



Attachment 4 to Item 10.3.4.

Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study Report and Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Risk Management Study and Plan – Maps

Date of meeting: 29 July 2025

Location: Council Chambers

Time: 6:30pm

Macdonald River, Colo River, Webbs Creek & Greens Creek Flood Study and Floodplain Risk Management Study and Plan

Map Compendium





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Document Control

Rev	Effective Date	Description of Revision	Prepared by:	Reviewed by:
0	March 2024	Phase 1 draft, issue to Council	DR / OG / JV	RST / DT
01	December 2024	Draft Flood study and FRMSP Mapping	DR / OG / JV	RST
02	February 2025	Draft for Public Exhibition	OG	

Prepared For: Hawkesbury City Council
Project Name: Macdonald River, Colo River, Webbs Creek & Greens Creek Flood Study
Rhelm Reference: J1382
Document Location: C:\Rhelm Dropbox\J1300-J1399\J1382 - Macdonald & Colo FPRMSP\Mc&Colo FRMSP External\4. Reports\Map Compendium\RR-05-1350-02 Map Compendium_Index.docx

The report has been prepared and reviewed by suitably qualified persons. The scope of the report is based on the client brief and/or the Rhelm written fee proposal and assumes information provided by the client and sourced from other third parties is fit for purpose unless otherwise stated. The findings rely on a range of assumptions that are noted in the report.

Maps

Map Number	Description	Map Number	Description
RG-00-001-1	Calibration July 2022 Colo River	RG-00-401	Flood Function - 1% AEP
RG-00-001-2	Calibration July 2022 MacDonald River	RG-00-402	Flood Function - 1 in 200 AEP (0.5% chance per year)
RG-00-002-1	Calibration March 2022 Colo River	RG-00-403	Flood Function - 1 in 500 AEP (0.2% chance per year)
RG-00-002-2	Calibration March 2022 MacDonald River	RG-00-404	Flood Function - PMF
RG-00-003-1	Calibration February 2020 Colo River		
RG-00-003-2	Calibration February 2020 MacDonald River	RG-00-501	Sensitivity - High Blockage -20% AEP
RG-00-004-1	Calibration March 1978 Colo River	RG-00-502	Sensitivity - High Blockage 1% AEP
RG-00-004-2	Calibration March 1978 MacDonald River	RG-00-503	Sensitivity - Low Blockage 20% AEP
		RG-00-504	Sensitivity - Low Blockage 1% AEP
RG-00-101	20% AEP Peak Depth and Level	RG-00-505	Sensitivity - High Roughness -20% AEP
RG-00-102	10% AEP Peak Depth and Level	RG-00-506	Sensitivity - High Roughness 1% AEP
RG-00-103	5% AEP Peak Depth and Level	RG-00-507	Sensitivity - Low Roughness 20% AEP
RG-00-104	2% AEP Peak Depth and Level	RG-00-508	Sensitivity - Low Roughness 1% AEP
RG-00-105	1% AEP Peak Depth and Level		
RG-00-106	1 in 200 AEP (0.5% chance per year) Peak Depth and Level	RG-00-601	Climate Change 2050 SSP3 – 1% AEP
RG-00-107	1 in 500 AEP (0.2% chance per year) Peak Depth and Level	RG-00-602	Climate Change 2100 SSP3 – 1% AEP
RG-00-108	1 in 1000 AEP (0.1% chance per year) Peak Depth and Level		
RG-00-109	1 in 2000 AEP (0.05% chance per year) Peak Depth and Level	RG-00-701	Building Inundation - First Flooded Above Floor
RG-00-110	PMF Peak Depth and Level	RG-00-702	Road Crossings
		RG-00-703	Infrastructure and Facilities
RG-00-201	20% AEP Peak Velocity		
RG-00-202	10% AEP Peak Velocity	RG-00-801	Land Zoning
RG-00-203	5% AEP Peak Velocity	RG-00-802	Flood Planning Area
RG-00-204	2% AEP Peak Velocity	RG-00-803	Flood Planning Constraint Categories
RG-00-205	1% AEP Peak Velocity		
RG-00-206	1 in 200 AEP (0.5% chance per year) Velocity	RG-00-901	Emergency Management Classifications
RG-00-207	1 in 500 AEP (0.2% chance per year) Velocity		
RG-00-208	1 in 1000 AEP (0.1% chance per year) Velocity		
RG-00-209	1 in 2000 AEP (0.05% chance per year) Velocity		
RG-00-210	PMF Peak Velocity		
RG-00-301	20% AEP Peak Hazard		
RG-00-302	10% AEP Peak Hazard		
RG-00-303	5% AEP Peak Hazard		
RG-00-304	2% AEP Peak Hazard		
RG-00-305	1% AEP Peak Hazard		
RG-00-306	1 in 200 AEP (0.5% chance per year) Hazard		
RG-00-307	1 in 500 AEP (0.2% chance per year) Hazard		
RG-00-308	1 in 1000 AEP (0.1% chance per year) Hazard		
RG-00-309	1 in 2000 AEP (0.05% chance per year) Hazard		
RG-00-310	PMF Hazard		



Contact us:

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ABN 55 616 964 517

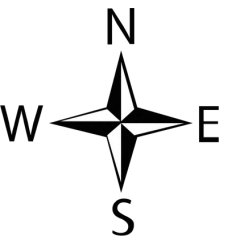
ACN 616 964 517

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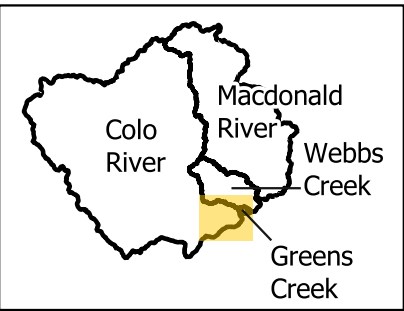
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**Colo River
Calibration
July 2022 – Peak
Depths
Map 1 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 1 2 km

Job Number: J1382

Scale : 1:65000@A3

Date : 03/12/2024

Revision : 01

Created by : SJW

Coordinate System : GDA2020 /
MGA zone 56



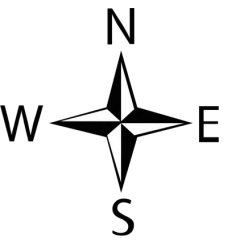
No calibration depth results for Greens Creek

Water Level (mAHD)
(Difference)

- < -0.8
- 0.8 - -0.6
- 0.6 - -0.4
- 0.4 - -0.2
- 0.2 - -0.05
- 0.05 - 0.05
- 0.05 - 0.2
- 0.2 - 0.4
- 0.2 - 0.3
- 0.6 - 0.8
- > 0.8

Values displayed represent the difference between the modelled and observed flood level (AHD).
Negative number denotes that the modelled depth is less than the observed depth.
Positive number denotes that the modelled depth is greater than the observed depth.

Aerial Imagery: NSW Six Map



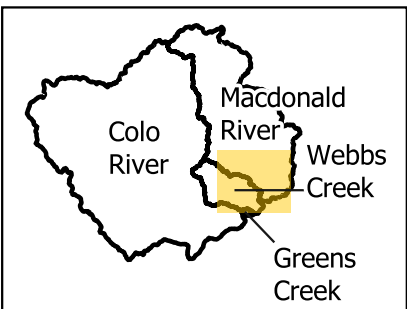
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Macdonald River Calibration July 2022 – Peak Depths Map 2 of 2

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 2 4 km

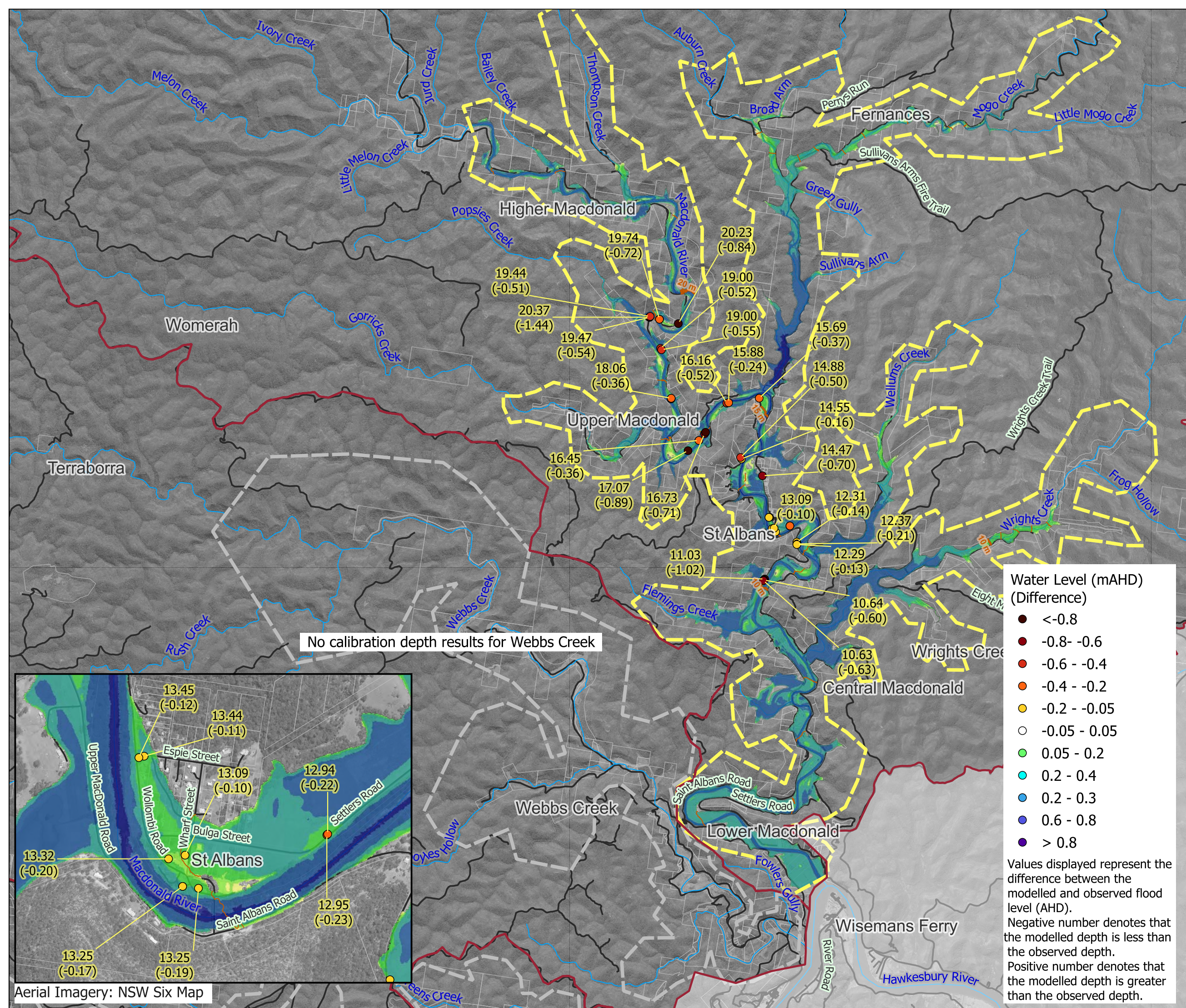
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Revision : 01
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Coordinate System : GDA2020 /
MGA zone 56



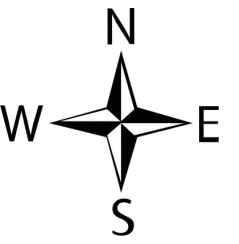
Water Level (mAHD)
(Difference)

- <-0.8
- 0.8 - -0.6
- 0.6 - -0.4
- 0.4 - -0.2
- 0.2 - -0.05
- 0.05 - 0.05
- 0.05 - 0.2
- 0.2 - 0.4
- 0.2 - 0.3
- 0.6 - 0.8
- > 0.8

Values displayed represent the difference between the modelled and observed flood level (AHD).
Negative number denotes that the modelled depth is less than the observed depth.
Positive number denotes that the modelled depth is greater than the observed depth.



Aerial Imagery: NSW Six Map



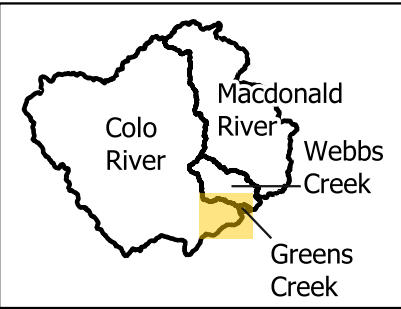
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**Colo River
Calibration
March 2022 – Peak
Depths
Map 1 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 1 2 km

Job Number: J1382

Scale : 1:65000@A3

Date : 03/12/2024

Revision : 01

Created by : SJW

Coordinate System : GDA2020 /
MGA zone 56



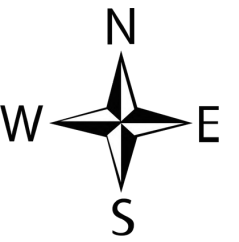
No calibration depth results for Greens Creek

Water Level (mAHD)
(Difference)

- < -0.8
- 0.8 - -0.6
- 0.6 - -0.4
- 0.4 - -0.2
- 0.2 - -0.05
- 0.05 - 0.05
- 0.05 - 0.2
- 0.2 - 0.4
- 0.2 - 0.3
- 0.6 - 0.8
- > 0.8

Values displayed represent the difference between the modelled and observed flood level (AHD).
Negative number denotes that the modelled depth is less than the observed depth.
Positive number denotes that the modelled depth is greater than the observed depth.

Aerial Imagery: NSW Six Map



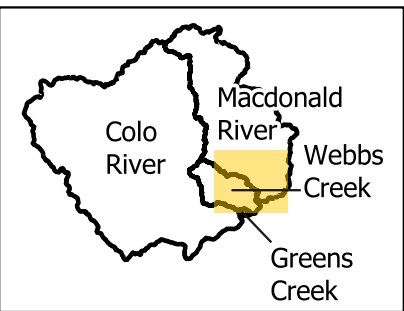
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Macdonald River Calibration March 2022 – Peak Depths Map 2 of 2

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 2 4 km

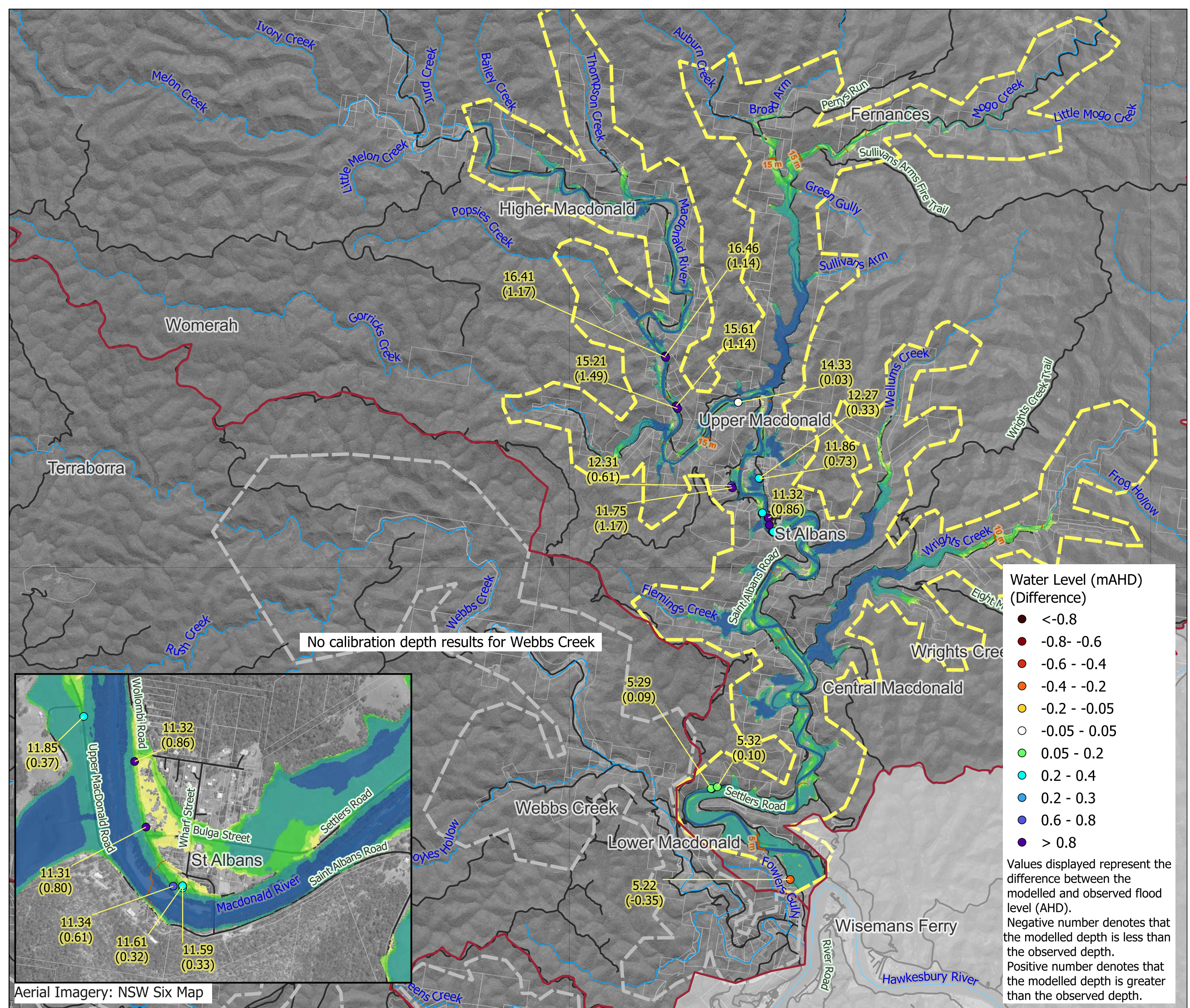
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Scale : 1:90000@A3
Date : 03/12/2024
Revision : 01
Created by : SJW
Coordinate System : GDA2020 /
MGA zone 56



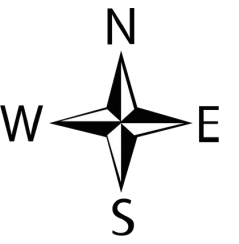
Water Level (mAHD)
(Difference)

- <-0.8
- 0.8 - -0.6
- 0.6 - -0.4
- 0.4 - -0.2
- 0.2 - -0.05
- 0.05 - 0.05
- 0.05 - 0.2
- 0.2 - 0.4
- 0.2 - 0.3
- 0.6 - 0.8
- > 0.8

Values displayed represent the difference between the modelled and observed flood level (AHD).
Negative number denotes that the modelled depth is less than the observed depth.
Positive number denotes that the modelled depth is greater than the observed depth.



Aerial Imagery: NSW Six Map



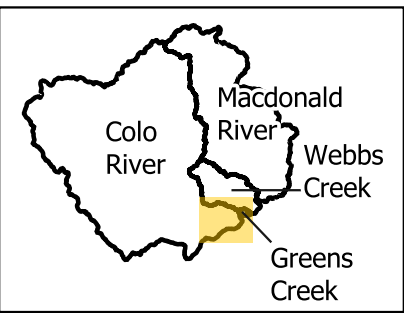
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**Colo River
Calibration
Februray 2020 – Peak
Depths
Map 1 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

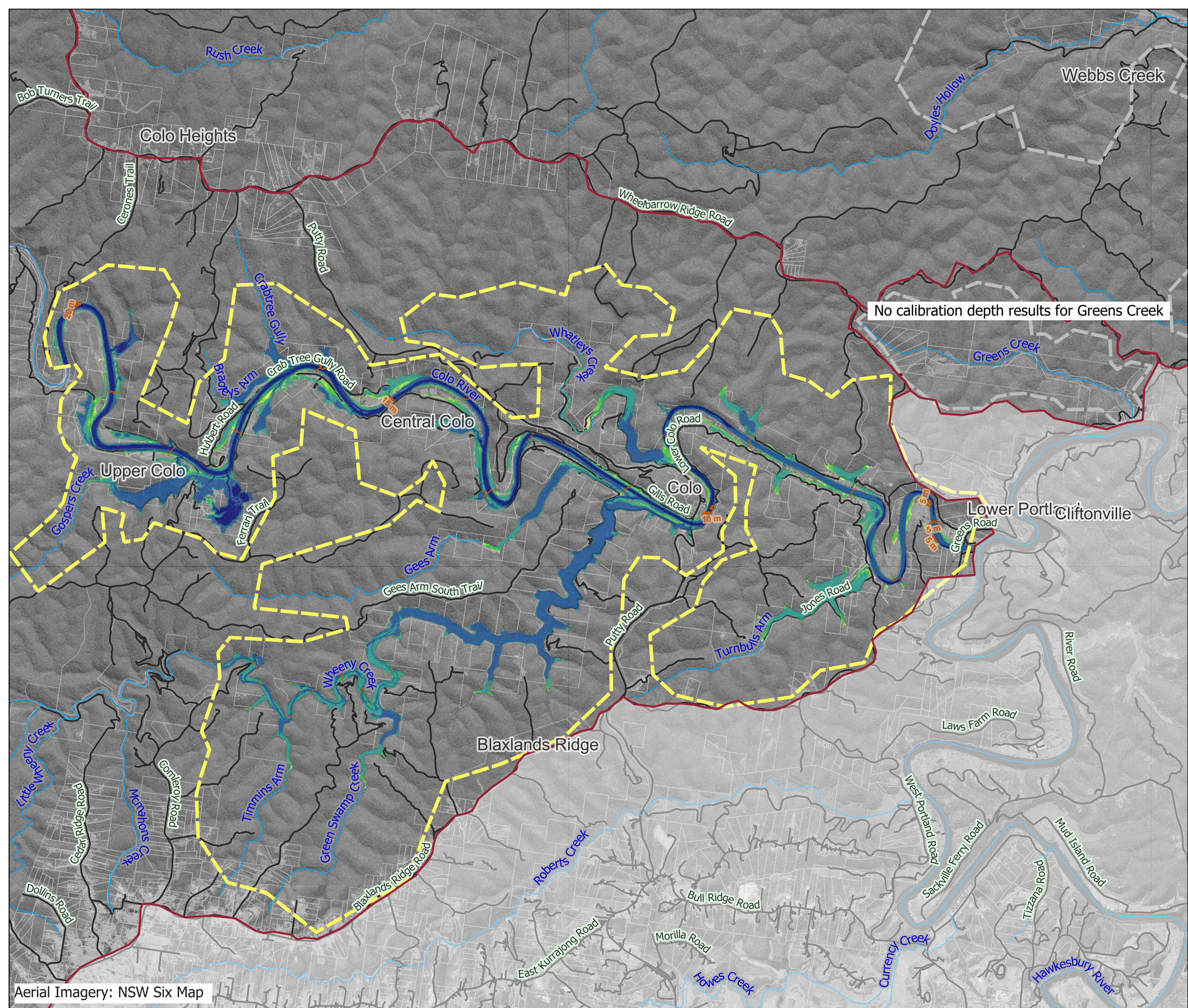
- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10

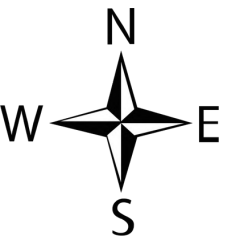


0 1 2 km

Job Number: J1382
Scale : 1:65000@A3
Date : 03/12/2024
Revision : 01
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Coordinate System : GDA2020 /
MGA zone 56

R h e l m





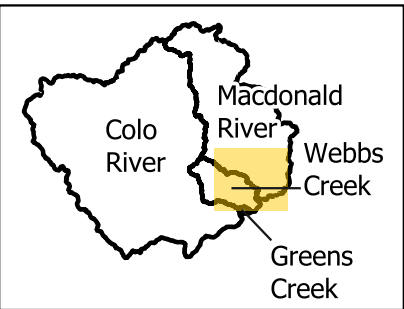
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**Macdonald River
Calibration
Februray 2020 – Peak
Depths
Map 2 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

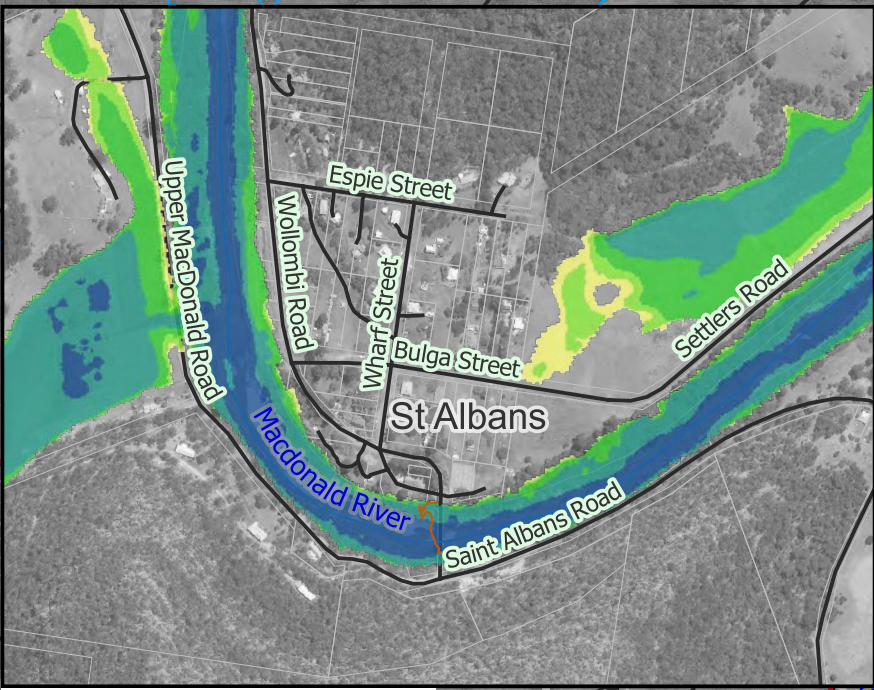
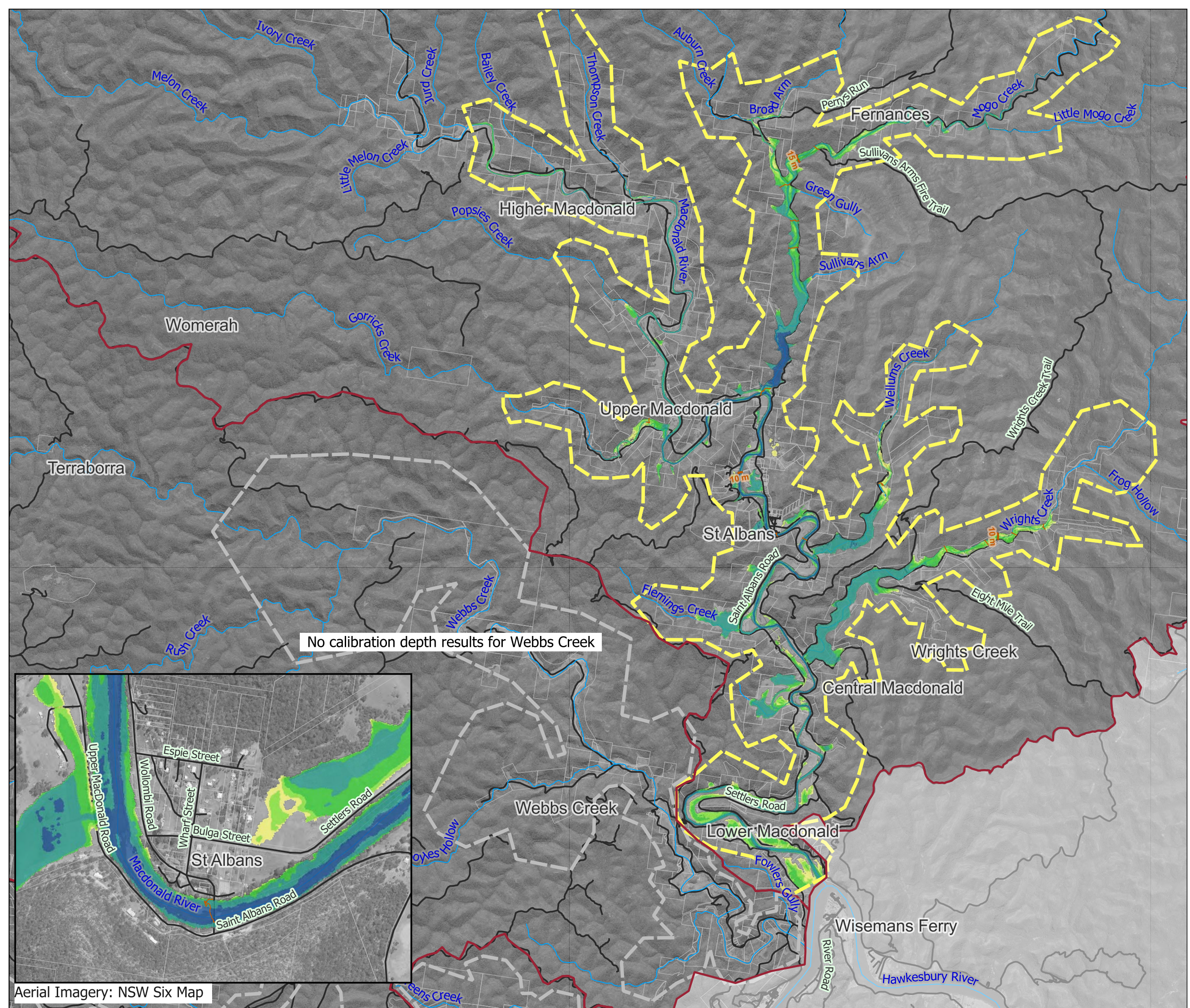
- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



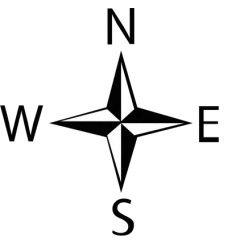
0 2 4 km

Job Number: J1382
Scale : 1:90000@A3
Date : 03/12/2024
Revision : 01
Created by : SJW
Coordinate System : GDA2020 /
MGA zone 56

R h e l m



Aerial Imagery: NSW Six Map



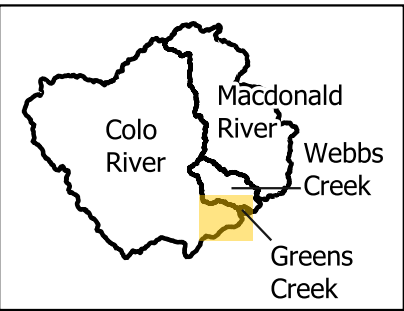
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**Colo River
Calibration
March 1978 – Peak
Depths
Map 1 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

Flood Depth (m)

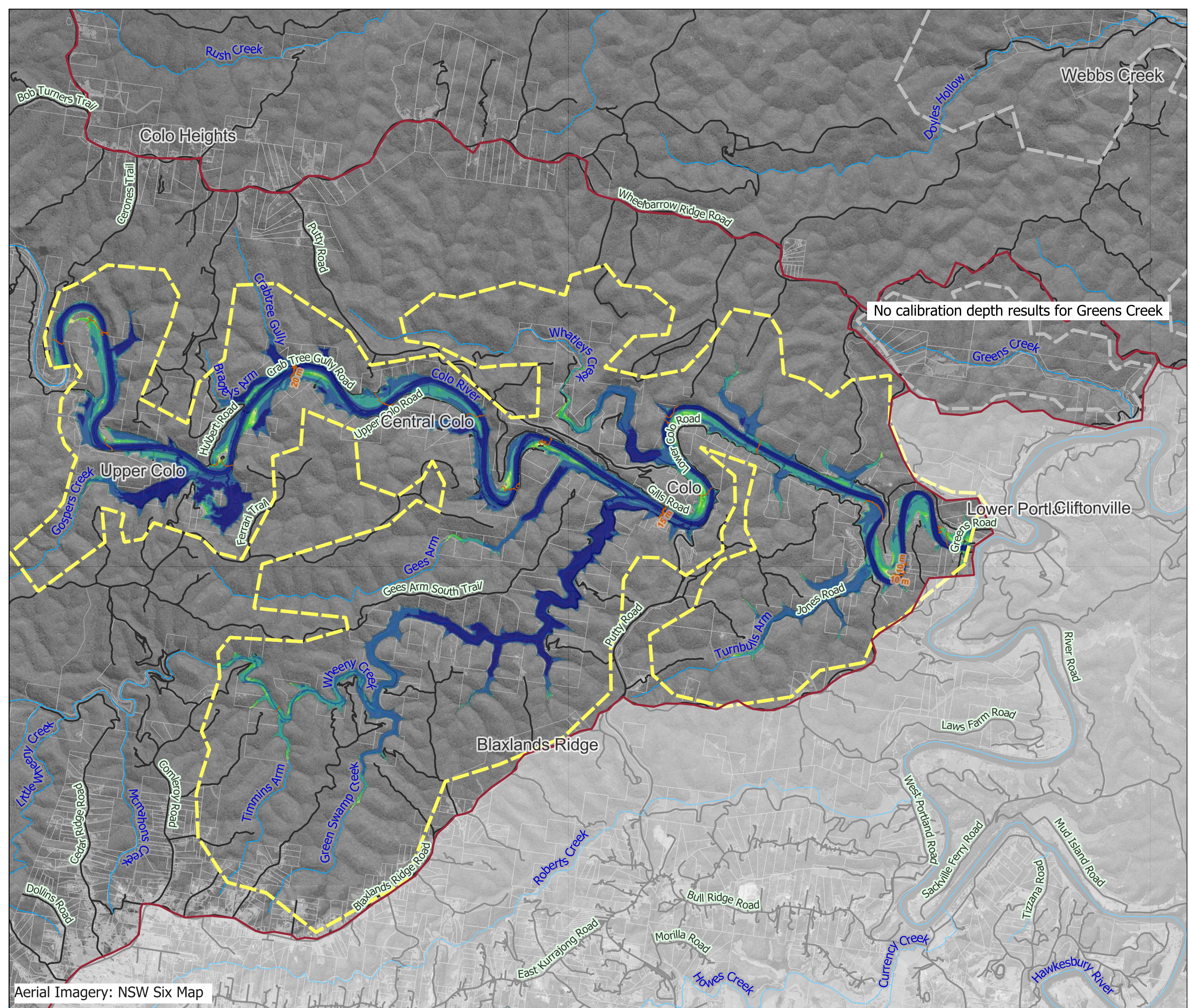
- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10

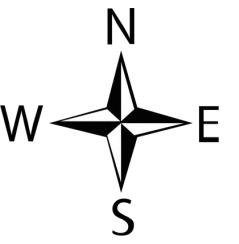


0 1 2 km

Job Number: J1382
Scale : 1:65000@A3
Date : 03/12/2024
Revision : 01
Created by : SJW
Coordinate System : GDA2020 /
MGA zone 56

R h e l m





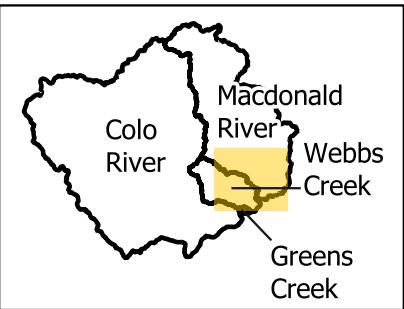
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**Macdonald River
Calibration
March 1978 – Peak
Depths
Map 2 of 2**

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Cadastre
- Road
- Waterway
- Water Level Contours

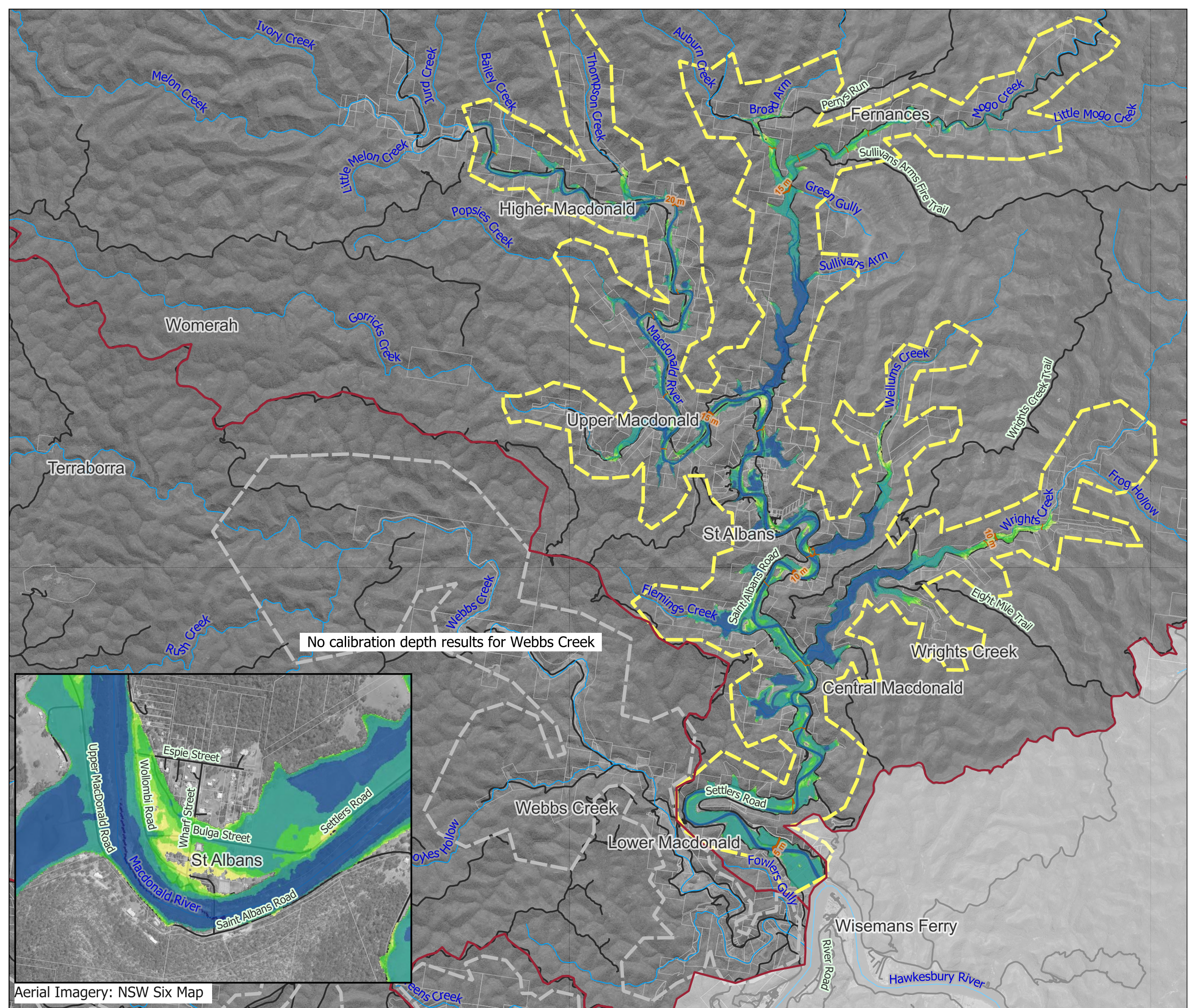
Flood Depth (m)

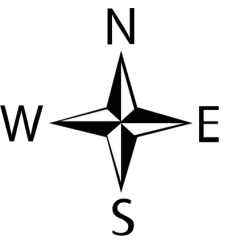
- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 2 4 km

Job Number: J1382
Scale : 1:90000@A3
Date : 03/12/2024
Revision : 01
Created by : SJW
Coordinate System : GDA2020 /
MGA zone 56



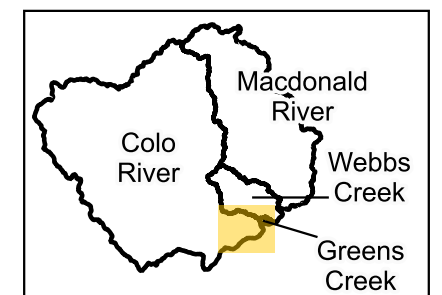


RG-00-101a
Catchment Driven
Colo River
Peak Depth and Level
20% AEP
Map 1 of 4

- Study Area Catchments
- Subject Model Extent
- Model Extent
- Road
- Waterway
- Water Level Contours

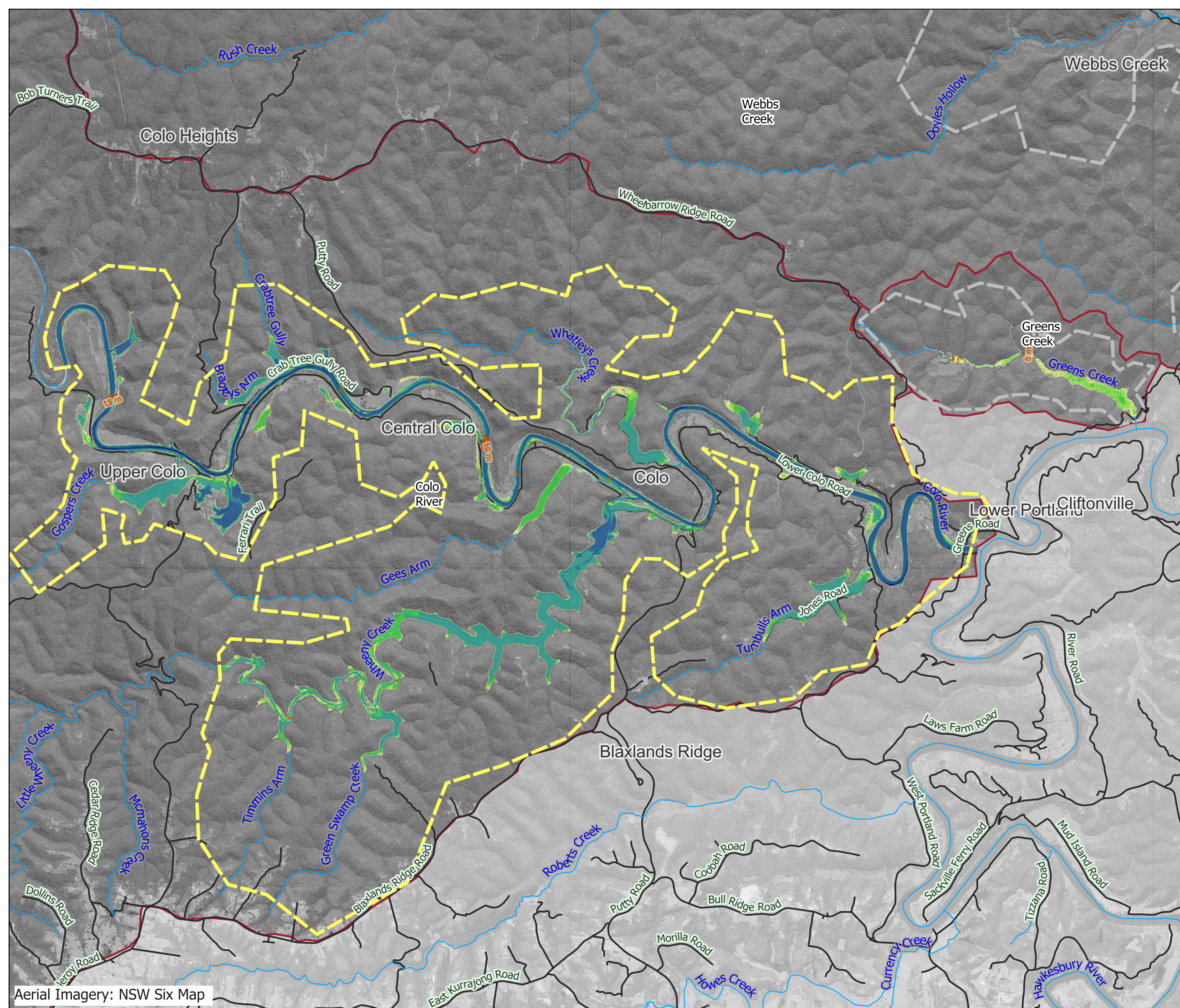
Peak Flood Depth (m)

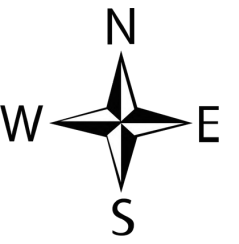
- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10
- > 10



0 1 2 km

Job Number: J1382
Scale : 1:65000@A3
Date : 04/12/2024
Revision : 01
Created by : AM
Coordinate System : GDA2020 /
MGA zone 56





RG-00-101b
Catchment Driven
Macdonald River
Peak Depth and Level
20% AEP
Map 2 of 4

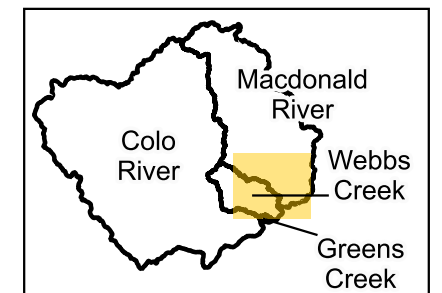
- Study Area Catchments
- Subject Model Extent
- Model Extent
- Road
- Waterway

Water Level Contours



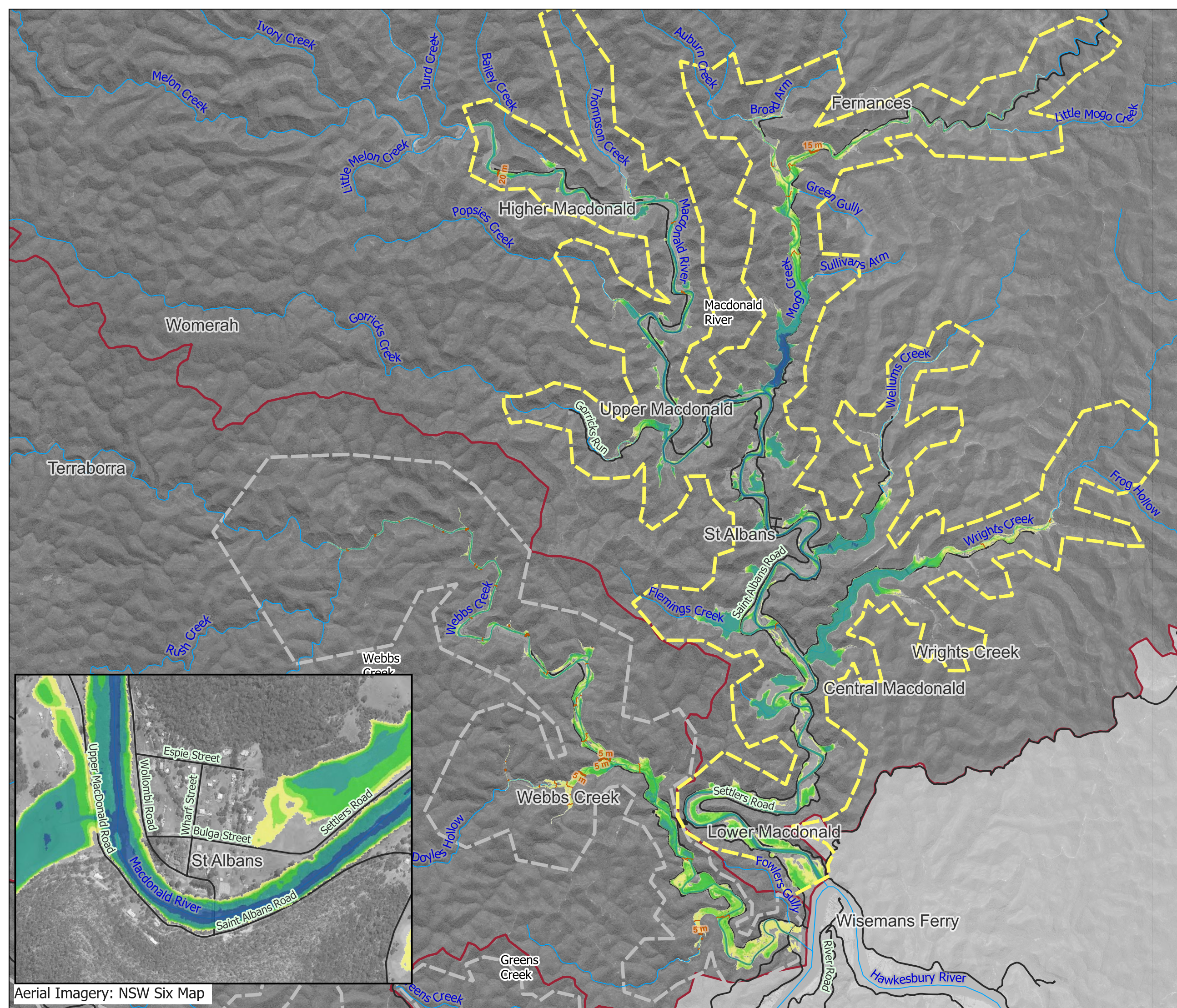
Peak Flood Depth (m)

- 0 - 0.5
- 0.5 - 1
- 1 - 2
- 2 - 5
- 5 - 10



0 2 4 km

Job Number: J1382
Scale : 1:90000@A3
Date : 04/12/2024
Revision : 01
Created by : AM
Coordinate System : GDA2020 /
MGA zone 56



Aerial Imagery: NSW Six Map