

Floodplain Management Service Rockhampton Regional Council 13-Oct-2017

South Rockhampton Local Catchment Study

Baseline Flooding and Hazard Assessment - Volume 2



Floodplain Management Services
South Rockhampton Local Catchment Study – Baseline Flooding and Hazard Assessment - Volume 2

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The South Rockhampton Local Catchment Study was jointly funded with the Department of Local Government, Racing and Multicultural Affairs through the Natural Disaster Resilience Program. The joint project aimed to enhance understanding of localised flood behaviour, along with options for management of the local flood impacts for improved flood resilience in South Rockhampton.

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Explanatory Notes and Disclaimer

These maps are to be read in conjunction with the South Rockhampton 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 South Rockhampton 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 South Rockhampton 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 metres 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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- 2. Using the map/s and associated data for any purpose not agreed to in writing by Rockhampton Regional Council.

Baseline Mapping

Map Number	Title
SR-01	Peak Flood Depths (1 EY 120m Storm Event)
SR-02	Peak Flood Heights (1 EY 120m Storm Event)
SR-03	Peak Depth Averaged Flood Velocity (1 EY 120m Storm Event)
SR-04	Peak Flood Depths (39% AEP 120m Storm Event)
SR-05	Peak Flood Heights (39% AEP 120m Storm Event)
SR-06	Peak Depth Averaged Flood Velocity (39% AEP 120m Storm Event)
SR-07	Peak Flood Depths (18% AEP 120m Storm Event) Overview
SR-08	Peak Flood Depths (18% AEP 120m Storm Event) Area 1
SR-09	Peak Flood Depths (18% AEP 120m Storm Event) Area 2
SR-10	Peak Flood Depths (18% AEP 120m Storm Event) Area 3
SR-11	Peak Flood Depths (18% AEP 120m Storm Event) Area 4
SR-12	Peak Flood Heights (18% AEP 120m Storm Event) Overview
SR-13	Peak Flood Heights (18% AEP 120m Storm Event) Area 1
SR-14	Peak Flood Heights (18% AEP 120m Storm Event) Area 2
SR-15	Peak Flood Heights (18% AEP 120m Storm Event) Area 3
SR-16	Peak Flood Heights (18% AEP 120m Storm Event) Area 4
SR-17	Peak Depth Averaged Flood Velocity (18% AEP 120m Storm Event) Overview
SR-18	Peak Depth Averaged Flood Velocity (18% AEP 120m Storm Event) Area 1
SR-19	Peak Depth Averaged Flood Velocity (18% AEP 120m Storm Event) Area 2
SR-20	Peak Depth Averaged Flood Velocity (18% AEP 120m Storm Event) Area 3
SR-21	Peak Depth Averaged Flood Velocity (18% AEP 120m Storm Event) Area 4
SR-22	Peak Flood Depths (10% AEP 120m Storm Event)
SR-23	Peak Flood Heights (10% AEP 120m Storm Event)
SR-24	Peak Depth Averaged Flood Velocity (10% AEP 120m Storm Event)
SR-25	Peak Flood Depths (5% AEP 120m Storm Event)
SR-26	Peak Flood Heights (5% AEP 120m Storm Event)
SR-27	Peak Depth Averaged Flood Velocity (5% AEP 120m Storm Event)
SR-28	Peak Flood Depths (2% AEP 120m Storm Event)
SR-29	Peak Flood Heights (2% AEP 120m Storm Event)
SR-30	Peak Depth Averaged Flood Velocity (2% AEP 120m Storm Event)
SR-31	Peak Flood Depths (1% AEP across multiple storm durations) Overview
SR-32	Peak Flood Depths (1% AEP across multiple storm durations) Area 1
SR-33	Peak Flood Depths (1% AEP across multiple storm durations) Area 2
SR-34	Peak Flood Depths (1% AEP across multiple storm durations) Area 3
SR-35	Peak Flood Depths (1% AEP across multiple storm durations) Area 4
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Map Number	Title Title
SR-36	Peak Flood Heights (1% AEP across multiple storm durations) Overview
SR-37	Peak Flood Heights (1% AEP across multiple storm durations) Area 1
SR-38	Peak Flood Heights (1% AEP across multiple storm durations) Area 2
SR-39	Peak Flood Heights (1% AEP across multiple storm durations) Area 3
SR-40	Peak Flood Heights (1% AEP across multiple storm durations) Area 4
SR-41	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Overview
SR-42	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 1
SR-43	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 2
SR-44	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 3
SR-45	Peak Depth Averaged Flood Velocity (1% AEP across multiple storm durations) Area 4
SR-46	Peak Flood Depths (0.2% AEP 120m Storm Event)
SR-47	Peak Flood Heights (0.2% AEP 120m Storm Event)
SR-48	Peak Depth Averaged Flood Velocity (0.2% AEP 120m Storm Event)
SR-49	Peak Flood Depths (0.05% AEP 120m Storm Event)
SR-50	Peak Flood Heights (0.05% AEP 120m Storm Event)
SR-51	Peak Depth Averaged Flood Velocity (0.05% AEP 120m Storm Event)
SR-52	Peak Flood Depths (PMF 120m Storm Event)
SR-53	Peak Flood Heights (PMF 120m Storm Event)
SR-54	Peak Depth Averaged Flood Velocity (PMF 120m Storm Event)
SR-55	Peak Flood Extent (120m Storm Event)

Sensitivity Analyses

Map Number	Title
SR-56	Difference in Peak Flood Height: 15% Increased Roughness minus Baseline (1% AEP 120min Storm Event)
SR-57	Difference in Peak Flood Height: 15% Decreased Roughness minus Baseline (1% AEP 120min Storm Event)
SR-58	Difference in Peak Flood Height: Climate Change to 2100 minus Baseline (1% AEP 120min Storm Event)
SR-59	Difference in Peak Flood Height: 18% AEP Fitzroy River Tailwater Level minus Baseline (1% AEP 120min Storm Event)
SR-60	Difference in Peak Flood Height: 20% Stormwater Infrastructure Blockage minus Baseline (18% AEP 120min Storm Event)
SR-61	Difference in Peak Flood Height: 50% Stormwater Infrastructure Blockage minus Baseline (18% AEP 120min Storm Event)
SR-62	Difference in Peak Flood Height: 100% Stormwater Infrastructure Blockage minus Baseline (18% AEP 120min Storm Event)
SR-63	Difference in Peak Flood Height: Increased Inlet Structure Dimensions minus Baseline (18% AEP 120min Storm Event)

Flood Hazard

Map Number	Title
SR-64	Baseline Flood Hazard (18% AEP 120 min Storm Event) Overview
SR-65	Baseline Flood Hazard (18% AEP 120 min Storm Event) Area 1
SR-66	Baseline Flood Hazard (18% AEP 120 min Storm Event) Area 2
SR-67	Baseline Flood Hazard (18% AEP 120 min Storm Event) Area 3
SR-68	Baseline Flood Hazard (18% AEP 120 min Storm Event) Area 4
SR-69	Baseline Flood Hazard (1% AEP across multiple storm durations) Overview
SR-70	Baseline Flood Hazard (1% AEP across multiple storm durations) Area 1
SR-71	Baseline Flood Hazard (1% AEP across multiple storm durations) Area 2
SR-72	Baseline Flood Hazard (1% AEP across multiple storm durations) Area 3
SR-73	Baseline Flood Hazard (1% AEP across multiple storm durations) Area 4

Sewerage Infrastructure

Map Number	Title
SR-74	Baseline Sewerage Infrastructure Flood Risk (18% AEP 120 min Storm Event and 1% AEP Across Multiple Storm Durations) Overview
SR-75	Baseline Sewerage Infrastructure Flood Risk (18% AEP 120 min Storm Event and 1% AEP Across Multiple Storm Durations) Area 1
SR-76	Baseline Sewerage Infrastructure Flood Risk (18% AEP 120 min Storm Event and 1% AEP Across Multiple Storm Durations) Area 2
SR-77	Baseline Sewerage Infrastructure Flood Risk (18% AEP 120 min Storm Event and 1% AEP Across Multiple Storm Durations) Area 3
SR-78	Baseline Sewerage Infrastructure Flood Risk (18% AEP 120 min Storm Event and 1% AEP Across Multiple Storm Durations) Area 4



























































































































































