

# Wyong River Catchment Floodplain Risk Management Study

**Final Draft Report Volume 2 of 2: Figures** 



# **FIGURES**

Figure 1: Wyong River Catchment

Figure 2: Environmental and Heritage Constraints

• Figure 3: Ground Surface Elevations

#### Map Set A – The Existing Flood Risk

• Figure A1: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood

• Figure A2: Peak Floodwater Depths, Velocities & Levels for the 5% AEP Flood

• Figure A3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood

• Figure A4: Peak Floodwater Depths, Velocities & Levels for the PMF

• Figure A5: Flood Hazard for the 1% AEP Flood

• Figure A6: Flood Hazard for the PMF

Figure A7: Emergency Response Classifications for the 1% AEP Flood

• Figure A8: Emergency Response Classifications for the PMF

Figure A9: 1% AEP Hydraulic Categories

• Figure A10: PMF Hydraulic Categories

Figure A11: Flood Planning Area

• Figure A12: Existing Flood Risk for the 20% AEP Event

• Figure A13: Existing Flood Risk for the 5% AEP Event

Figure A14: Existing Flood Risk for the 1% AEP Event

Figure A15: Existing Flood Risk for the PMF Event

• Figure A16: Peak 1% AEP Flood Extent with 15% increase in Rainfall & 0.4m Increase in Tuggerah Lake Level

• Figure A17: Peak 1% AEP Flood Extent with 30% increase in Rainfall & 0.9m Increase in Tuggerah Lake Level

• Figure A18: Hydrological Infrastructure used for Wyong River Flood Warning System

## Map Set B - Mardi Creek Detention Basin

• Figure B1: Conceptual Layout for Mardi Creek Detention Basin

Figure B2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Mardi Creek Detention Basin

Figure B3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Mardi Creek Detention Basin

• Figure B4: Flood Level Difference Mapping for the 20% AEP Flood with Mardi Creek Detention Basin

 Figure B5: Flood Level Difference Mapping for the 1% AEP Flood with Mardi Creek Detention Basin

#### Map Set C – Anzac Road Levee

• Figure C1: Conceptual Layout for Anzac Road Levee

Figure C2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Anzac Road Levee

• Figure C3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Anzac Road Levee

Figure C4: Flood Level Difference Mapping for the 20% AEP Flood with Anzac Road Levee

• Figure C5: Flood Level Difference Mapping for the 1% AEP Flood with Anzac Road Levee

#### Map Set D - Mardi Creek Relief Floodway

• Figure D1: Conceptual Layout for Mardi Creek Relief Floodway

Figure D2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Mardi Creek Floodway

Figure D3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Mardi Creek Floodway

Figure D4: Flood Level Difference Mapping for the 20% AEP Flood with Mardi Creek Floodway

• Figure D5: Flood Level Difference Mapping for the 1% AEP Flood with Mardi Creek Floodway

## Map Set E - South Tacoma Relief Floodway

- Figure E1: Conceptual Layout for South Tacoma Relief Floodway
- Figure E2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with South Tacoma Floodway
- Figure E3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with South Tacoma Floodway
- Figure E4: Flood Level Difference Mapping for the 20% AEP Flood with South Tacoma Floodway
- Figure E5: Flood Level Difference Mapping for the 1% AEP Flood with South Tacoma Floodway

#### Map Set F – Vegetation Removal across Lower Floodplain

- Figure F1: Extent of Potential Vegetation Removal
- Figure F2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Vegetation Removed
- Figure F3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Vegetation Removed
- Figure F4: Flood Level Difference Mapping for the 20% AEP Flood with Vegetation Removed
- Figure F5: Flood Level Difference Mapping for the 1% AEP Flood with Vegetation Removed

#### Map Set G – Mardi Creek Debris Control Structures

- Figure G1: Potential Location of Debris Control Structures
- Figure G2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Debris Control Structures
- Figure G3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Debris Control Structures
- Figure G4: Flood Level Difference Mapping for the 20% AEP Flood with Debris Control Structures
- Figure G5: Flood Level Difference Mapping for the 1% AEP Flood with Debris Control Structures

# Map Set H – Wyong River Dredging

- Figure H1: Extent of Potential Wyong River Dredging
- Figure H2: Peak Floodwater Depths, Velocities & Levels for the 20% AEP Flood with Dredging
- Figure H3: Peak Floodwater Depths, Velocities & Levels for the 1% AEP Flood with Dredging
- Figure H4: Flood Level Difference Mapping for the 20% AEP Flood with Dredging
- Figure H5: Flood Level Difference Mapping for the 1% AEP Flood with Dredging

# Map Set I – Property Modification Options

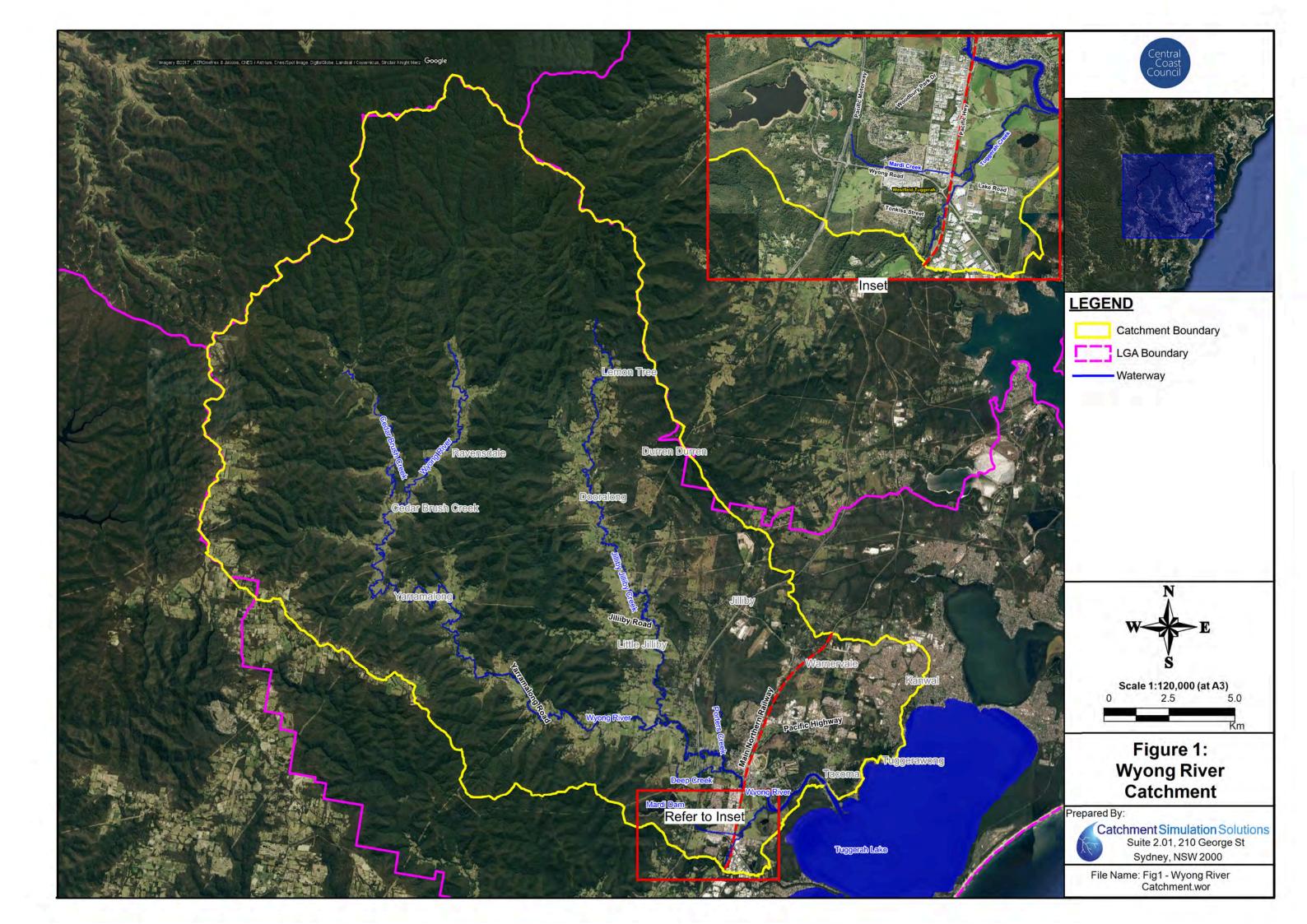
- Figure I1: Location of Houses Potentially Eligible for Voluntary Purchase
- Figure I2: Location of Houses Potentially Eligible for Voluntary Raising
- Figure 13: Location of Houses Potentially Eligible for Voluntary Flood Proofing
- Figure I4: Areas Where Exceptional Circumstances Could Be Considered
- Figure I5: Areas Where Shelter-In-Place Controls Could Be Considered within the Flood Planning Area

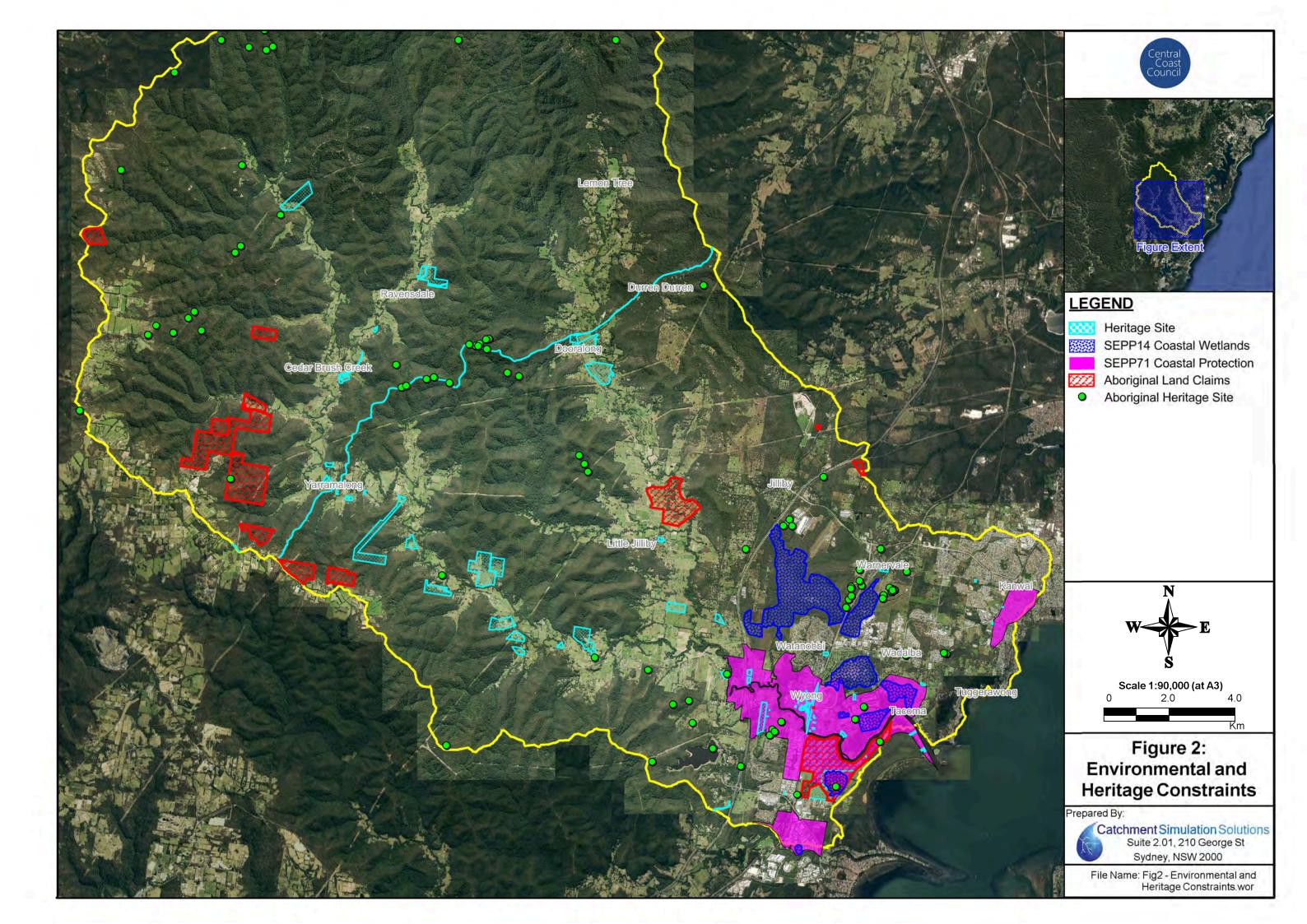
#### Map Set J – Response Modification Options

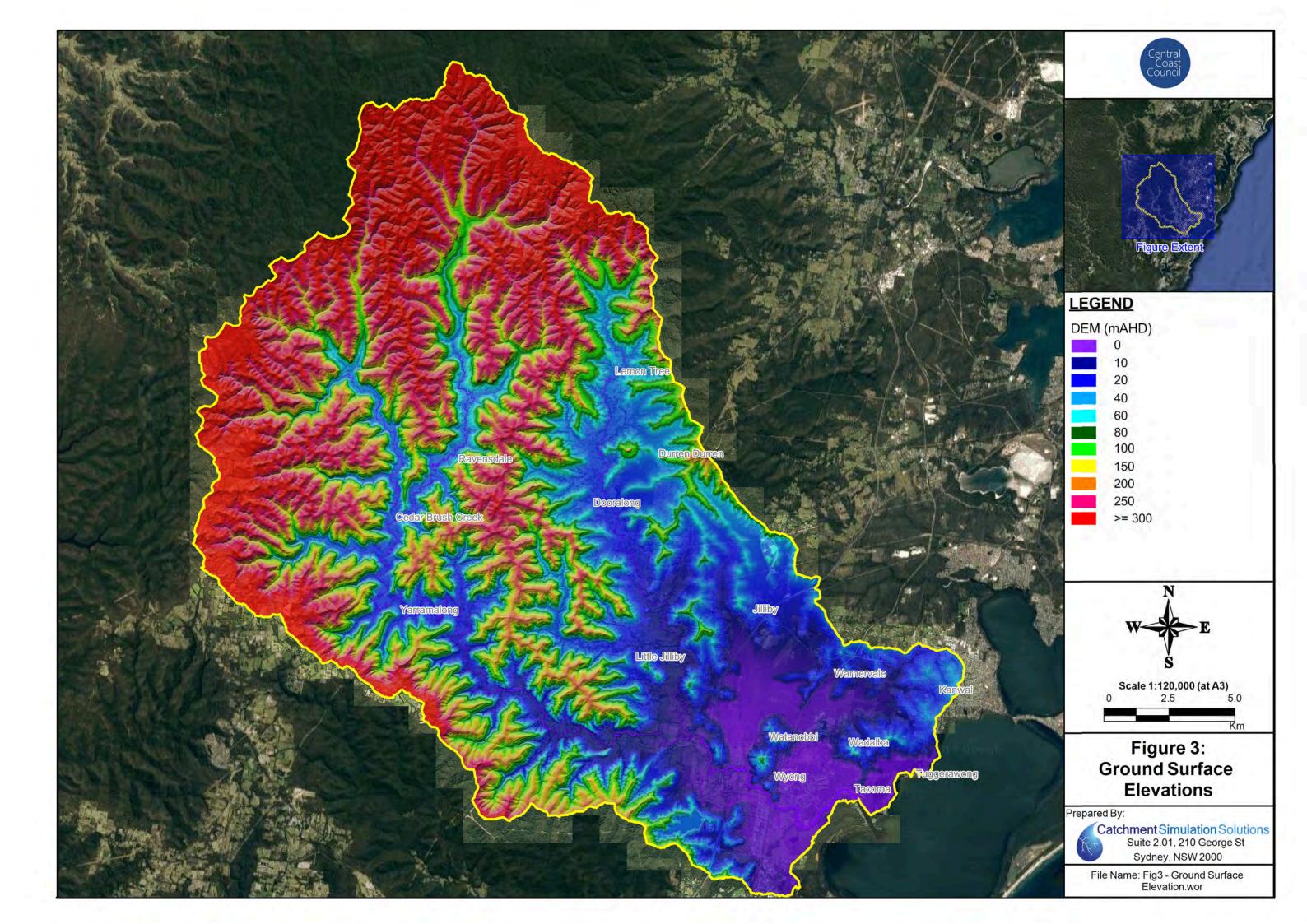
- Figure J1: Critical Roadway Overtopping Locations
- Figure J2: Potential Flood Gate Locations

#### Map Set K – Draft Floodplain Risk Management Plan

• Figure K1: Recommended Flood Risk Management Options









THE EXISTING FLOODING RISK

