

Johnstone River Flood Study Final Report

Volume 2 of 2

DRAWING ADDENDUM

Prepared For: Johnstone Shire River Improvement Trust

Prepared By: WBM Oceanics Australia

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Synopsis: This document details the Johnstone River Flood and Floodplain Management Study. On the basis of this Study, the Floodplain Management Steering Committee recommends the inclusion of some of the options presented here for inclusion into the Floodplain Management Plan. The Plan exists as a separate document.	

REVISION/CHECKING HISTORY

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0	19/11/02	C Barton		M Jempson	
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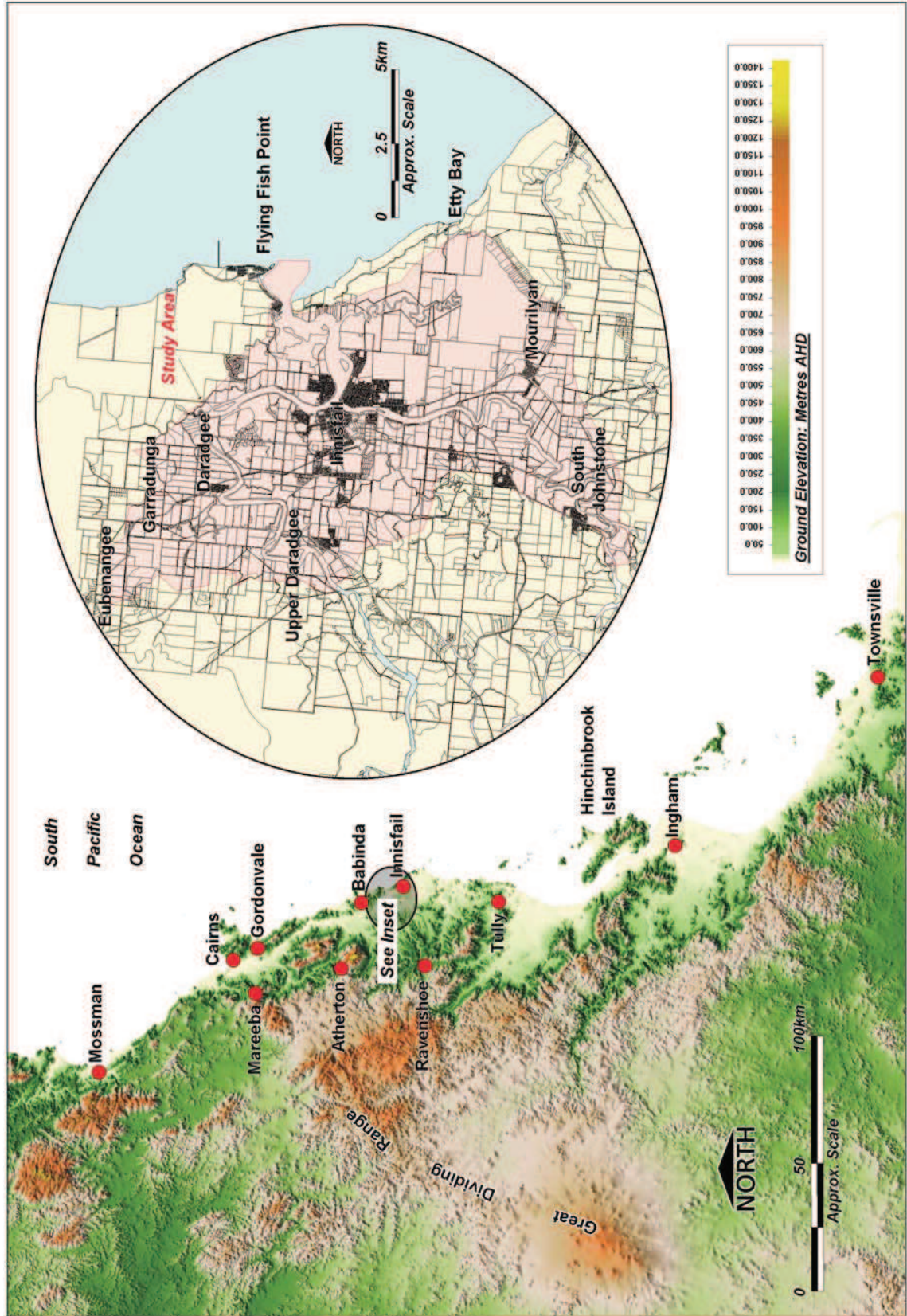
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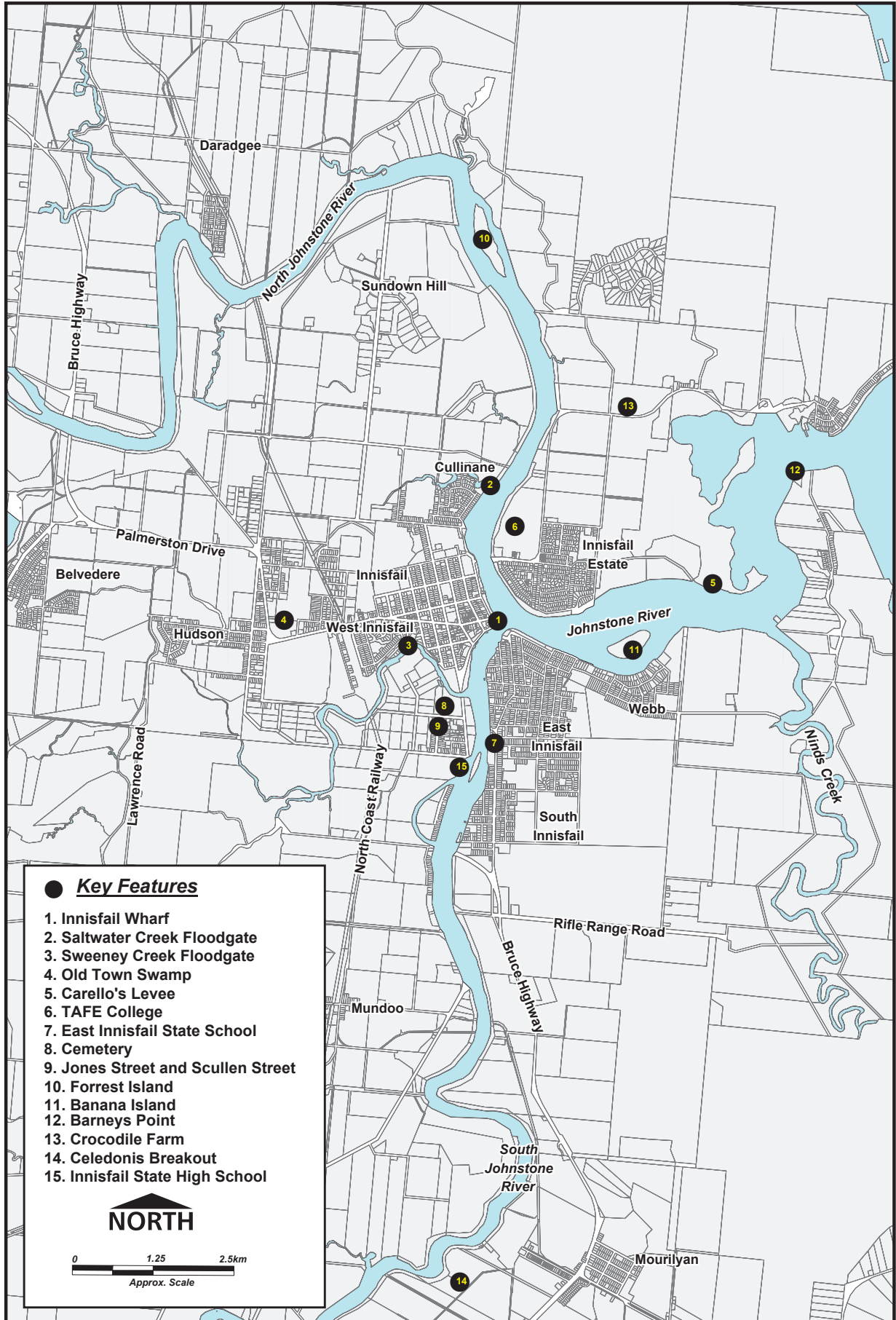
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1 INTRODUCTION



Locality Map

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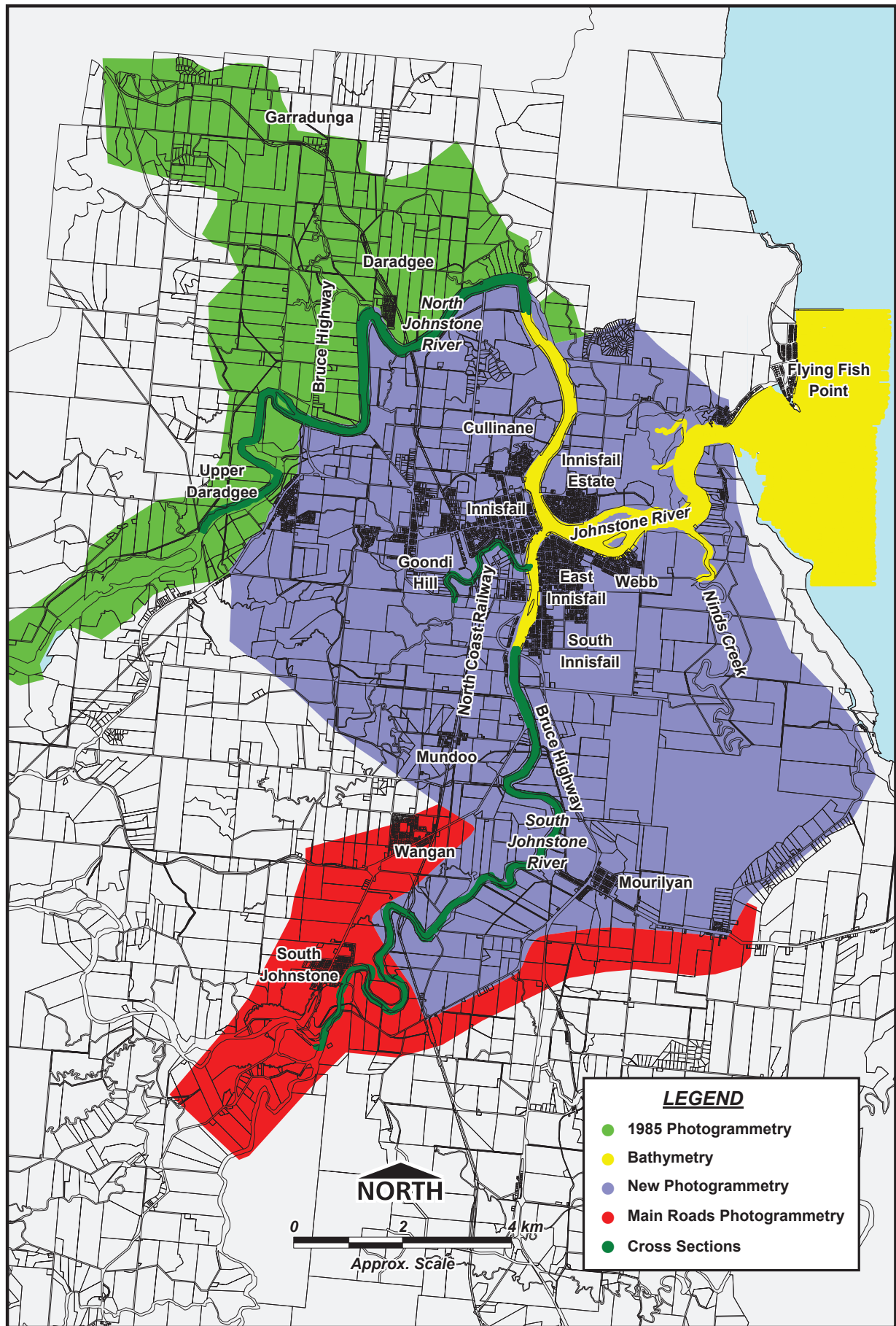


Key Features

Figure 1-2

2 STUDY APPROACH

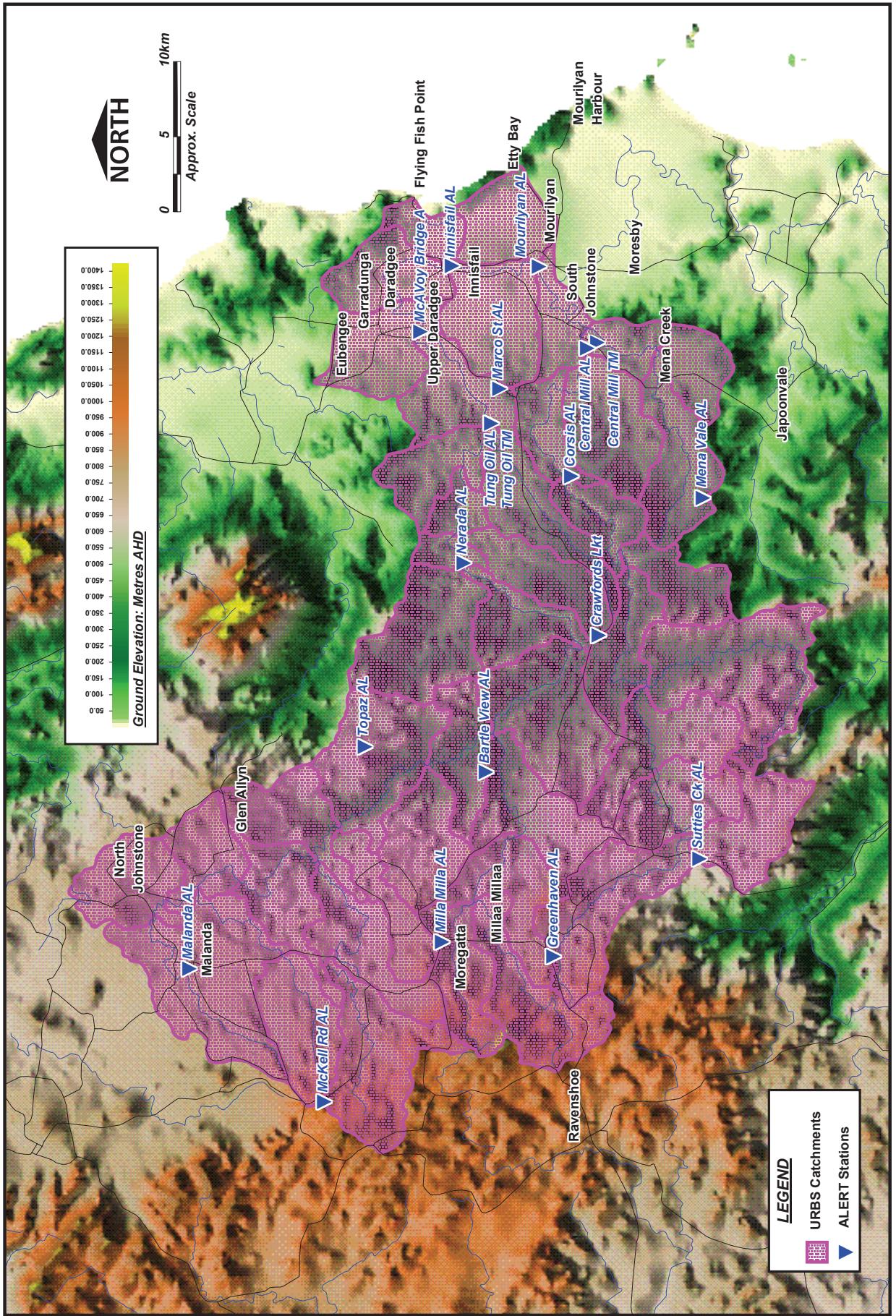
3 DATA COLLECTION



Digital Elevation Model Data Sources

Figure 3-1

4 FLOOD MODEL DEVELOPMENT & CALIBRATION



Johnstone River URBS Sub-catchments and Flood Warning Network

Figure 4-1

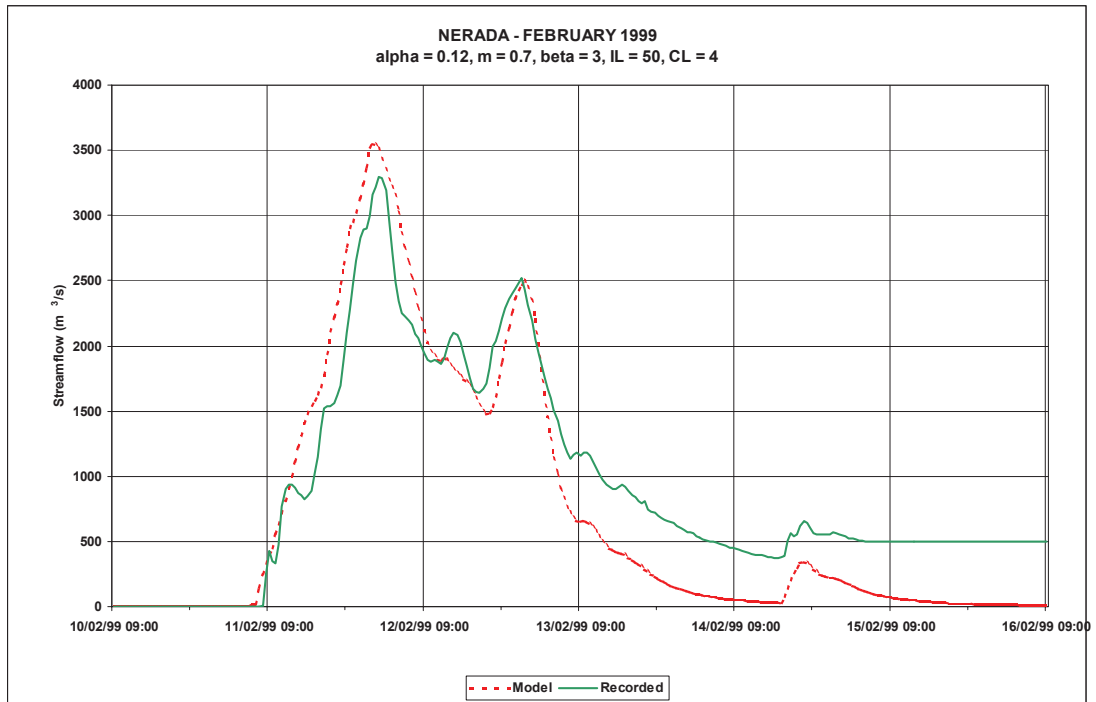


Figure 4.2 URBS Streamflow Calibration – Nerada – February 1999

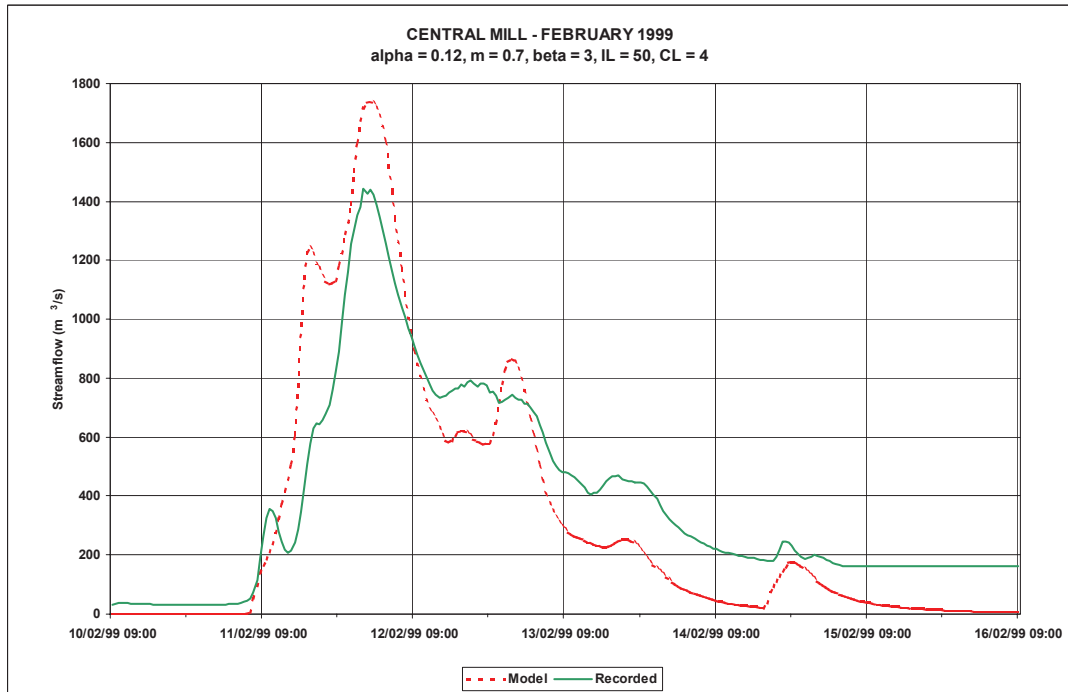


Figure 4.3 URBS Streamflow Calibration – Central Mill – February 1999

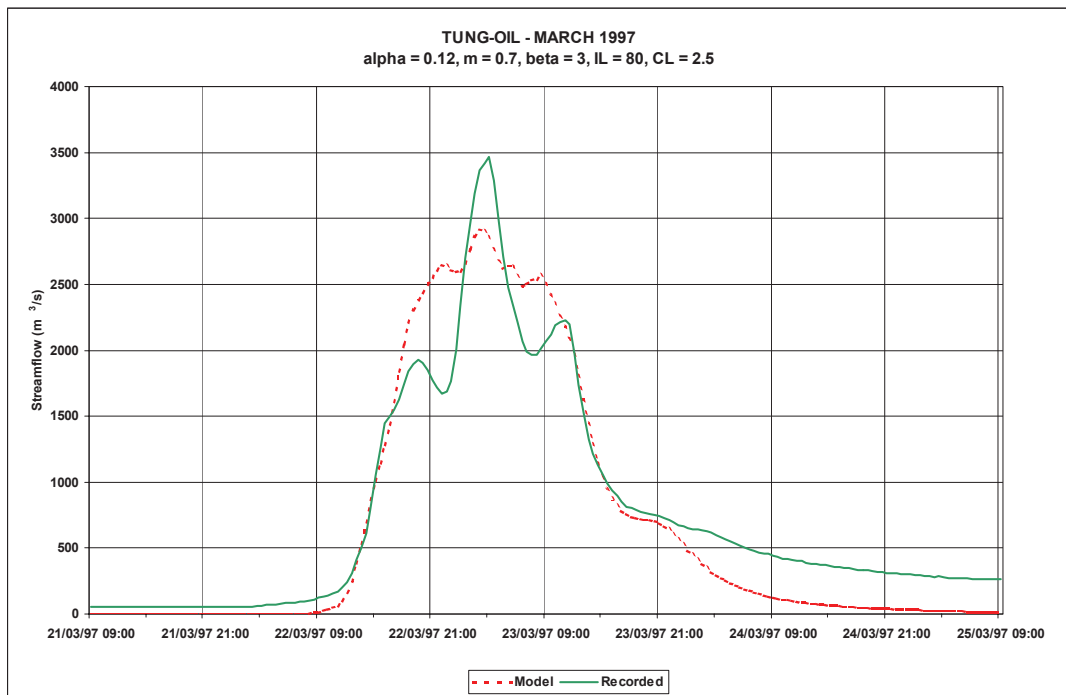


Figure 4.4 URBS Streamflow Calibration – Tung-Oil – March 1997

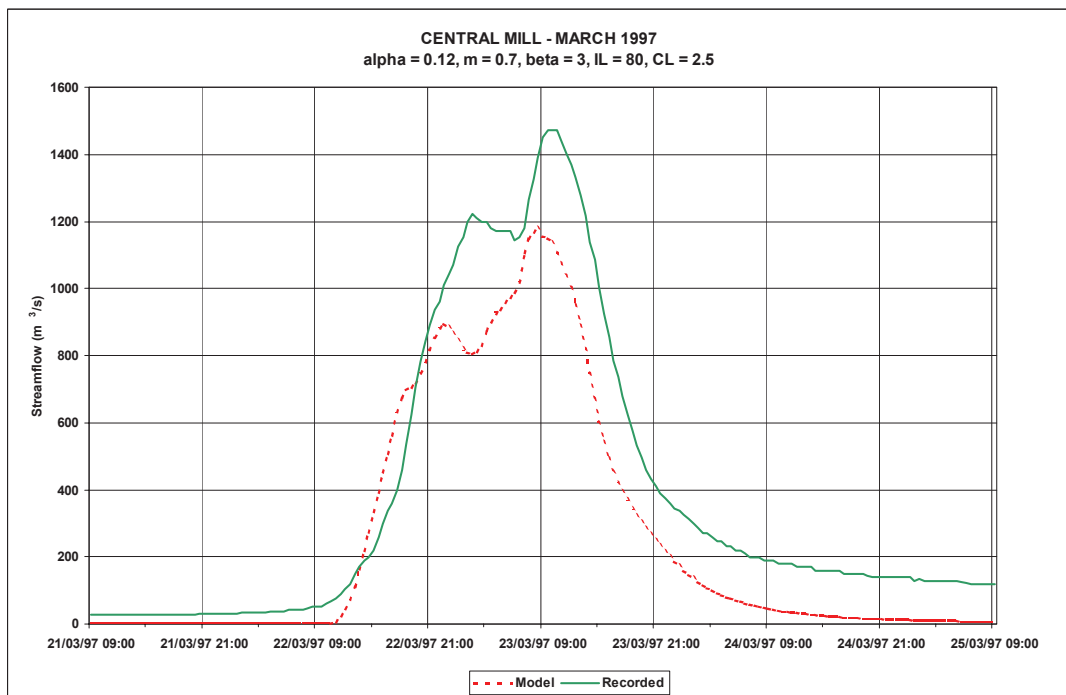


Figure 4.5 URBS Streamflow Calibration – Central Mill – March 1997

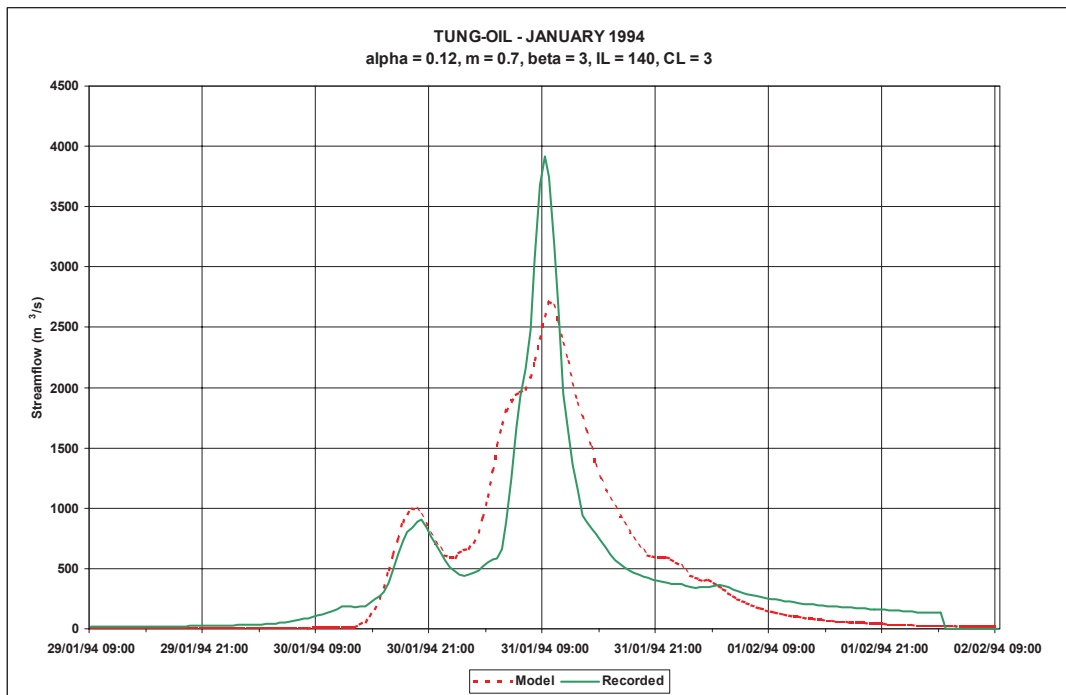


Figure 4.6 URBS Streamflow Calibration – Tung-Oil – January 1994

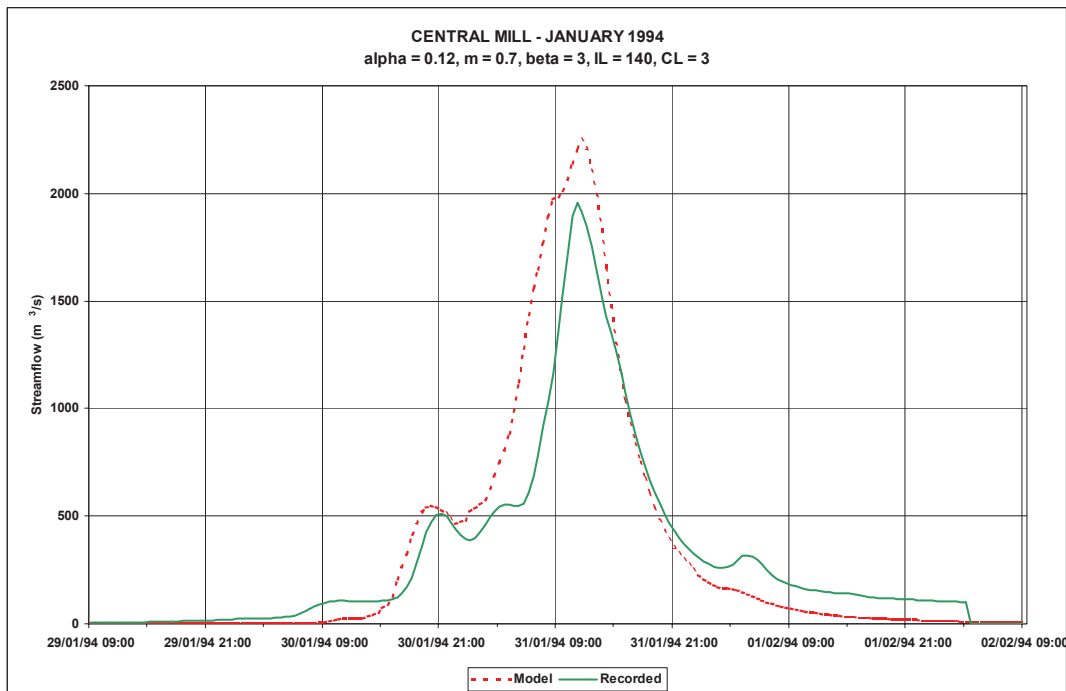


Figure 4.7 URBS Streamflow Calibration – Central Mill – January 1994

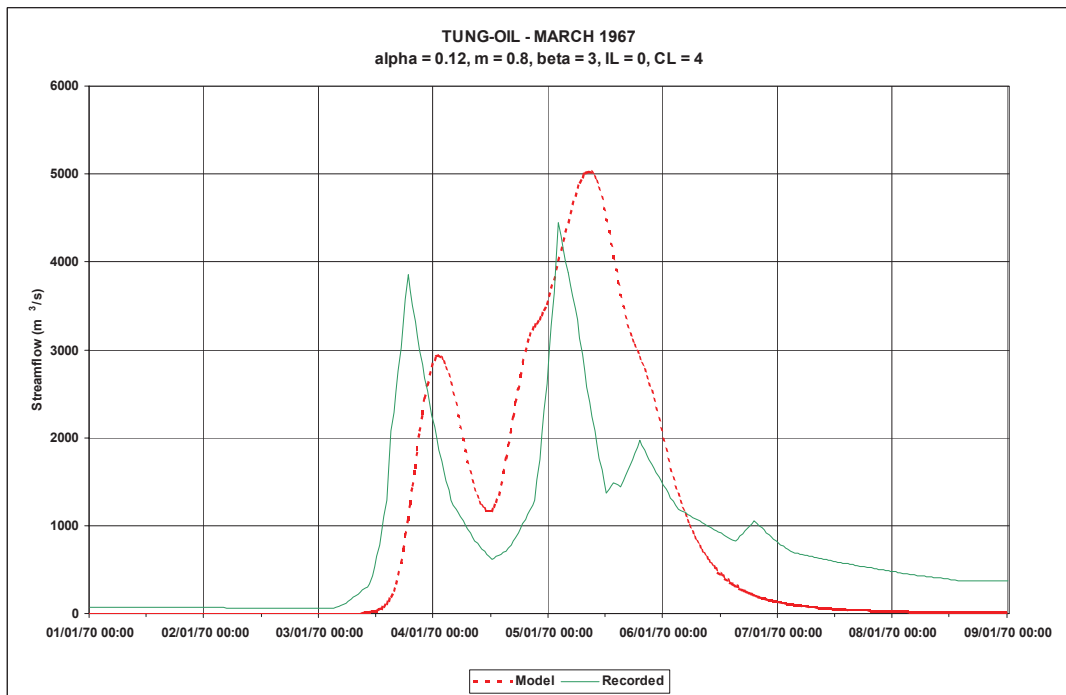


Figure 4.8 URBS Streamflow Calibration – Tung-Oil – March 1967

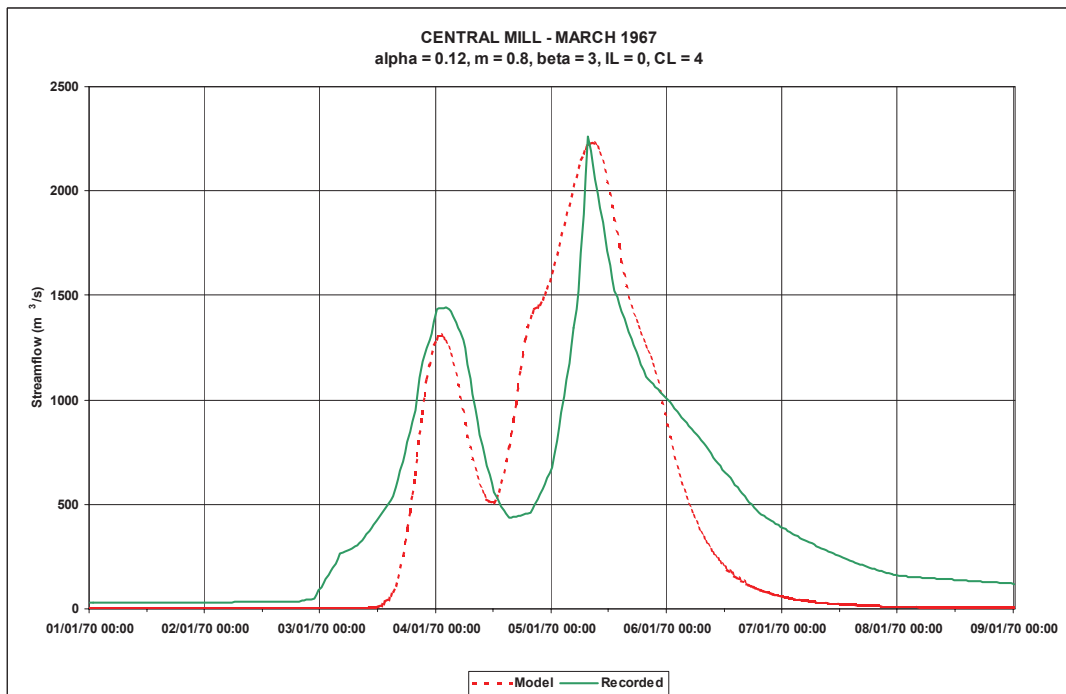


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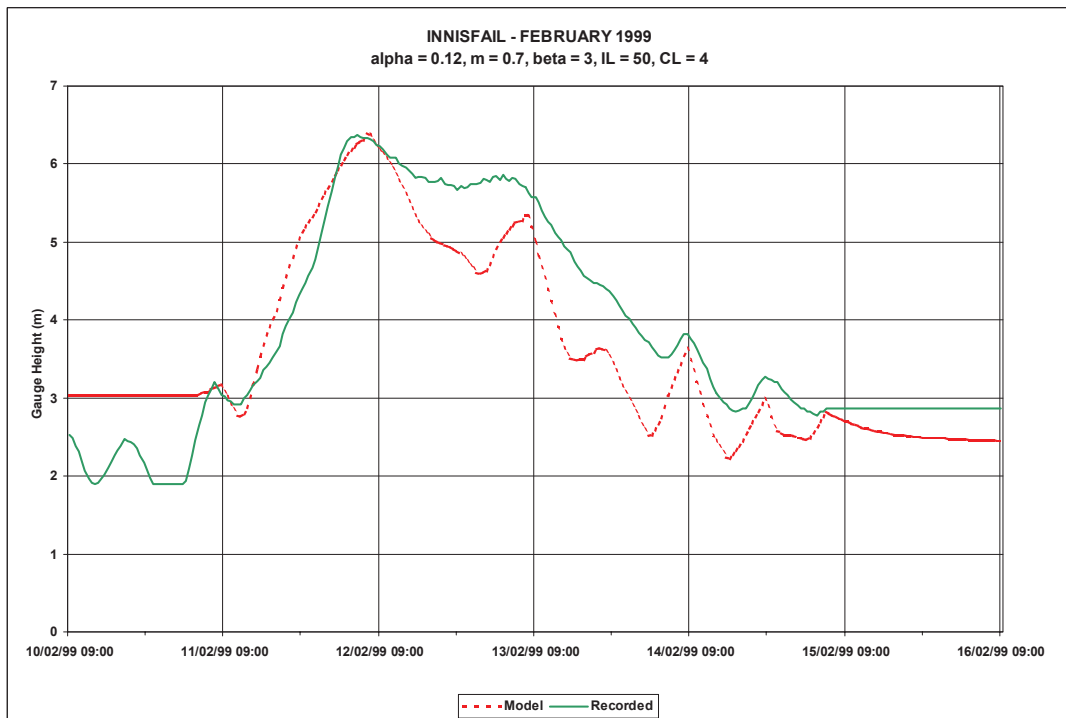


Figure 4.10 URBS Flood Height Calibration – Innisfail – February 1999

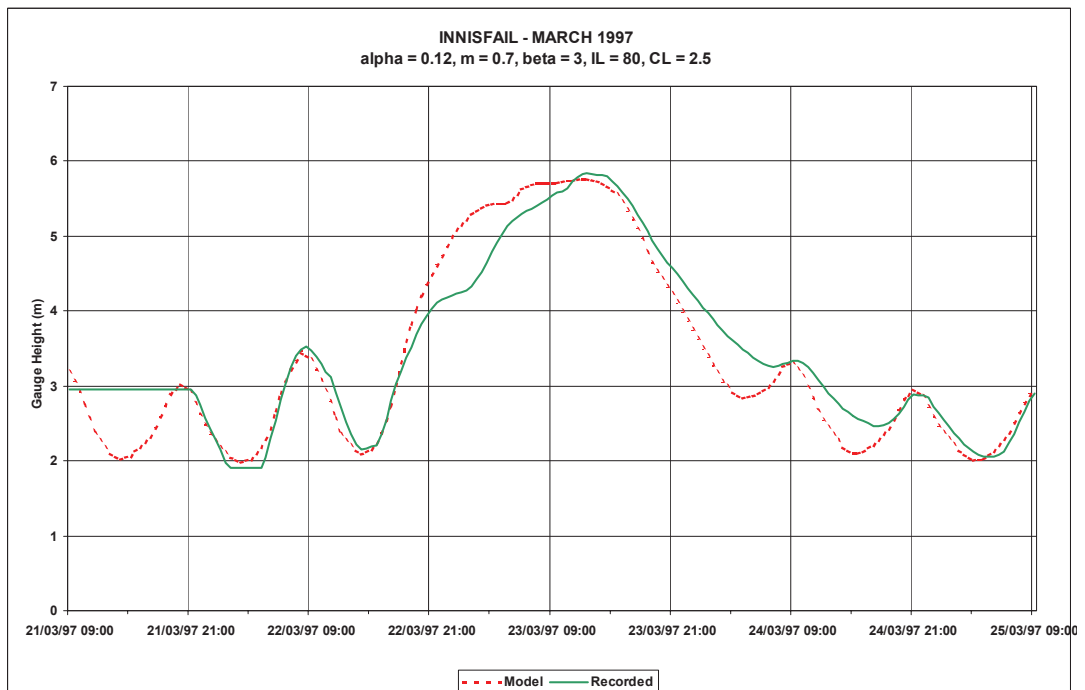


Figure 4.11 URBS Flood Height Calibration – Innisfail – March 1997

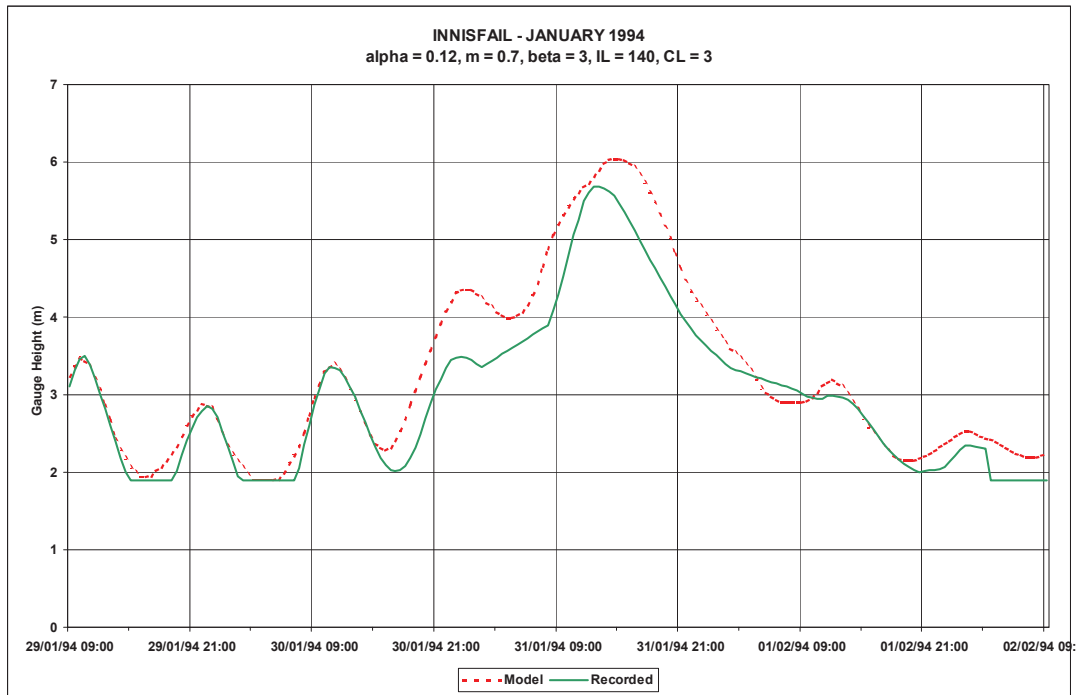


Figure 4.12 URBS Flood Height Calibration – Innisfail – January 1994

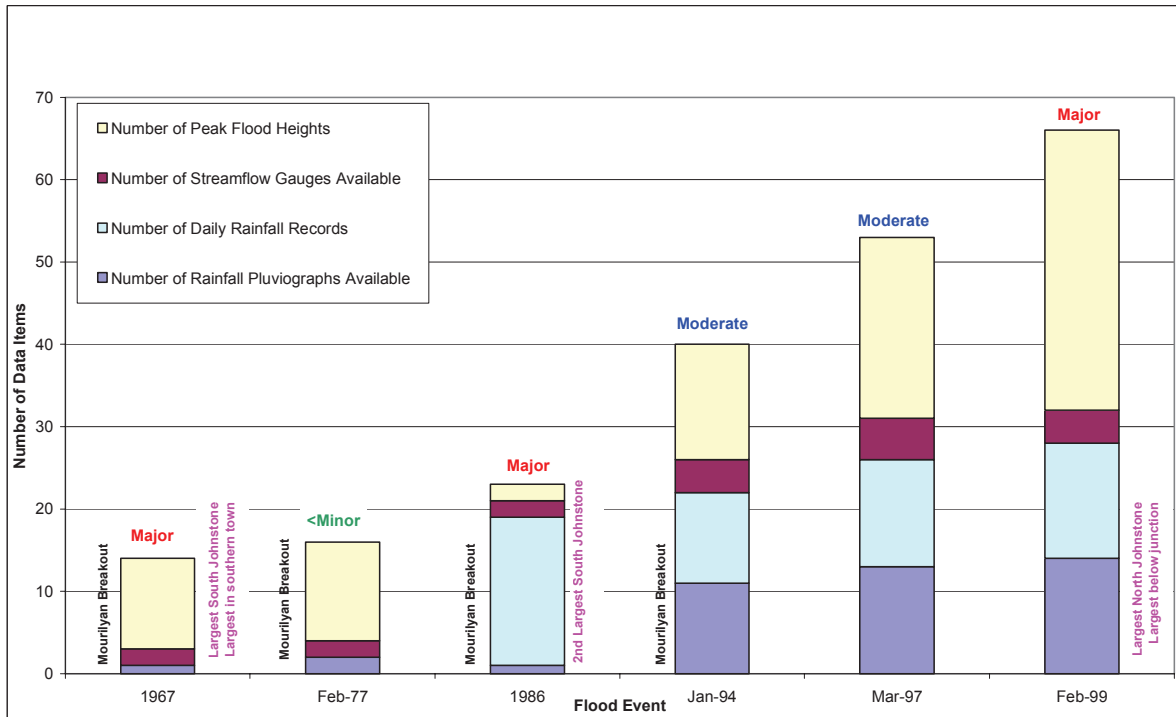
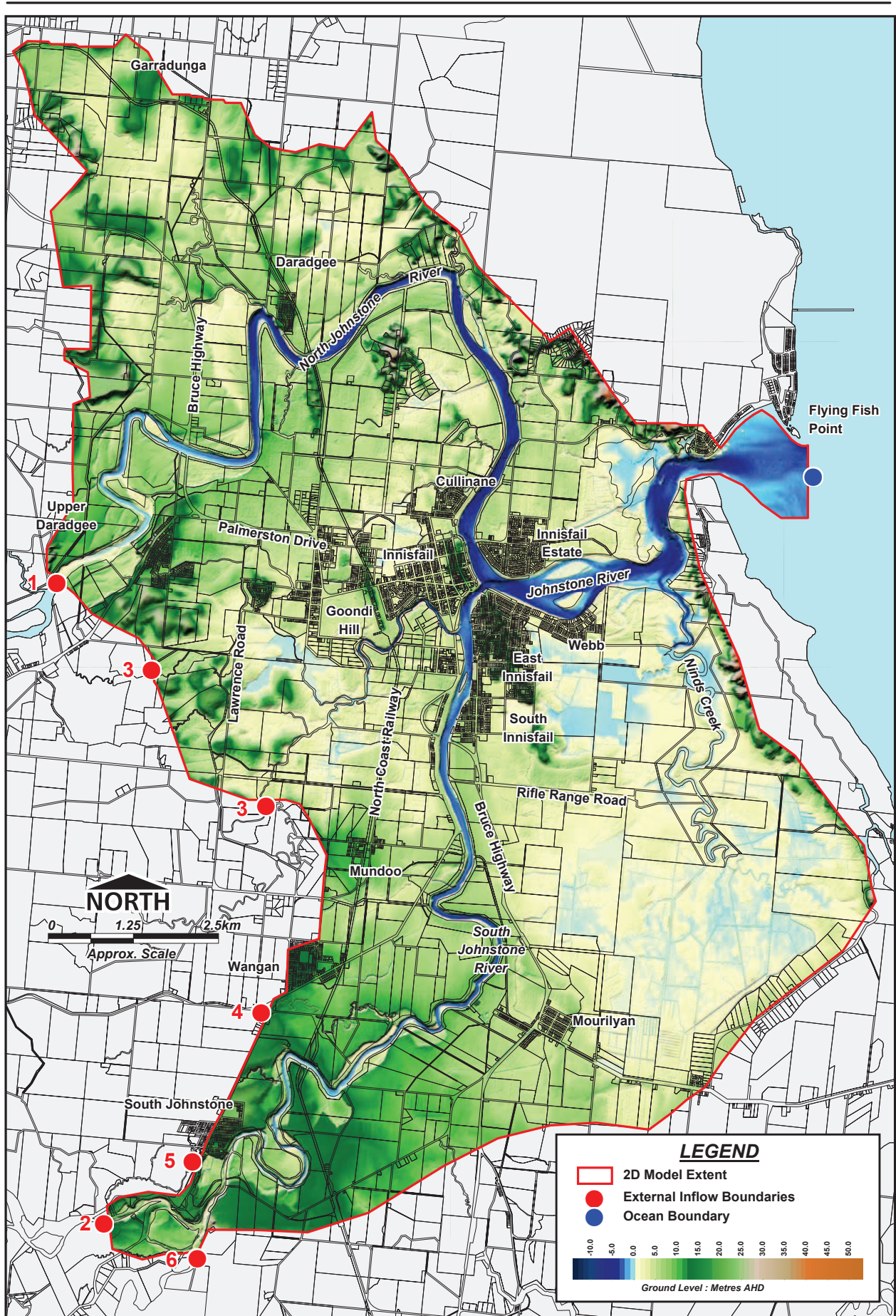


Figure 4.13 Flood Data Availability



DEM, 2D Model Limits and Boundaries

Figure 4-14



**Location of Historical Flood Levels
February 1999**

Figure 4-15



**Location of Historical Flood Levels
March 1997**

Figure 4-16



**Location of Historical Flood Levels
January 1994**

Figure 4-17



**Location of Historical Flood Levels
February 1986**

Figure 4-18



**Location of Historical Flood Levels
February 1977**

Figure 4-19



**Location of Historical Flood Levels
March 1967**

Figure 4-20

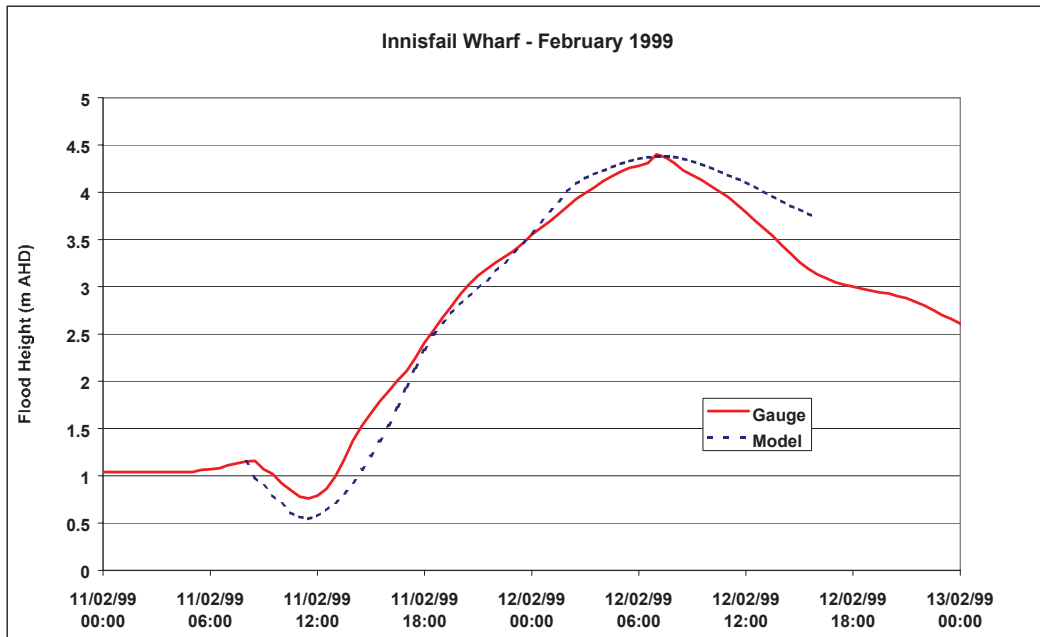
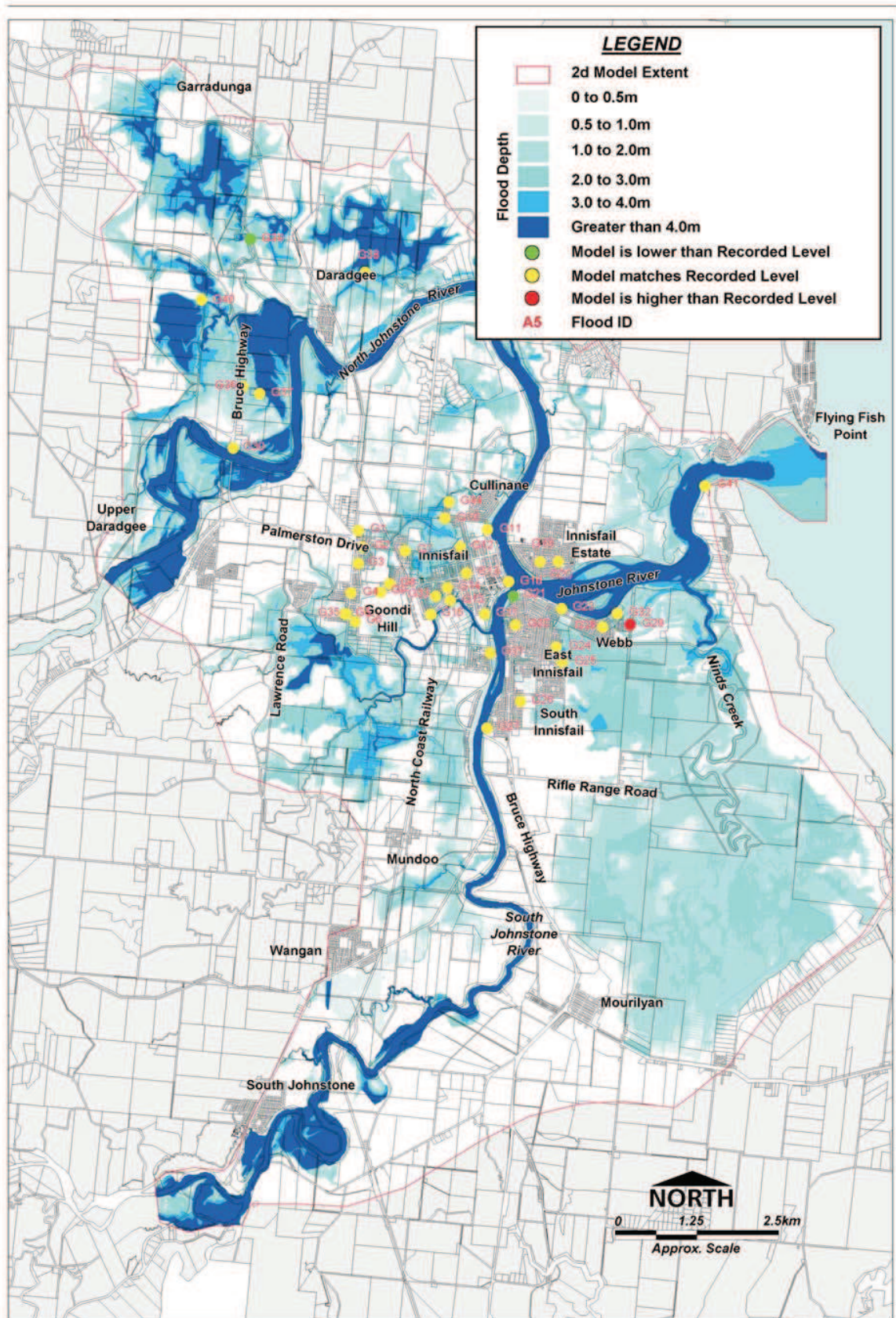


Figure 4.21 Comparison Between Recorded Heights and Model Results at Innisfail Wharf Alert Station – February 1999 Flood



**Hydraulic Model Calibration
February 1999**

Figure 4-22



Model Flood Levels at 2pm on 12 February 1999

Figure 4-23

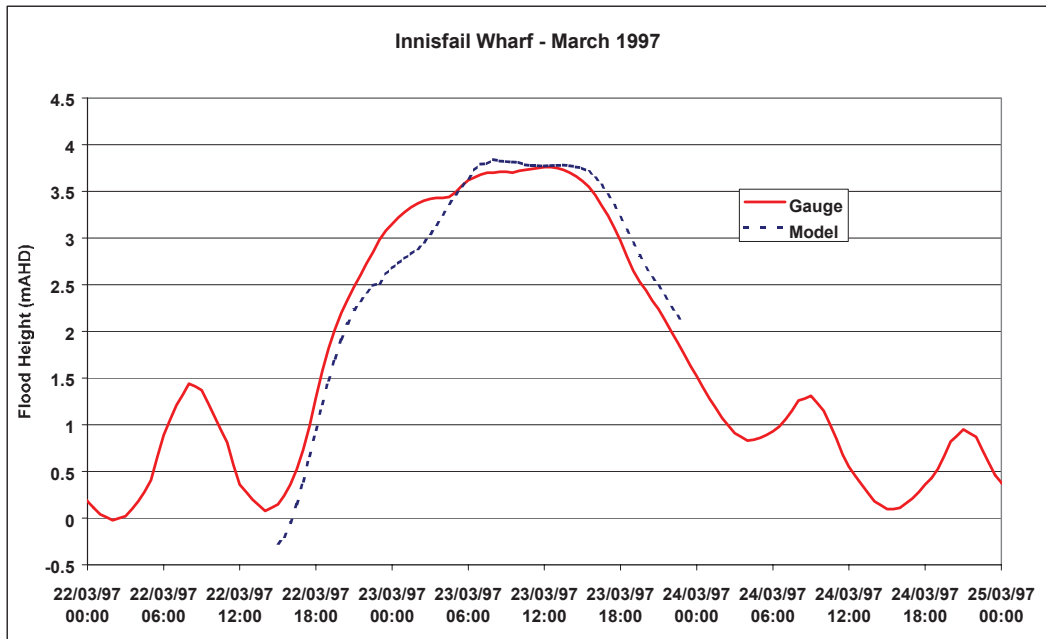
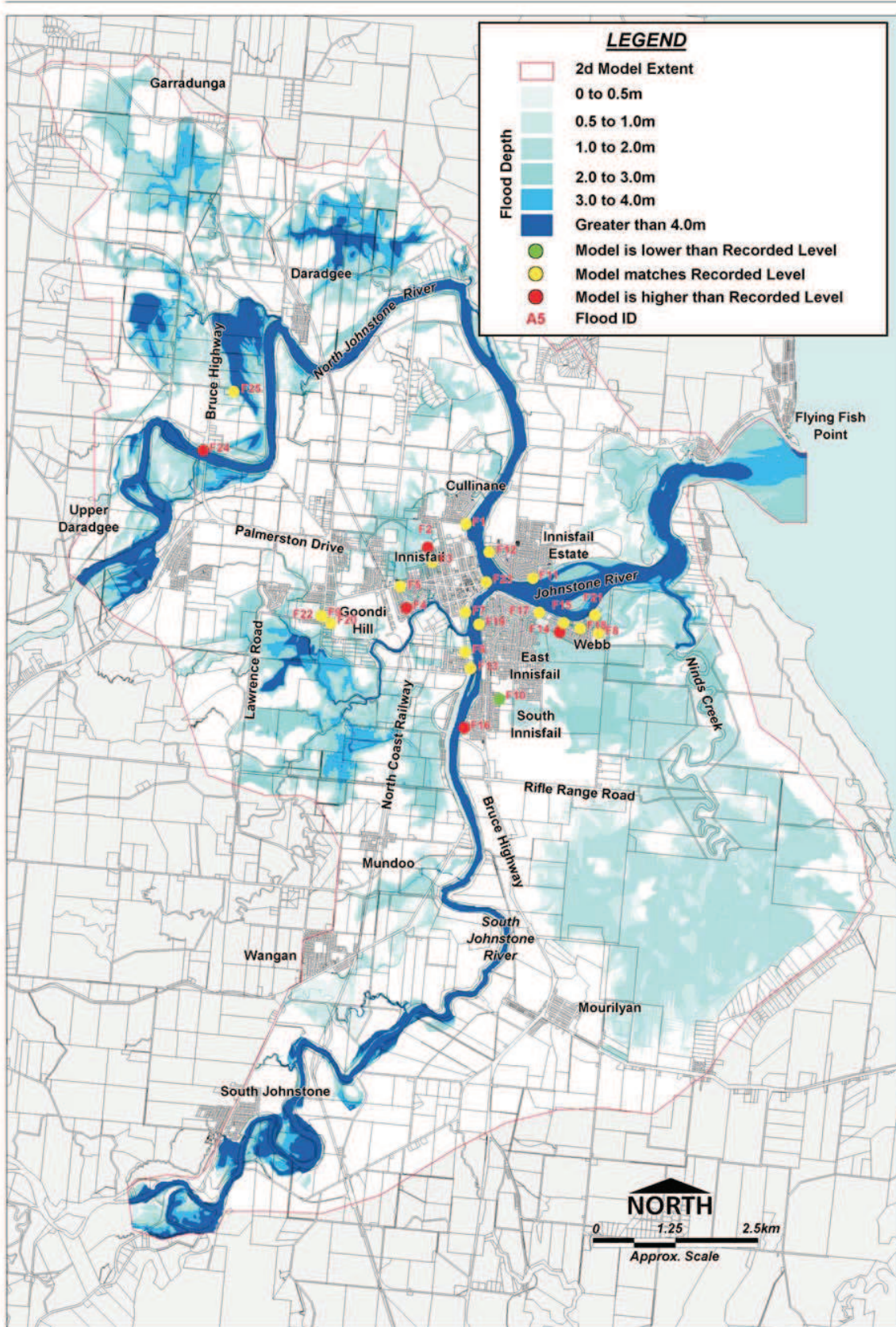
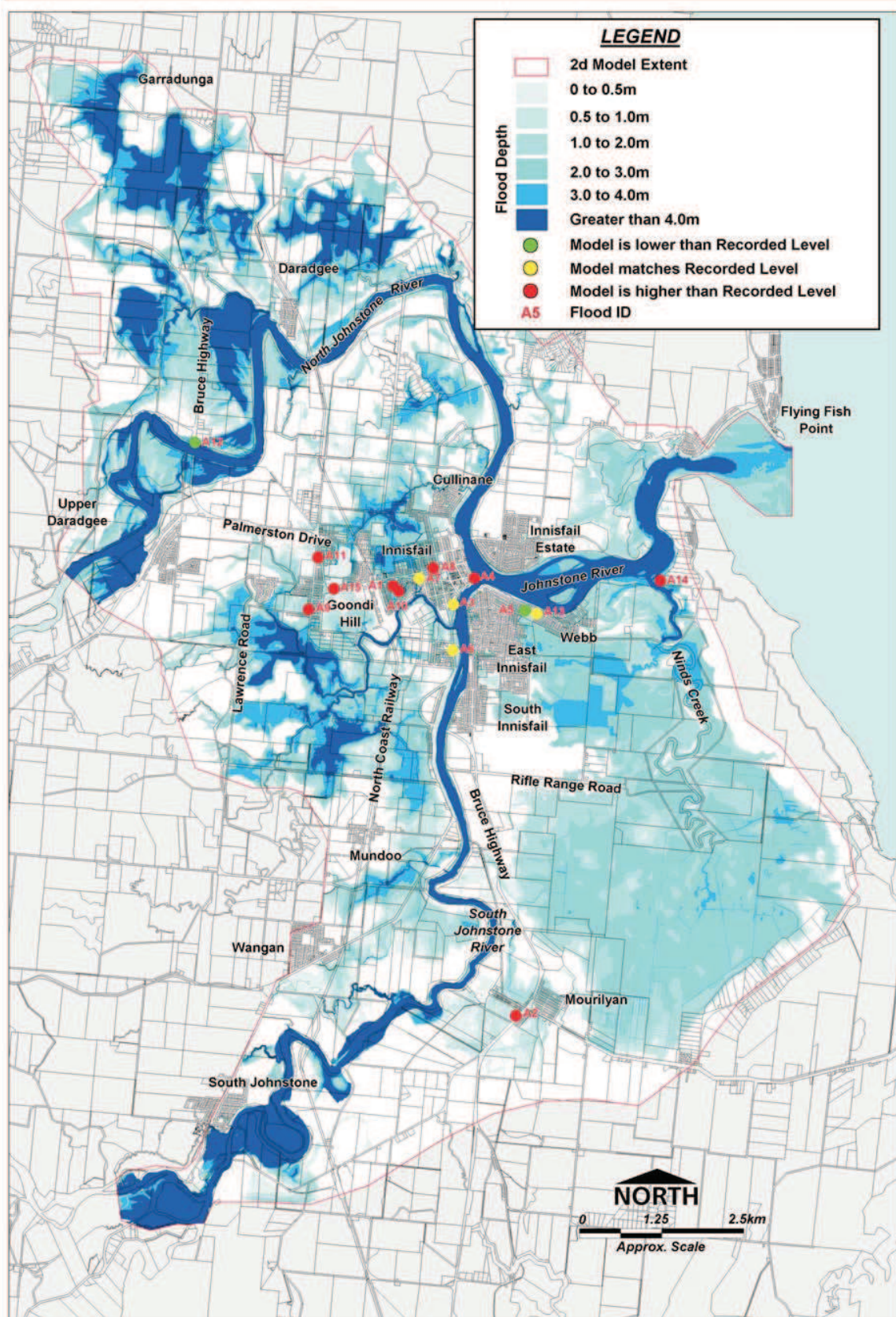


Figure 4.24 Comparison Between Recorded Heights and Model Results at Innisfail Wharf Alert Station – March 1997 Flood



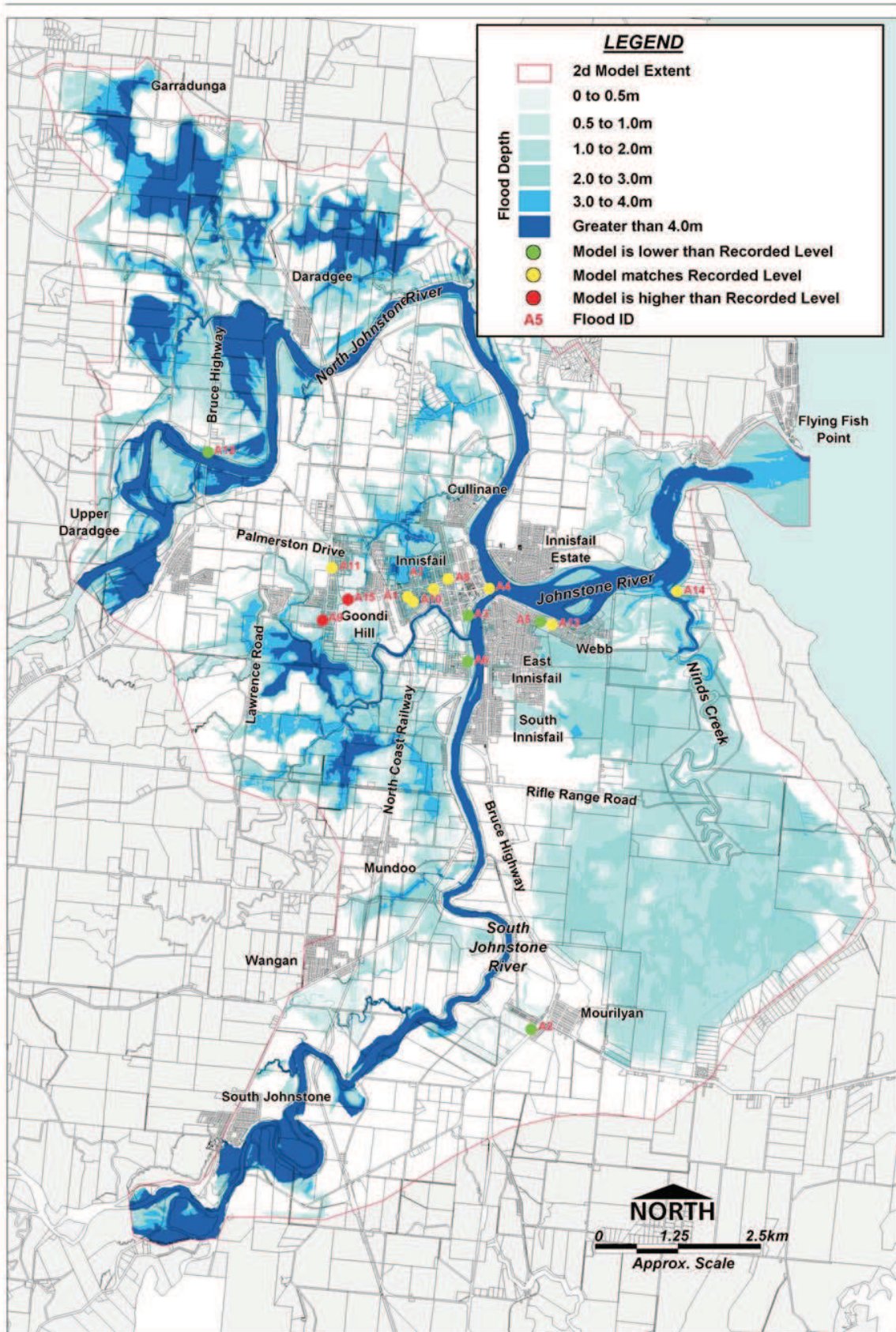
**Hydraulic Model Calibration
March 1997**

Figure 4-25



Hydraulic Model Verification
March 1967

Figure 4-26



**Hydraulic Model Verification - March 1967
(River bed lowered by 0.5m)**

Figure 4-27

5 DESIGN FLOODS

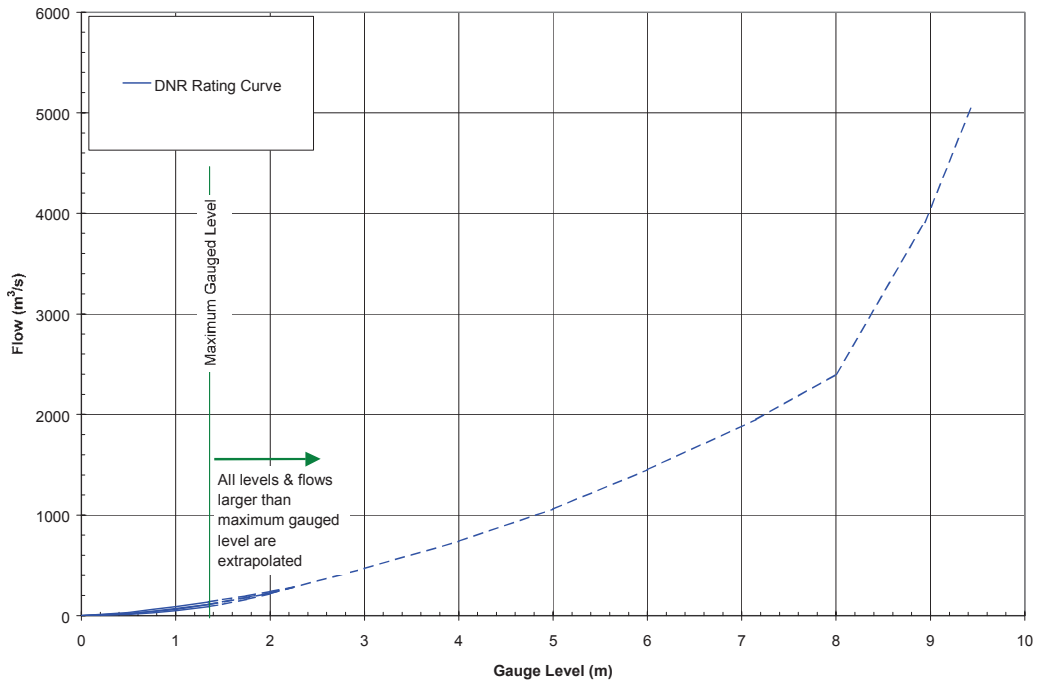


Figure 5.1 Rating Curves for the Goondi Gauge

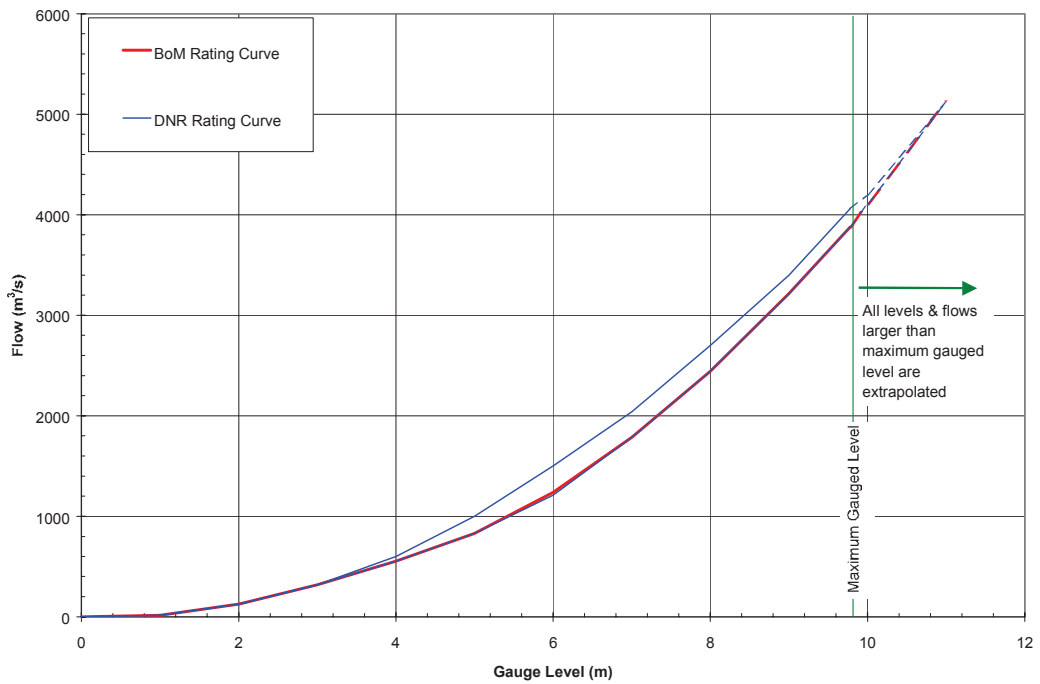


Figure 5.2 Rating Curves for the Tung Oil Gauge

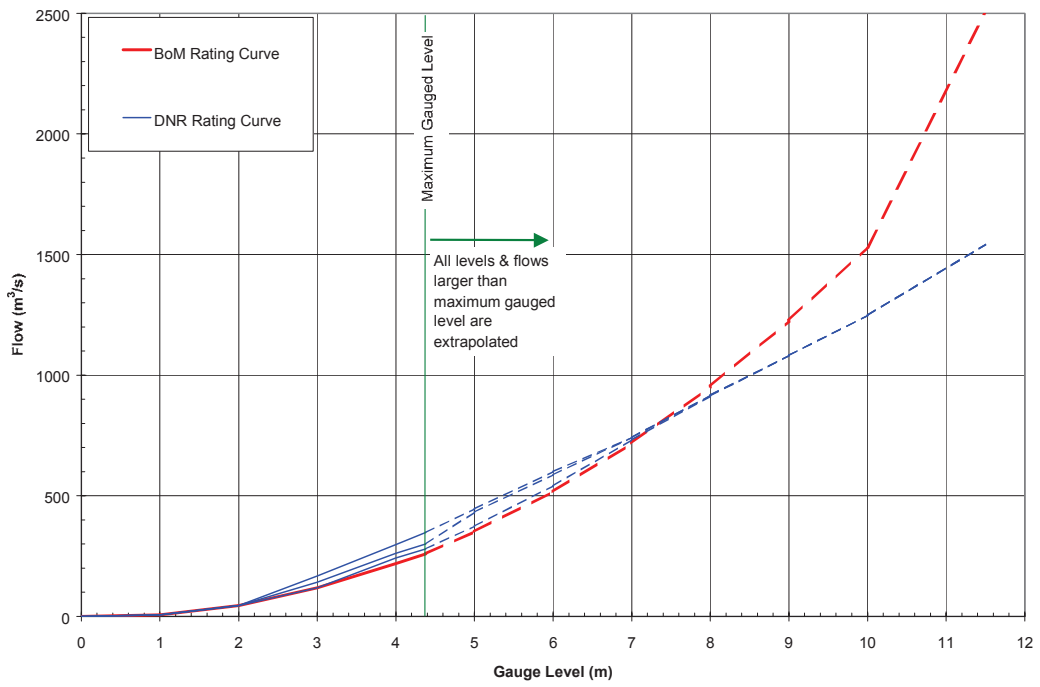


Figure 5.3 Rating Curves for the Central Mill Gauge

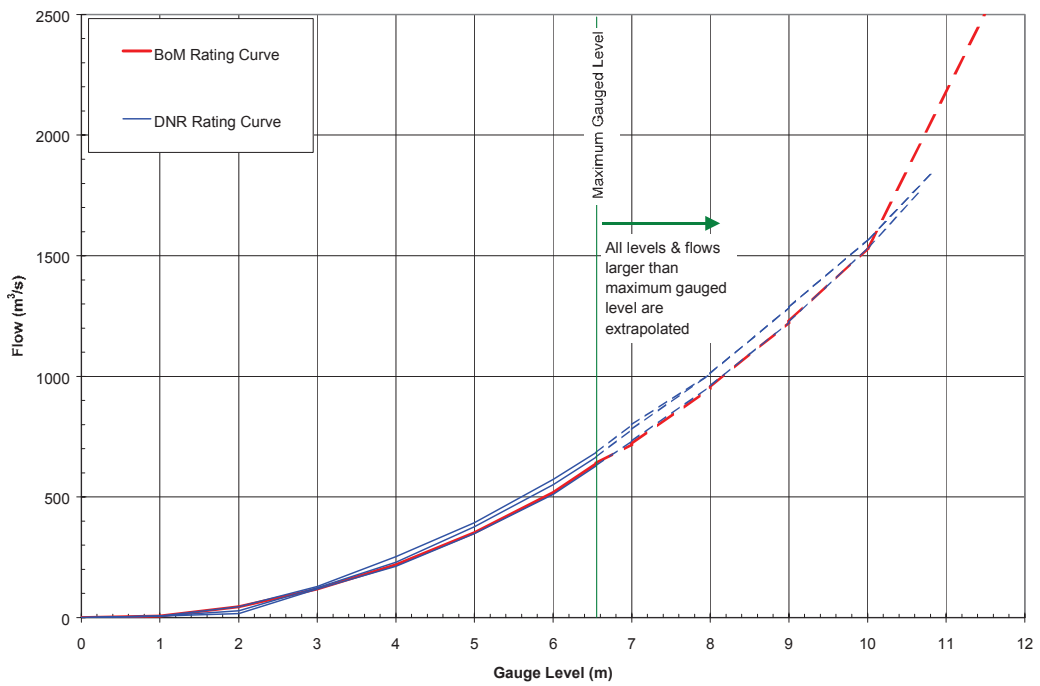


Figure 5.4 Rating Curves for the Upstream of Central Mill Gauge

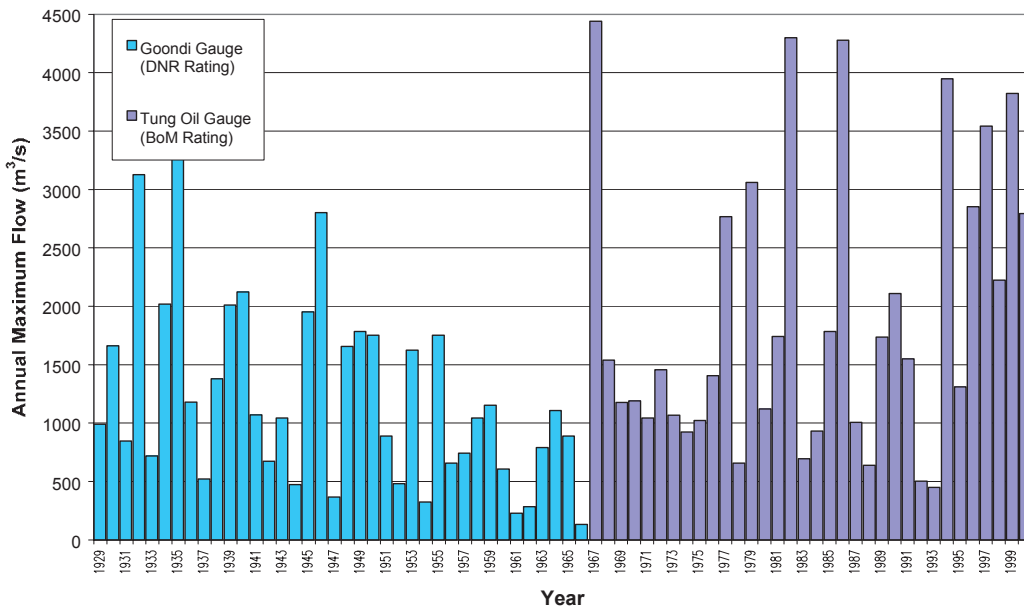


Figure 5.5 North Johnstone Annual Maximum Flows

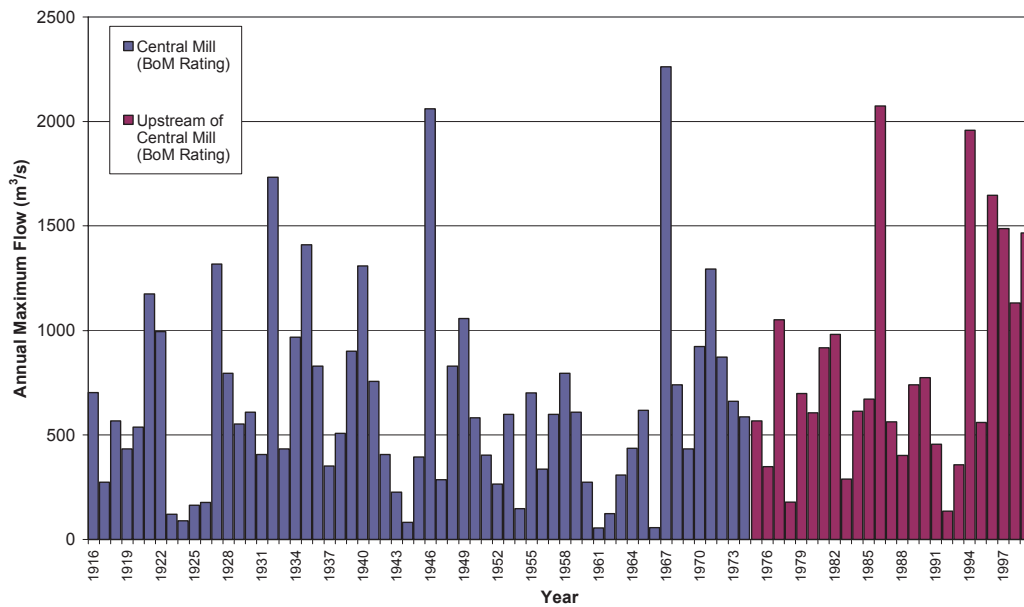


Figure 5.6 South Johnstone Annual Maximum Flows

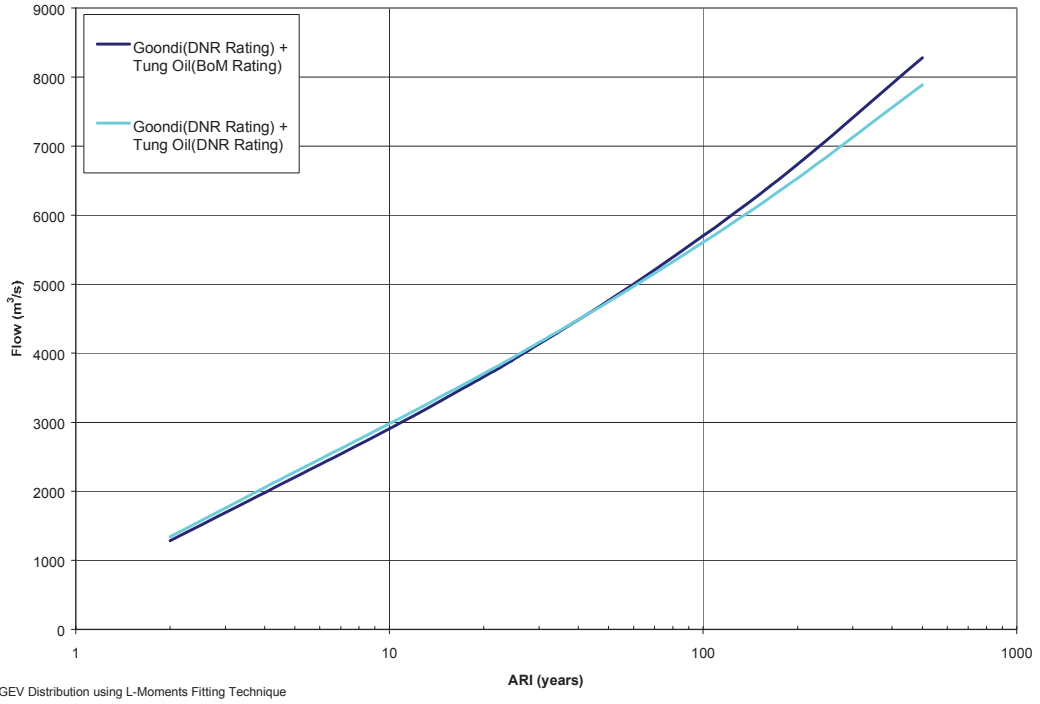


Figure 5.7 Comparison of North Johnstone FFA Results

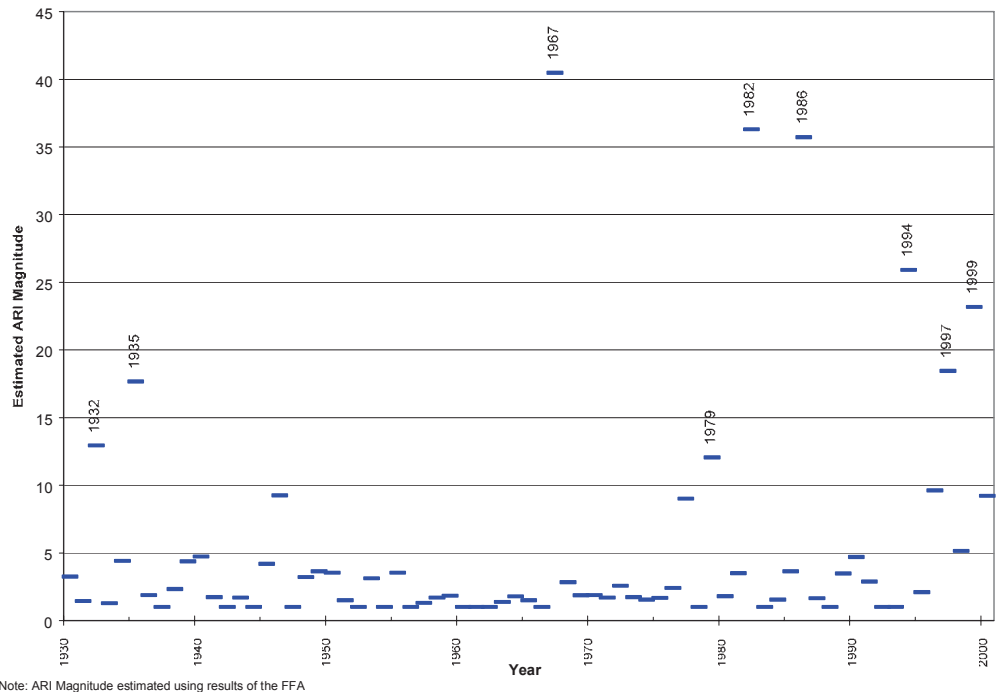


Figure 5.8 ARI Magnitude of North Johnstone Historical Events

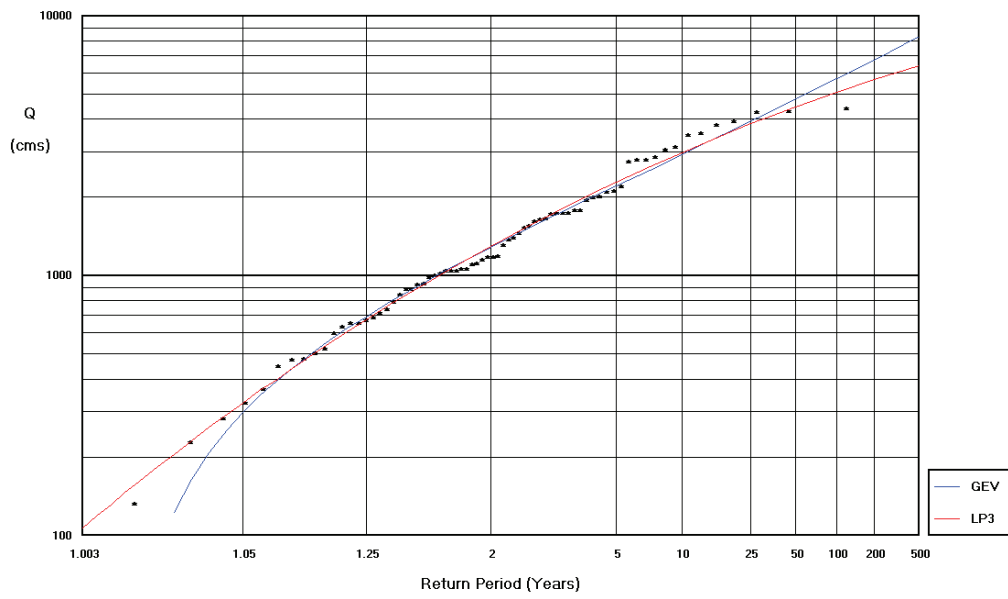


Figure 5.9 FFA Curves for North Johnstone

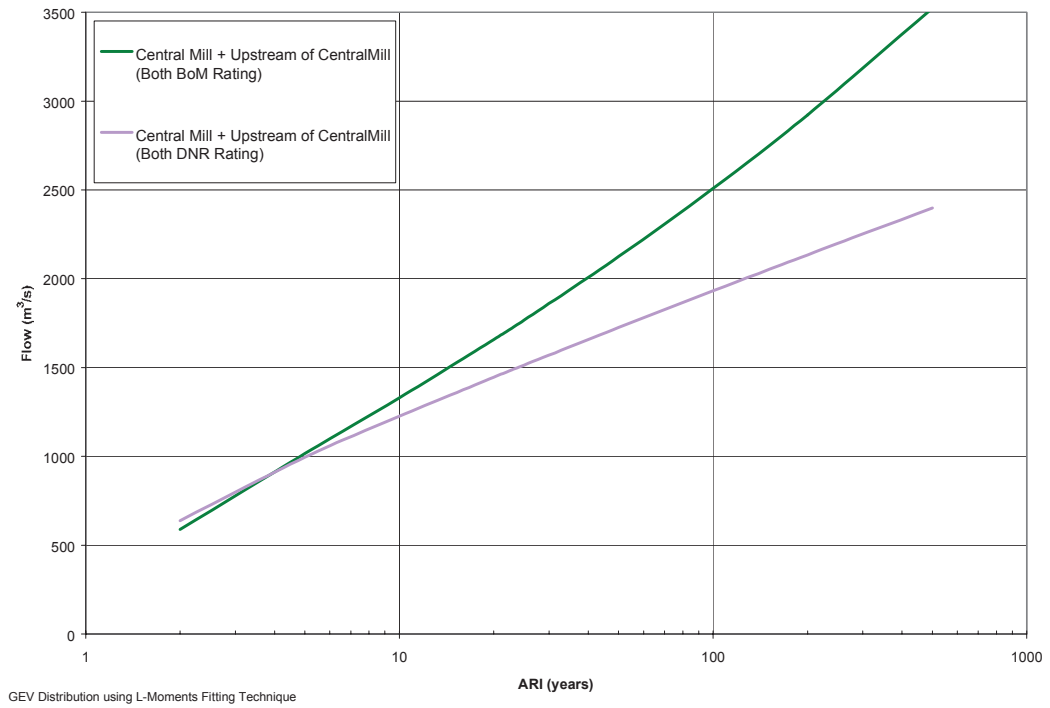


Figure 5.10 Comparison of South Johnstone FFA Results

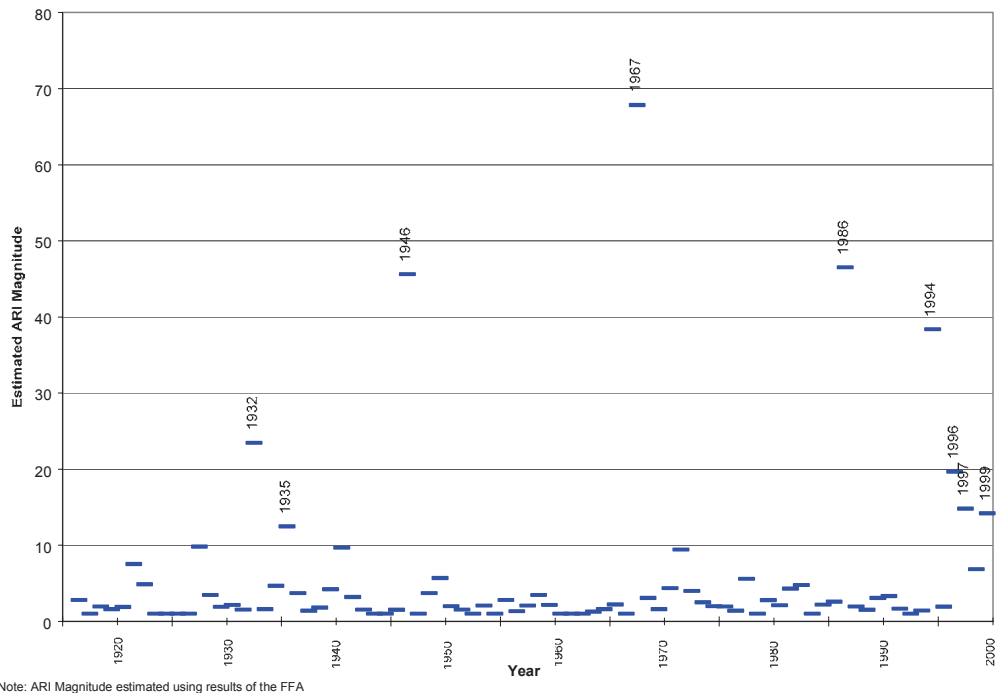


Figure 5.11 ARI Magnitude of South Johnstone Historical Events

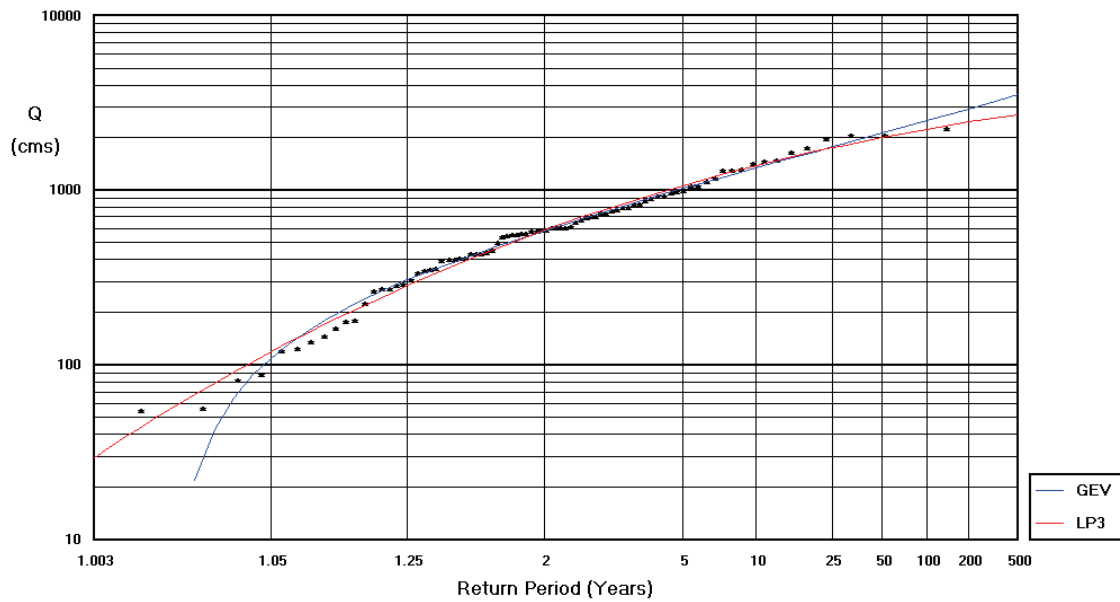


Figure 5.12 FFA Curves for South Johnstone

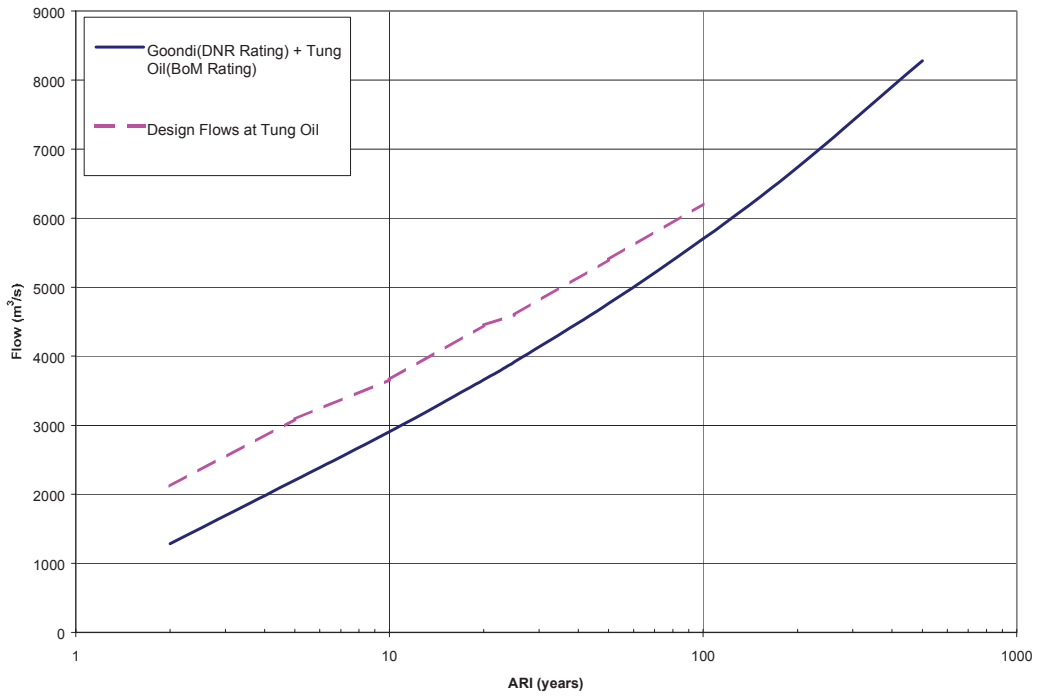


Figure 5.13 Comparison of North Johnstone FFA Results with Design Flows

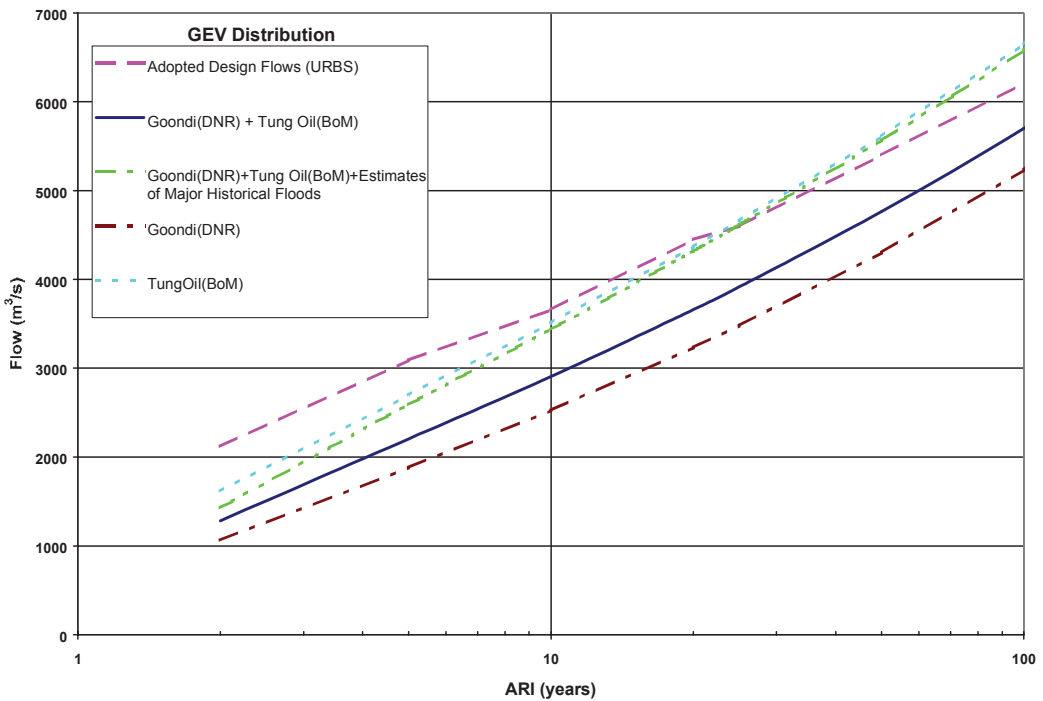
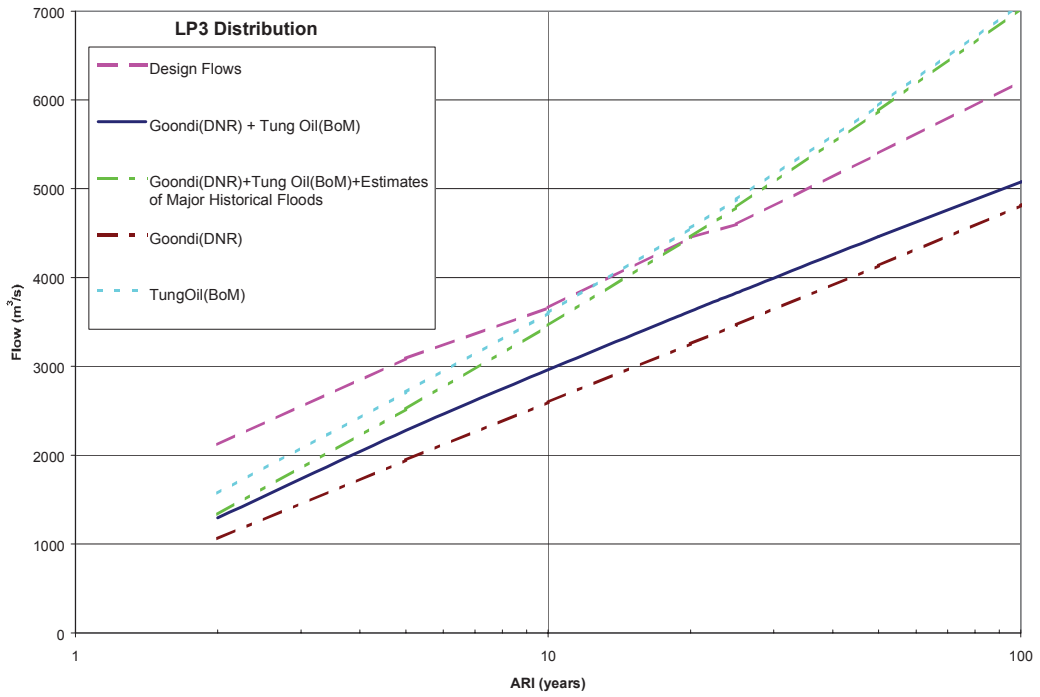


Figure 5.14 FFA Sensitivity Results for North Johnstone

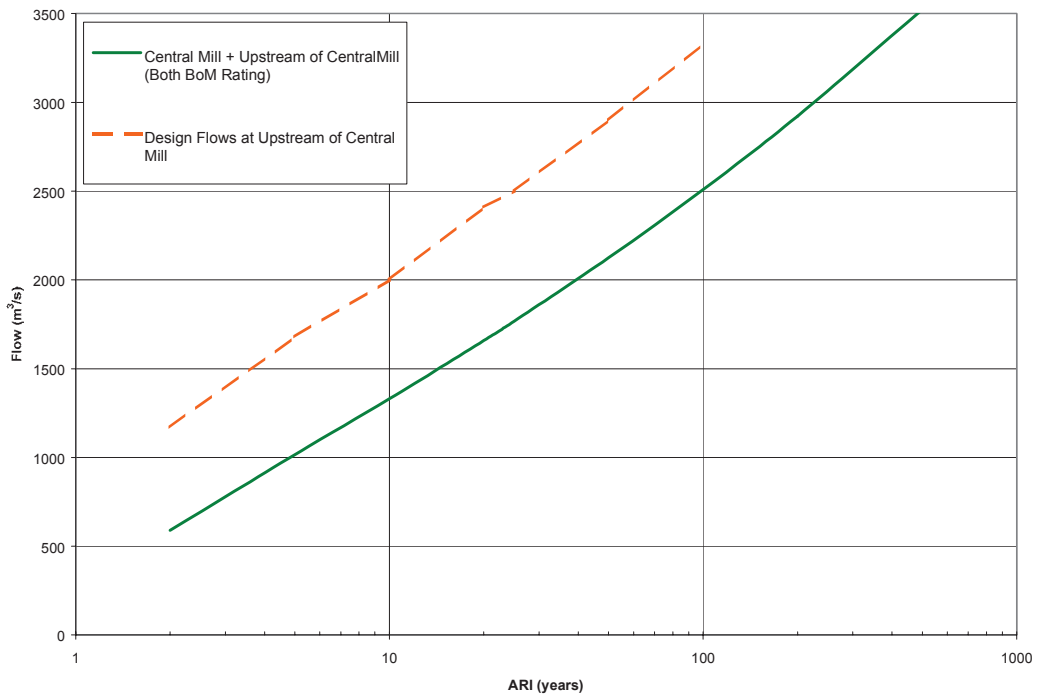


Figure 5.15 Comparison of South Johnstone FFA Results with Design Flows

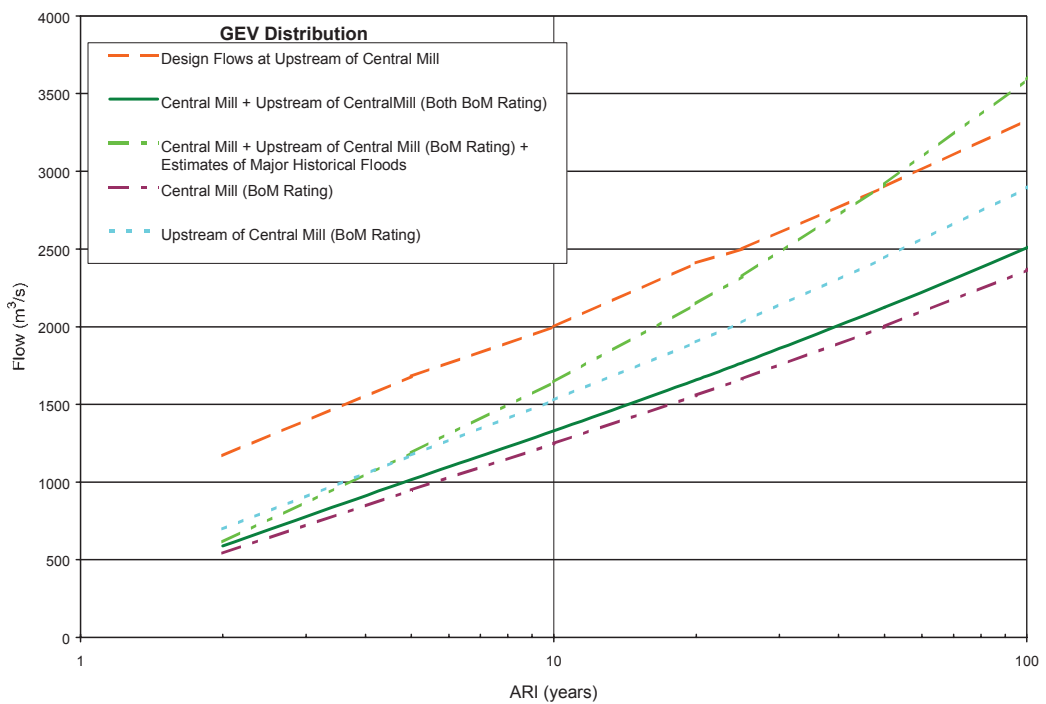
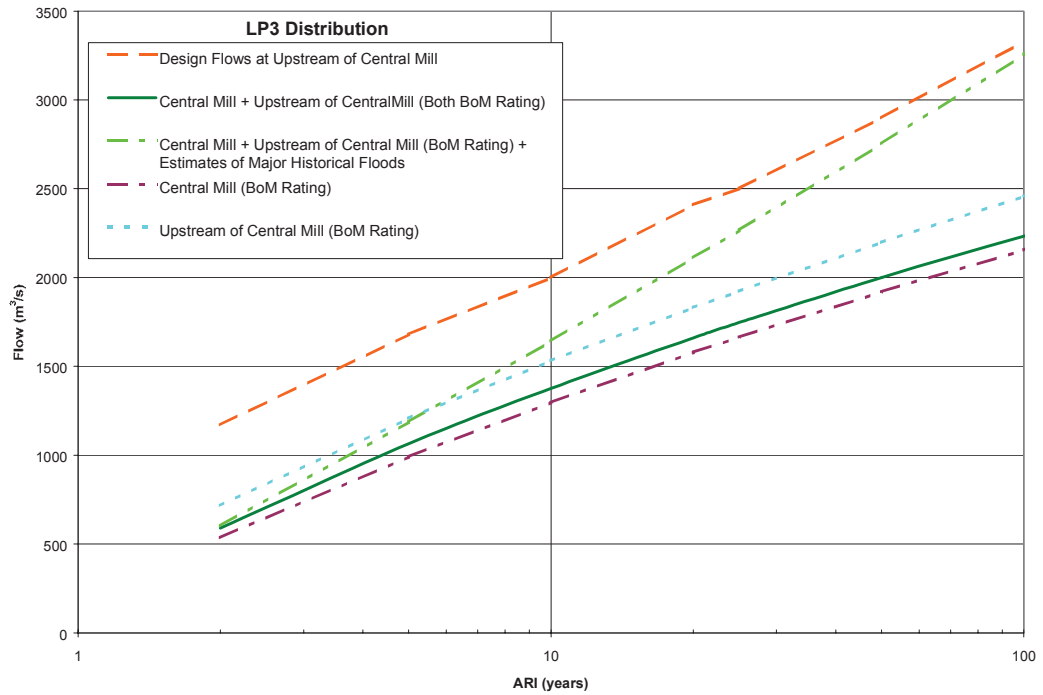


Figure 5.16 FFA Sensitivity Results for South Johnstone