 size

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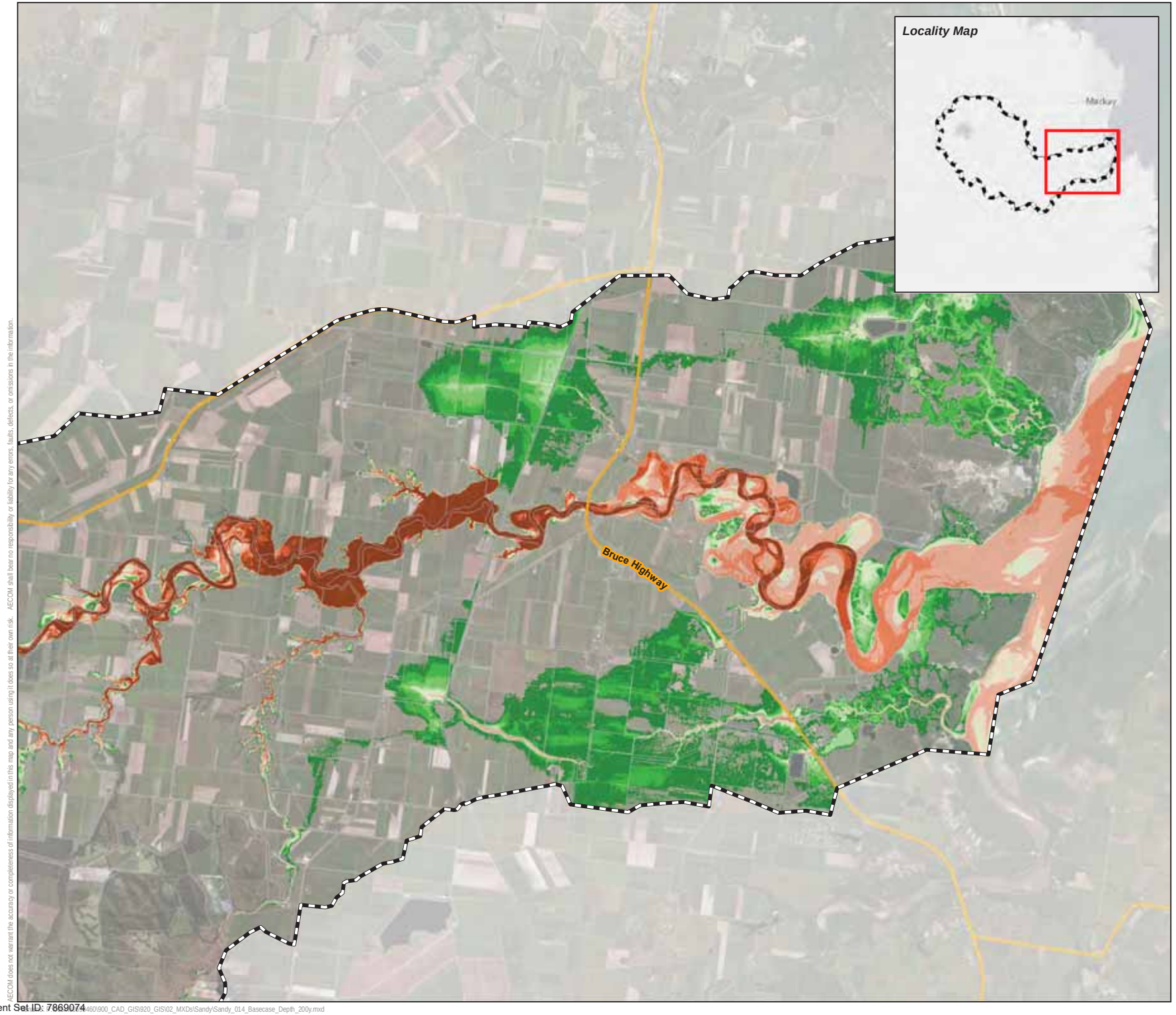

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.5% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
14.3

A3 size

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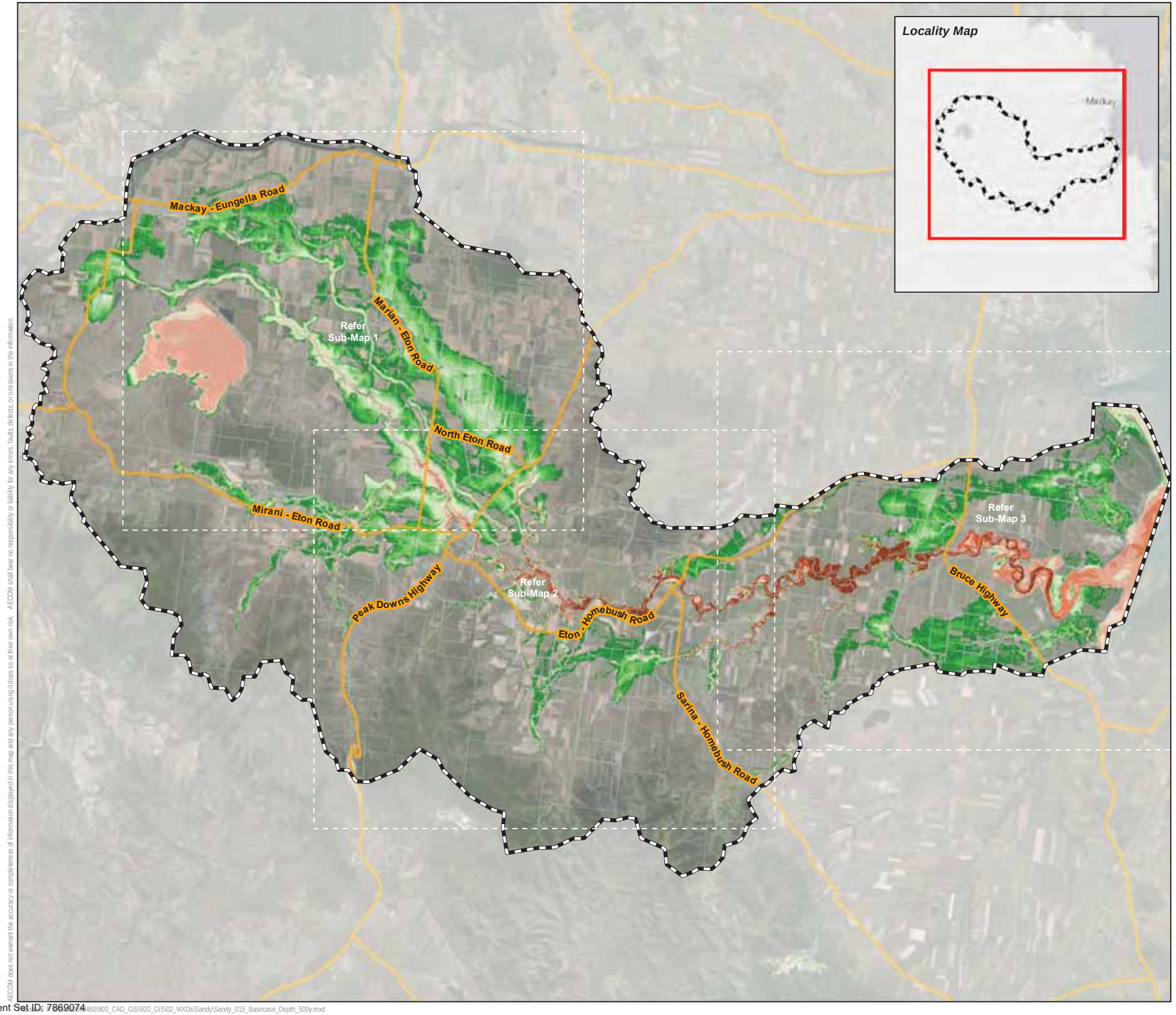

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map
15.0

A3 size

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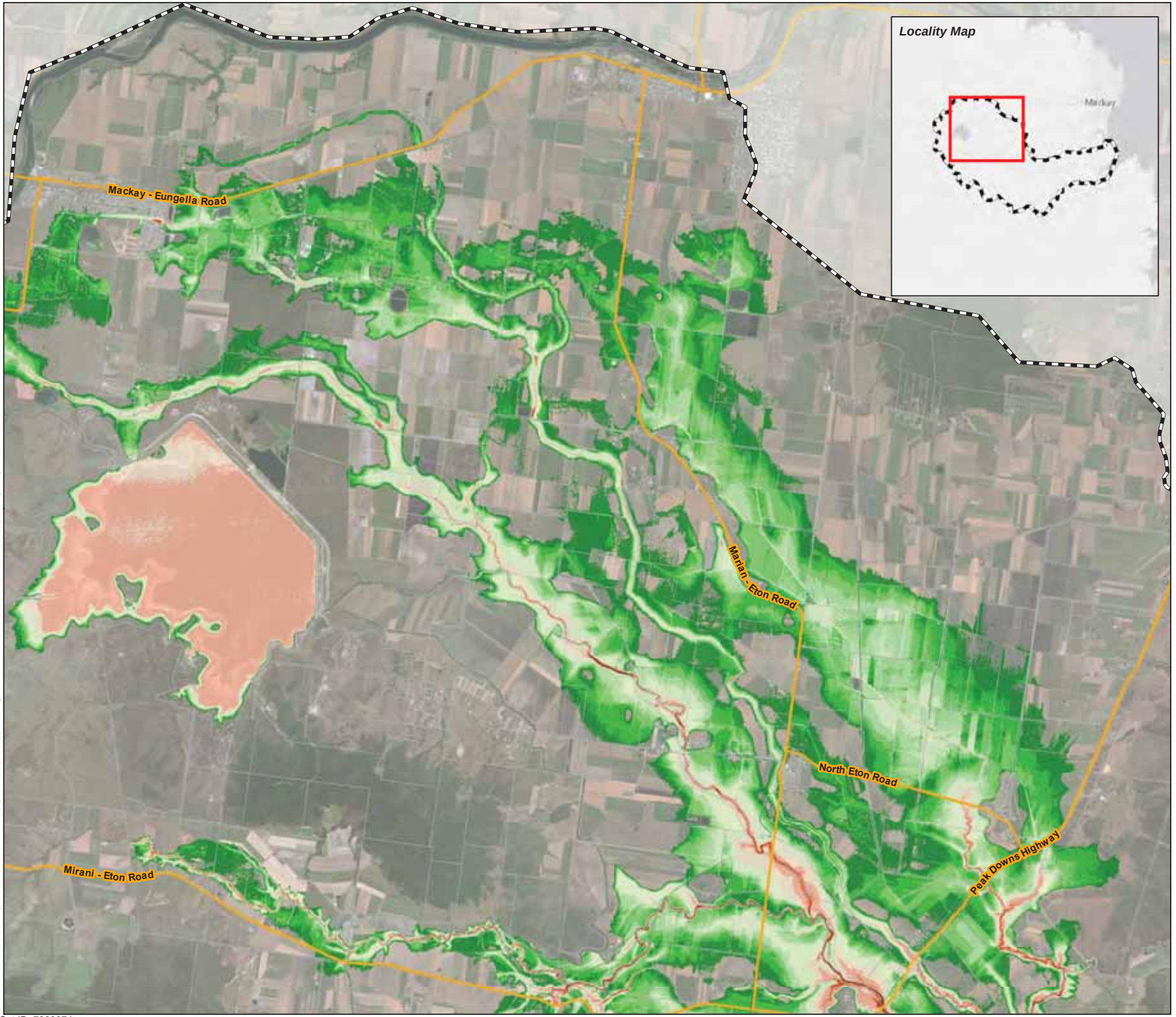

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
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- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 15.1

A3 size

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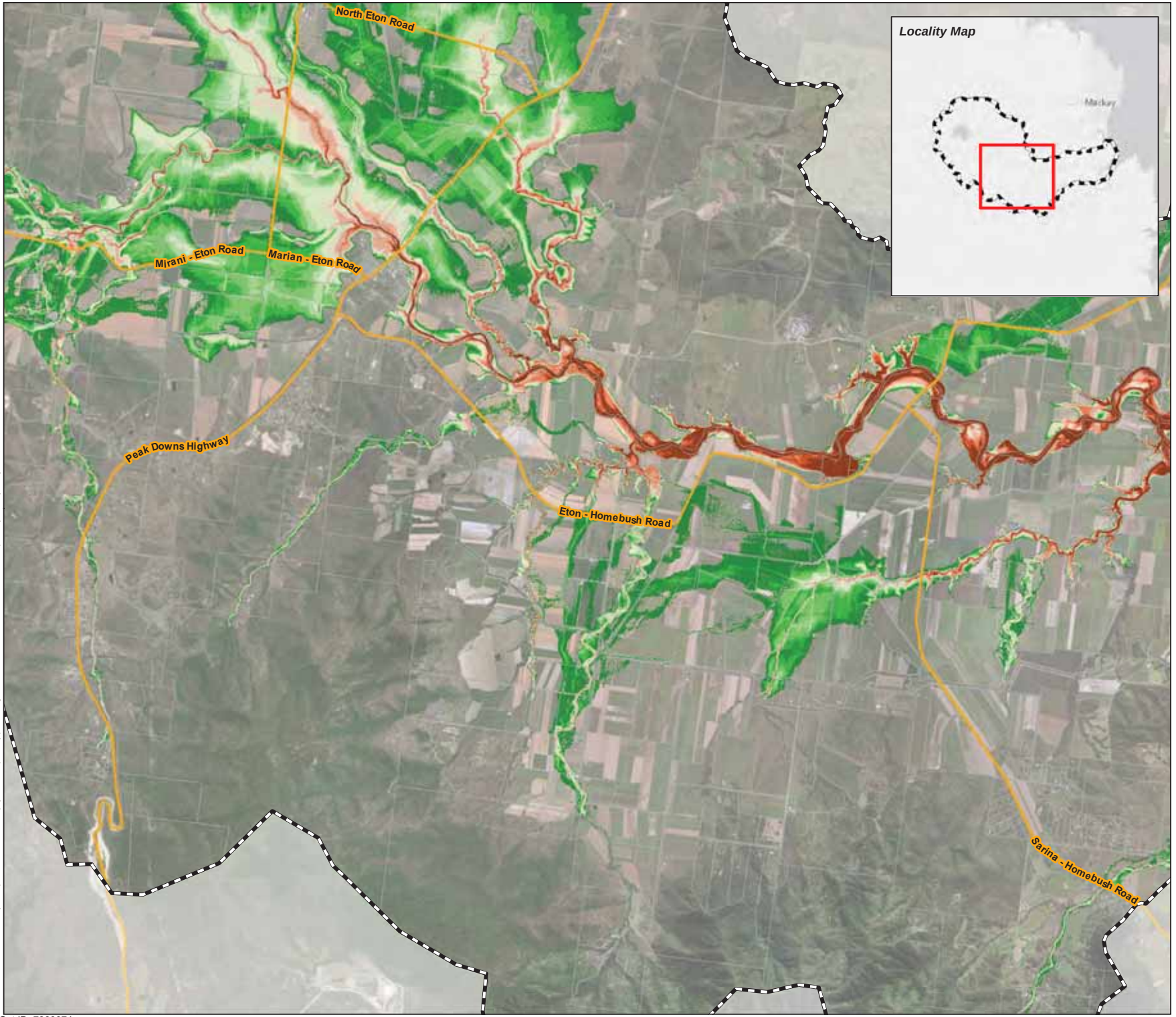
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	29/09/2019
VERSION:	v01

Map 15.2

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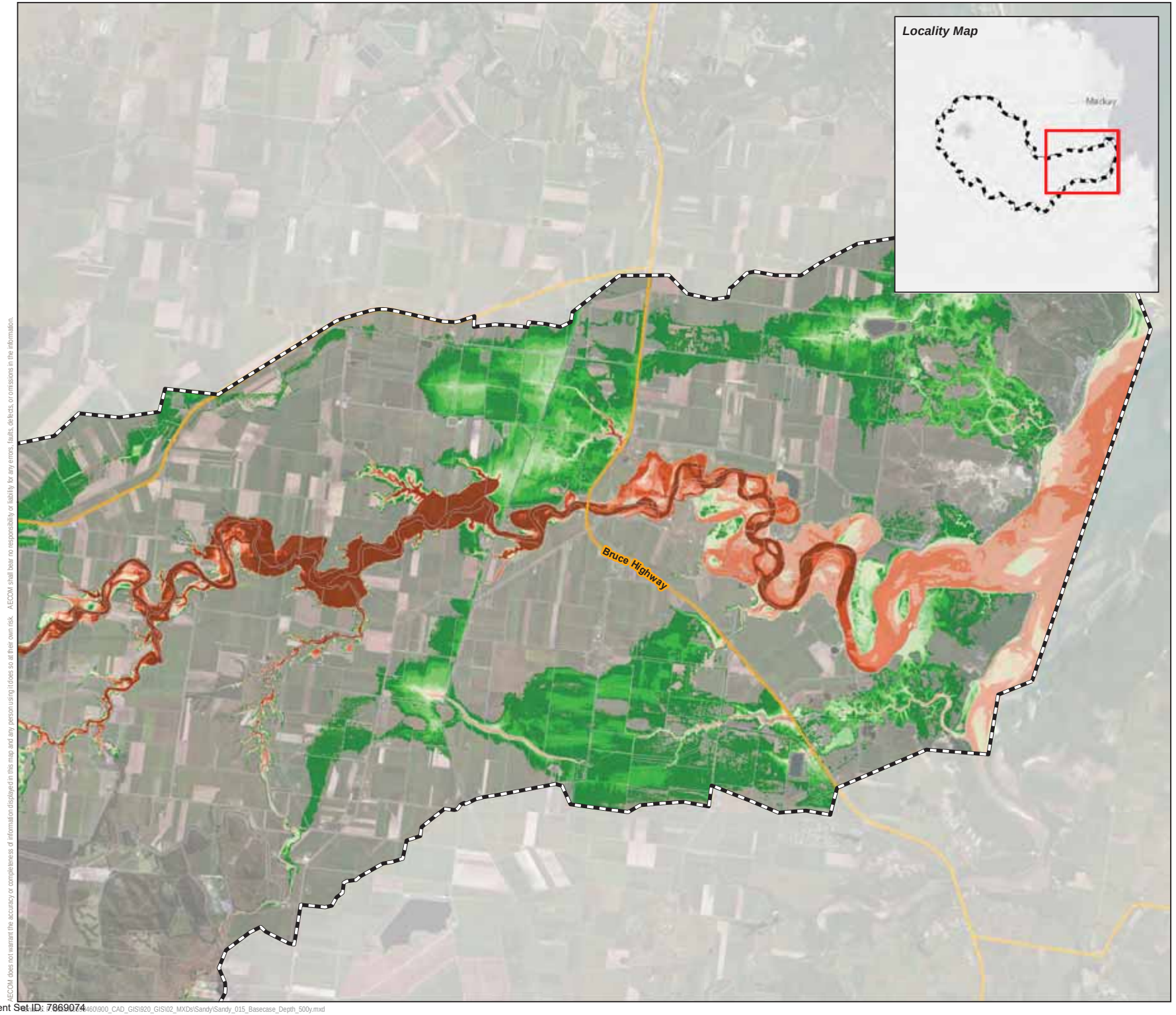

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GDA 1994 MGA Zone 55

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Metres

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LEGEND

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Sandy Creek Catchment

Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
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Map
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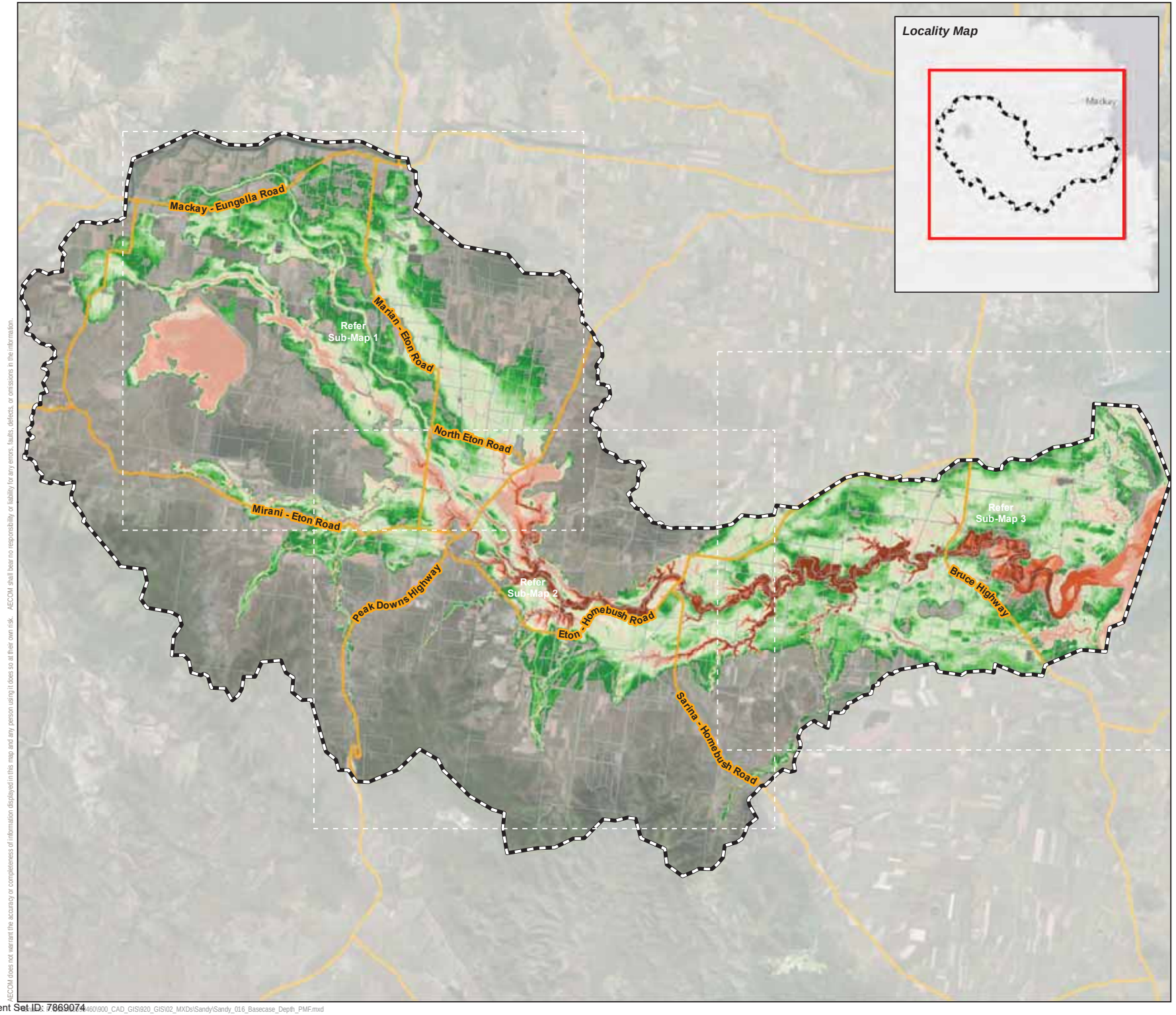

Locality Map

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
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- 1.0 - 1.5
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
16.0

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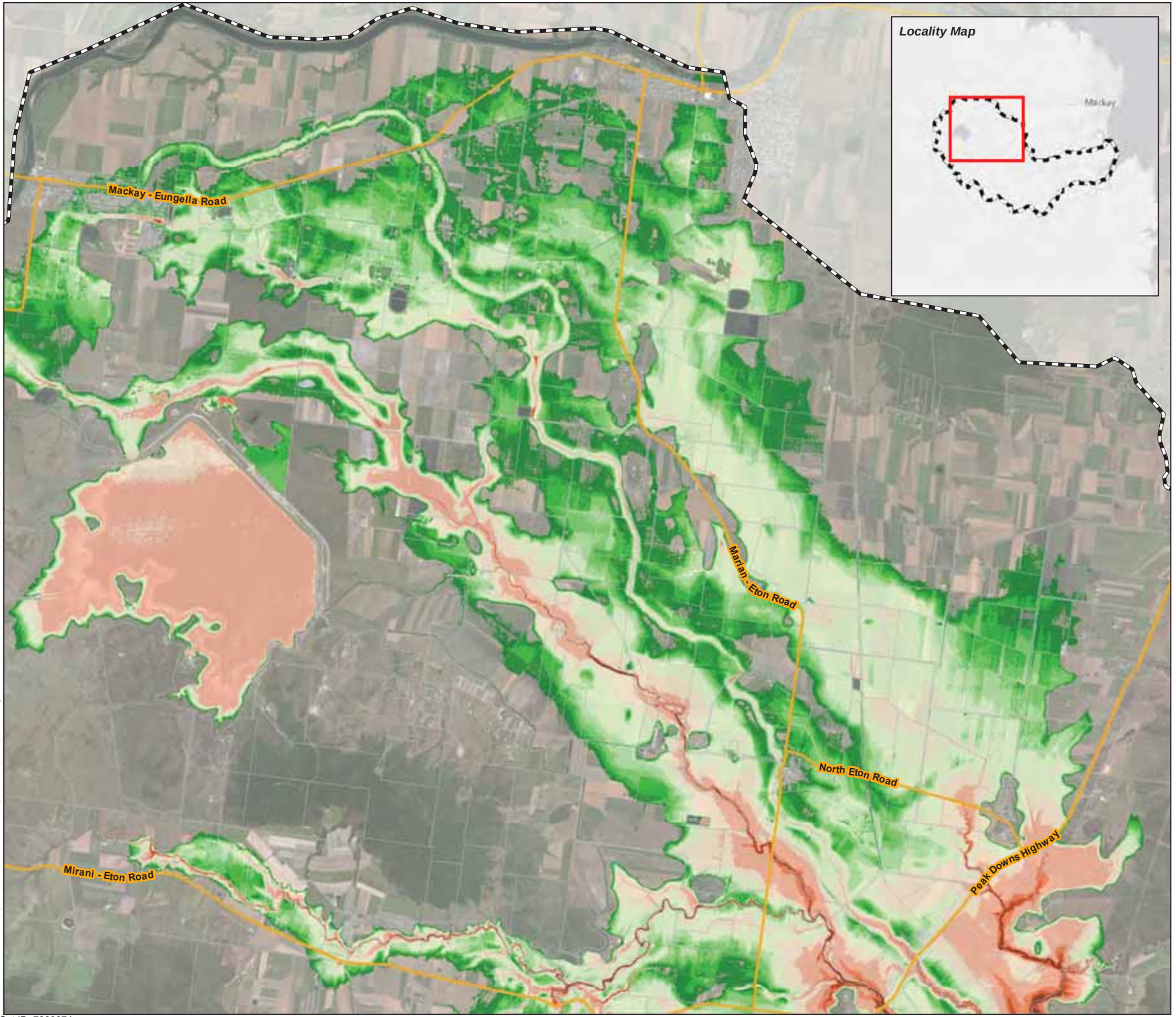

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0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

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- 0.2 - 0.4
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
PMF Event - 48 Hour Storm

PROJECT ID	60598460
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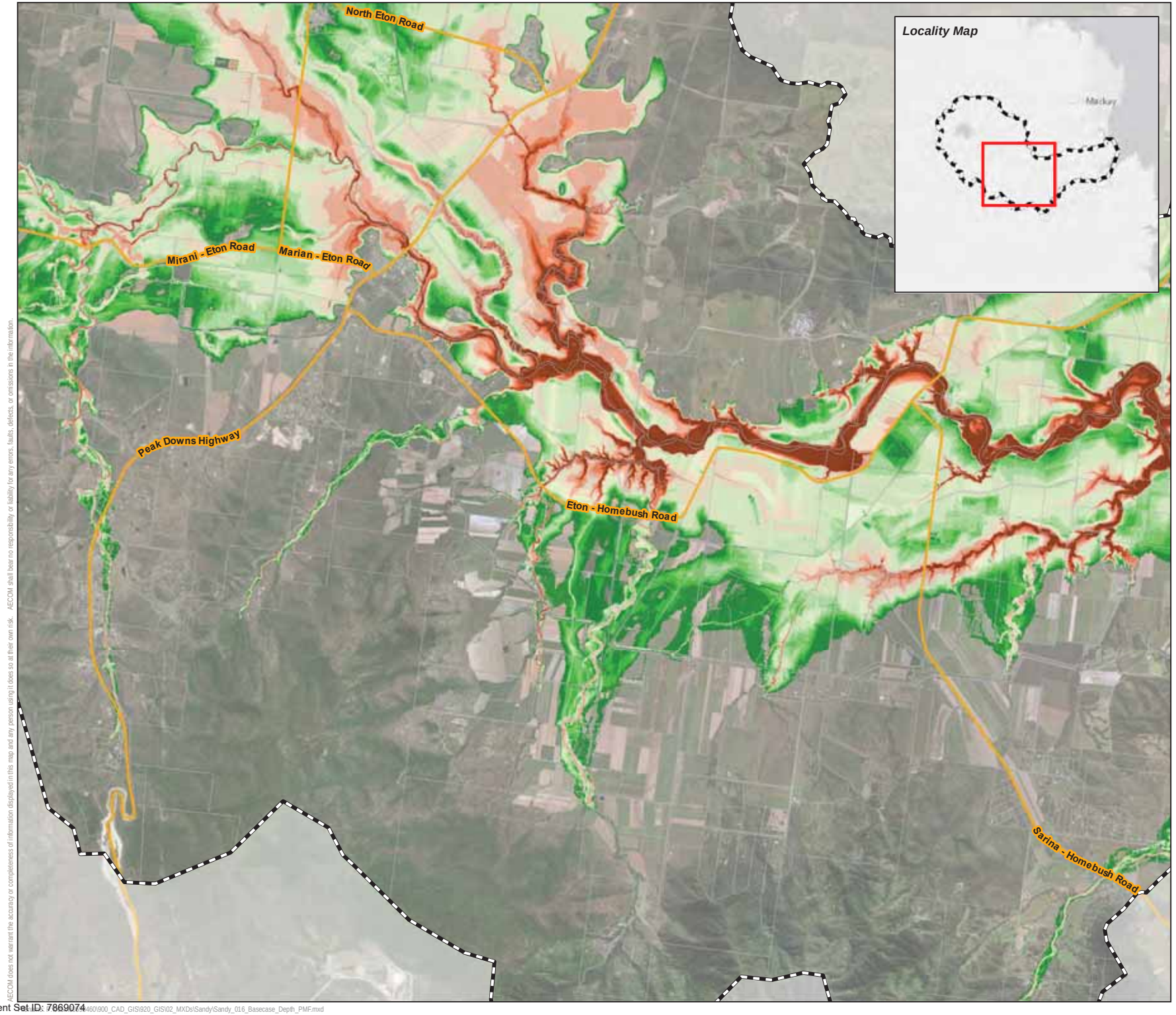

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
16.2

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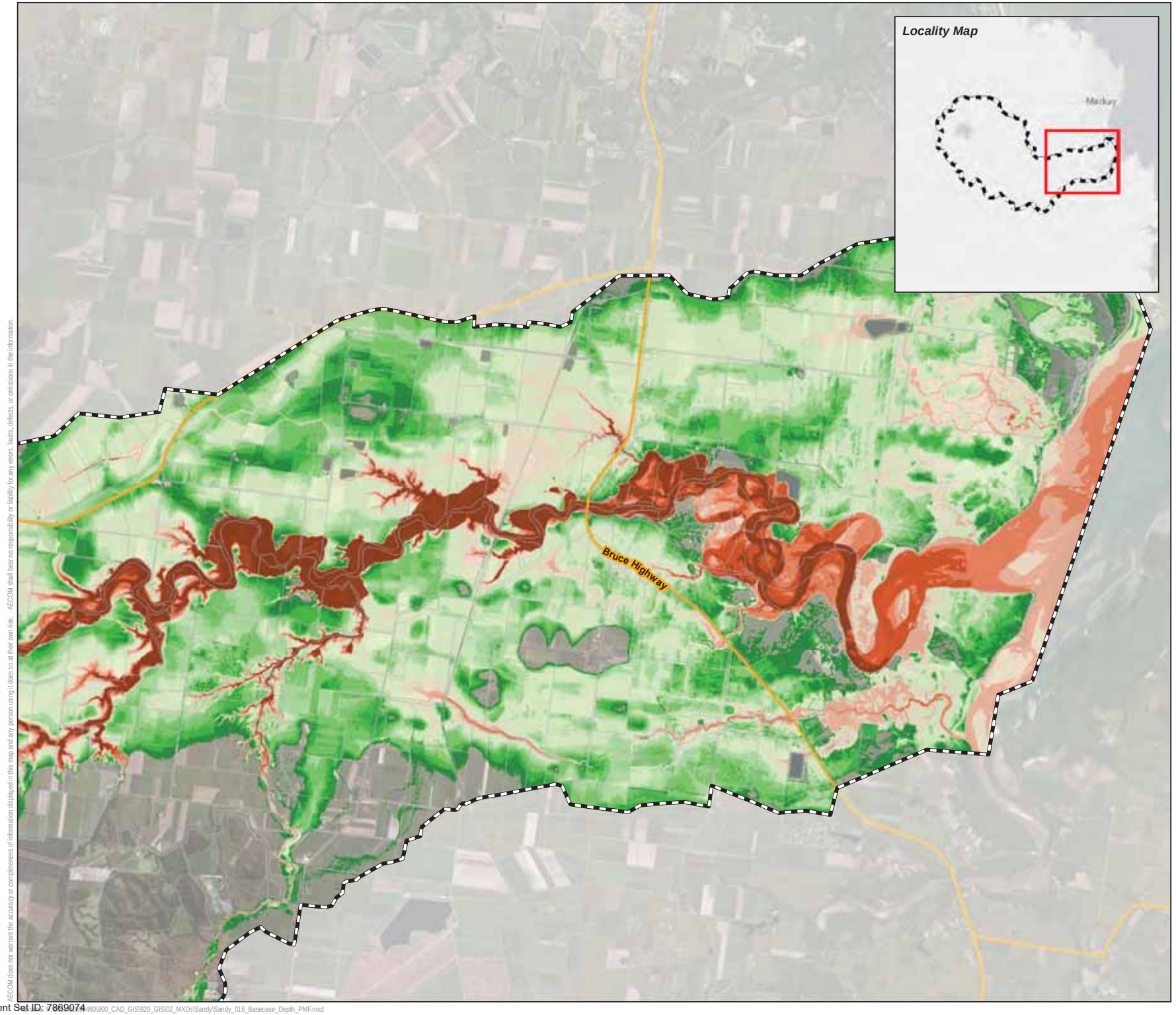

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Metres

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MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment

Peak Flood Depth
PMF Event - 48 Hour Storm

PROJECT ID	60598460
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Map
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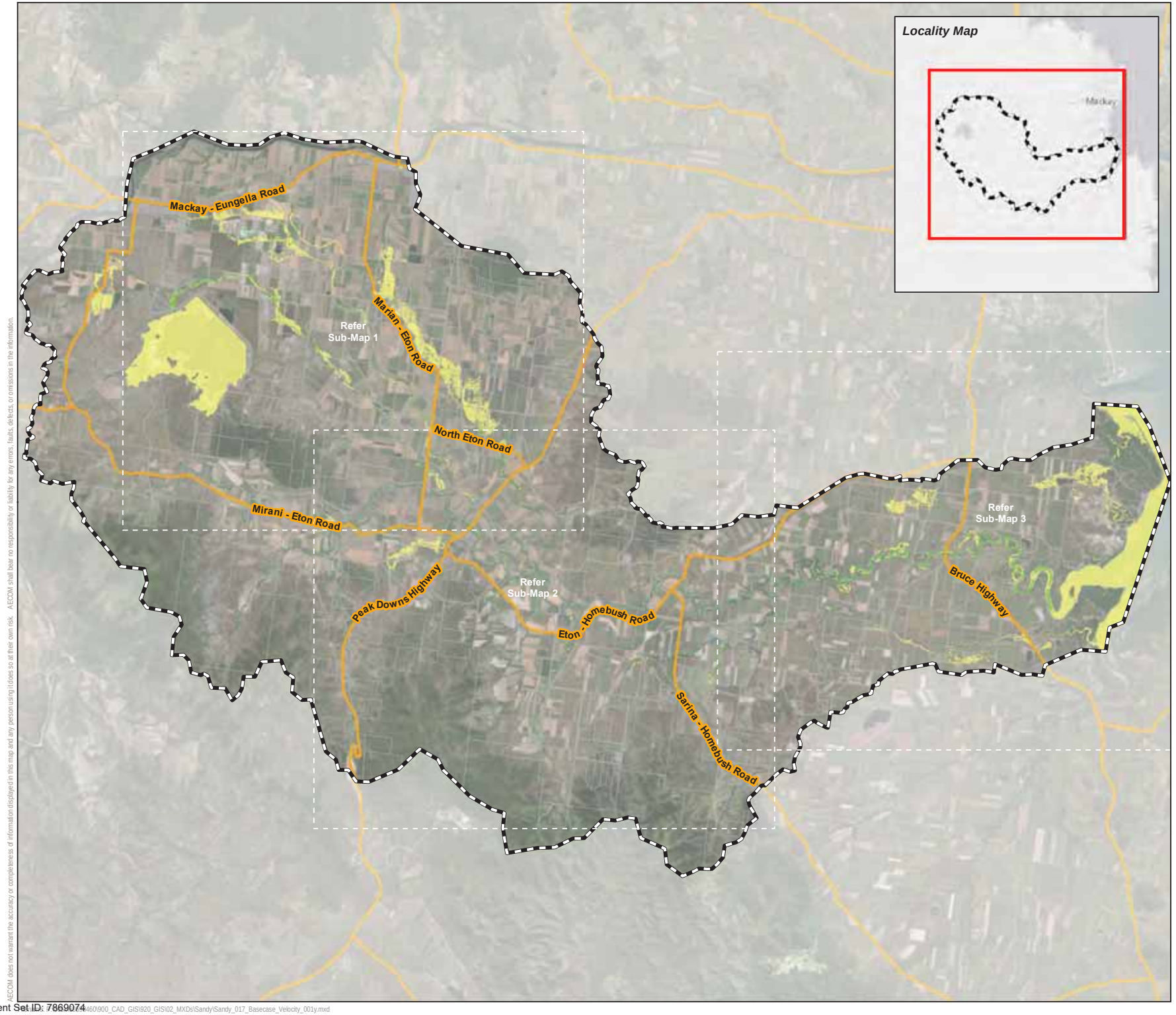

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
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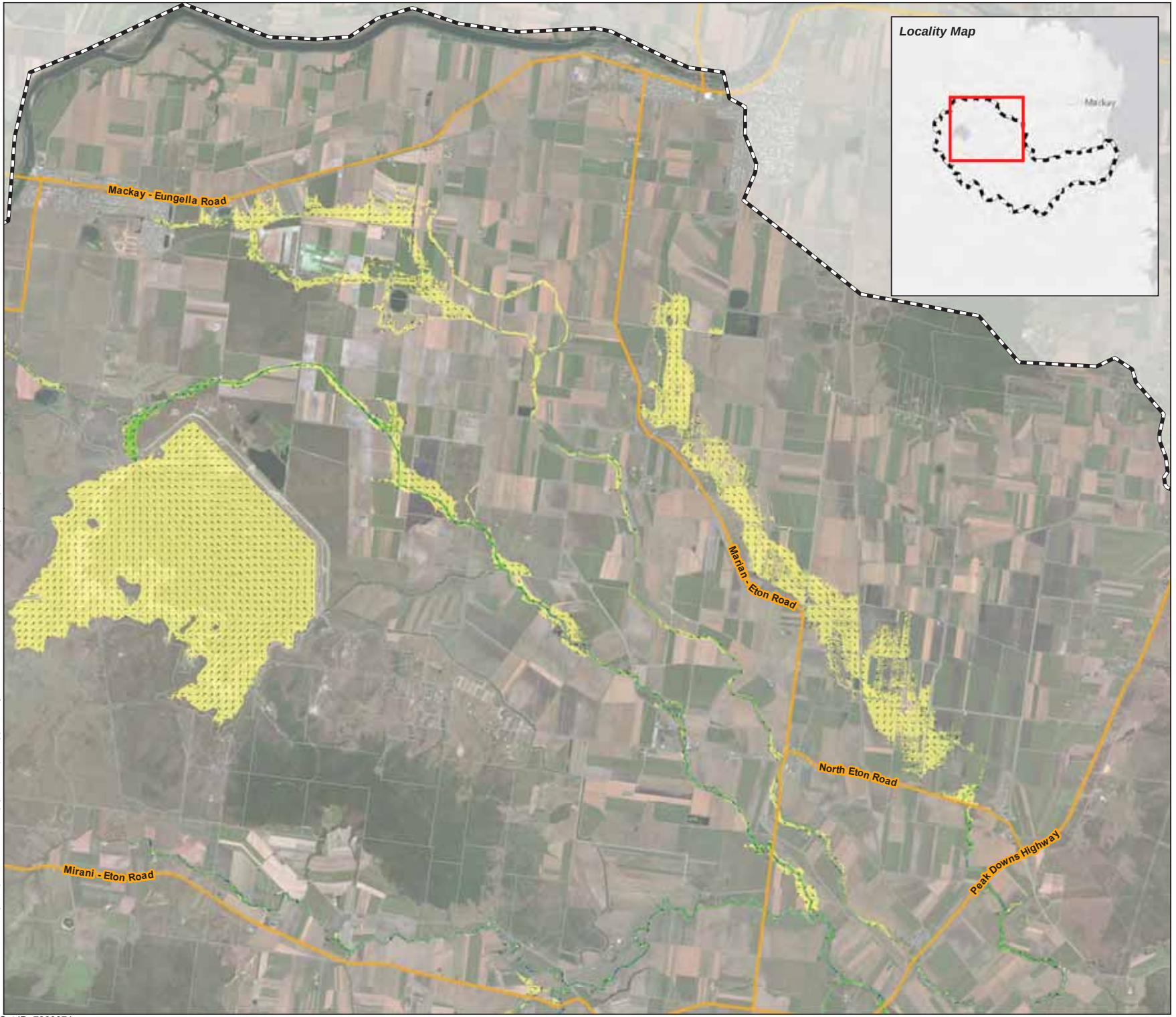

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
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Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
1EY Event - 18 Hour Storm

PROJECT ID	60598460
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LAST MODIFIED	30/09/2019
VERSION:	v01

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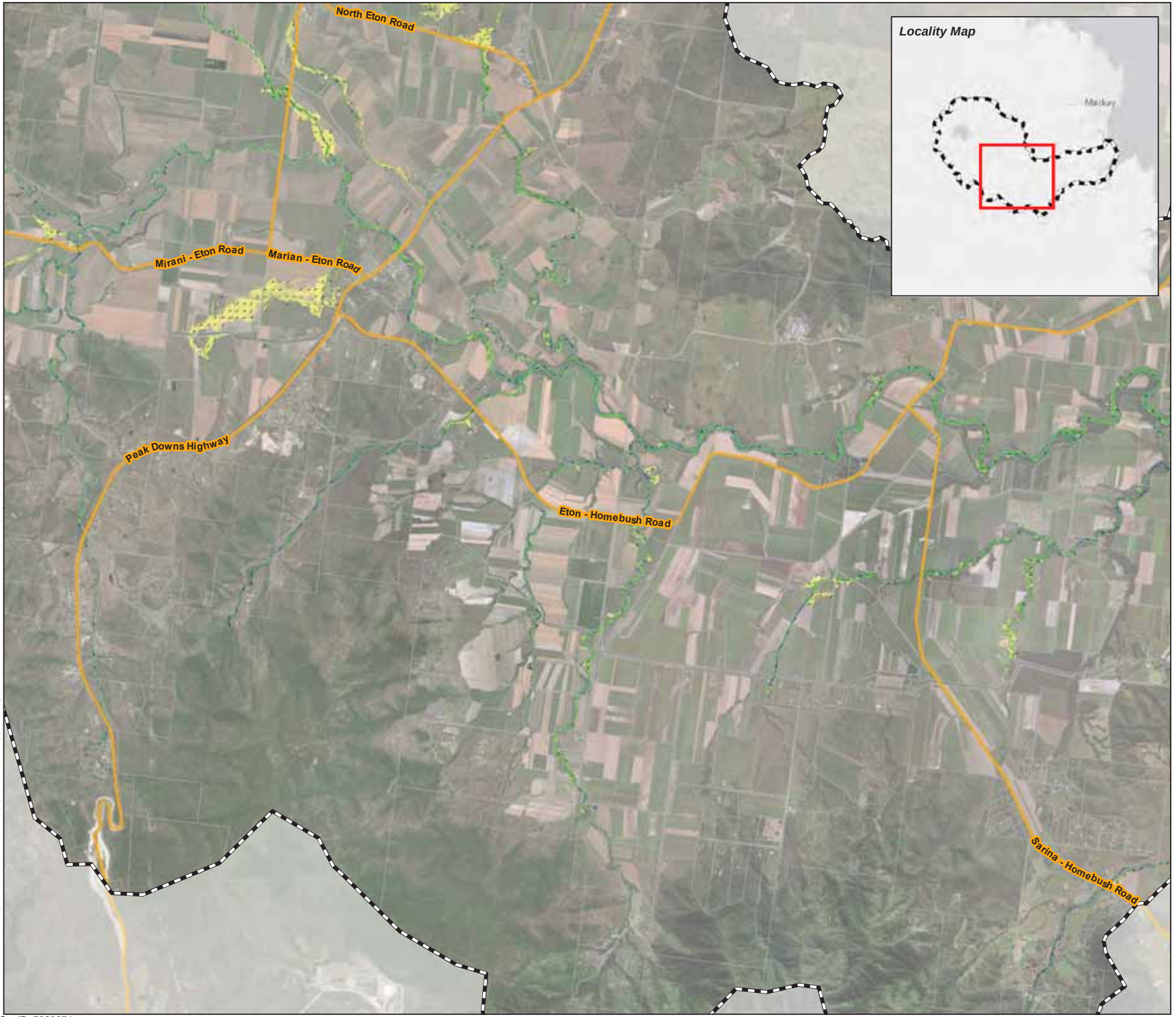

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

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- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
1EY Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
17.2

A3 size

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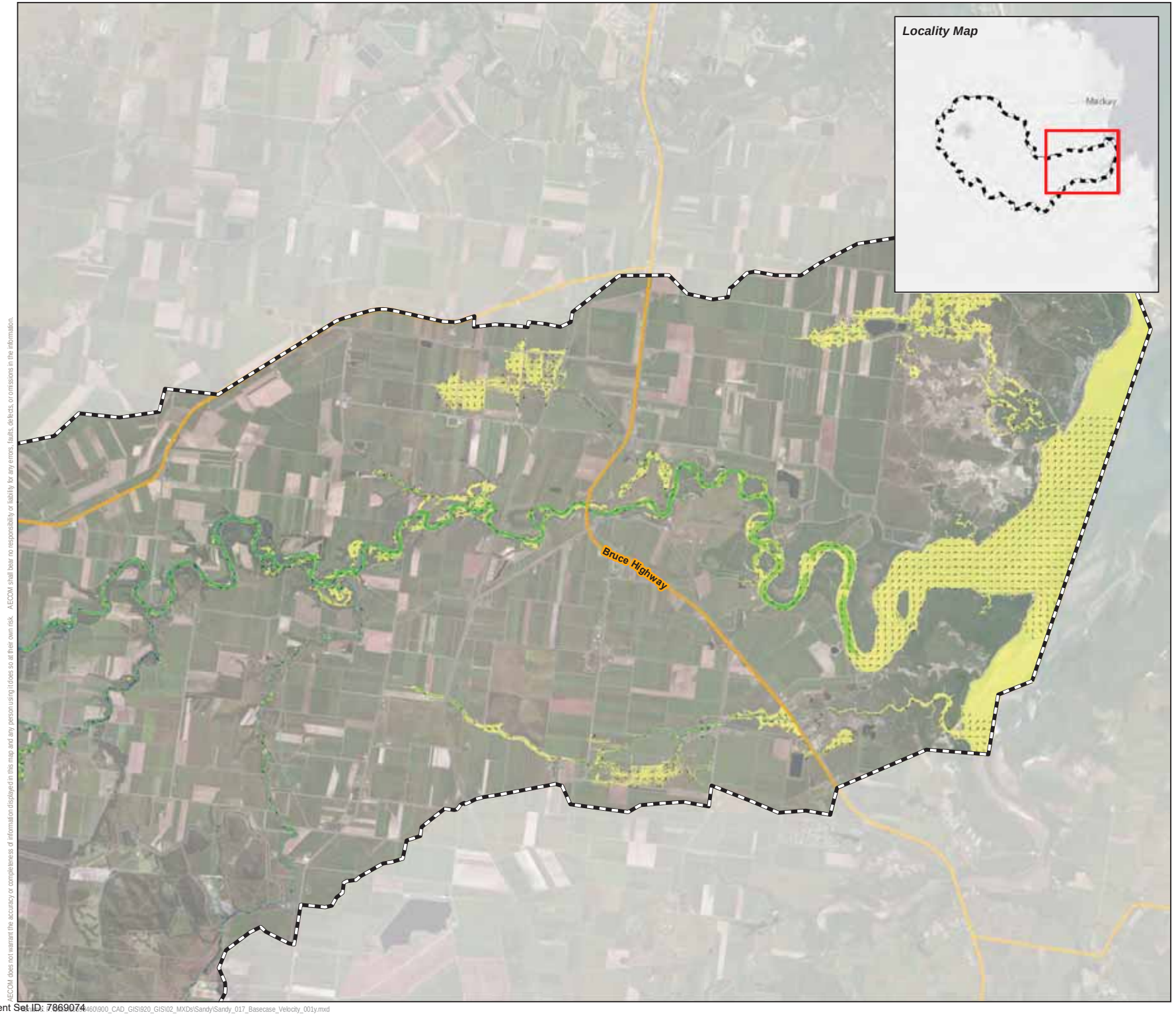

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Metres

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1EY Event - 18 Hour Storm

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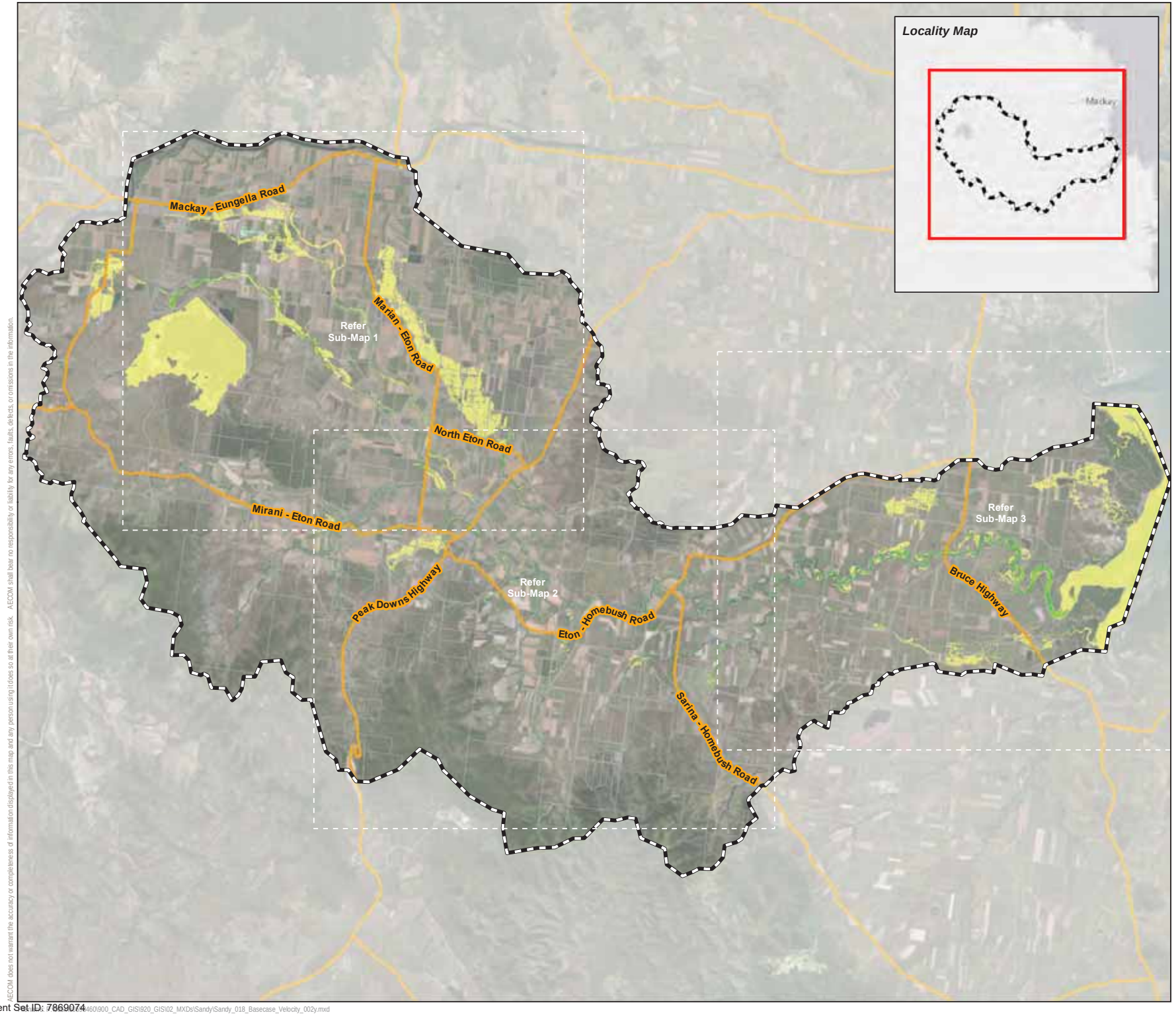

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
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Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
18.0

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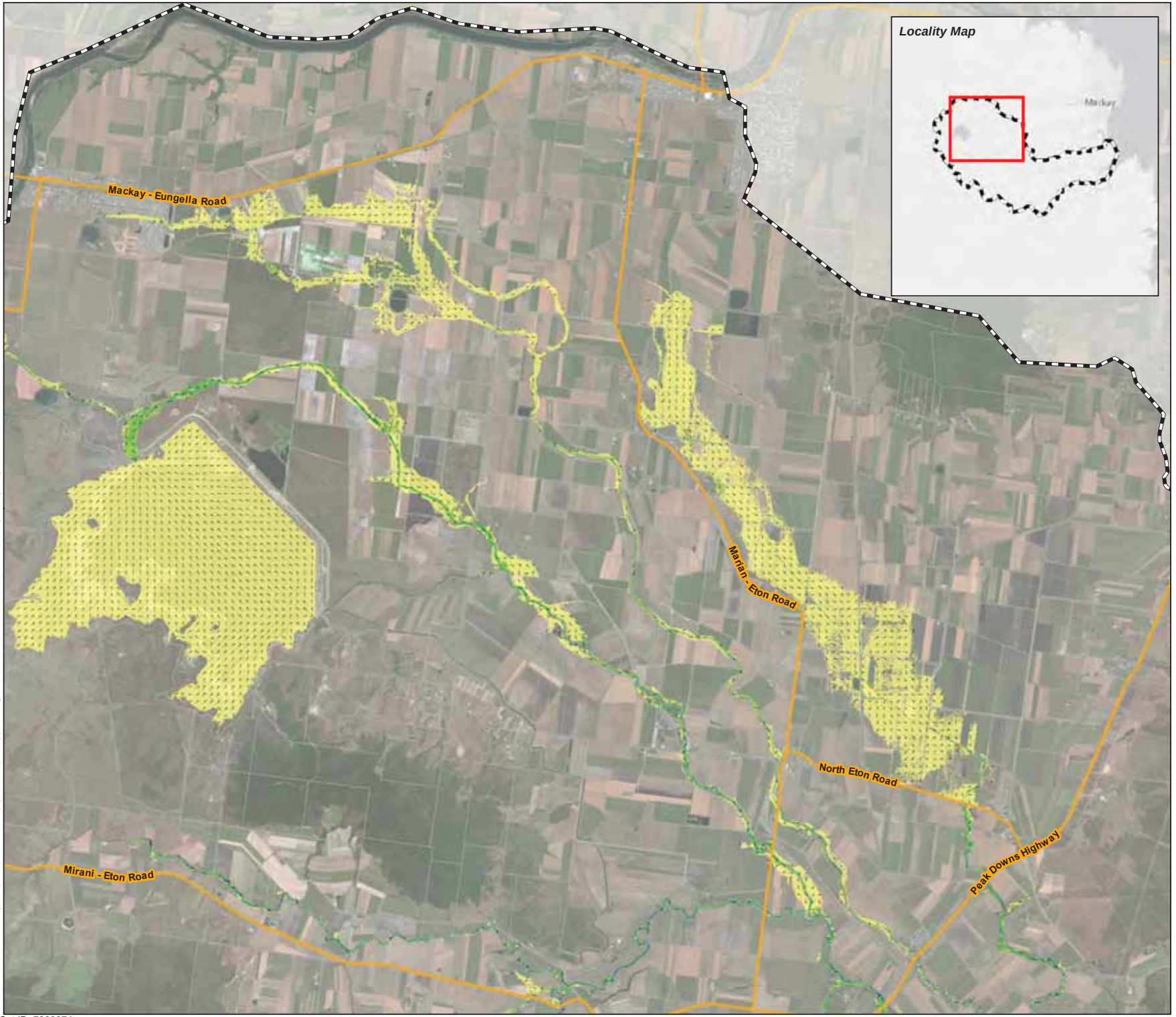
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
39% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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Map
18.1

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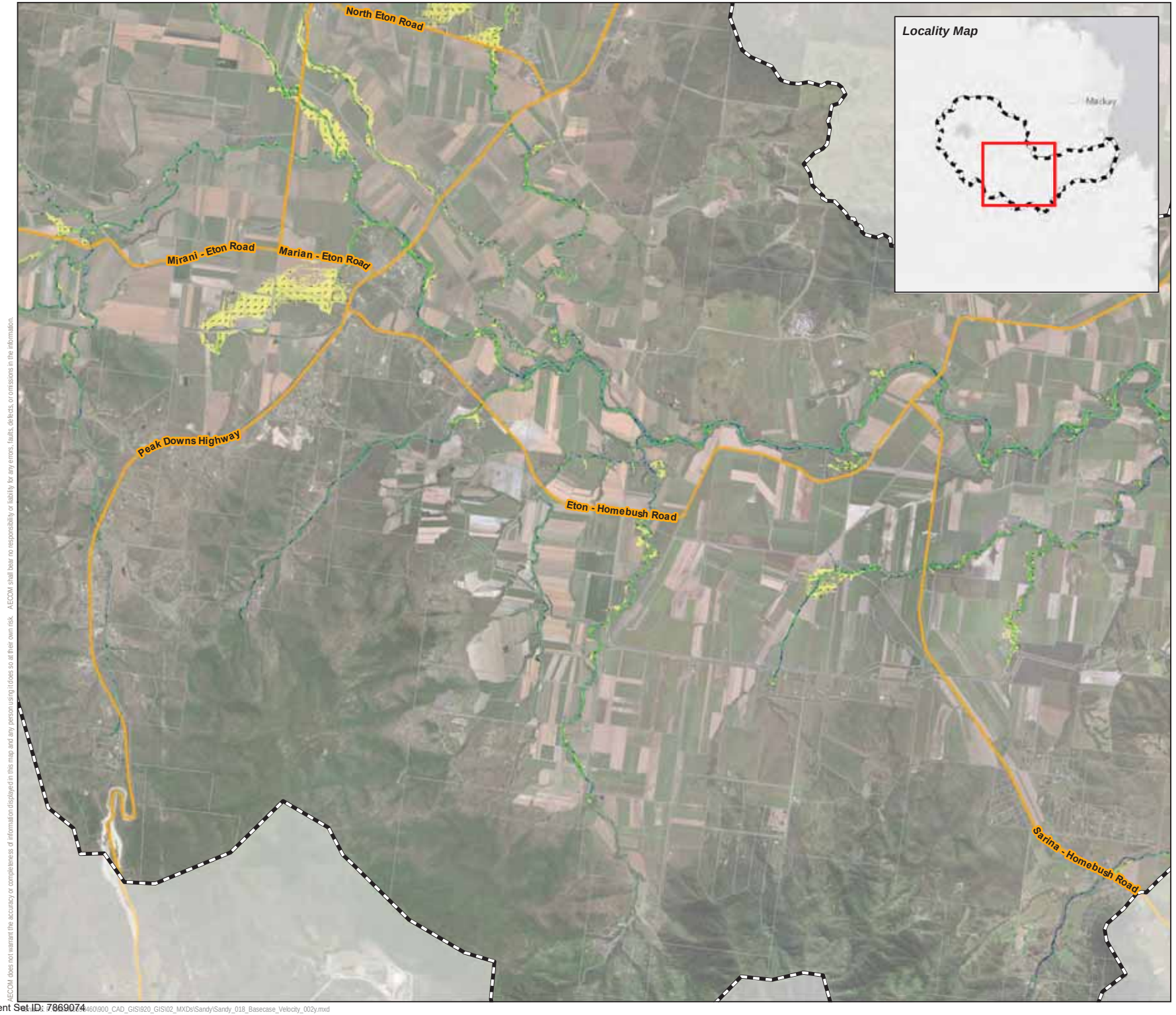

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- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
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Peak Depth Averaged Velocity (m/s)

- < 0.25
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Peak Depth Averaged Velocity
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Map
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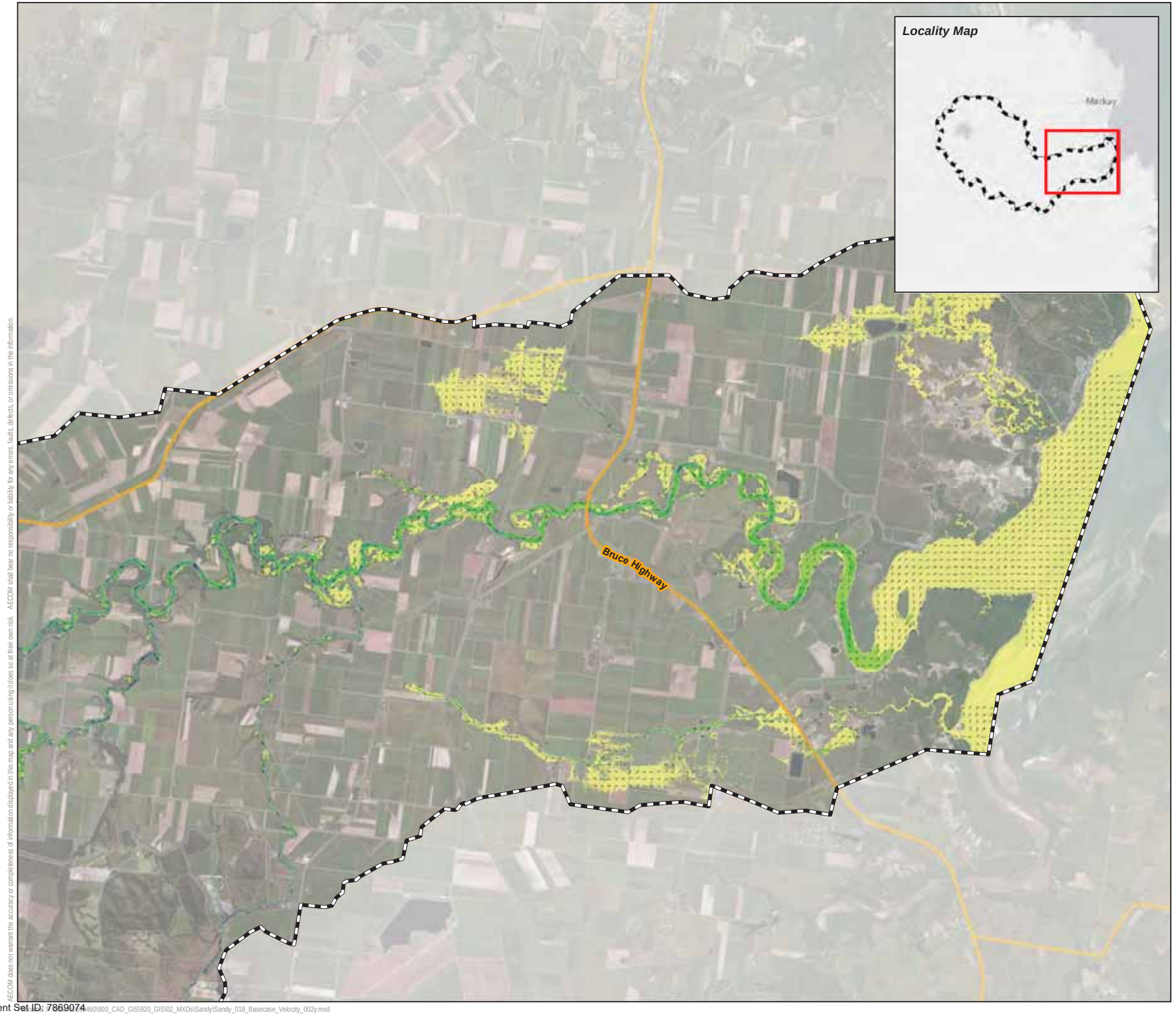

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GDA 1994 MGA Zone 55

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Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
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Peak Depth Averaged Velocity
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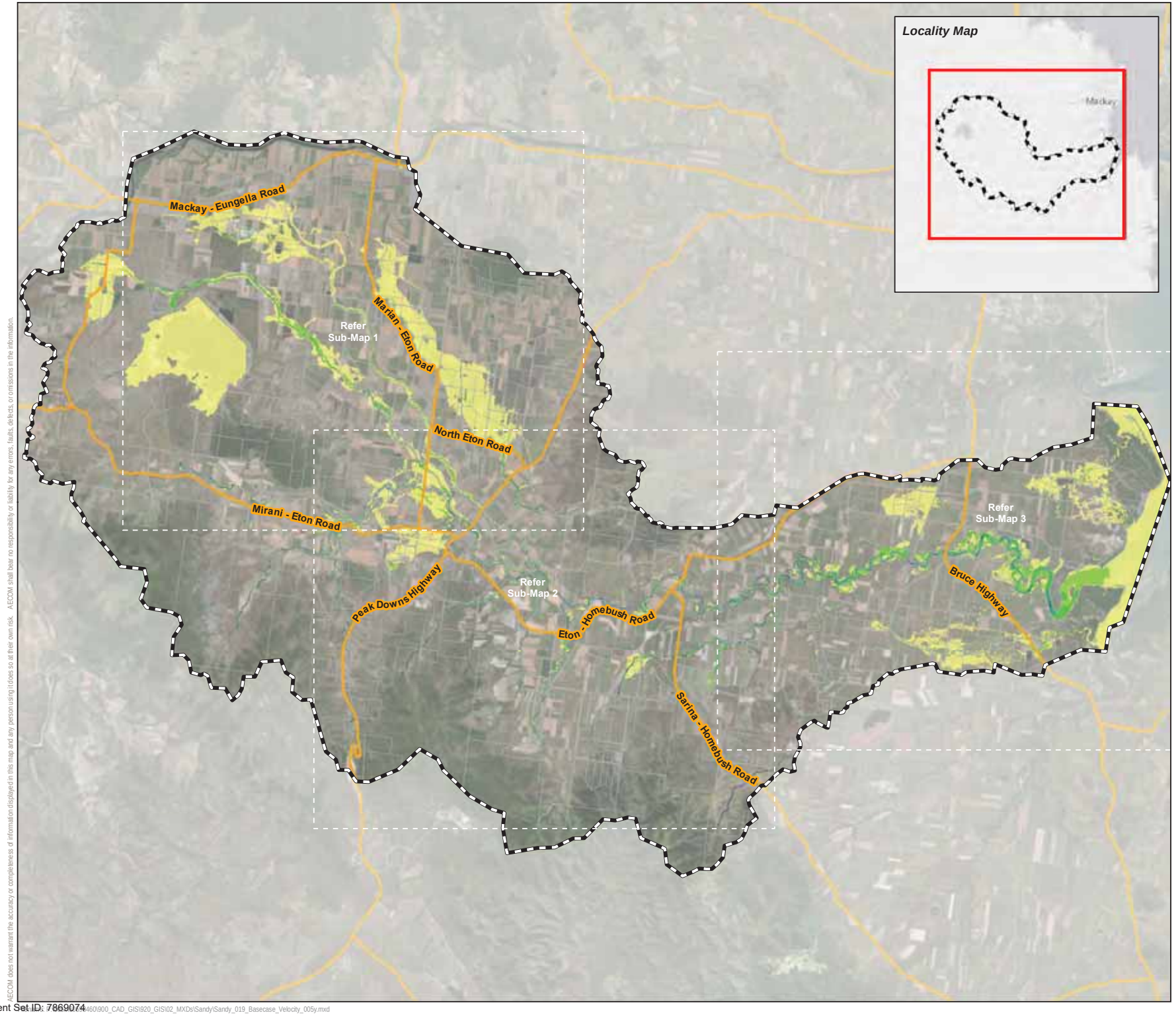

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

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- 1.50 - 2.00
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 19.0

A3 size

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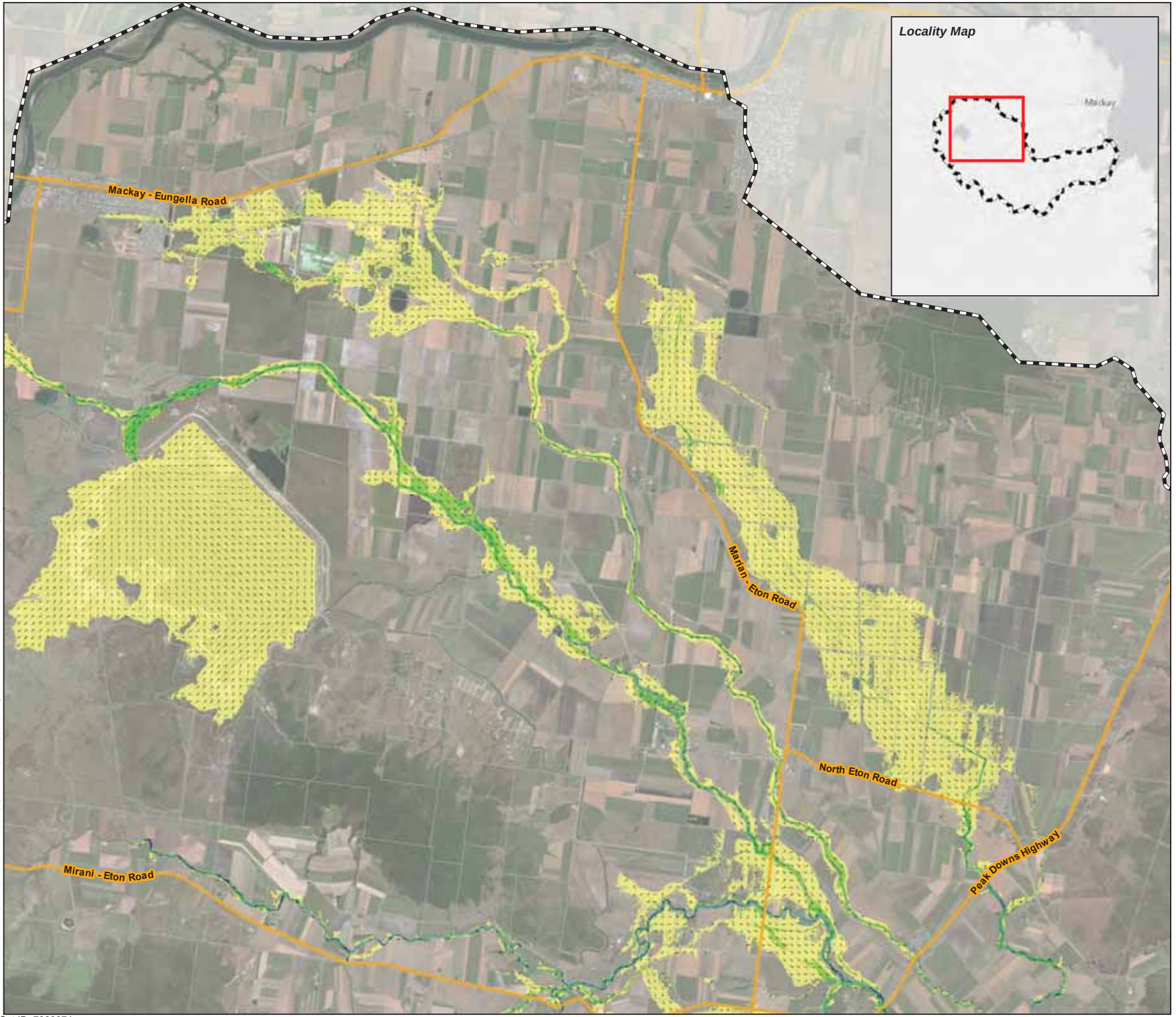

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
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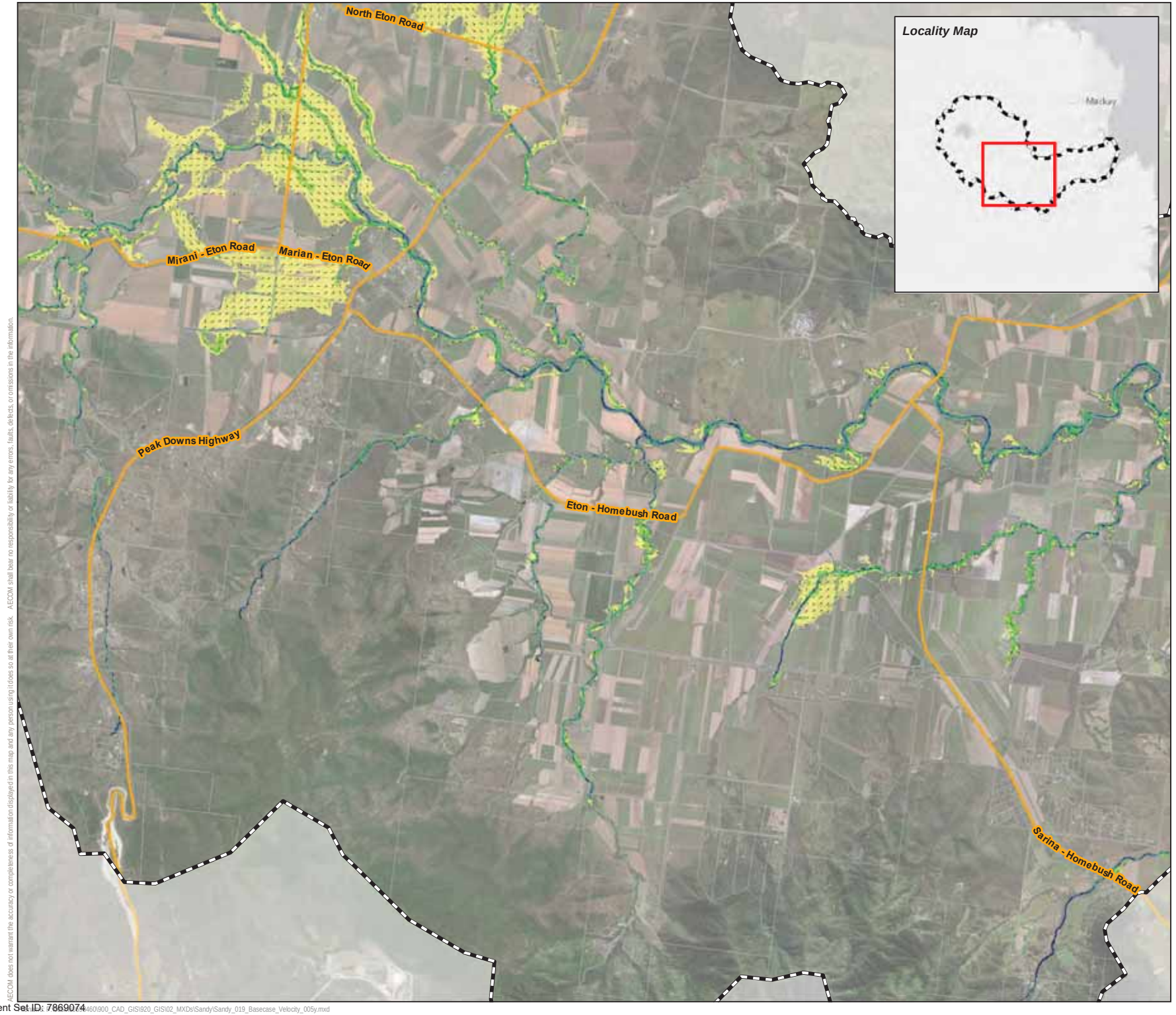

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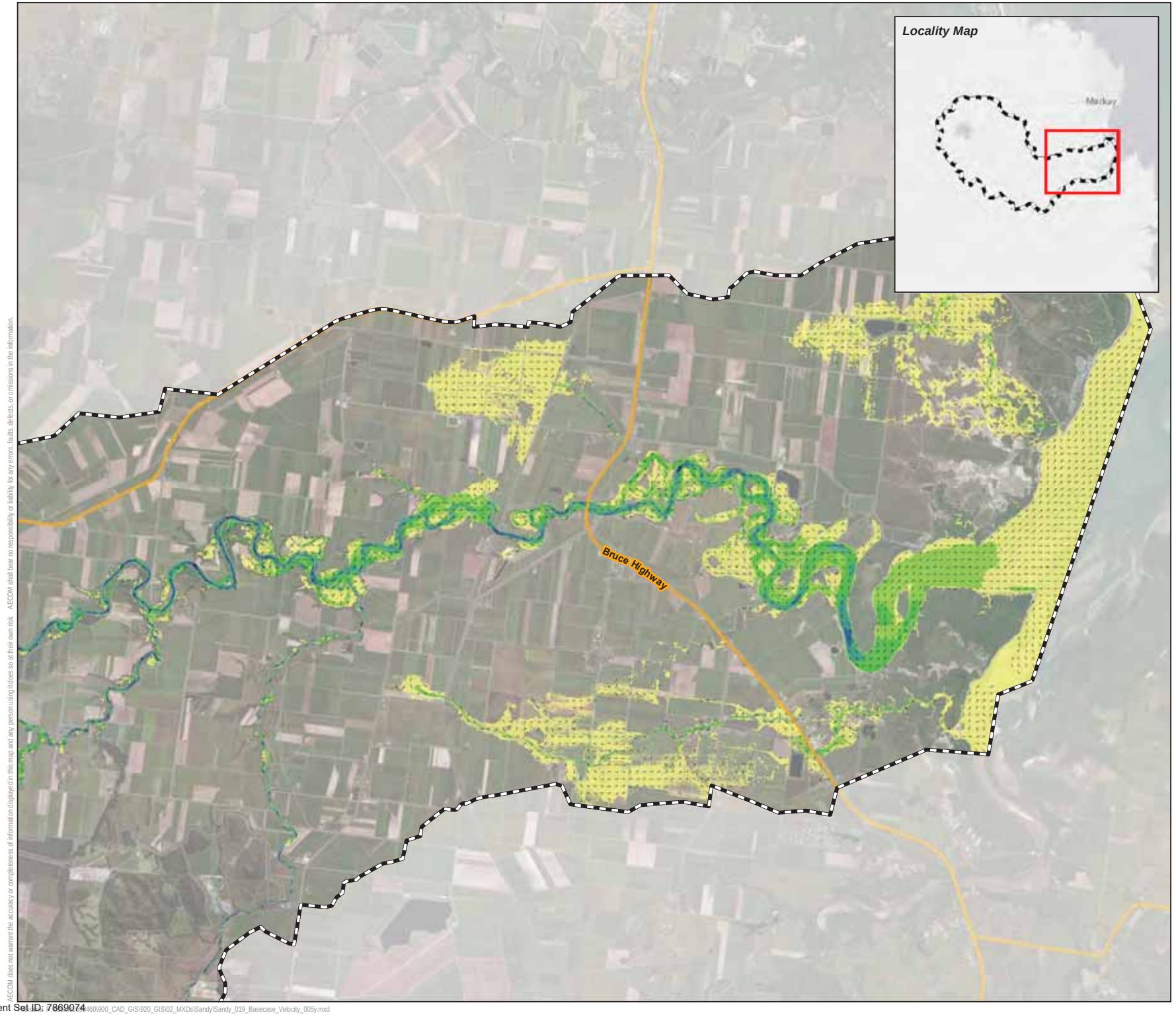

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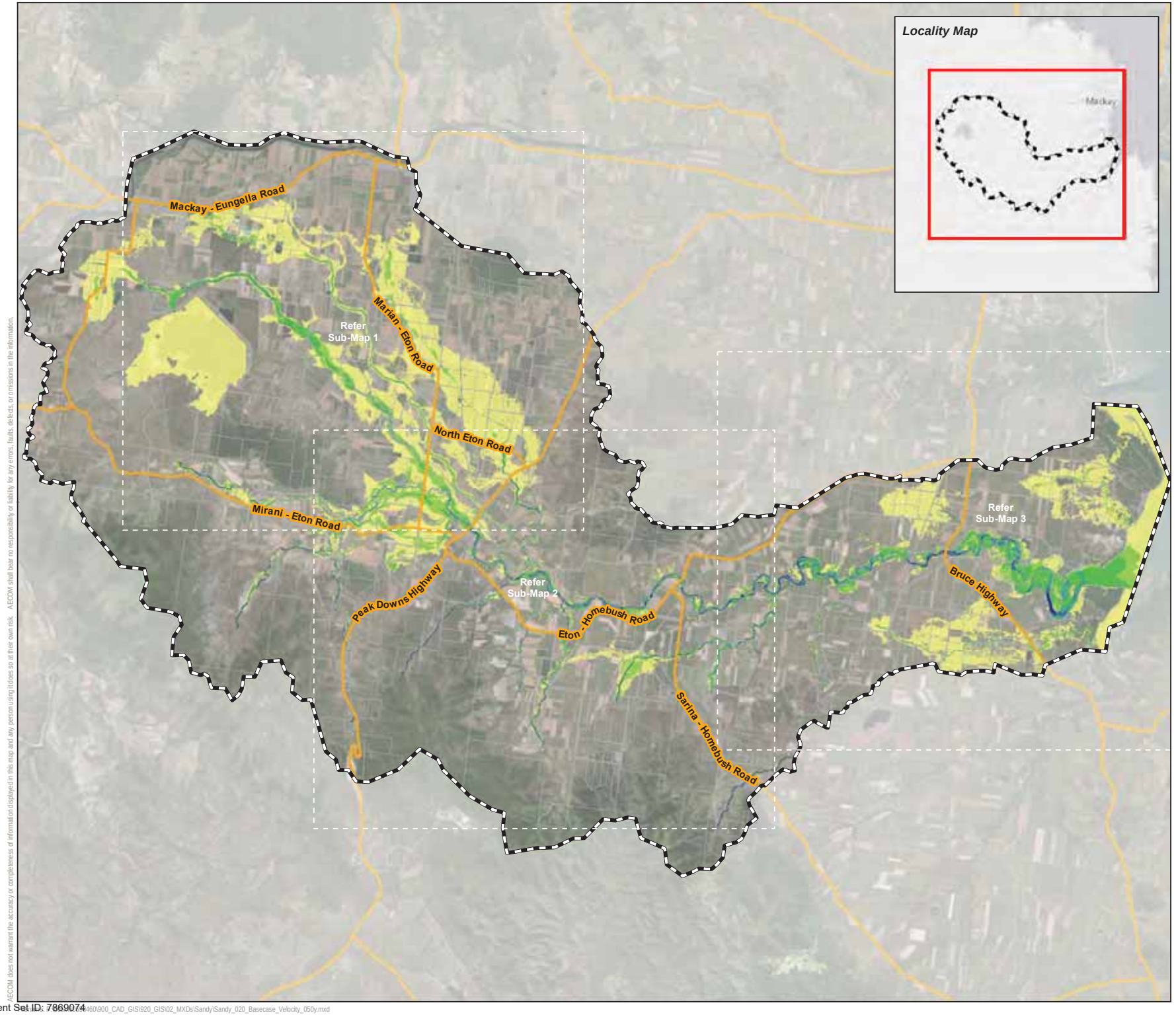

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GDA 1994 MGA Zone 55

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Map 20.0

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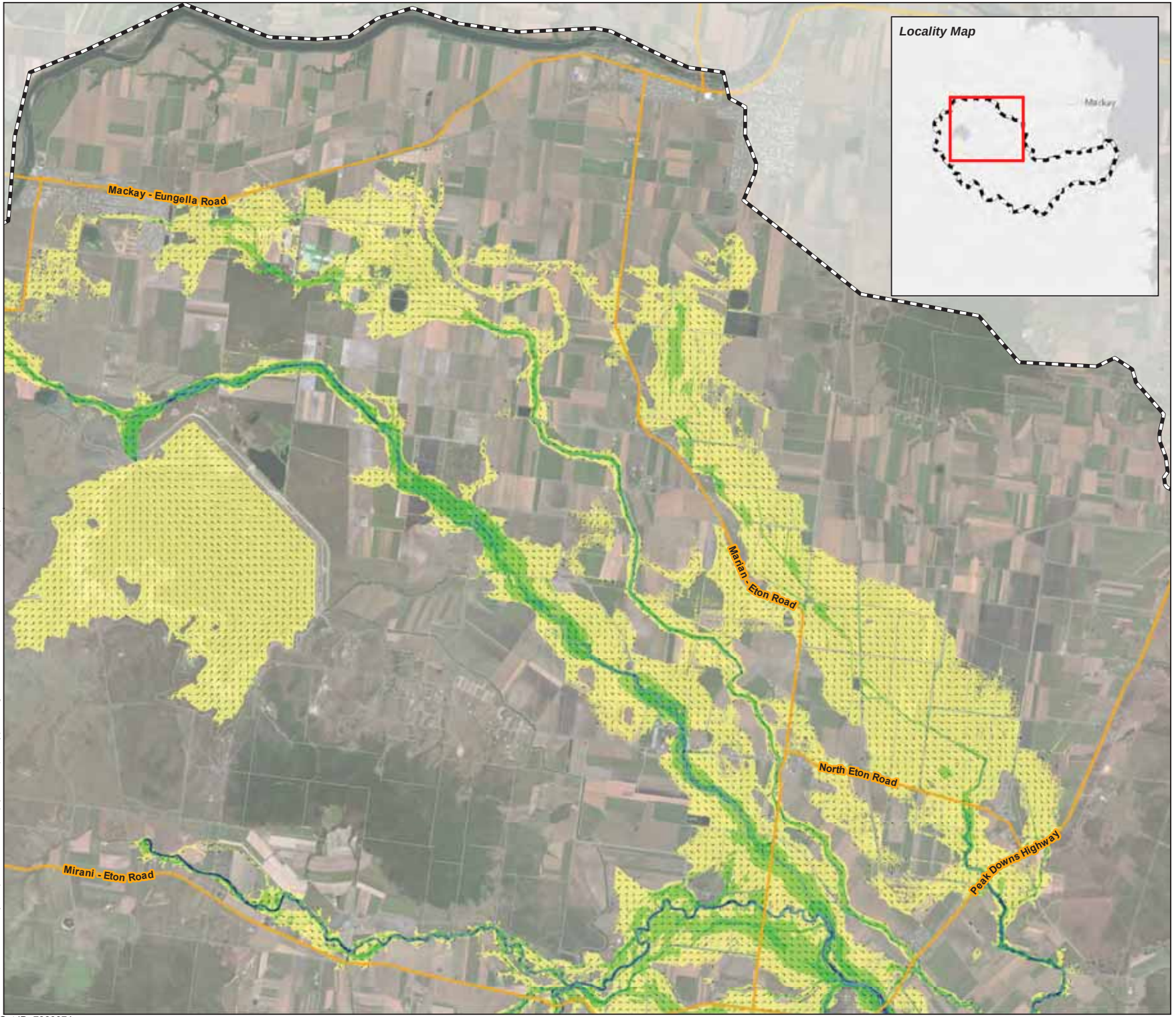

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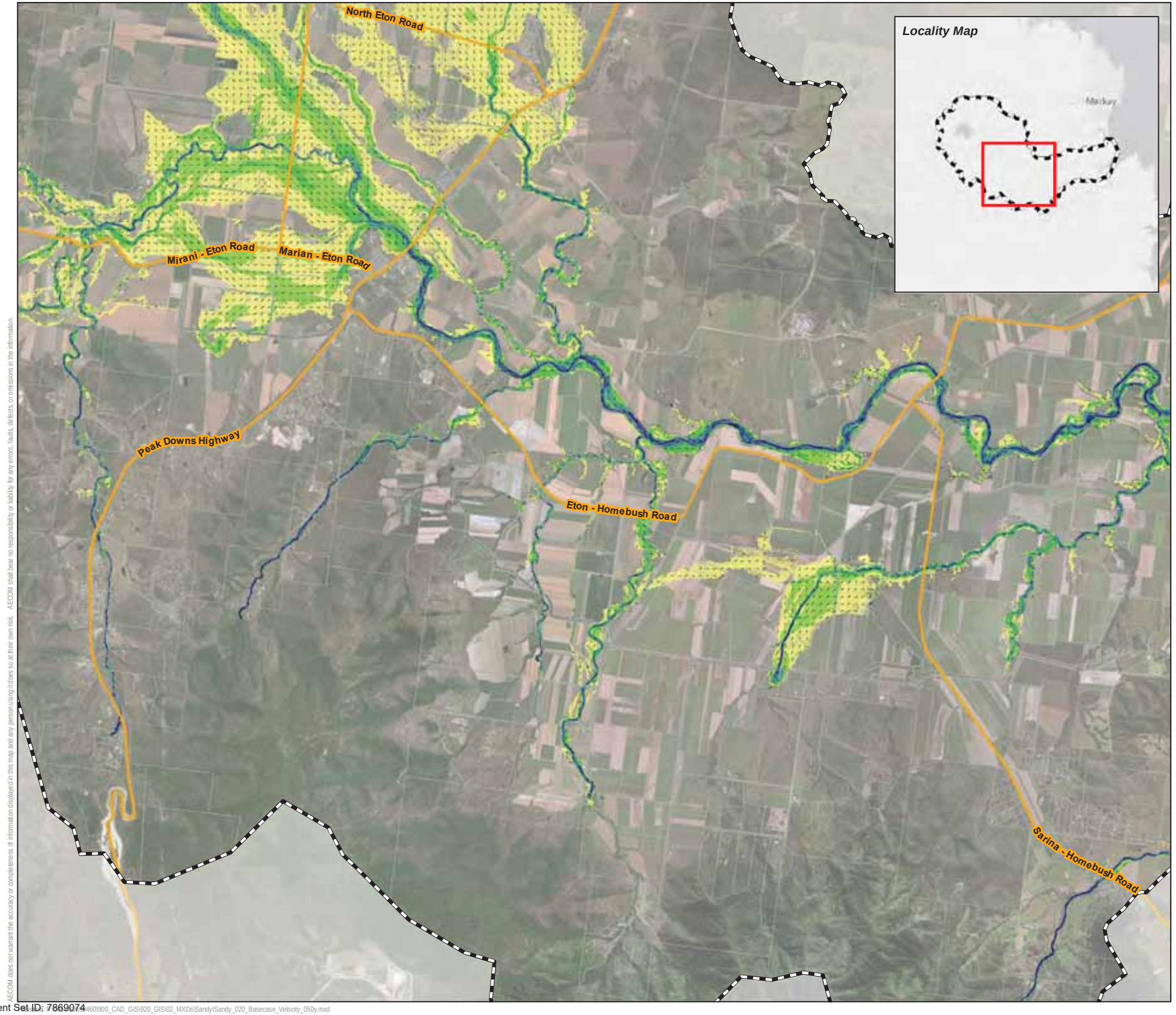

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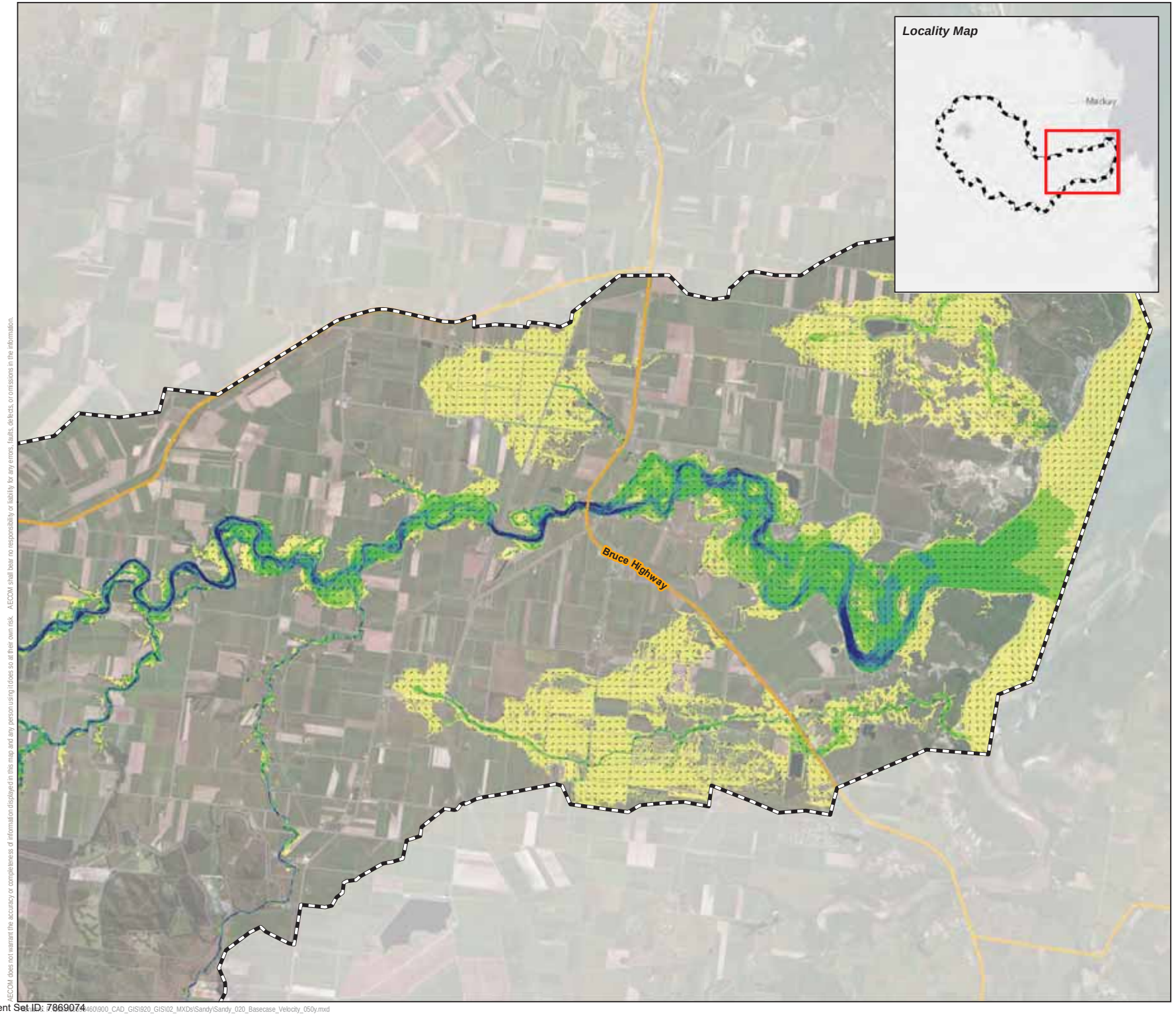

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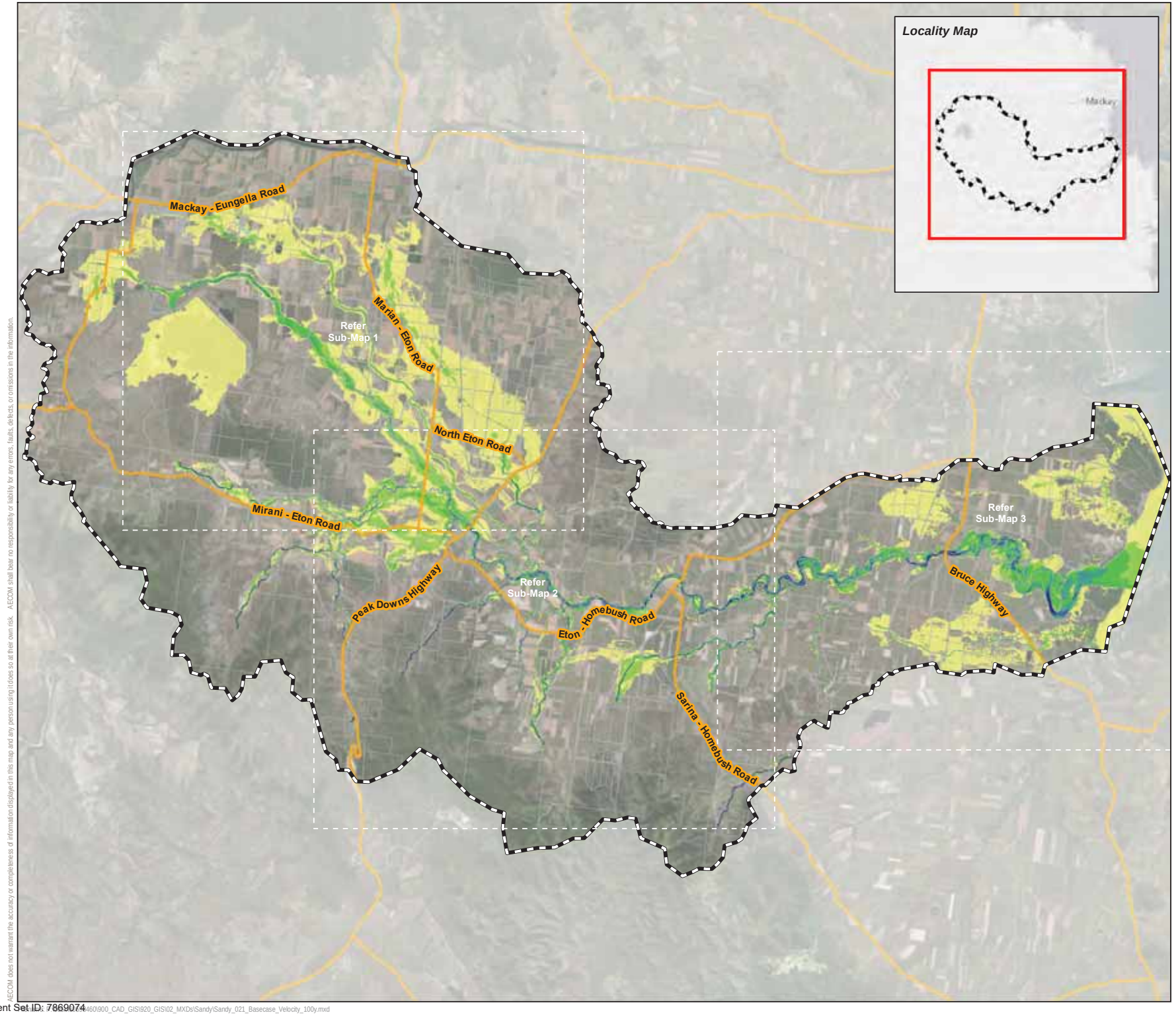

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Peak Depth Averaged Velocity
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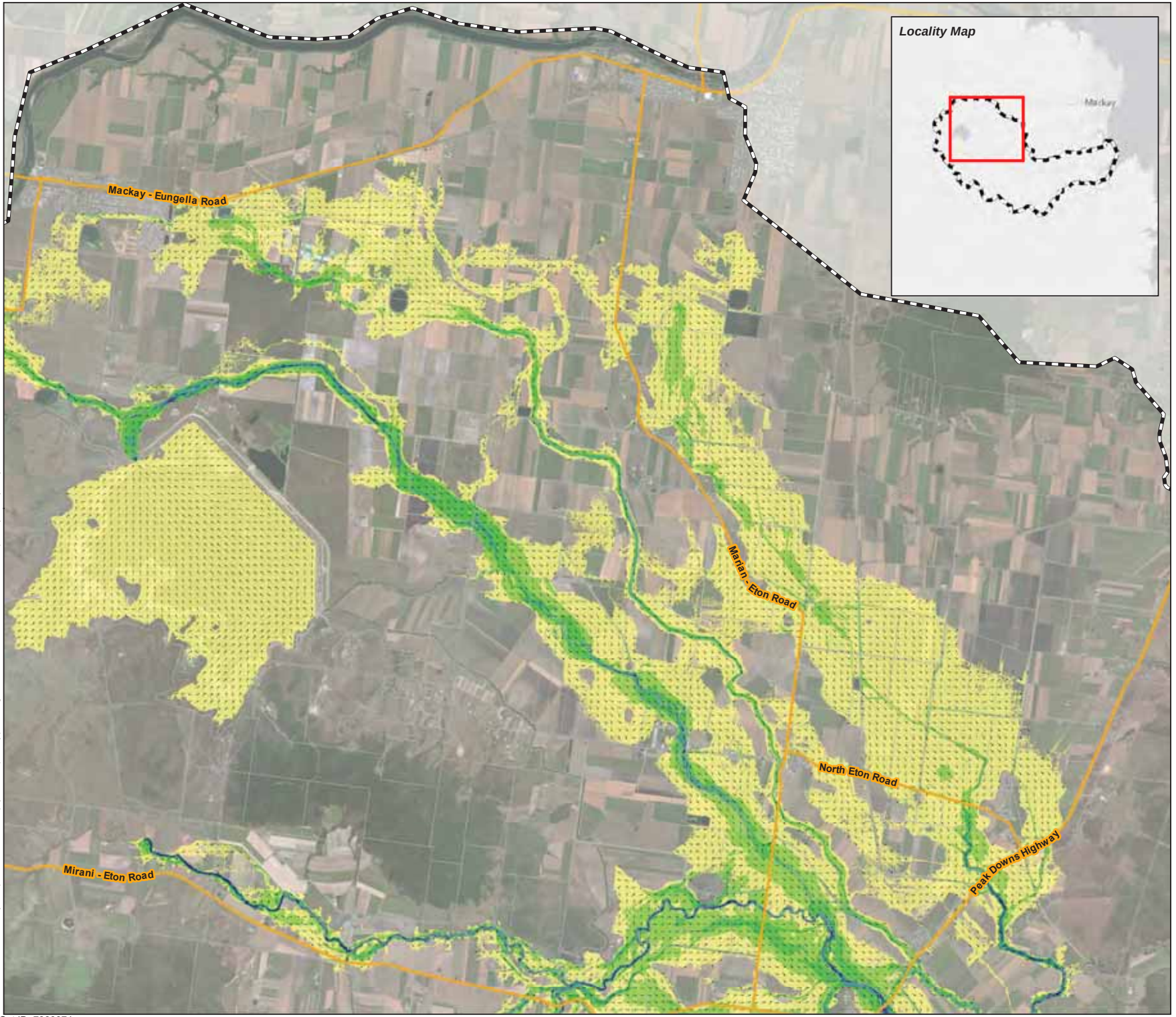

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GDA 1994 MGA Zone 55

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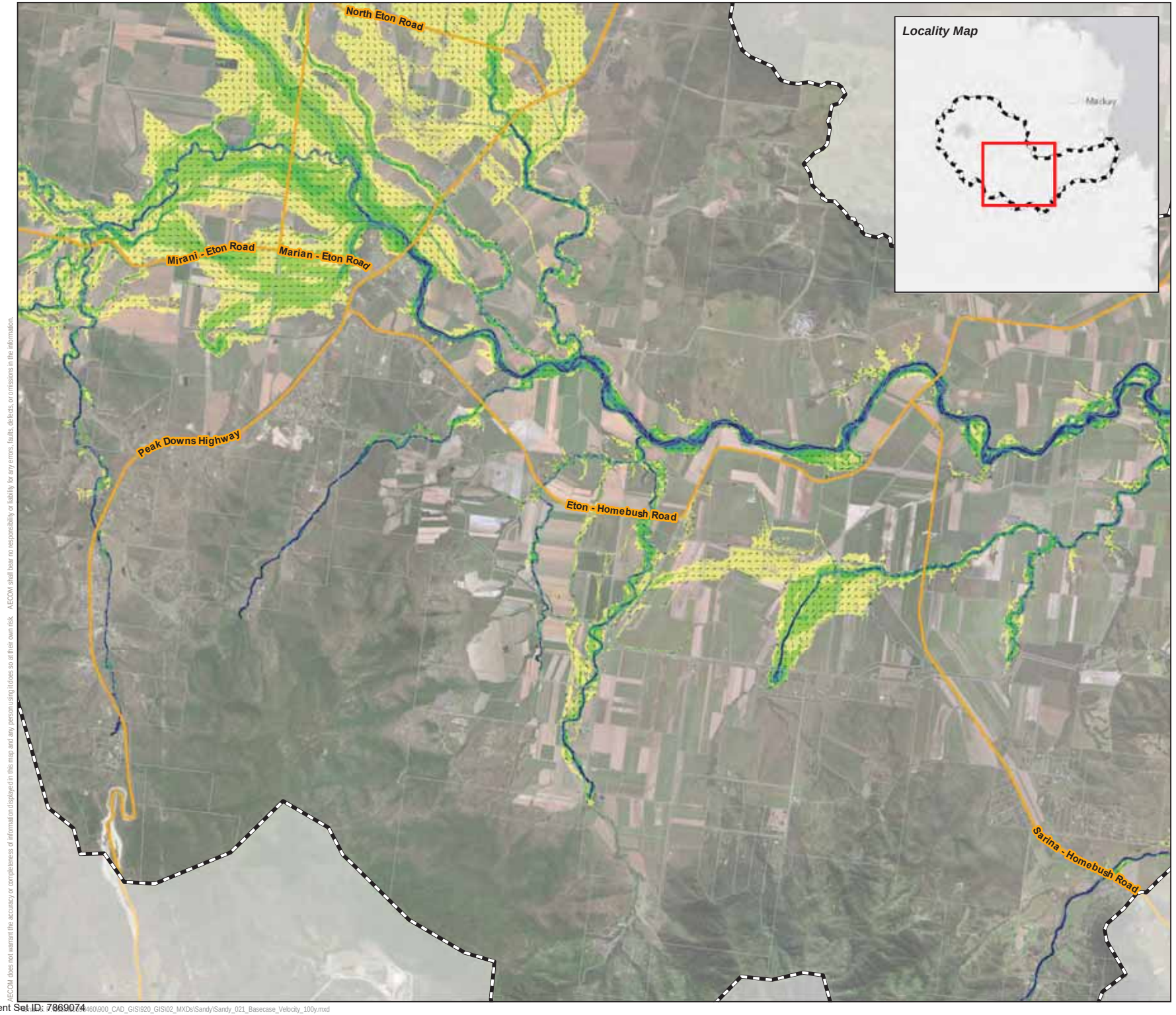

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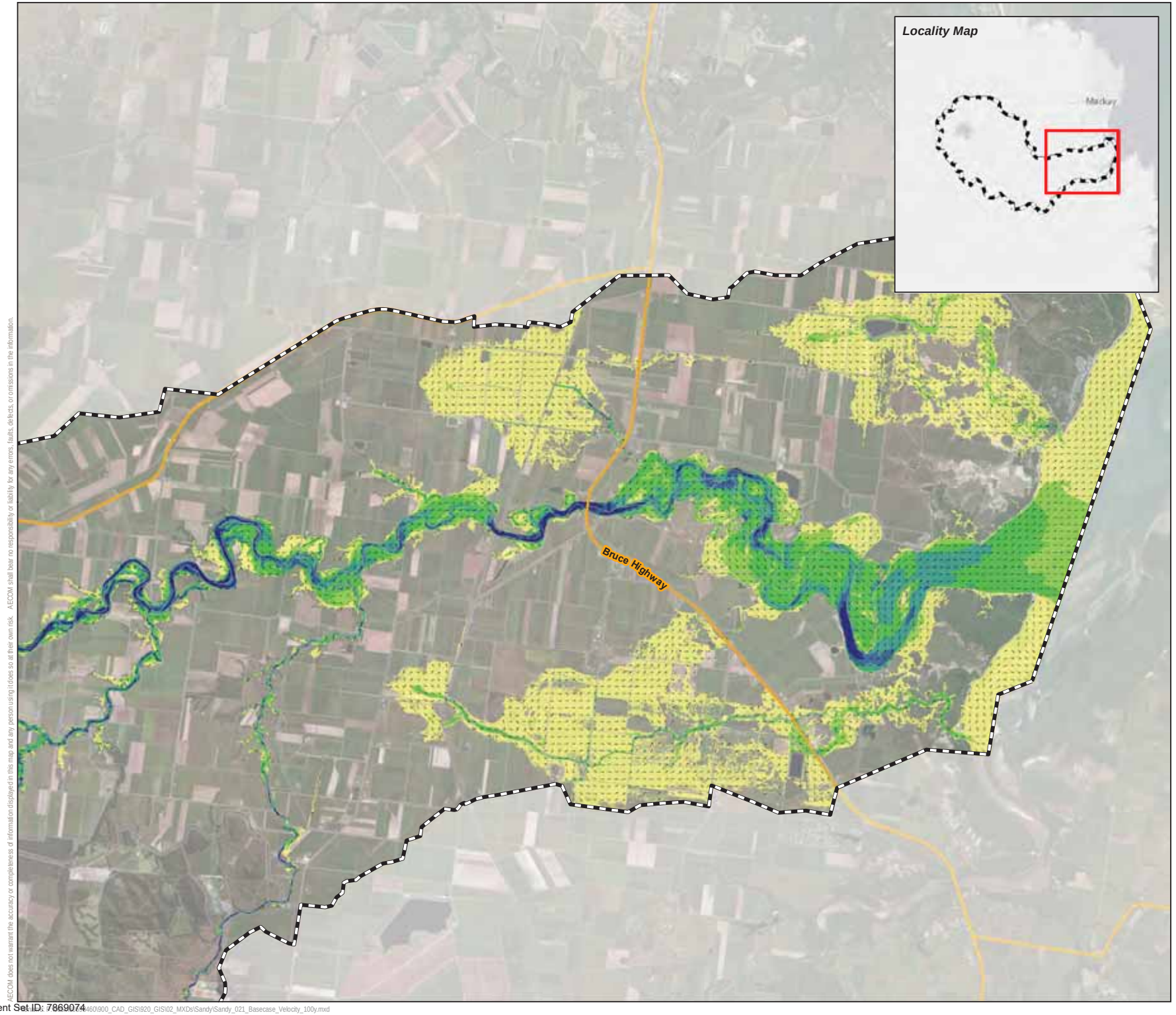

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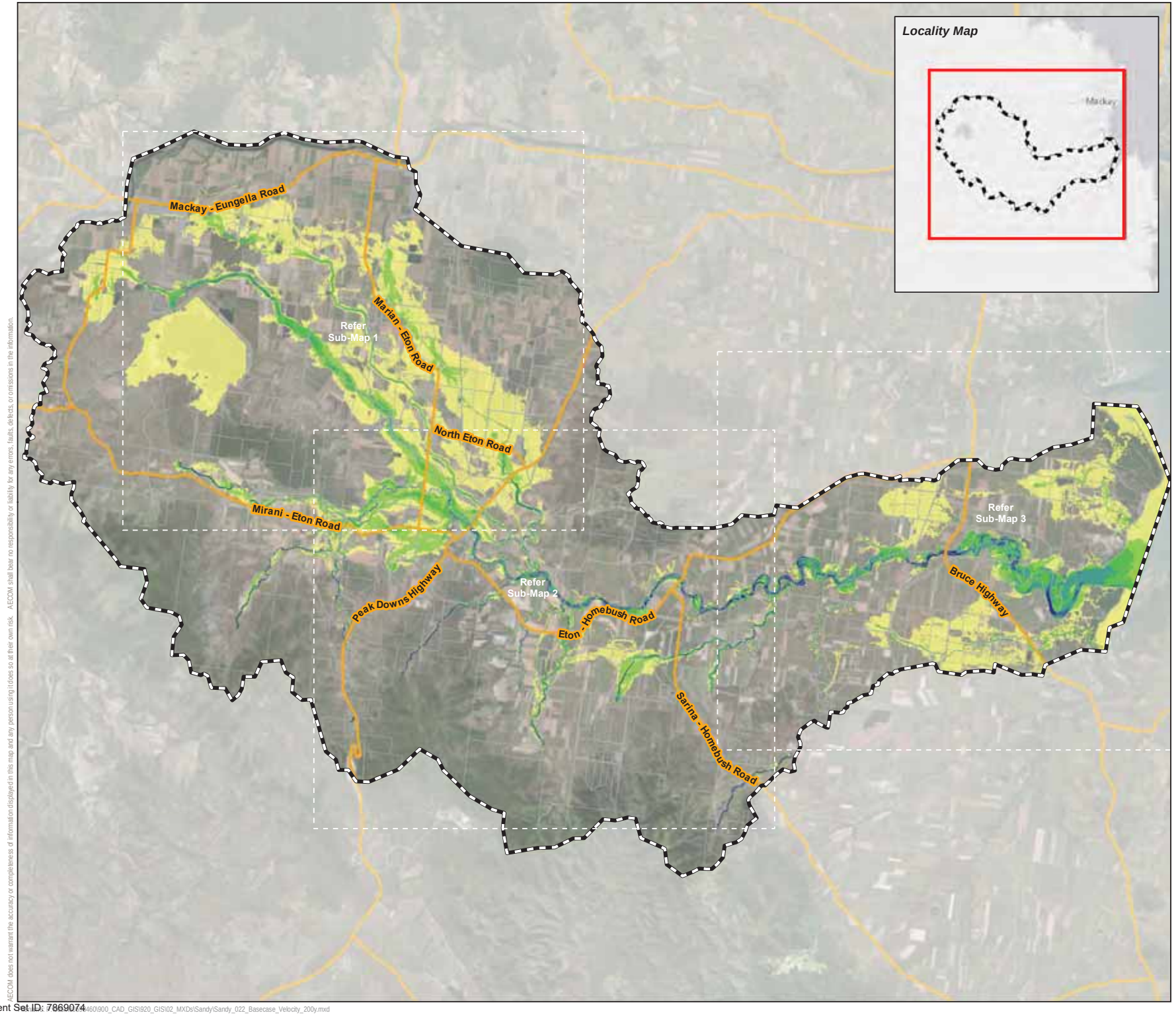

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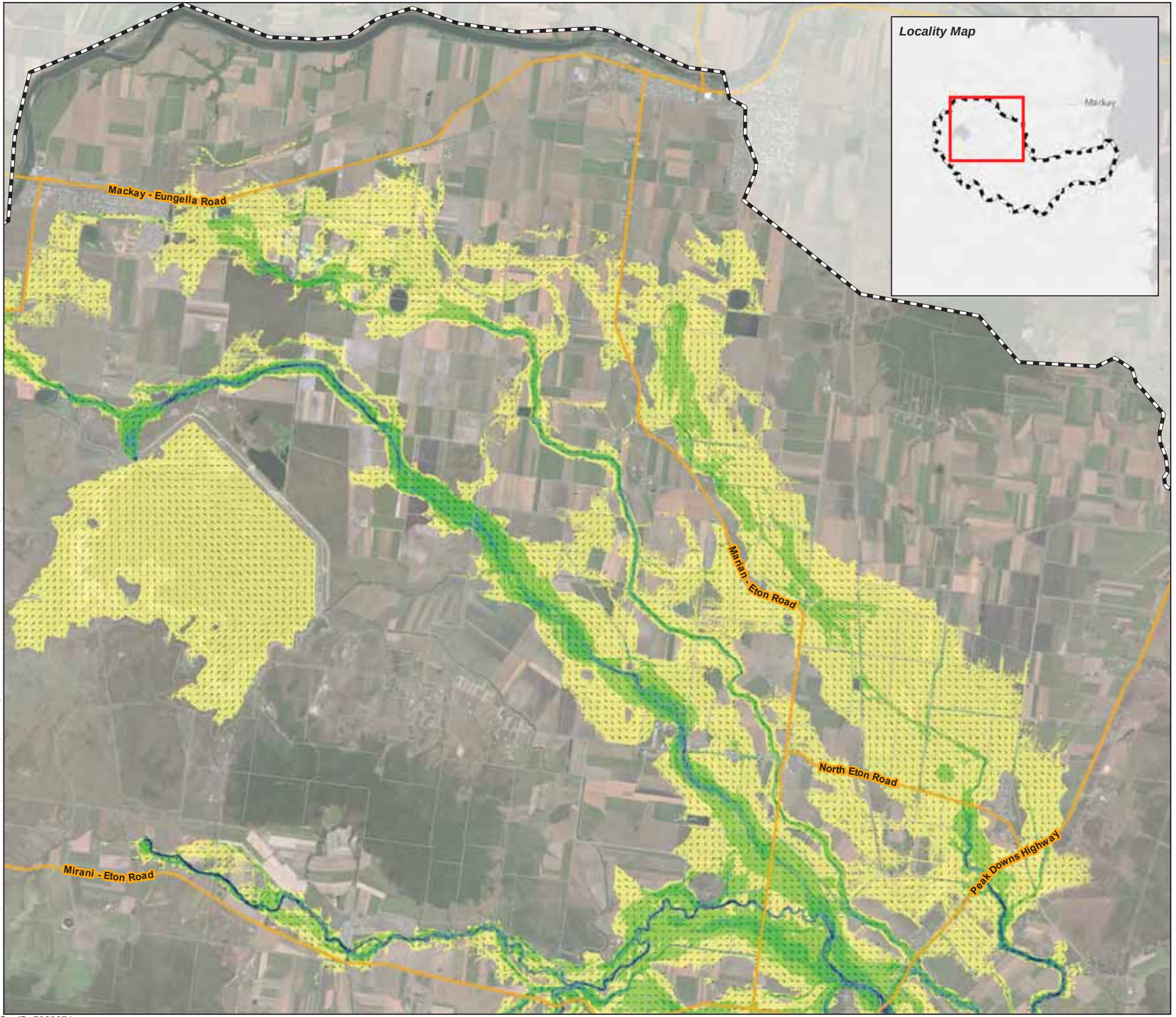

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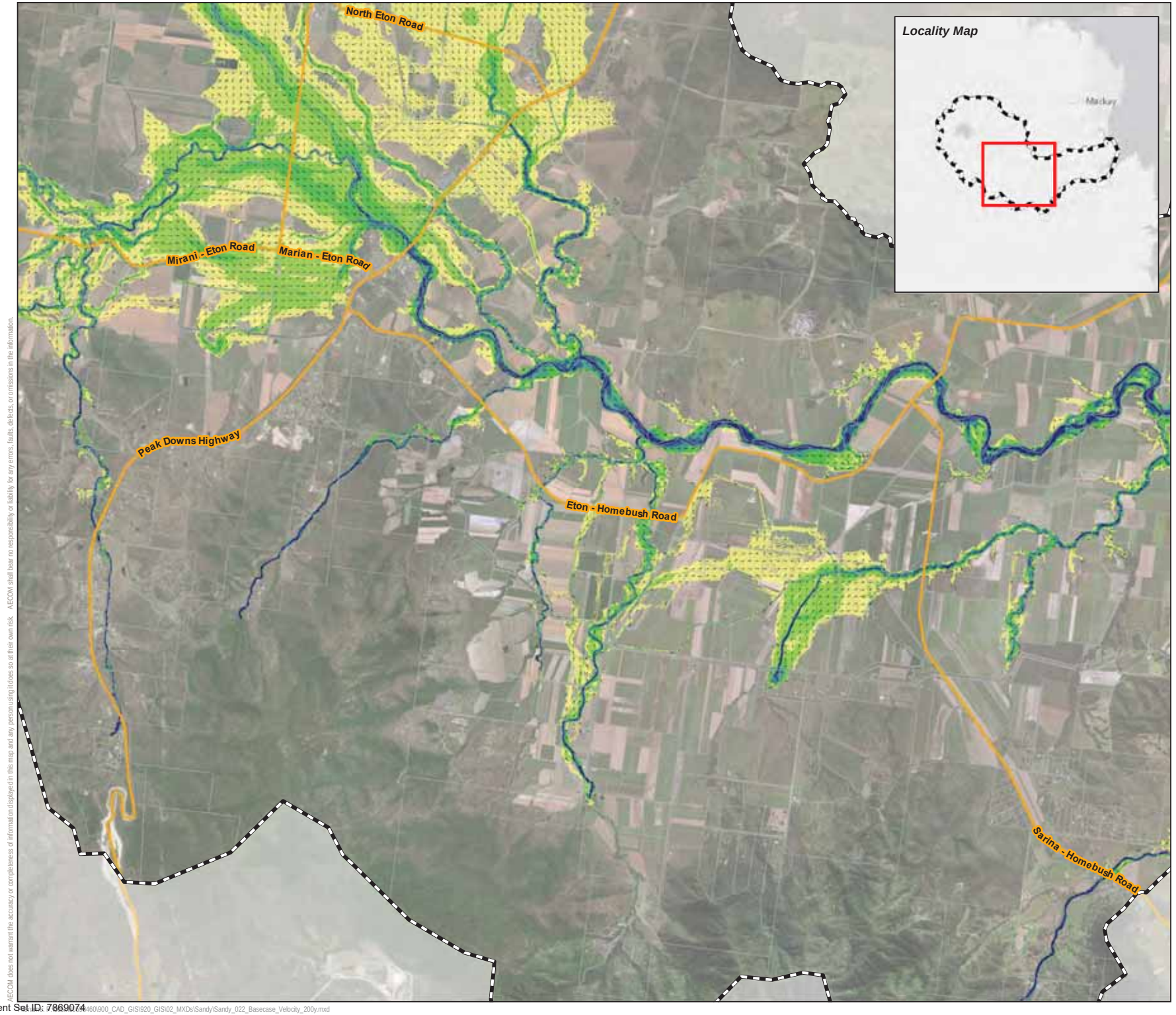

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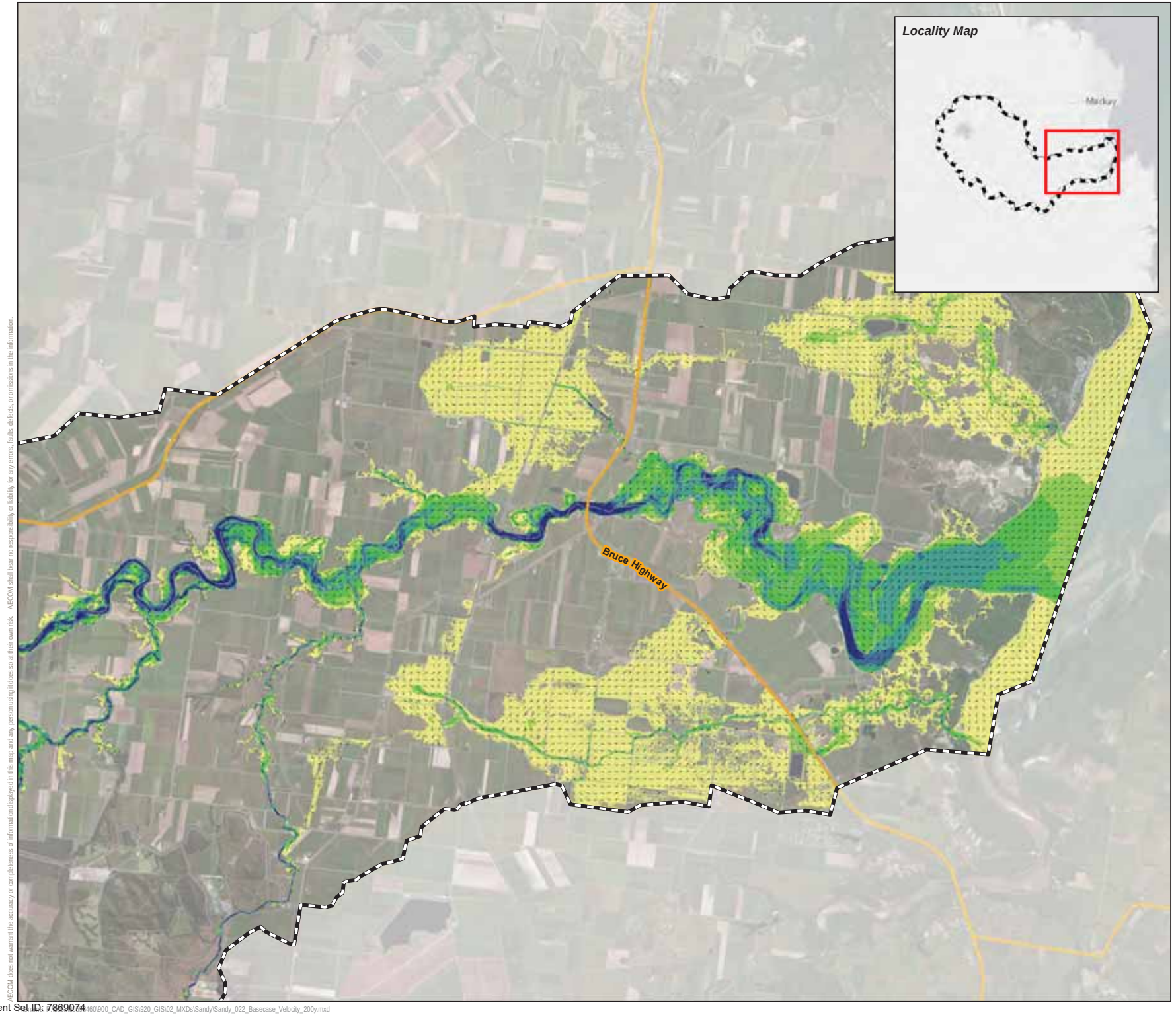

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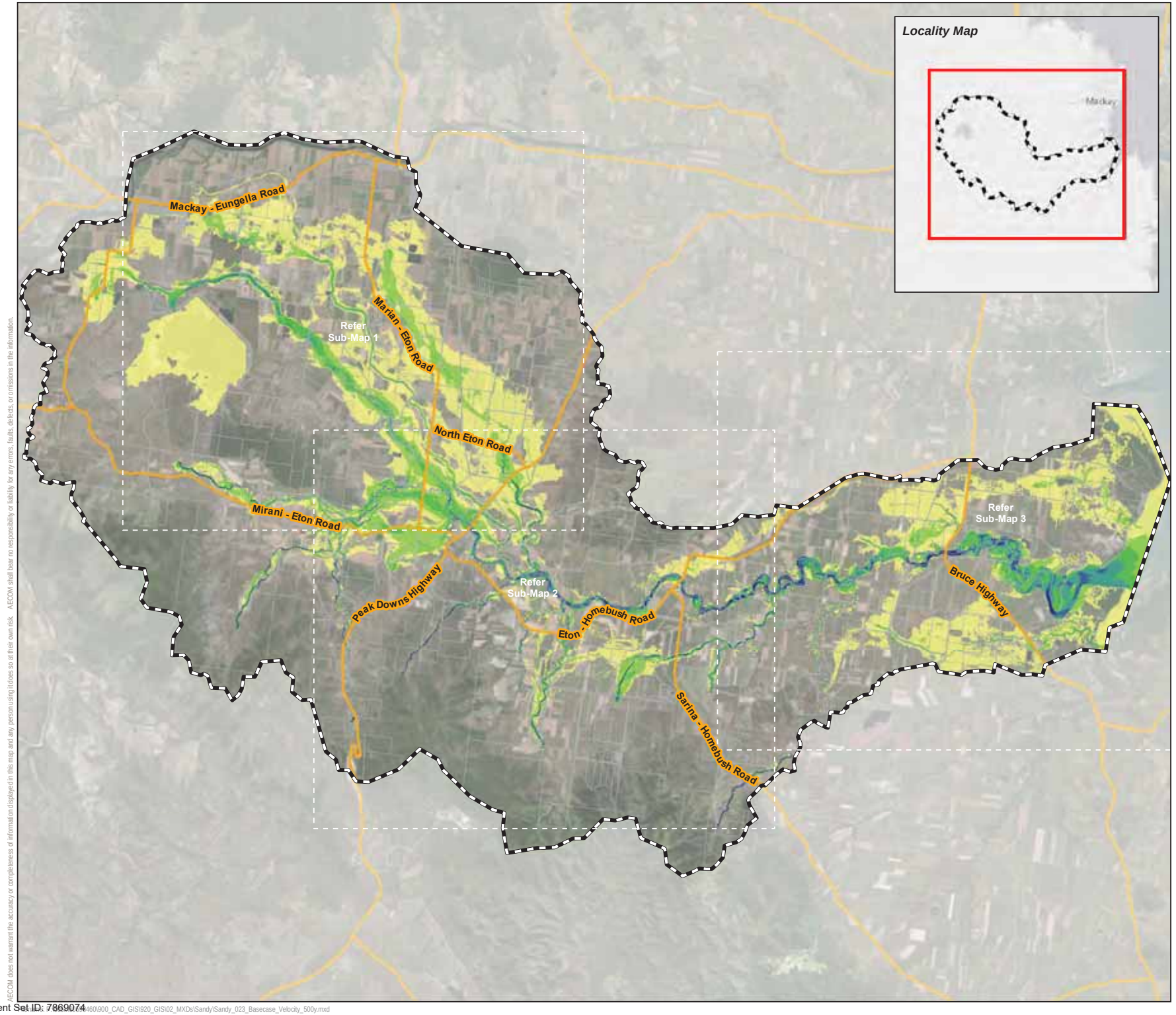

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
23.0

A3 size

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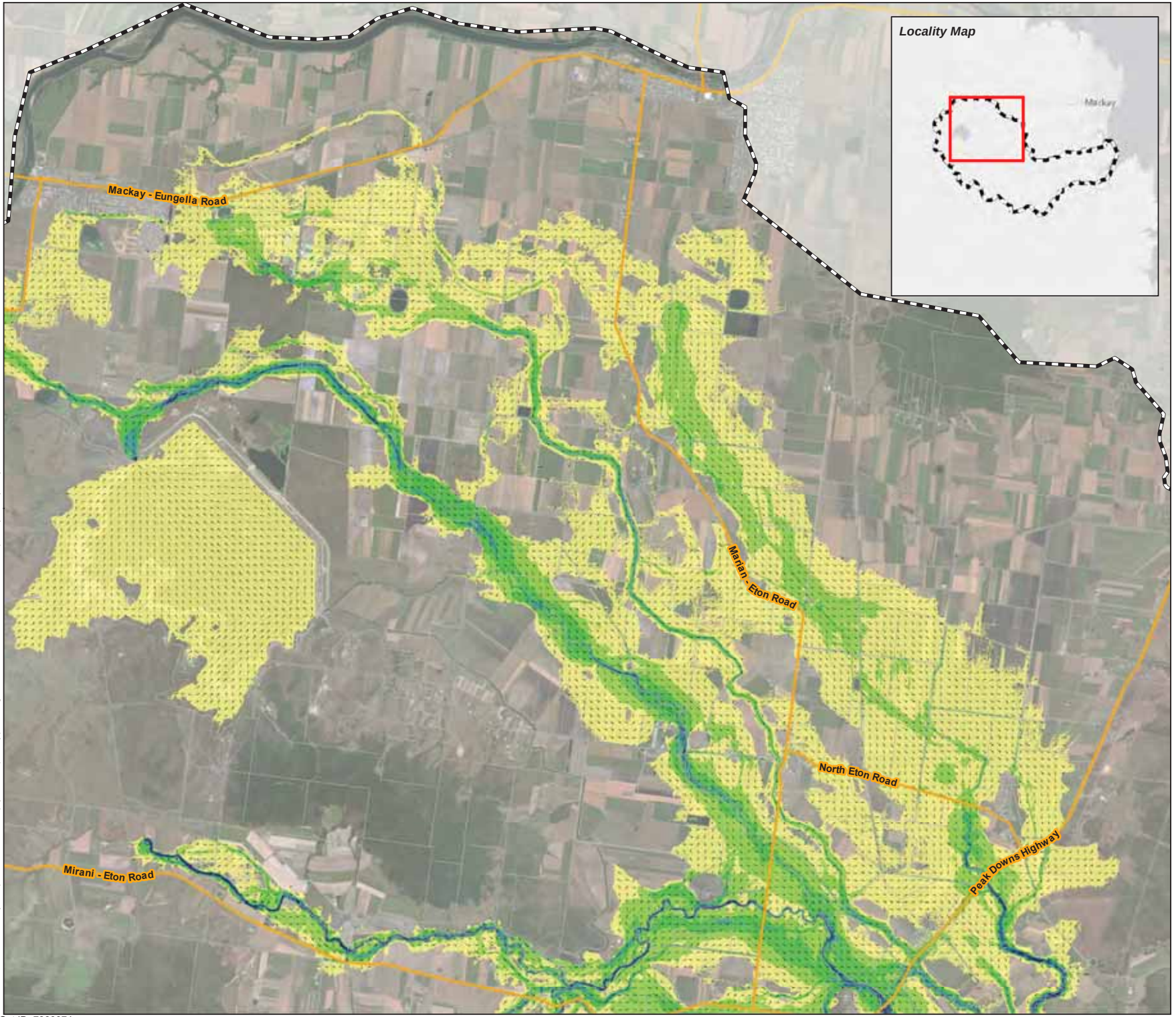

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

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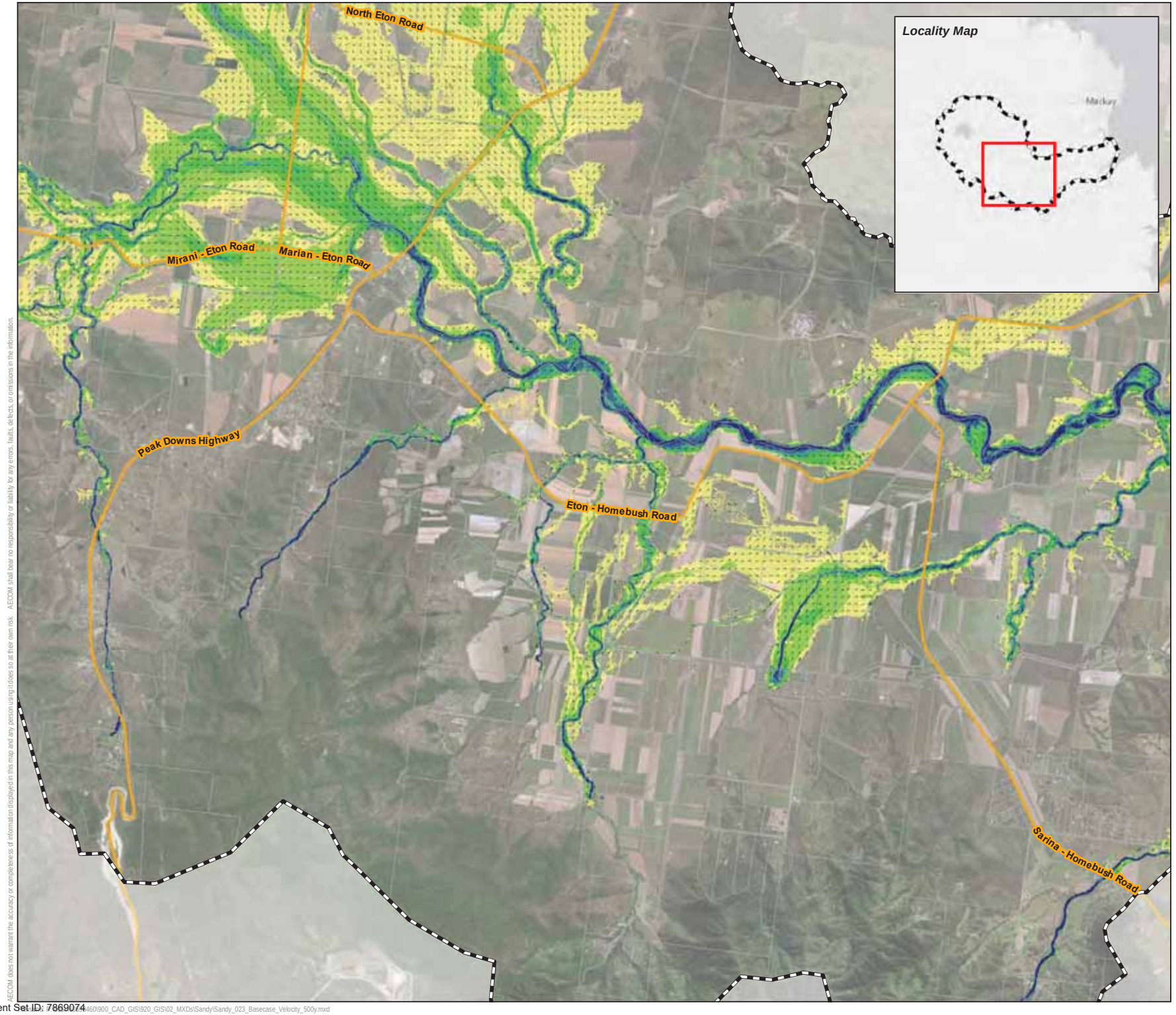

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PROJECT ID	60598460
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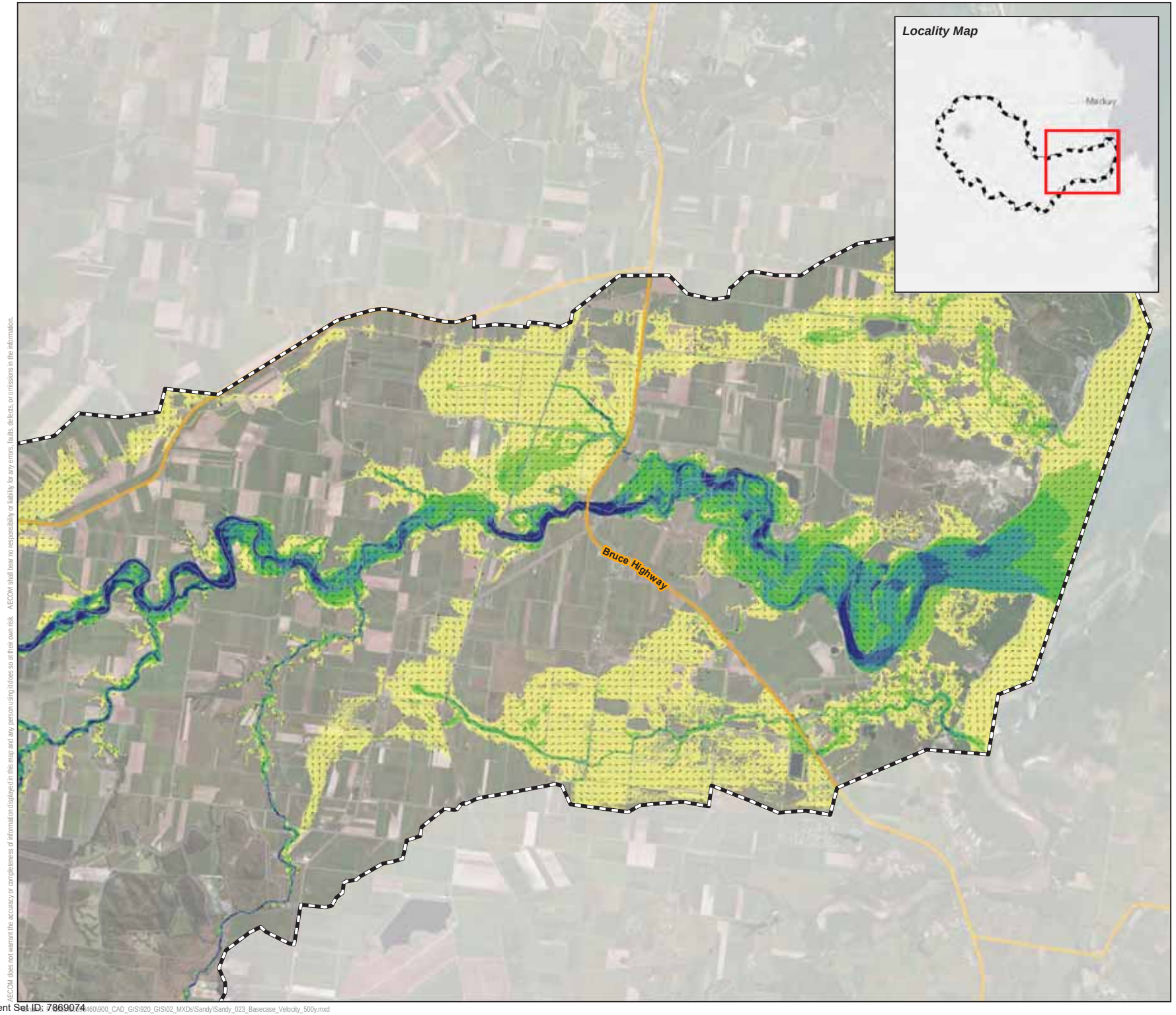
Map
23.2

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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Map
23.3

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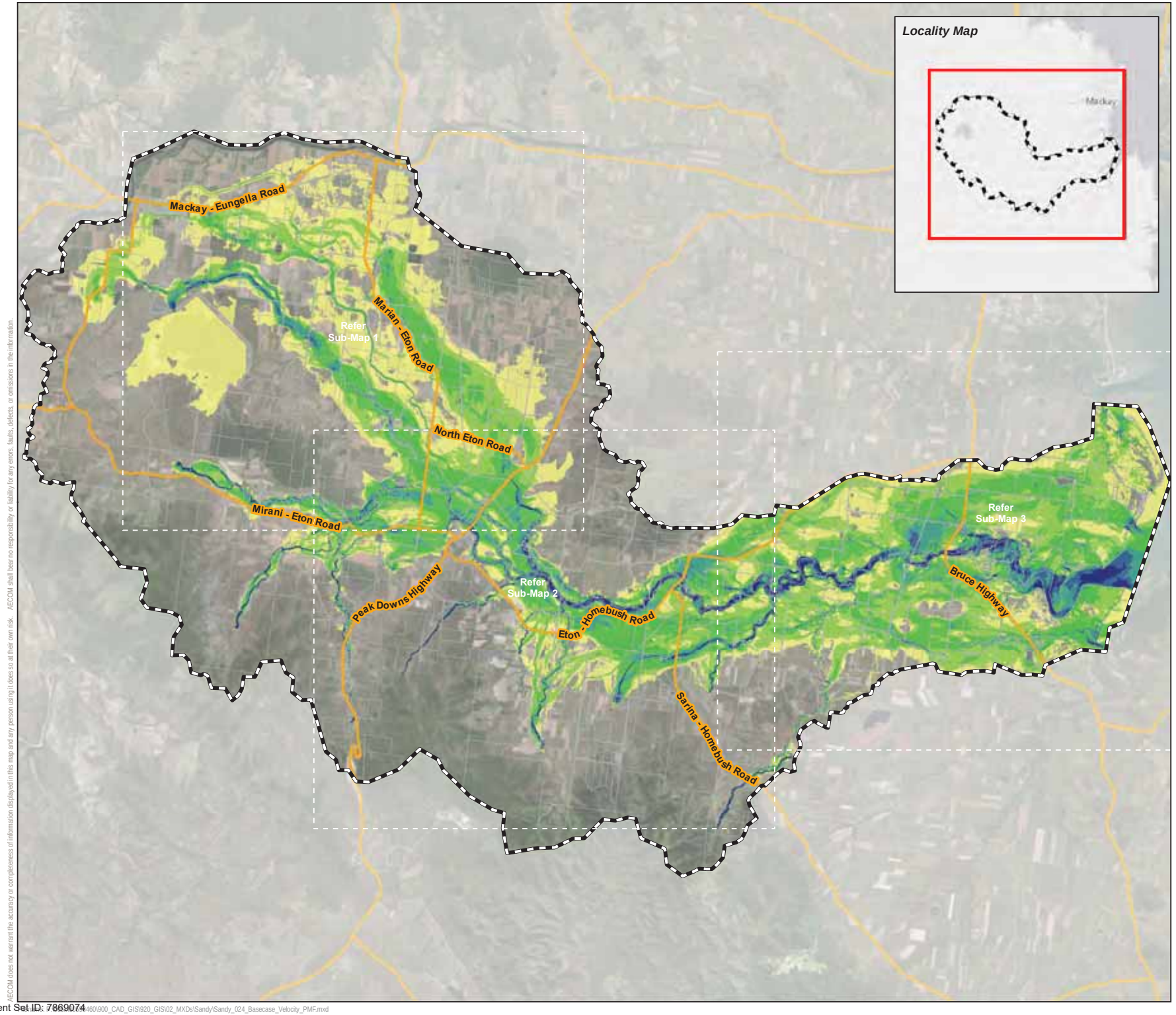

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

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LEGEND

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
PMF Event - 48 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 24.0

A3 size

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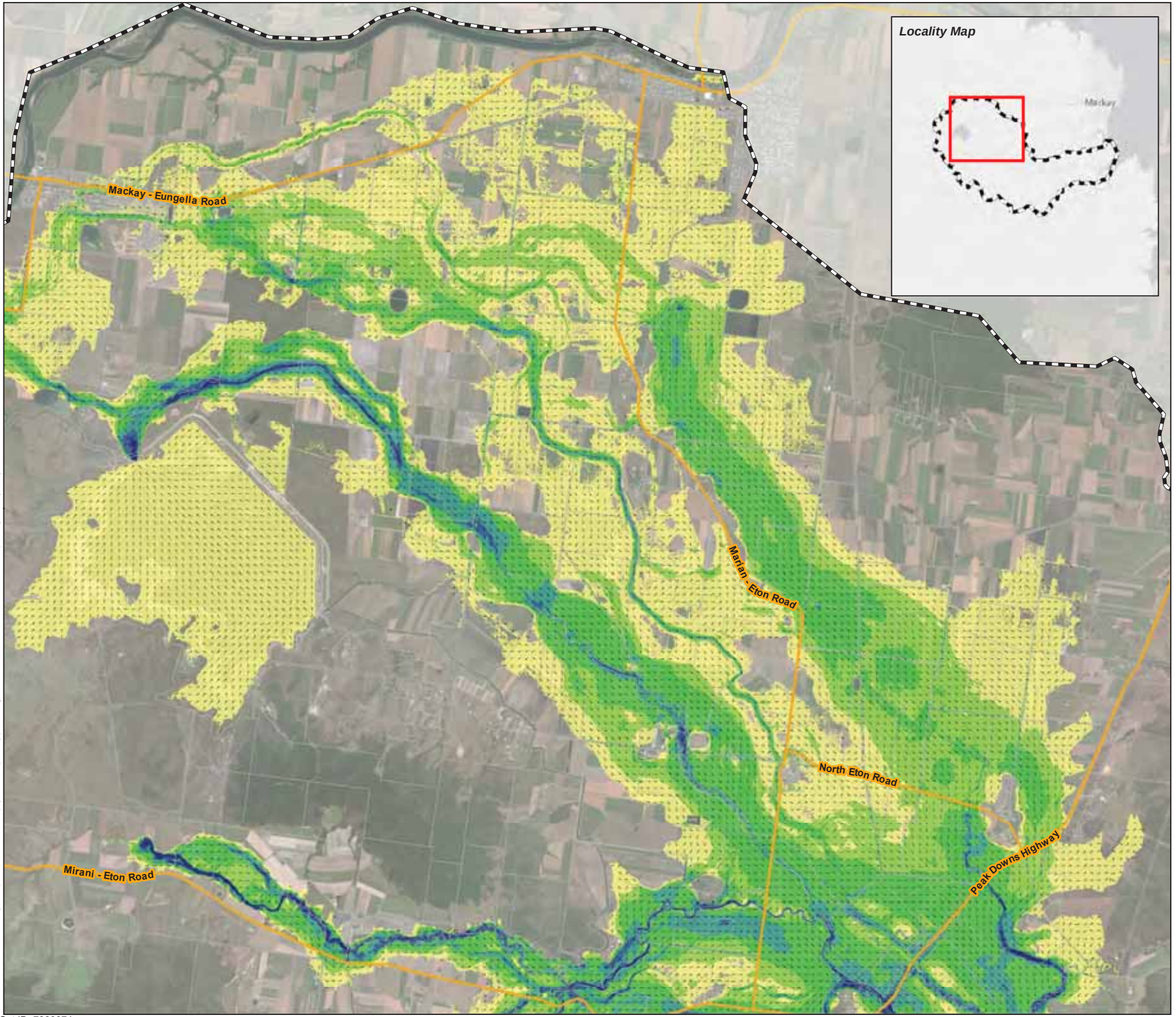

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

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Peak Depth Averaged Velocity
PMF Event - 48 Hour Storm

PROJECT ID	60598460
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Map 24.1

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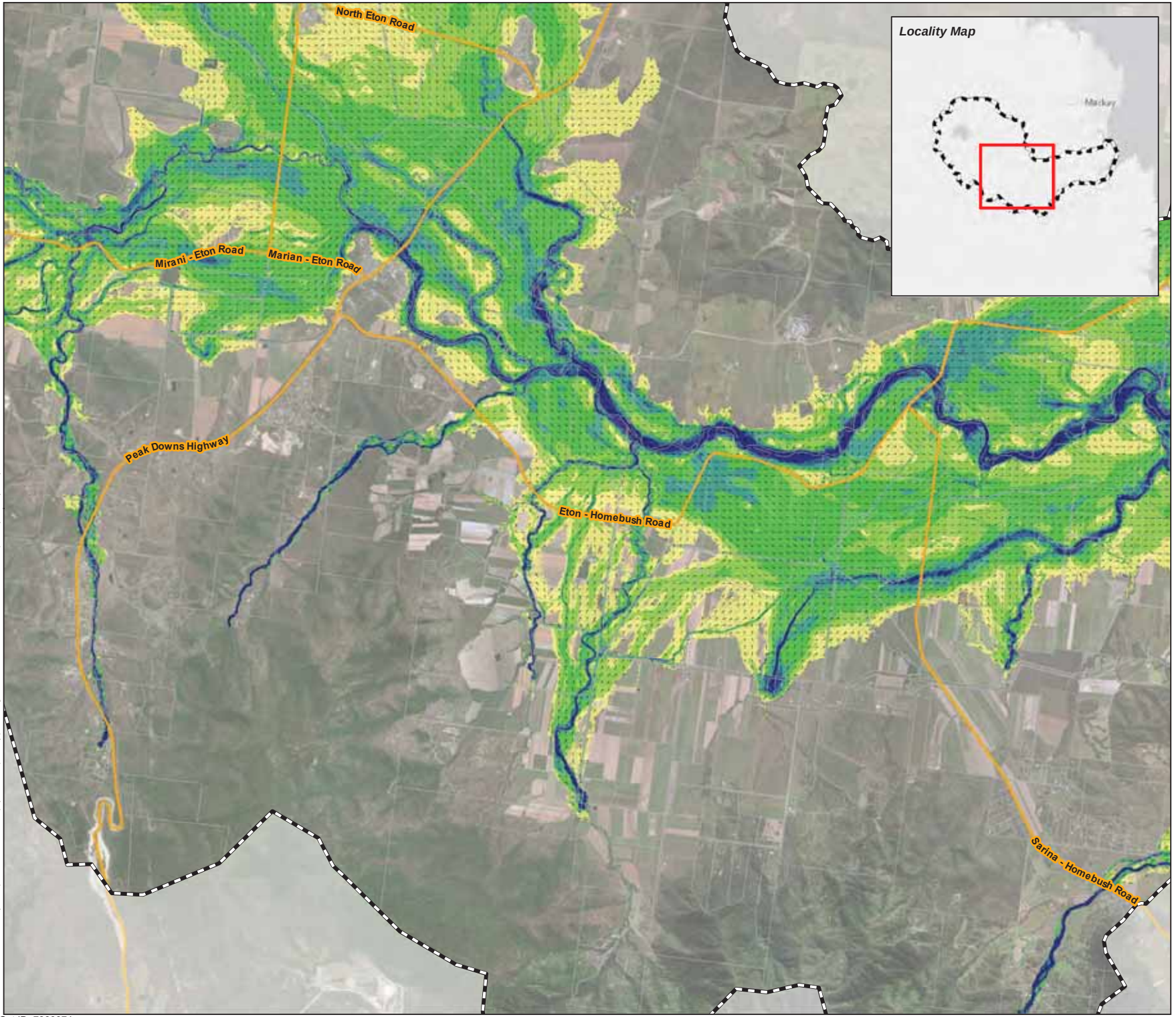

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Sandy Creek Catchment

Peak Depth Averaged Velocity
PMF Event - 48 Hour Storm

PROJECT ID	60598460
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Map
24.2

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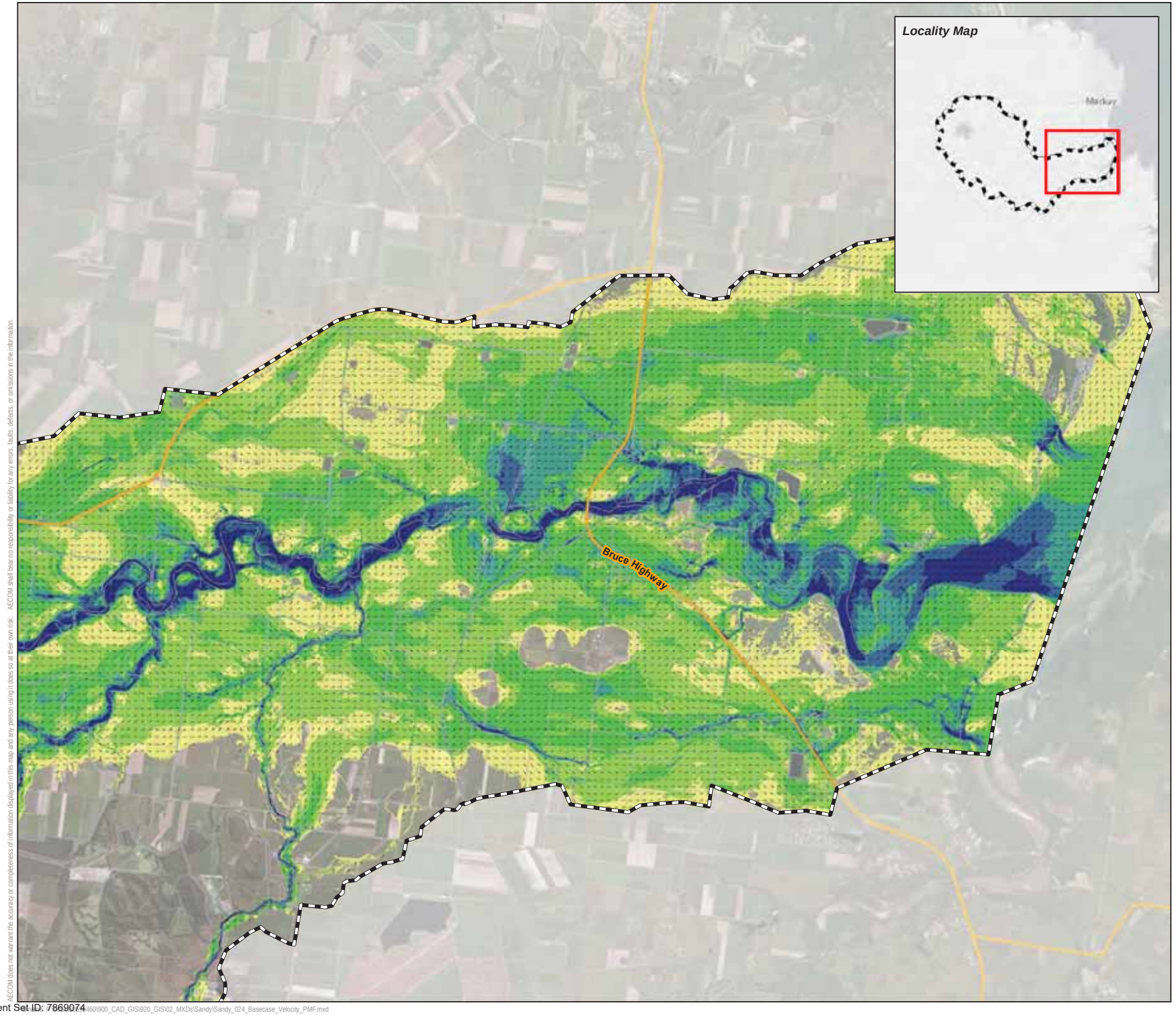

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GDA 1994 MGA Zone 55

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Metres

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Sandy Creek Catchment

Peak Depth Averaged Velocity
PMF Event - 48 Hour Storm

PROJECT ID	60598460
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Map
24.3

A3 size

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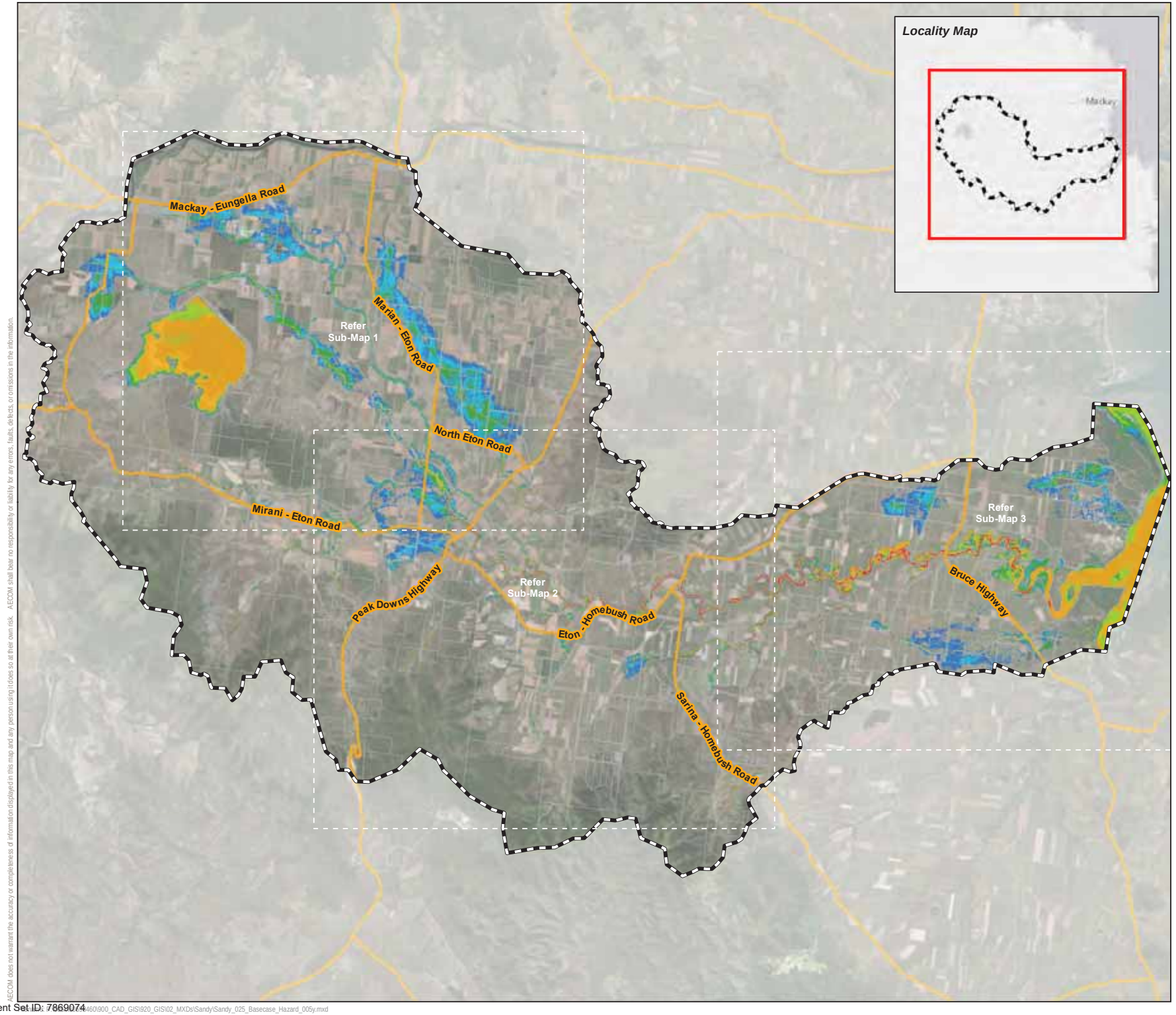

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
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Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Flood Hazard Mapping
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
25.0

A3 size

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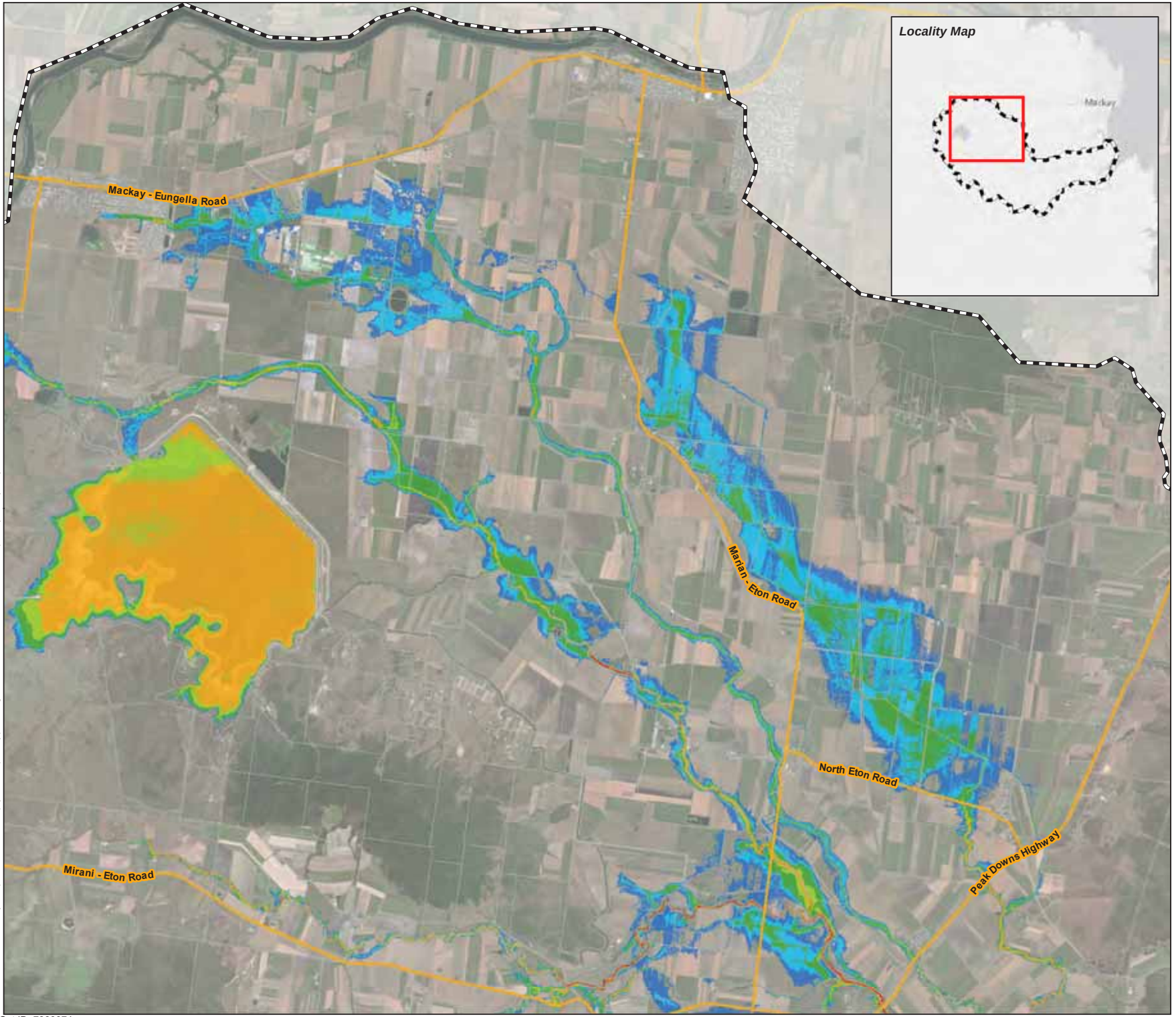

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

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Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Flood Hazard Mapping
18% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
25.1

A3 size

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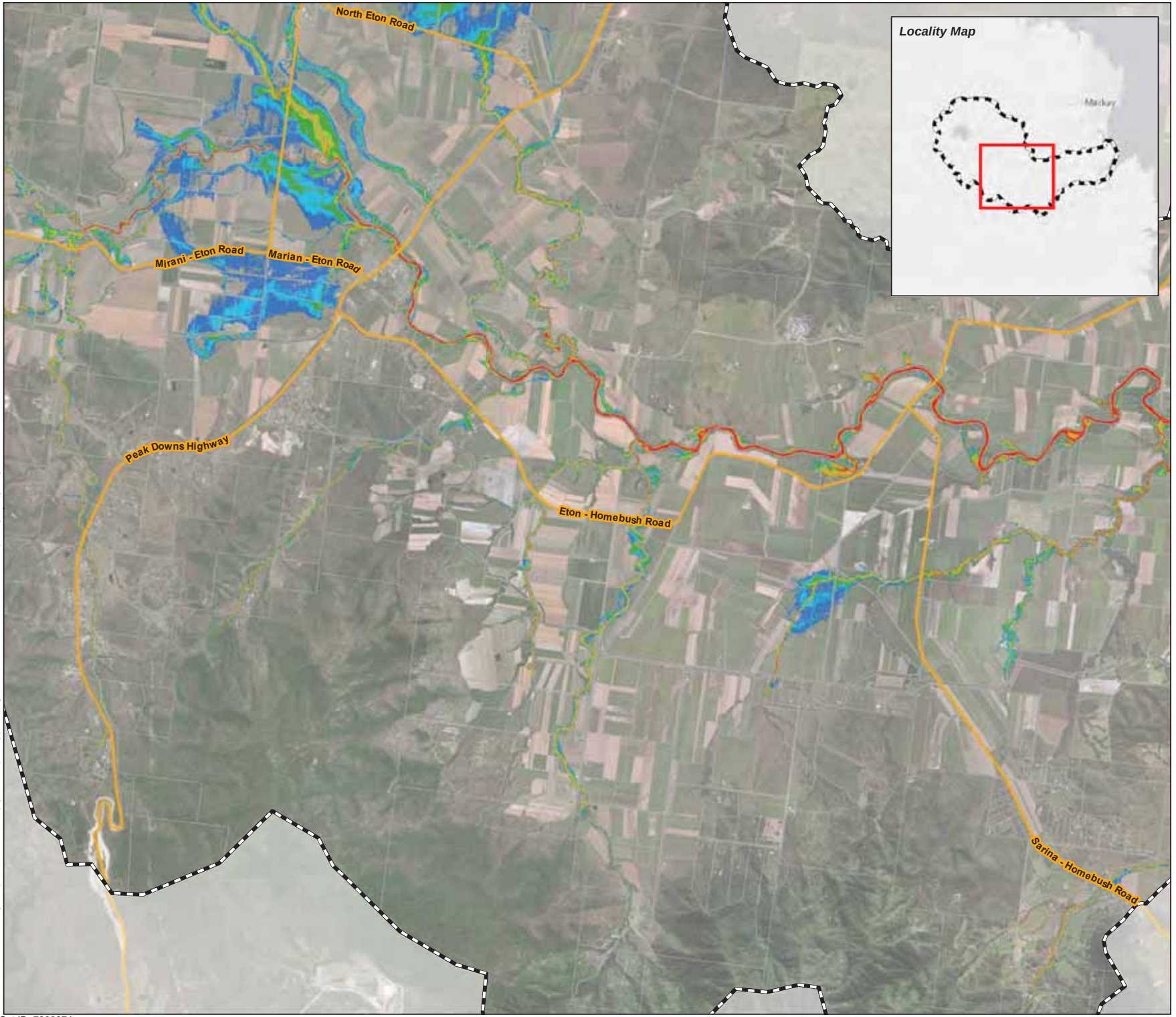

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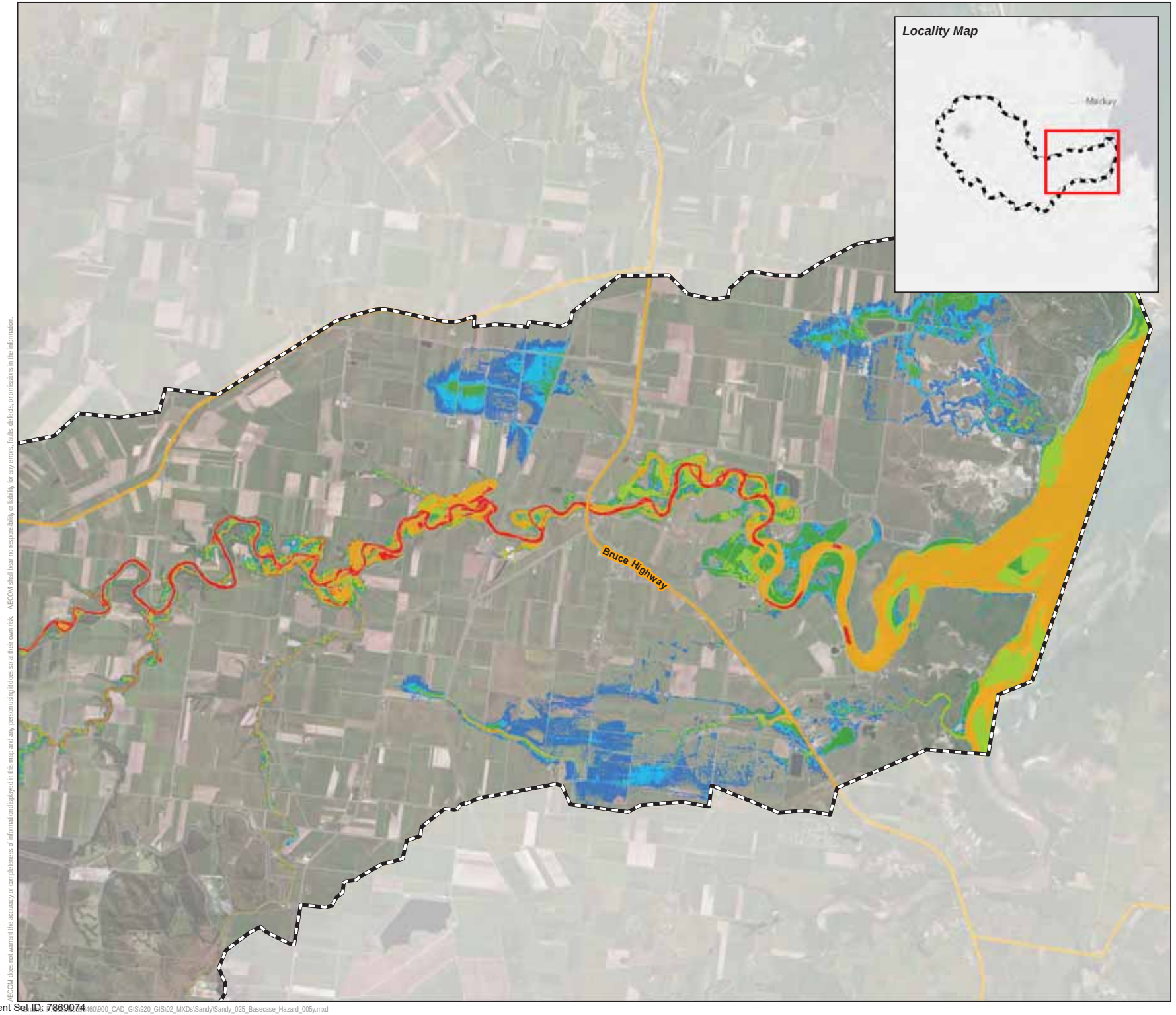

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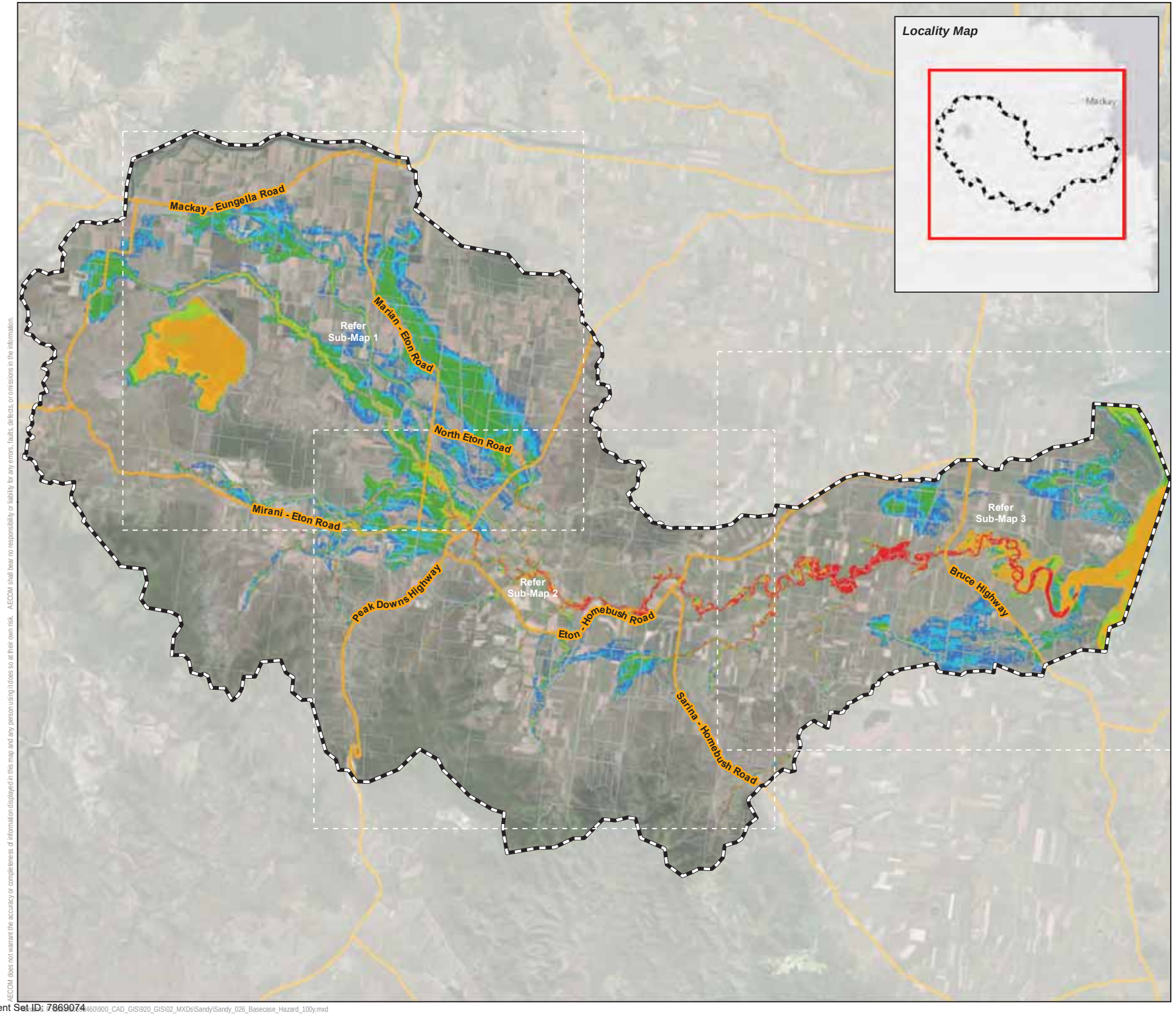

Locality Map

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GDA 1994 MGA Zone 55

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Map
26.0

A3 size

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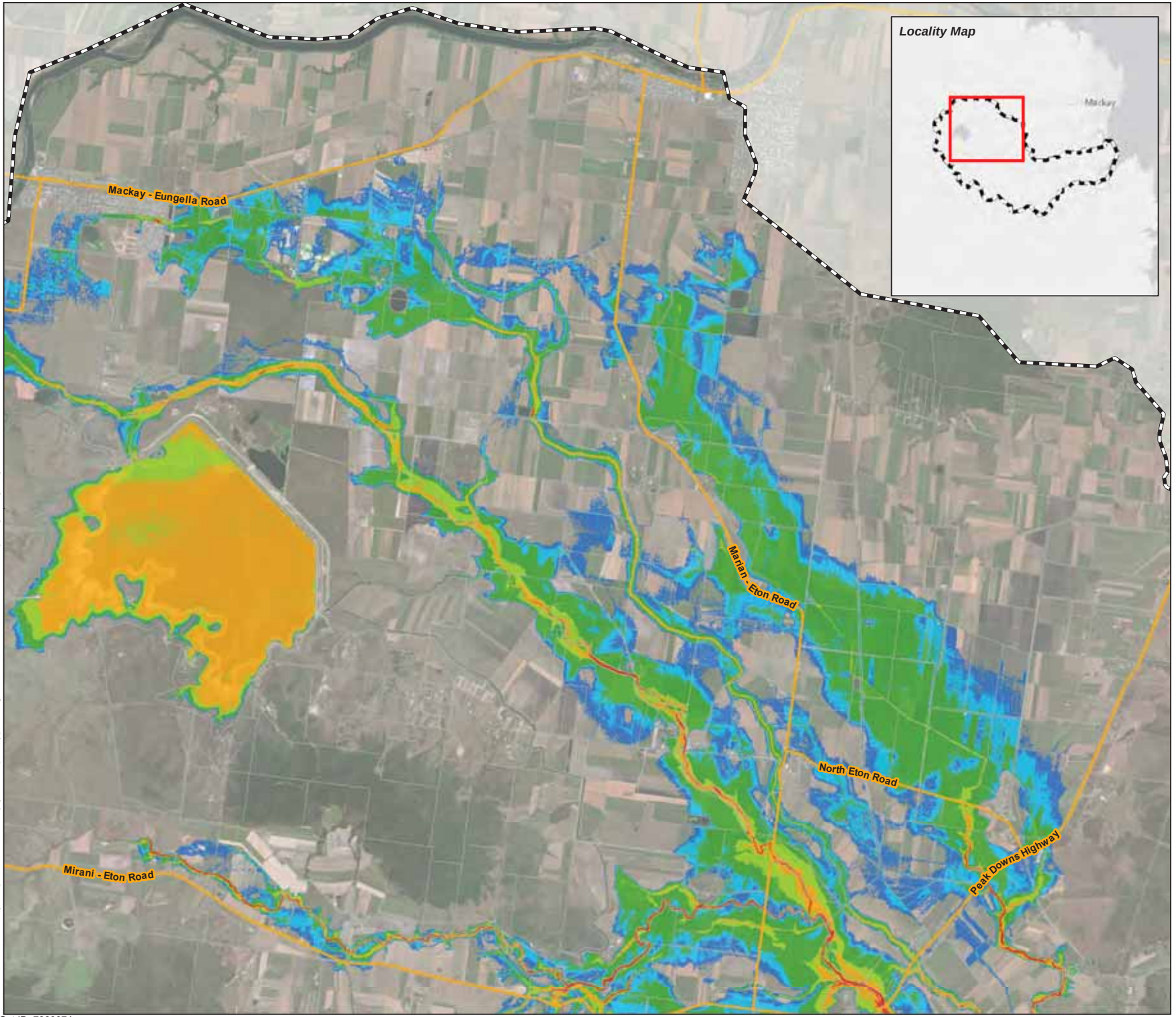

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

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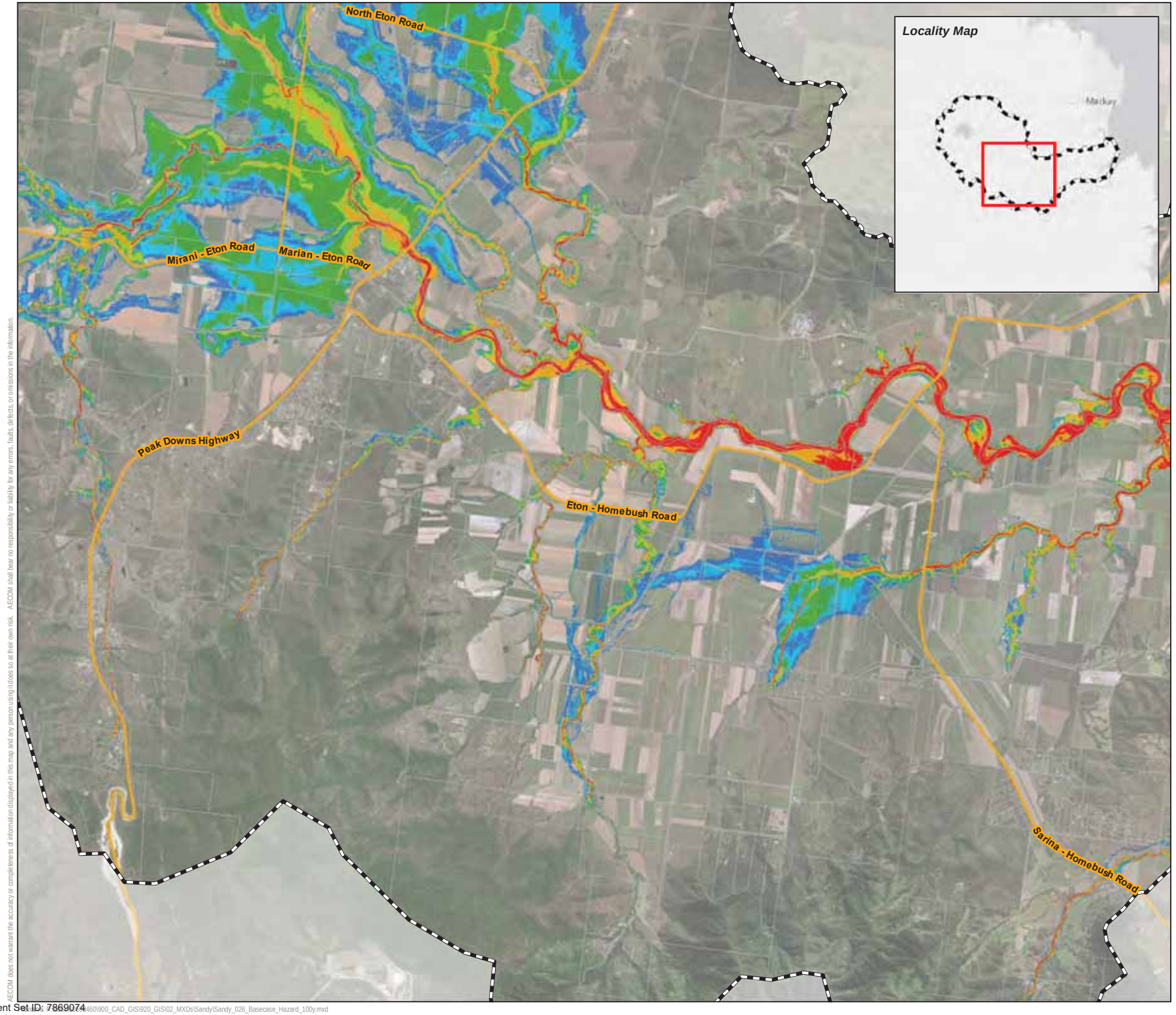

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Sandy Creek Catchment

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Map
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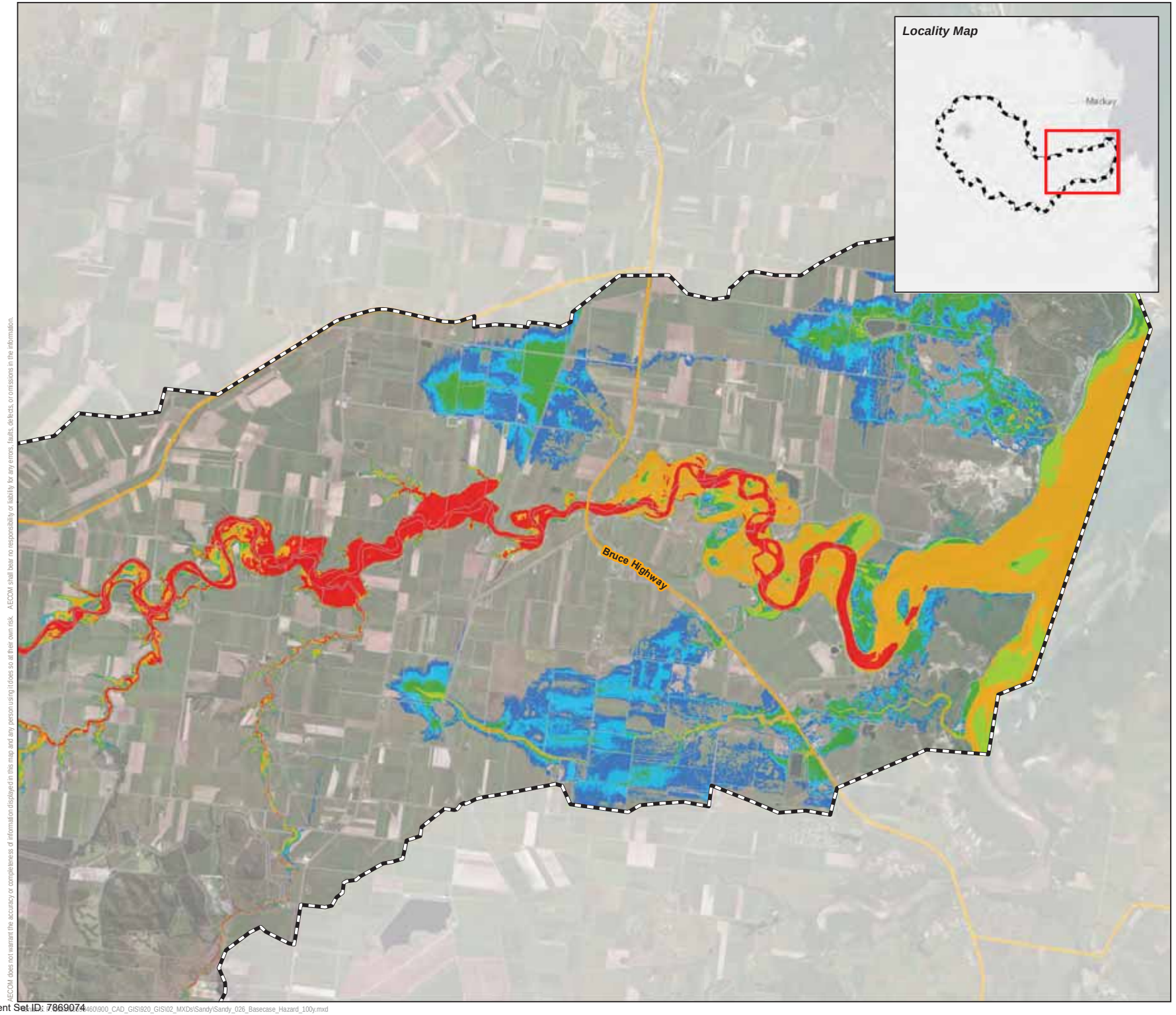

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A3 size

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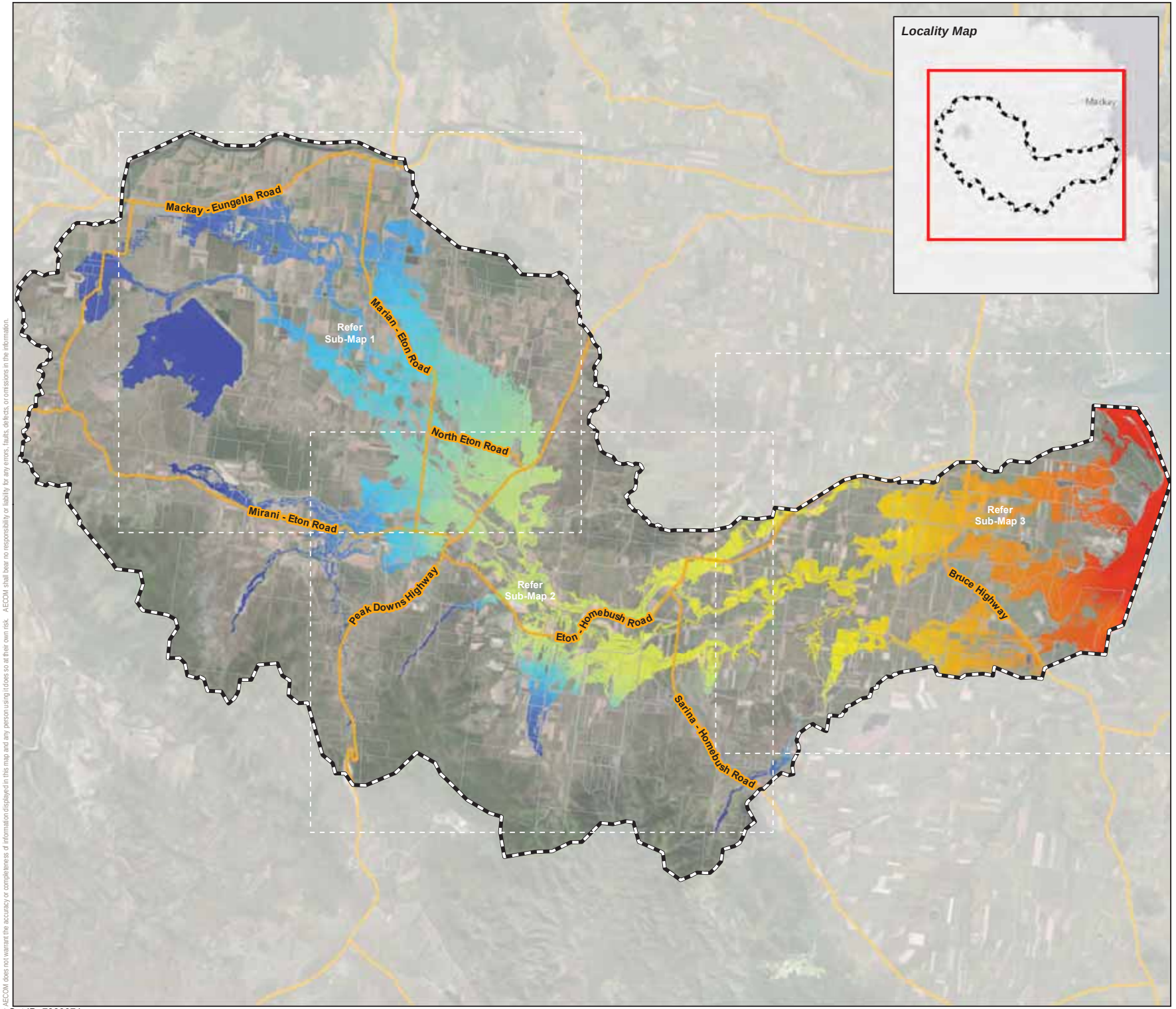

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.951

Low : 2.399

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
27.0

A3 size

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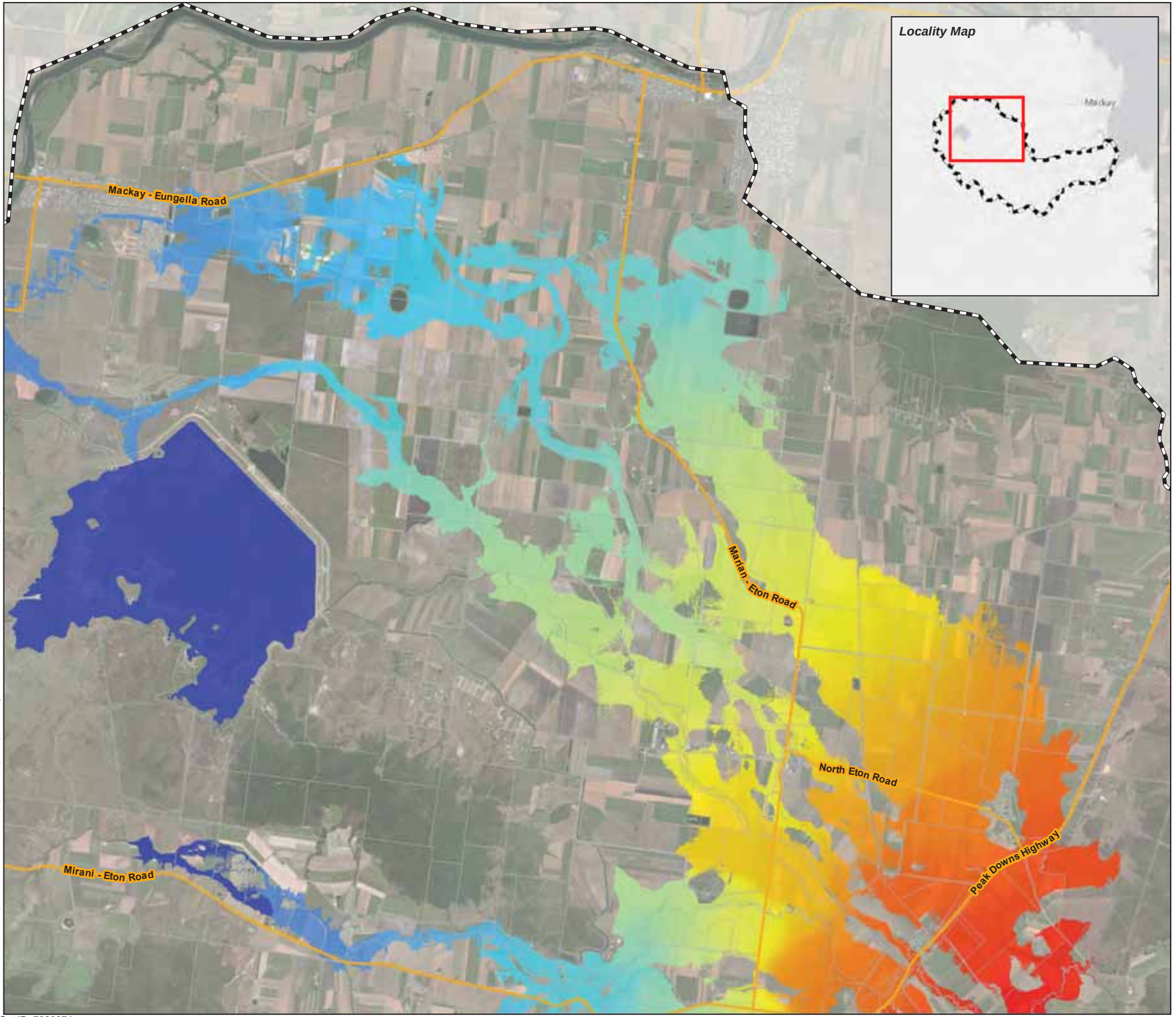
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.6823

Low : 28.0927

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
27.1

A3 size

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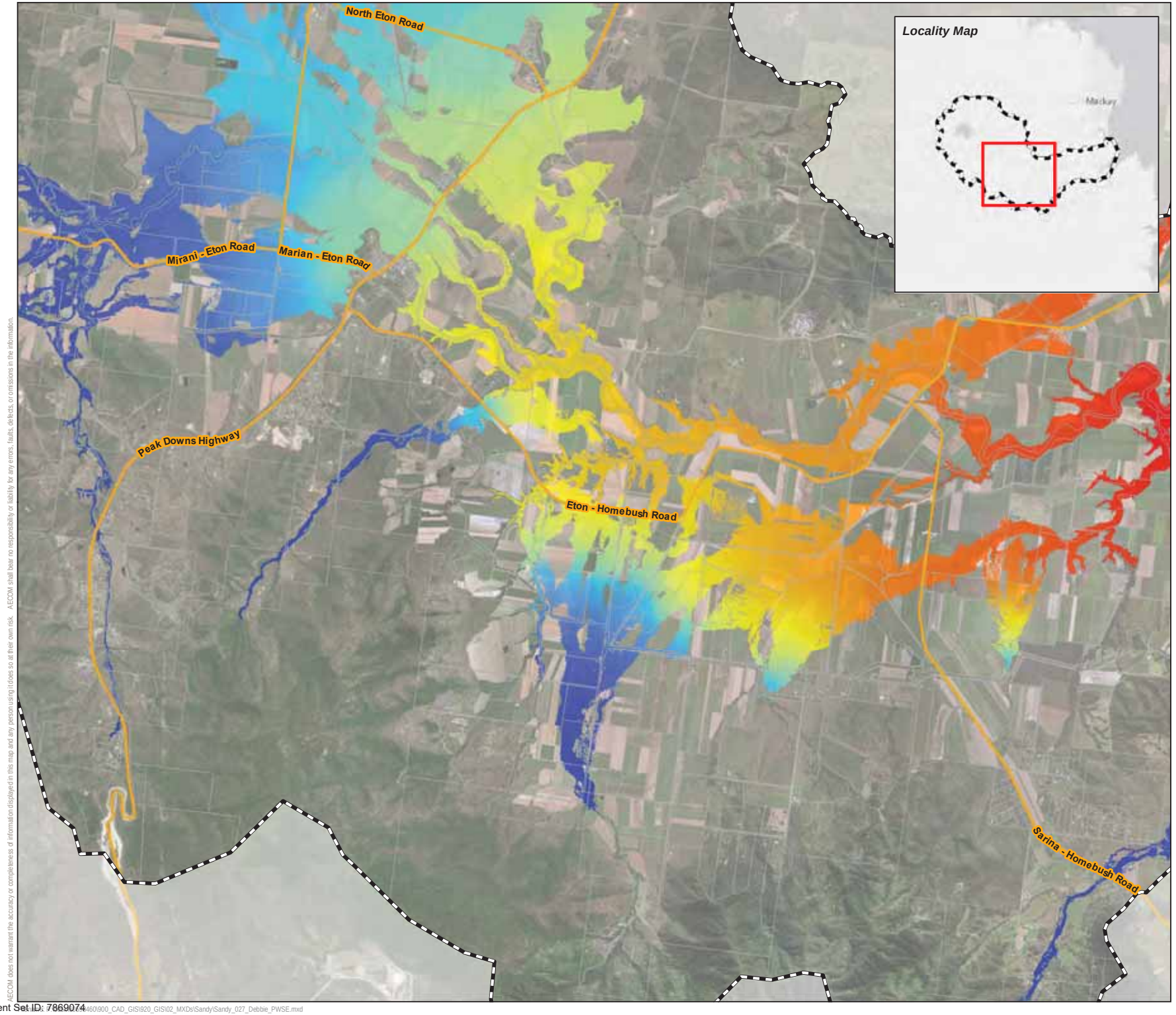
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55
0 600 1,200 2,400
Metres
1:50,000 (when printed at A3)

LEGEND
- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)
High : 116.259
Low : 16.3622

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Water Surface Elevation (PWSE)
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
27.2

A3 size

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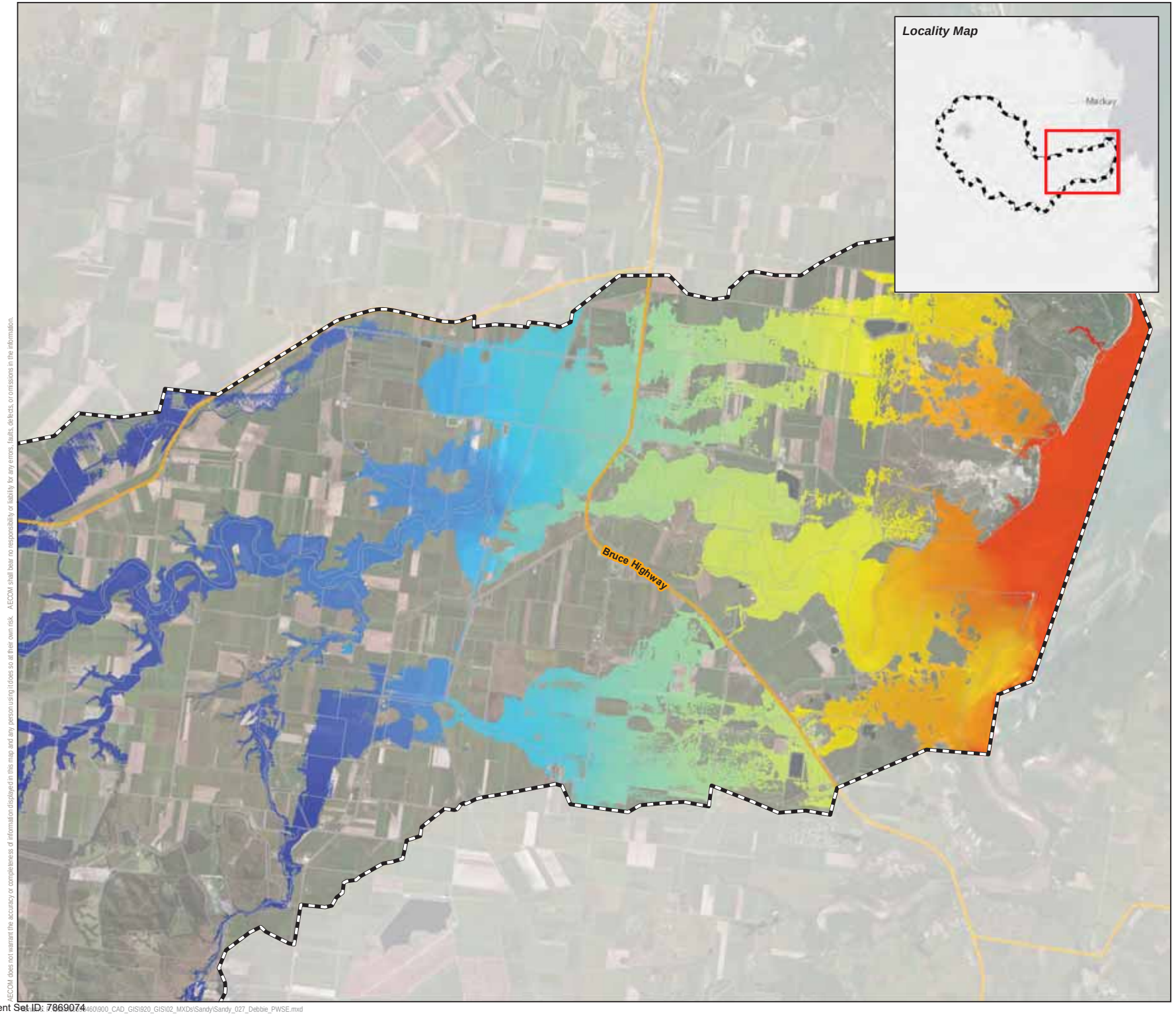

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 42.3121

Low : 2.399

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

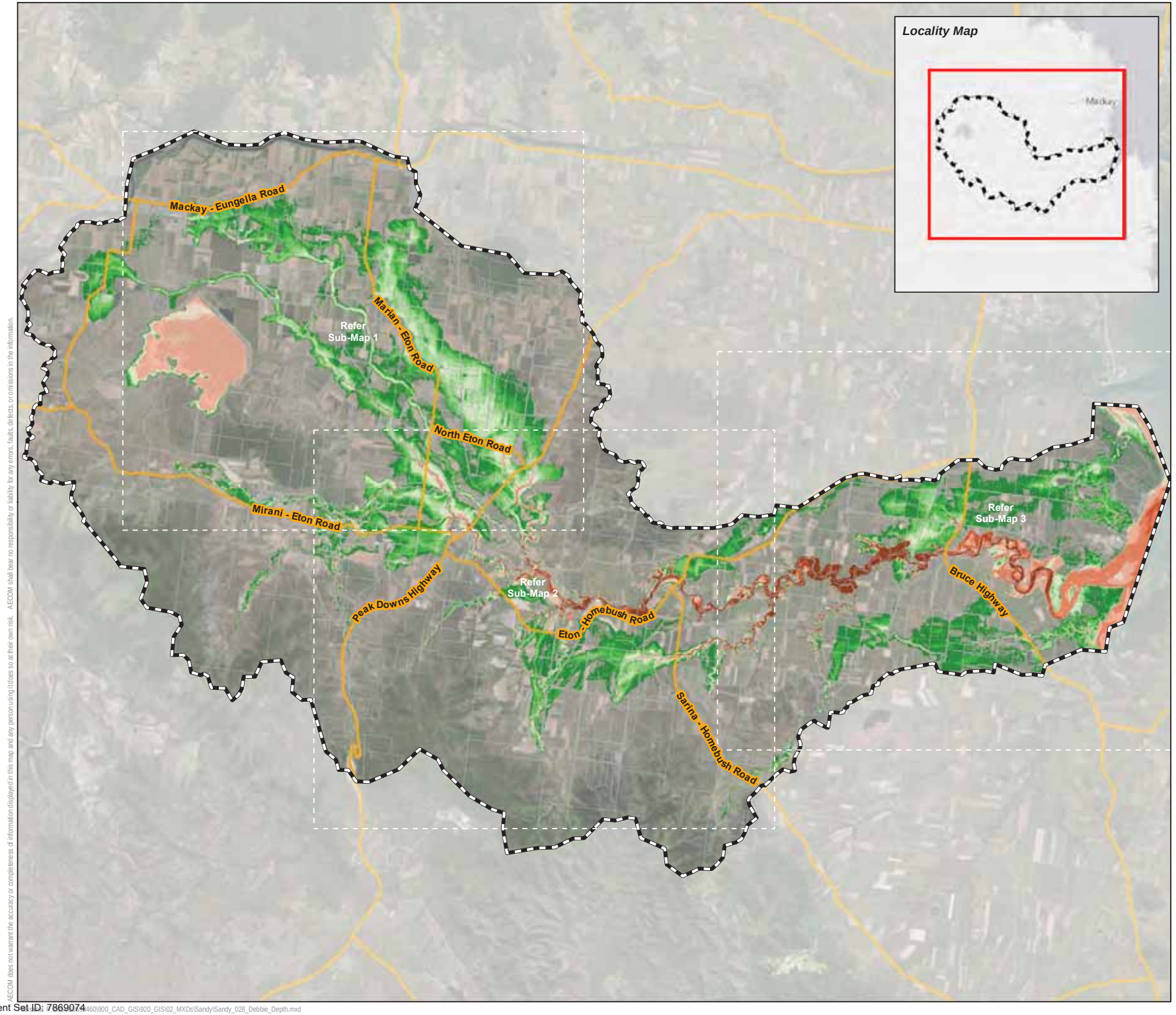
Peak Water Surface Elevation (PWSE)
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
27.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



Locality Map

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
28.0

A3 size

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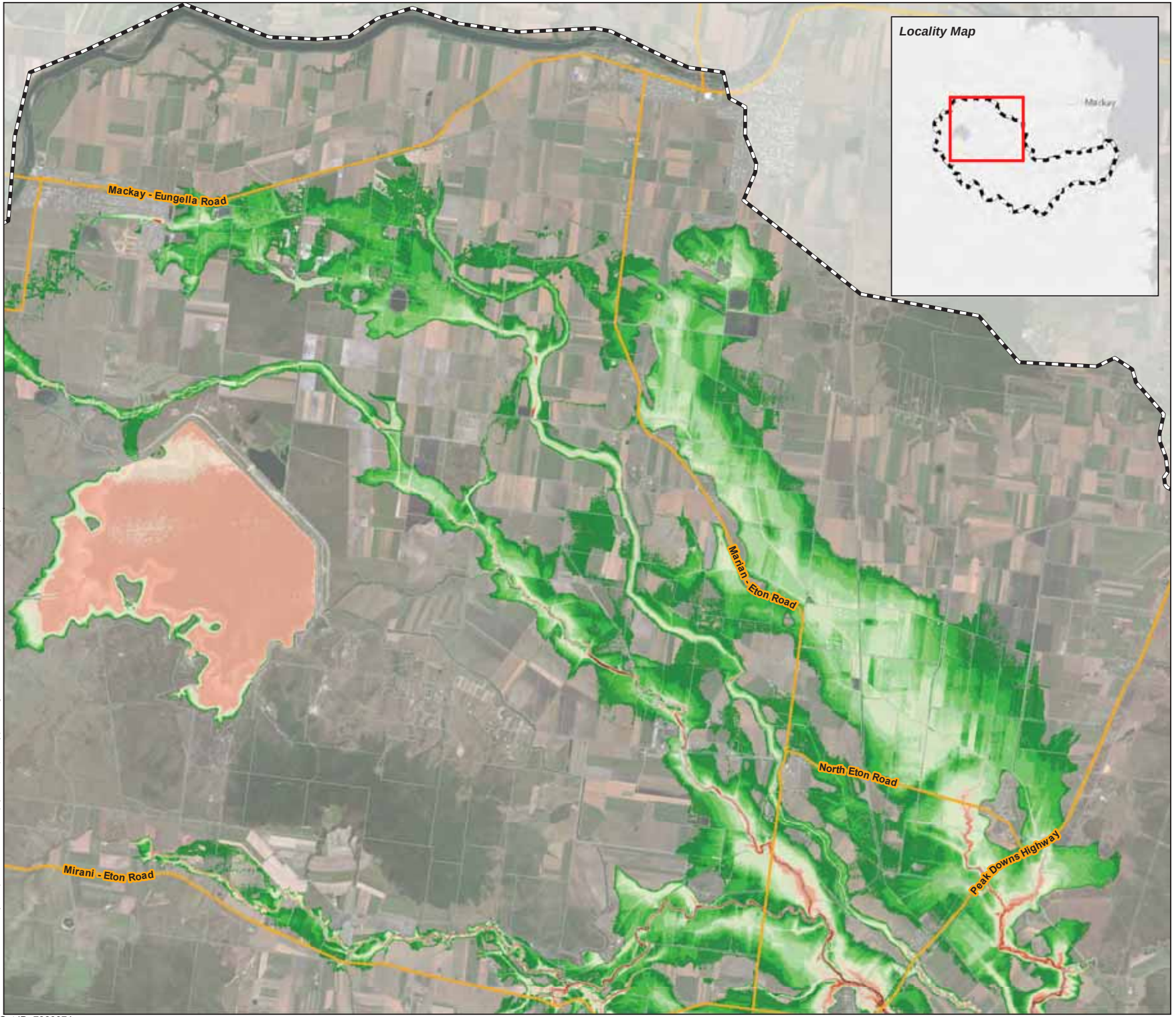

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
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VERSION:	v01

Map
28.1

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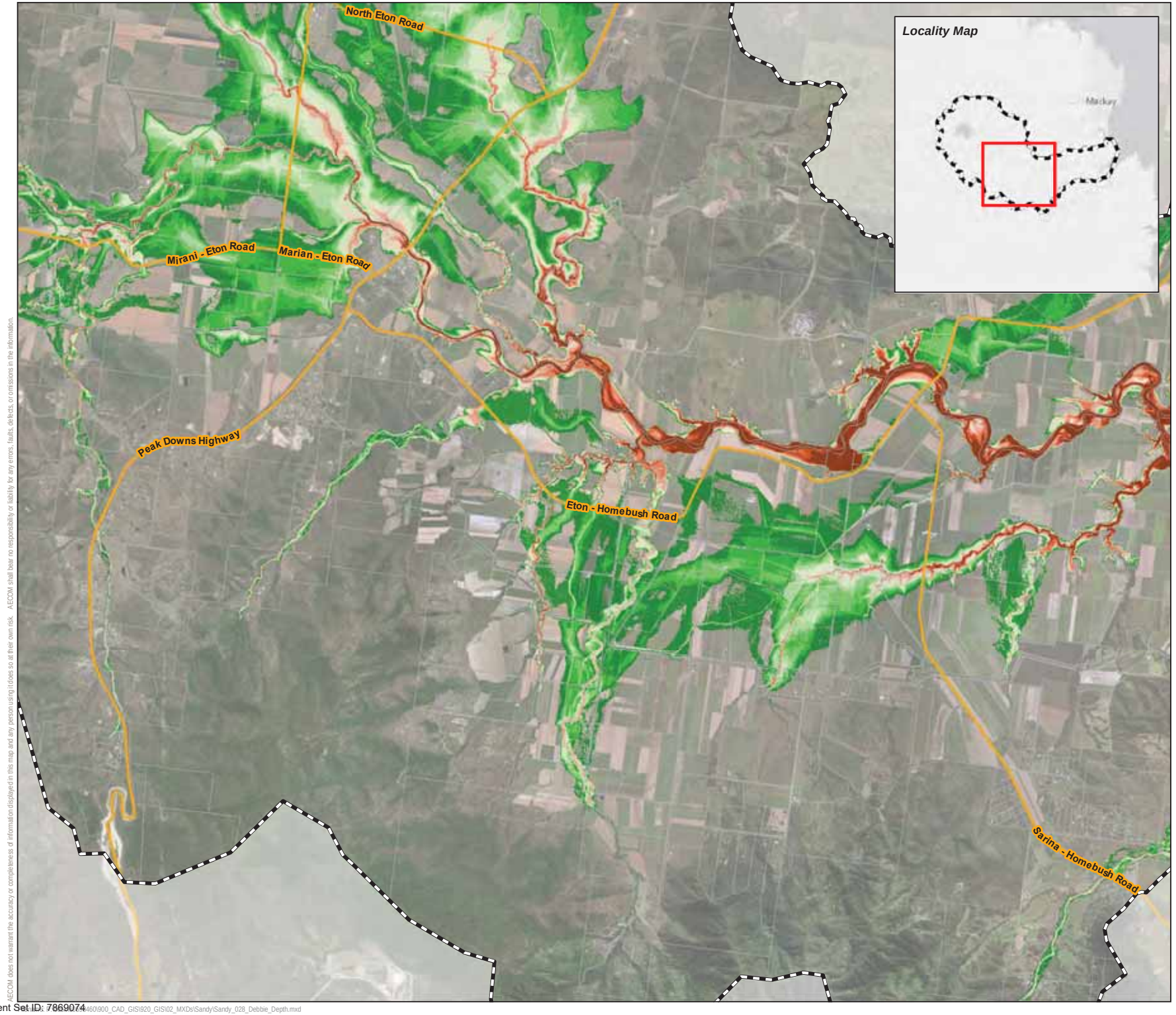

AECOM
www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
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Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
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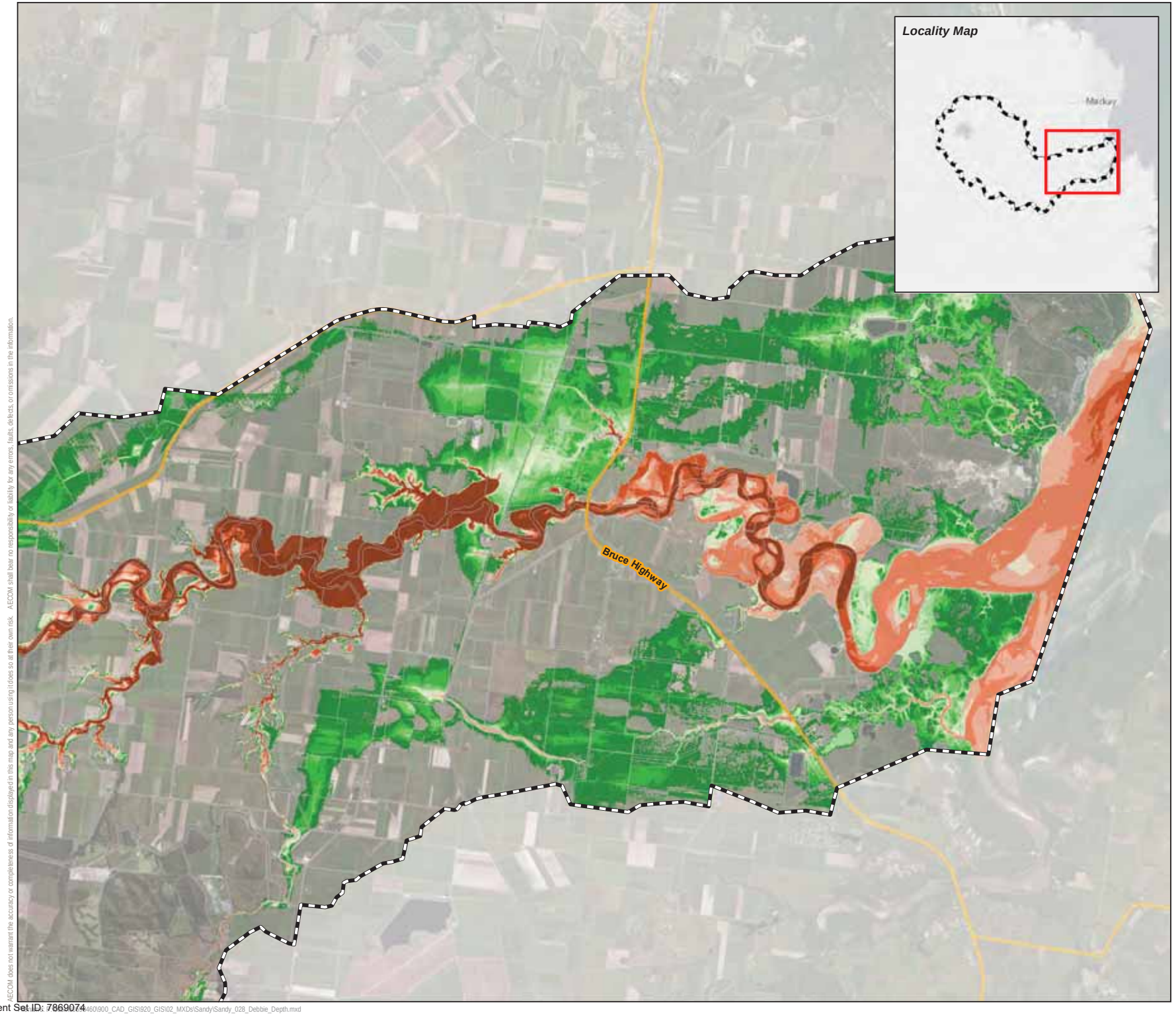

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Flood Depth
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
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A3 size

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Document Set ID: 7869074
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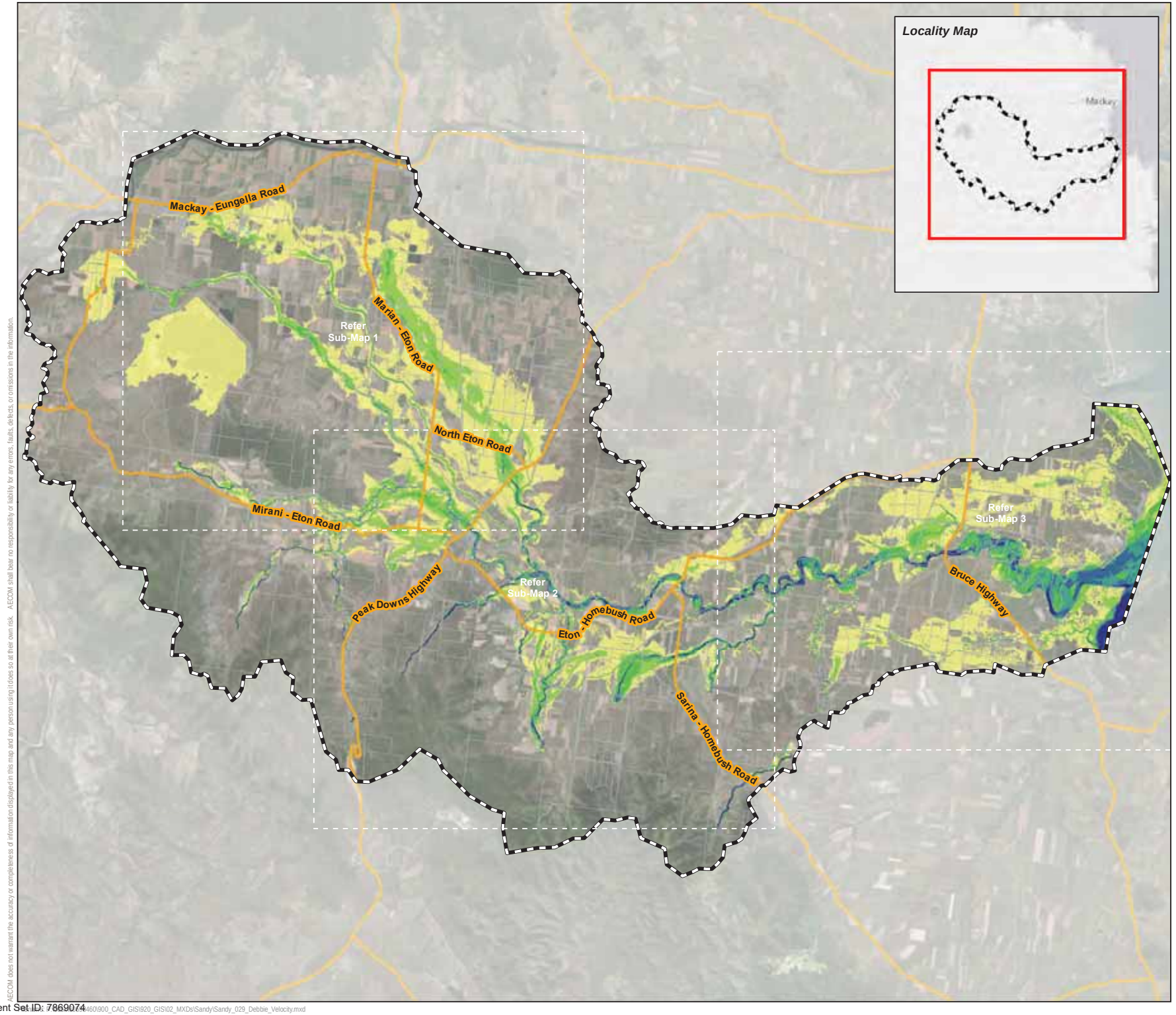

AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
29.0

A3 size

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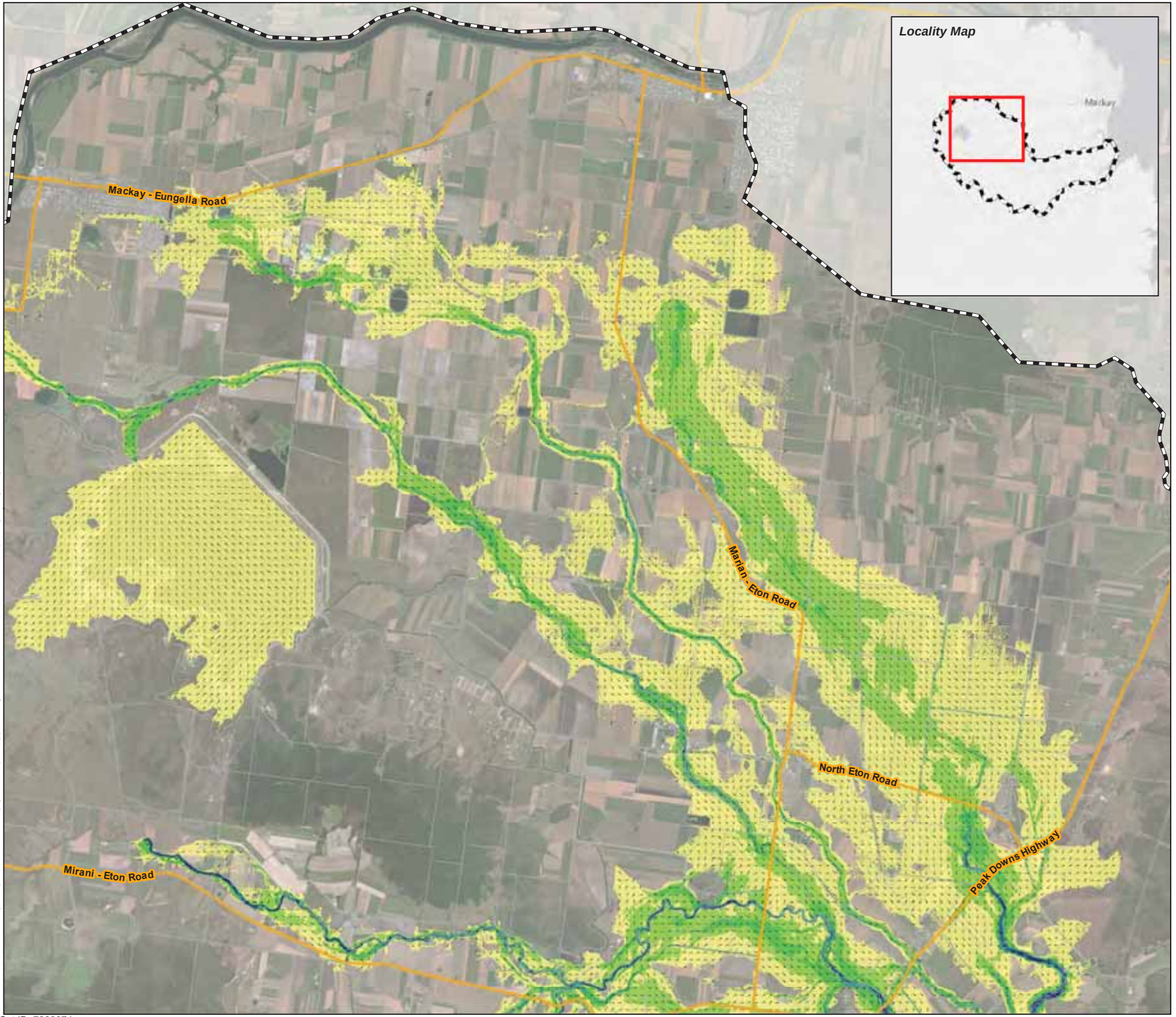

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 29.1

A3 size

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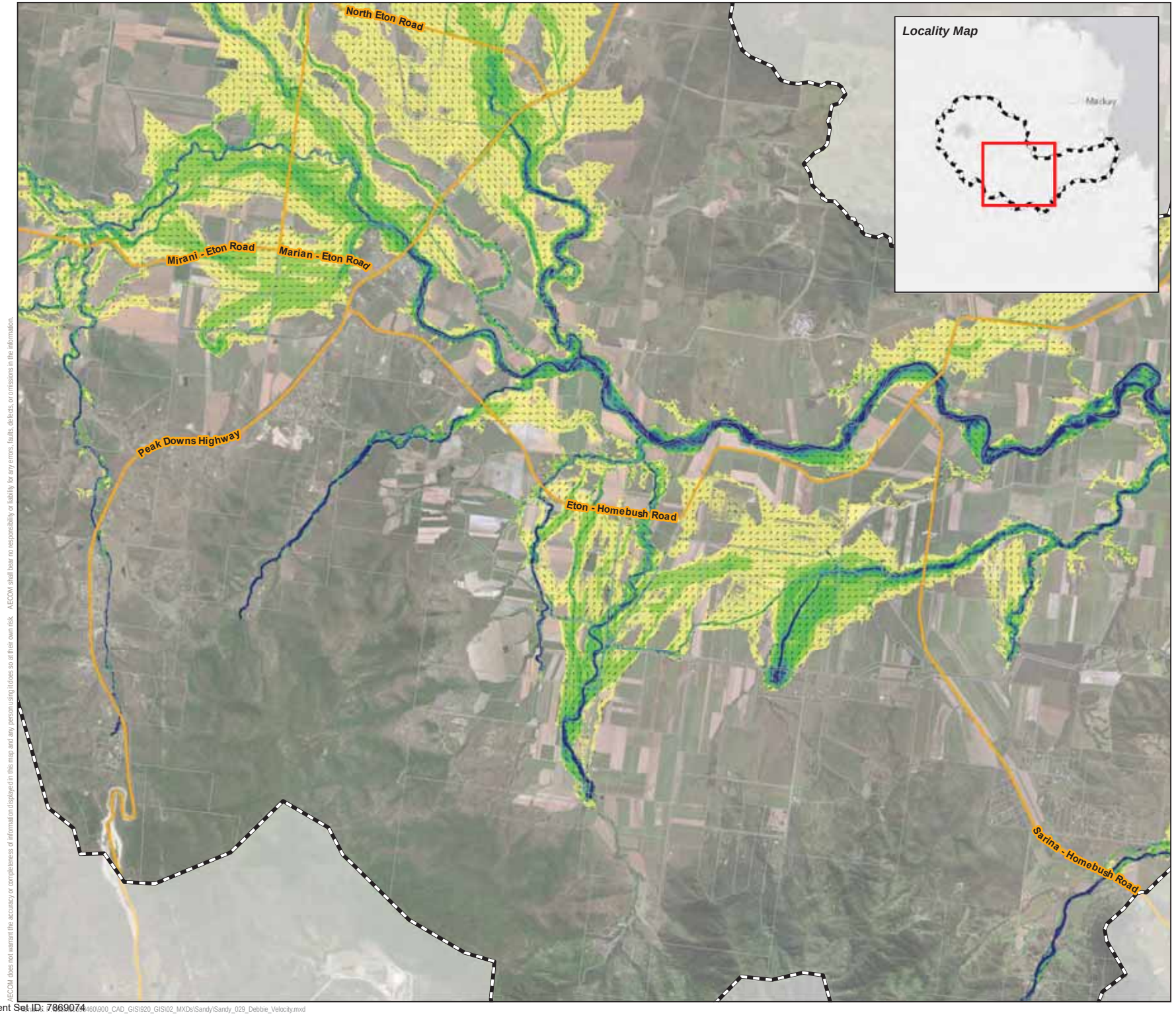

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
29.2

A3 size

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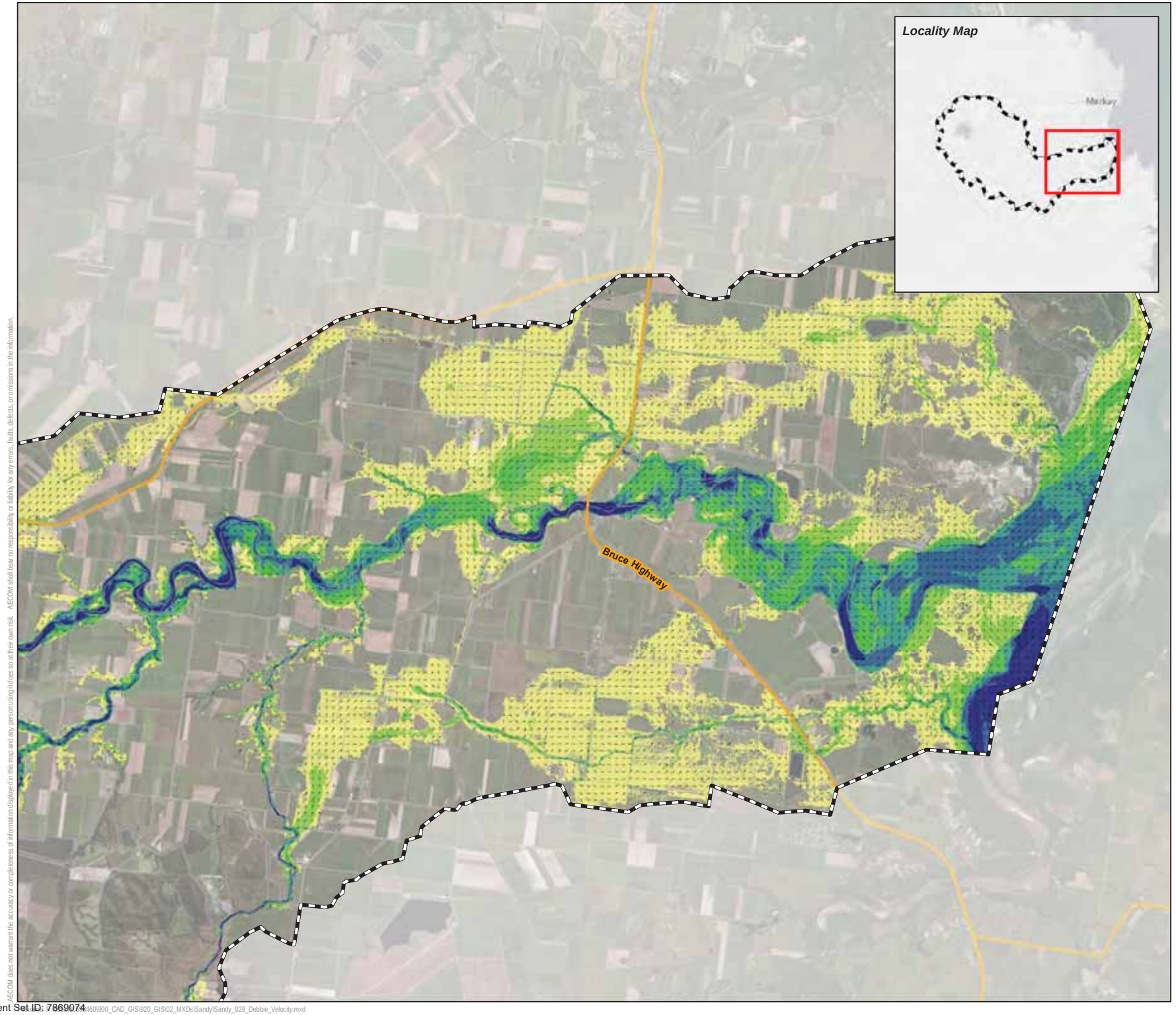

AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment

Peak Depth Averaged Velocity
TC Debbie Rainfall Event (March 2017)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
29.3

A3 size

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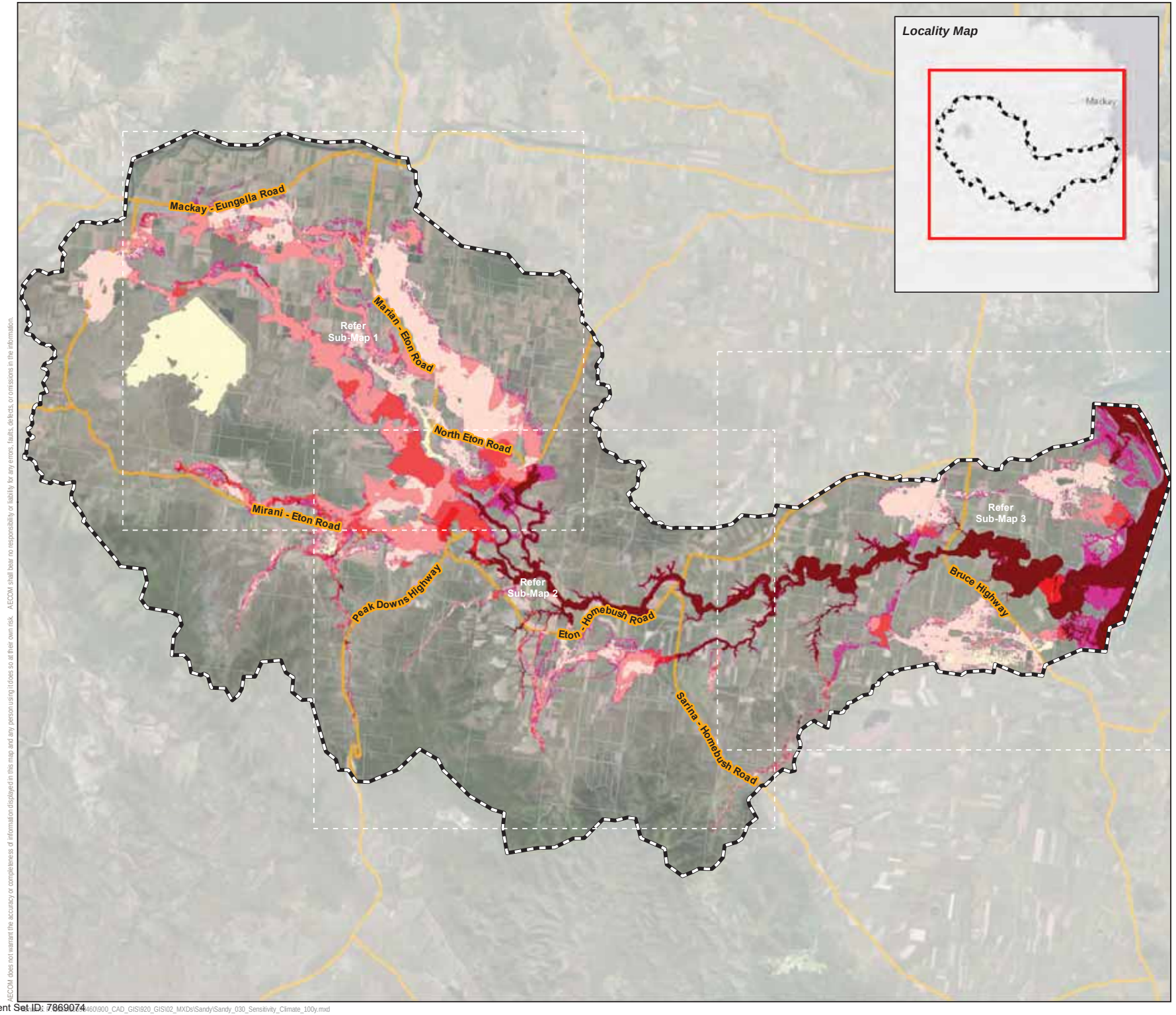
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
30.0

A3 size

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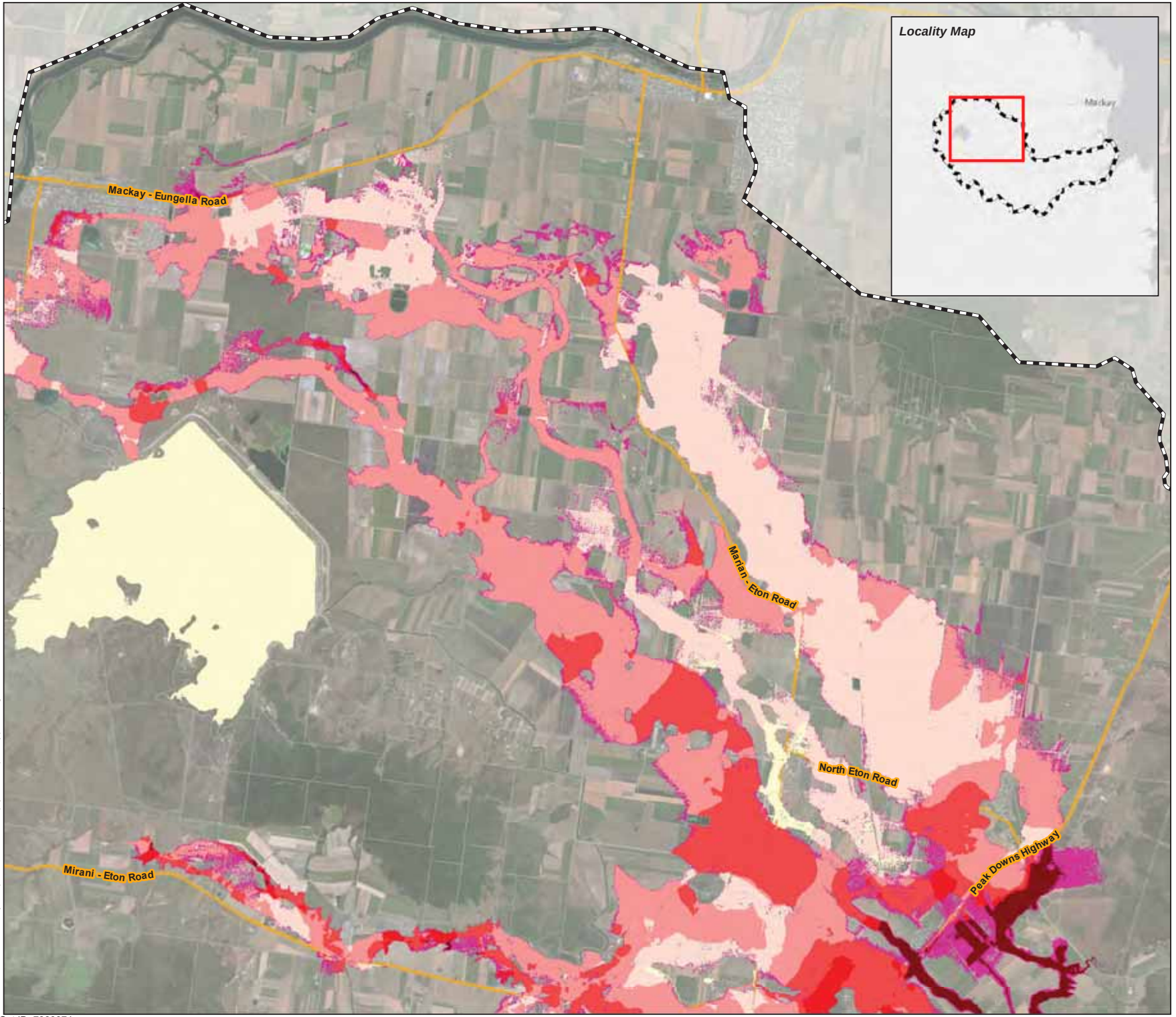
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 30.1

A3 size

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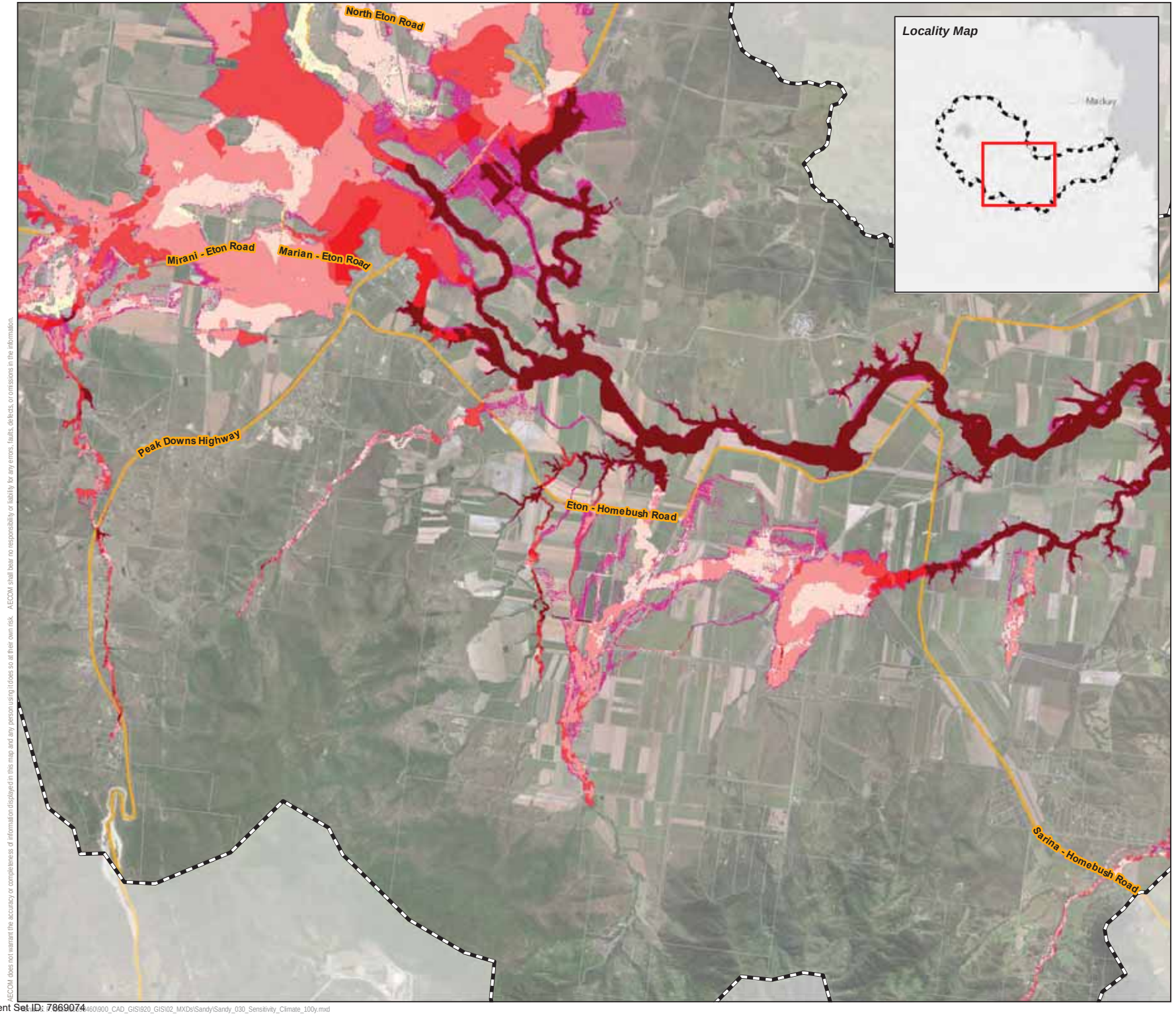

AECOM

www.aecom.com

GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 30.2

A3 size

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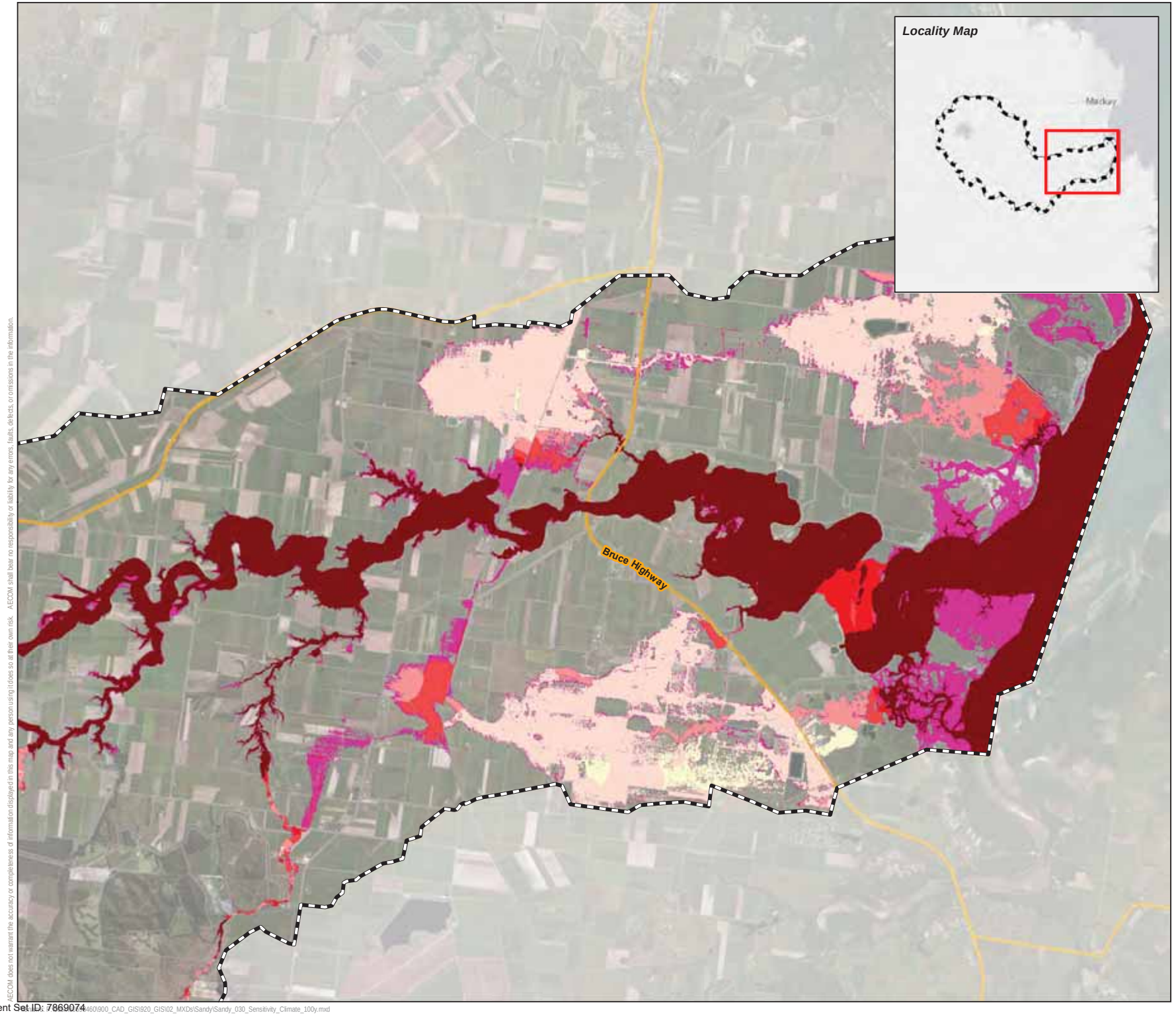

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 30.3

A3 size

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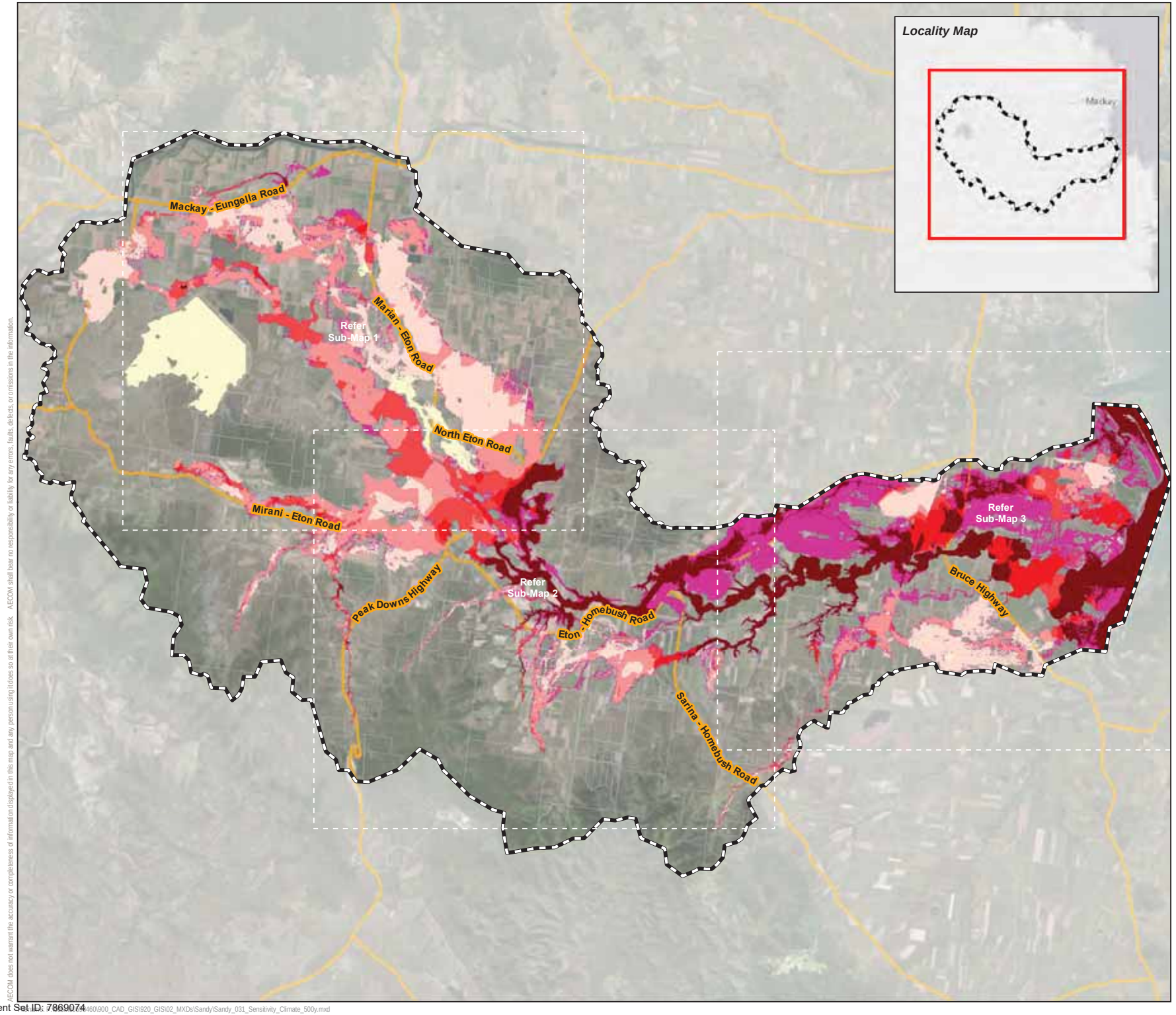
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
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Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (0.2% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 31.0

A3 size

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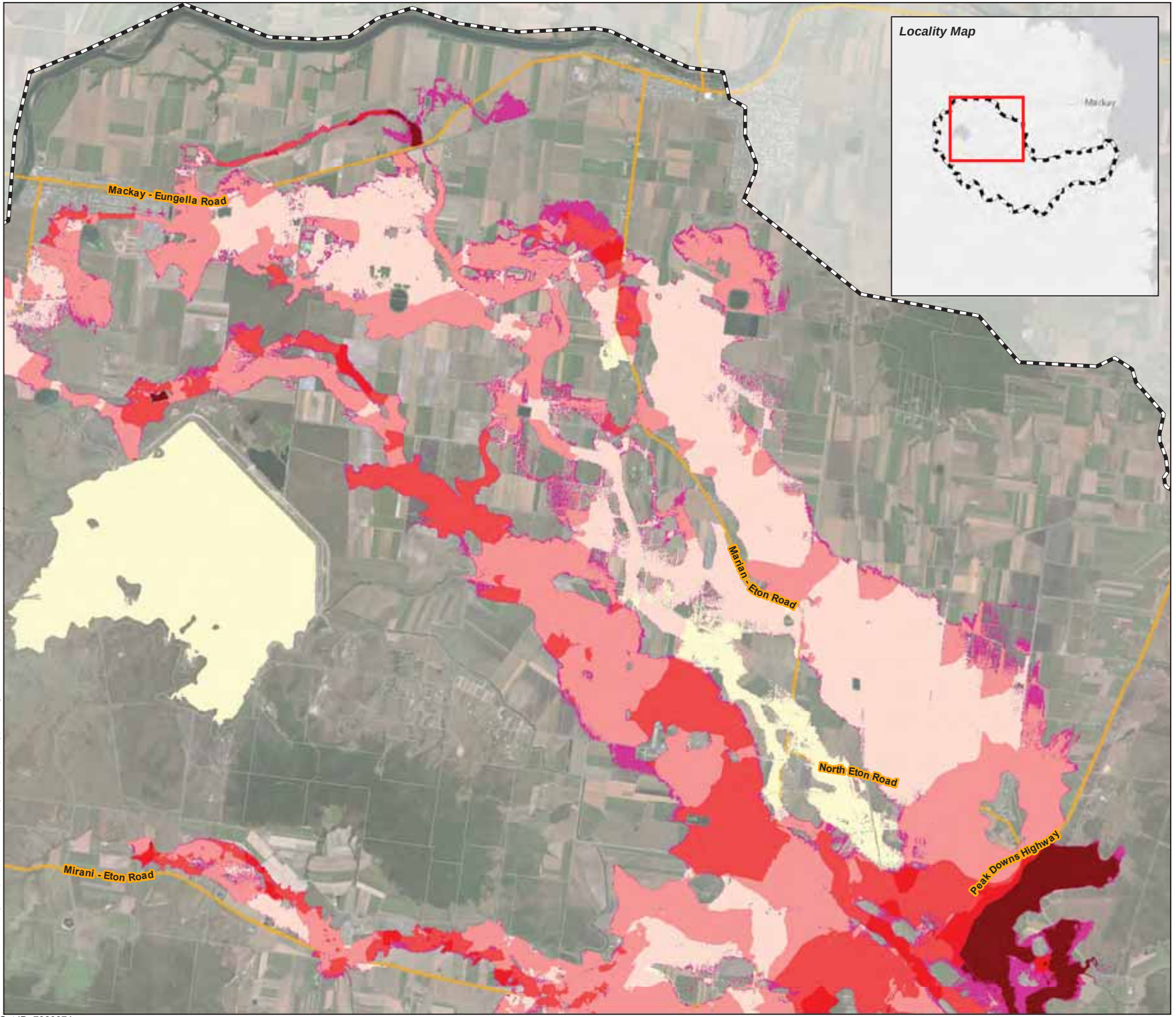

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
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- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
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PROJECT ID	60598460
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Map 31.1

A3 size

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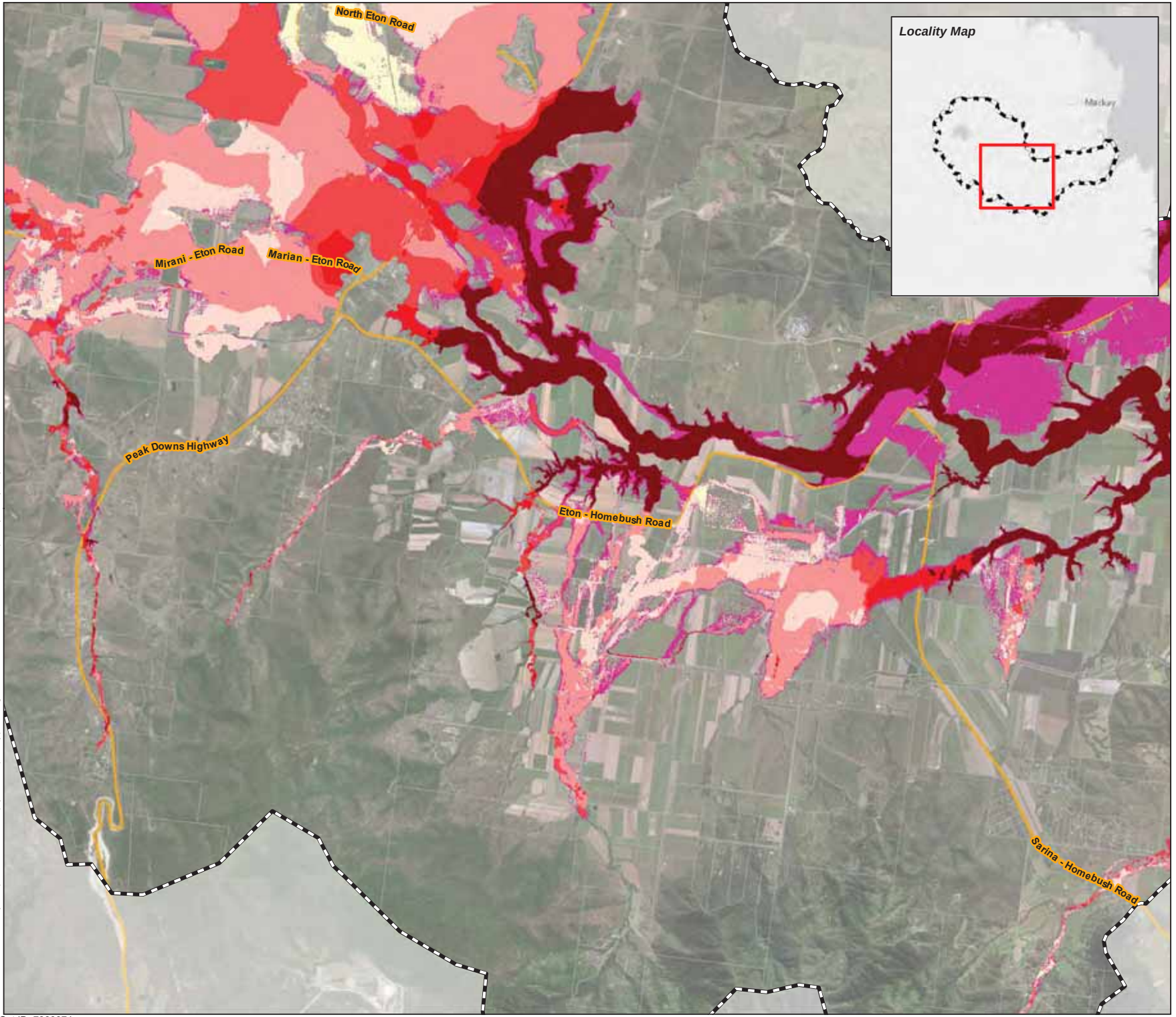

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MACKAY REGIONAL COUNCIL
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PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 31.2

A3 size

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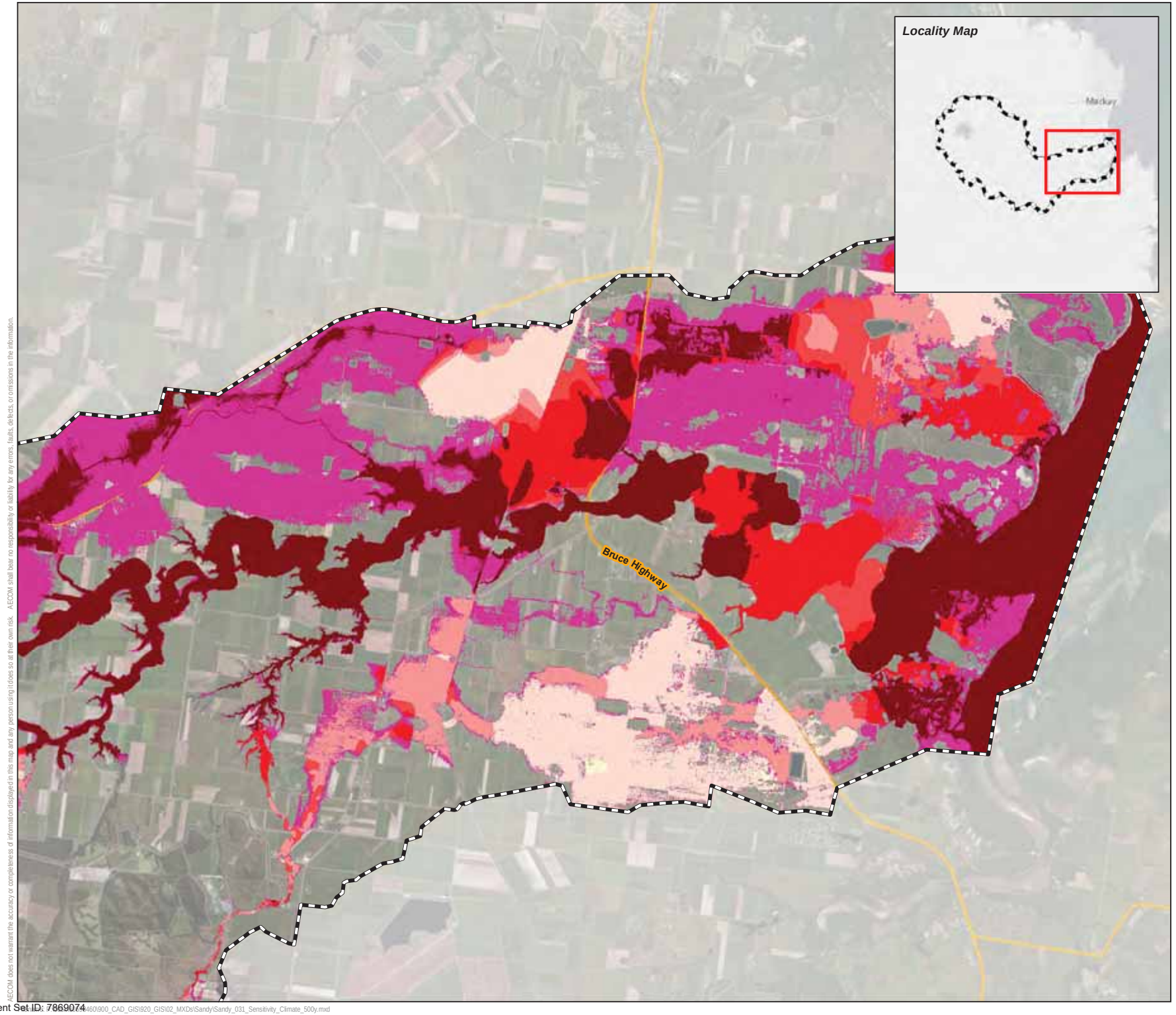

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- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Sensitivity
Difference in PWSE - Climate Change Scenario minus Basecase (0.2% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 31.3

A3 size

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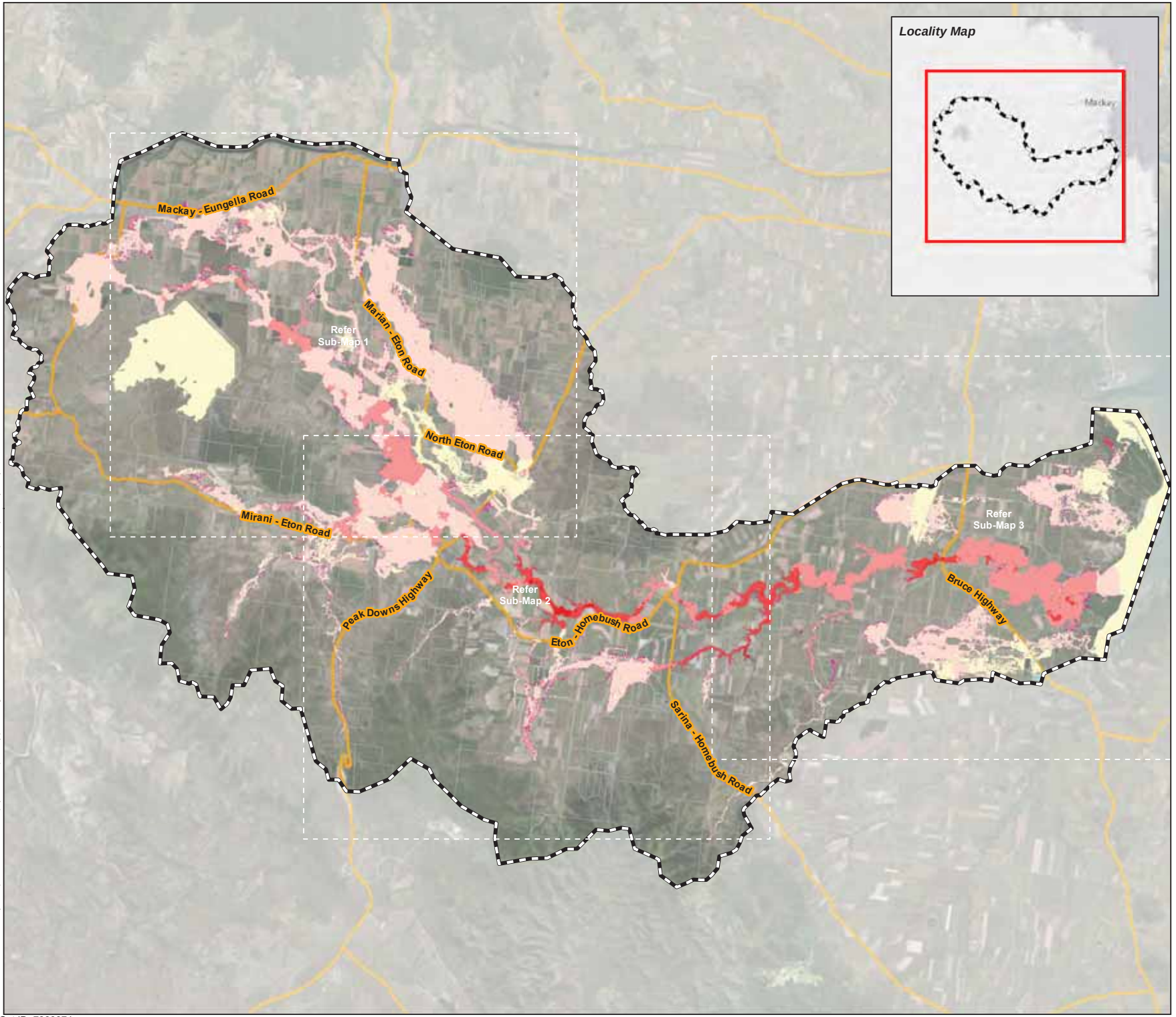

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
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- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Mannings Roughness Increase (20%)
Difference in PWSE - Increased Roughness minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 32.0

A3 size

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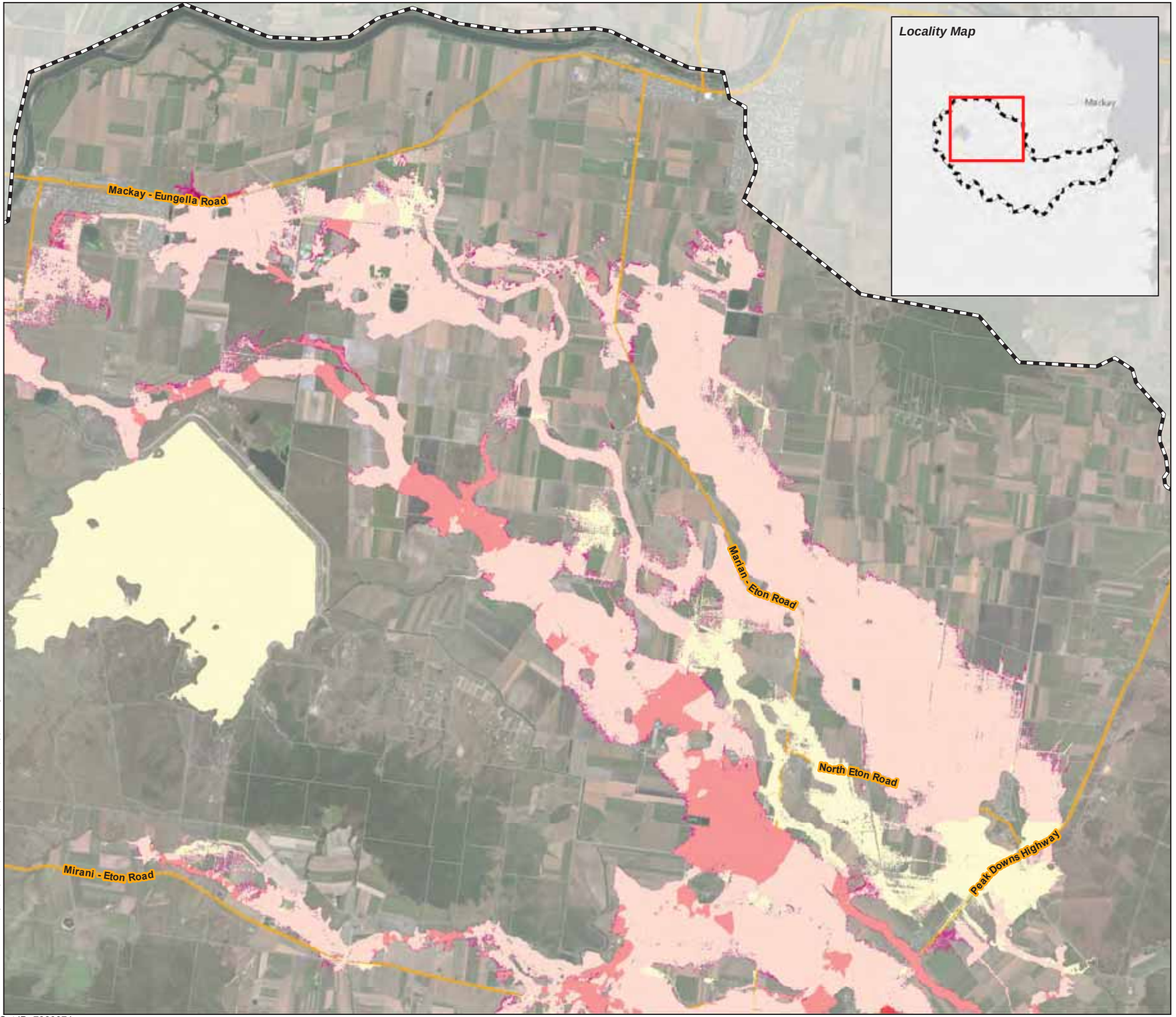

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GDA 1994 MGA Zone 55

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- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Mannings Roughness Increase (20%)
Difference in PWSE - Increased Roughness minus Basecase (1% AEP)

PROJECT ID	60598460
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VERSION:	v01

Map 32.1

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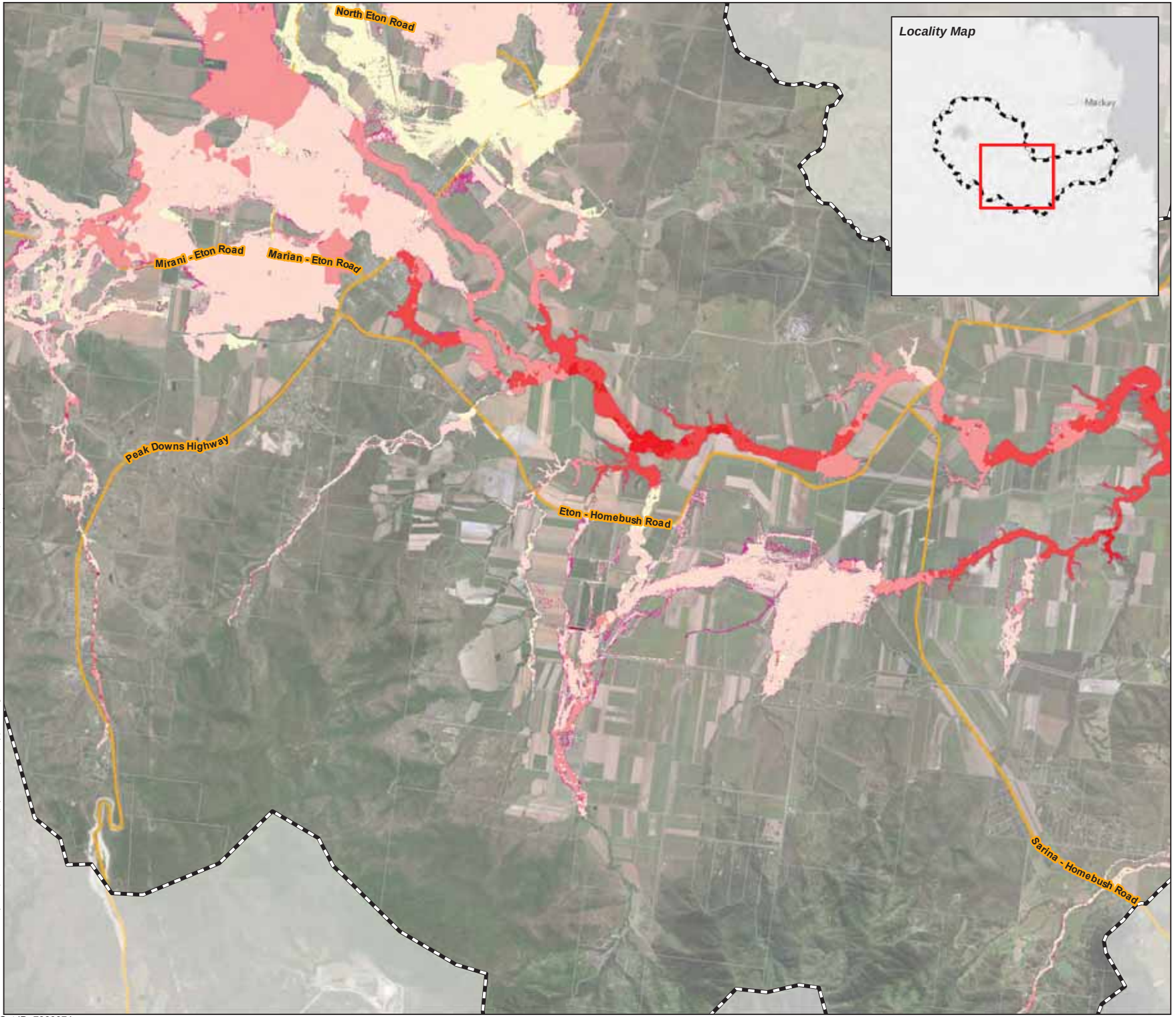

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- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Mannings Roughness Increase (20%)
Difference in PWSE - Increased Roughness minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
32.2

A3 size

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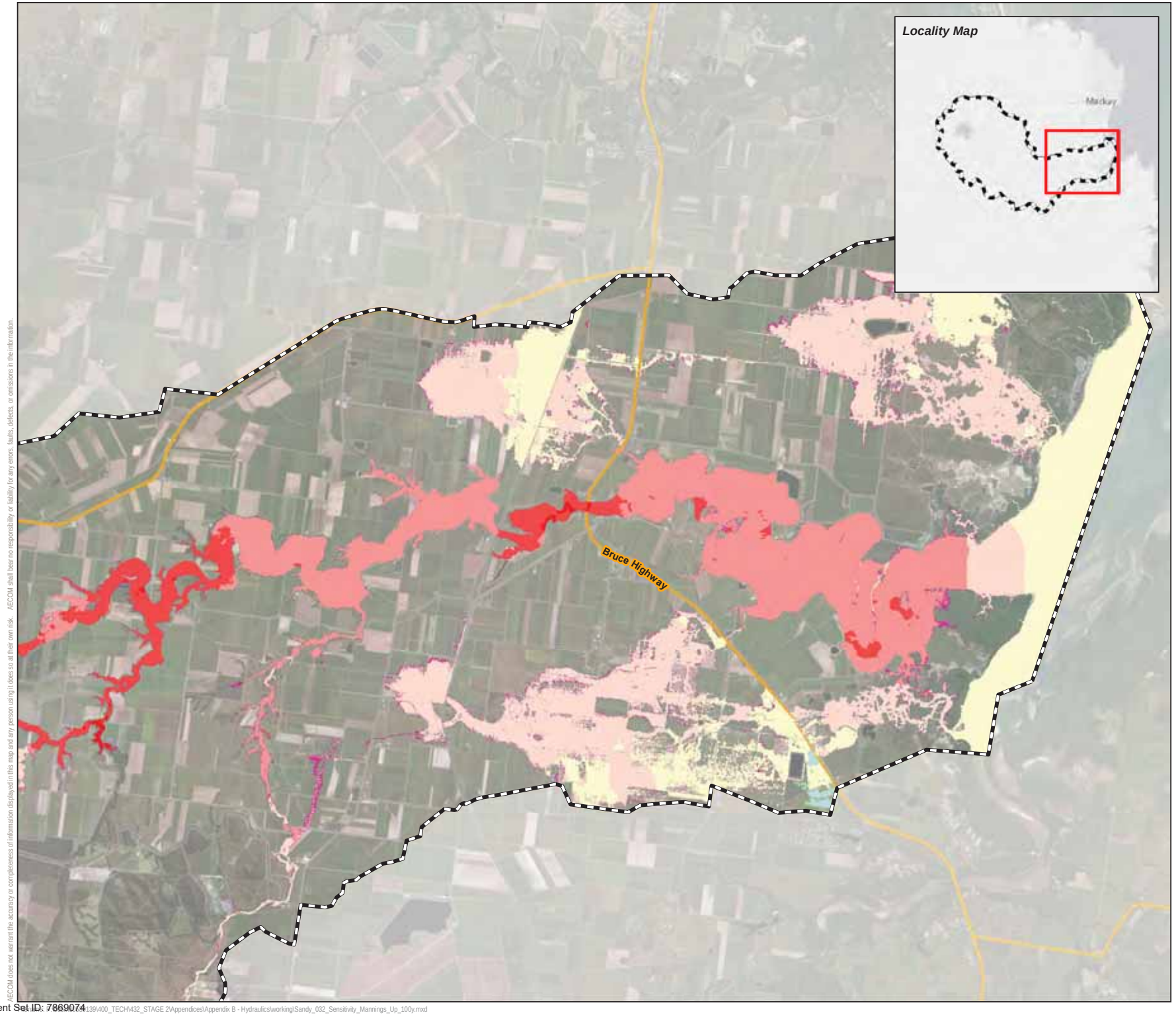

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

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LEGEND

- TUFLOW Model Boundary
- State Controlled Road
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- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Mannings Roughness Increase (20%)
Difference in PWSE - Increased Roughness minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 32.3

A3 size

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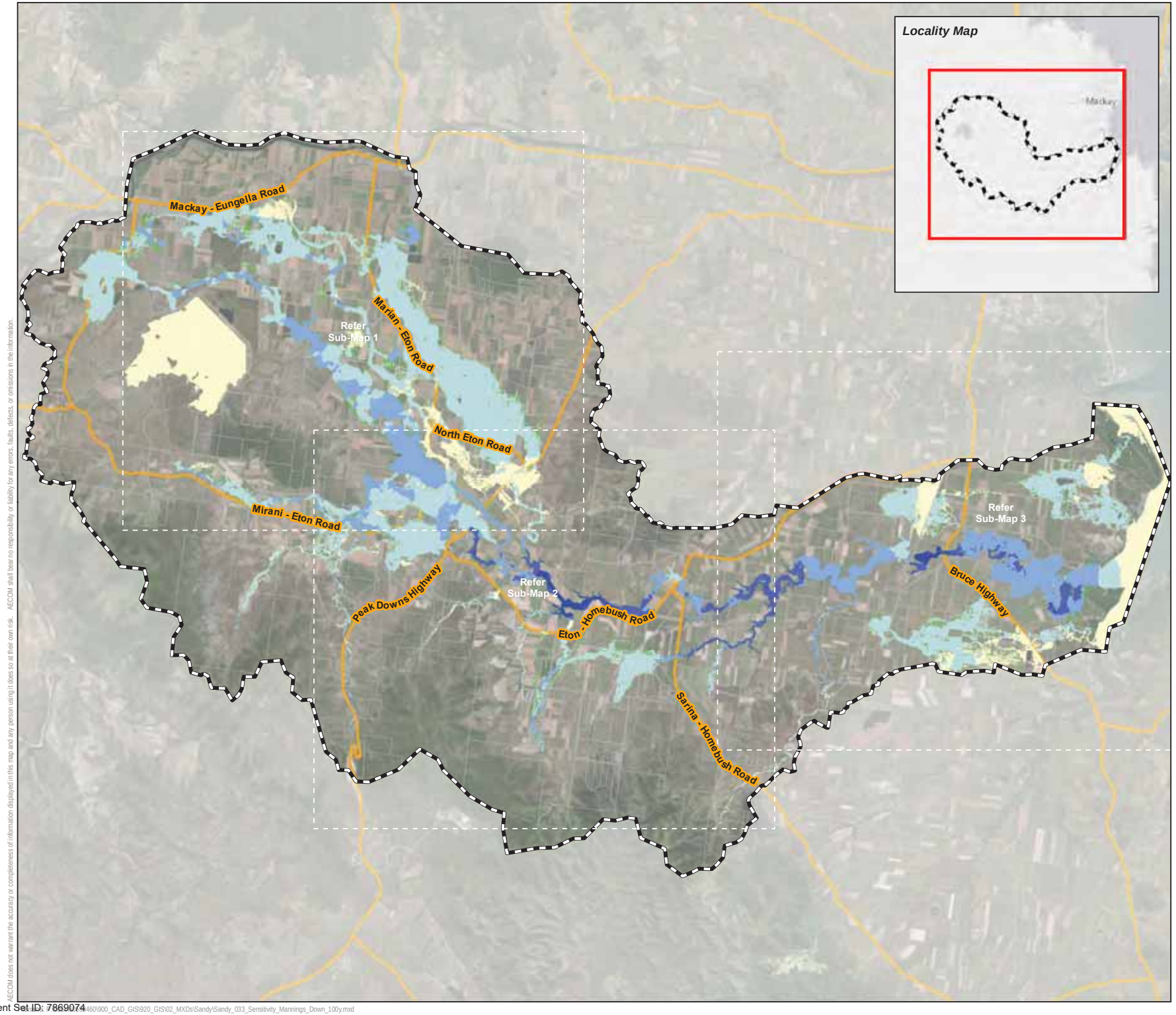

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Mannings Roughness Decrease (-20%)
Difference in PWSE - Decreased Roughness minus Basecase (1% AEP)

PROJECT ID	60598460
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LAST MODIFIED	17/10/2019
VERSION:	v01

Map
33.0

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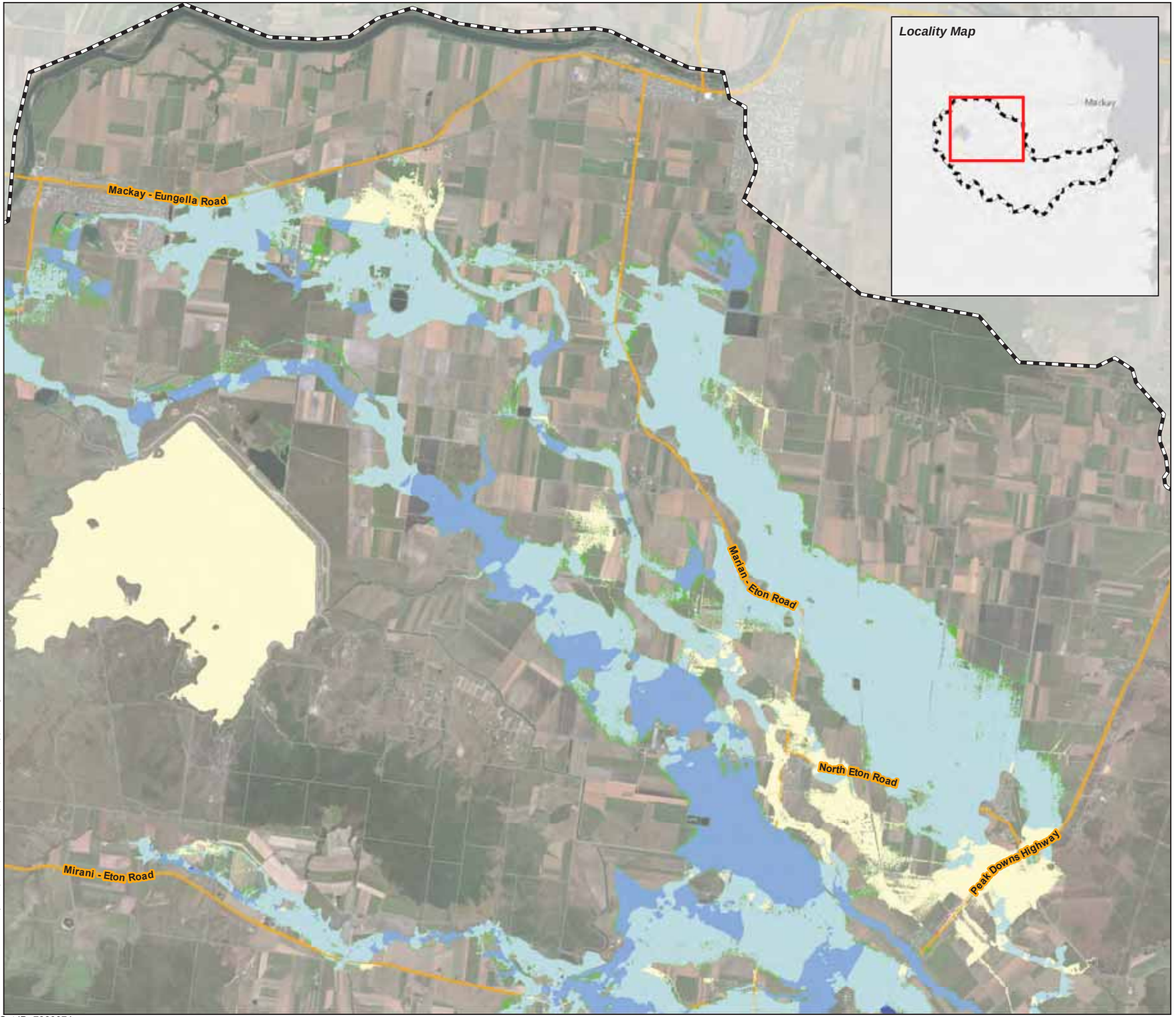

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- 0.02 to 0.075
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- 0.15 to 0.225
- 0.225 to 0.3
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Map 33.1

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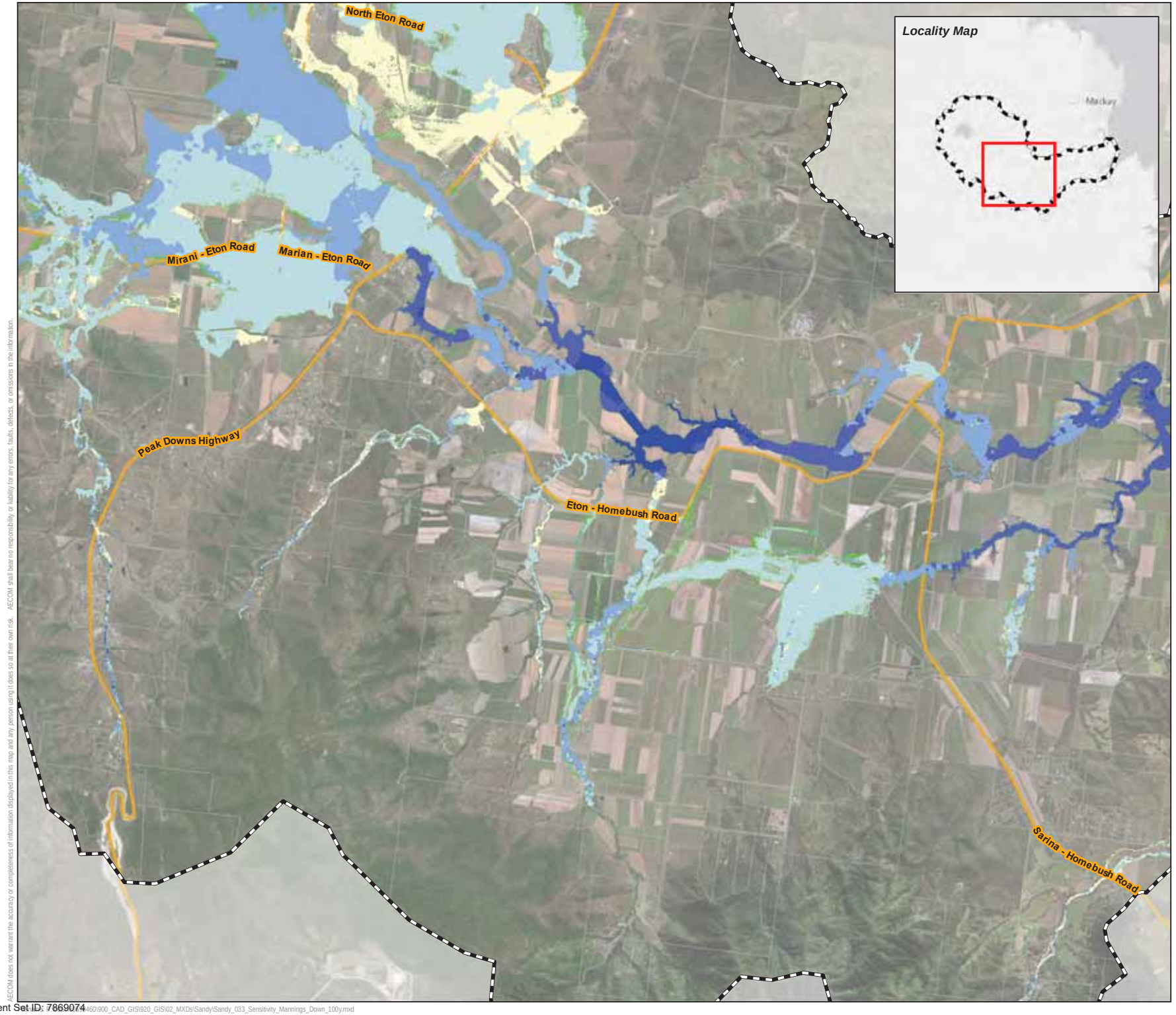

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Map
33.2

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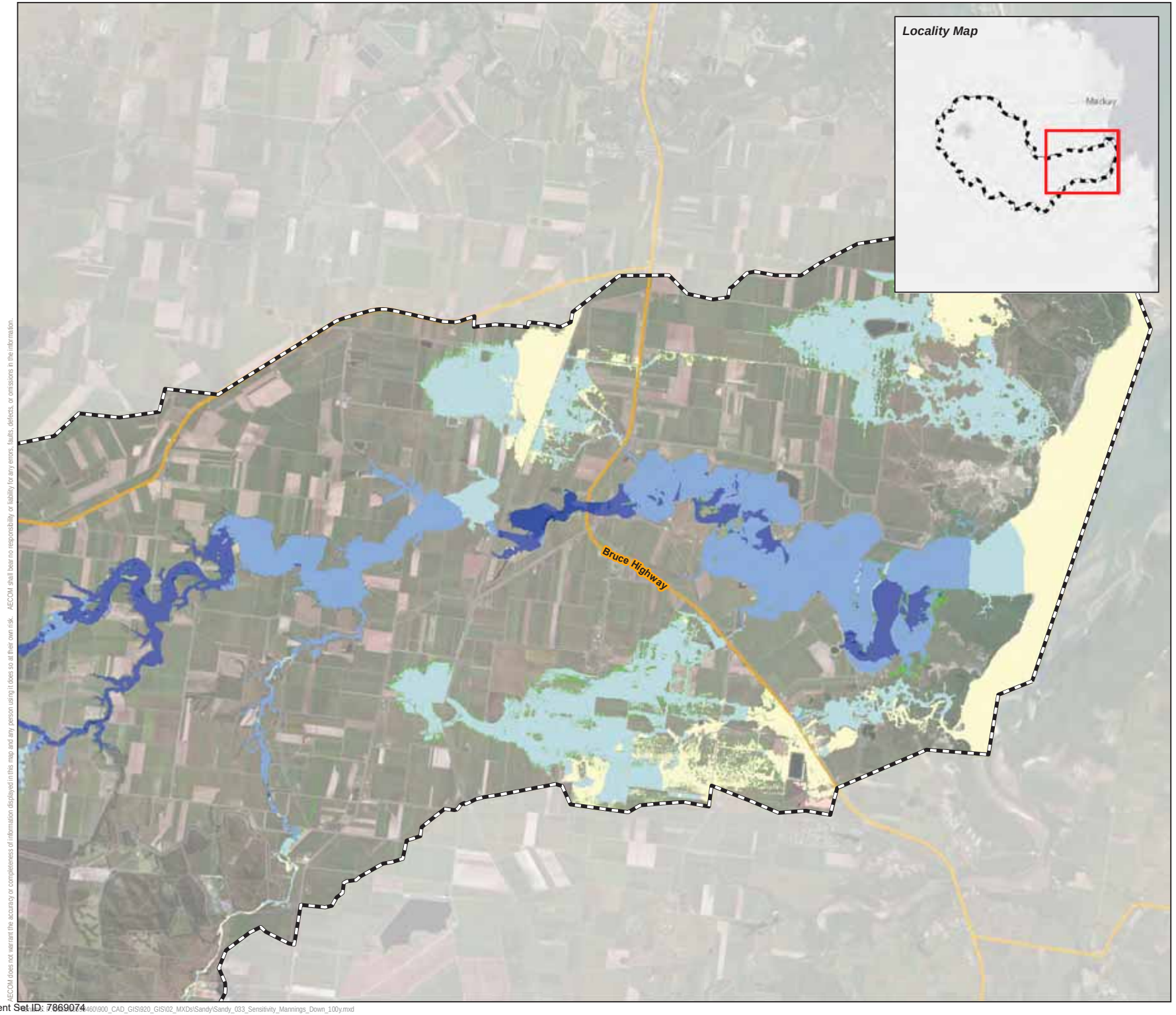

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Map

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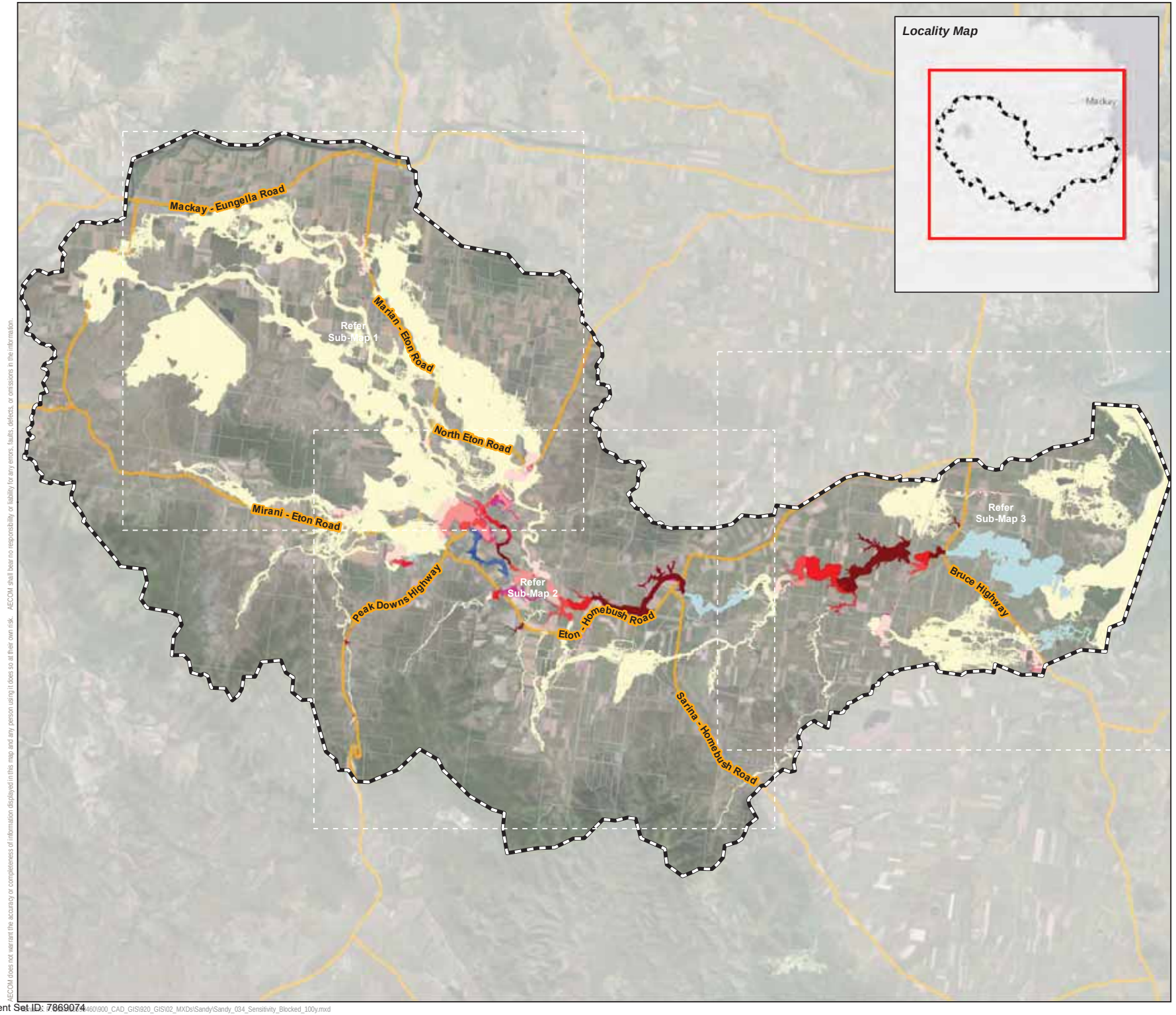

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- -0.15 to -0.075
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Data sources:
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Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Blockage Sensitivity (60%)
Difference in PWSE - Increased Blockage minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 34.0

A3 size

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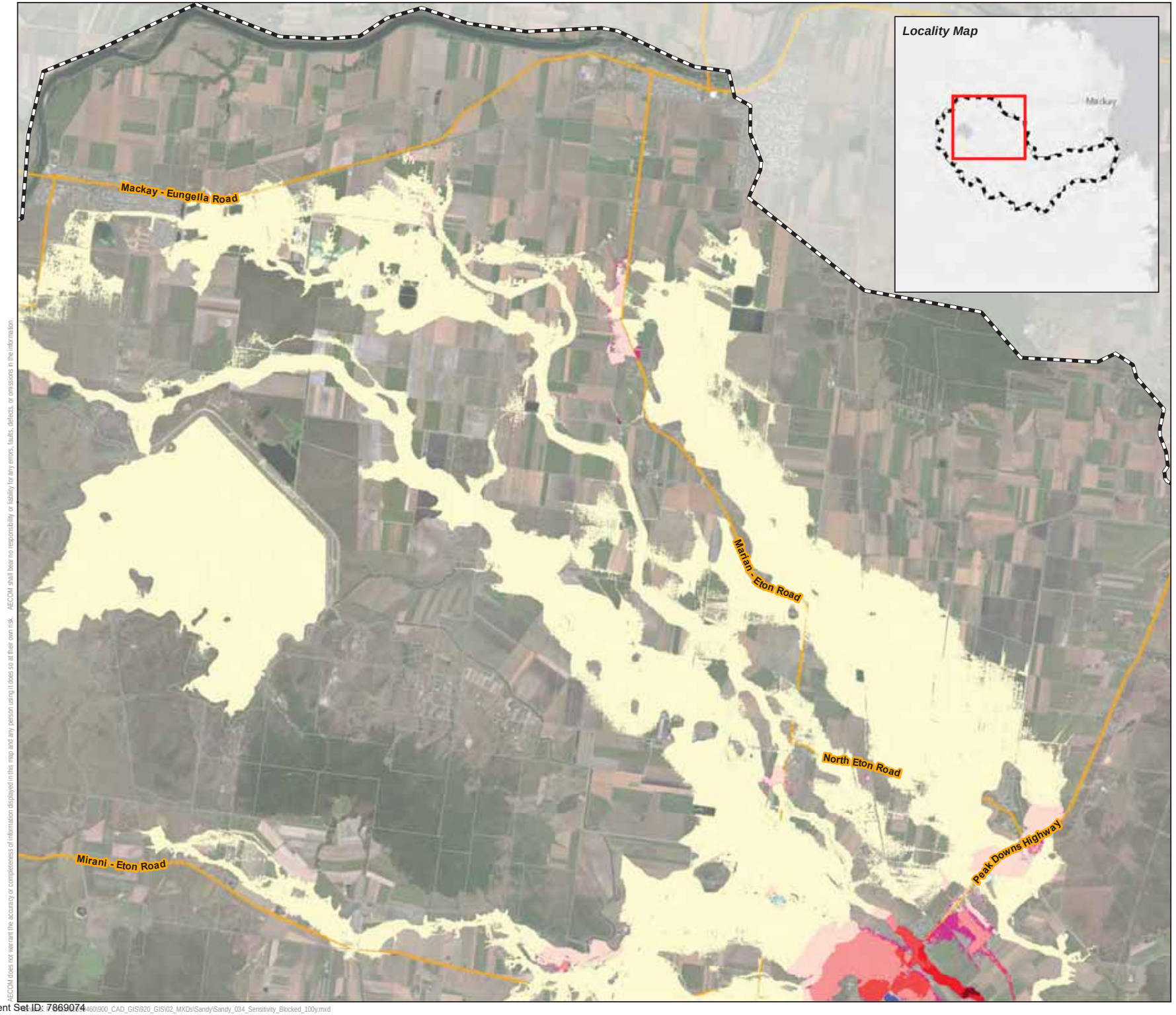

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Blockage Sensitivity (60%)
Difference in PWSE - Increased Blockage minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 34.1

A3 size

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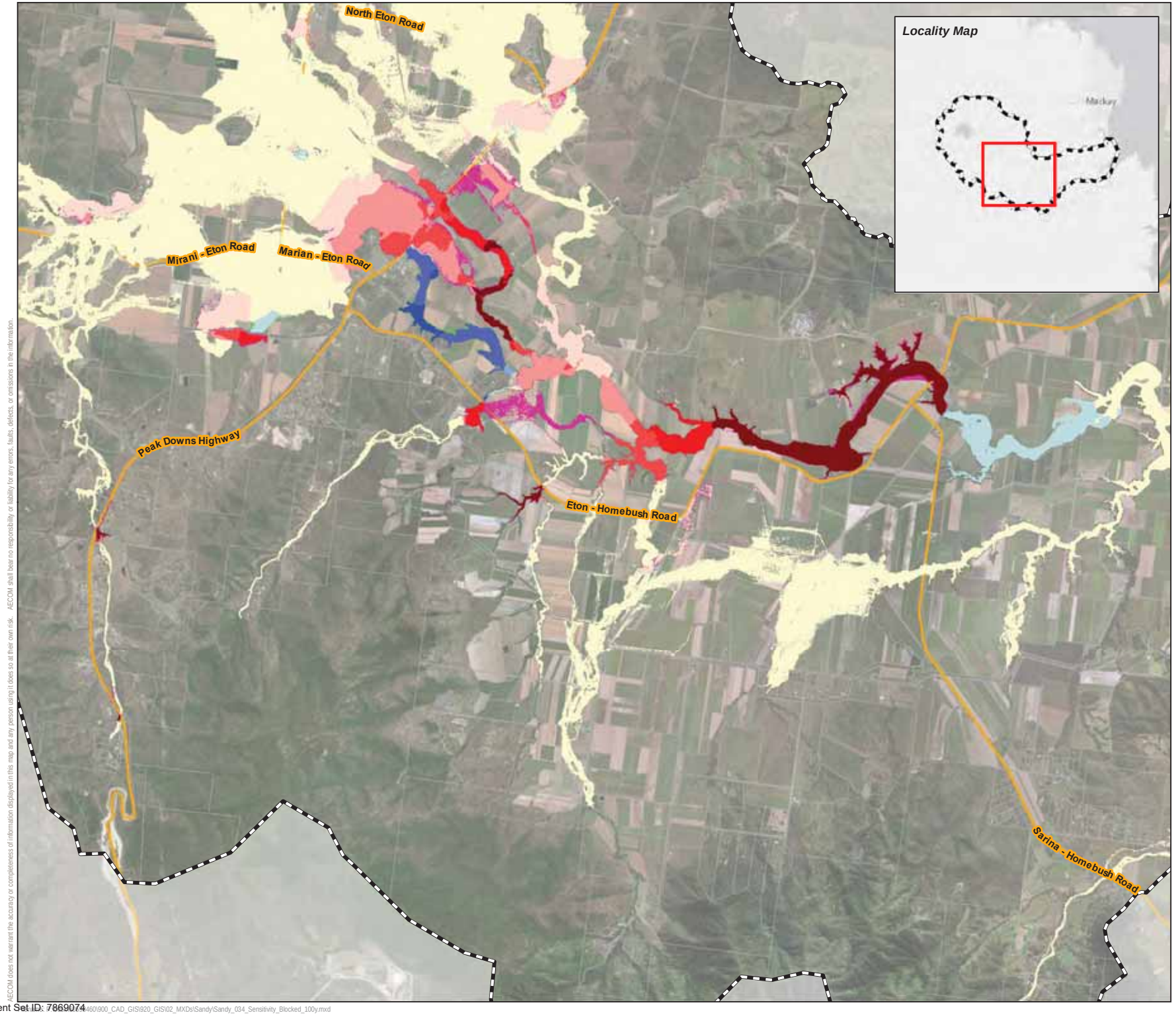

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Blockage Sensitivity (60%)
Difference in PWSE - Increased Blockage minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map
34.2

A3 size

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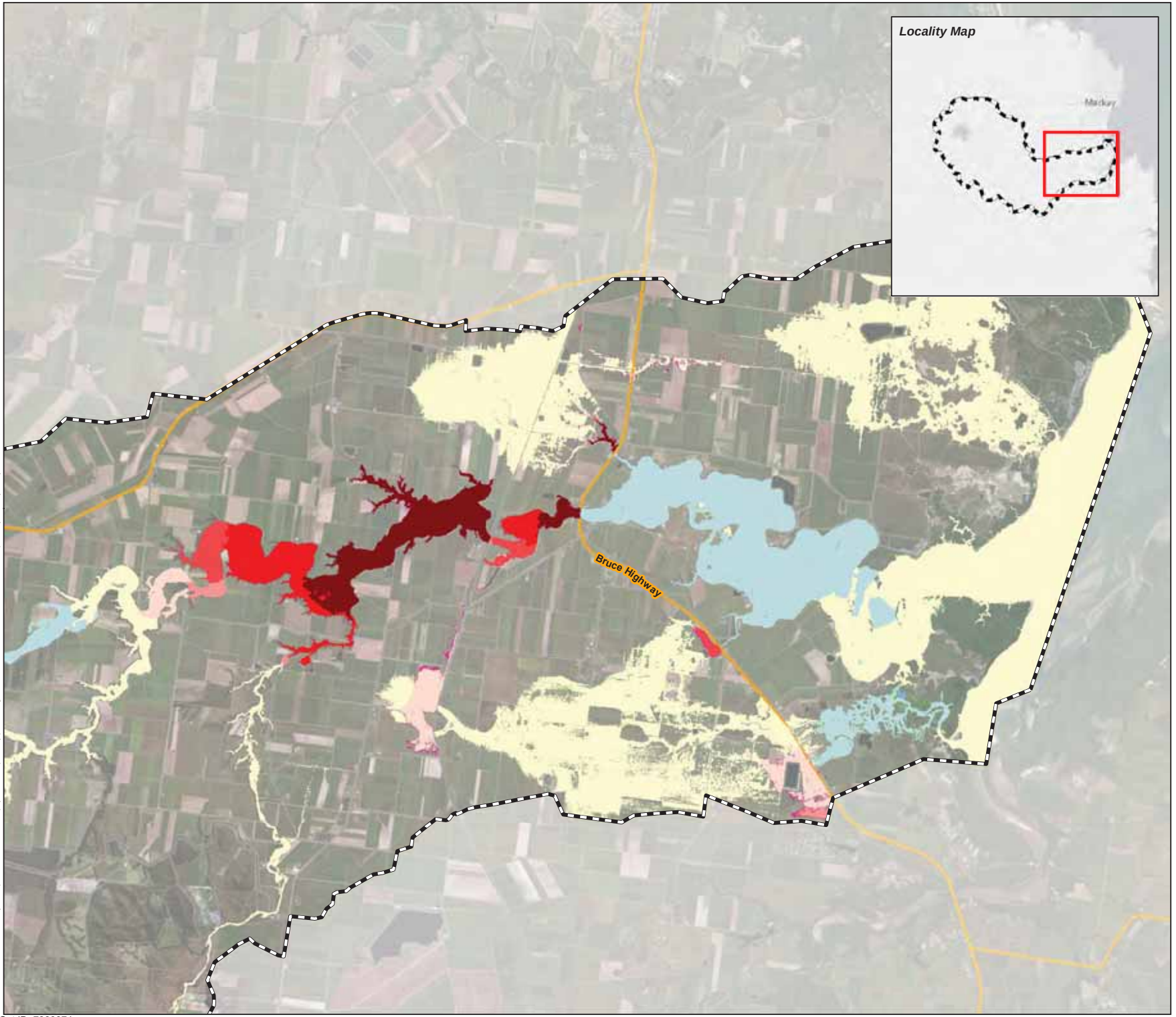

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Difference in Peak Water Surface (m)

- < -0.3
- -0.3 to -0.225
- -0.225 to -0.15
- -0.15 to -0.075
- -0.075 to -0.02
- -0.02 to 0.02
- 0.02 to 0.075
- 0.075 to 0.15
- 0.15 to 0.225
- 0.225 to 0.3
- > 0.3
- Was Dry Now Wet
- Was Wet Now Dry

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Blockage Sensitivity (60%)
Difference in PWSE - Increased Blockage minus Basecase (1% AEP)

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	17/10/2019
VERSION:	v01

Map 34.3

A3 size

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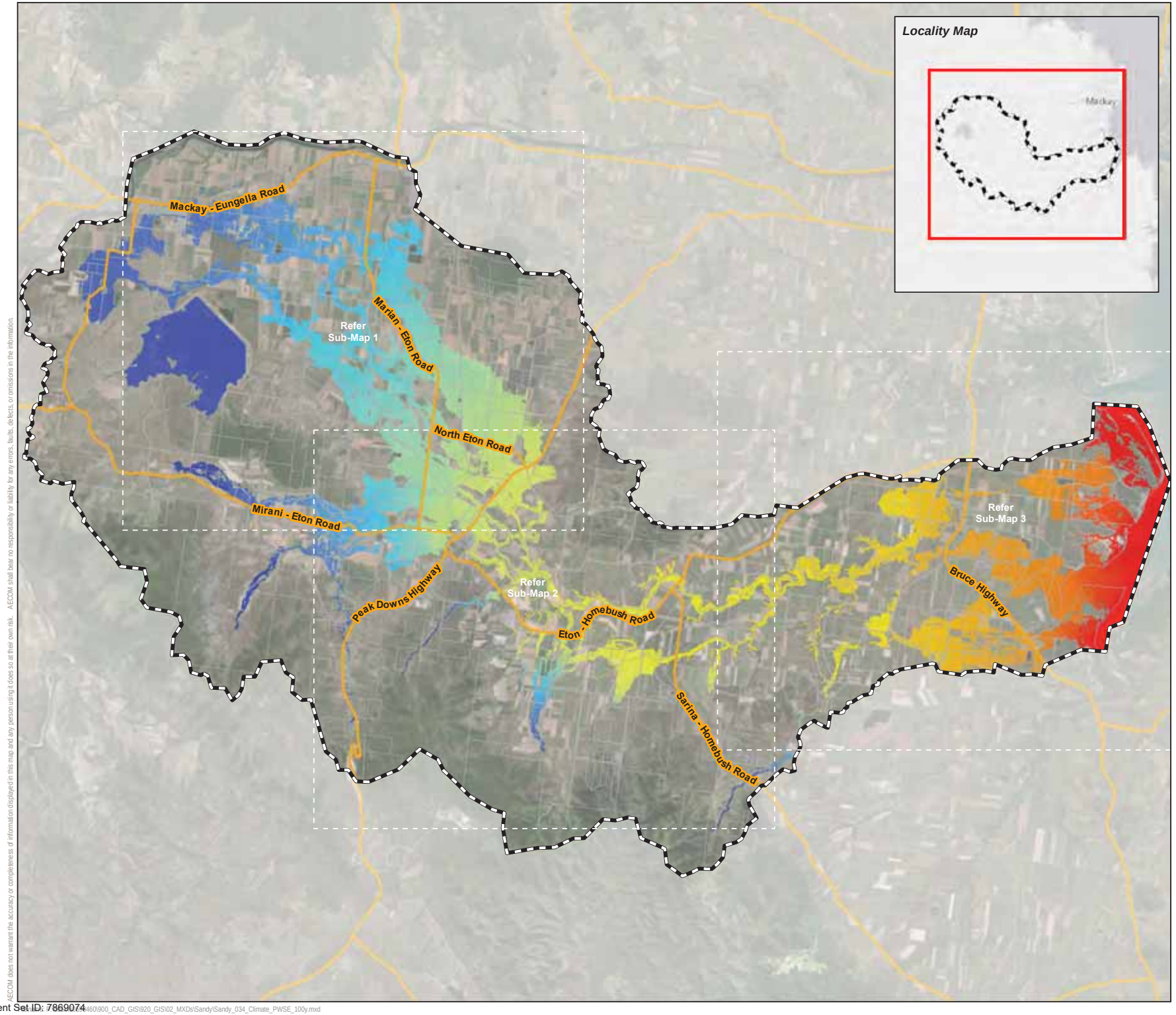

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.179

Low : 3.25

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 35.0

A3 size

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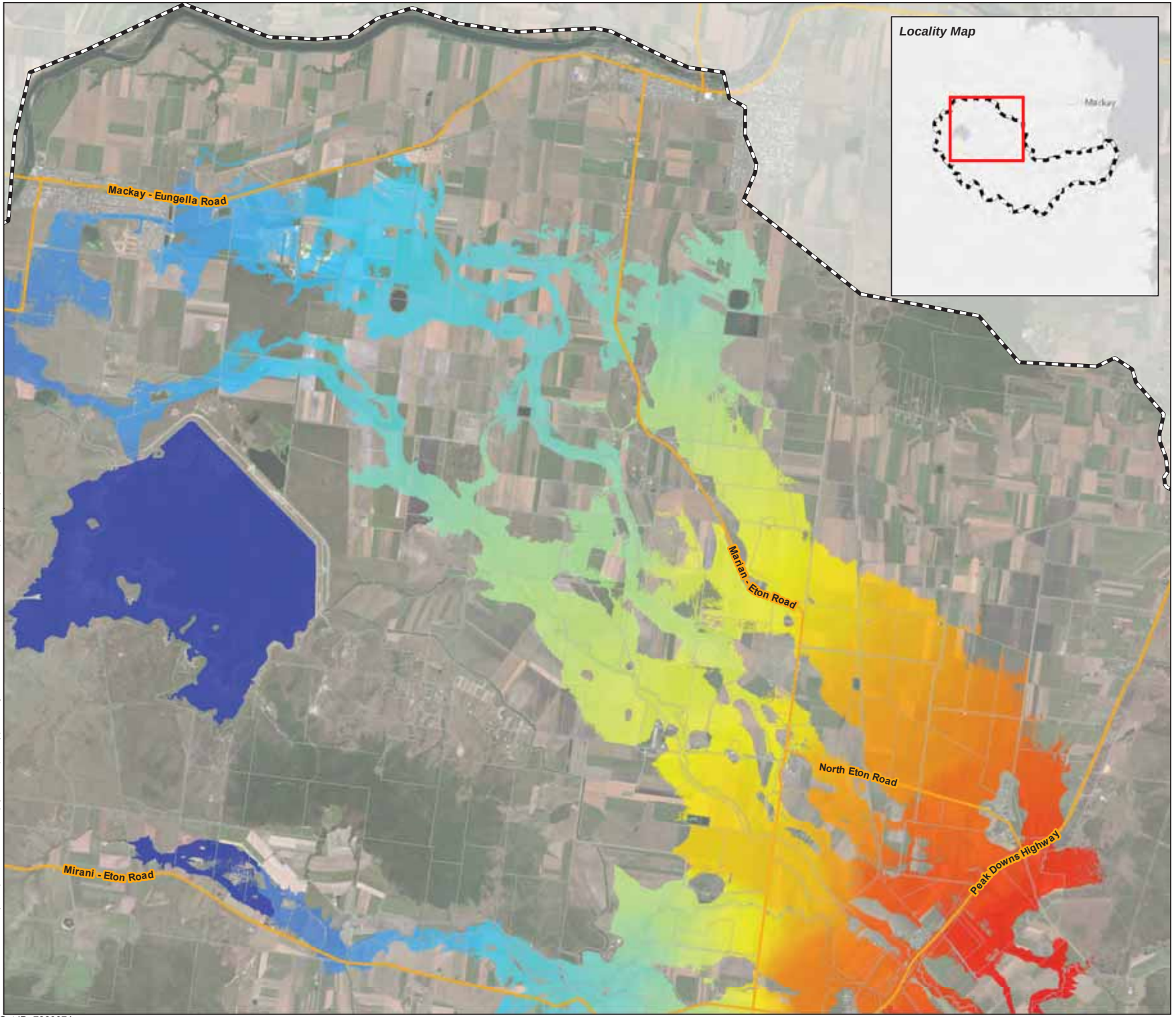

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 67.8148

Low : 26.9762

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 35.1

A3 size

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Document Set ID: 7869074
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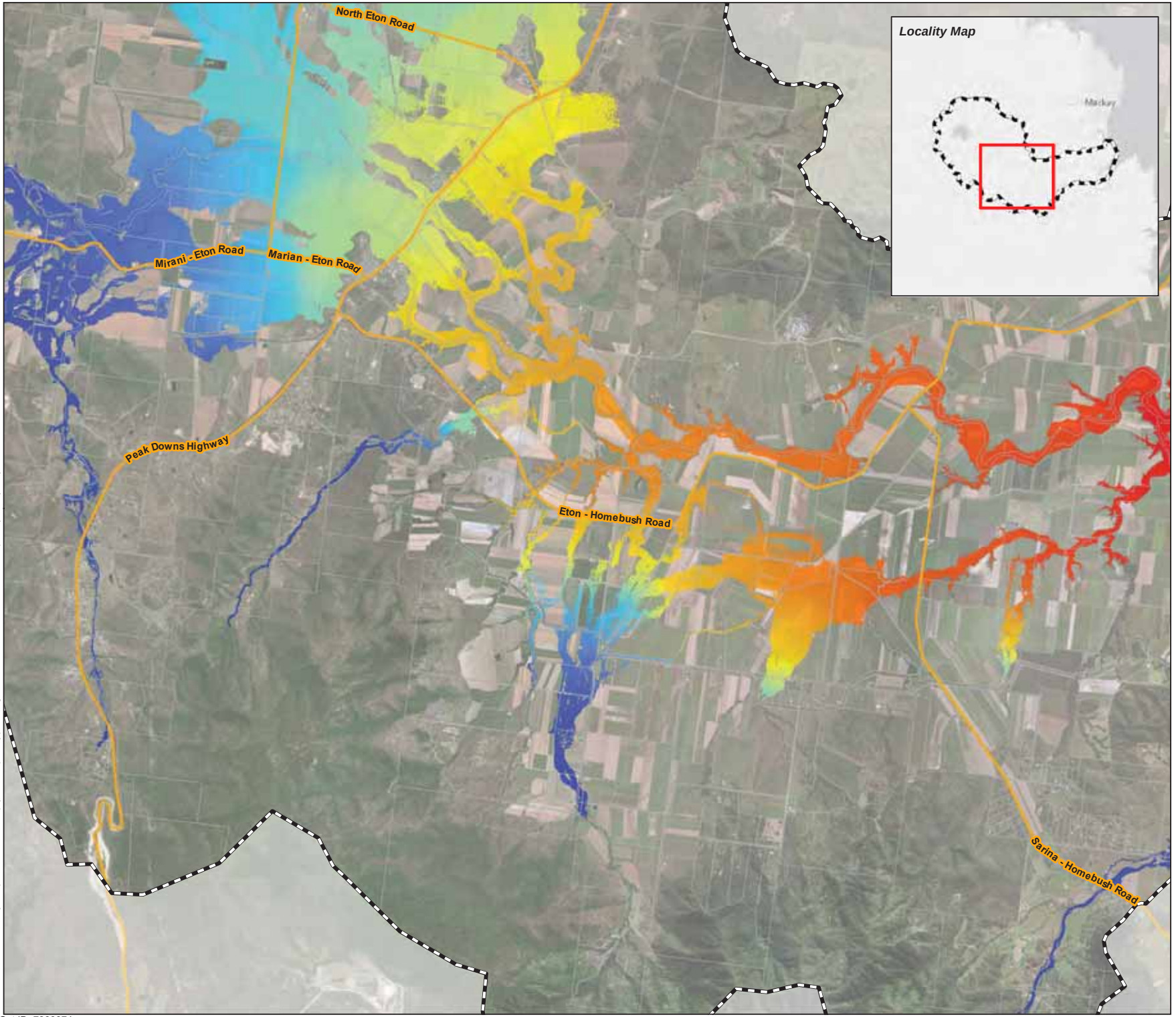

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 115.772

Low : 15.2682

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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Map
35.2

A3 size

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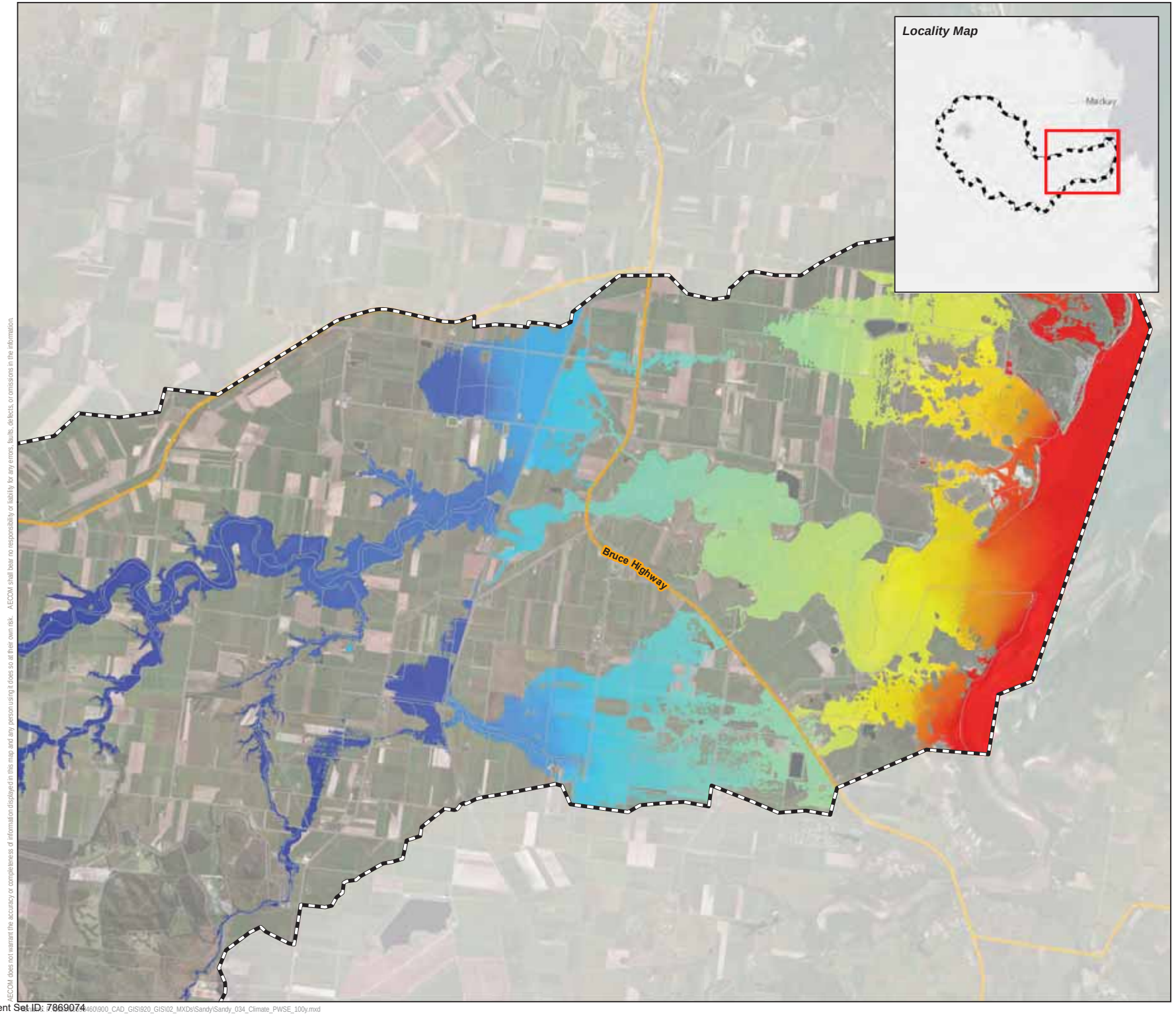

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 41.4098

Low : 3.25

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Data sources:
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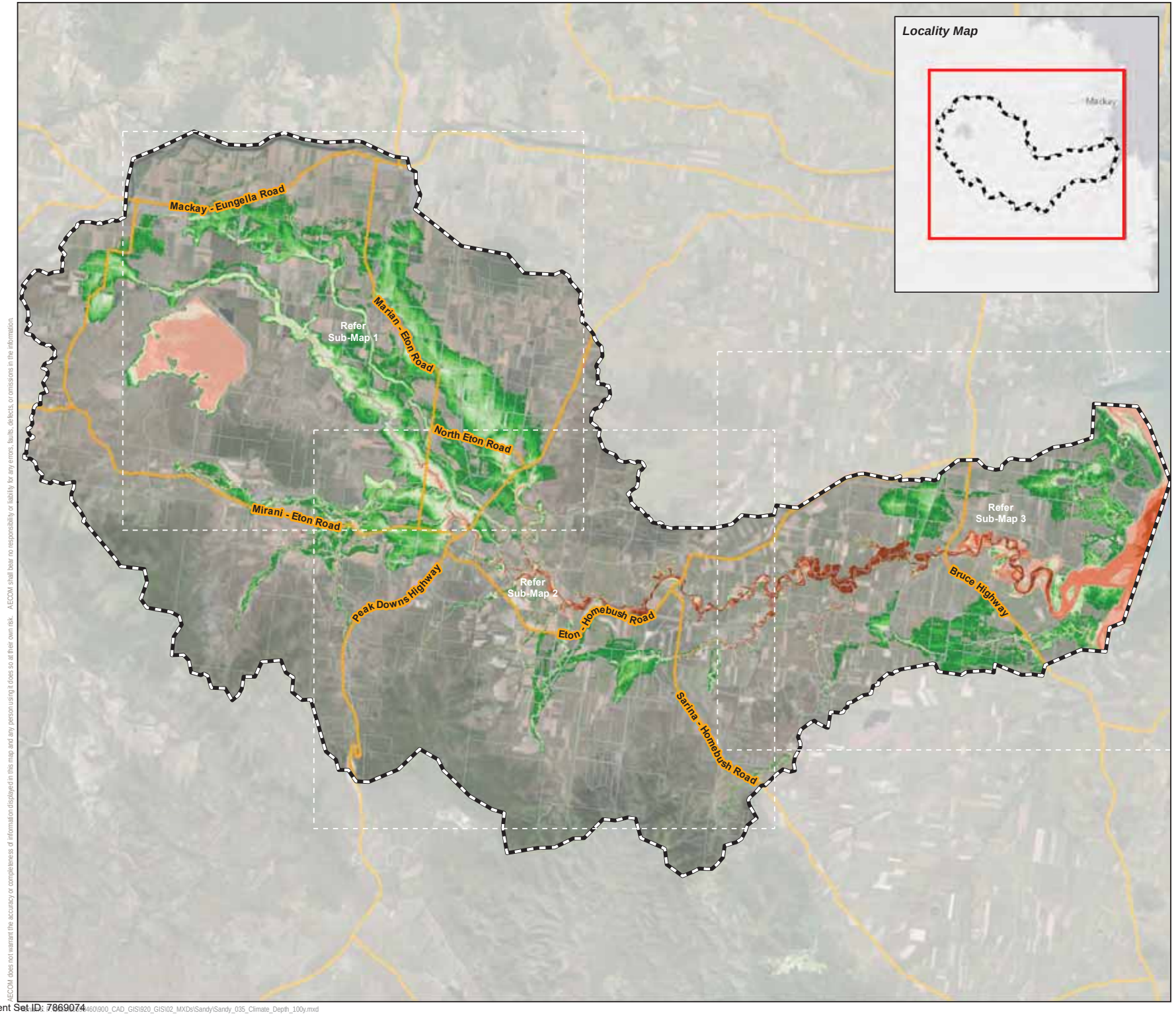
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
35.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
36.0

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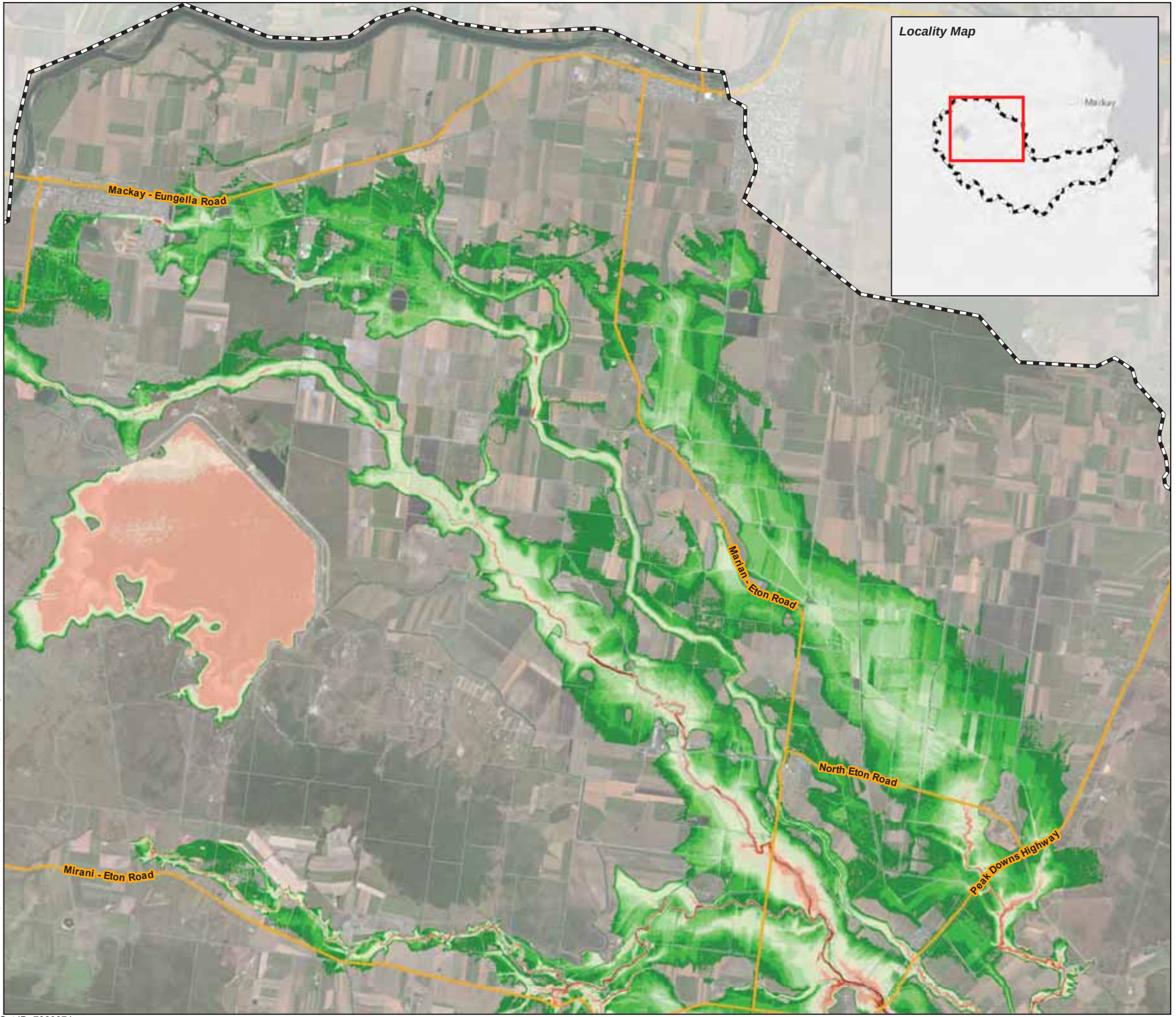

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
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Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
36.1

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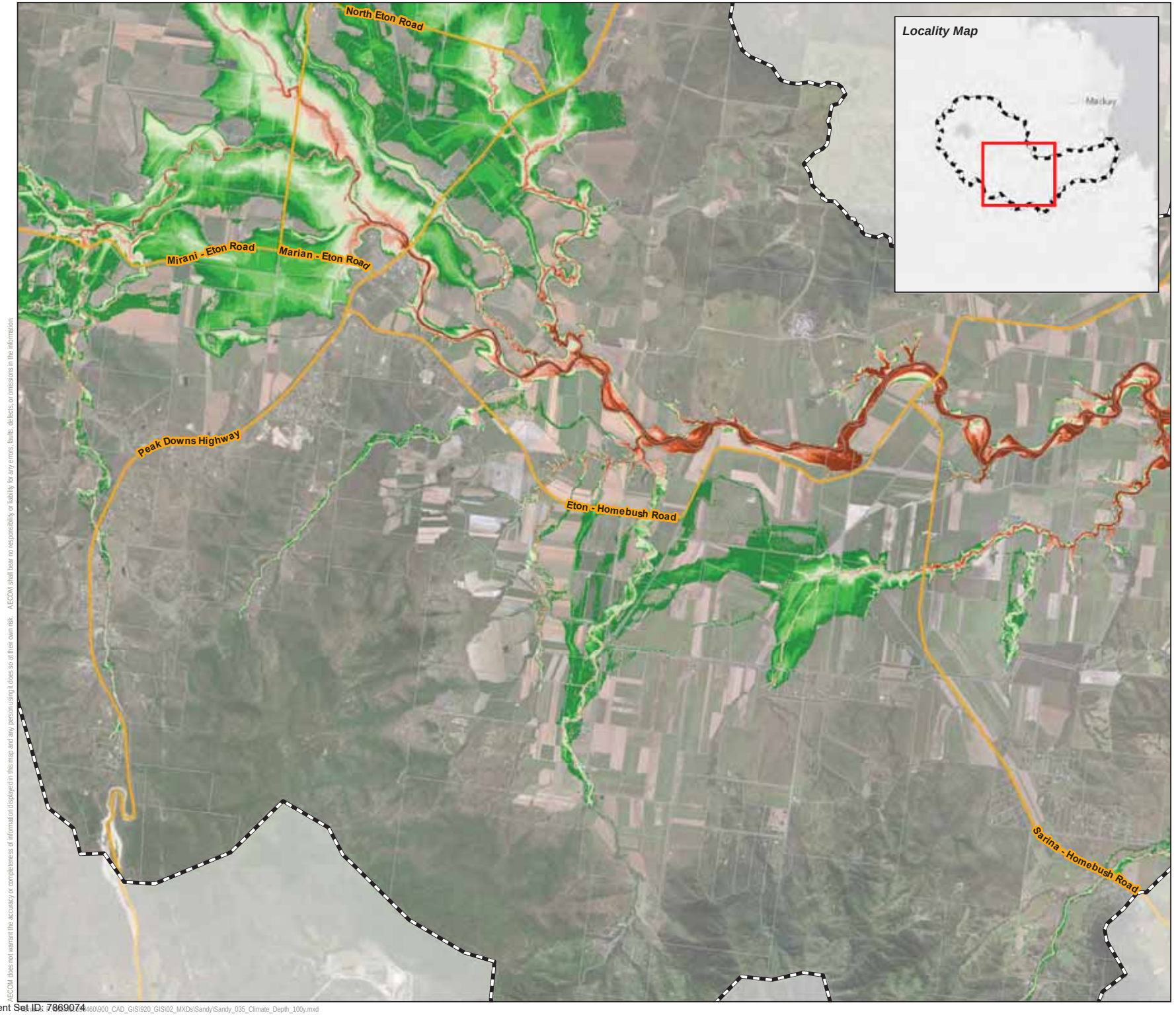

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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Map 36.2

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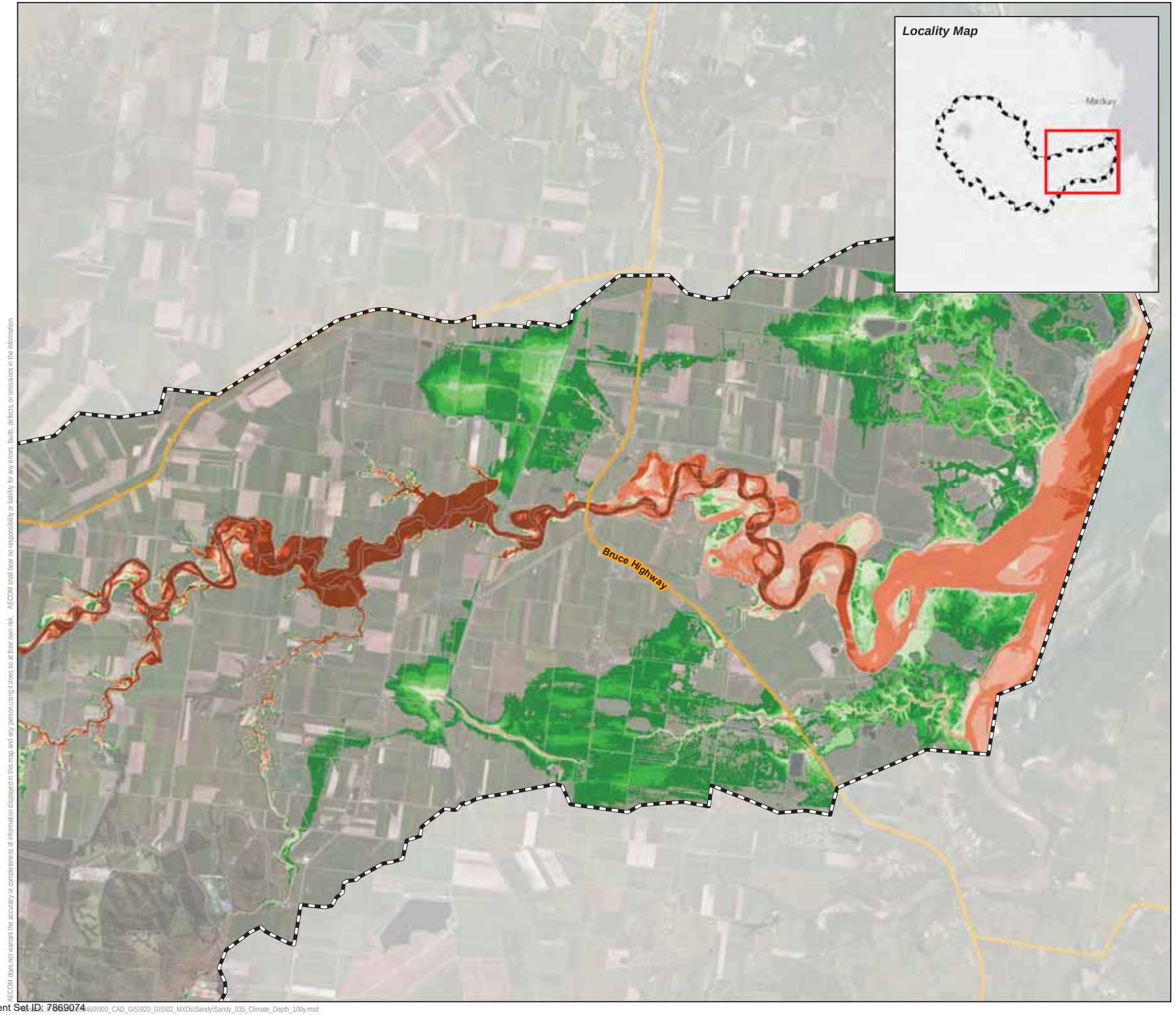
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
36.3

A3 size

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Document Set ID: 7869074
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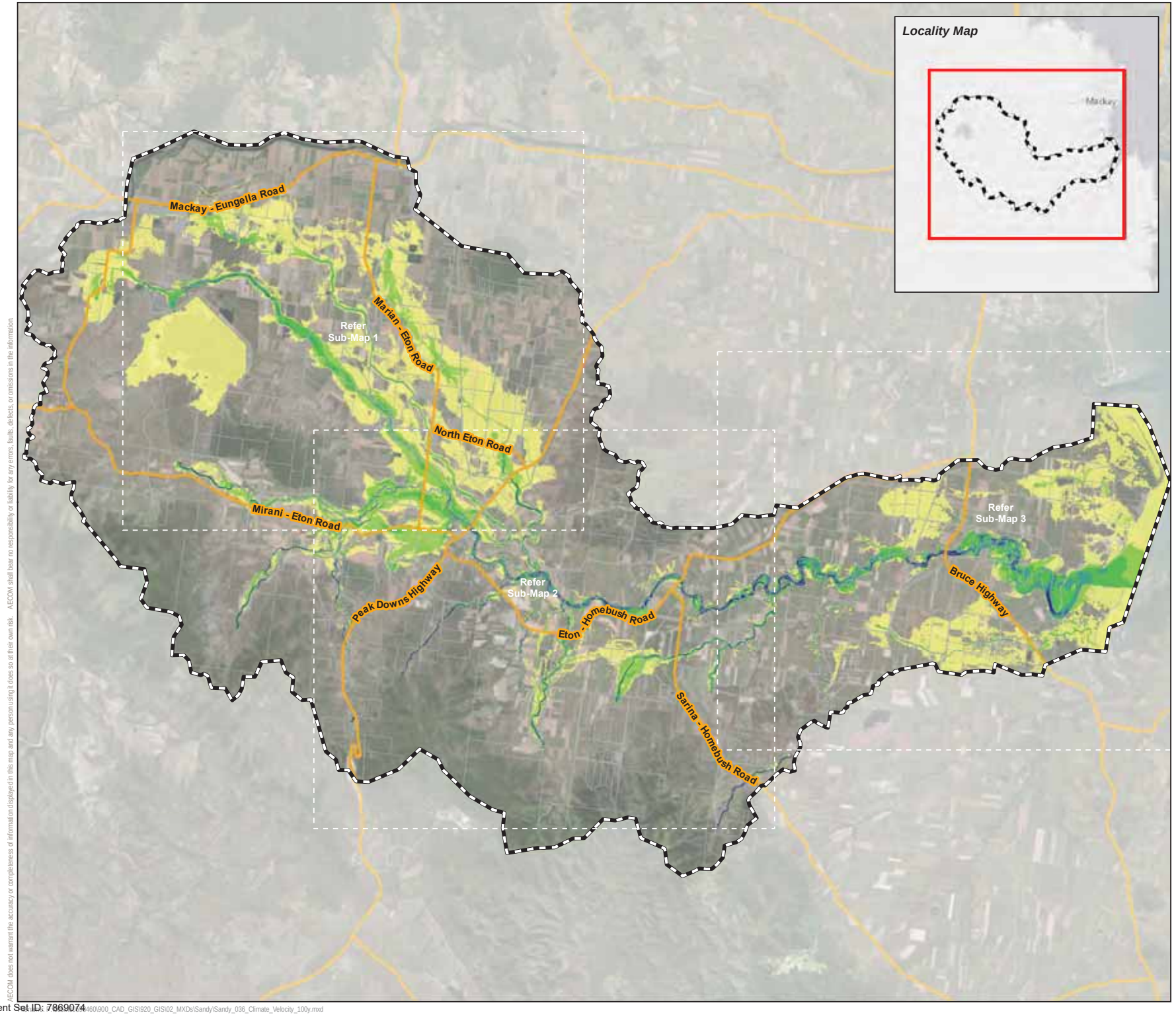

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Depth Averaged Velocity
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
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Map
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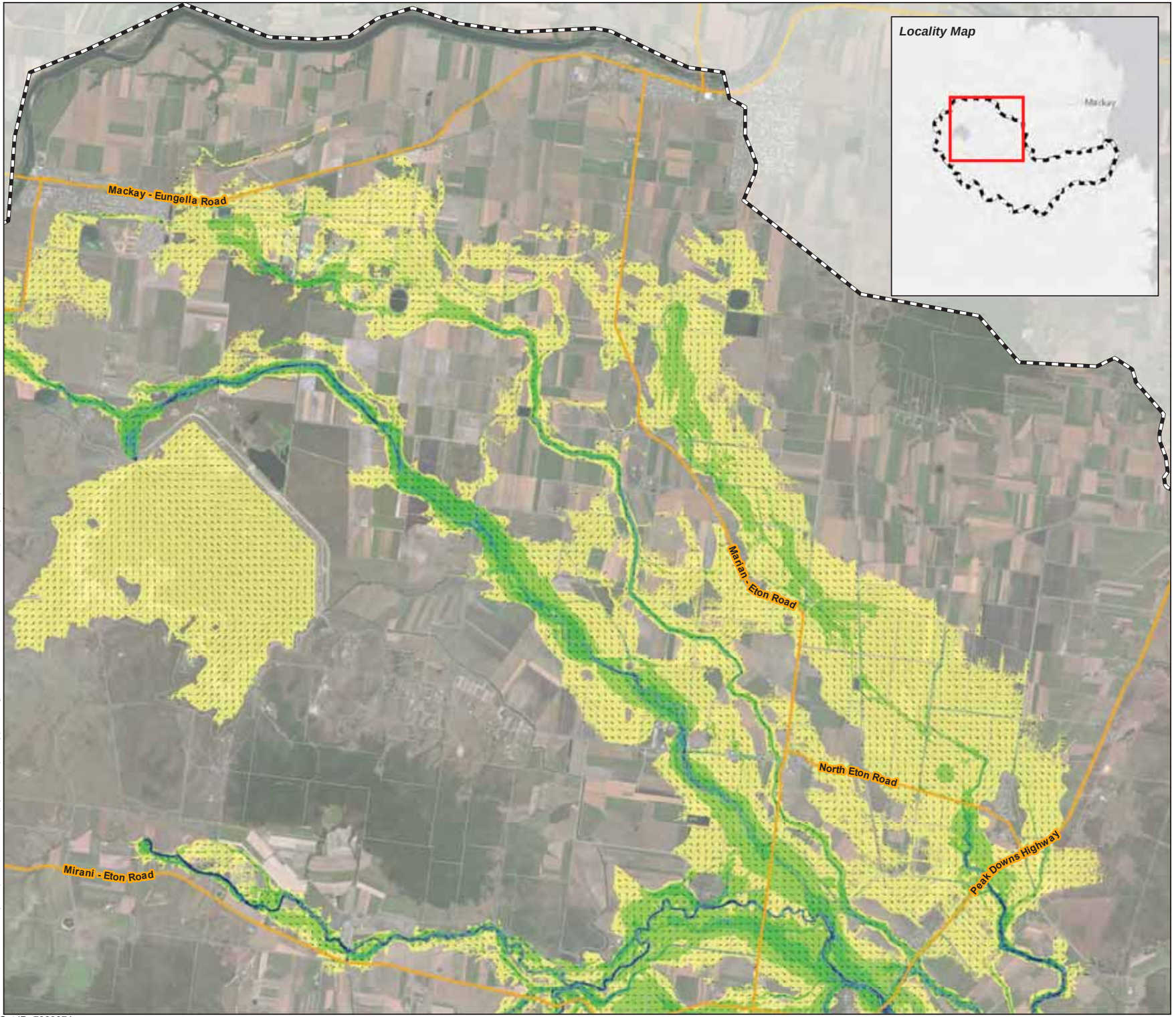

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

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MACKAY REGIONAL COUNCIL
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1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 37.1

A3 size

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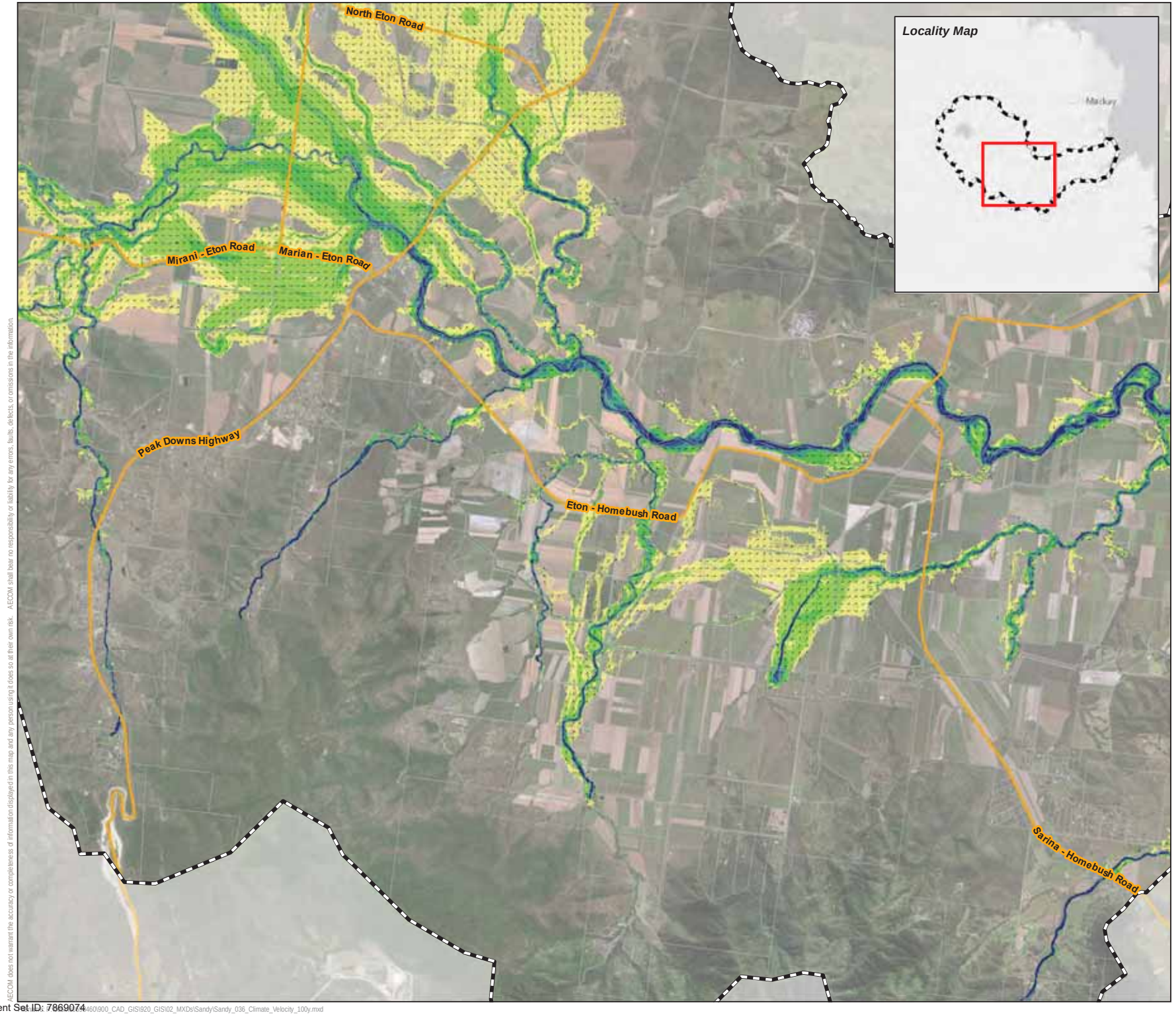
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
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Climate Change Scenario
Peak Depth Averaged Velocity
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 37.2

A3 size

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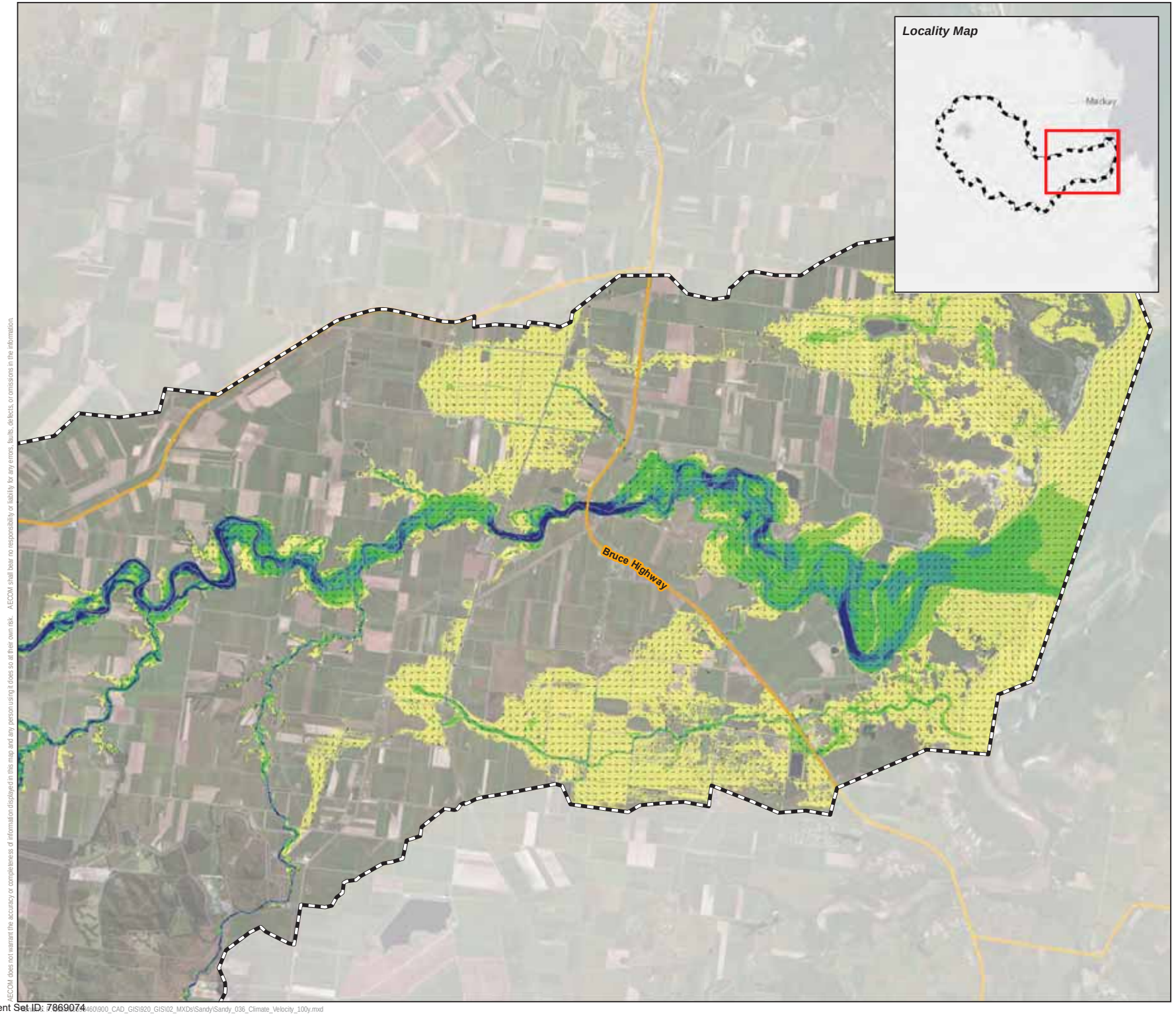

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

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Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

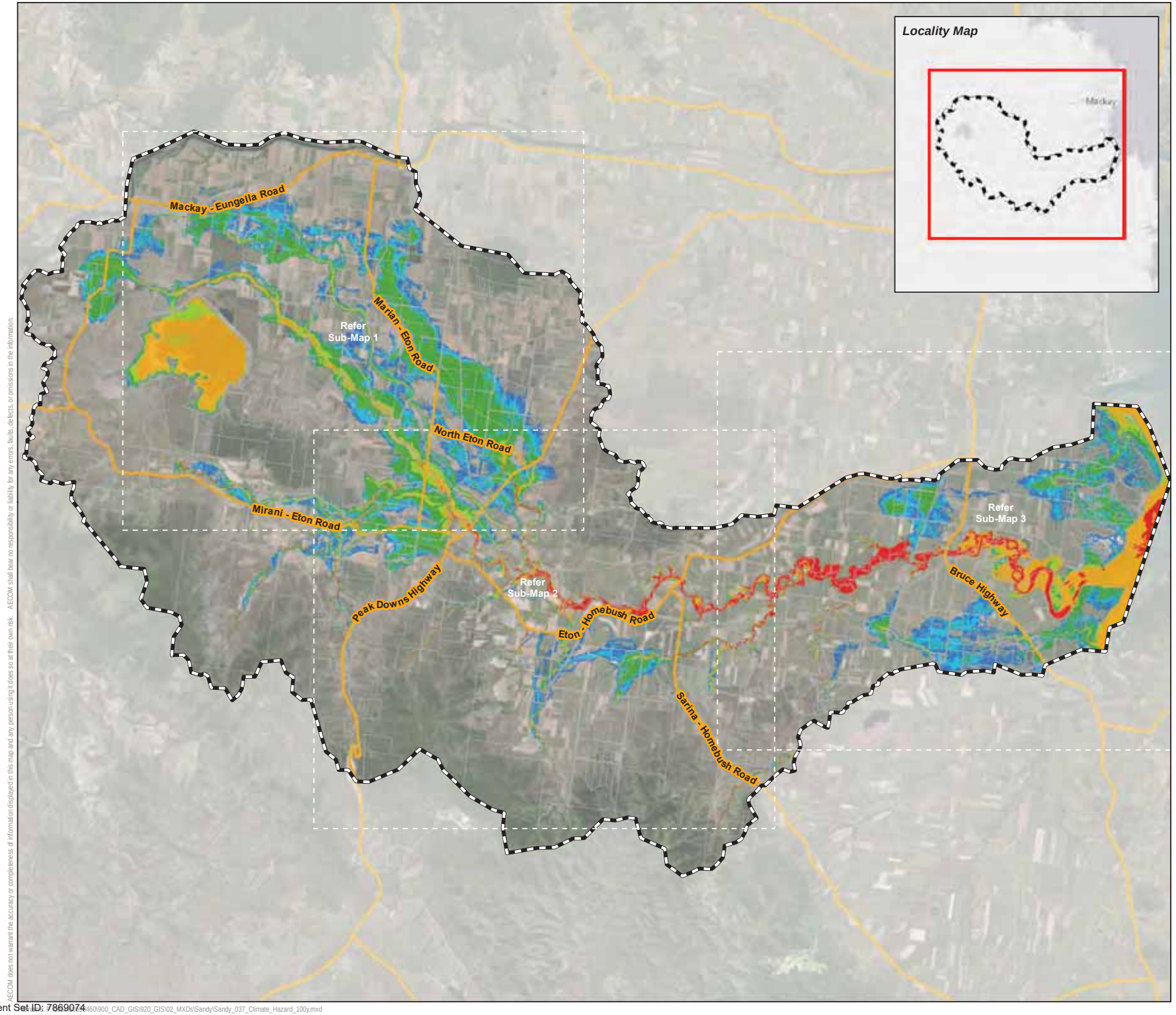
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Depth Averaged Velocity
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
37.3

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Flood Hazard Mapping
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
38.0

A3 size

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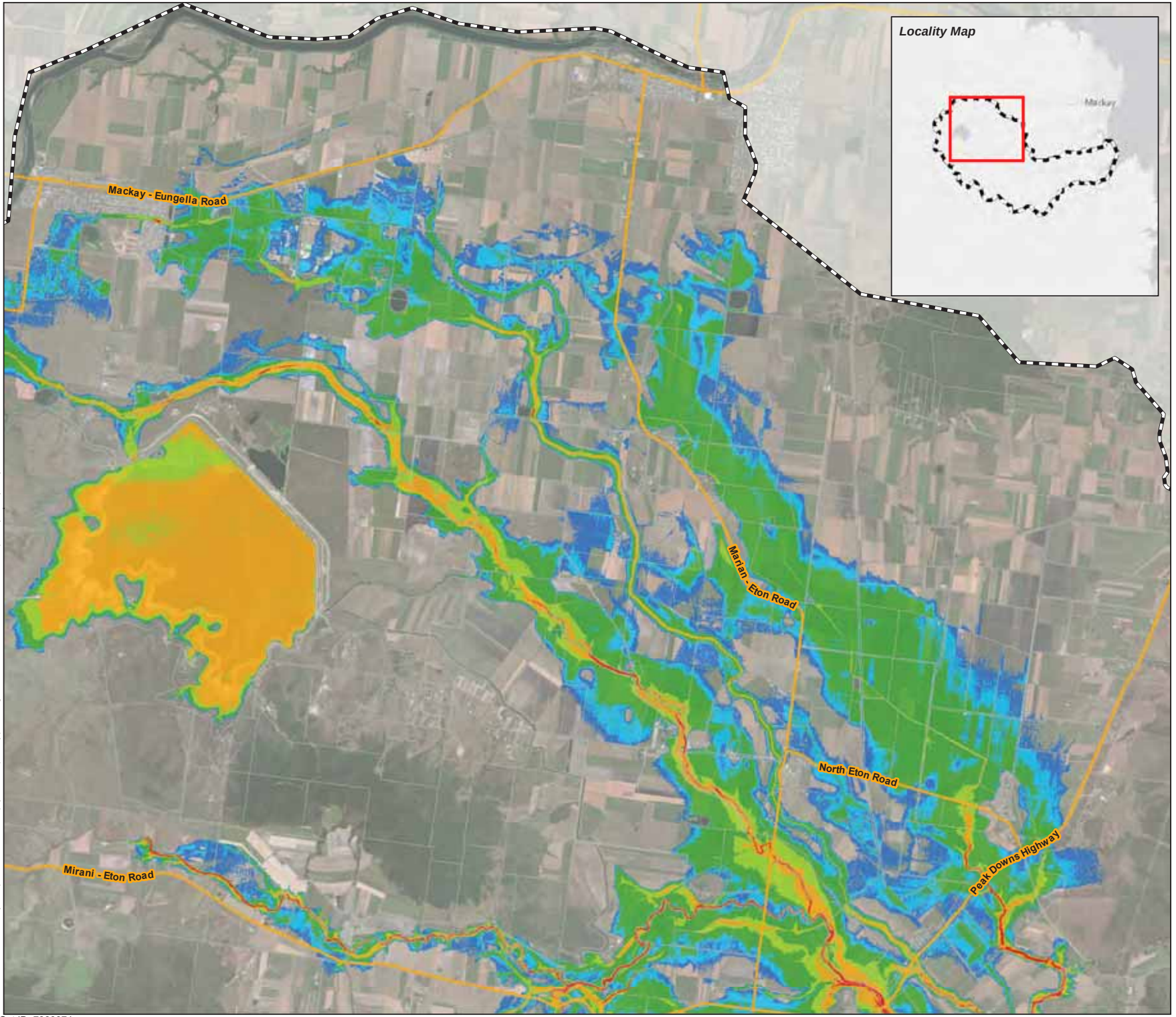
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



AECOM
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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment
Climate Change Scenario
Flood Hazard Mapping
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
38.1

A3 size

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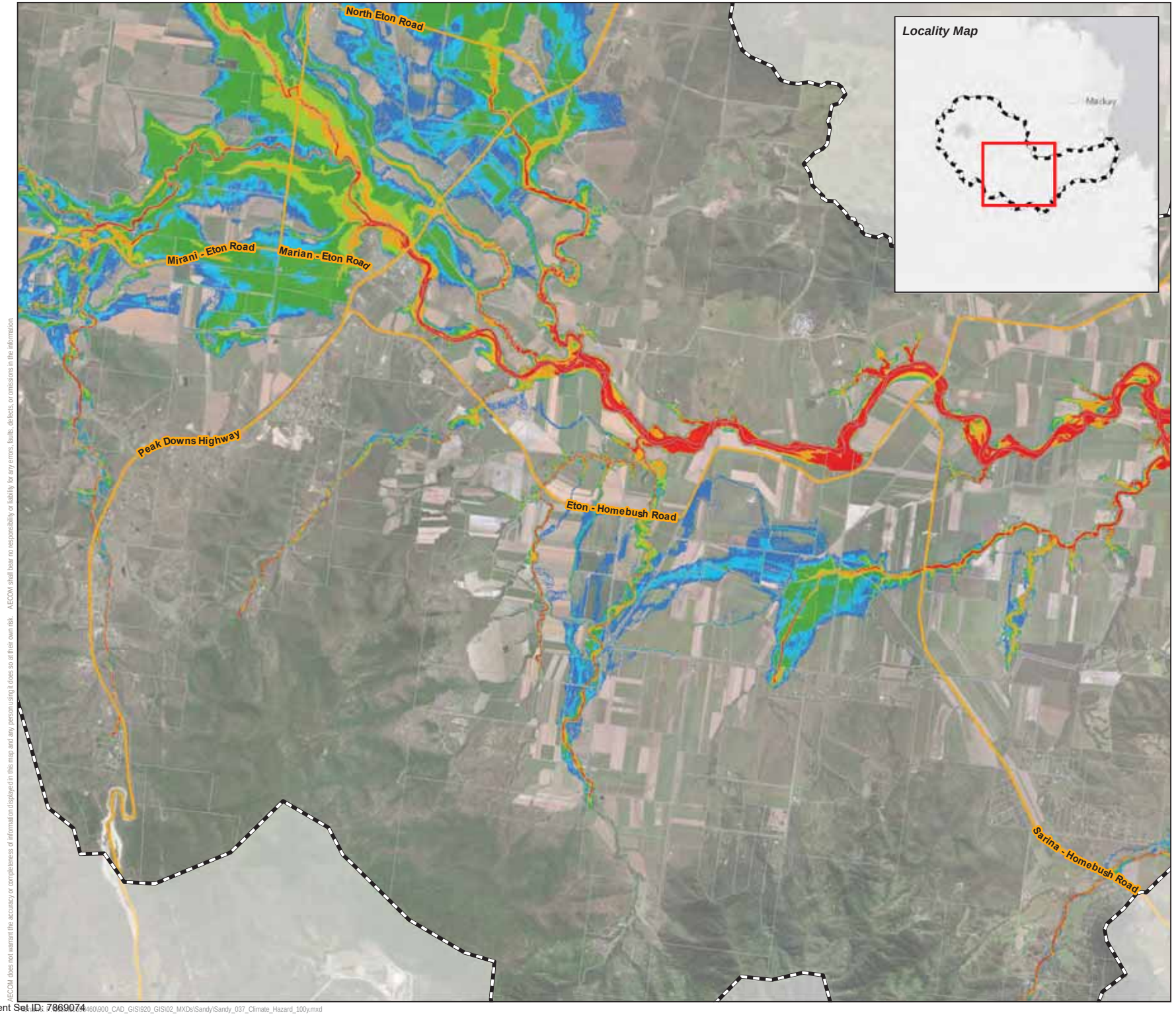

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

Data sources:
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MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Flood Hazard Mapping
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
38.2

A3 size

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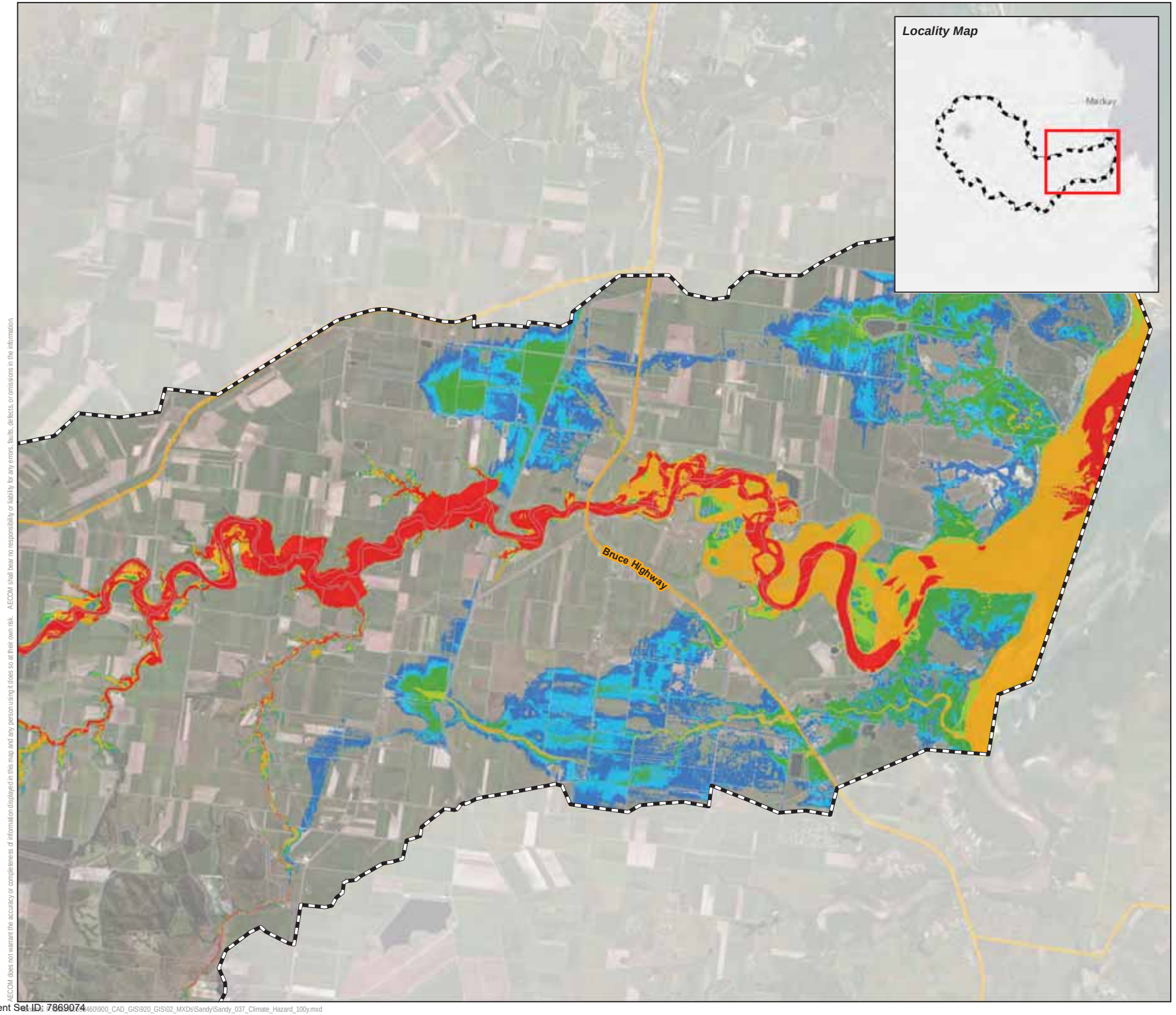
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Flood Hazard Mapping
1% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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Map 38.3

A3 size

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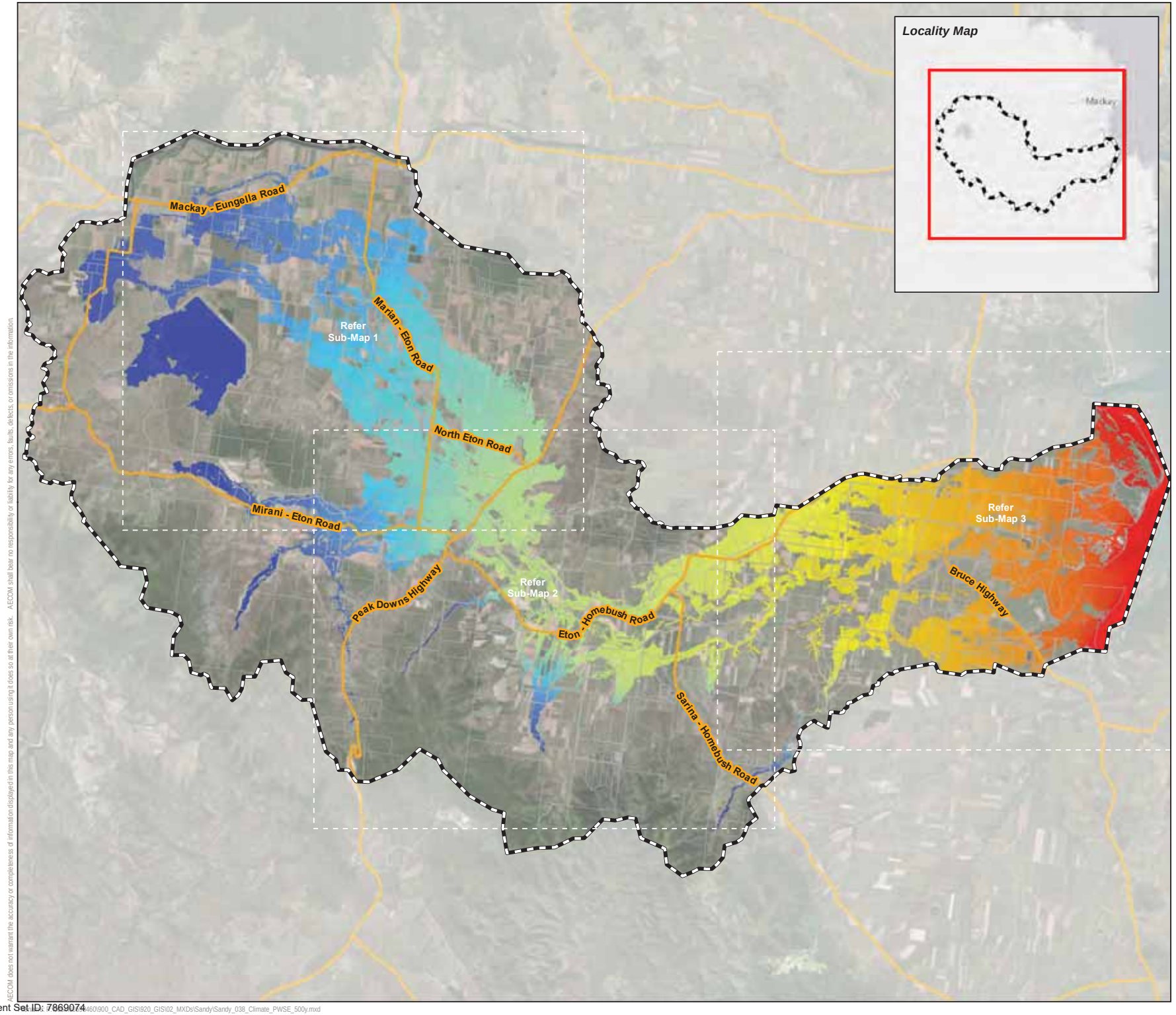

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 114.246

Low : 3.25

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
39.0

A3 size

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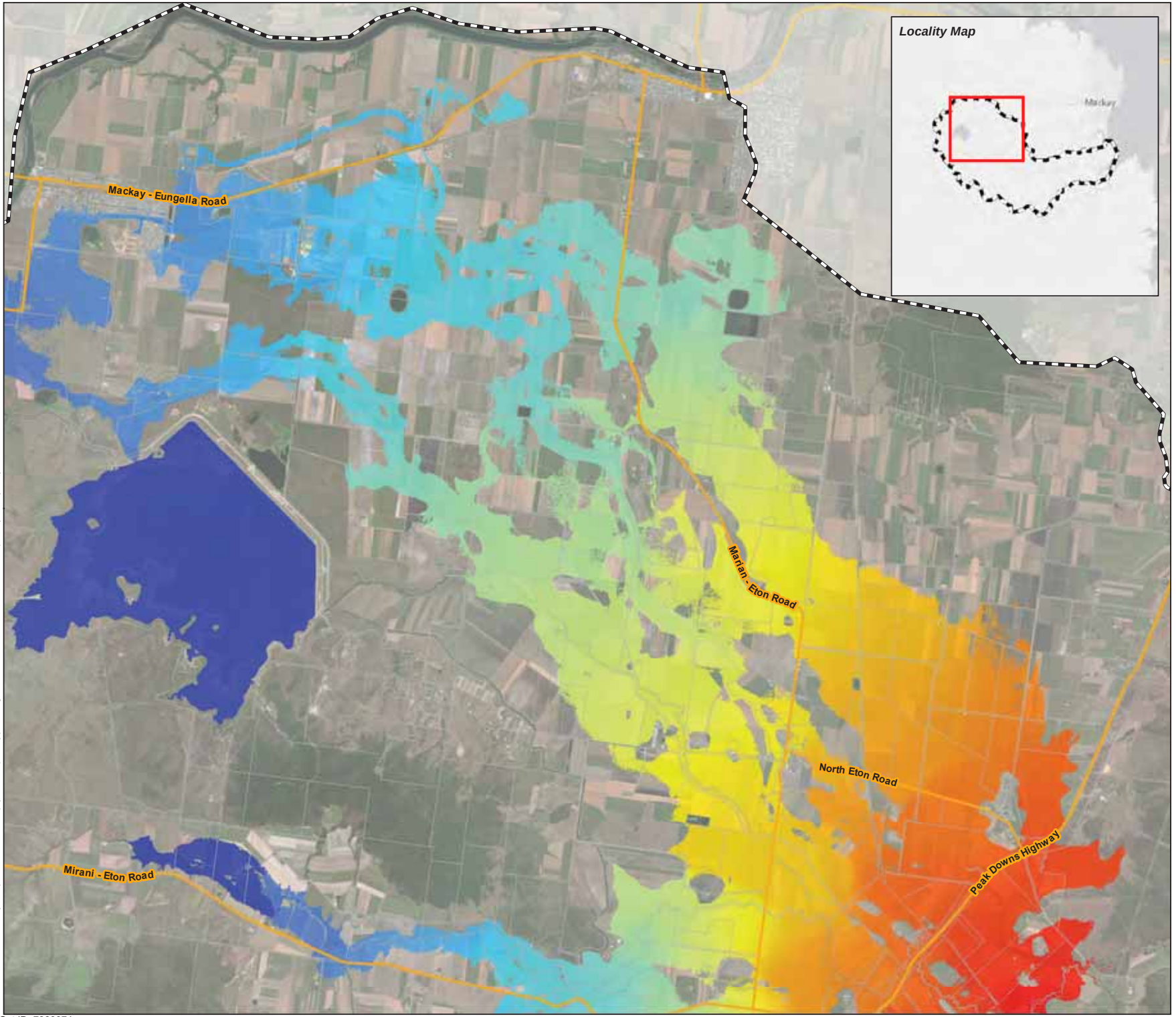
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 68.025

Low : 28.7613

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Data sources:
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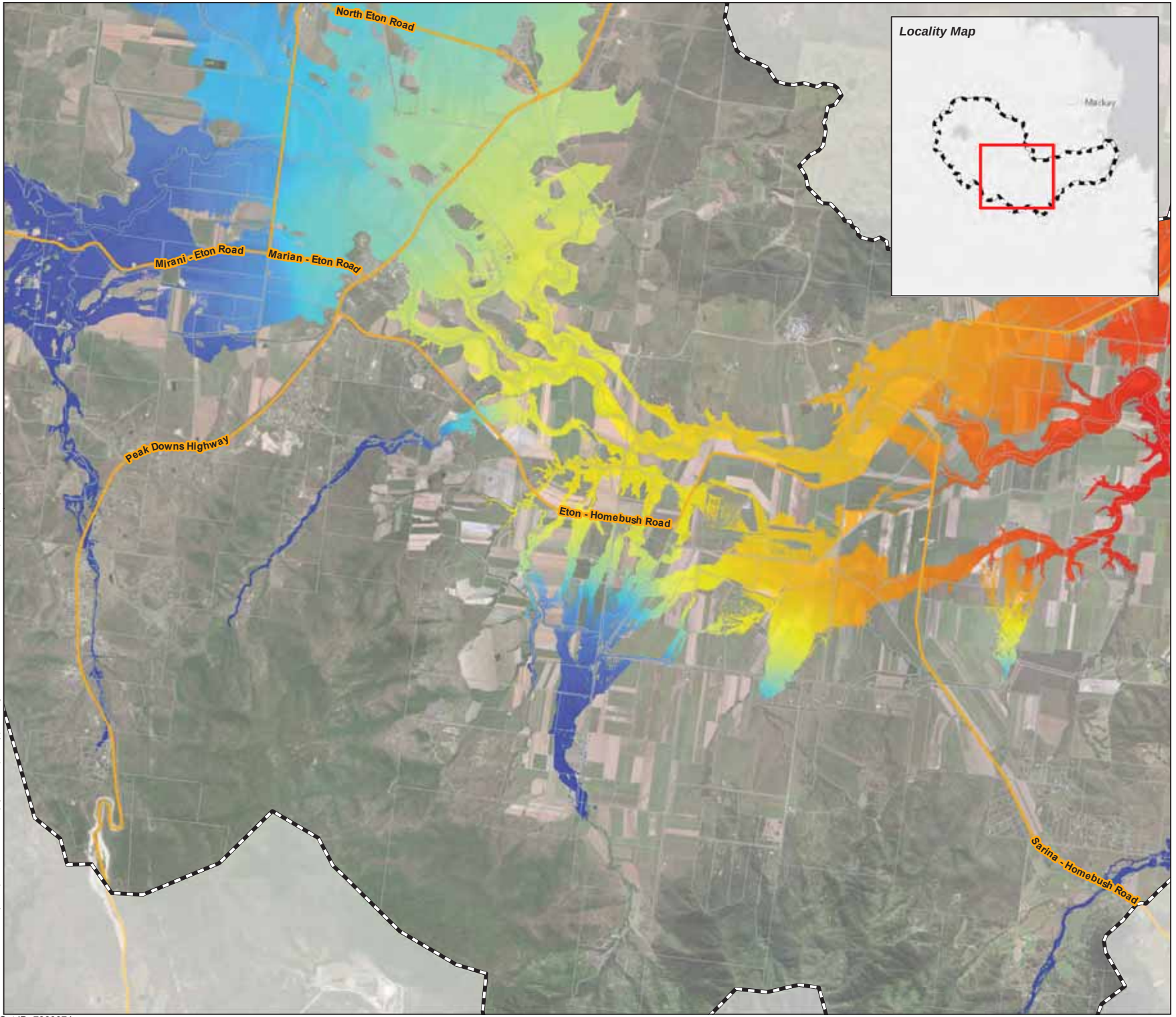
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
39.1

A3 size



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 115.812

Low : 16.6759

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 39.2

A3 size

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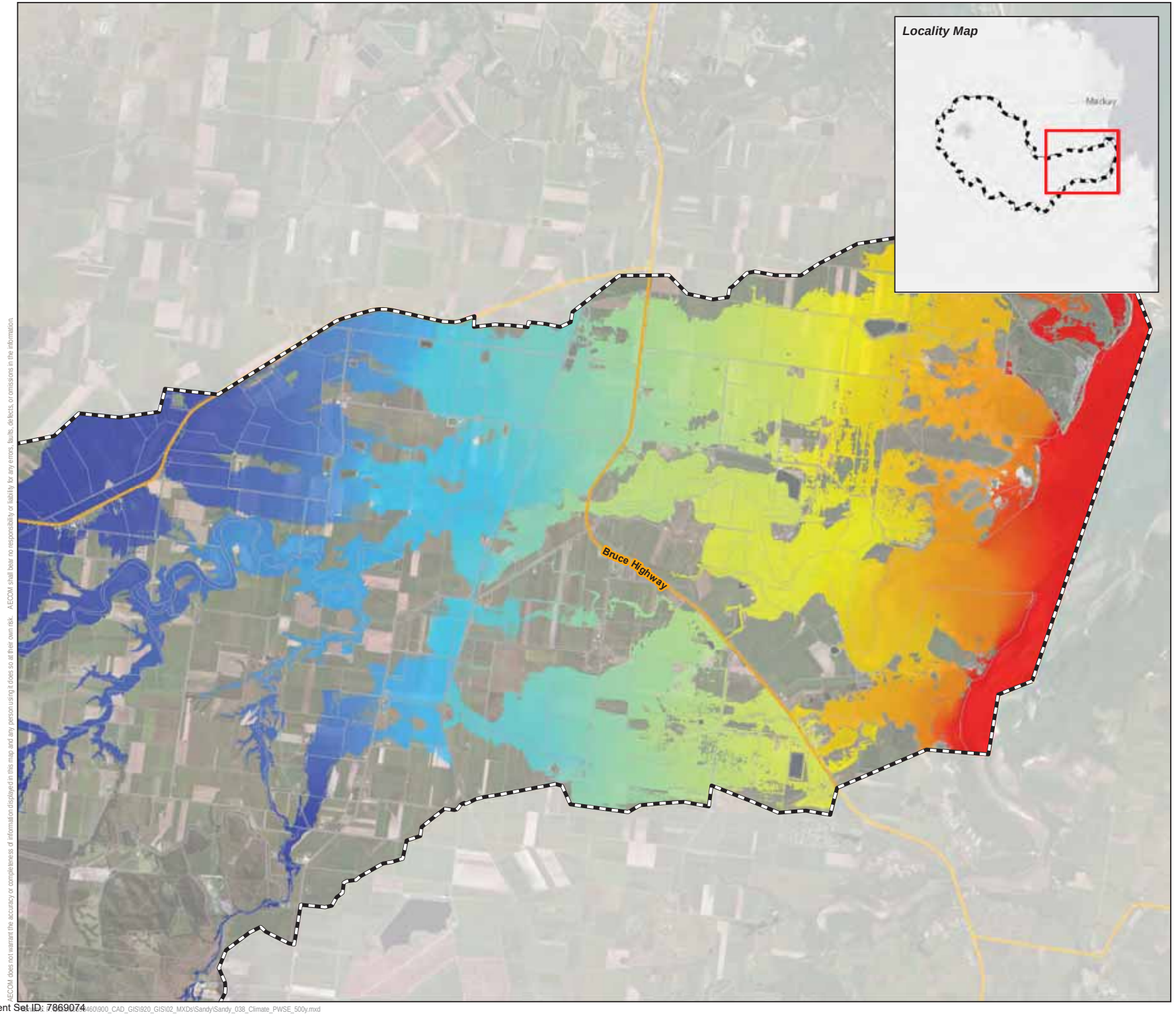
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

PWSE (mAHD)

High : 42.1109

Low : 3.25

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MACKAY REGIONAL COUNCIL
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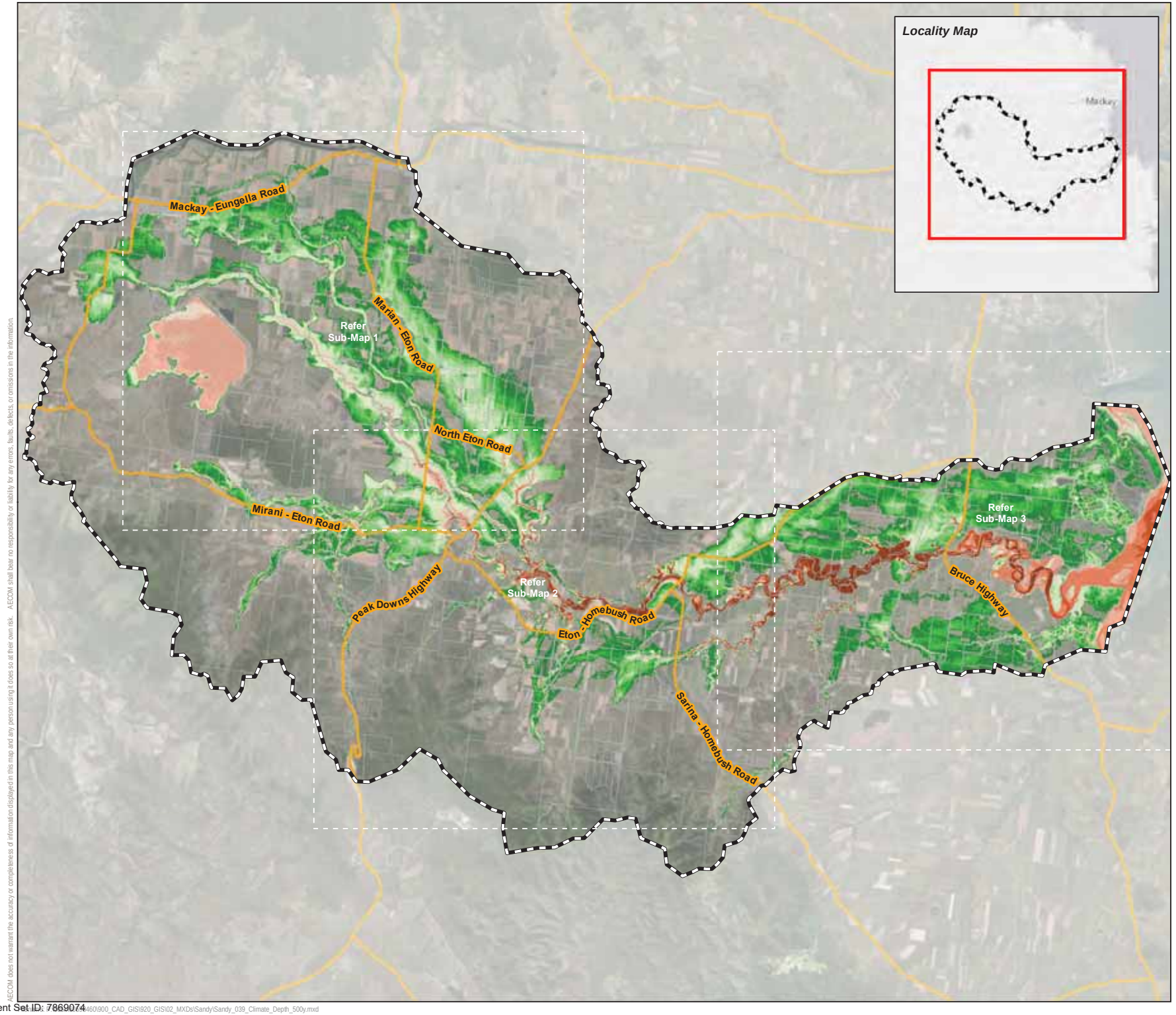
Sandy Creek Catchment
Climate Change Scenario
Peak Water Surface Elevation (PWSE)
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
39.3

A3 size



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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

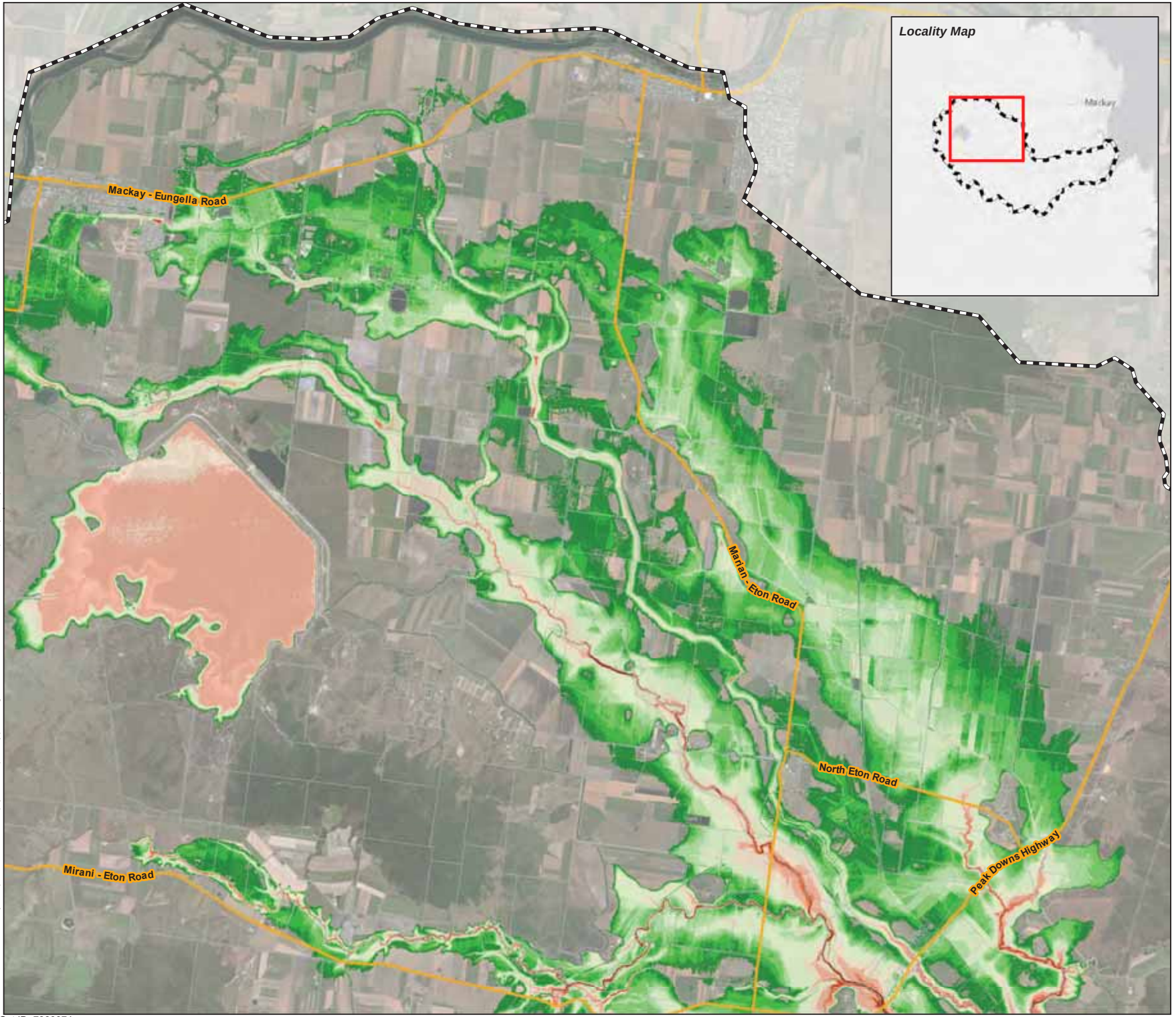
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
40.0

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 40.1

A3 size

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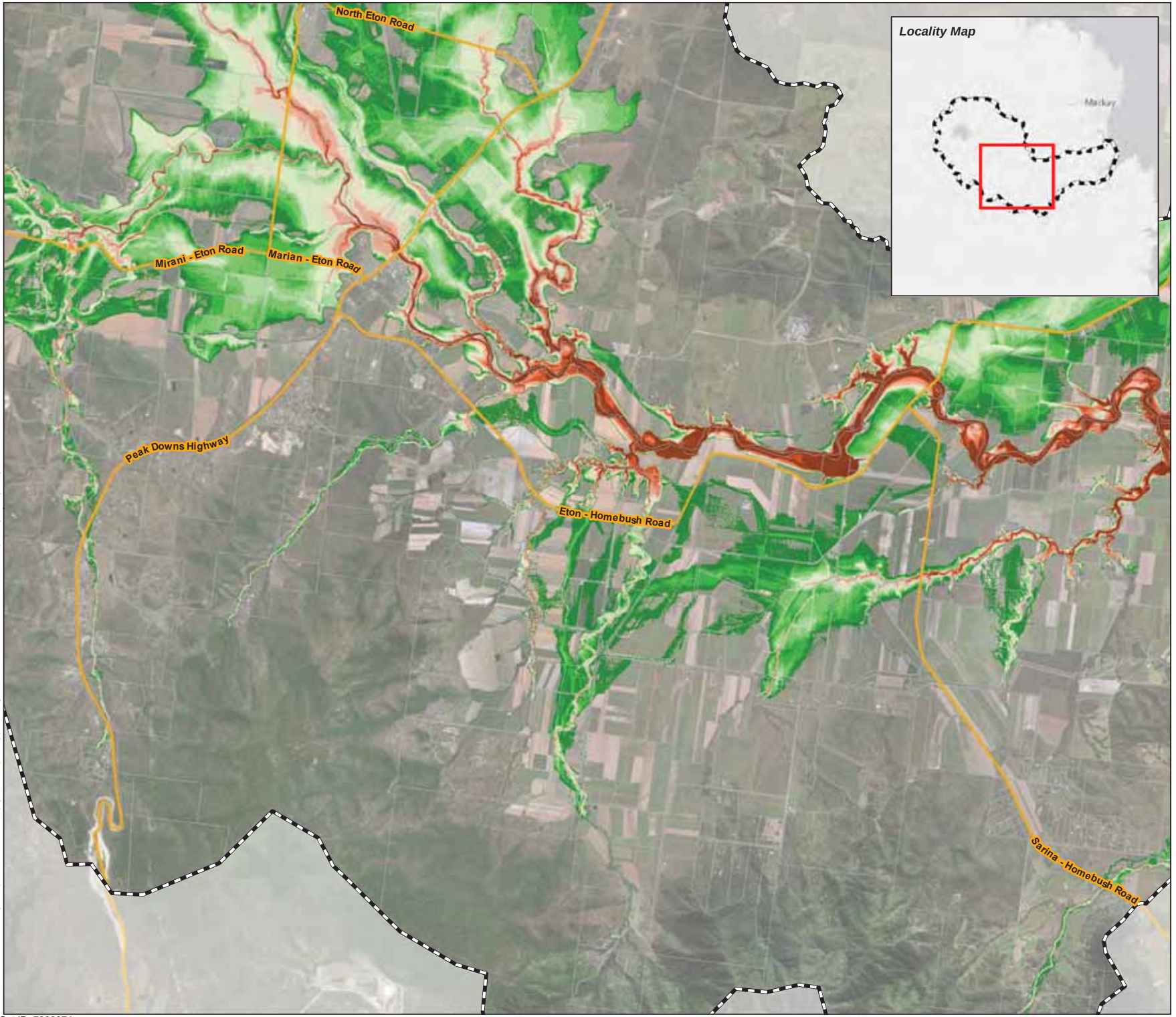
Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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VERSION:	v01

Map
40.2

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Document Set ID: 7869074
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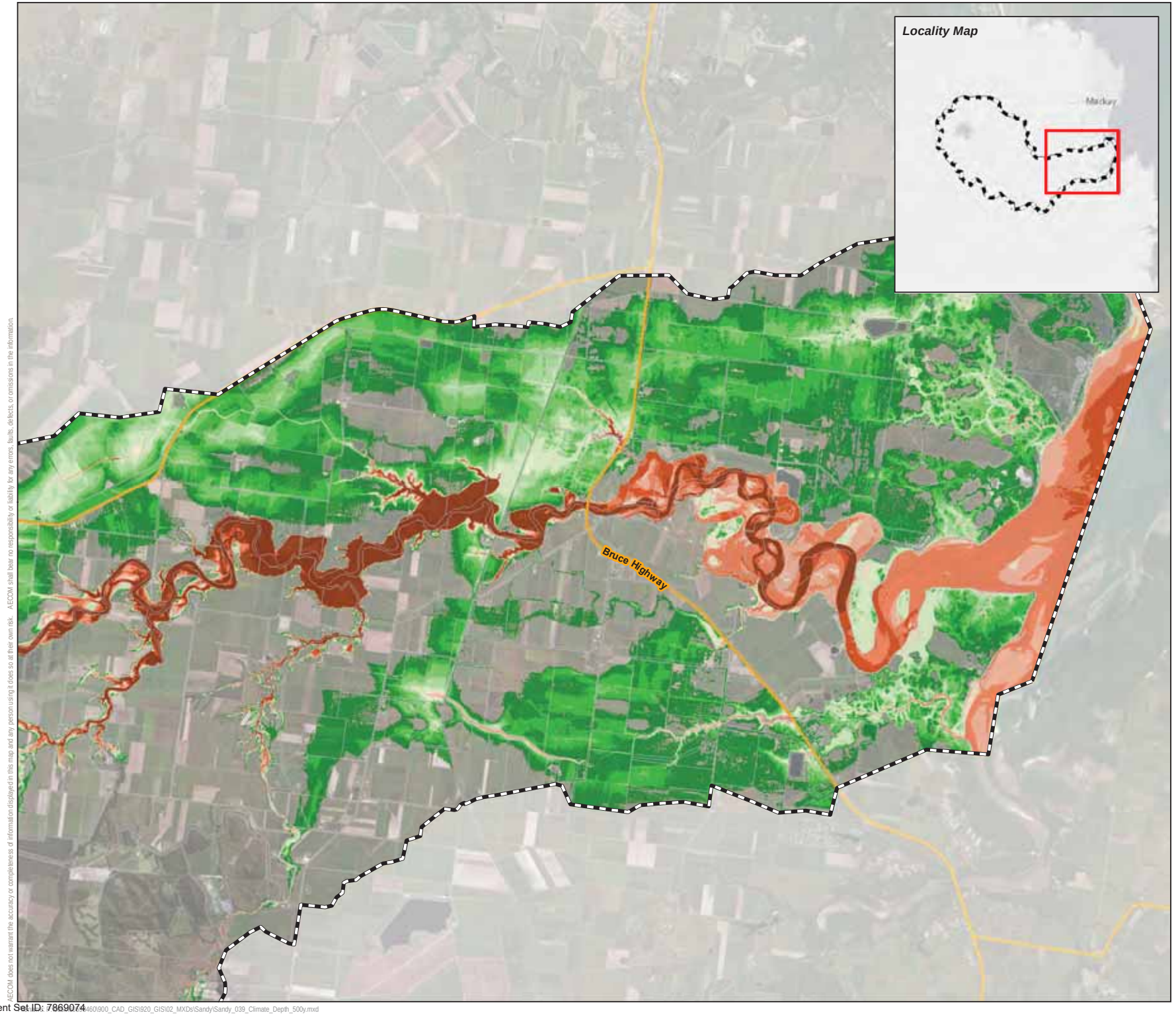

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Depth (m)

- 0 - 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- >5.0

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
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Sandy Creek Catchment
Climate Change Scenario
Peak Flood Depth
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 40.3

A3 size

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Document Set ID: 7869074
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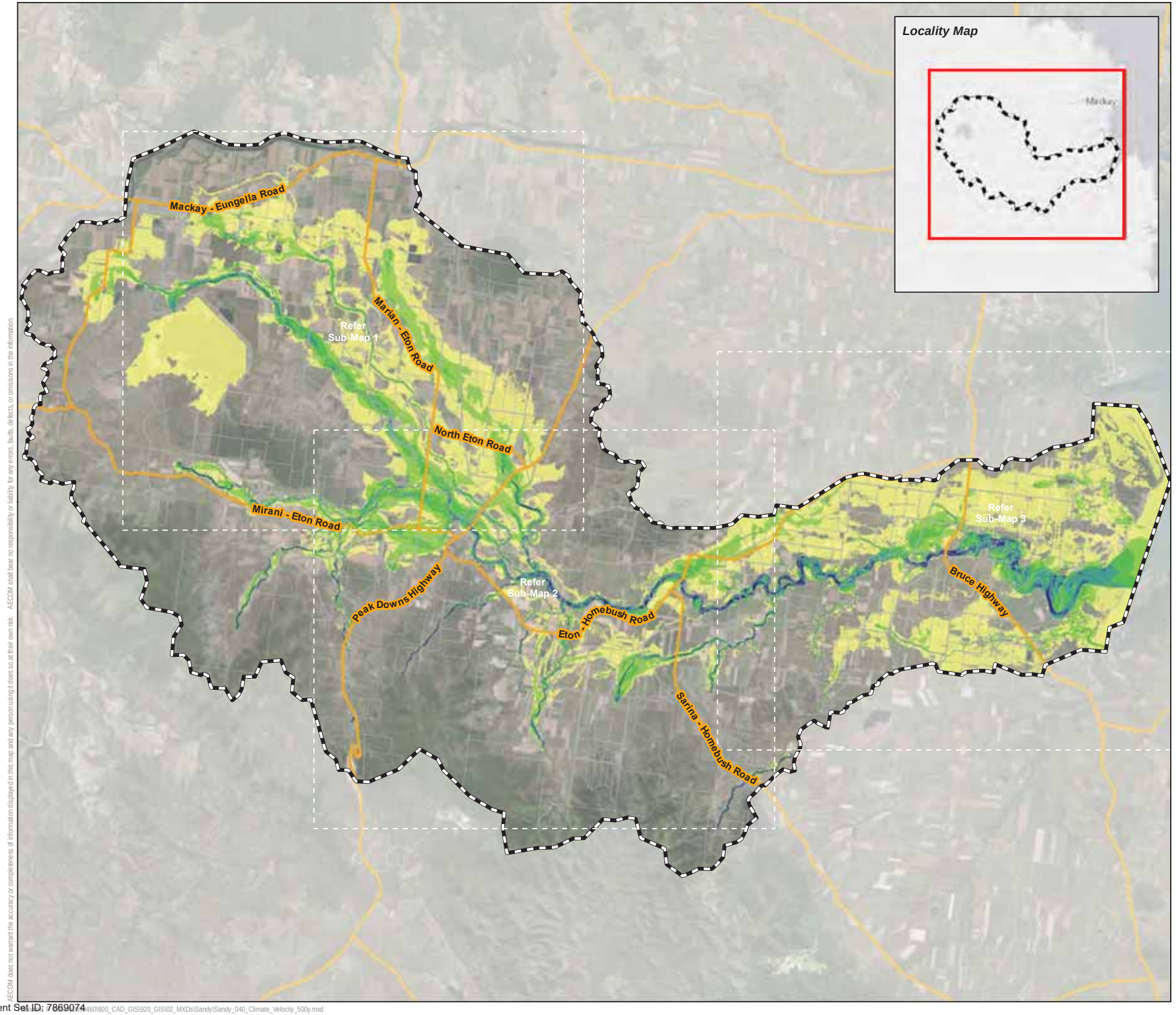

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

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Data sources:
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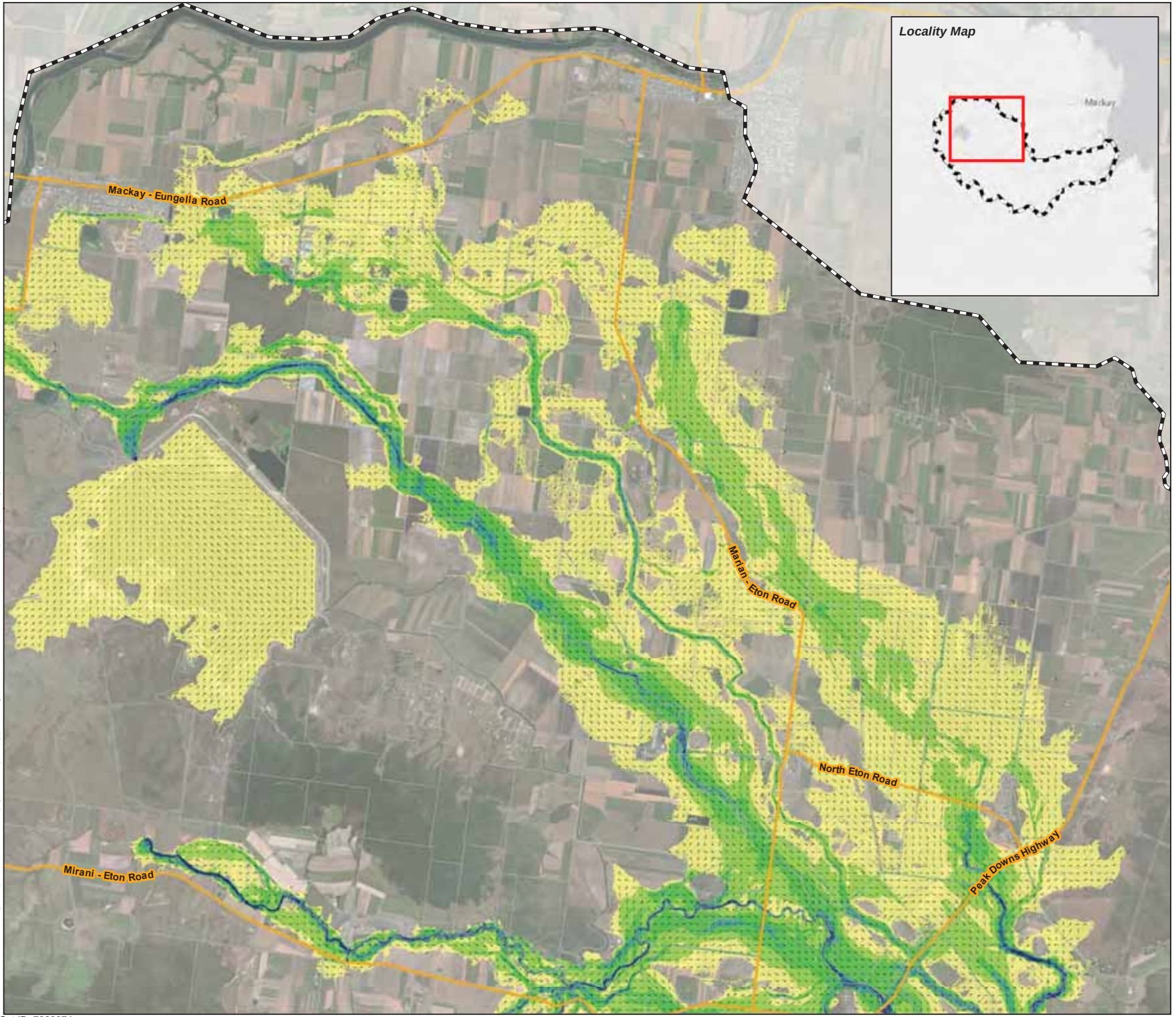
MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Depth Averaged Velocity
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
41.0

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

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MACKAY REGIONAL COUNCIL
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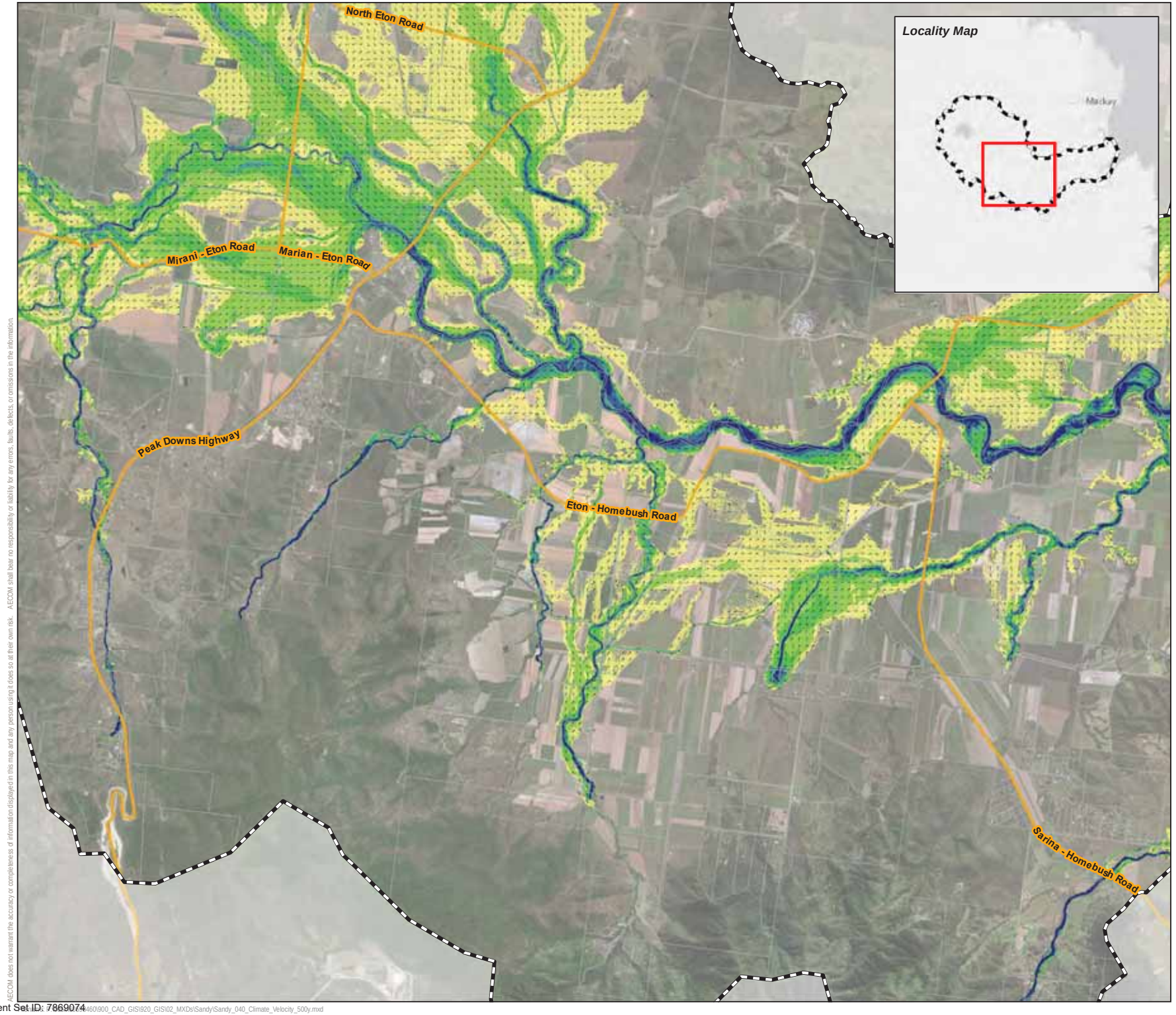
Climate Change Scenario
Peak Depth Averaged Velocity
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map 41.1

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Depth Averaged Velocity
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
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VERSION:	v01

Map 41.2

A3 size

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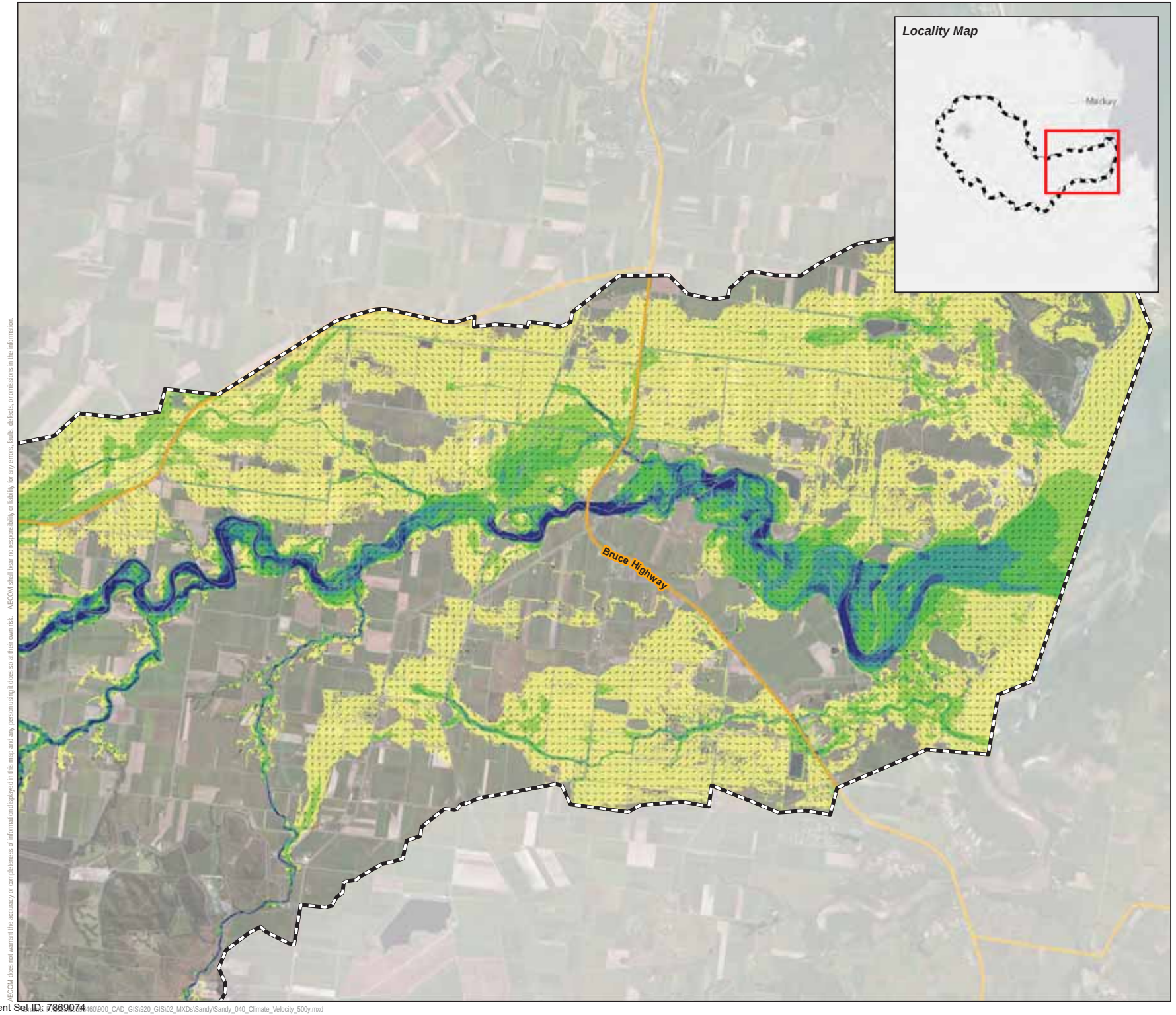

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Directional Velocity Vector
- Cadastre

Peak Depth Averaged Velocity (m/s)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

MACKAY REGIONAL COUNCIL
Tropical Cyclone Debbie Flood Studies
Sandy Creek Catchment
Climate Change Scenario
Peak Depth Averaged Velocity
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
41.3

A3 size

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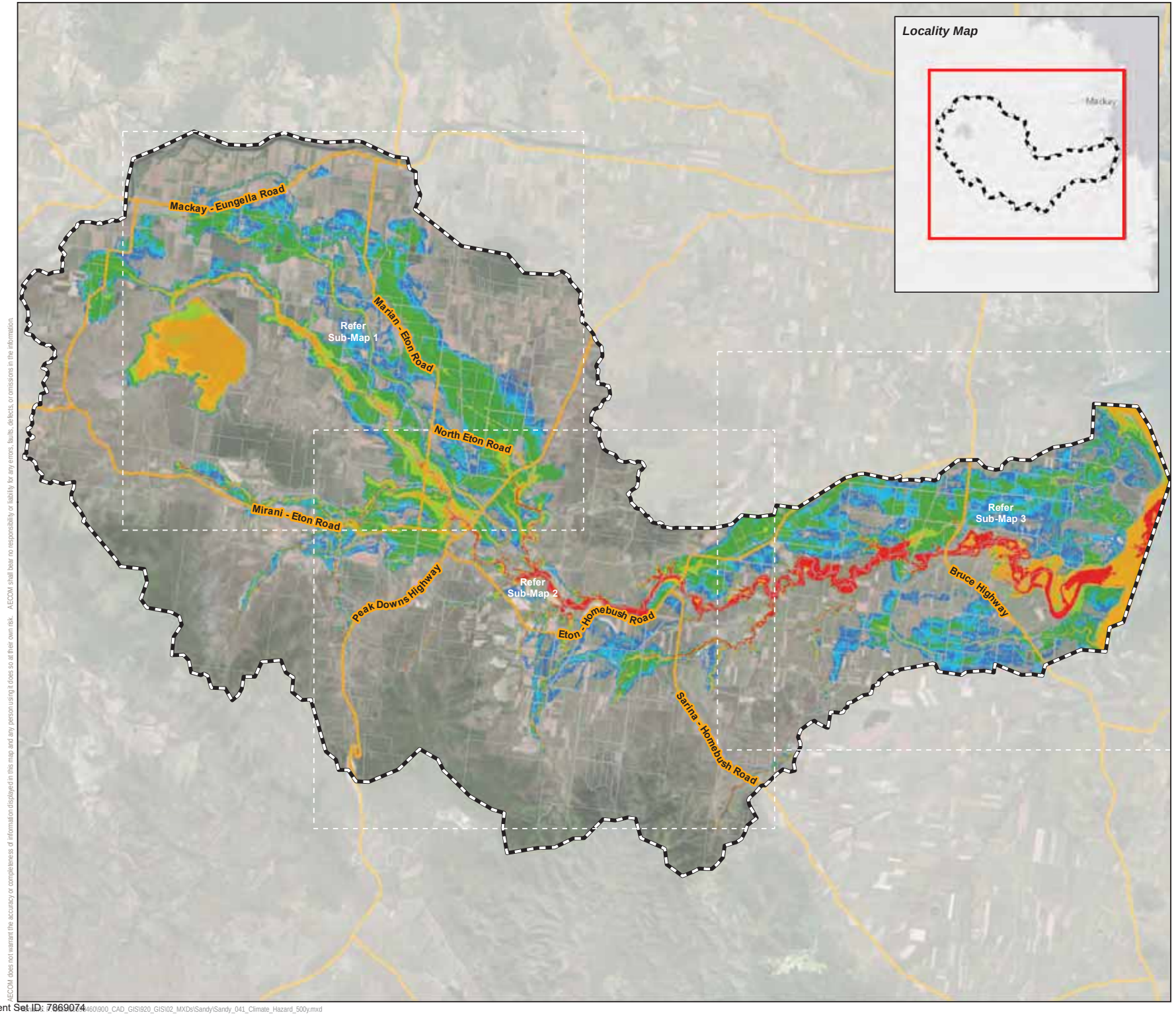

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GDA 1994 MGA Zone 55

0 1,550 3,100 6,200

Metres

1:125,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

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Tropical Cyclone Debbie Flood Studies
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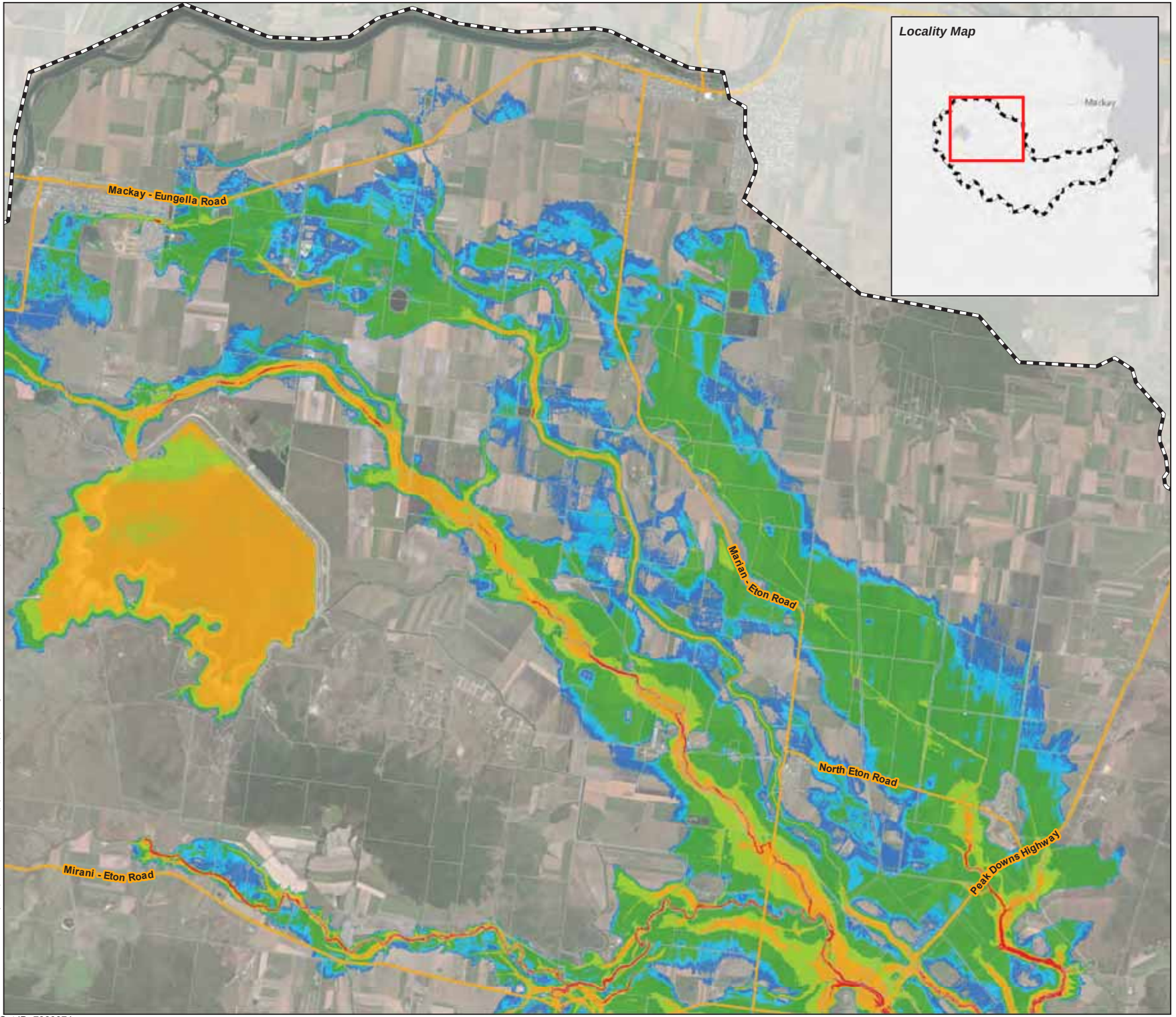
Flood Hazard Mapping
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
42.0

A3 size



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

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Sandy Creek Catchment
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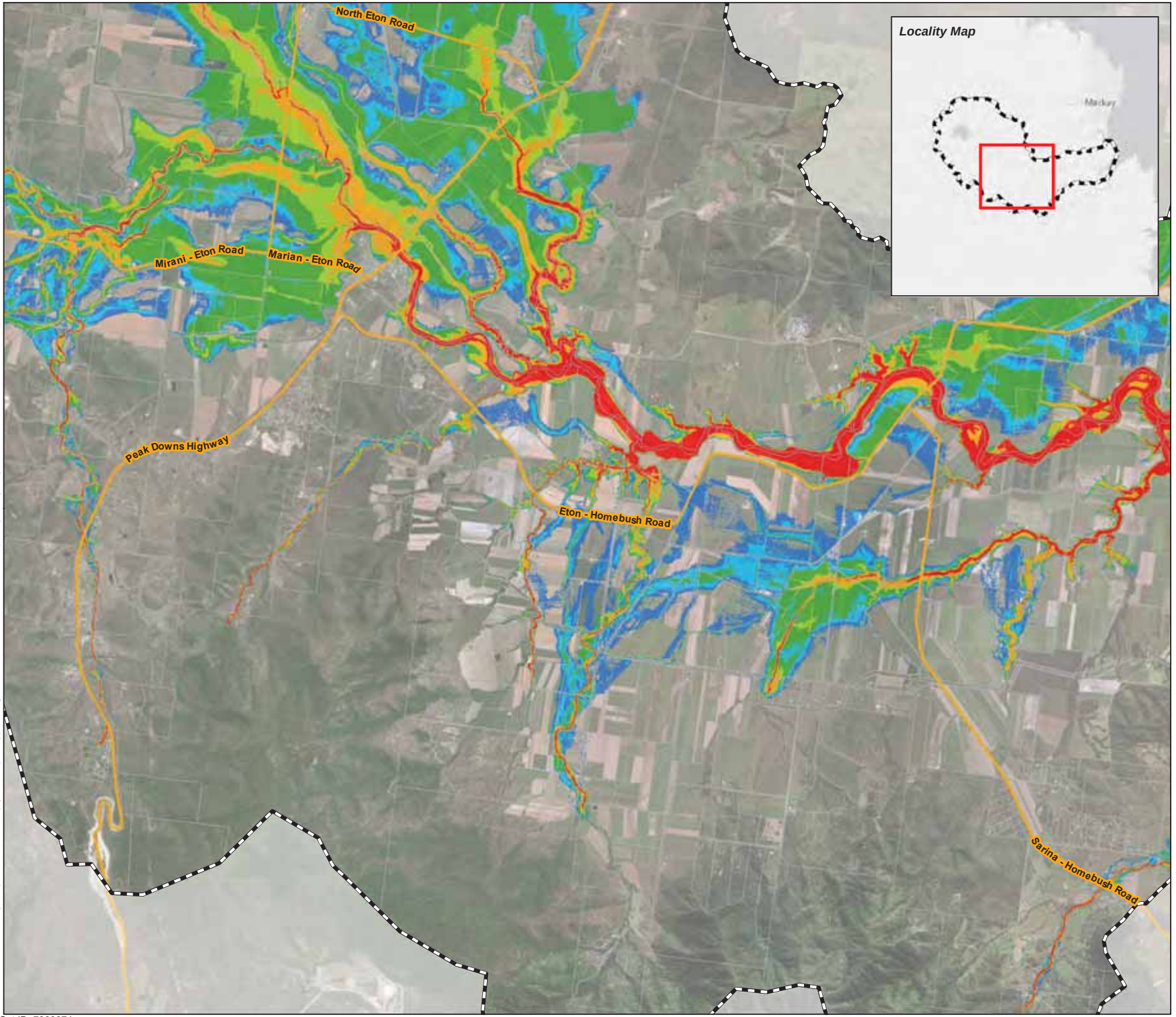
0.2% AEP Event - 18 Hour Storm

PROJECT ID	60598460
CREATED BY	briggh
LAST MODIFIED	30/09/2019
VERSION:	v01

Map
42.1

A3 size

Document Set ID: 7869074
Version: 1, Version Date: 24/01/2020



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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Category 6

Data sources:
Base Data: (c) 2019 (MRC)
Imagery: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

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Map 42.2

A3 size

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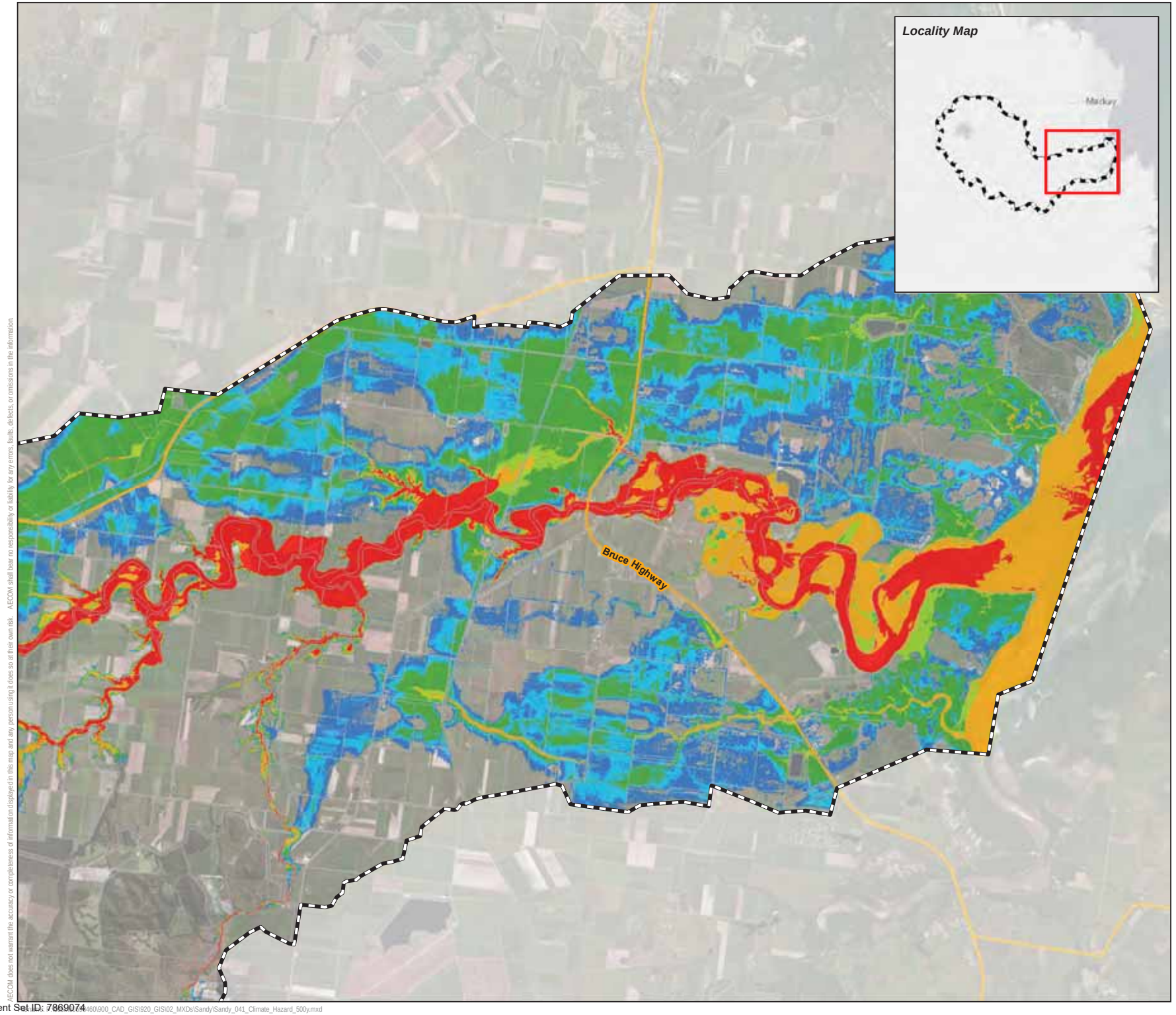

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GDA 1994 MGA Zone 55

0 600 1,200 2,400

Metres

1:50,000 (when printed at A3)

LEGEND

- TUFLOW Model Boundary
- State Controlled Road
- Cadastre

Peak Flood Hazard

- Category 1
- Category 2
- Category 3
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VERSION:	v01

Map
42.3

A3 size

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