

# Frenchmans and Thozets Creek Local Catchment Study

Baseline Flooding and Hazard Assessment - Volume 2

Client: Rockhampton Regional Council

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26-Sep-2017

Job No.: 60534898

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## **Explanatory Notes and Disclaimer**

These maps are to be read in conjunction with the Frenchmans & Thozets Creek Local Catchment Study - Volume 1 (AECOM, 2017). Study methodology and assumptions are outlined in the Volume 1 report.

This mapping has been developed to represent local catchment flood behaviour in the Frenchmans & Thozets Creek catchment area, bounded by the model extents described in the Volume 1 report. It is noted that flooding occurs upstream and downstream of these locations which are outside the extent of the two-dimensional hydraulic models.

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

The development of the TUFLOW hydraulic model is detailed in the Frenchmans & Thozets Creek Local Catchment Study - Volume 1 (AECOM, 2017). This report outlines input data, modelling assumptions and schematisation parameters adopted.

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

Hydraulic model results used in this mapping is based on a 3m 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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### Frenchmans / Thozets Creeks Baseline Mapping

Map Number	Title
FT-01	Peak Flood Depths (1 EY 90min Storm Event)
FT-02	Peak Flood Heights (1 EY 90min Storm Event)
FT-03	Peak Depth Averaged Flood Velocity (1 EY 90min Storm Event)
FT-04	Peak Flood Depths (39% AEP 90min Storm Event)
FT-05	Peak Flood Heights (39% AEP 90min Storm Event)
FT-06	Peak Depth Averaged Flood Velocity (39% AEP 90min Storm Event)
FT-07	Peak Flood Depths (18% AEP 90min Storm Event) Catchment Overview
FT-08	Peak Flood Depths (18% AEP 90min Storm Event) Area 1
FT-09	Peak Flood Depths (18% AEP 90min Storm Event) Area 2
FT-10	Peak Flood Depths (18% AEP 90min Storm Event) Area 3
FT-11	Peak Flood Depths (18% AEP 90min Storm Event) Area 4
FT-12	Peak Flood Depths (18% AEP 90min Storm Event) Area 5
FT-13	Peak Flood Heights (18% AEP 90min Storm Event) Catchment Overview
FT-14	Peak Flood Heights (18% AEP 90min Storm Event) Area 1
FT-15	Peak Flood Heights (18% AEP 90min Storm Event) Area 2
FT-16	Peak Flood Heights (18% AEP 90min Storm Event) Area 3
FT-17	Peak Flood Heights (18% AEP 90min Storm Event) Area 4
FT-18	Peak Flood Heights (18% AEP 90min Storm Event) Area 5
FT-19	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Catchment Overview
FT-20	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Area 1
FT-21	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Area 2
FT-22	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Area 3
FT-23	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Area 4
FT-24	Peak Depth Averaged Flood Velocity (18% AEP 90min Storm Event) Area 5
FT-25	Peak Flood Depths (10% AEP 90min Storm Event)
FT-26	Peak Flood Heights (10% AEP 90min Storm Event)
FT-27	Peak Depth Averaged Flood Velocity (10% AEP 90min Storm Event)
FT-28	Peak Flood Depths (5% AEP 90min Storm Event)
FT-29	Peak Flood Heights (5% AEP 90min Storm Event)
FT-30	Peak Depth Averaged Flood Velocity (5% AEP 90min Storm Event)
FT-31	Peak Flood Depths (2% AEP 90min Storm Event)
FT-32	Peak Flood Heights (2% AEP 90min Storm Event)

Map Number	Title Title
FT-33	Peak Depth Averaged Flood Velocity (2% AEP 90min Storm Event)
FT-34	Peak Flood Depths (1% AEP across multiple storm durations) Catchment Overview
FT-35	Peak Flood Depths (1% AEP across multiple storm durations) Area 1
FT-36	Peak Flood Depths (1% AEP across multiple storm durations) Area 2
FT-37	Peak Flood Depths (1% AEP across multiple storm durations) Area 3
FT-38	Peak Flood Depths (1% AEP across multiple storm durations) Area 4
FT-39	Peak Flood Depths (1% AEP across multiple storm durations) Area 5
FT-40	Peak Flood Heights (1% AEP across multiple storm durations) Catchment Overview
FT-41	Peak Flood Heights (1% AEP across multiple storm durations) Area 1
FT-42	Peak Flood Heights (1% AEP across multiple storm durations) Area 2
FT-43	Peak Flood Heights (1% AEP across multiple storm durations) Area 3
FT-44	Peak Flood Heights (1% AEP across multiple storm durations) Area 4
FT-45	Peak Flood Heights (1% AEP across multiple storm durations) Area 5
FT-46	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Catchment Overview
FT-47	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 1
FT-48	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 2
FT-49	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 3
FT-50	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 4
FT-51	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 5
FT-52	Peak Flood Depths (0.2% AEP 90min Storm Event)
FT-53	Peak Flood Heights (0.2% AEP 90min Storm Event)
FT-54	Peak Depth Averaged Flood Velocity (0.2% AEP 90min Storm Event)
FT-55	Peak Flood Depths (0.05% AEP 90min Storm Event)
FT-56	Peak Flood Heights (0.05% AEP 90min Storm Event)
FT-57	Peak Depth Averaged Flood Velocity (0.05% AEP 90min Storm Event)
FT-58	Peak Flood Depths (PMF 90min Storm Event)
FT-59	Peak Flood Heights (PMF 90min Storm Event)
FT-60	Peak Depth Averaged Flood Velocity (PMF 90min Storm Event)
FT-61	Peak Flood Extent (90min Storm Event)

### **Sensitivity Analyses**

Map Number	Title Title
FT-62	Difference in Peak Flood Height: 15% Increased Roughness minus Baseline (1% AEP 90min Storm Event)
FT-63	Difference in Peak Flood Height: 15% Decreased Roughness minus Baseline (1% AEP 90min Storm Event)
FT-64	Difference in Peak Flood Height: Climate Change to 2100 minus Baseline (1% AEP 90min Storm Event)
FT-65	Difference in Peak Flood Height: 18% AEP Fitzroy River Tailwater Level minus Baseline (1% AEP 90min Storm Event)
FT-66	Difference in Peak Flood Height: 20% Stormwater Infrastructure Blockage minus Baseline (18% AEP 90min Storm Event)
FT-67	Difference in Peak Flood Height: 50% Stormwater Infrastructure Blockage minus Baseline (18% AEP 90min Storm Event)
FT-68	Difference in Peak Flood Height: 100% Stormwater Infrastructure Blockage minus Baseline (18% AEP 90min Storm Event)
FT-69	Difference in Peak Flood Height: Increased Inlet Structure Dimensions minus Baseline (18% AEP 90min Storm Event)
FT-70	Difference in Peak Flood Height: Key Cross Drainage Culvert Blockage minus Baseline (18% AEP 90min Storm Event)

#### Flood Hazard

Map Number	Title
FT-71	Baseline Flood Hazard (18% AEP 180 min Storm Event) Overview
FT-72	Baseline Flood Hazard (18% AEP 180 min Storm Event) Area 1
FT-73	Baseline Flood Hazard (18% AEP 180 min Storm Event) Area 2
FT-74	Baseline Flood Hazard (18% AEP 180 min Storm Event) Area 3
FT-75	Baseline Flood Hazard (18% AEP 180 min Storm Event) Area 4
FT-76	Baseline Flood Hazard (18% AEP 180 min Storm Event) Area 5
FT-77	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Overview
FT-78	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Area 1
FT-79	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Area 2
FT-80	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Area 3
FT-81	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Area 4
FT-82	Baseline Flood Hazard (1% AEP Across Multiple Storm Durations) Area 5

### Sewerage Infrastructure

Map Number	Title
FT-83	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Overview
FT-84	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Area 1
FT-85	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Area 2
FT-86	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Area 3
FT-87	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Area 4
FT-88	Baseline Sewerage Infrastructure Flood Risk (18% AEP 180 min Storm Event and 1% AEP Across Multiple Storm Durations ) Area 5















































































































































































