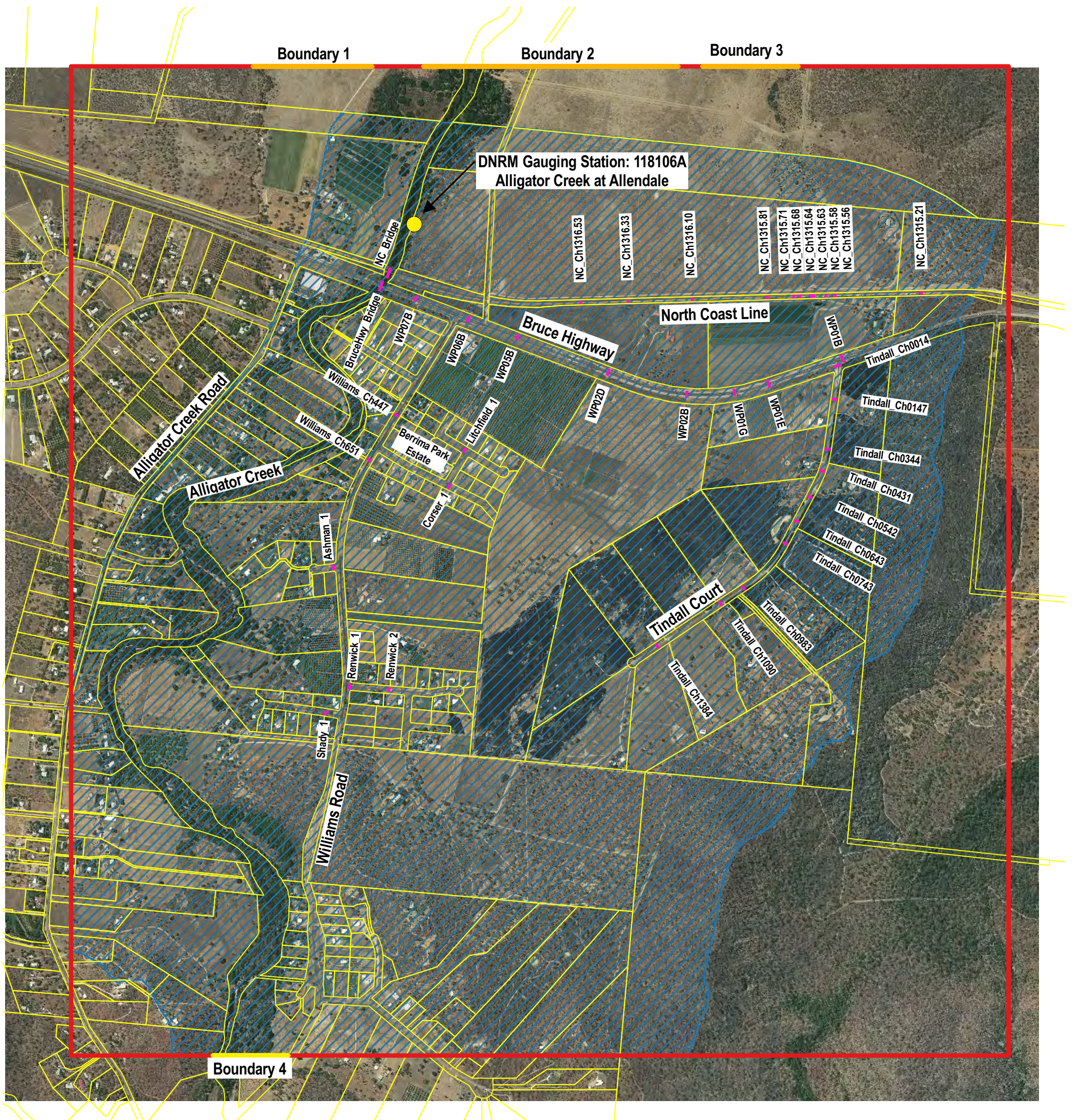


# APPENDIX A

## Flood Model Setup & Parameters



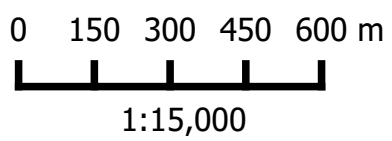
Boundary 1

Boundary 2

Boundary 3

DNRM Gauging Station: 118106A  
Alligator Creek at Allendale

Boundary 4



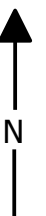
**Legend**

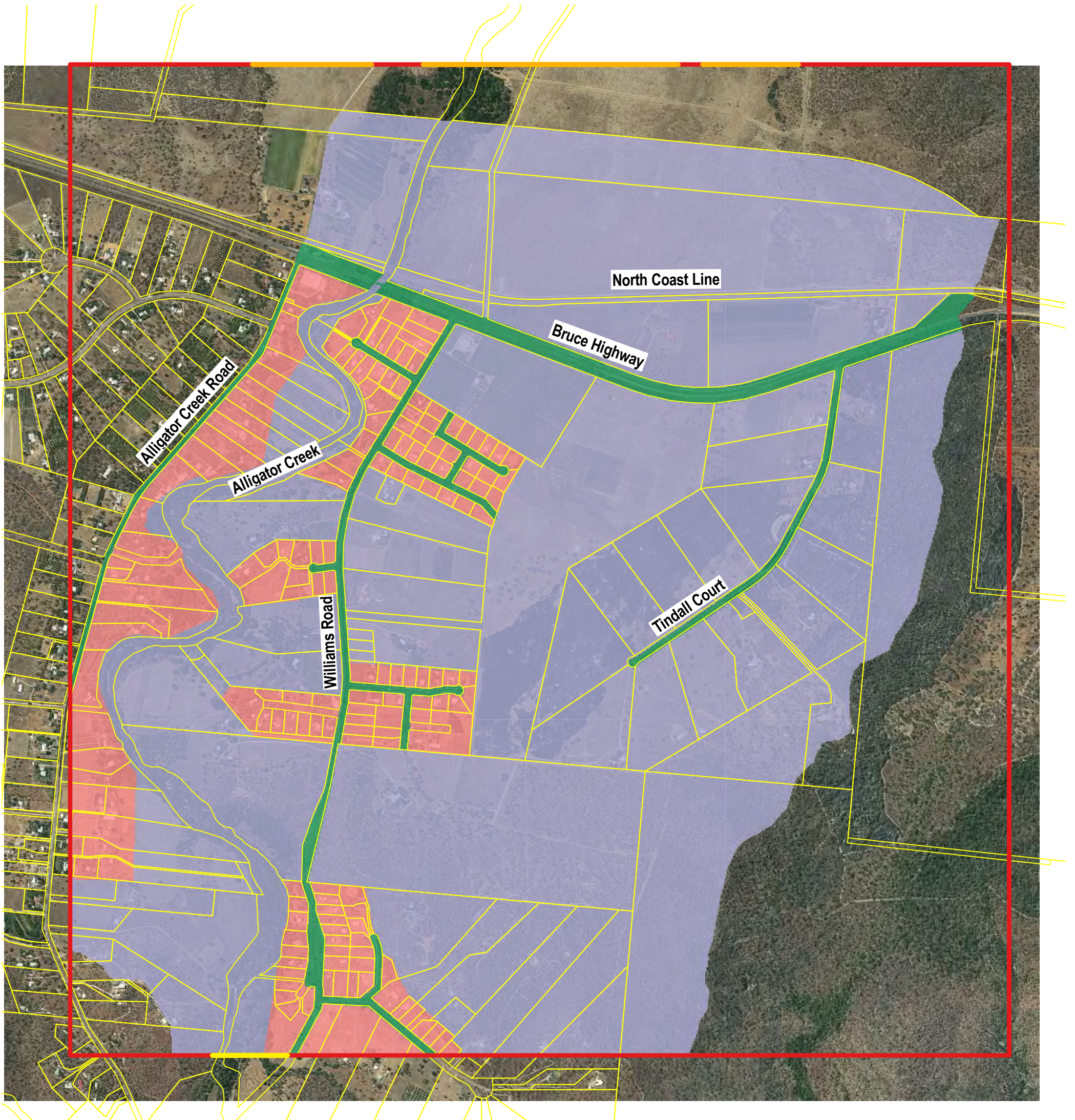
- Model Extents
- Direct Rainfall Extents
- Existing Property Boundaries
- MIKE11 Structures
- Inflow Boundary
- Outflow Boundary

Eastern Alligator Creek Baseline  
Flood Assessment  
Model Setup

Date: 02/11/2015  
Job No: TCC0049

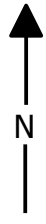
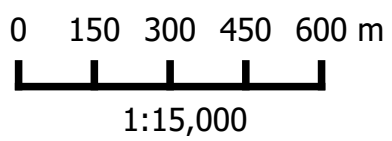
**Figure A-1**





**Fraction Impervious**

0% Impervious
  20% Impervious
  50% Impervious



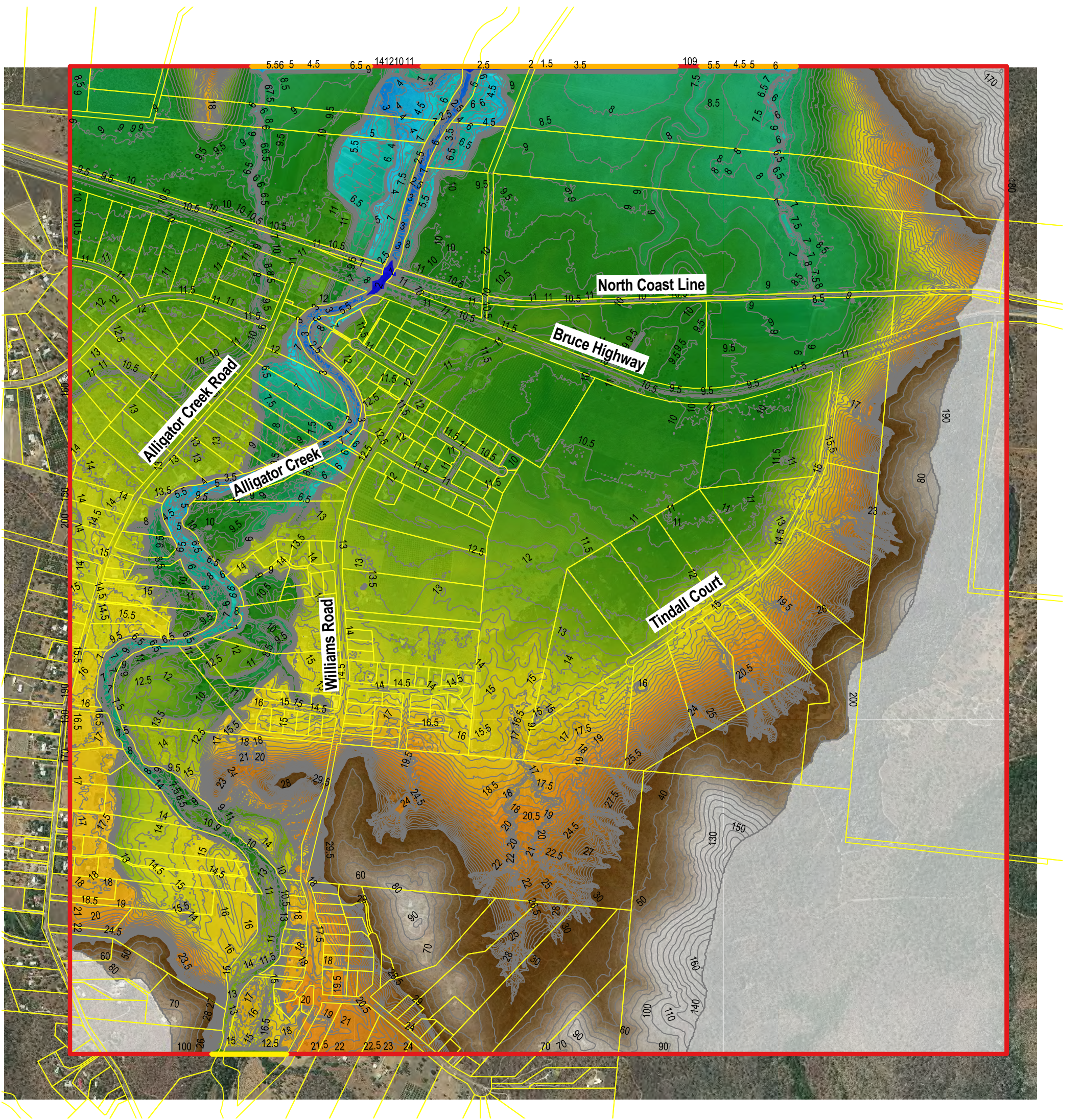
**Legend**

- Model Extents
- Existing Property Boundary
- Inflow Boundary
- Outflow Boundary

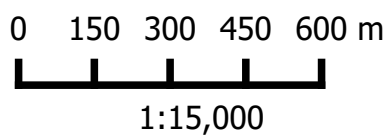
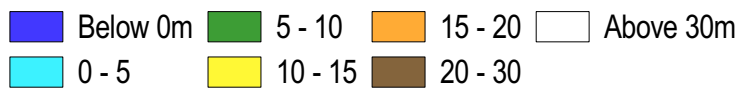
Eastern Alligator Creek Baseline  
Flooding Assessment  
Fraction Impervious Map

Date: 27/08/2015  
Job No: TCC0049

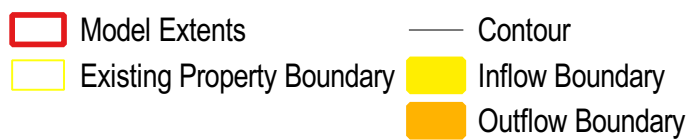
**Figure A-2**



**Surface Elevation (m)**



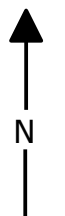
**Legend**

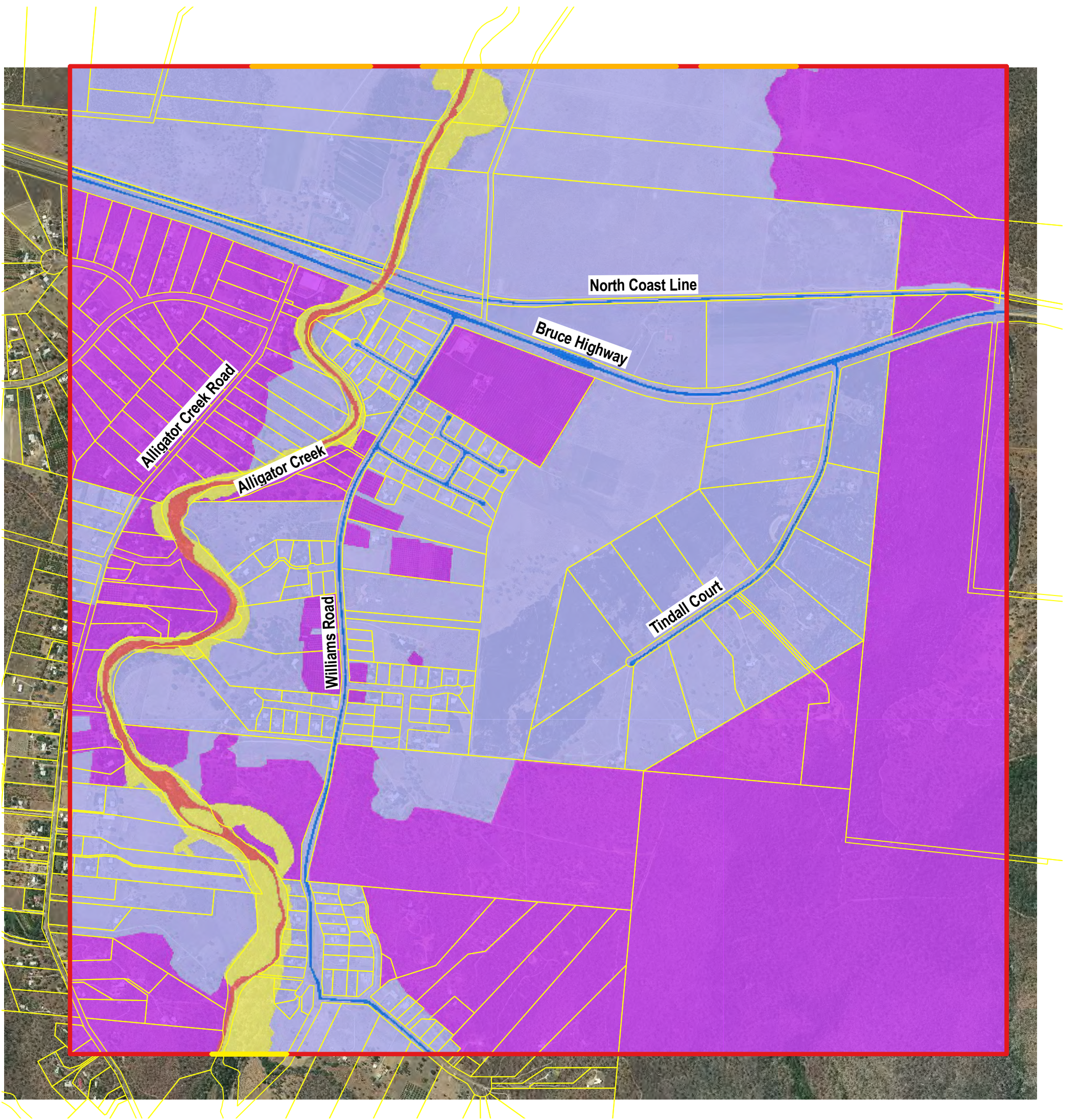


Eastern Alligator Creek Baseline  
Flood Assessment  
Base Case DEM

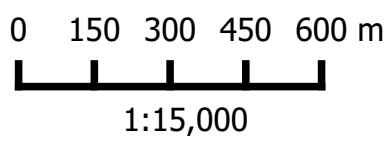
Date: 02/11/2015  
Job No: TCC0049

**Figure A-3**





**Manning's (n)**



**Legend**

- |  |  |
|--|--|
|  Model Extents              |  Inflow Boundary  |
|  Existing Property Boundary |  Outflow Boundary |

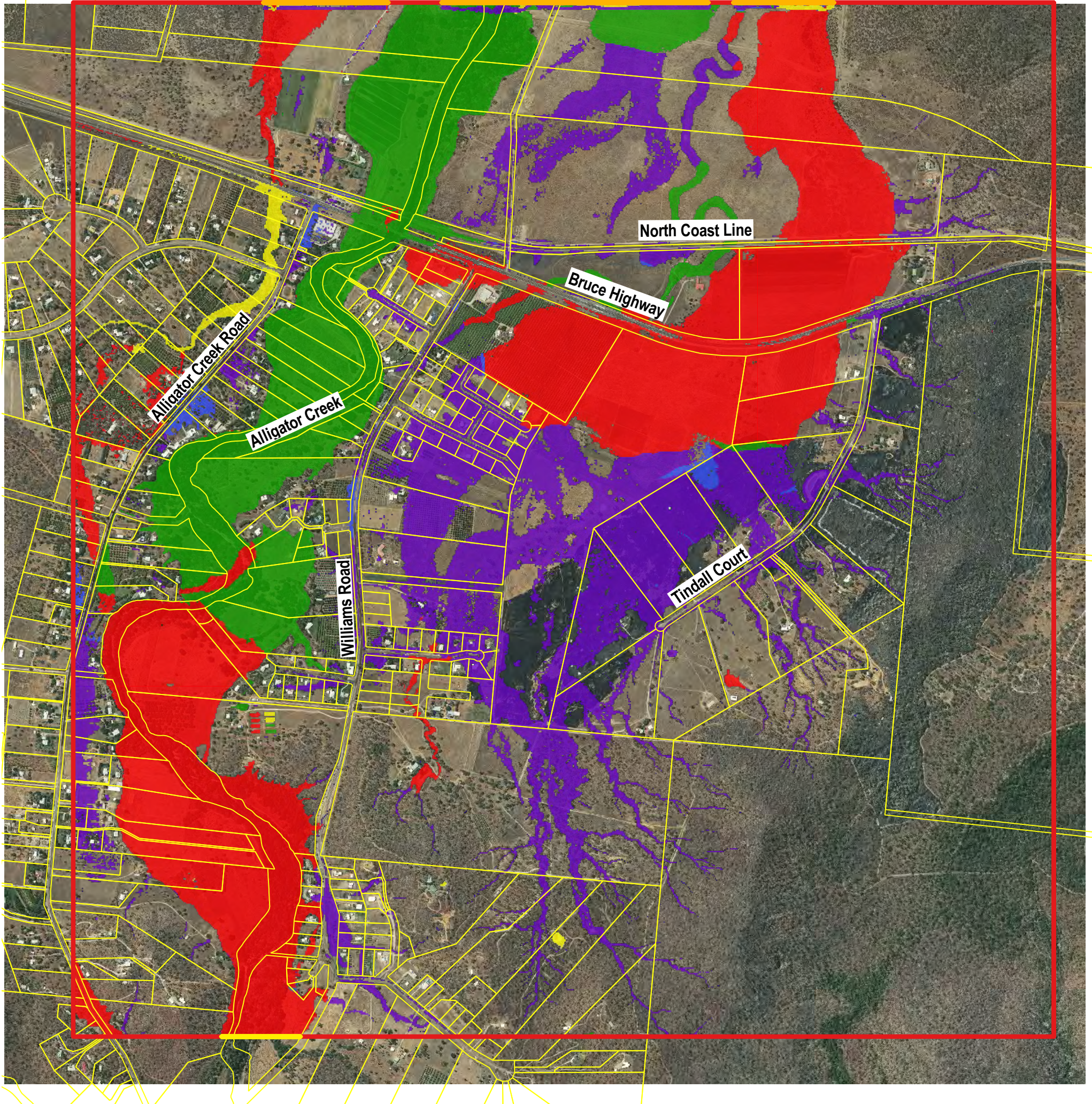
Eastern Alligator Creek Baseline  
Flood Assessment  
Roughness Map

Date: 02/11/2015  
Job No: TCC0049

**Figure A-4**

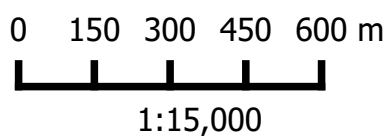
## **APPENDIX B**

### Model Development, Calibration & Verification



**Critical Duration (hours)**

2
  3
  12
  18
  24



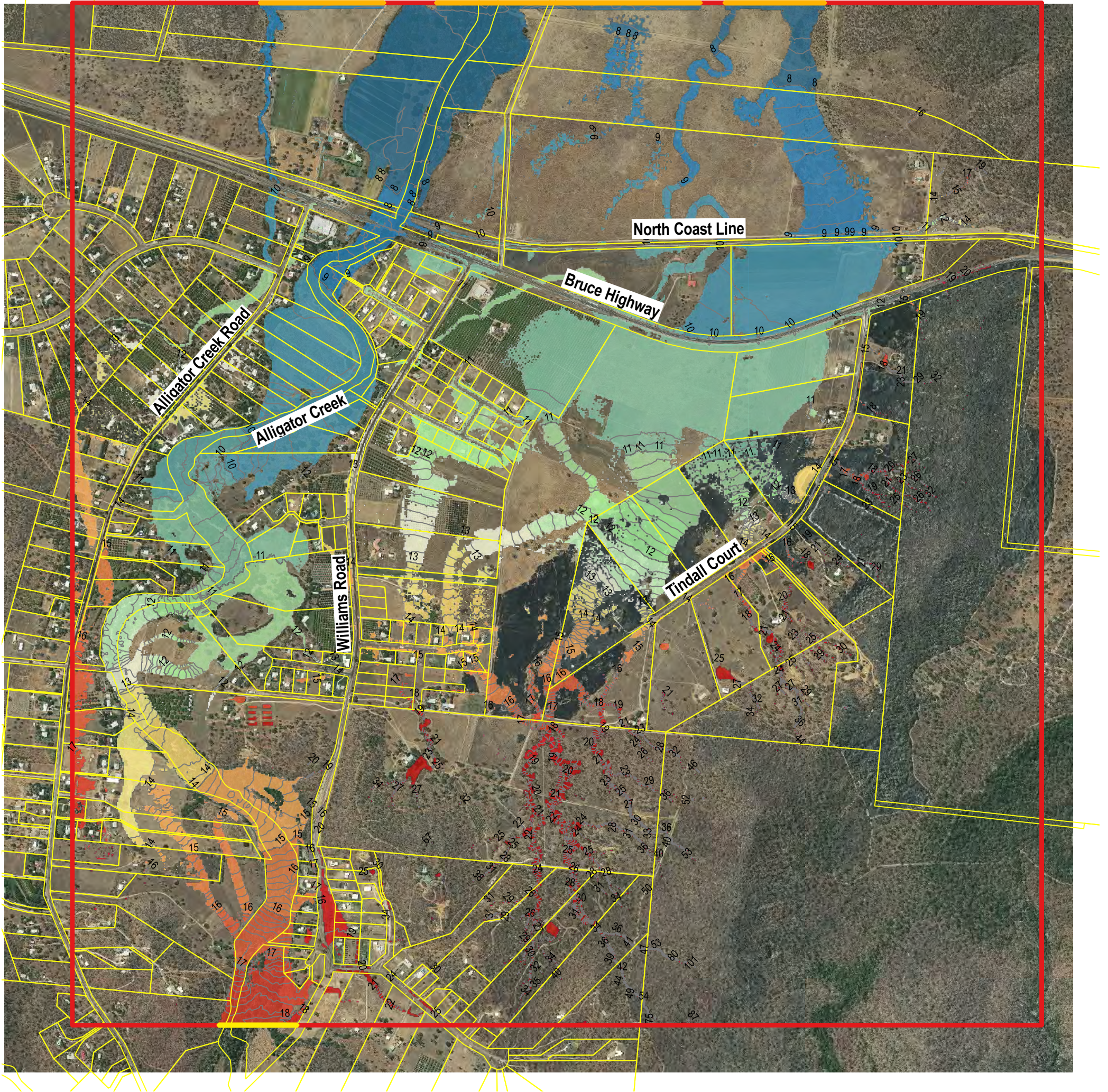
**Legend**

- Model Extents
- Inflow Boundary
- Outflow Boundary
- Existing Property Boundary

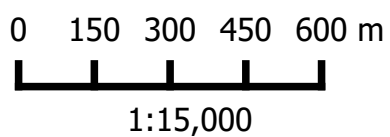
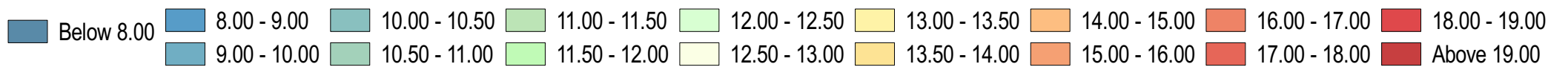
Eastern Alligator Creek Baseline  
Flood Assessment  
Critical Duration Map

Date: 02/11/2015  
Job No: TCC0049

**Figure B-1**



**Surface Elevation (m)**



**Legend**

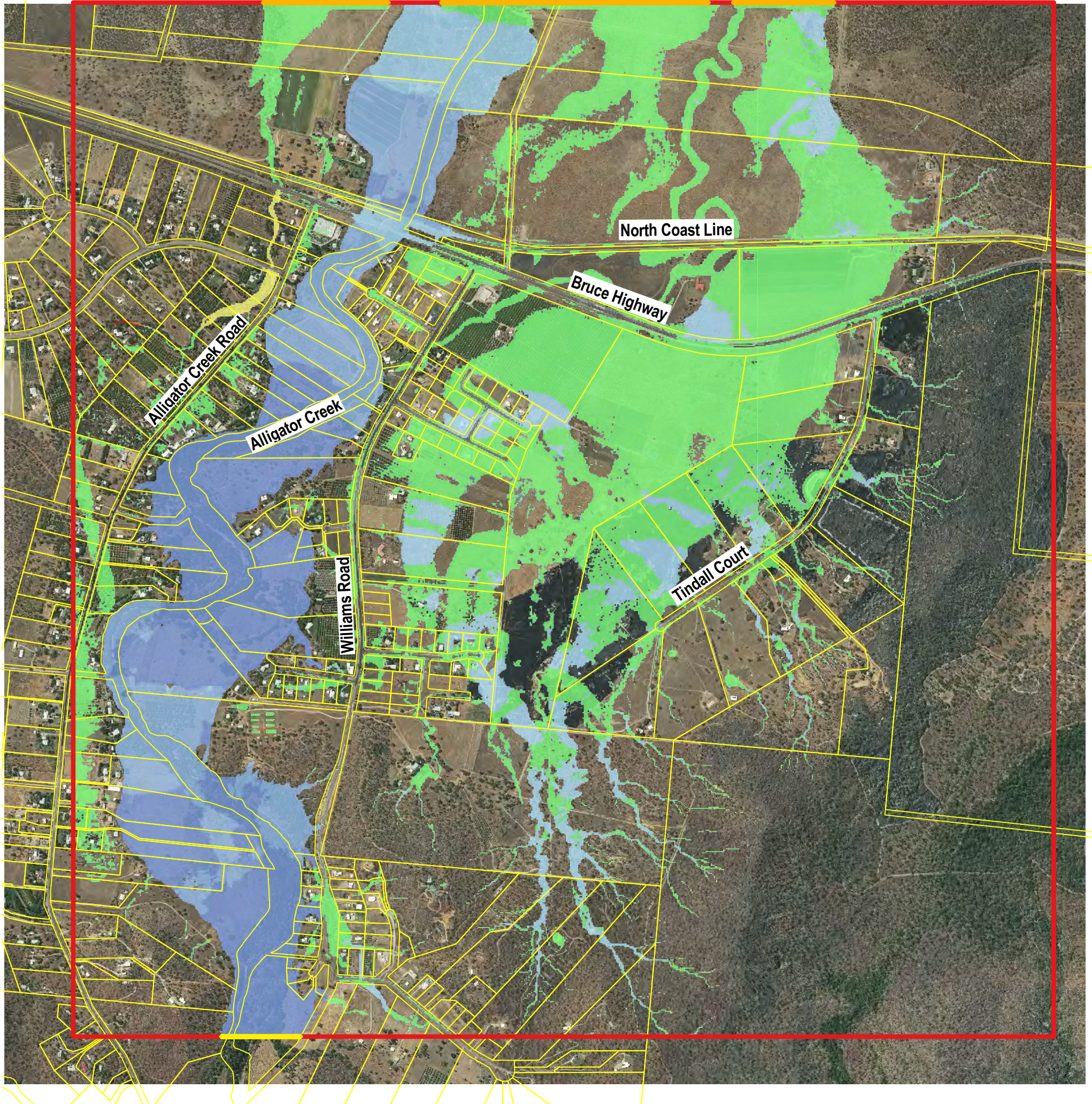
- Model Extents
- Existing Property Boundary
- Inflow Boundary
- Outflow Boundary

Eastern Alligator Creek Baseline Flood Assessment  
Severe Tropical Cyclone Ita (2014 Calibration)  
Maximum Water Surface Elevation

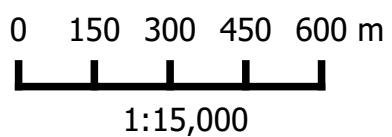
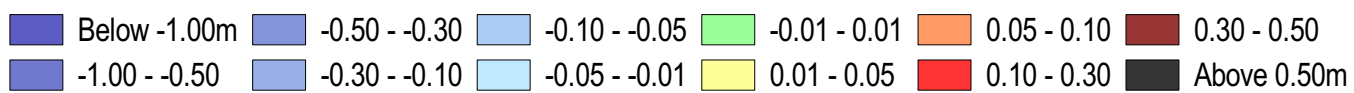
Date: 26/05/2016  
Job No: TCC0049

**Figure B-2**



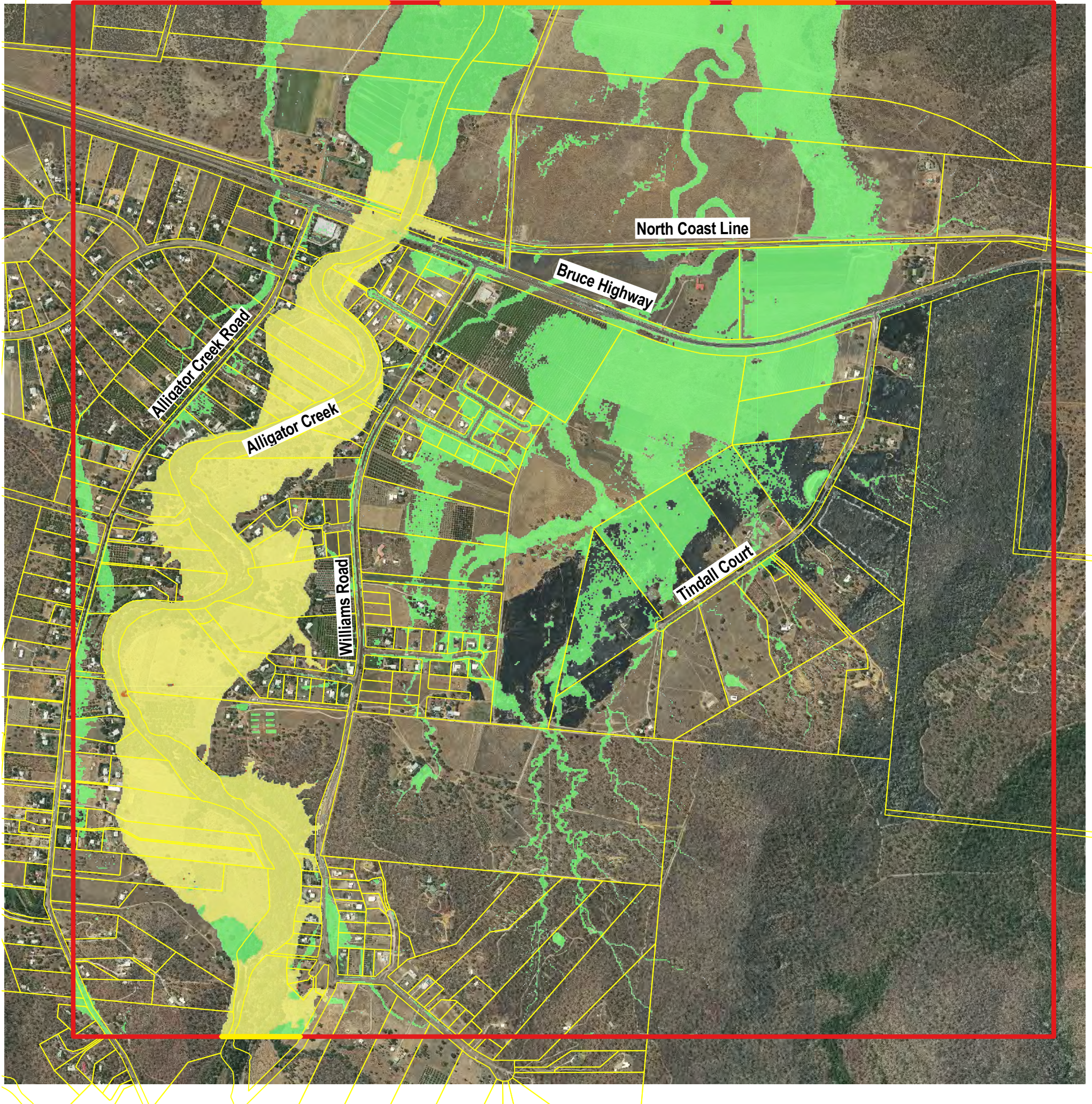


**Afflux (m)**

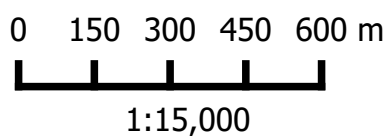
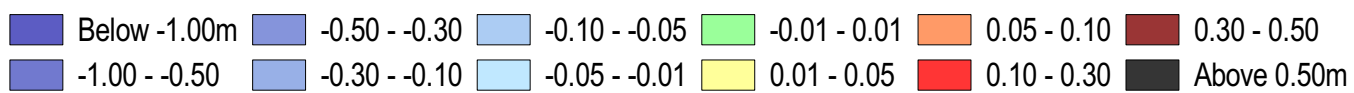


**Legend**

- Model Extents
- Existing Property Boundary
- Inflow Boundary
- Outflow Boundary



**Afflux (m)**



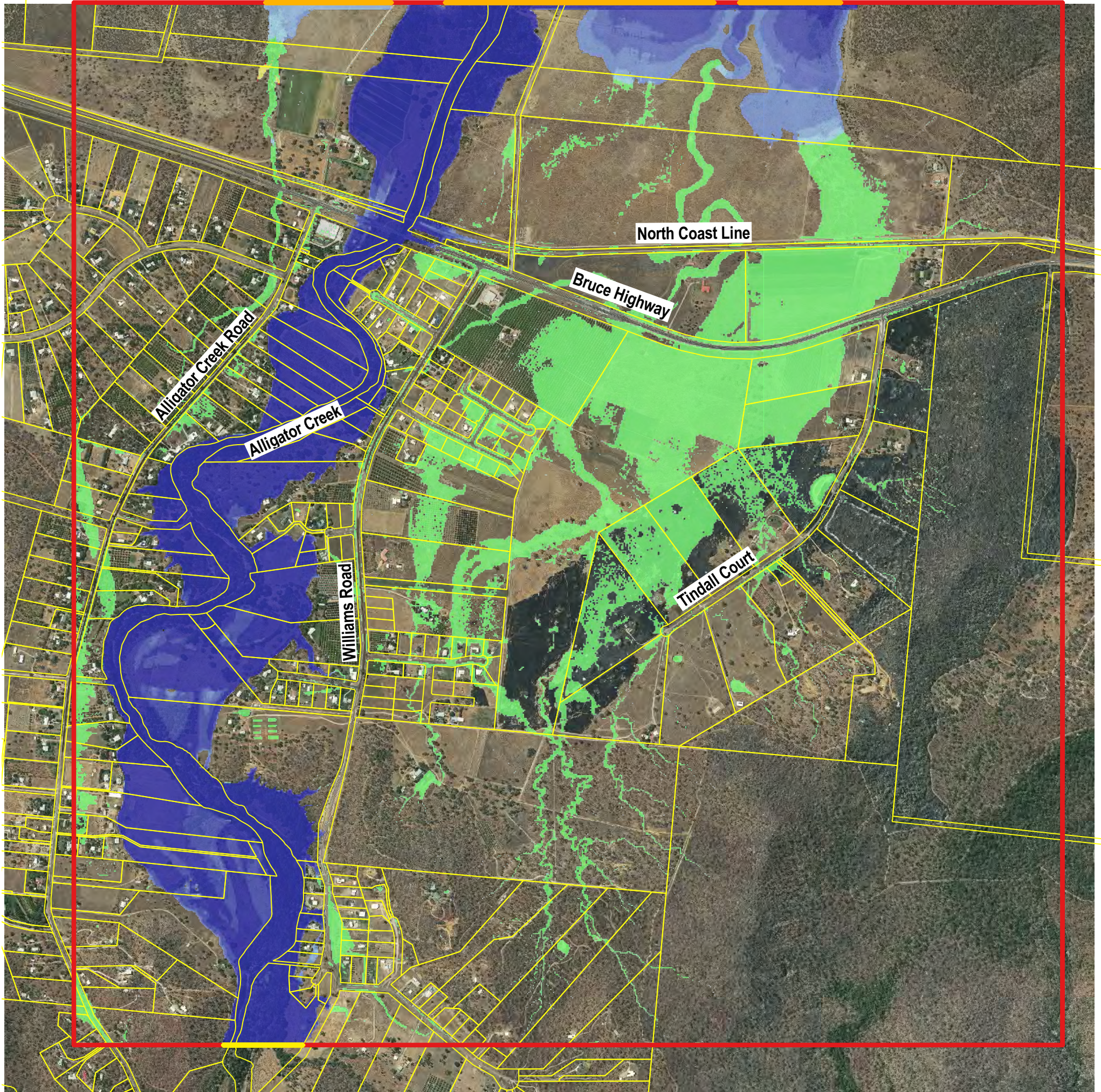
**Legend**



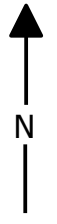
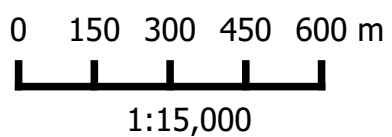
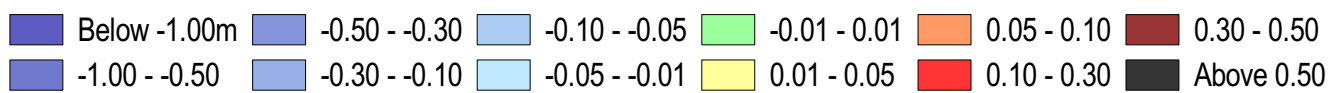
Eastern Alligator Creek Baseline Flood Assessment  
 Channel Roughness Sensitivity Analysis  
 Afflux Plot (RoughSens2 minus Base, 1% AEP 2 hr)

Date: 02/11/2015  
 Job No: TCC0049

**Figure B-4**



**Afflux (m)**



**Legend**



Eastern Alligator Creek Baseline Flood Assessment  
 Downstream Tailwater Sensitivity Analysis  
 Afflux Plot (TWSens minus Base, 1% AEP 24 hour)

Date: 02/11/2015  
 Job No: TCC0049

**Figure B-5**