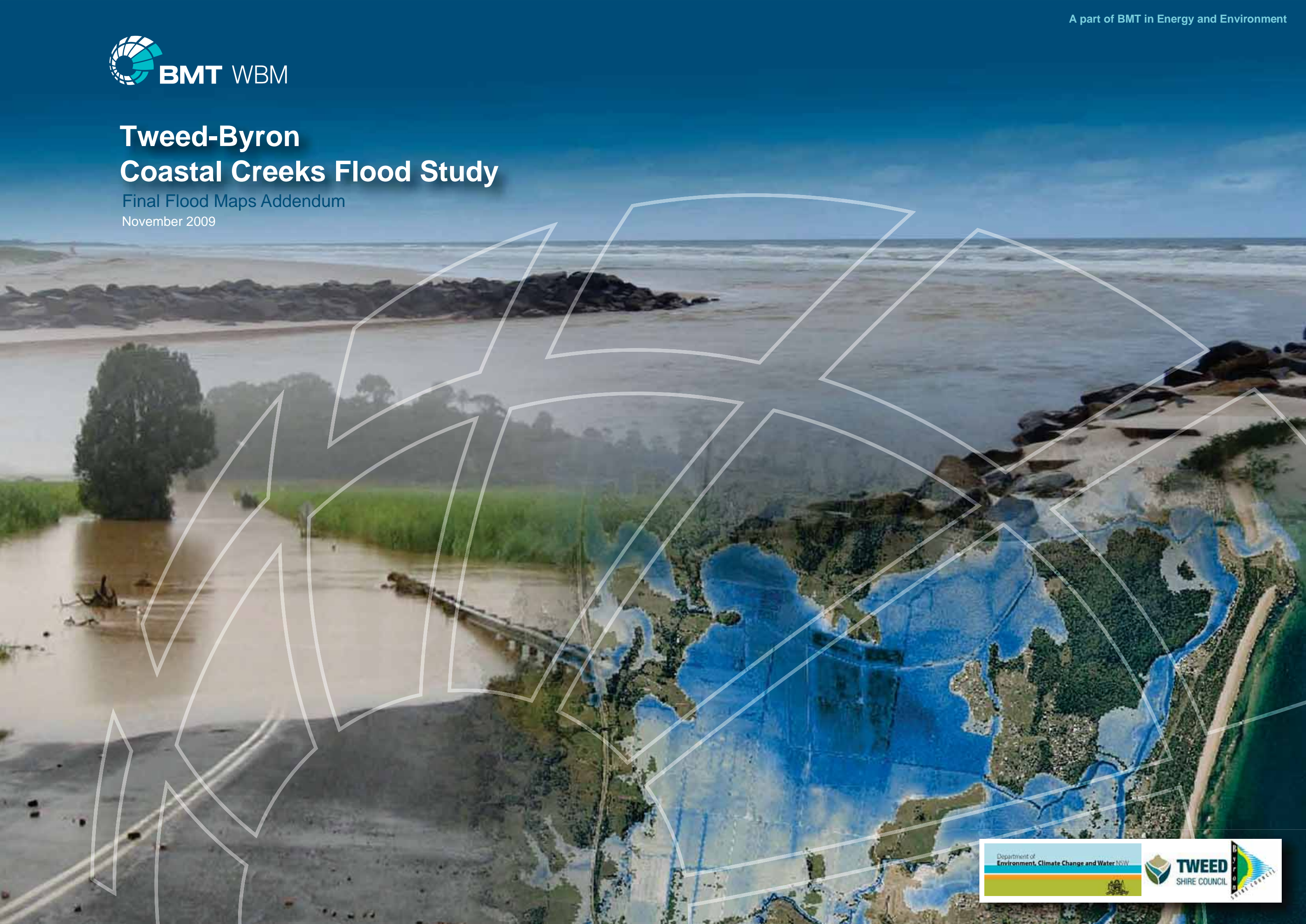




# Tweed-Byron Coastal Creeks Flood Study

Final Flood Maps Addendum  
November 2009





# **Tweed Byron Coastal Creeks Flood Study Final Flood Maps Addendum**

Prepared For: Tweed Shire Council and Byron Shire Council

Prepared By: BMT WBM Pty Ltd (Member of the BMT group of companies)

## DOCUMENT CONTROL SHEET

<b>BMT WBM Pty Ltd</b> BMT WBM Pty Ltd Level 11, 490 Upper Edward Street Brisbane 4000 Queensland Australia PO Box 203 Spring Hill 4004  Tel: +61 7 3831 6744 Fax: + 61 7 3832 3627  ABN 54 010 830 421  <a href="http://www.wbimpl.com.au">www.wbimpl.com.au</a>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Document :</b></td> <td>R.B16790.001.04_A3_Addendum.doc</td> </tr> <tr> <td><b>Project Manager :</b></td> <td>Sharon Wallace / Fanny Houdré</td> </tr> <tr> <td><b>Client:</b></td> <td>Tweed Shire Council / Byron Shire Council</td> </tr> <tr> <td><b>Client Contact:</b></td> <td>Danny Rose / James Flockton</td> </tr> <tr> <td><b>Client Reference</b></td> <td></td> </tr> </table>	<b>Document :</b>	R.B16790.001.04_A3_Addendum.doc	<b>Project Manager :</b>	Sharon Wallace / Fanny Houdré	<b>Client:</b>	Tweed Shire Council / Byron Shire Council	<b>Client Contact:</b>	Danny Rose / James Flockton	<b>Client Reference</b>	
<b>Document :</b>	R.B16790.001.04_A3_Addendum.doc										
<b>Project Manager :</b>	Sharon Wallace / Fanny Houdré										
<b>Client:</b>	Tweed Shire Council / Byron Shire Council										
<b>Client Contact:</b>	Danny Rose / James Flockton										
<b>Client Reference</b>											

<b>Title :</b>	Tweed Byron Coastal Creeks Flood Study – Final Flood Maps Addendum
<b>Author :</b>	Fanny Houdré
<b>Synopsis :</b>	Flood maps to accompany the Coastal Creeks Flood Study Report.

### REVISION/CHECKING HISTORY

REVISION NUMBER	DATE OF ISSUE	CHECKED BY	ISSUED BY
2	10 <sup>th</sup> July 2009	SAW	FMH
3	18 <sup>th</sup> September 2009	SAW	FMH
4	24 <sup>th</sup> November 2009	SAW	FMH

### DISTRIBUTION

DESTINATION	REVISION		
	2	3	4
Tweed Shire Council	8+PDF	5+PDF	PDF
Byron Shire Council	9+PDF	5-PDF	PDF
DECC	1+PDF	1+PDF	PDF
BMT WBM File	1	1	1
BMT WBM Library	PDF	PDF	PDF

## TABLE OF FLOOD MAPS

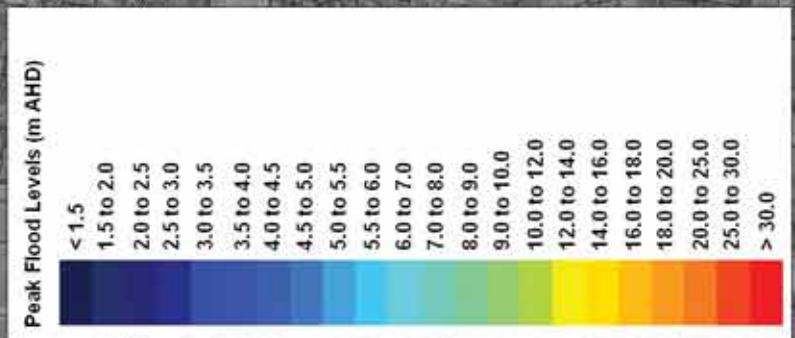
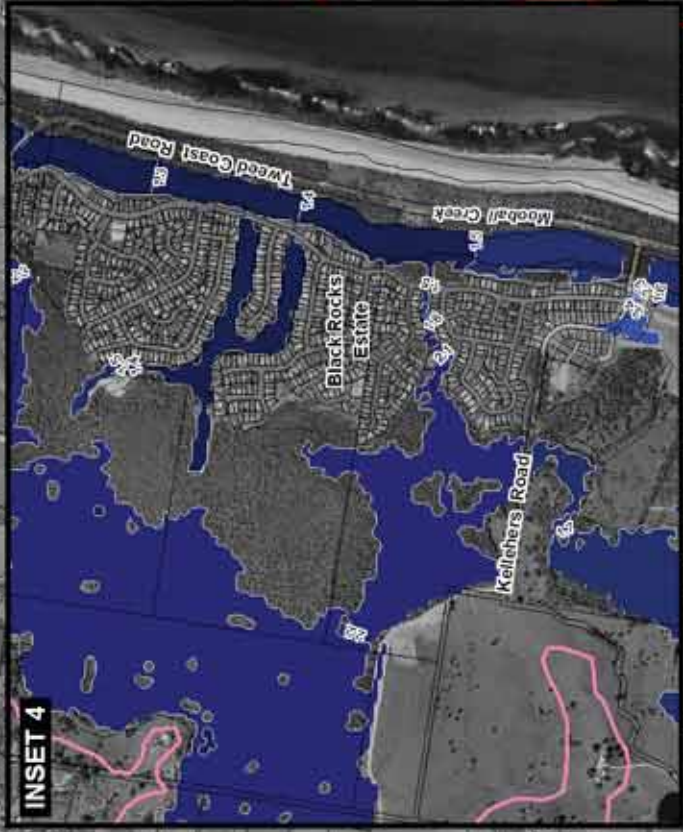
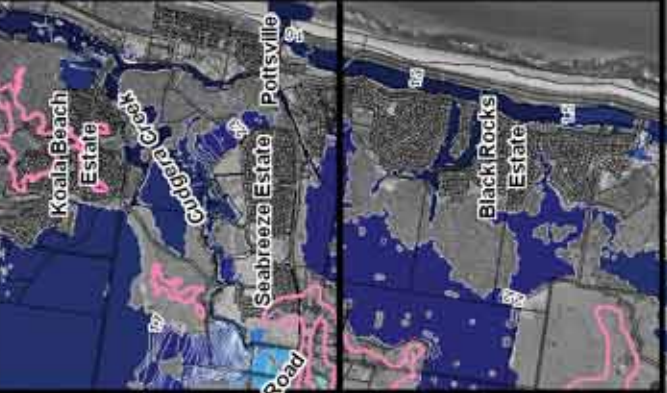
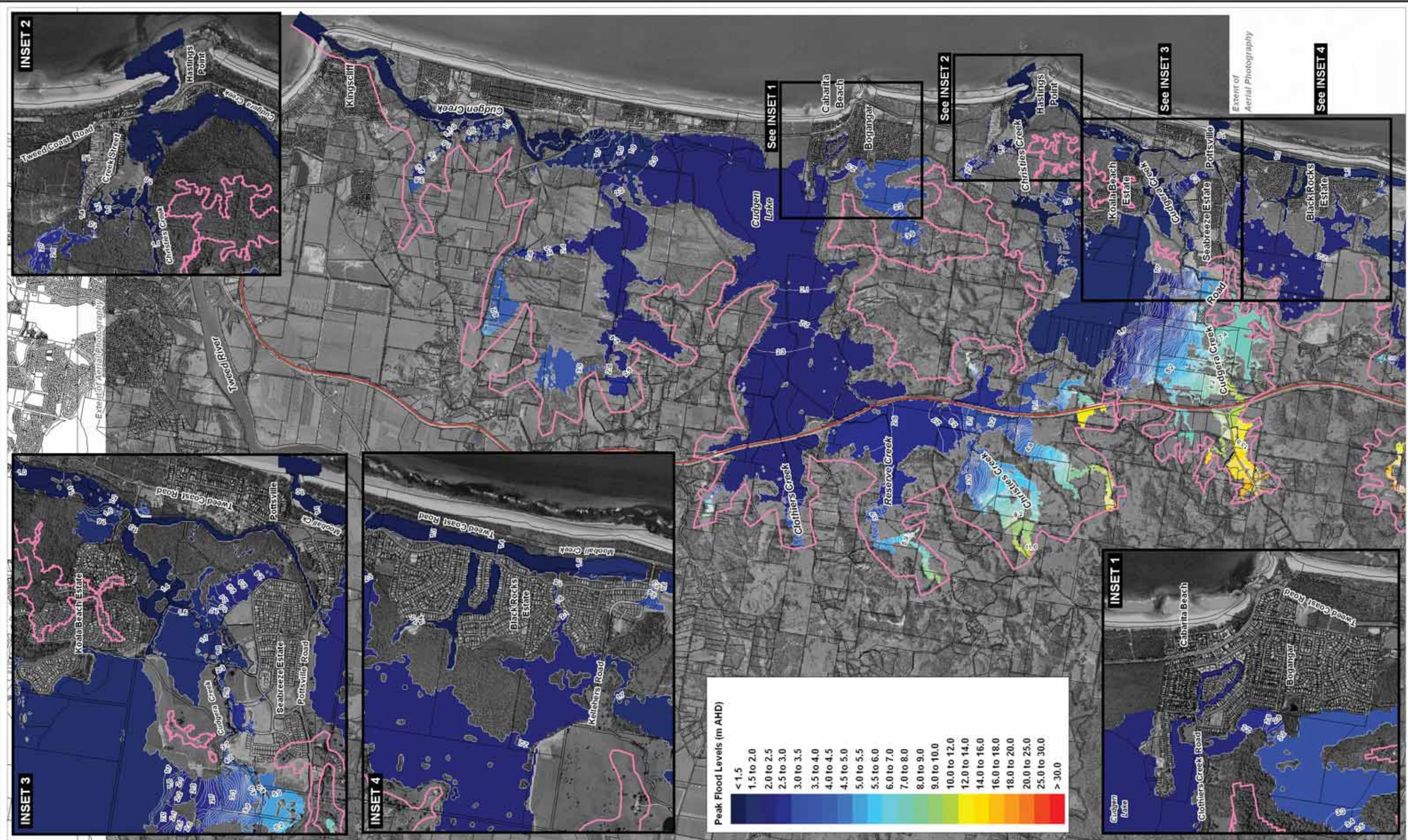
### Cudgen / Cudgera

- Flood Map 1: 5 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 2: 5 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 3: 5 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 4: 10 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 5: 10 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 6: 10 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 7: 20 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 8: 20 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 9: 20 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 10: 50 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 11: 50 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 12: 50 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 13: 100 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 14: 100 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 15: 100 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 16: 500 Year ARI Peak Flood Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 17: 500 Year ARI Peak Flood Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 18: 500 Year ARI Peak Flood Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 19: Probable Maximum Flood Peak Levels - Cudgen/Cudgera Creeks Catchments
- Flood Map 20: Probable Maximum Flood Peak Depths - Cudgen/Cudgera Creeks Catchments
- Flood Map 21: Probable Maximum Flood Peak Velocity x Depth Product - Cudgen/Cudgera Creeks Catchments
- Flood Map 22: 100 Year ARI Peak Flood Levels - Medium Impacts Climate Change - Cudgen/Cudgera Creeks Catchments
- Flood Map 23: 100 Year ARI Peak Flood Depths - Medium Impacts Climate Change - Cudgen/Cudgera Creeks Catchments
- Flood Map 24: 100 Year ARI Peak Flood Velocity x Depth Product - Medium Impacts Climate Change - Cudgen/Cudgera Creeks Catchments
- Flood Map 25: 100 Year ARI Peak Flood Levels - High Impacts Climate Change - Cudgen/Cudgera Creeks Catchments
- Flood Map 26: 100 Year ARI Peak Flood Depths - High Impacts Climate Change - Cudgen/Cudgera Creeks Catchments
- Flood Map 27: 100 Year ARI Peak Flood Velocity x Depth Product - High Impacts Climate Change - Cudgen/Cudgera Creeks Catchments

### Mooball / Marshalls

- Flood Map 28: 5 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 29: 5 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 30: 5 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 31: 10 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 32: 10 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 33: 10 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 34: 20 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 35: 20 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 36: 20 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 37: 50 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 38: 50 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 39: 50 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 40: 100 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 41: 100 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 42: 100 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 43: 500 Year ARI Peak Flood Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 44: 500 Year ARI Peak Flood Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 45: 500 Year ARI Peak Flood Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 46: Probable Maximum Flood Peak Levels - Mooball/Marshalls Creeks Catchments
- Flood Map 47: Probable Maximum Flood Peak Depths - Mooball/Marshalls Creeks Catchments
- Flood Map 48: Probable Maximum Flood Peak Velocity x Depth Product - Mooball/Marshalls Creeks Catchments
- Flood Map 49: 100 Year ARI Peak Flood Levels - Medium Impacts Climate Change - Mooball/Marshalls Creeks Catchments
- Flood Map 50: 100 Year ARI Peak Flood Depths - Medium Impacts Climate Change - Mooball/Marshalls Creeks Catchments
- Flood Map 51: 100 Year ARI Peak Flood Velocity x Depth Product - Medium Impacts Climate Change - Mooball/Marshalls Creeks Catchments
- Flood Map 52: 100 Year ARI Peak Flood Levels - High Impacts Climate Change - Mooball/Marshalls Creeks Catchments
- Flood Map 53: 100 Year ARI Peak Flood Depths - High Impacts Climate Change - Mooball/Marshalls Creeks Catchments
- Flood Map 54: 100 Year ARI Peak Flood Velocity x Depth Product - High Impacts Climate Change - Mooball/Marshalls Creeks Catchments





- LEGEND**
- Model Extent
  - Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

Title:  
**5 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

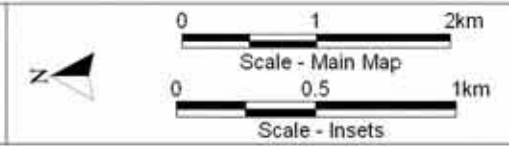
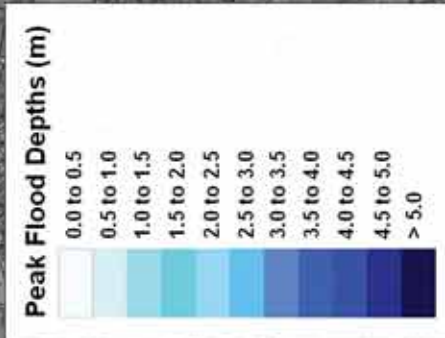
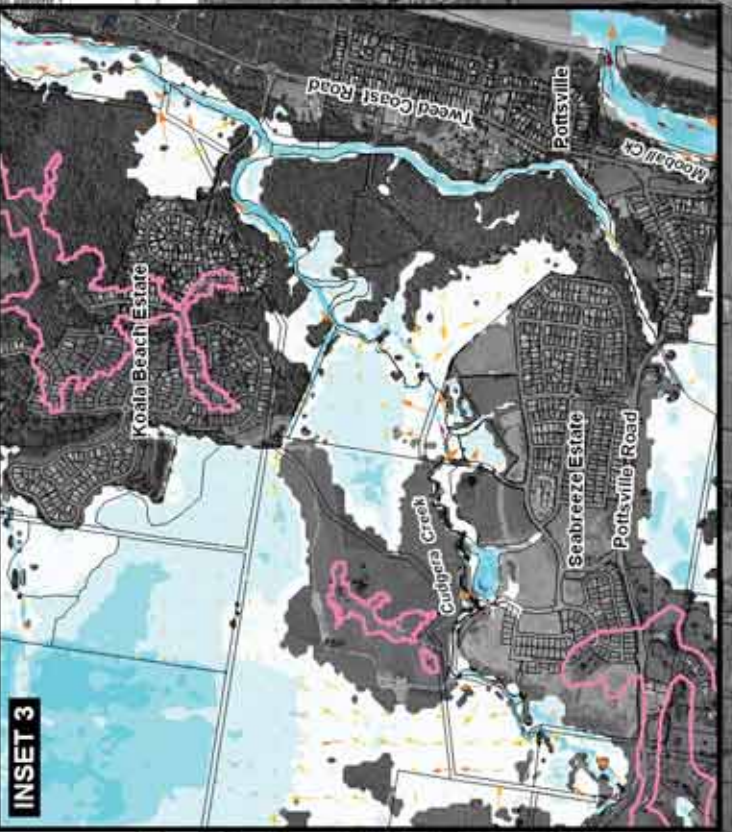
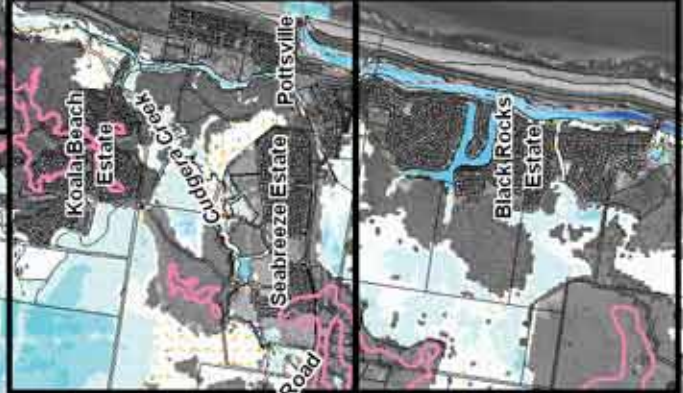
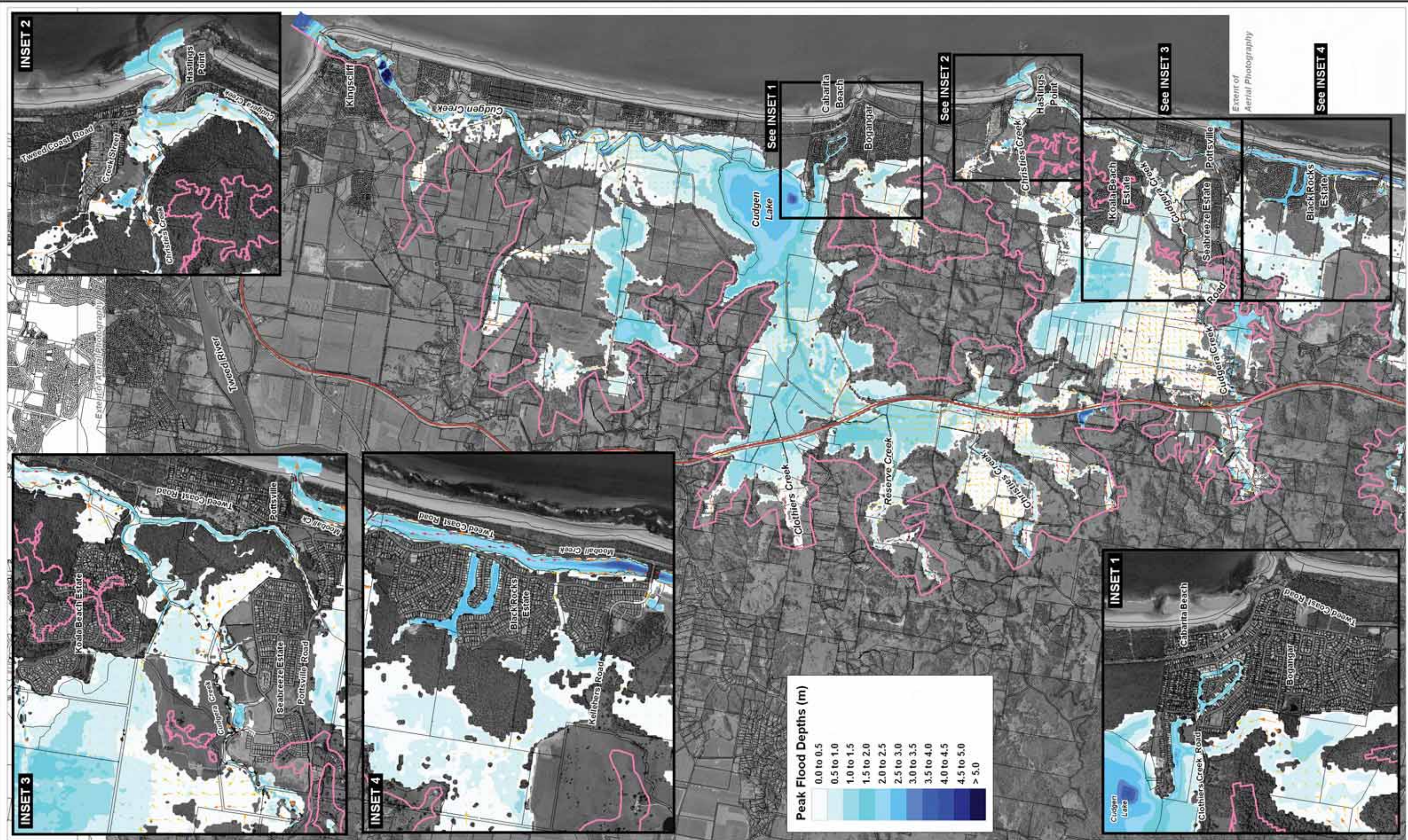


Figure:  
**Flood Map 1**

Rev:  
**B**







- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

- Peak Flood Vectors (m/s)**
- 0.0 to 0.2
  - 0.2 to 0.5
  - 0.5 to 0.8
  - > 0.8

Title:  
**5 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

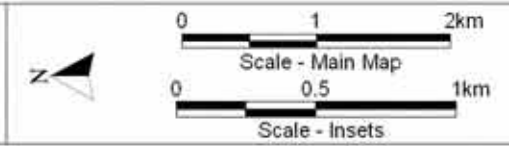
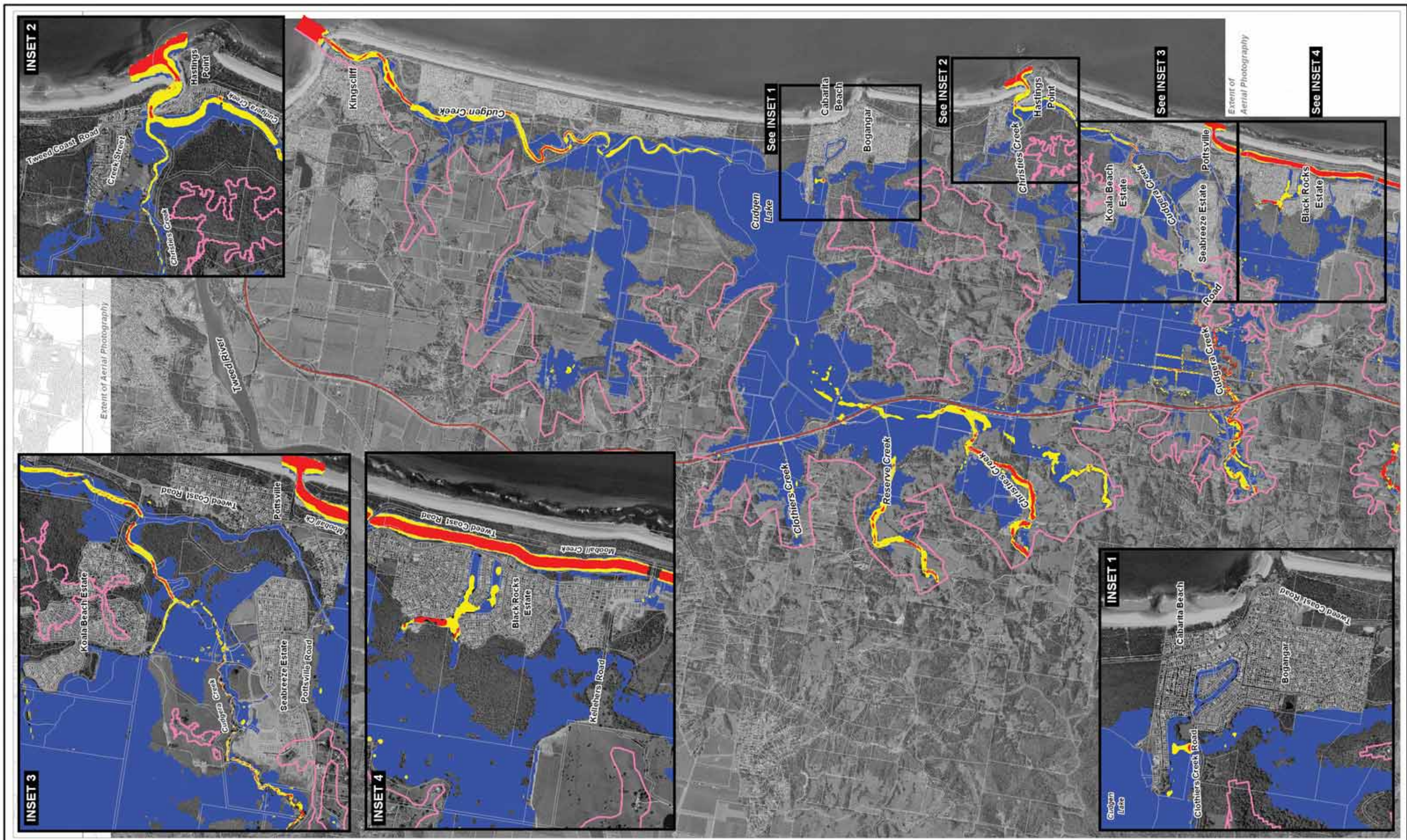


Figure:  
**Flood Map 2**



Rev:  
**B**





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

**Title:**  
**5 Year ARI Peak Flood Velocity x Depth Product**  
**Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

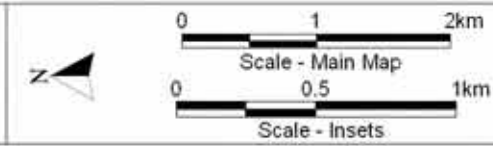
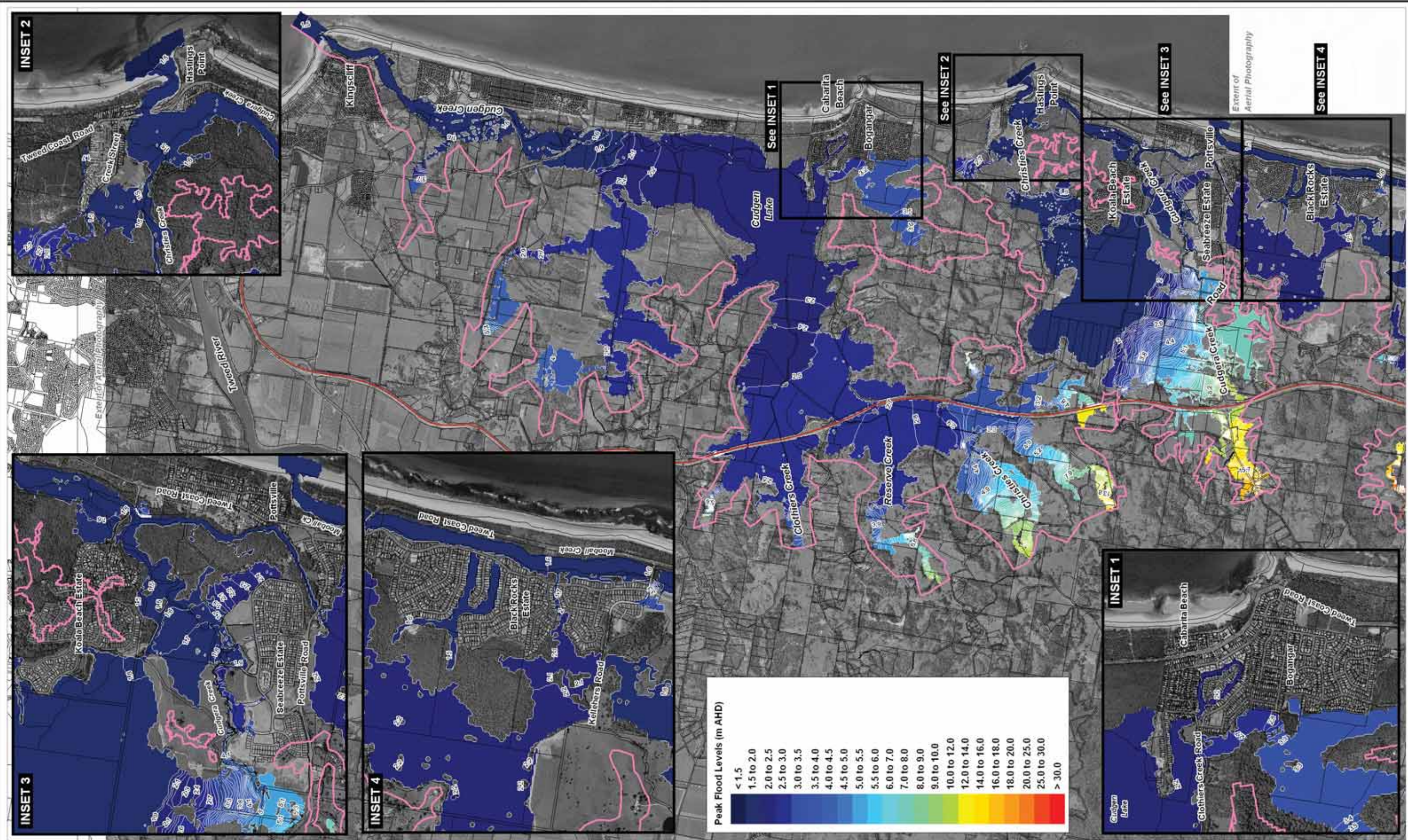


Figure:  
**Flood Map 3**

Rev:  
**B**

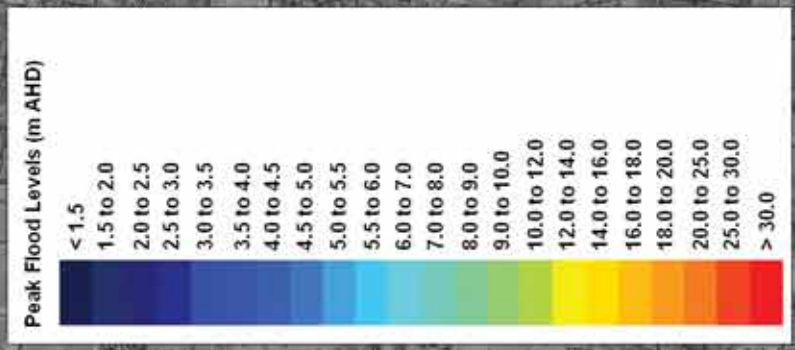






**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Cadastral Boundaries



Title:  
**10 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

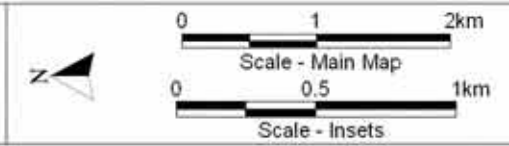
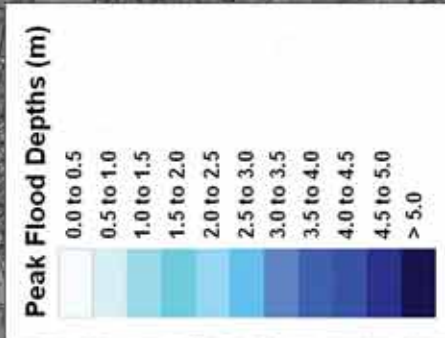
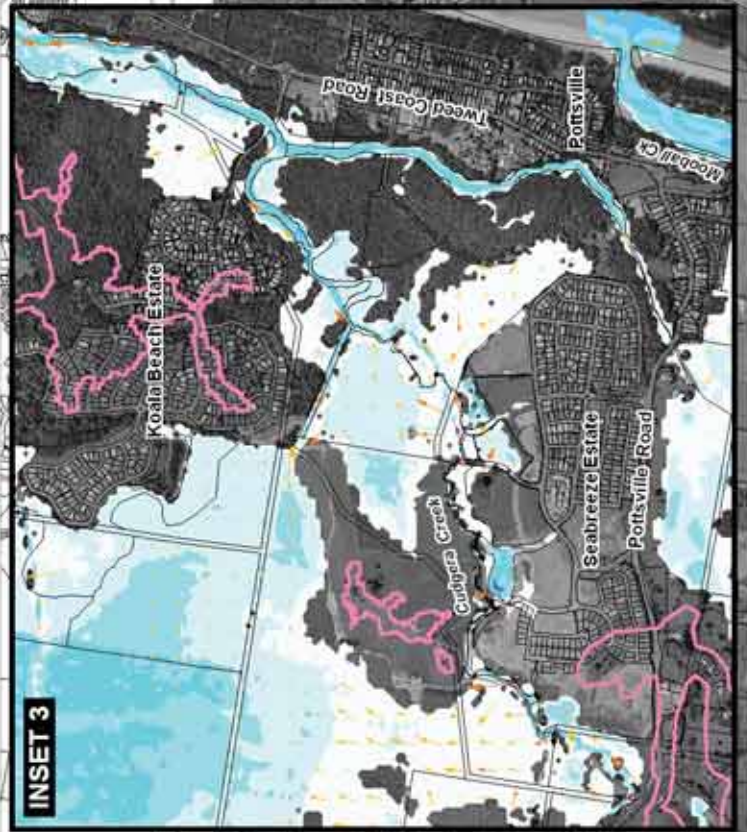
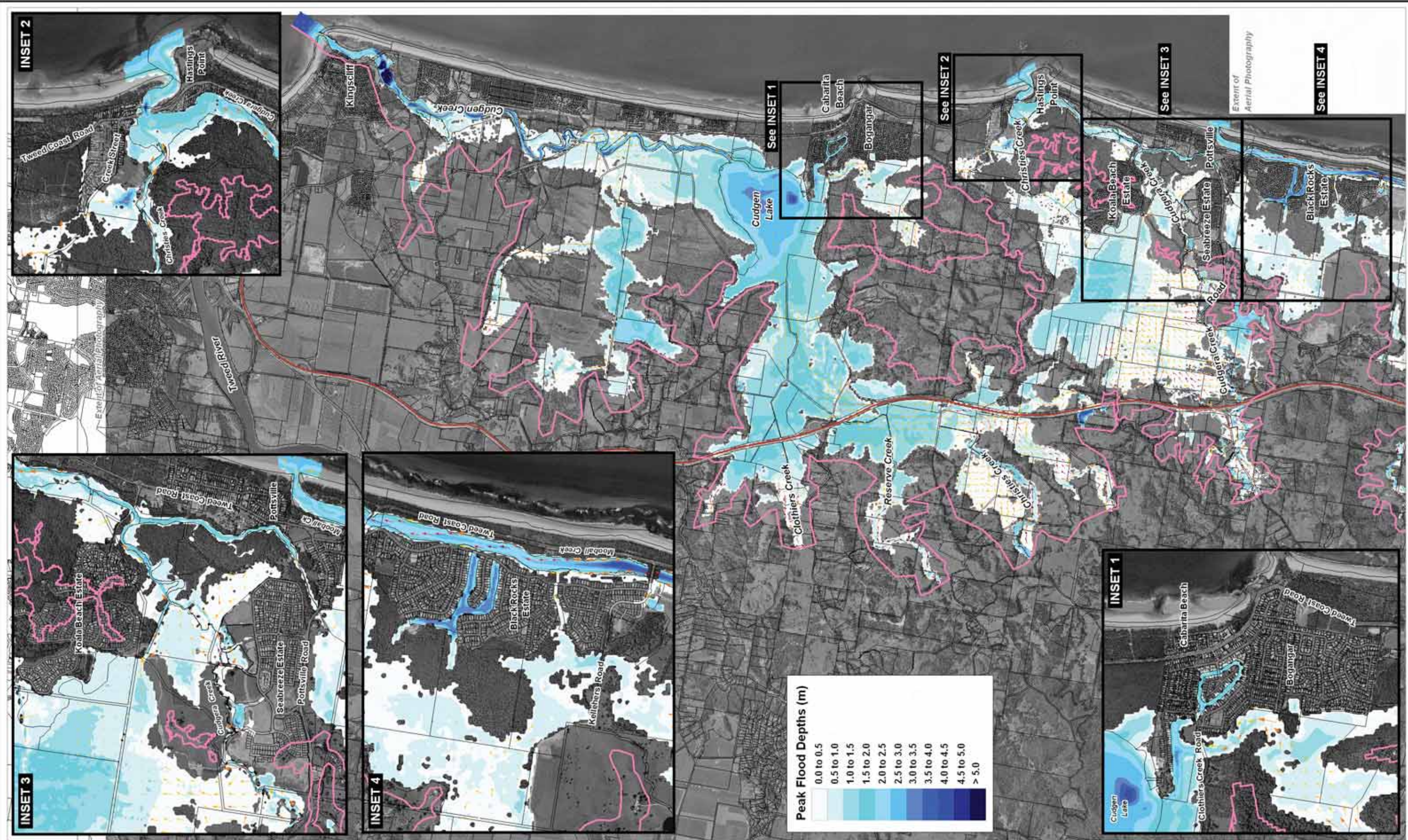


Figure:  
**Flood Map 4**

Rev:  
**B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- ▶ 0.0 to 0.2
- ▶ 0.2 to 0.5
- ▶ 0.5 to 0.8
- ▶ > 0.8

Title:  
**10 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

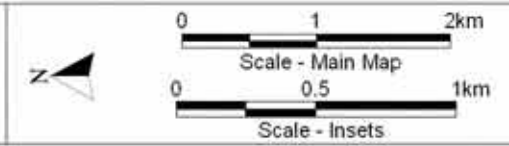


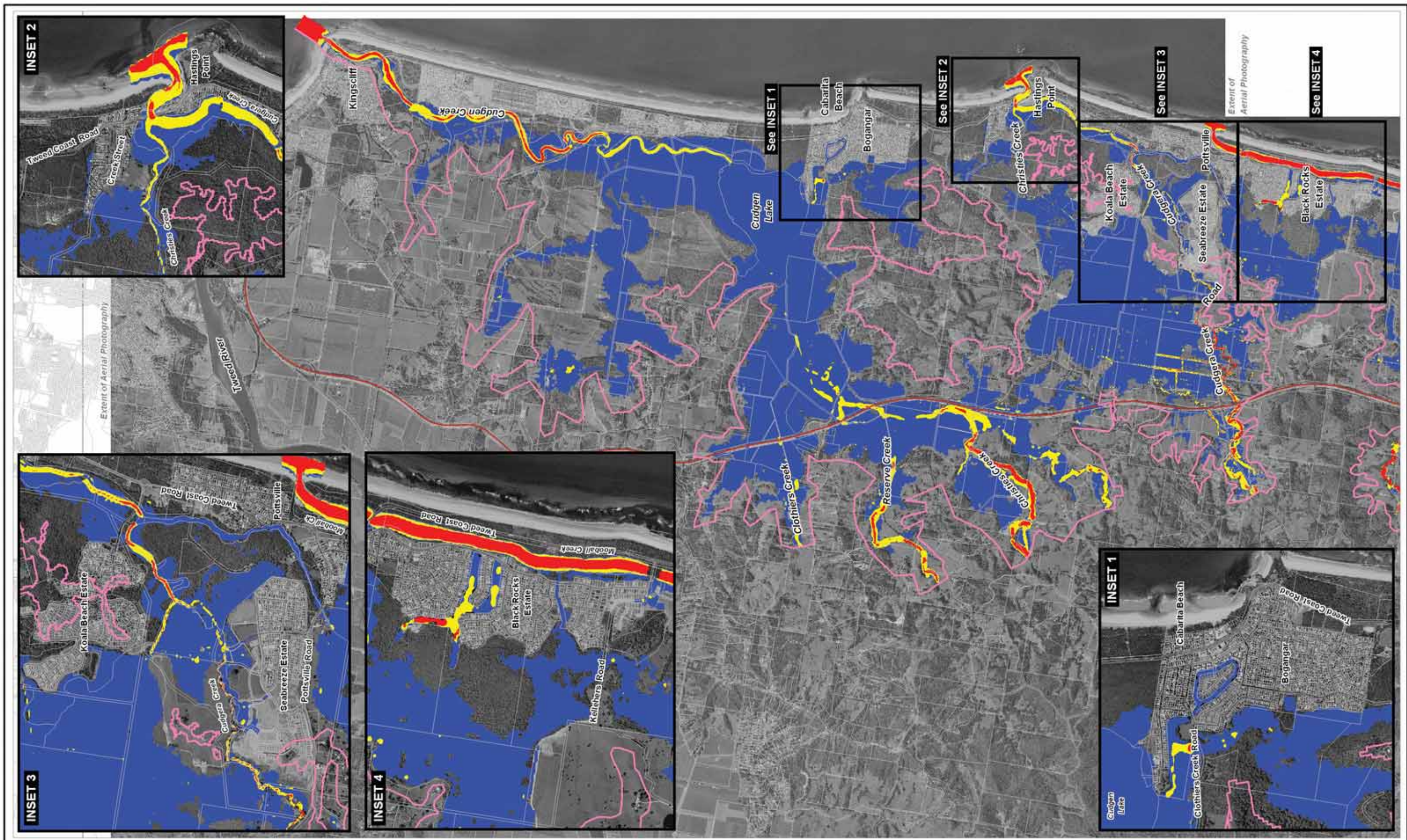
Figure:  
**Flood Map 5**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_067\_090521\_CC 10Y Flood Depths RevB.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

Title:  
**10 Year ARI Peak Flood Velocity x Depth Product  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

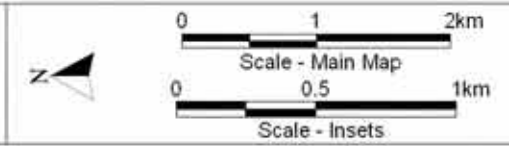
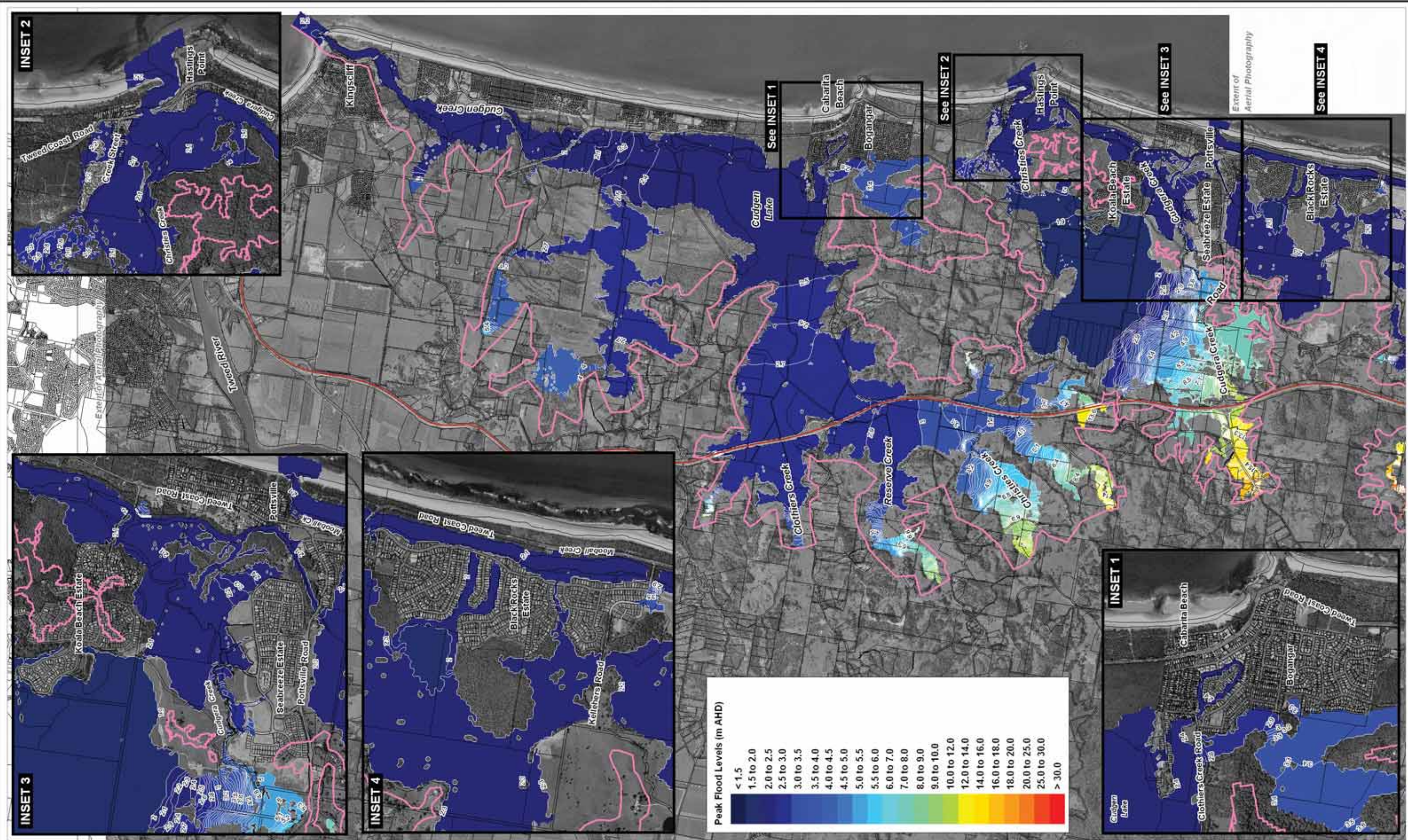


Figure:  
**Flood Map 6**

Rev:  
**B**

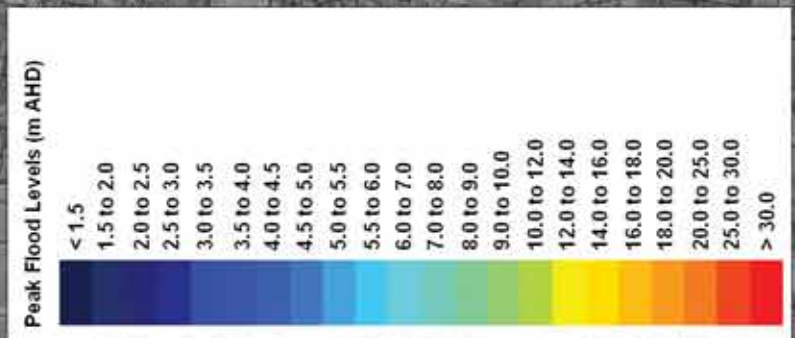






**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Cadastral Boundaries



Title:  
**20 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

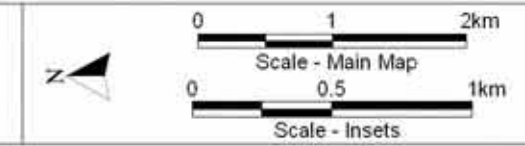
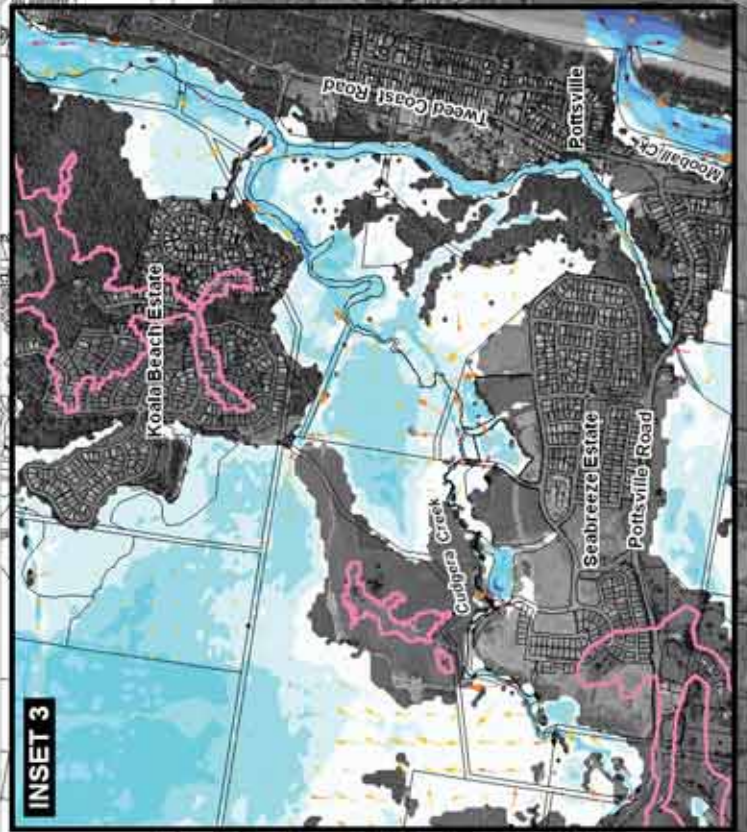
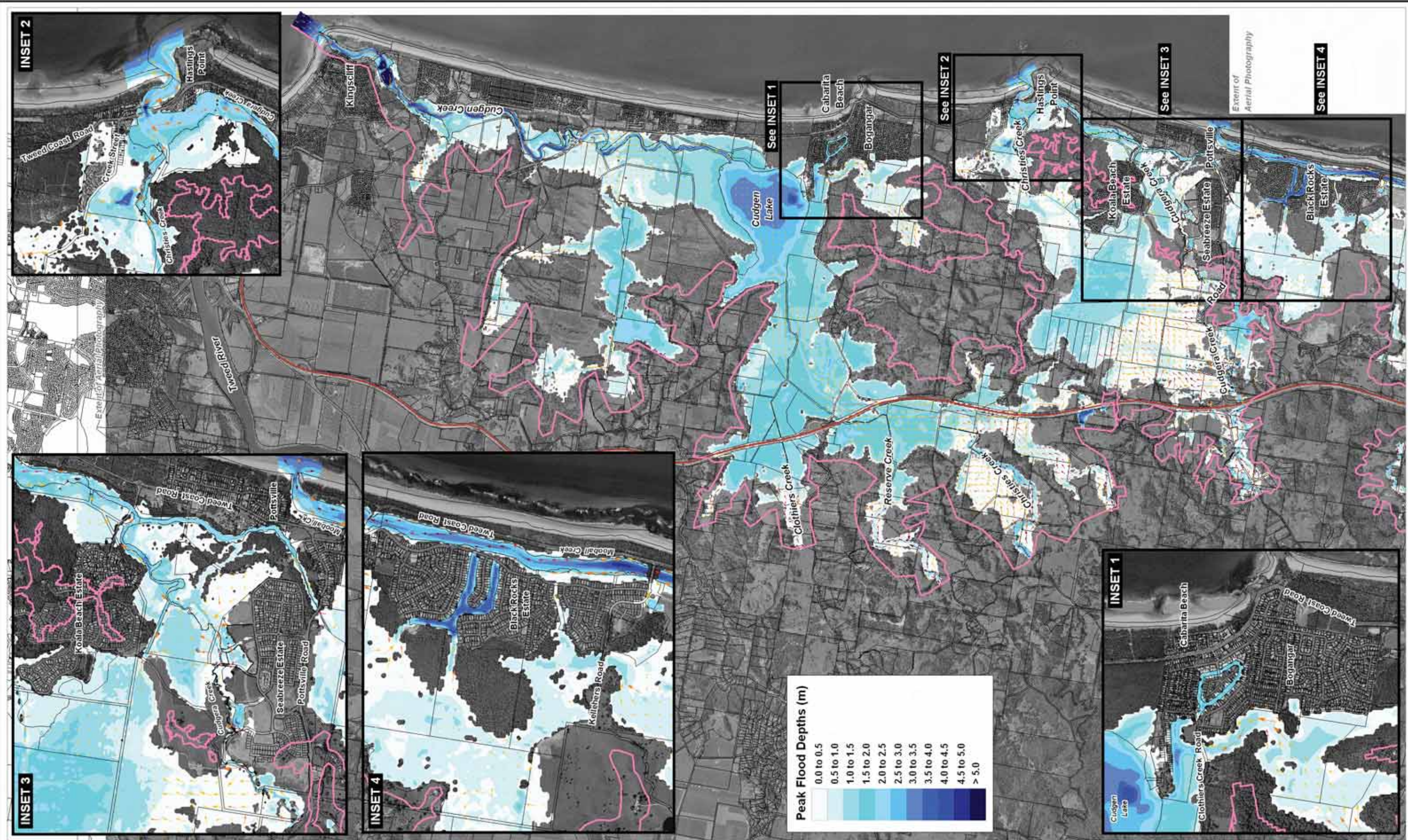


Figure:  
**Flood Map 7**

Rev:  
**B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**20 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

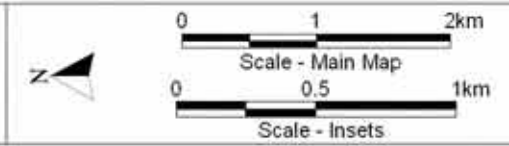
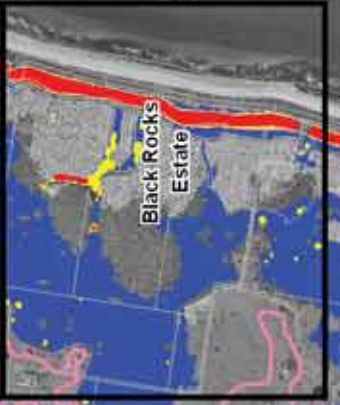
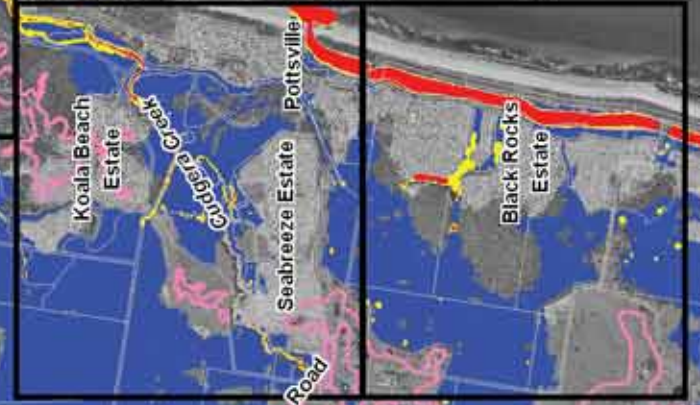
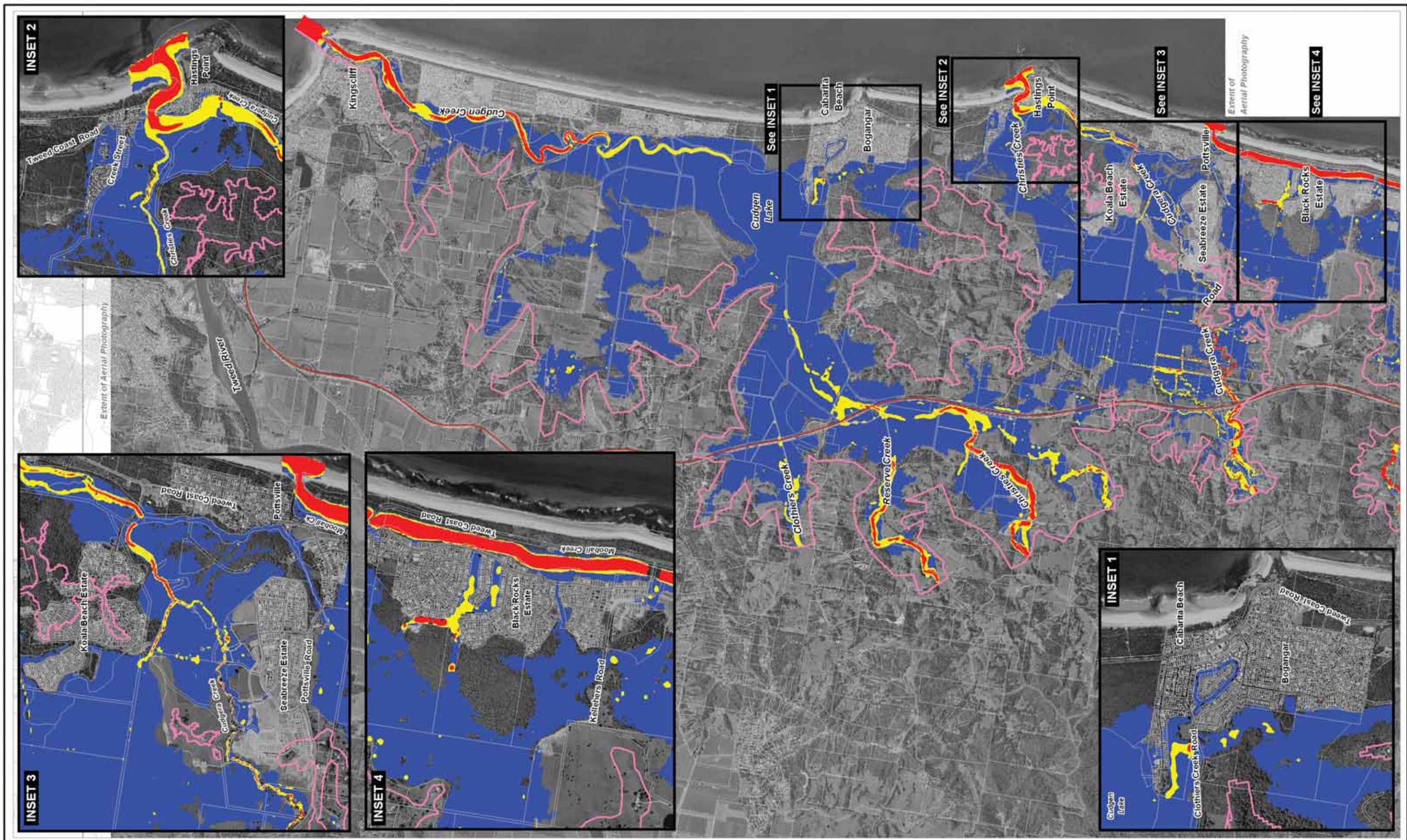


Figure:  
**Flood Map 8**

Rev:  
**B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low ( $< 0.3$ )
- Medium (0.3 to 1.0)
- High ( $> 1.0$ )

Title:  
**20 Year ARI Peak Flood Velocity x Depth Product  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

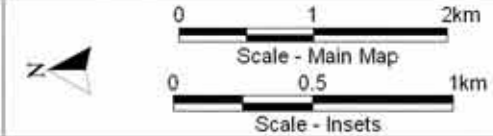


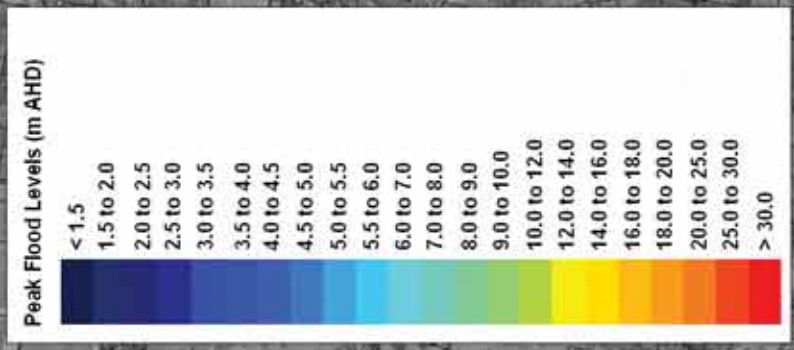
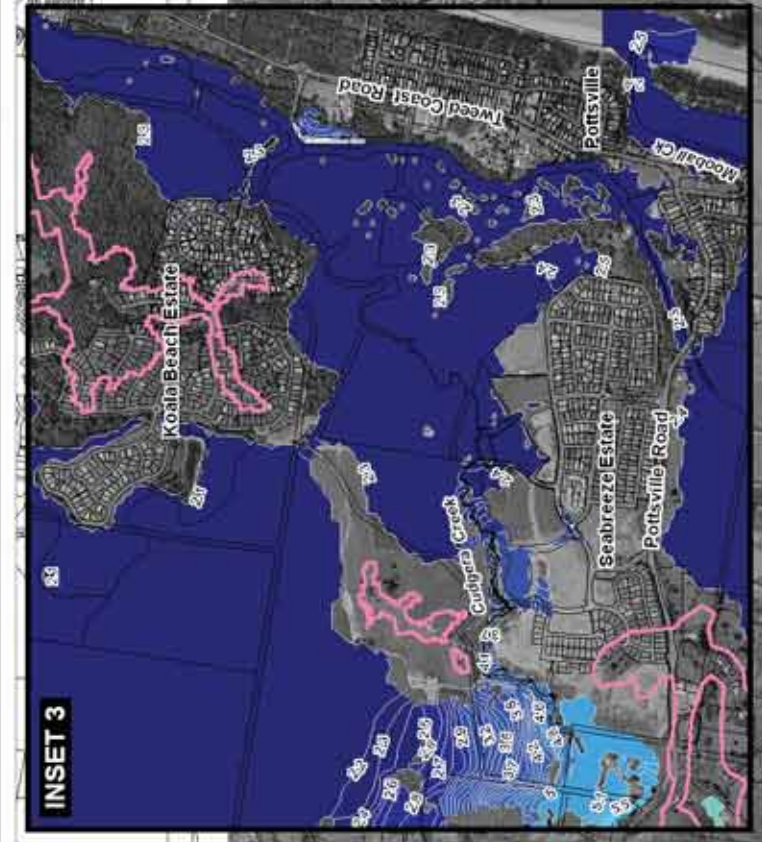
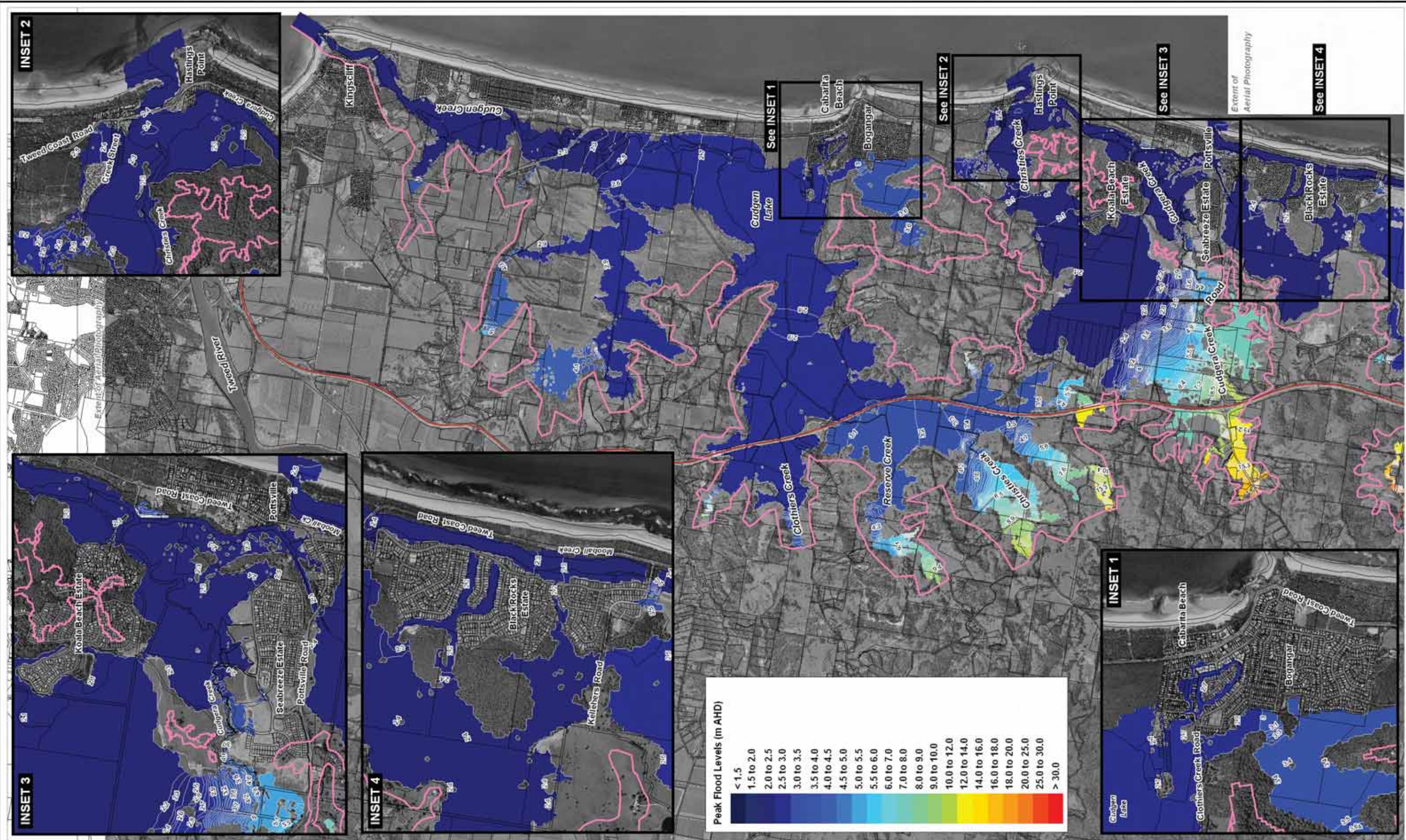
Figure:  
**Flood Map 9**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_048\_090708\_CC 20Y Flood Velocity Rev B.WOR





**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Cadastral Boundaries

Title:  
**50 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

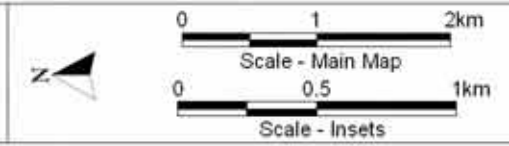


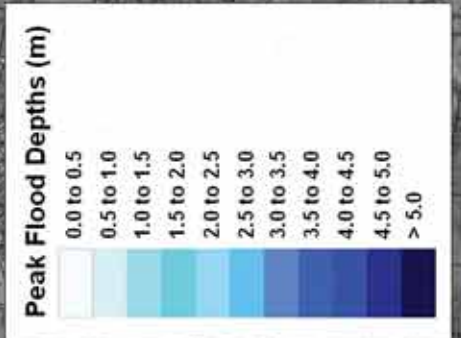
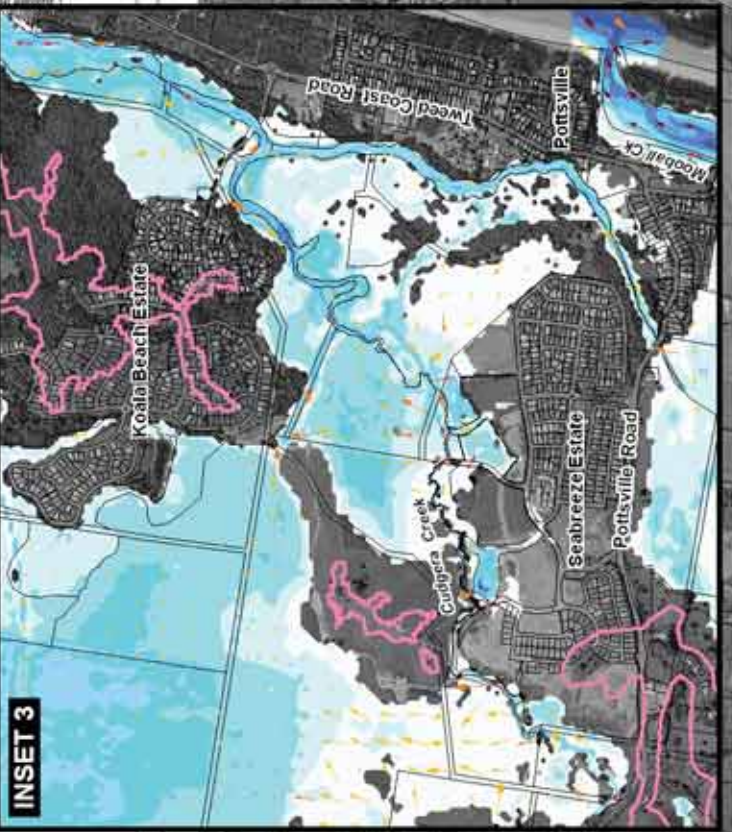
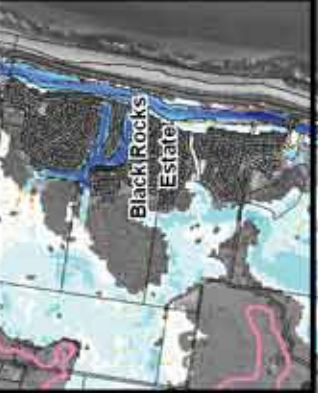
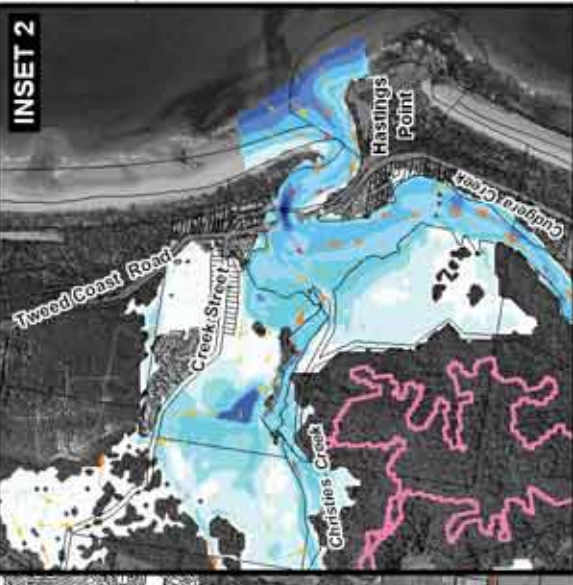
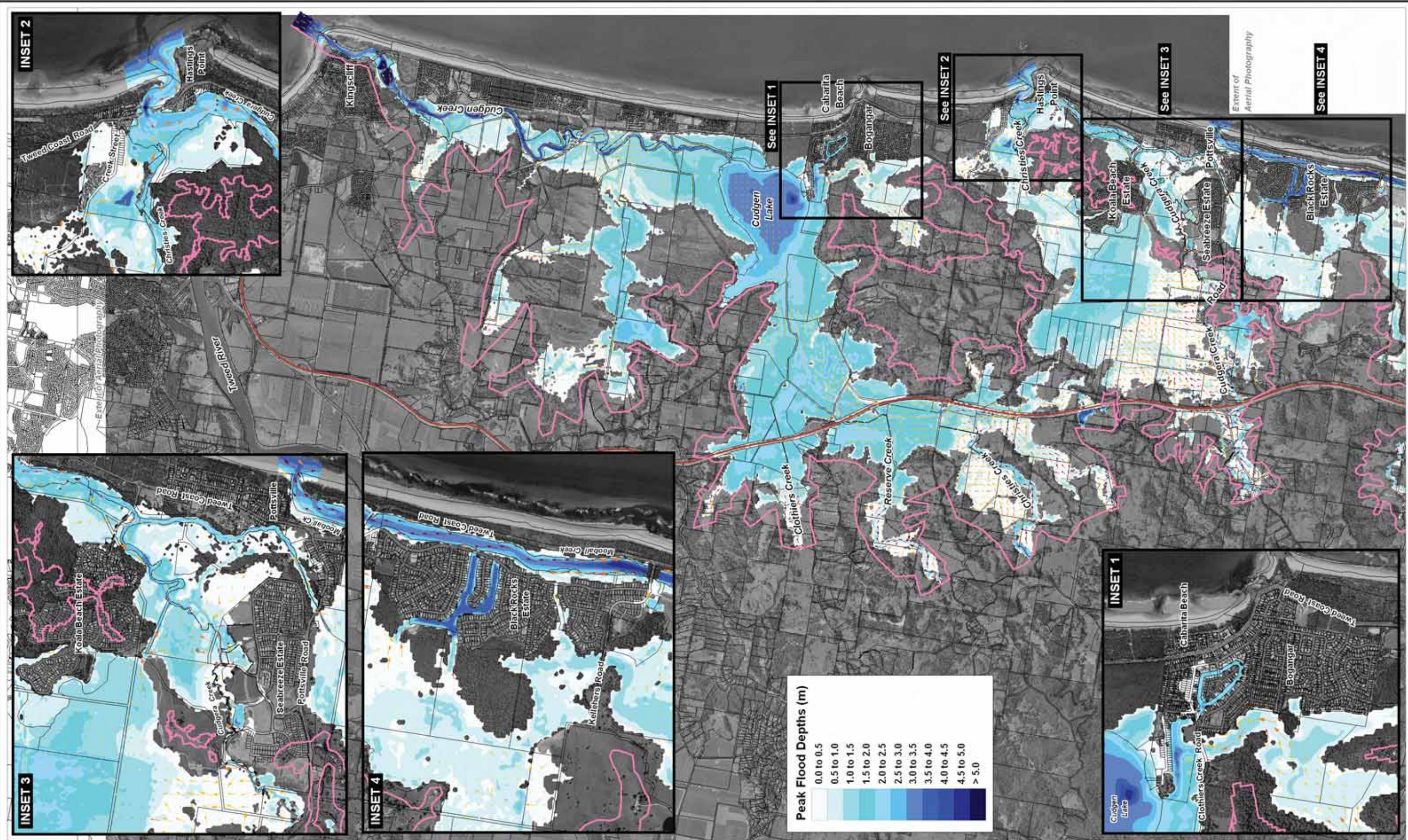
Figure:  
**Flood Map 10**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_062\_090707\_CC 50Y Flood Levels Rev8.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**50 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

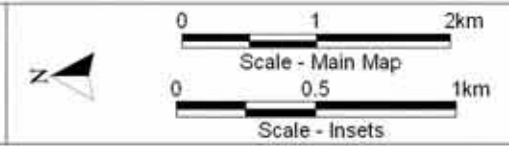
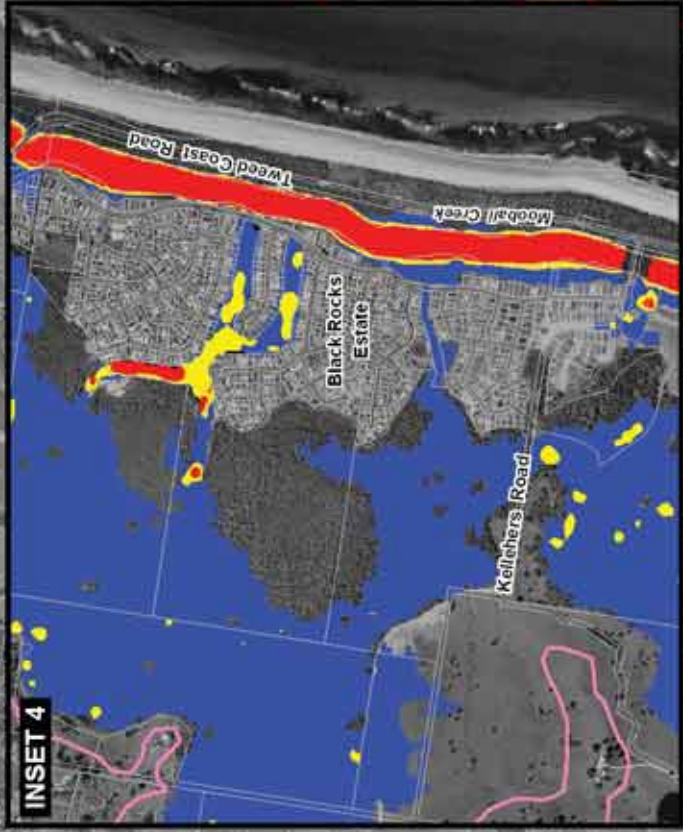
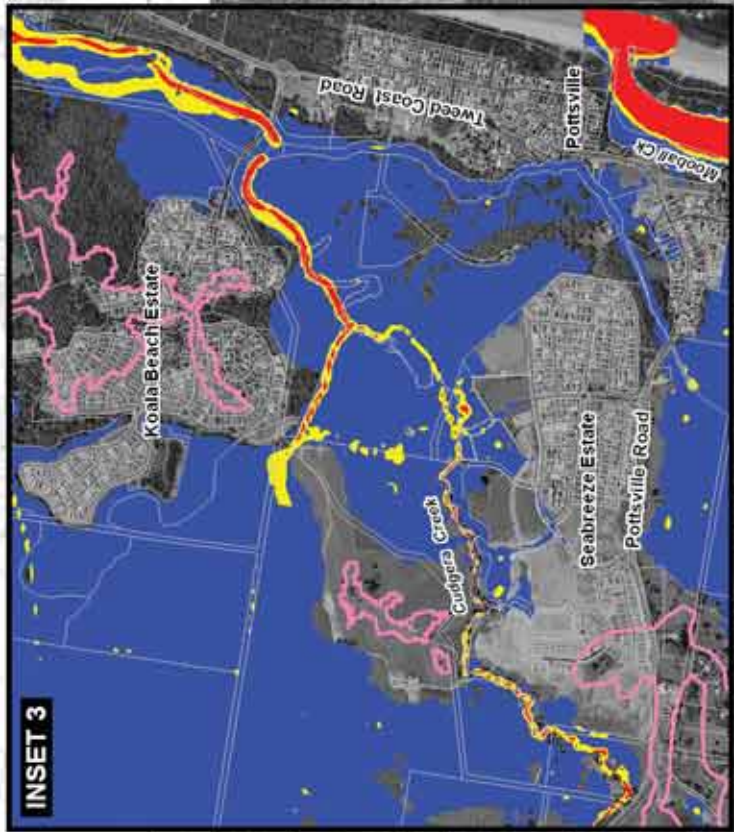
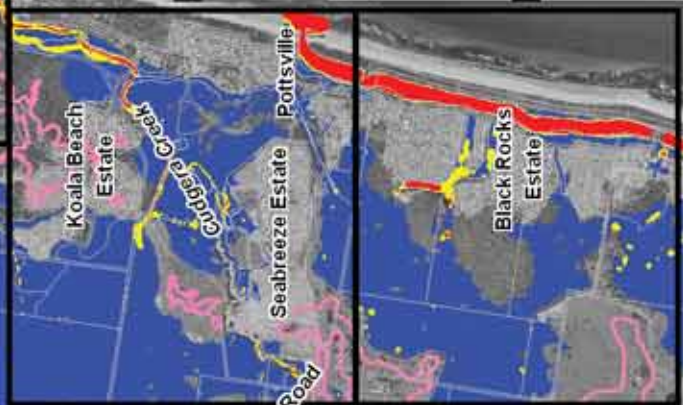
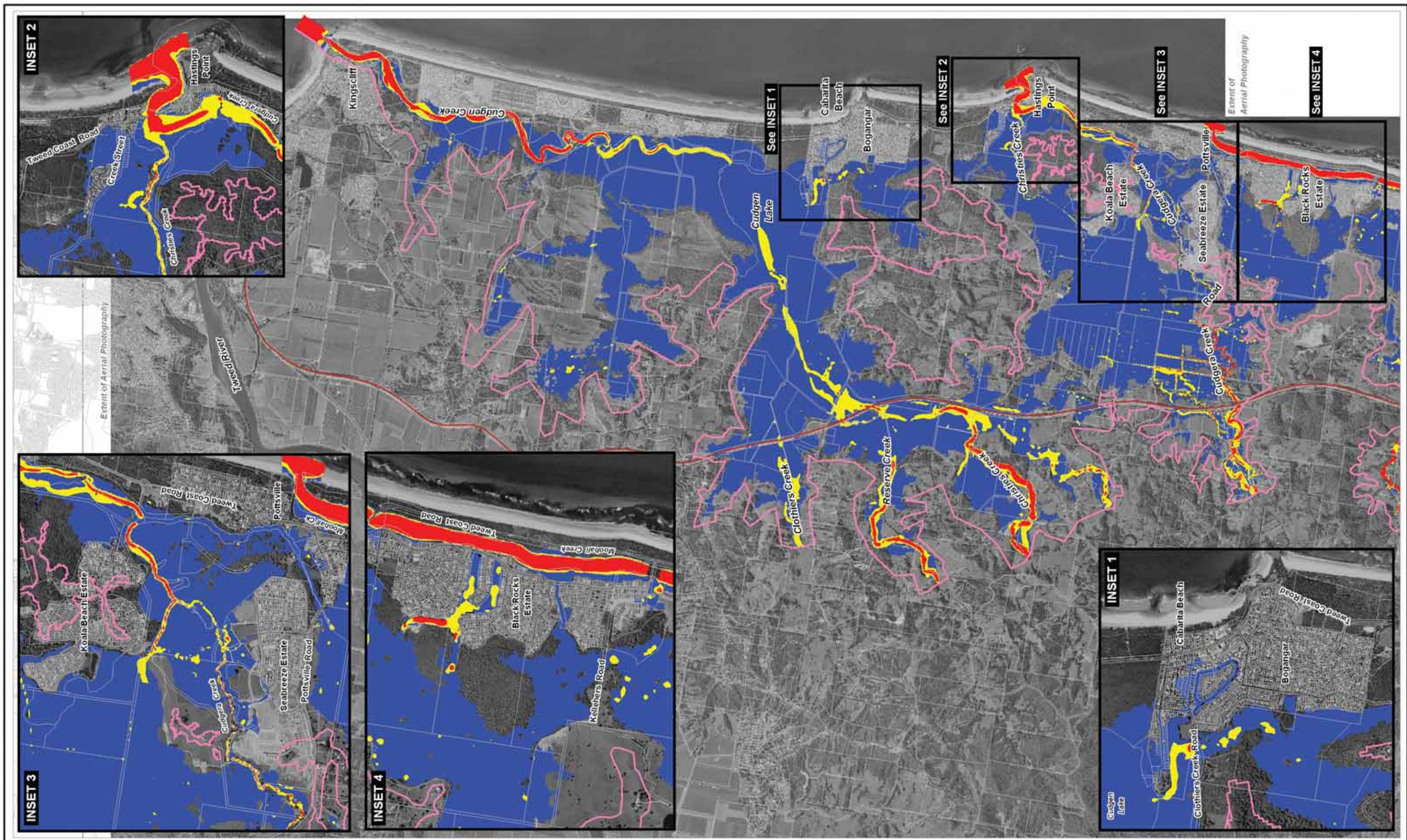


Figure:  
**Flood Map 11**

Rev:  
**B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

Title:  
**50 Year ARI Peak Flood Velocity x Depth Product  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

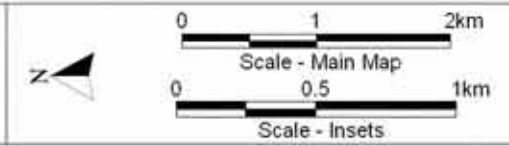
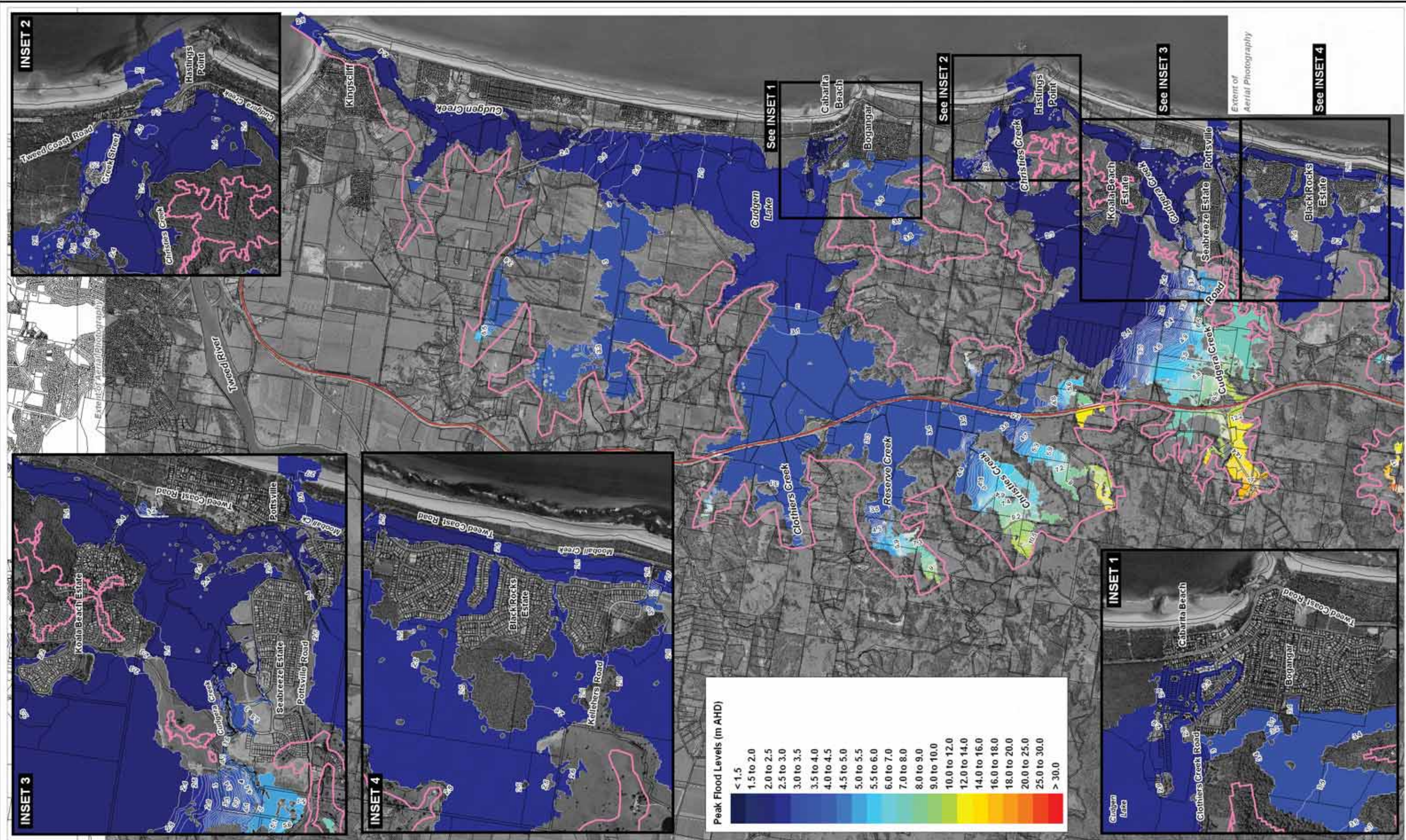


Figure:  
**Flood Map 12**

Rev:  
**B**

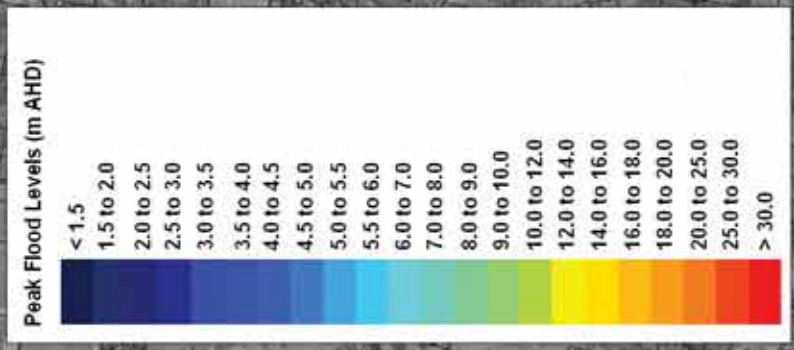






**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Cadastral Boundaries



Title:  
**100 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

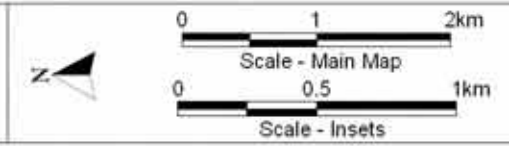
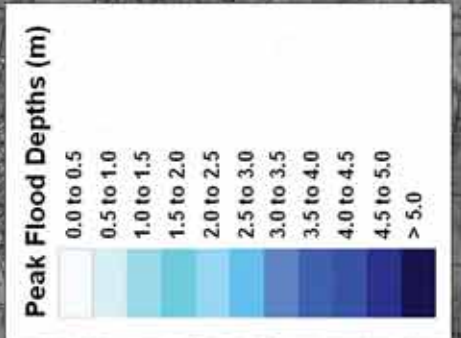
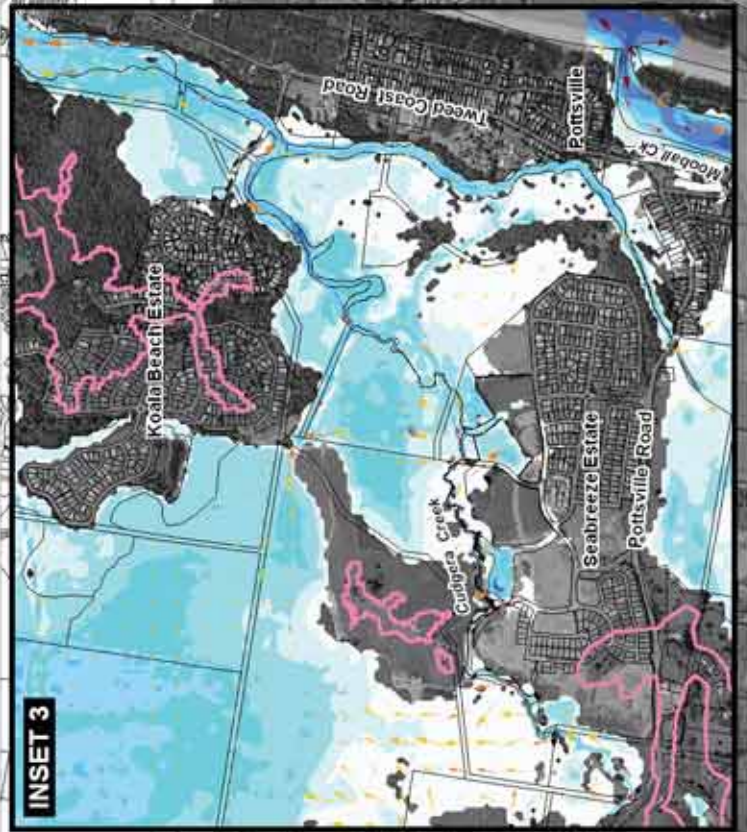
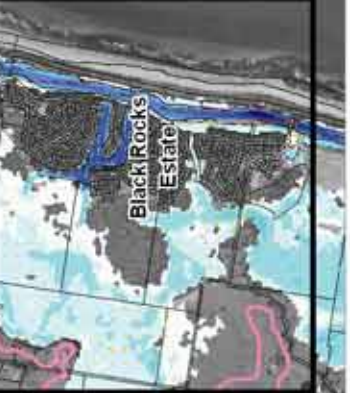
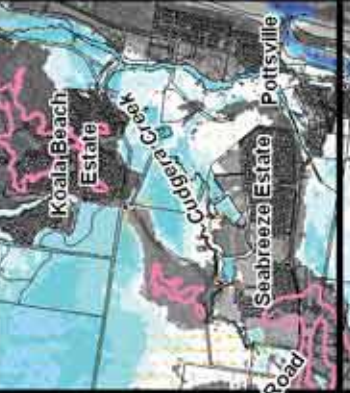
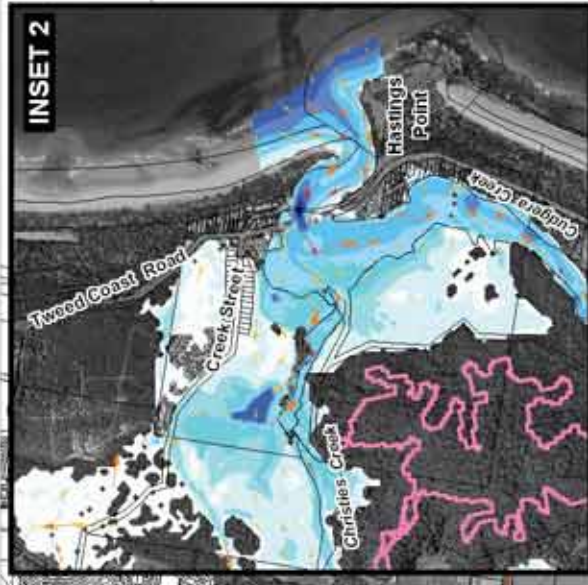
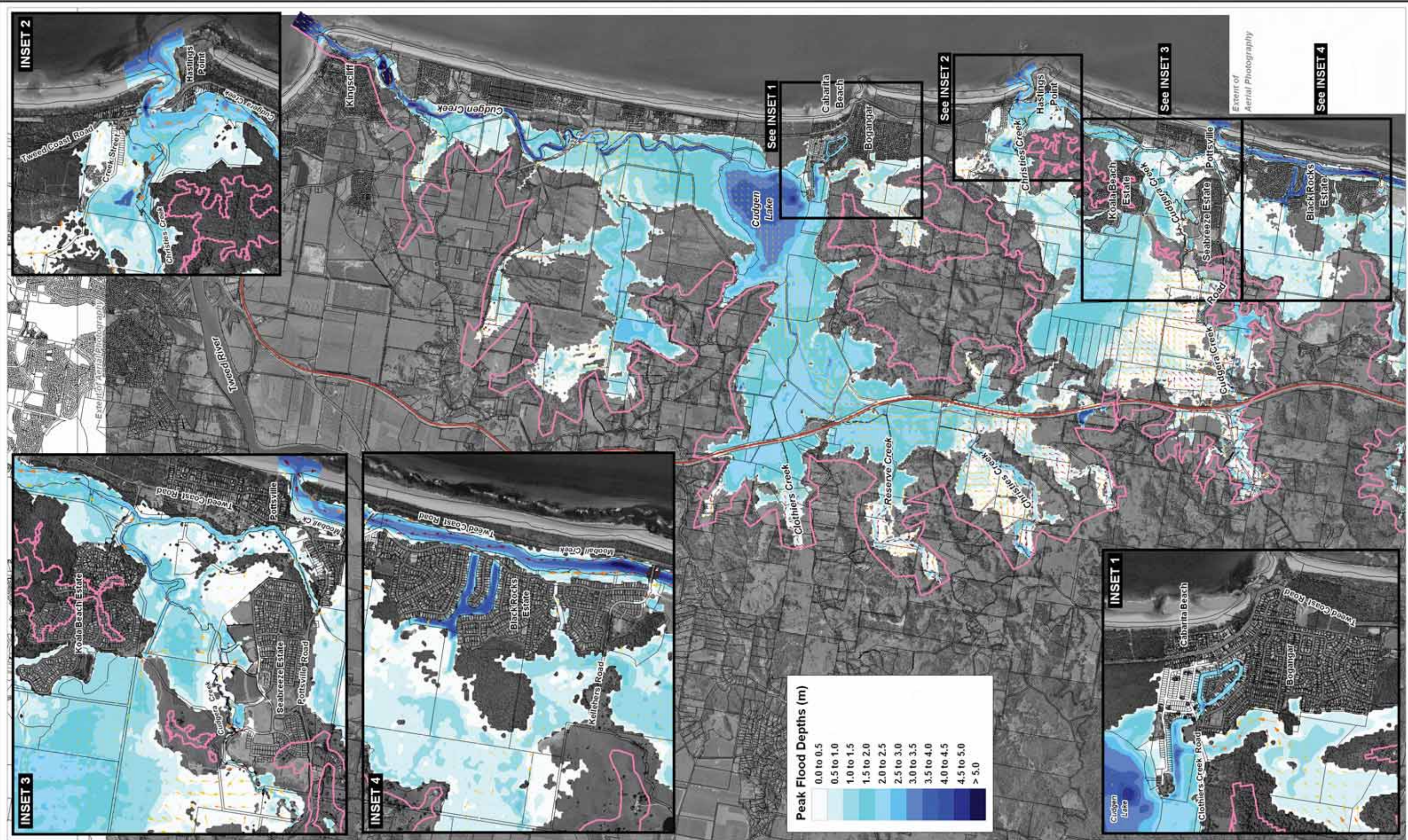


Figure:  
**Flood Map 13**

Rev:  
**B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- ▶ 0.0 to 0.2
- ▶ 0.2 to 0.5
- ▶ 0.5 to 0.8
- ▶ > 0.8

Title:  
**100 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

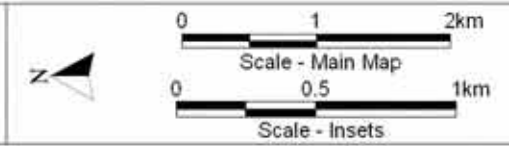
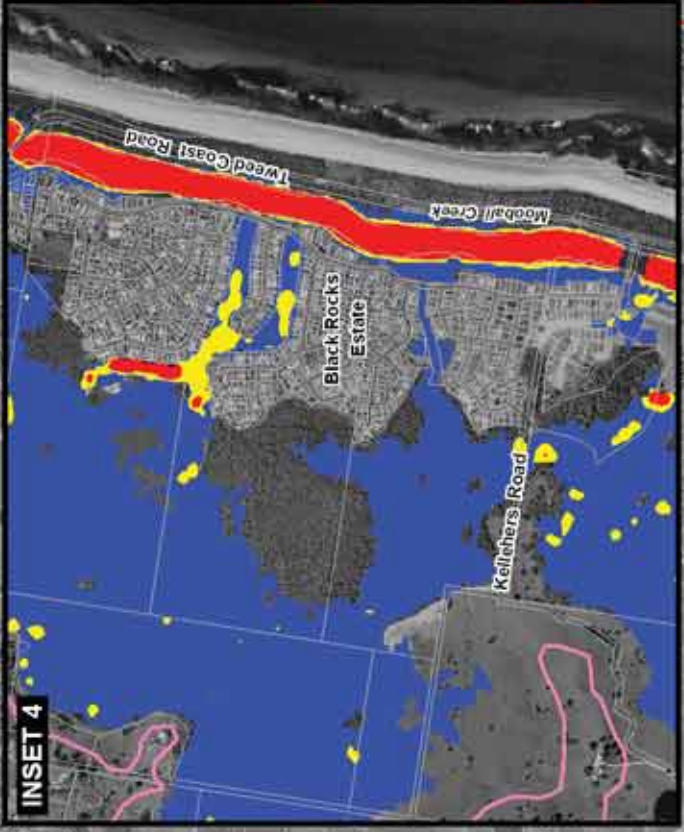
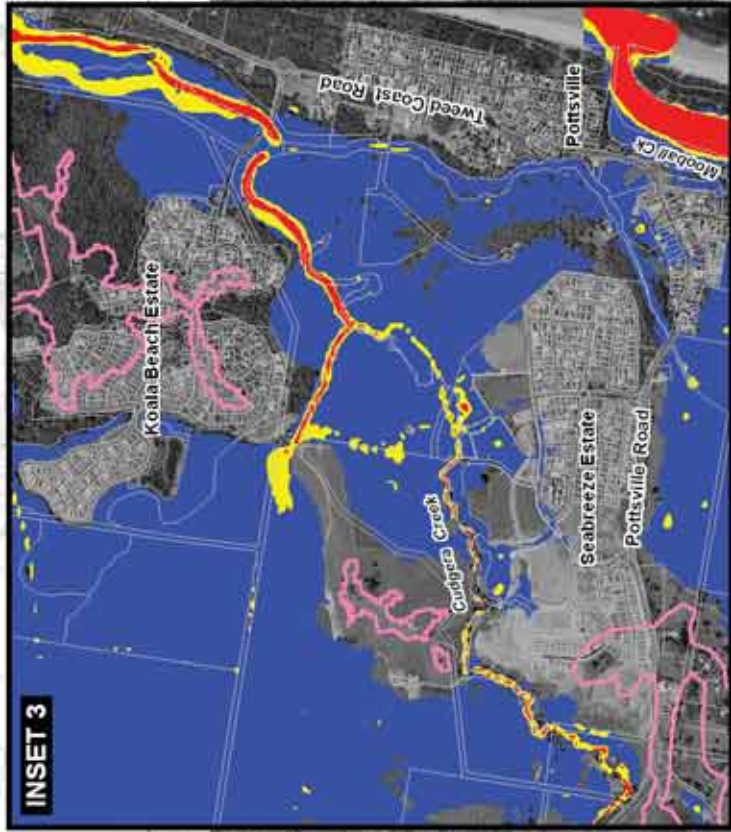
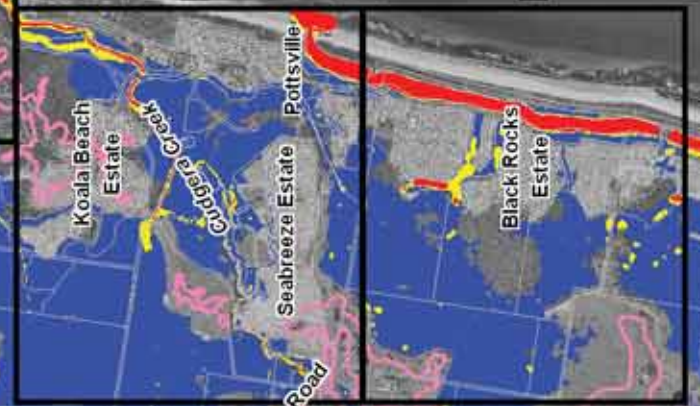
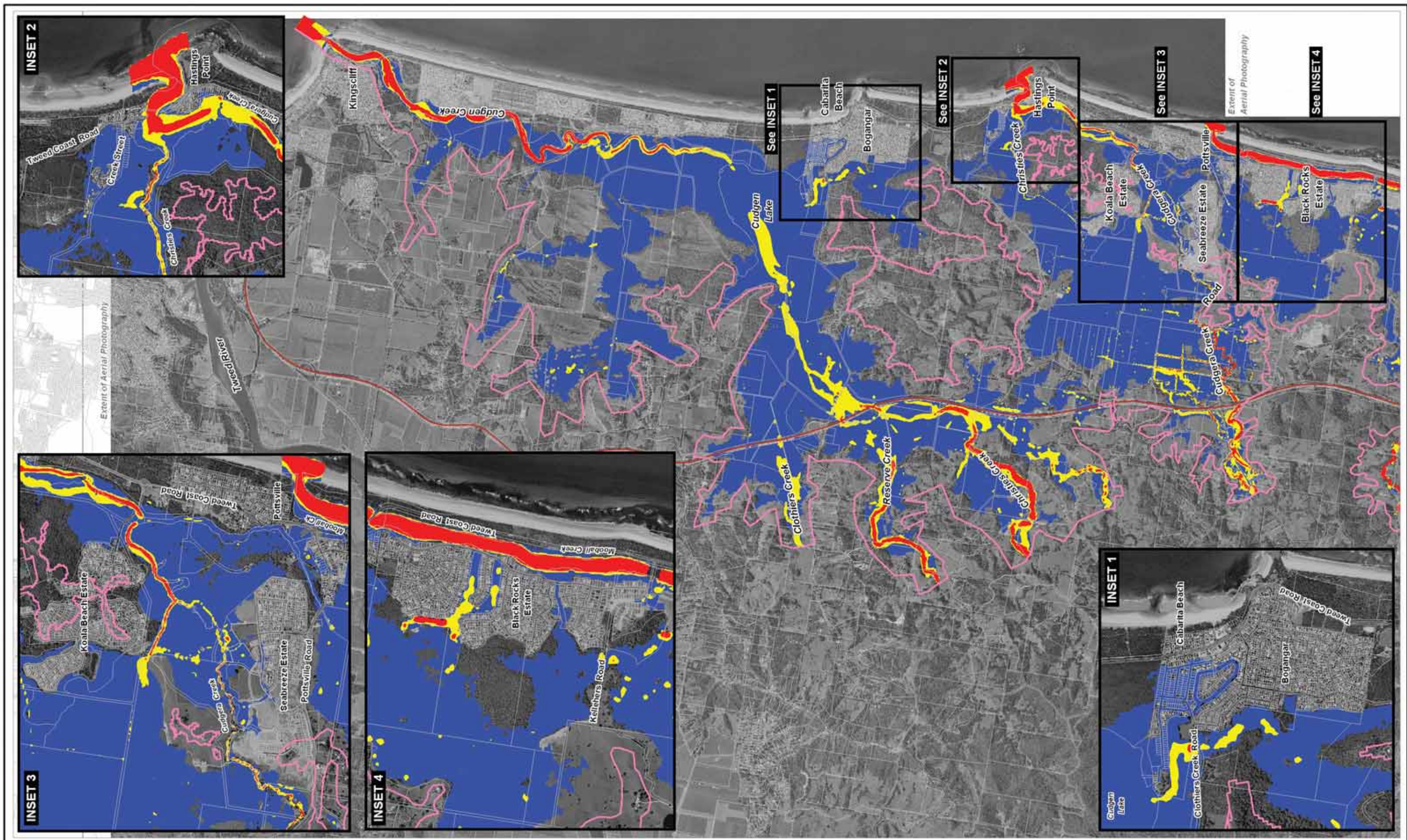


Figure:  
**Flood Map 14**

Rev:  
**B**







- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

- Peak Flood Velocity x Depth ( $m^2/s$ )**
- Low (< 0.3)
  - Medium (0.3 to 1.0)
  - High (> 1.0)

Title:  
**100 Year ARI Peak Flood Velocity x Depth Product  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

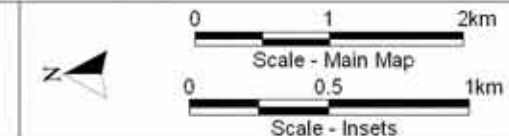
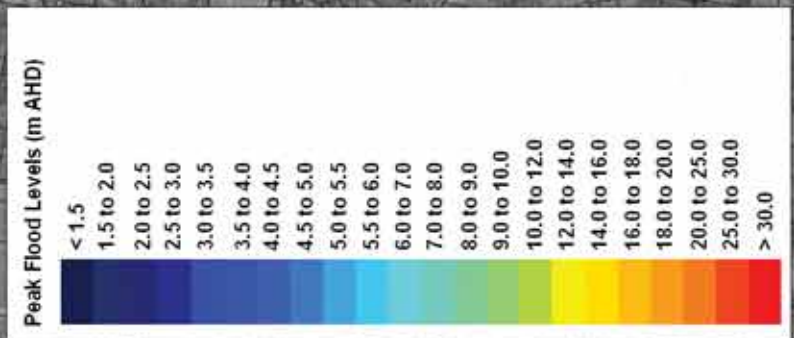
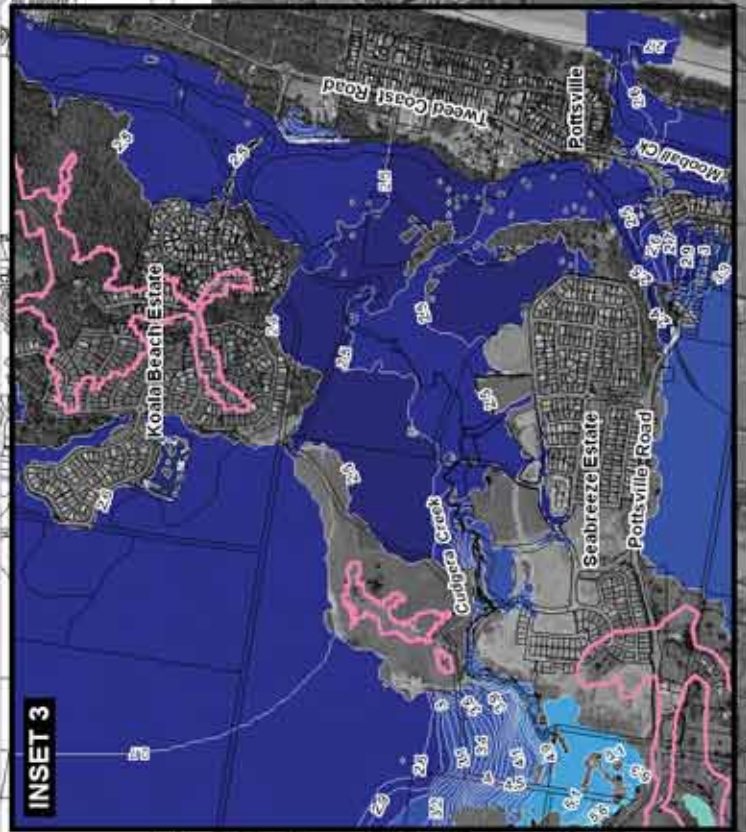
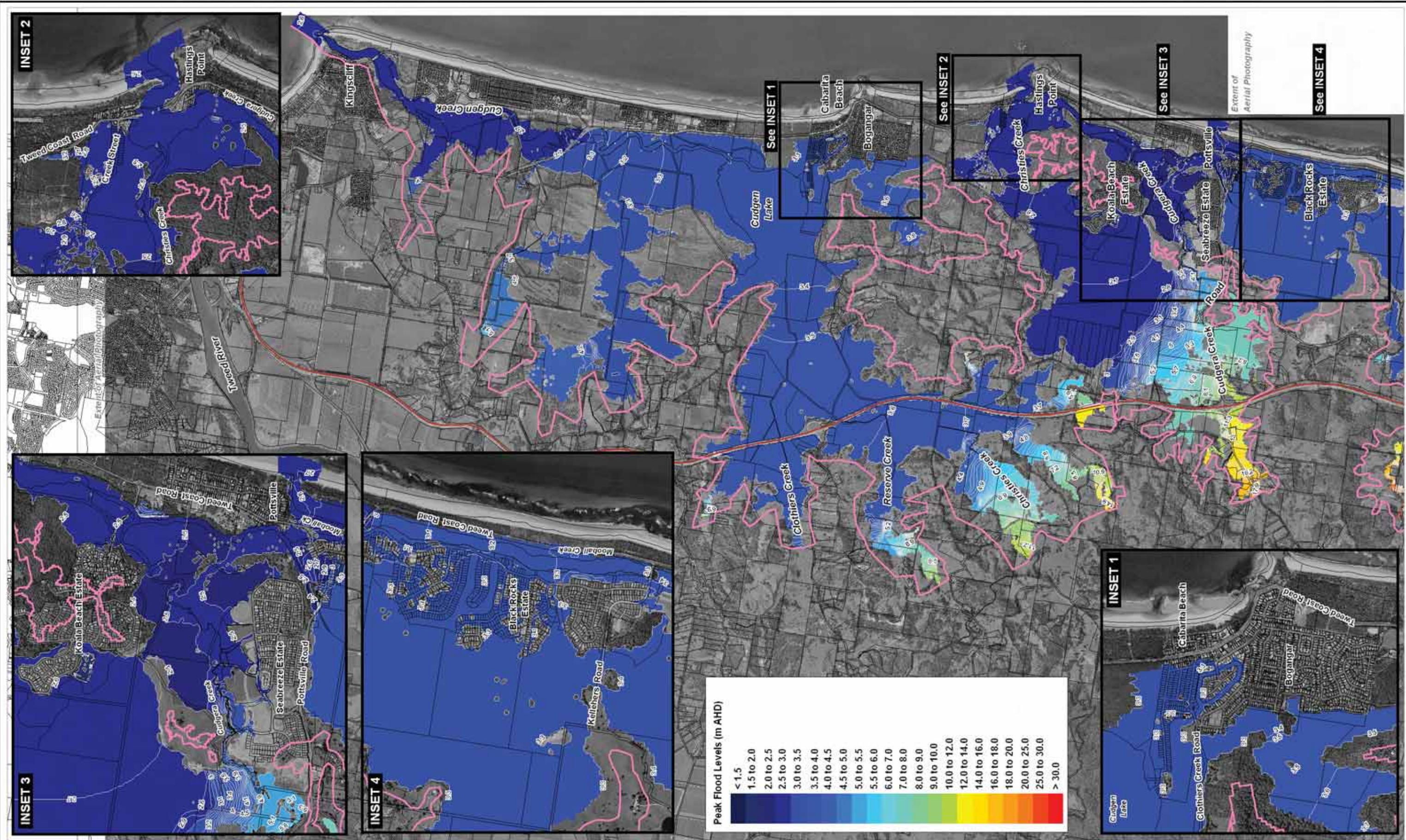


Figure:  
**Flood Map 15**

Rev:  
**B**







- LEGEND**
- Model Extent
  - Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

Title:  
**500 Year ARI Peak Flood Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

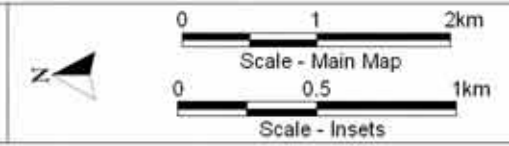


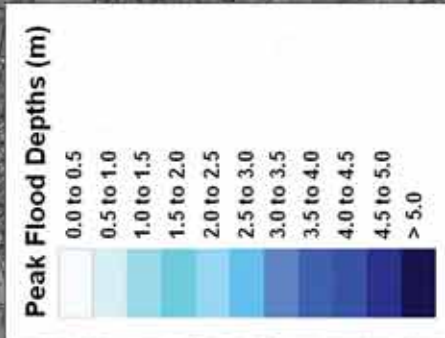
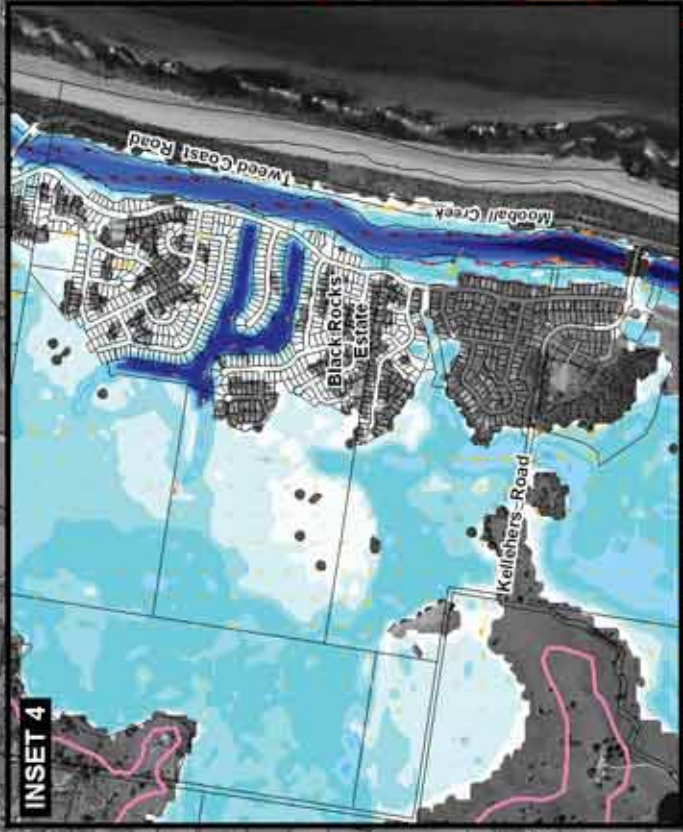
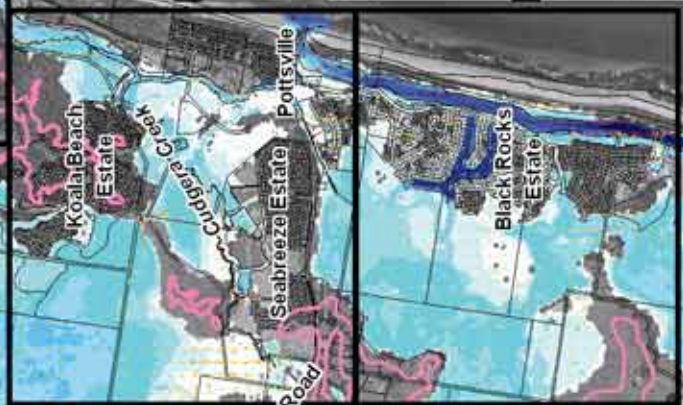
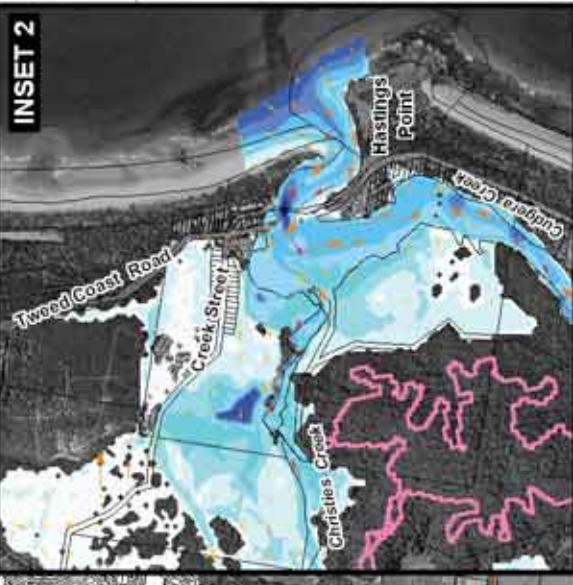
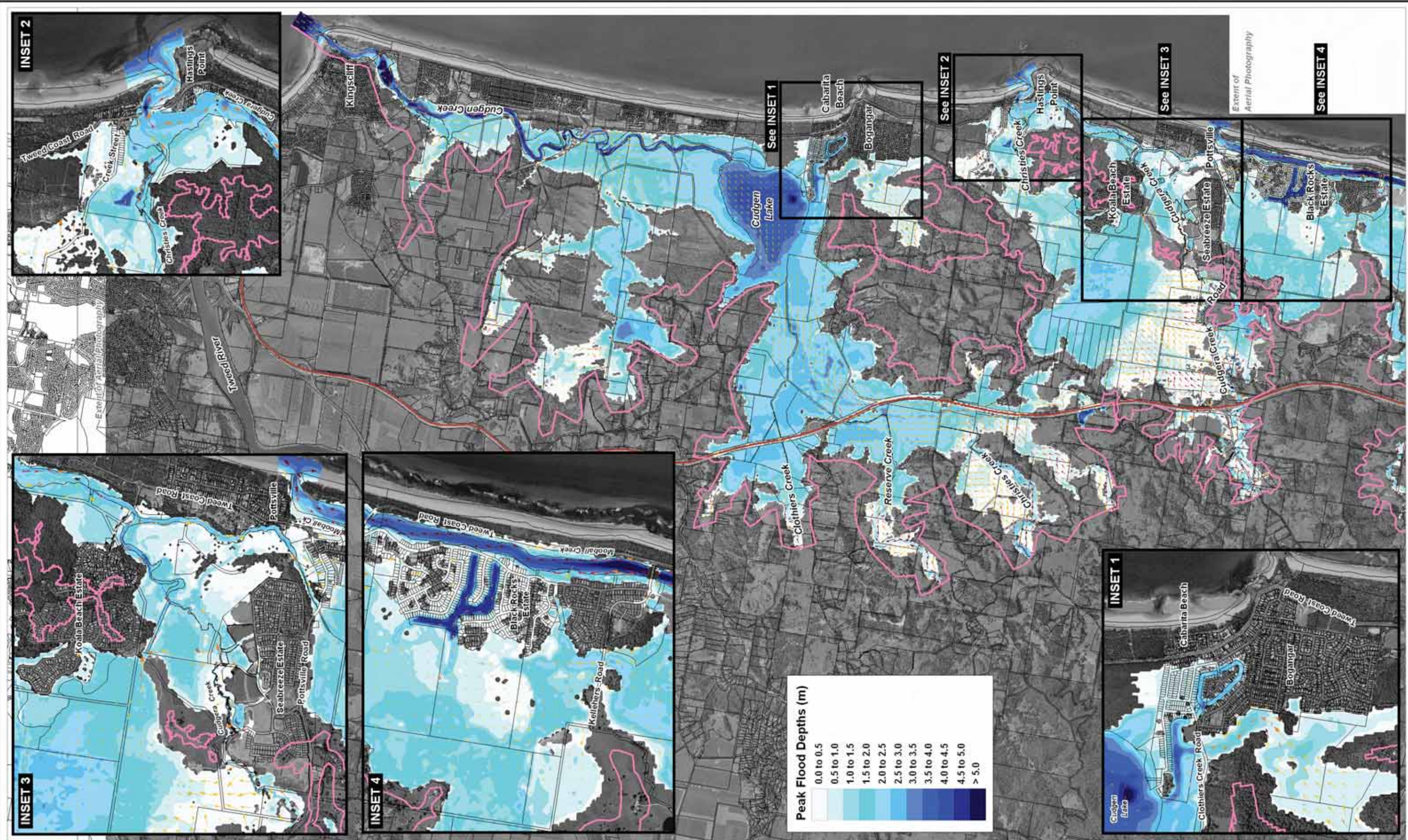
Figure:  
**Flood Map 16**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_064\_090707\_CC 500Y Flood Levels Rev.B.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**500 Year ARI Peak Flood Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

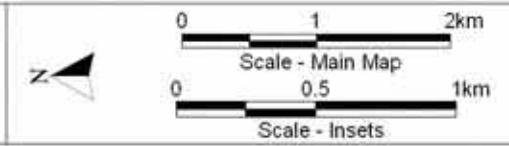


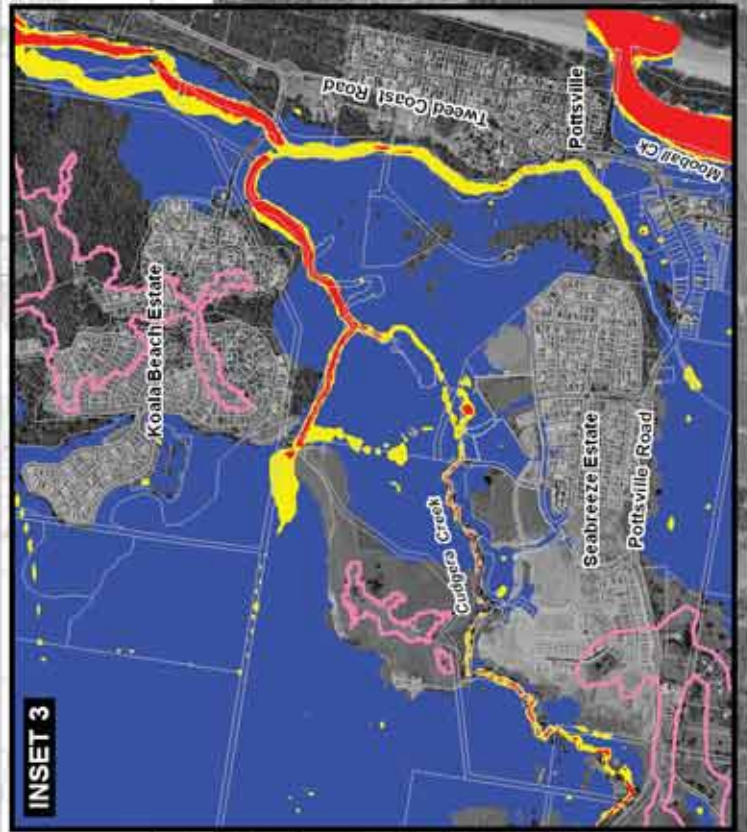
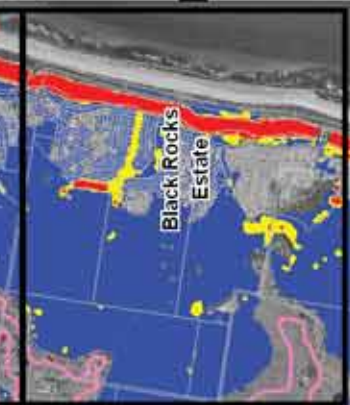
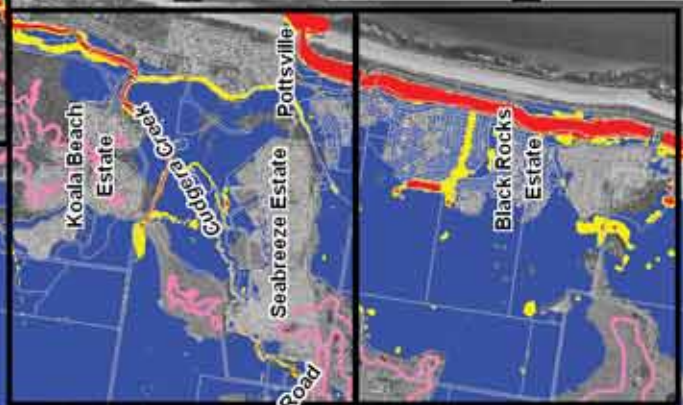
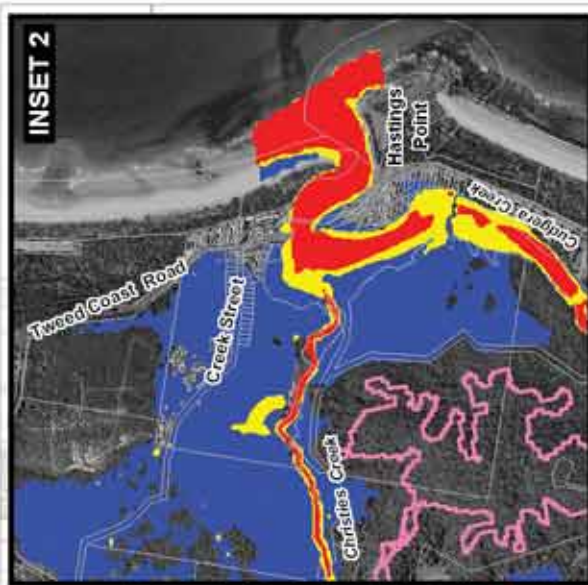
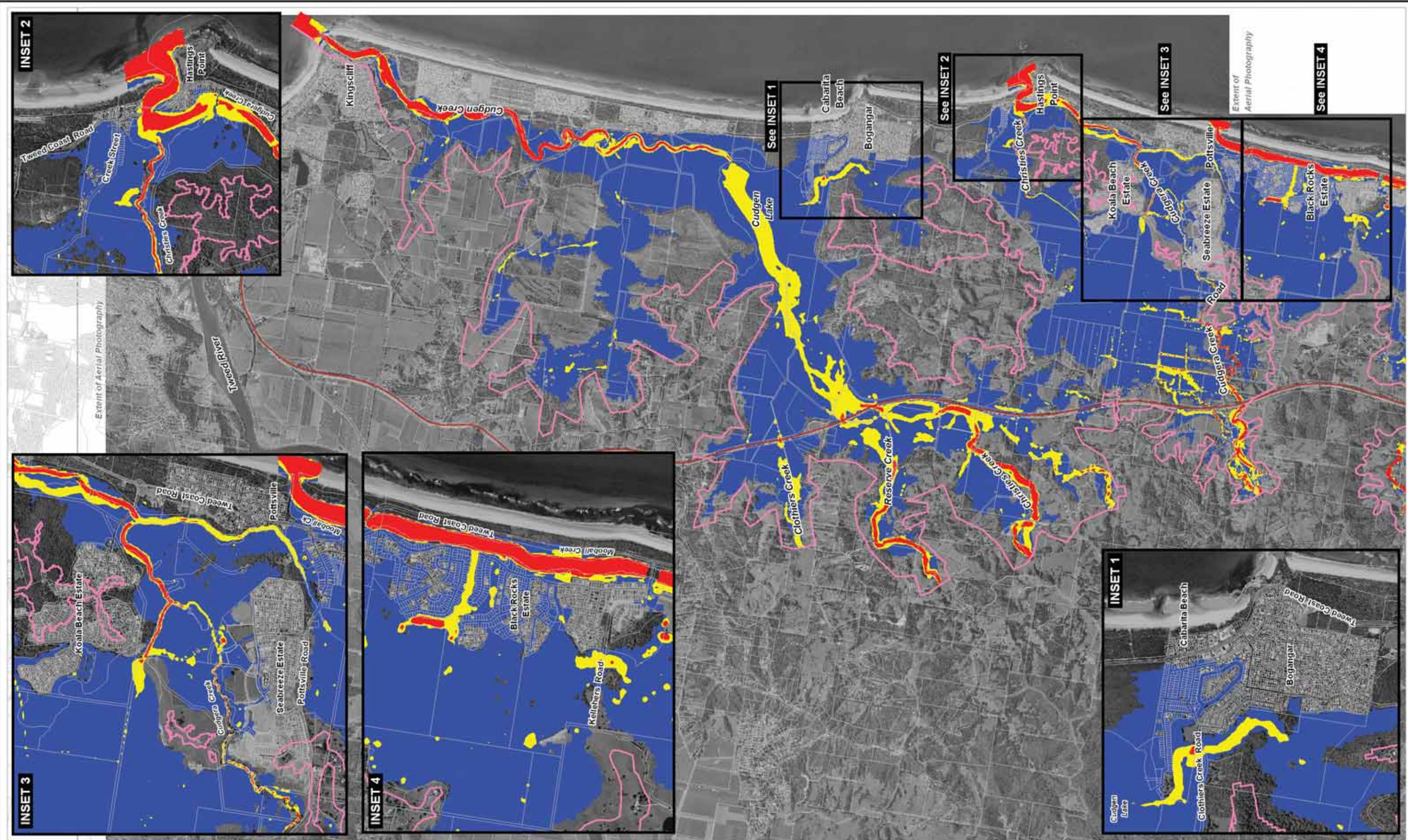
Figure:  
**Flood Map 17**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_070\_090708\_CC 500Y Flood Depths RevB.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low ( $< 0.3$ )
- Medium ( $0.3$  to  $1.0$ )
- High ( $> 1.0$ )

Title:  
**500 Year ARI Peak Flood Velocity x Depth Product  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

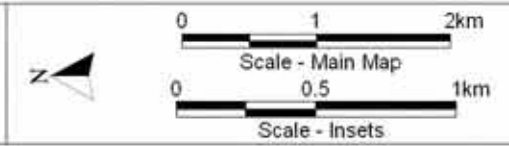


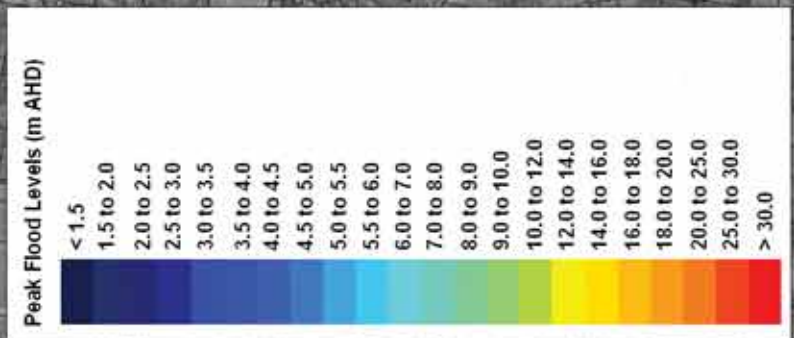
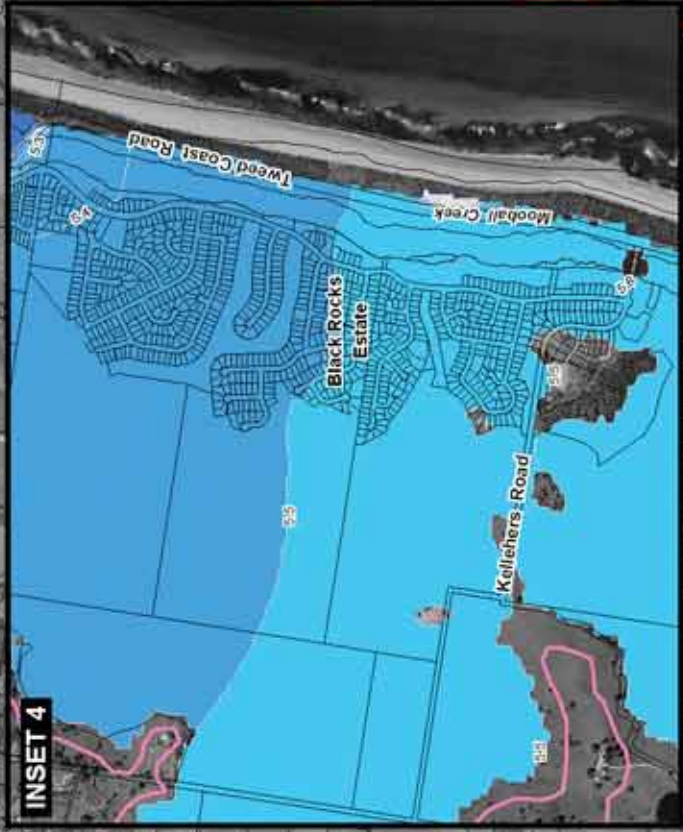
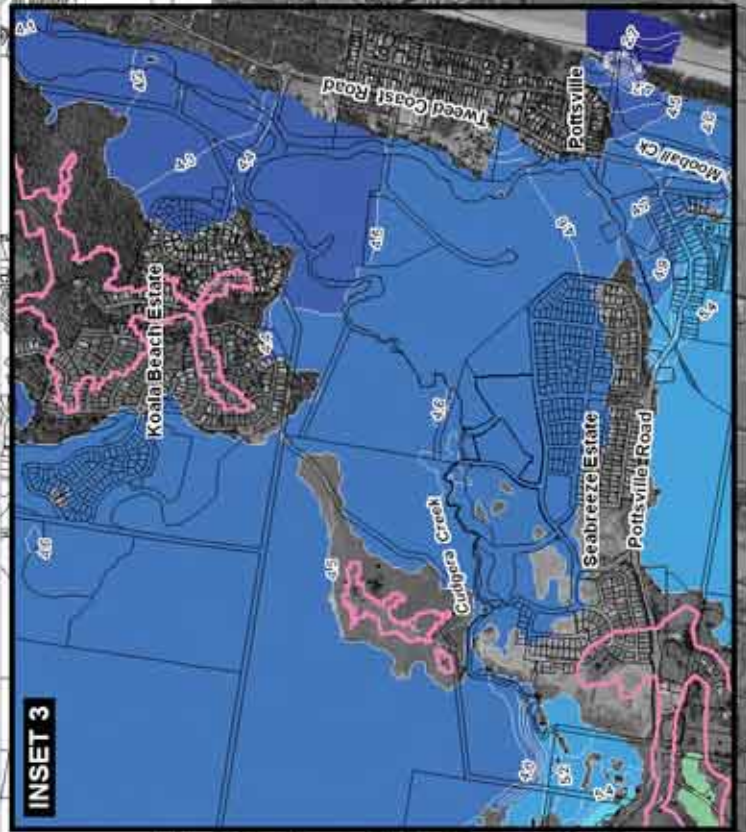
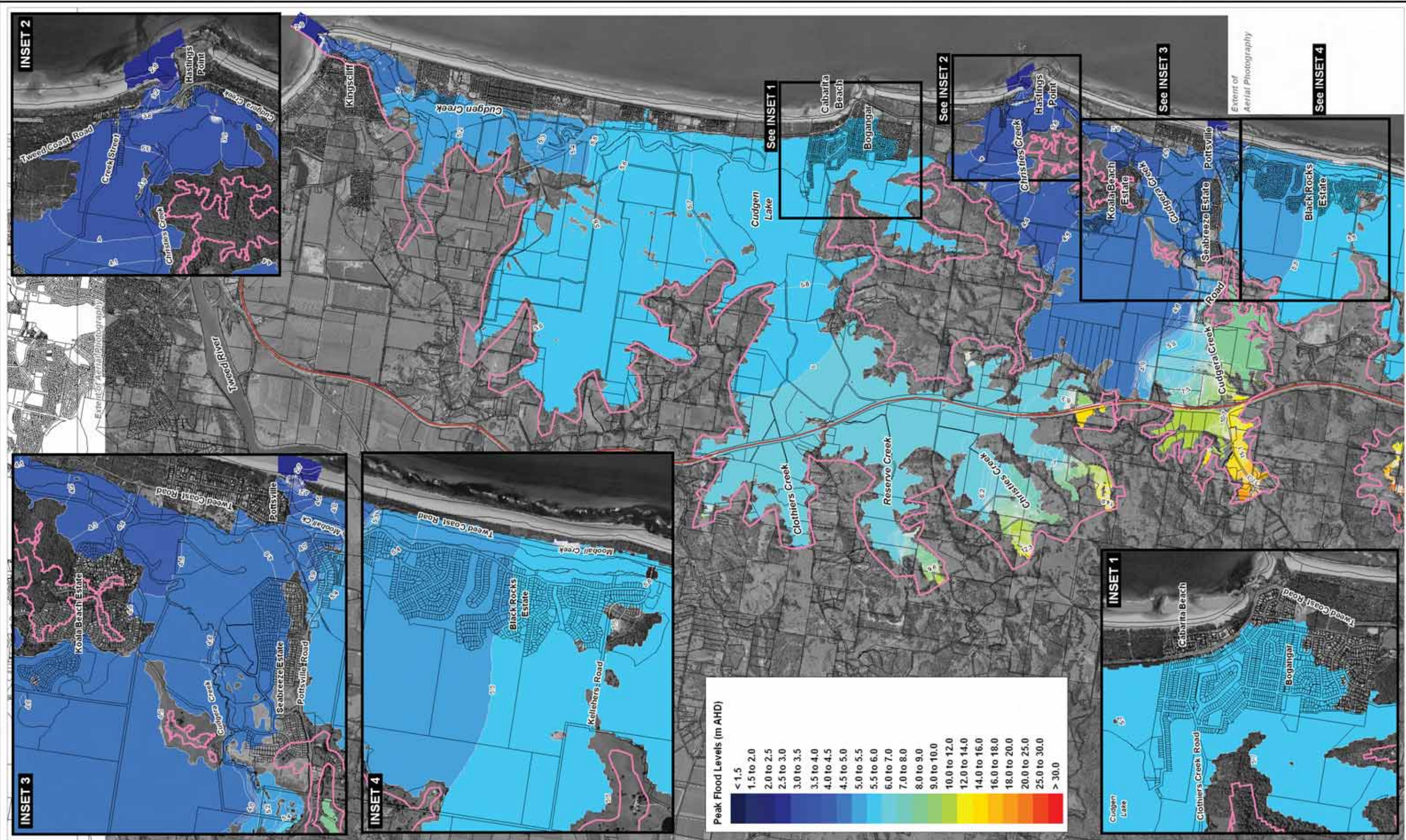
Figure:  
**Flood Map 18**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_060\_090708\_CC 500Y Flood Velocity RevB.WOR





- LEGEND**
- Model Extent
  - Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

Title:  
**Probable Maximum Flood Peak Levels  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

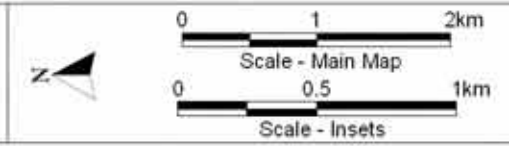
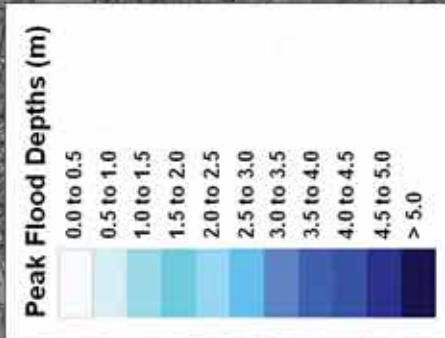
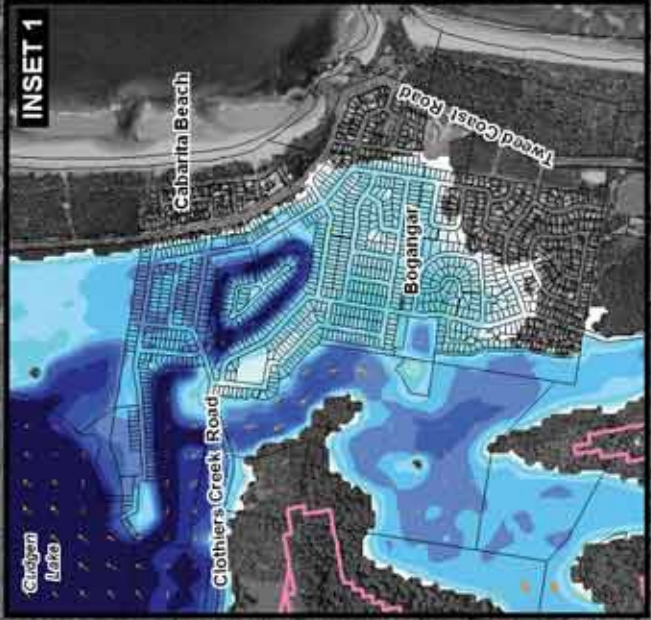
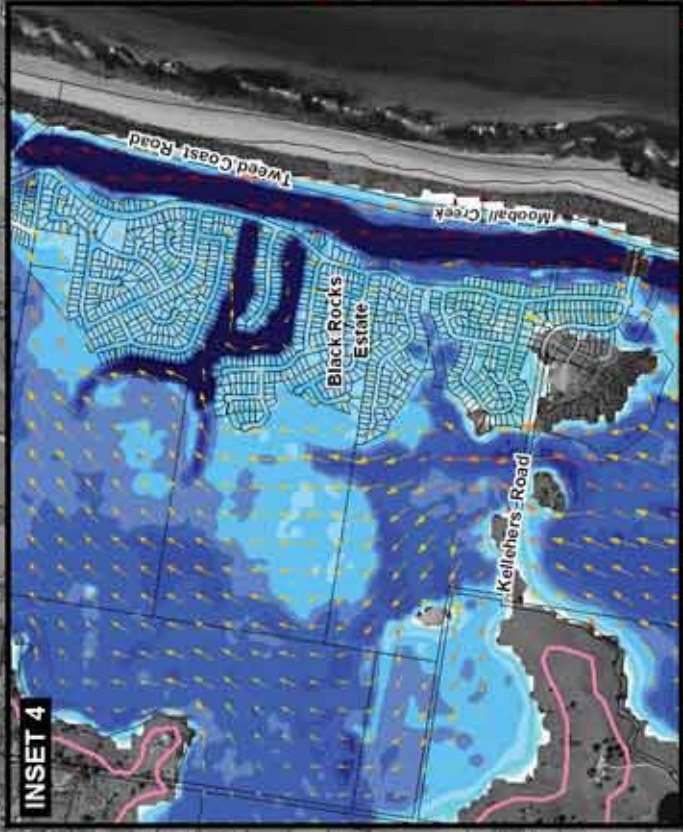
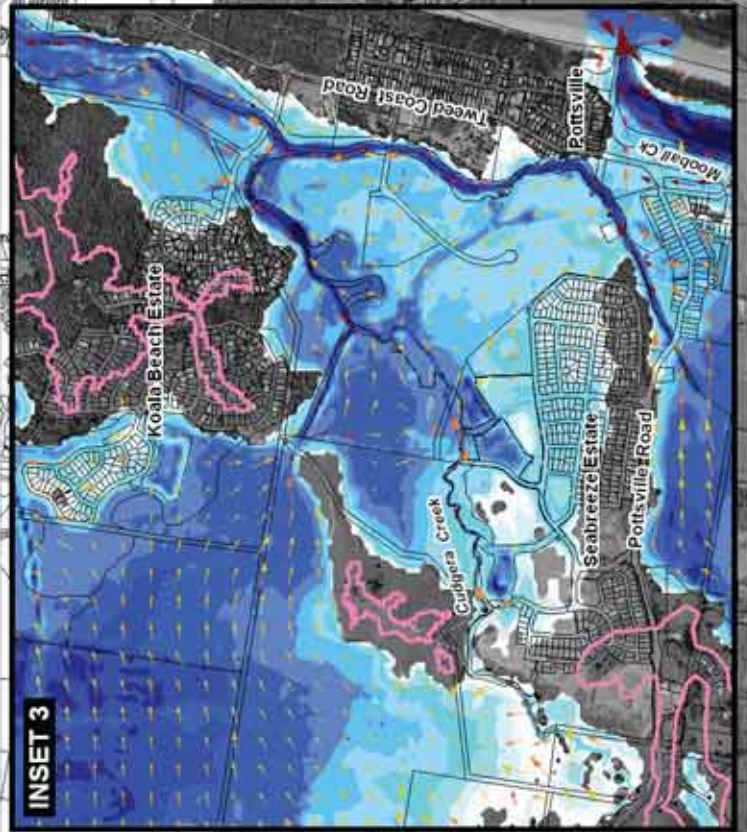
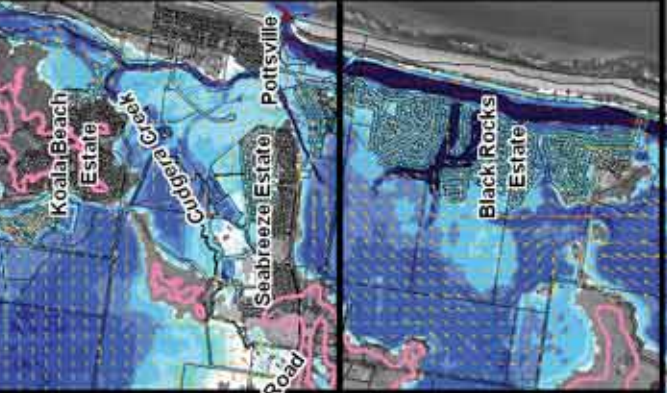
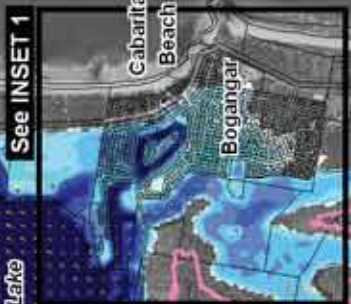
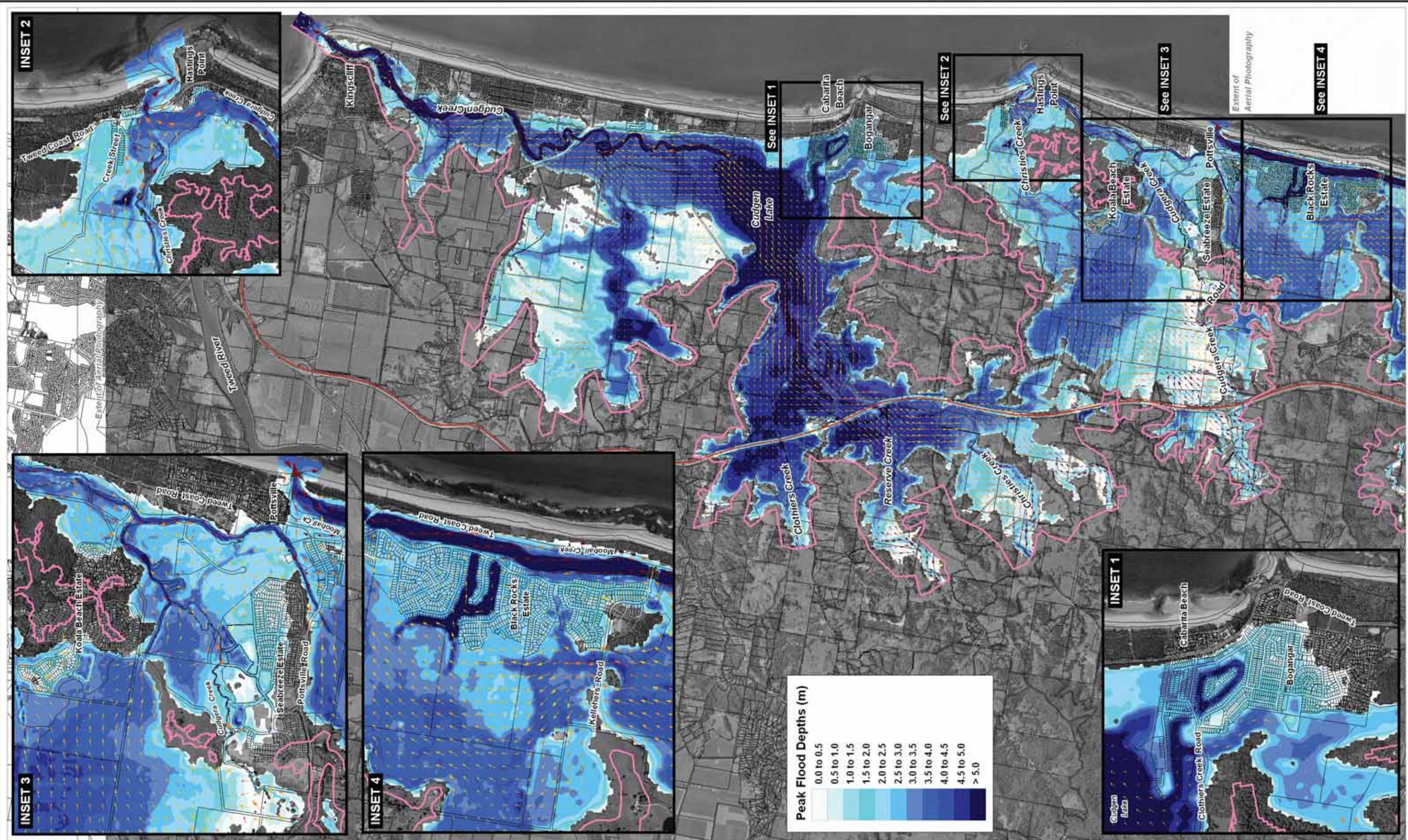


Figure:  
**Flood Map 19**

Rev:  
**A**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**Probable Maximum Flood Peak Depths  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

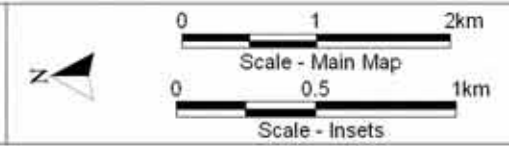


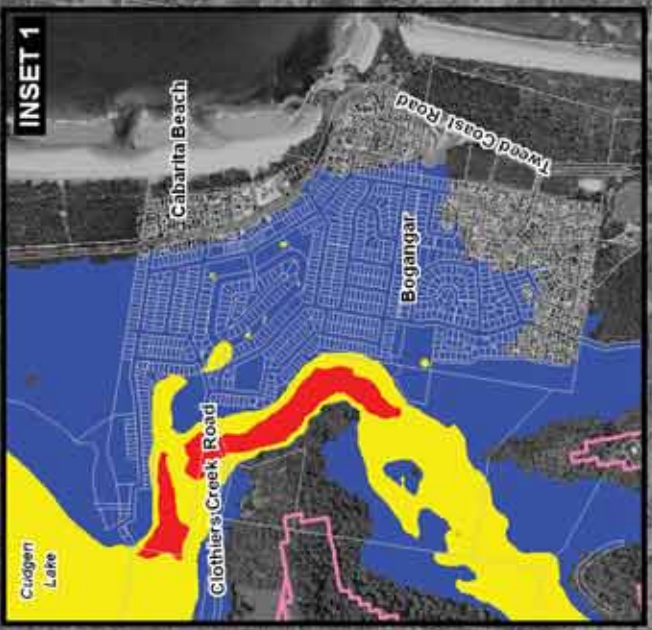
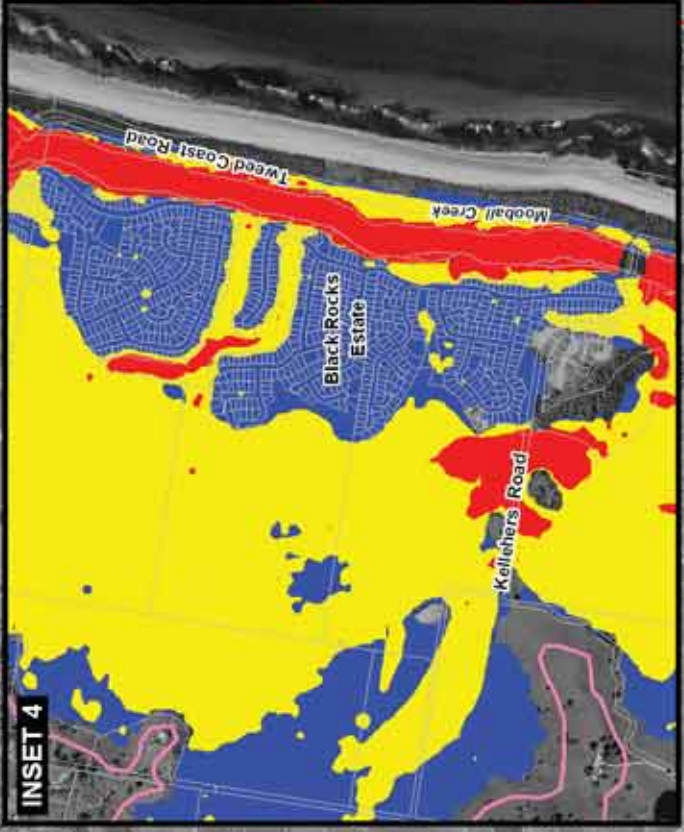
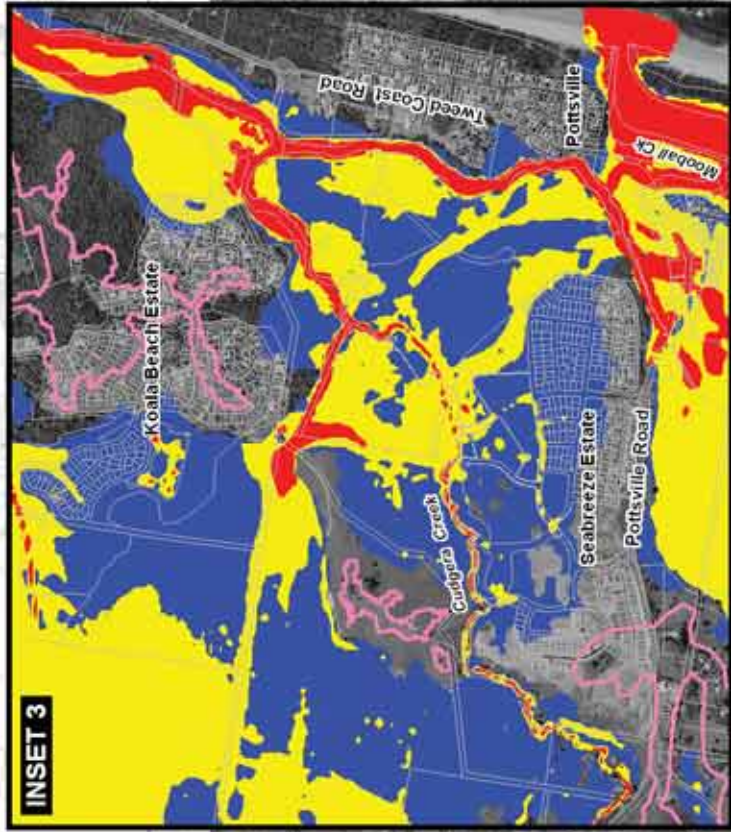
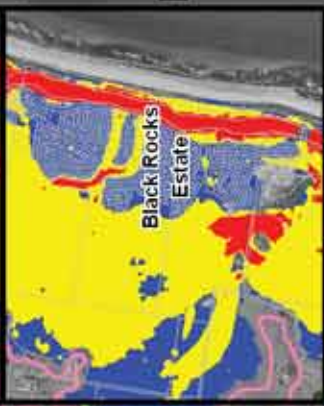
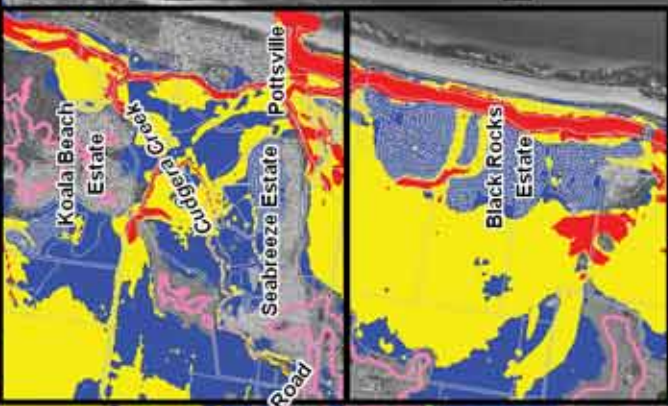
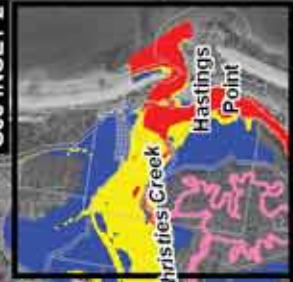
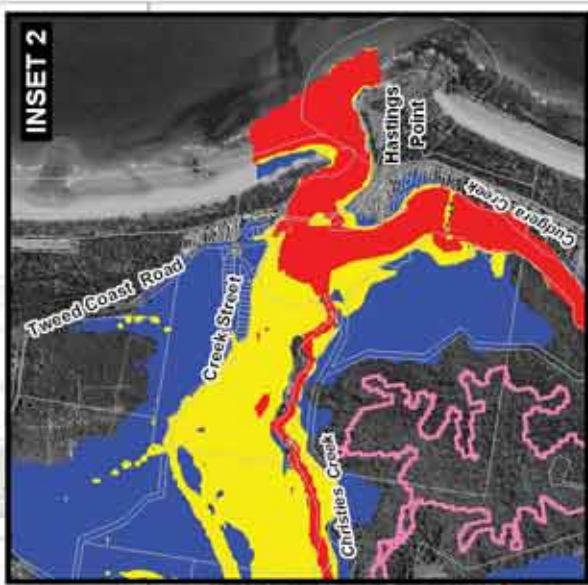
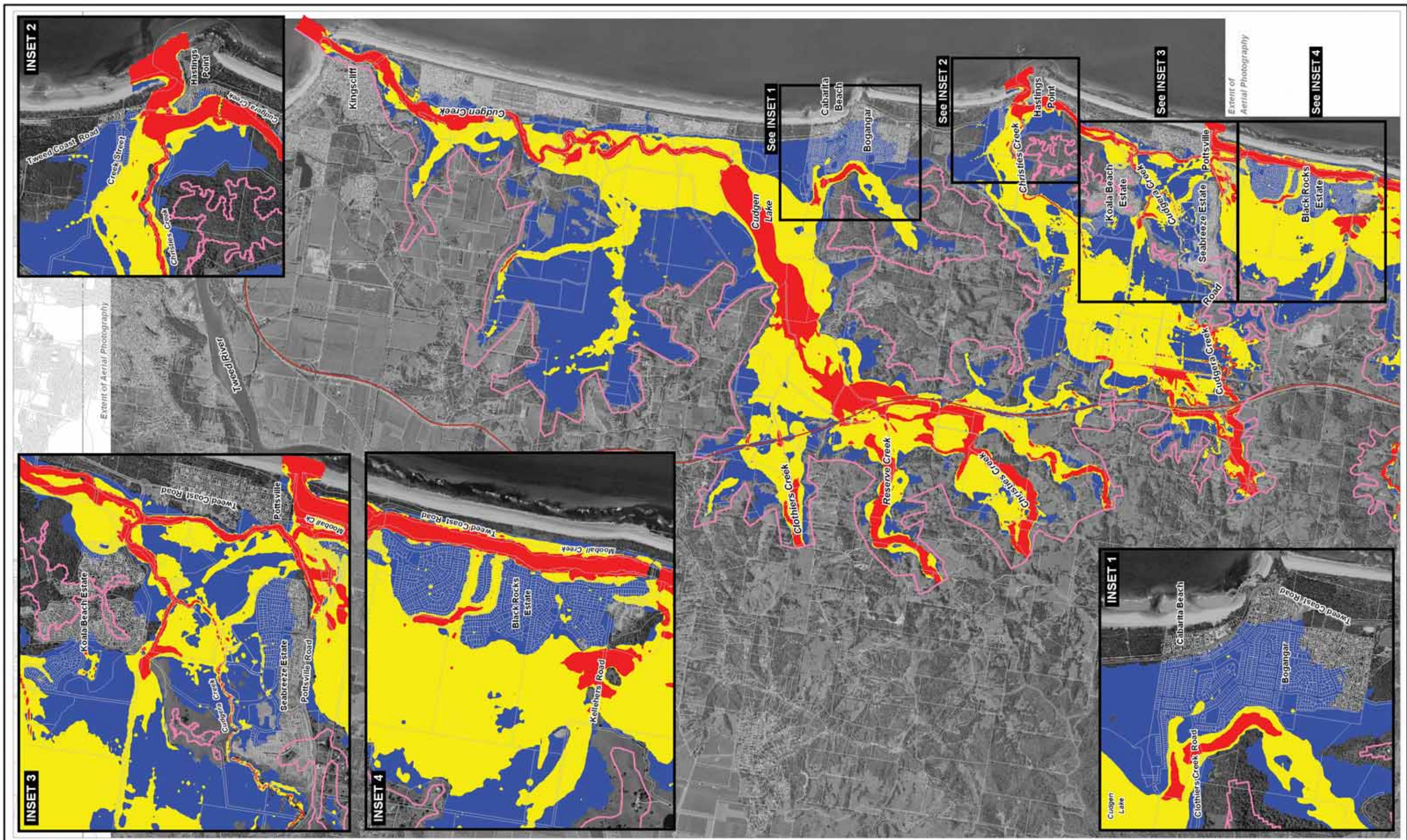
Figure:  
**Flood Map 20**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_085\_090708\_CC Probable Maximum Flood Depths.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low ( $< 0.3$ )
- Medium (0.3 to 1.0)
- High ( $> 1.0$ )

Title:  
**Probable Maximum Flood Peak Velocity x Depth Product  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

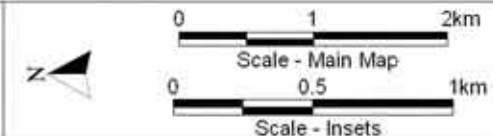


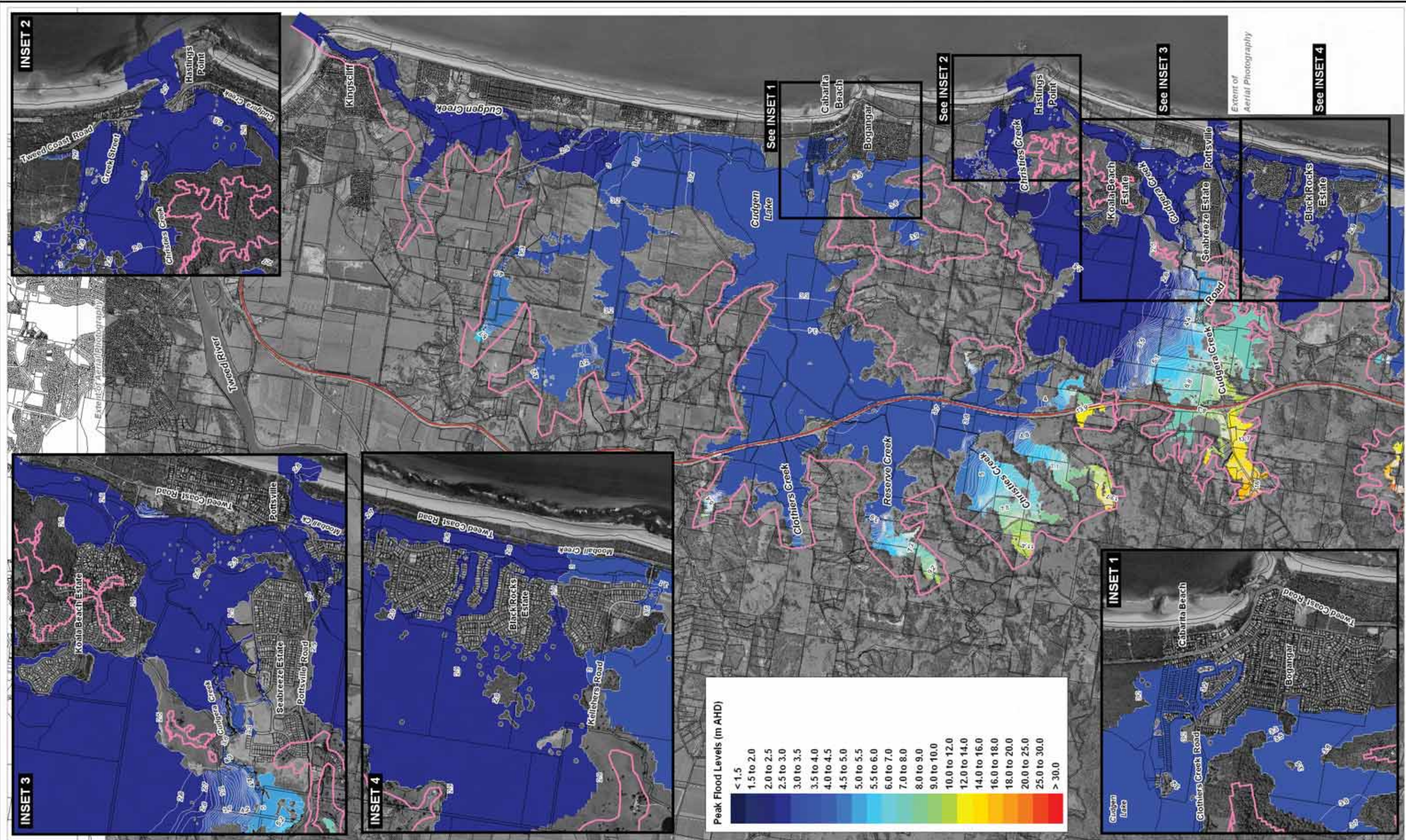
Figure:  
**Flood Map 21**

Rev:  
**A**



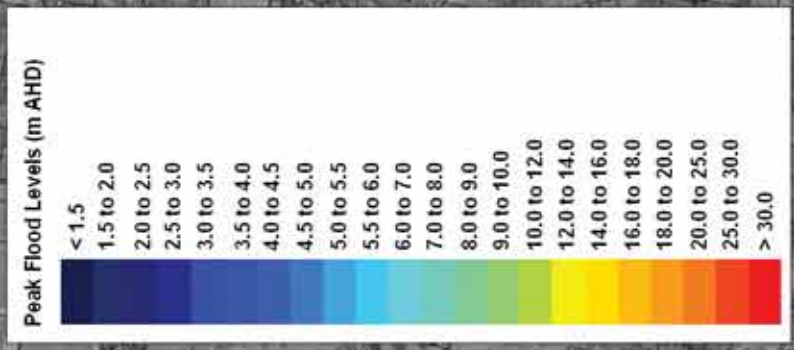
Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_087\_090708\_CC Probable Maximum Flood Velocity.WOR





**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Cadastral Boundaries



Title:  
**100 Year ARI Peak Flood Levels Medium Impacts Climate Change  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

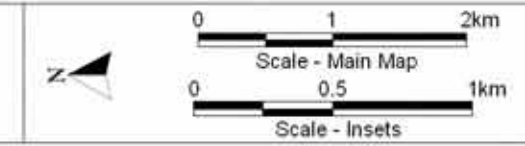
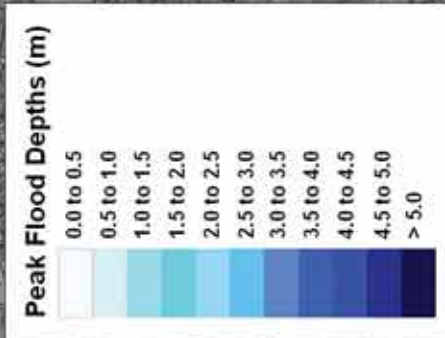
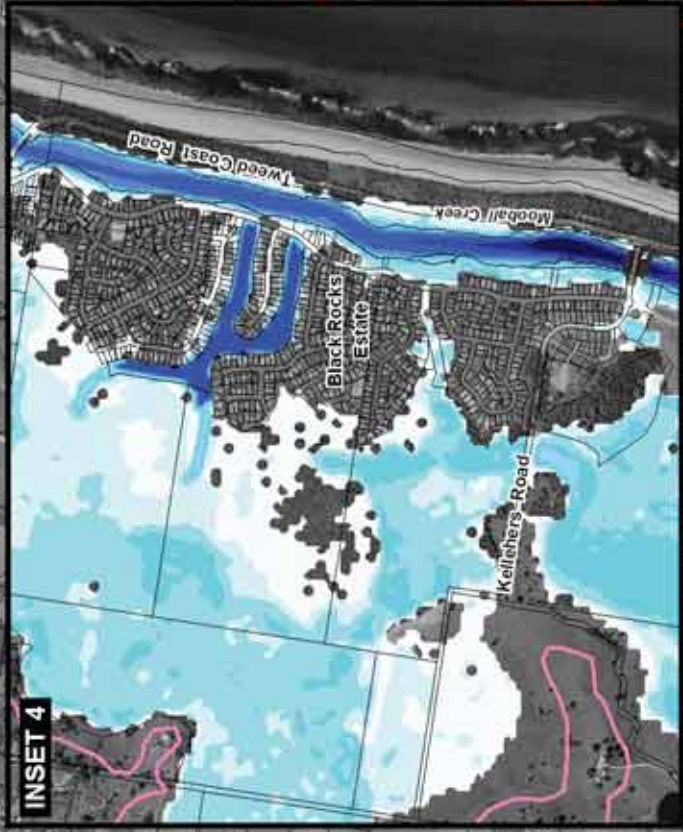
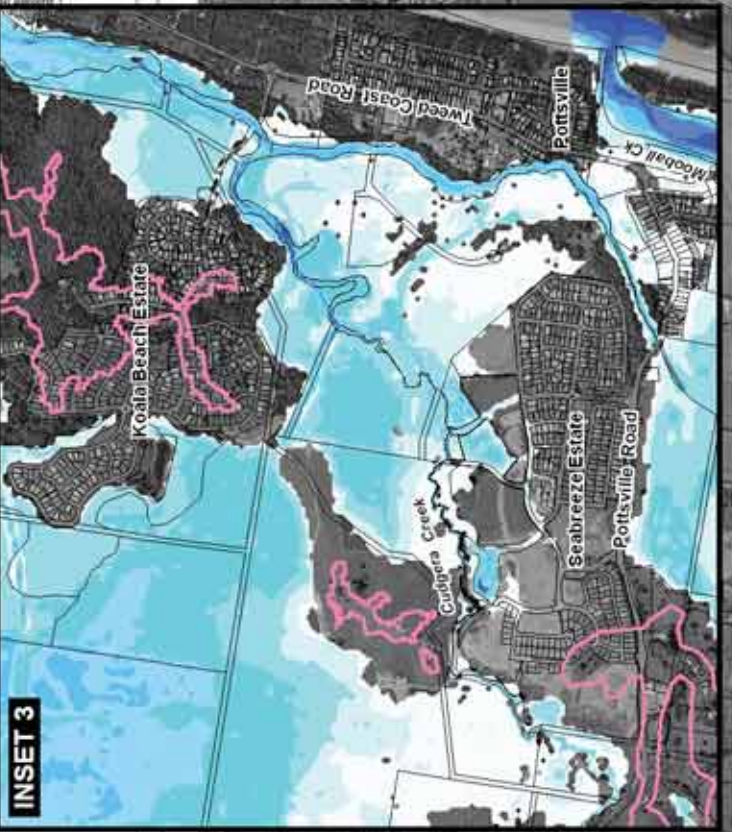
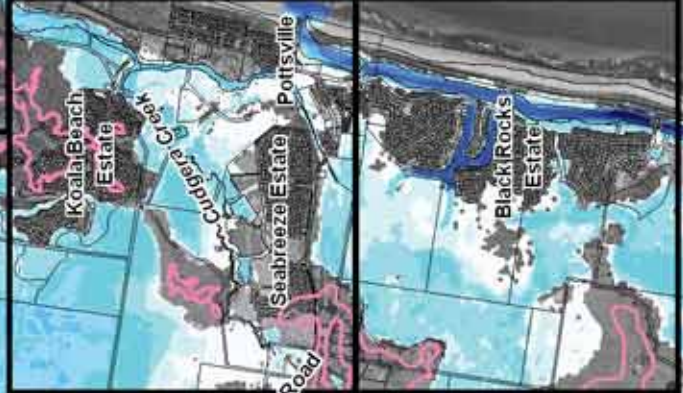
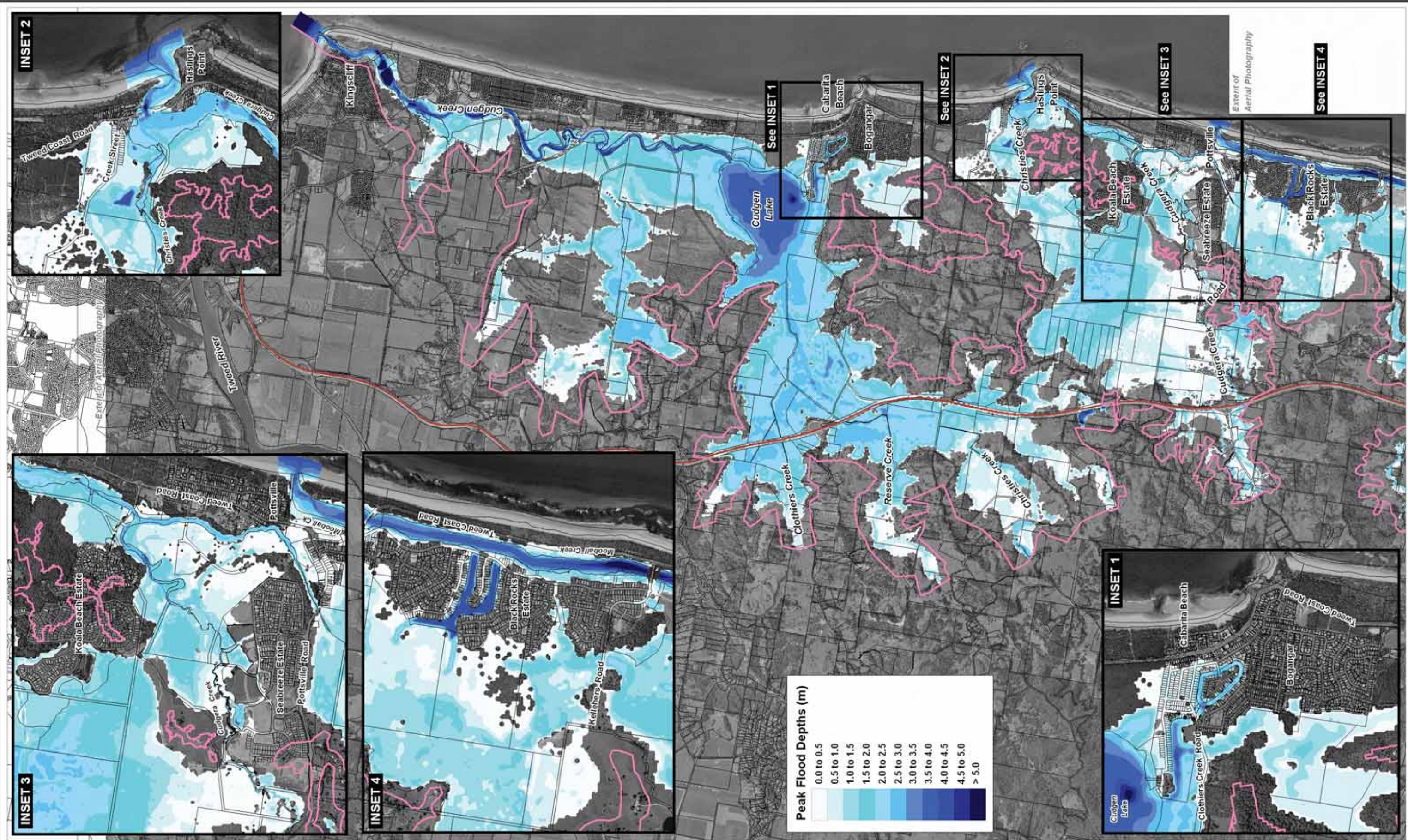


Figure:  
**Flood Map 22**

Rev:  
**A**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Depths Medium Impacts  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

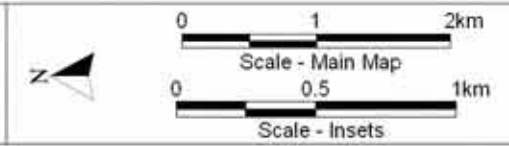
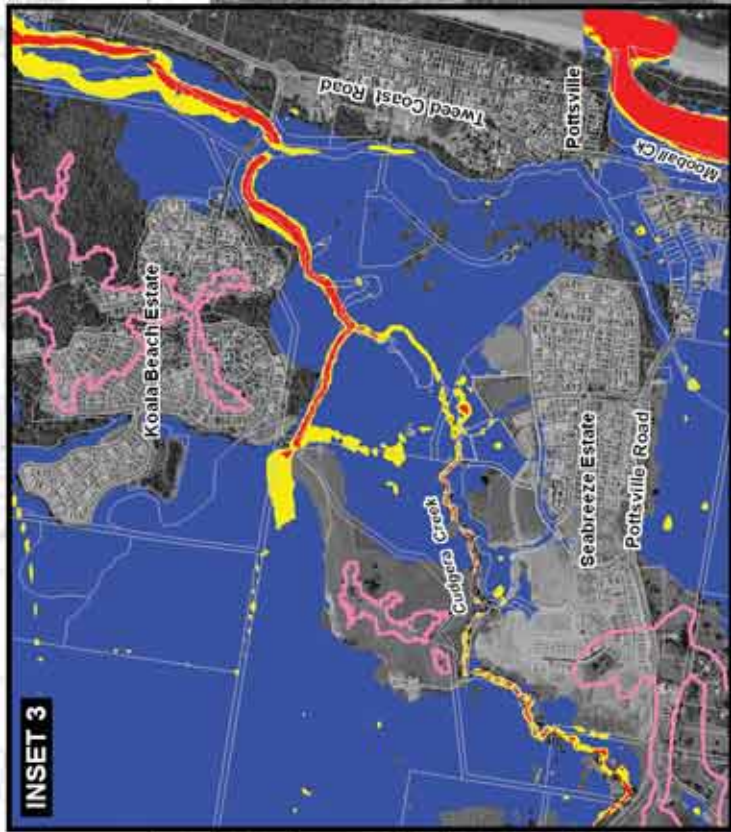
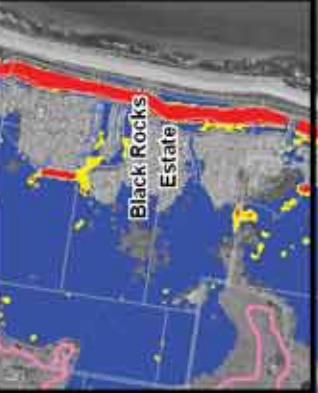
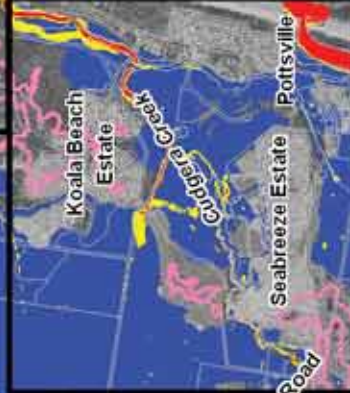
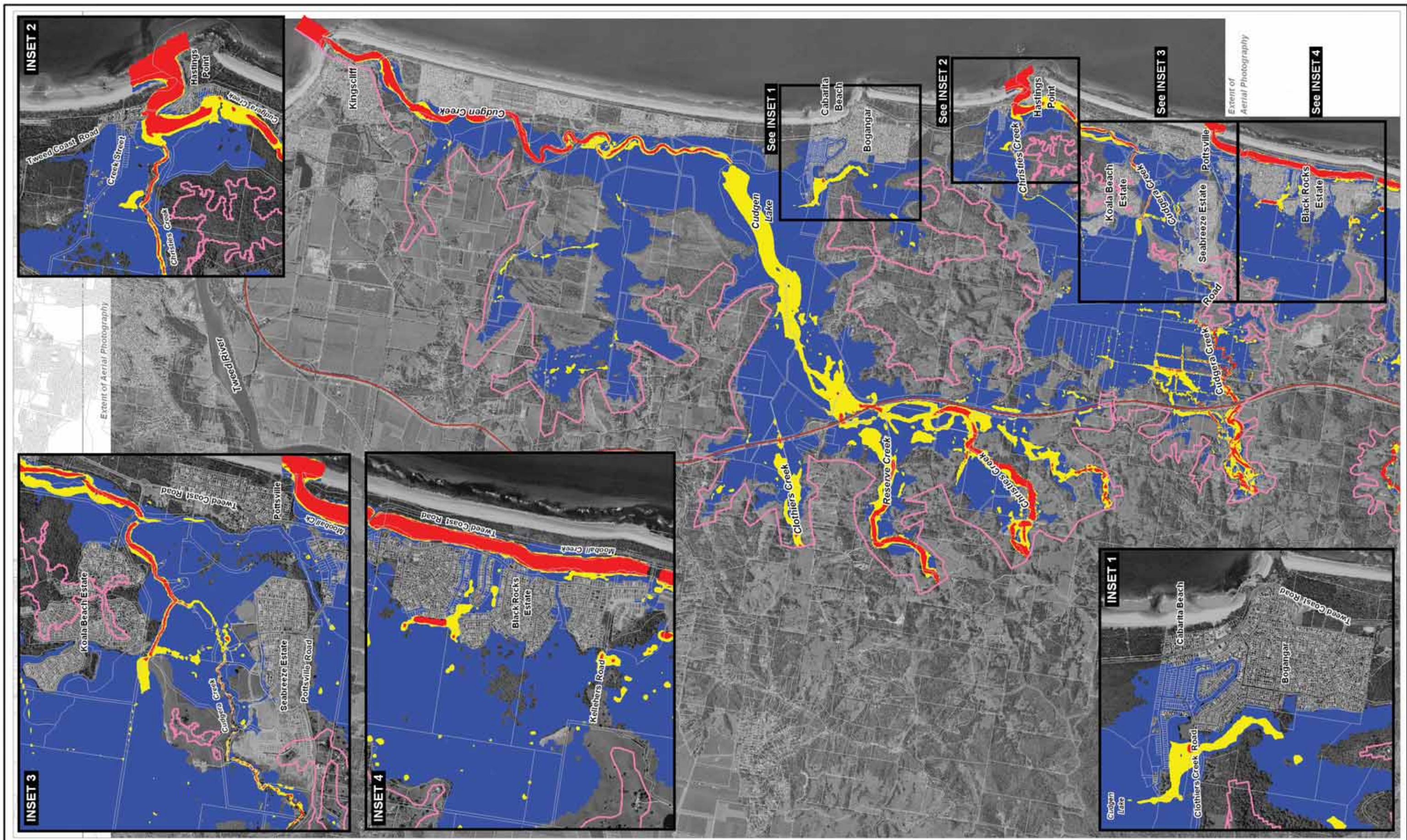


Figure:  
**Flood Map 23**

Rev:  
**A**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (<math>< 0.3</math>)
- Medium (0.3 to 1.0)
- High (> 1.0)

Title:  
**100 Year ARI Peak Flood Velocity x Depth Medium Impacts  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

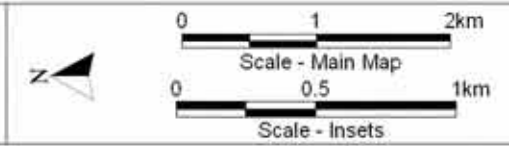
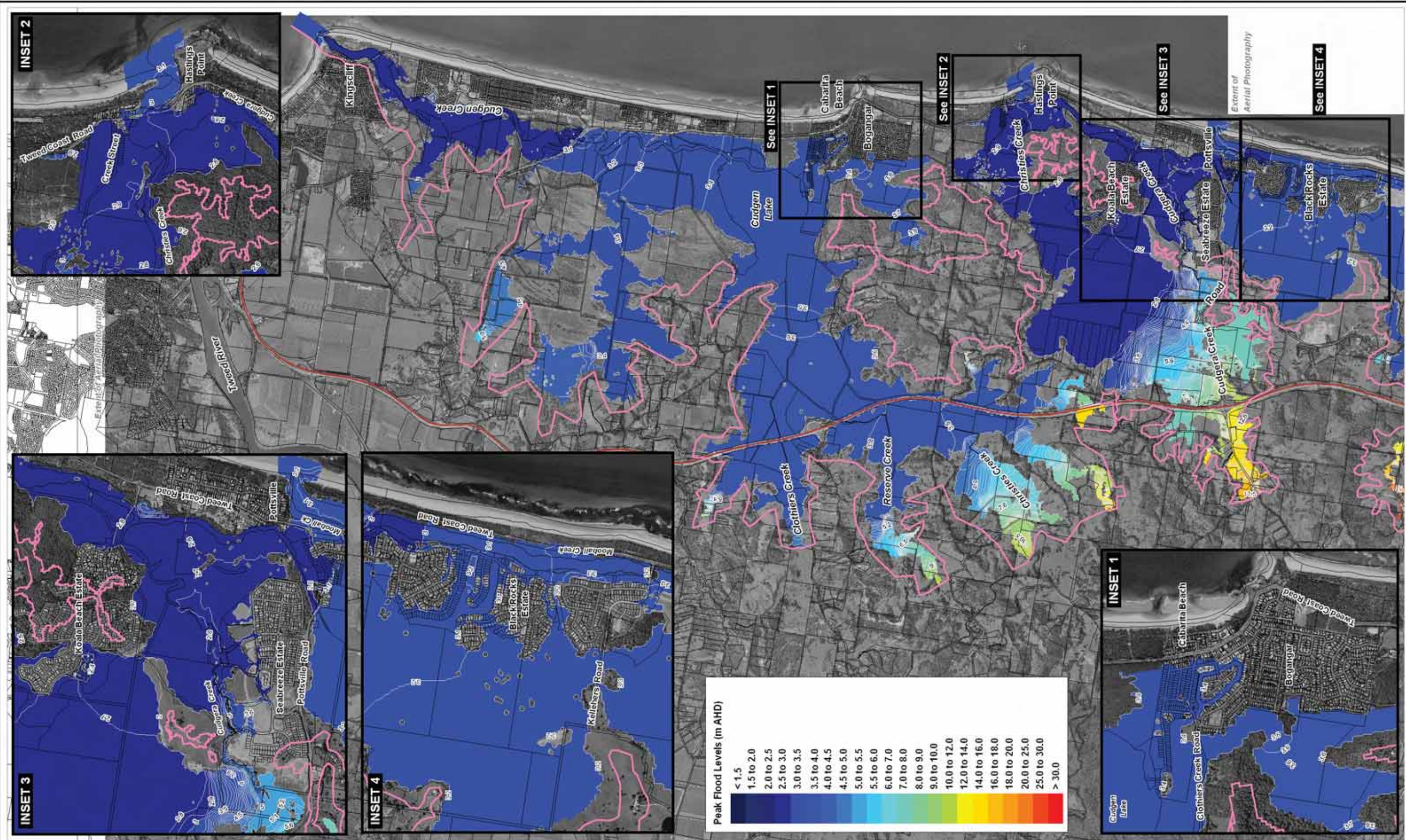


Figure:  
**Flood Map 24**

Rev:  
**A**







**LEGEND**

	Model Extent
	Peak Flood Level Contours (m AHD) (0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
	Pacific Highway (approximate location)
	Cadastral Boundaries

**Peak Flood Levels (m AHD)**

< 1.5
1.5 to 2.0
2.0 to 2.5
2.5 to 3.0
3.0 to 3.5
3.5 to 4.0
4.0 to 4.5
4.5 to 5.0
5.0 to 5.5
5.5 to 6.0
6.0 to 7.0
7.0 to 8.0
8.0 to 9.0
9.0 to 10.0
10.0 to 12.0
12.0 to 14.0
14.0 to 16.0
16.0 to 18.0
18.0 to 20.0
20.0 to 25.0
25.0 to 30.0
> 30.0

Title:  
**100 Year ARI Peak Flood Levels High Impacts Climate Change  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

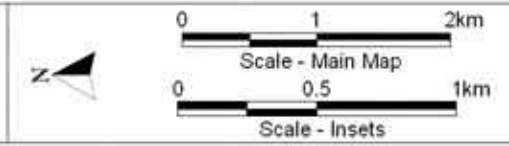


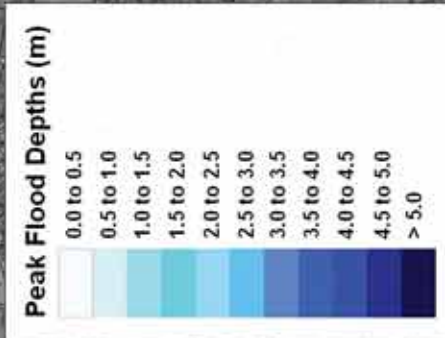
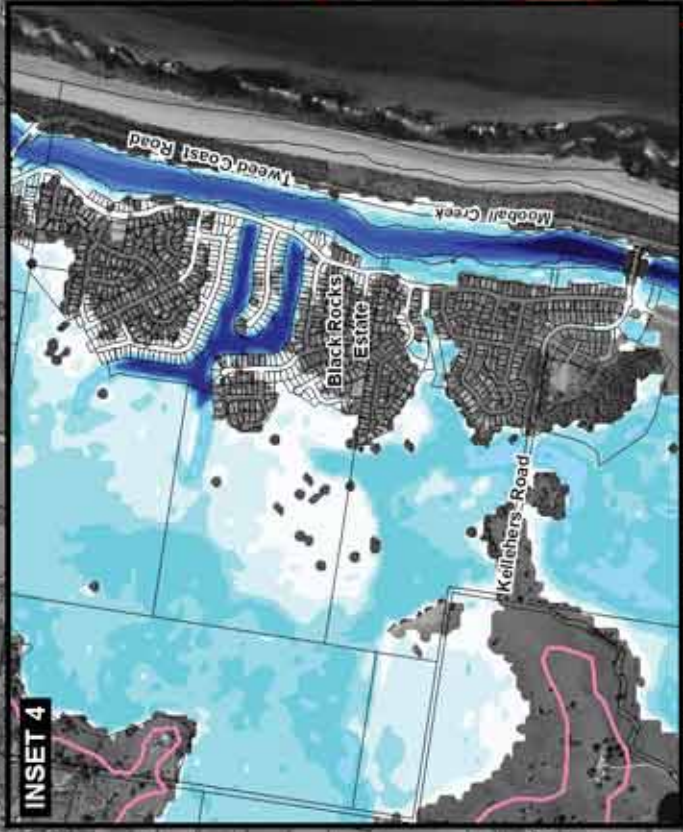
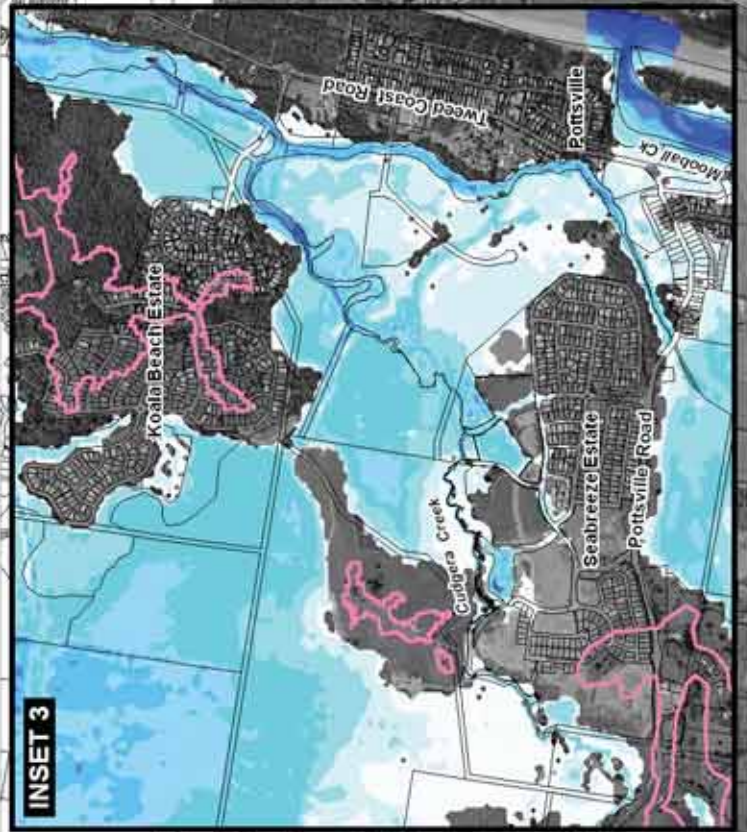
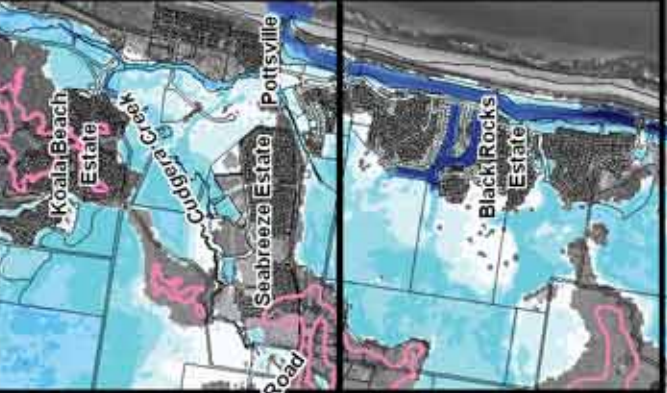
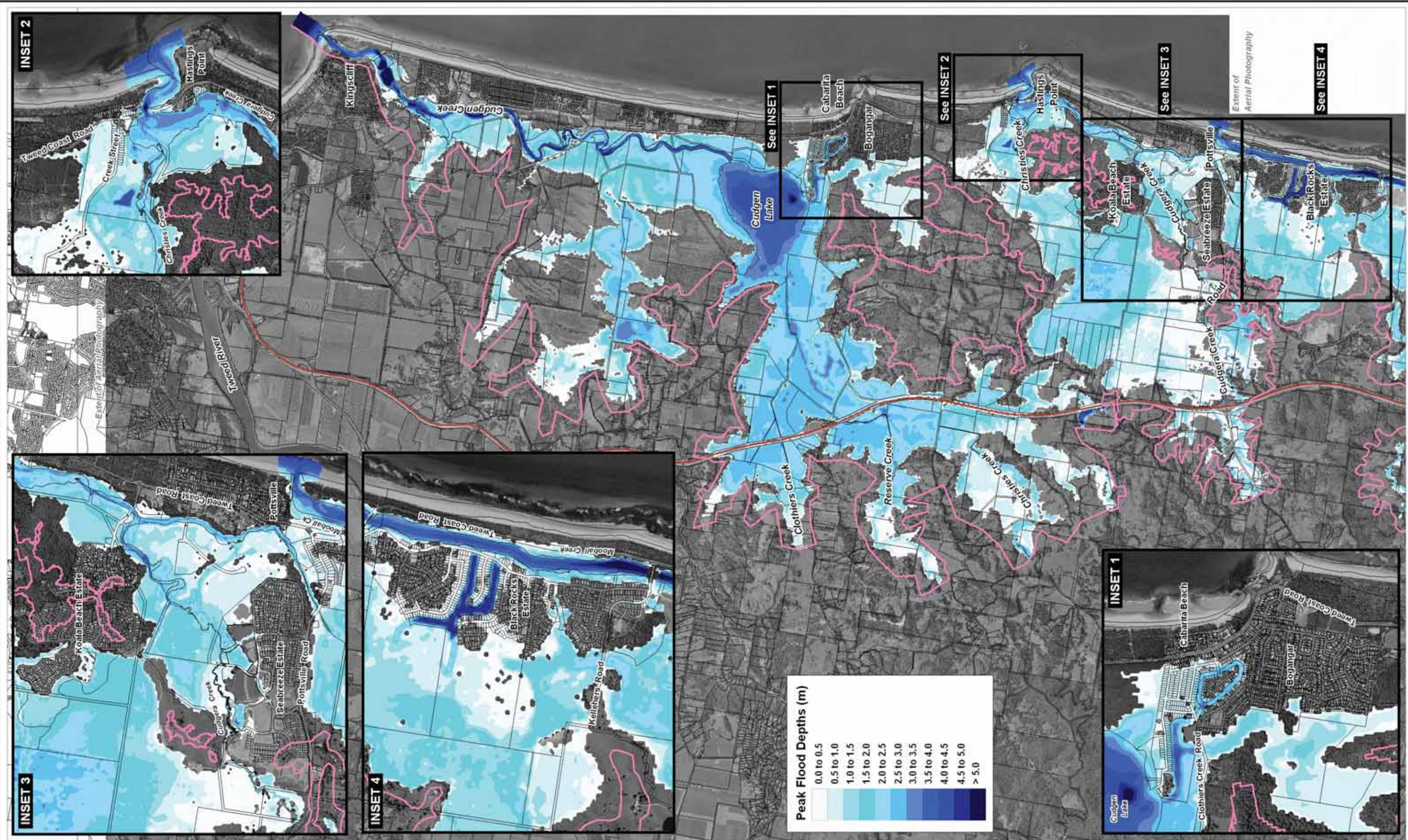
Figure:  
**Flood Map 25**

Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_084\_090708\_CC High Impacts Climate Change.wor





- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Depths High Impacts  
 Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

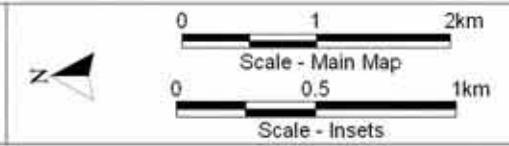
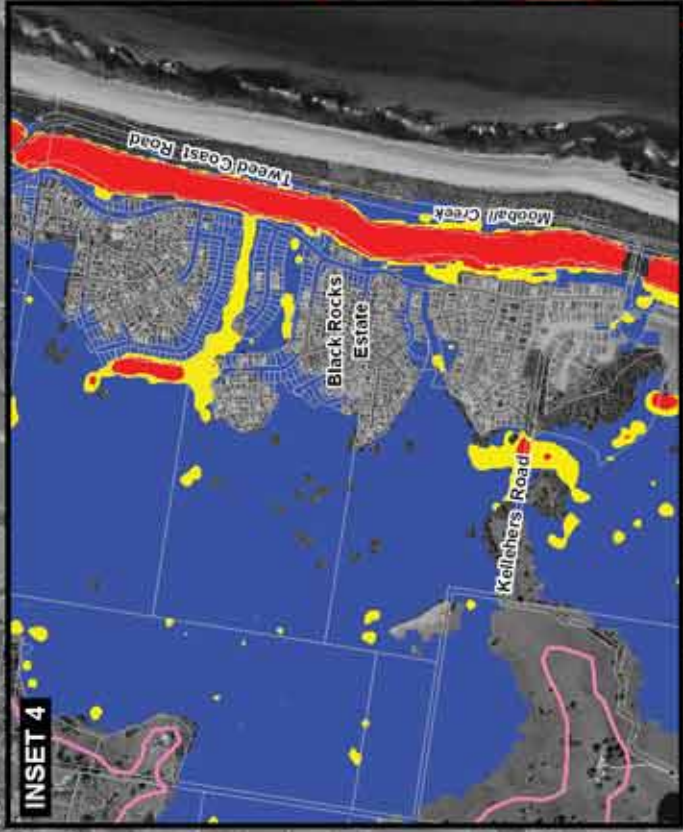
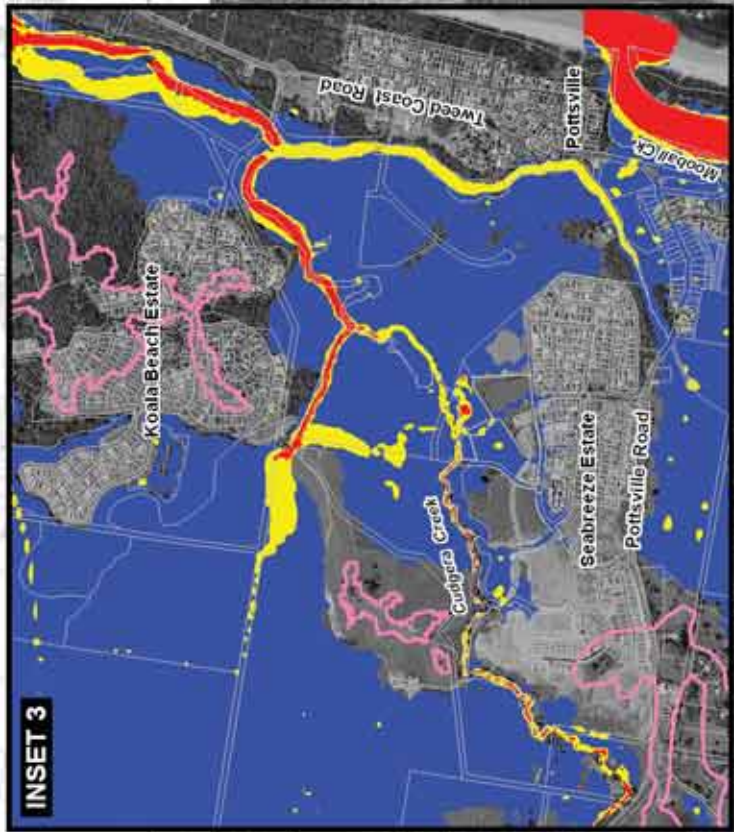
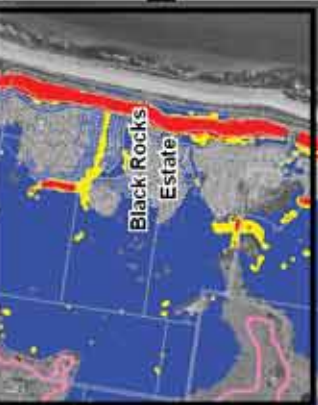
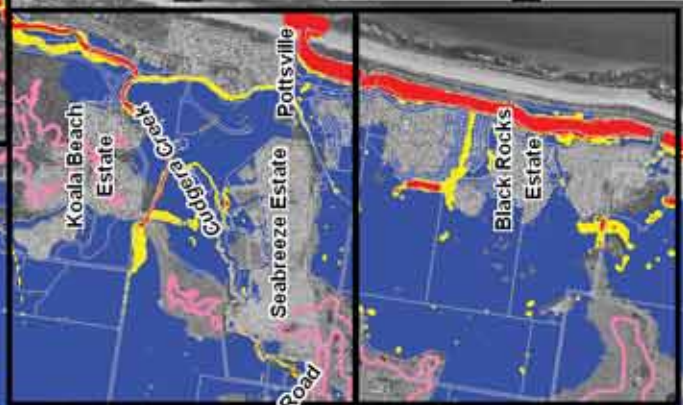
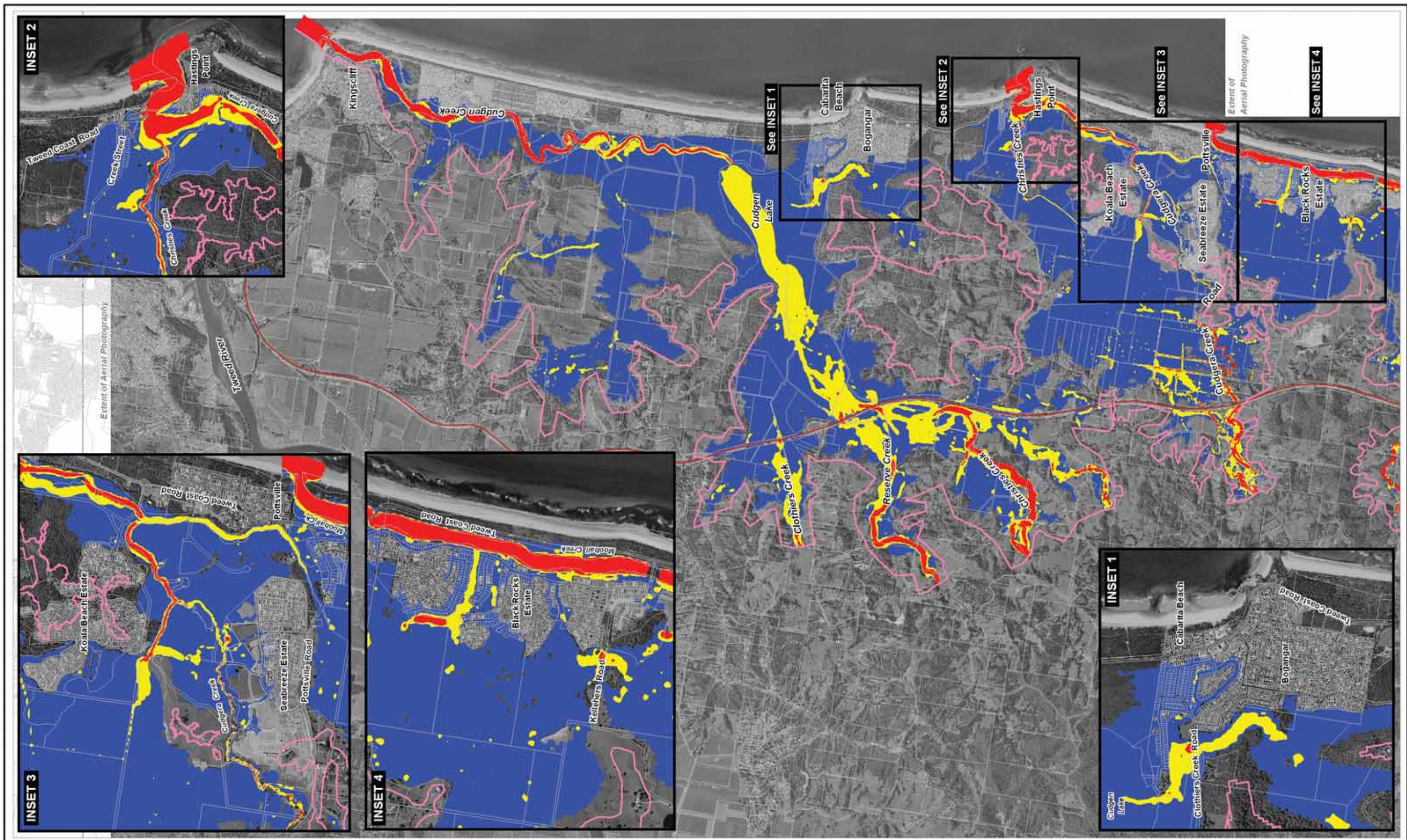


Figure:  
**Flood Map 26**

Rev:  
**A**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

Title:  
**100 Year ARI Peak Flood Velocity x Depth High Impacts  
Cudgen/Cudgera Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

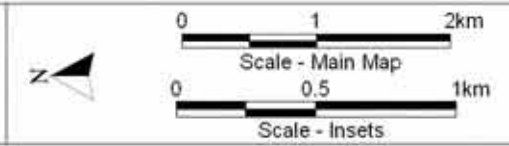


Figure:  
**Flood Map 27**

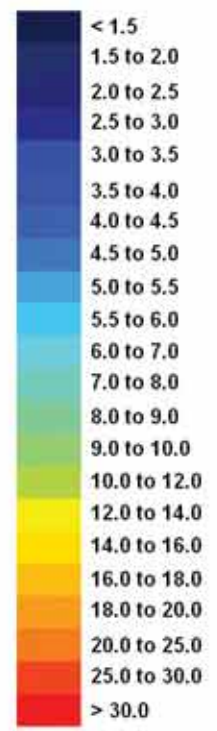
Rev:  
**A**



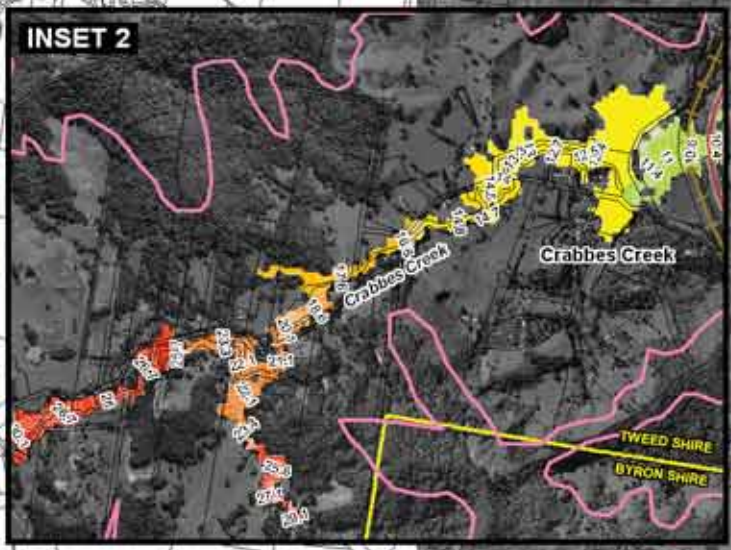
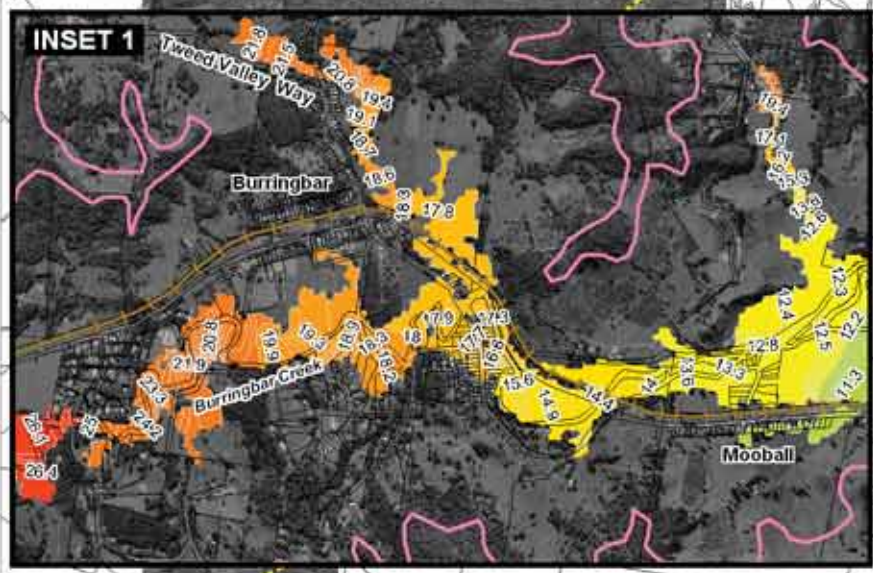
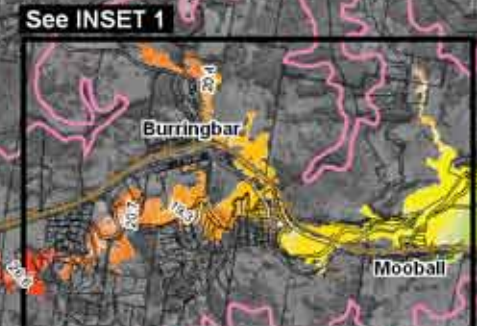
Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_089\_090708\_CC High Impacts Flood Velocity.WOR



Peak Flood Levels (m AHD)



Extent of Aerial Photography



**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**5 Year ARI Peak Flood Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

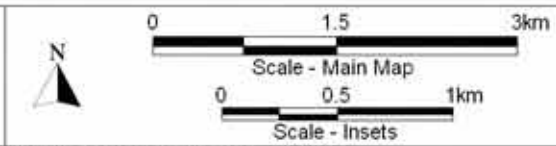
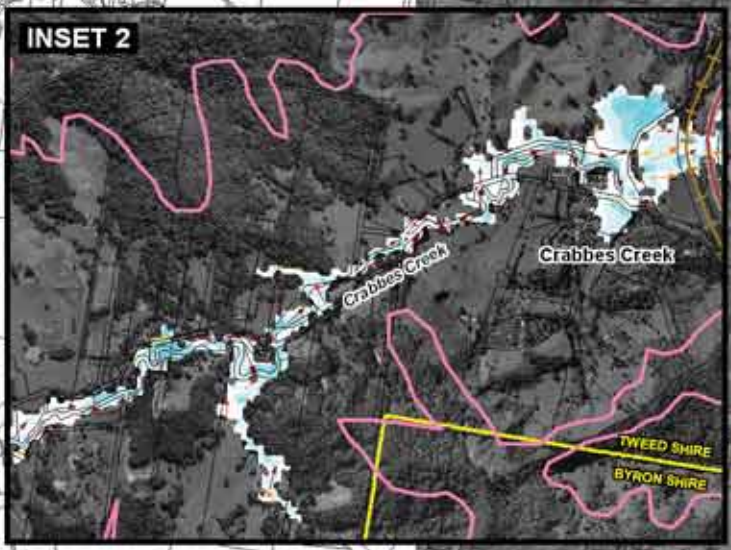
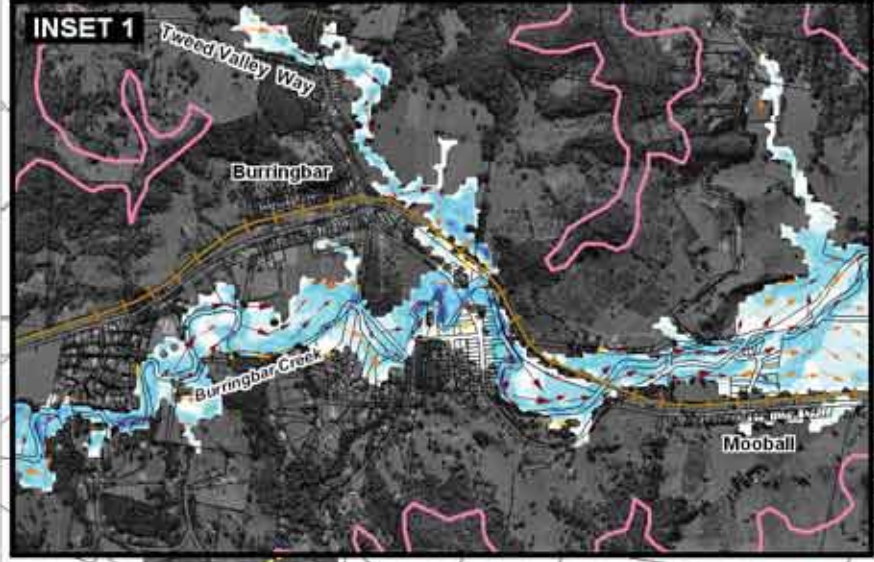
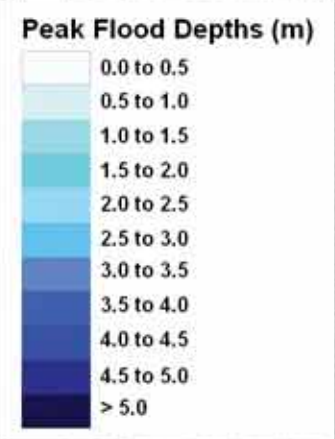
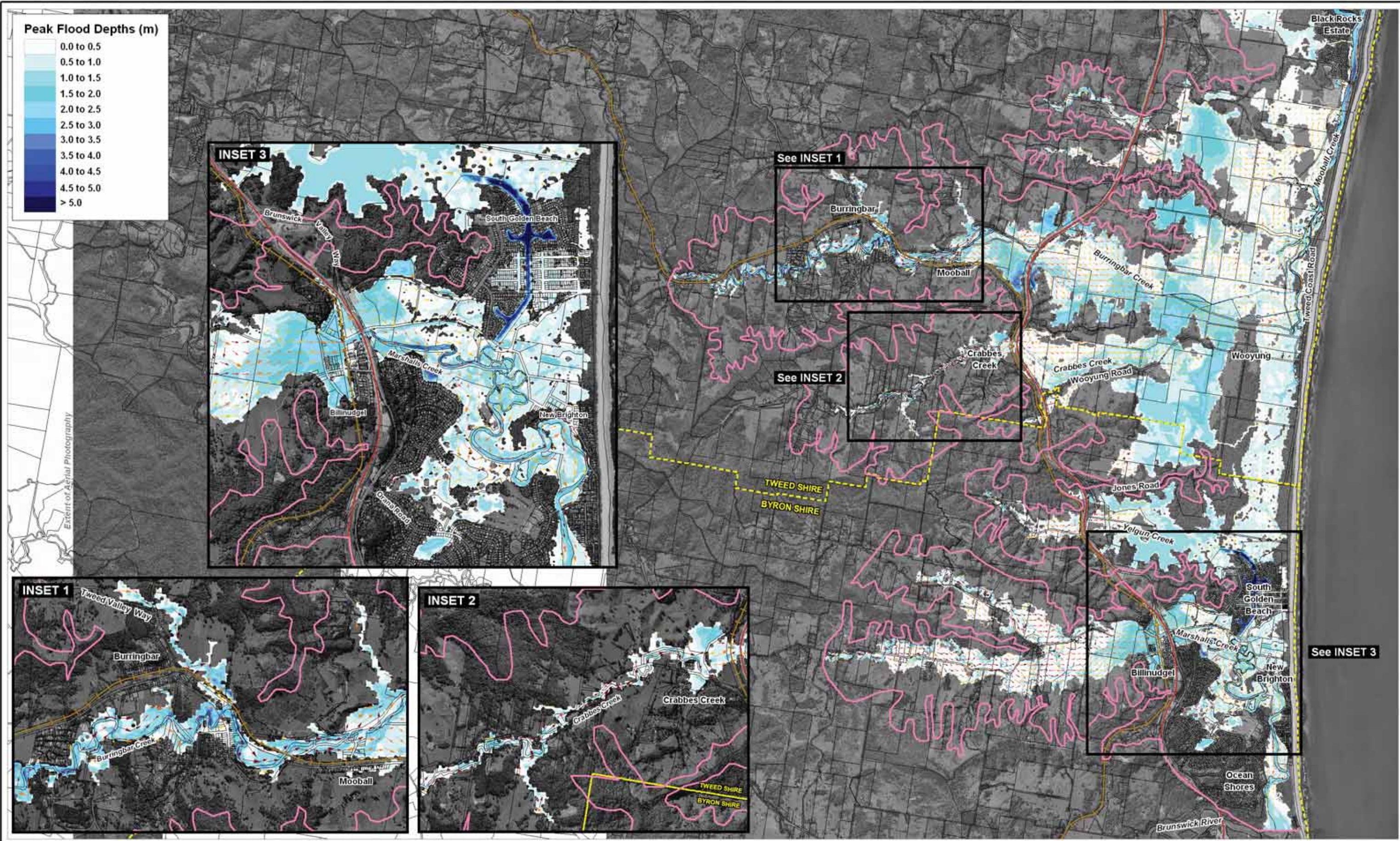


Figure: **Flood Map 28**  
Rev: **B**







- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Vectors (m/s)**
- 0.0 to 0.2
  - 0.2 to 0.5
  - 0.5 to 0.8
  - > 0.8

Title:  
**5 Year ARI Peak Flood Depths  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

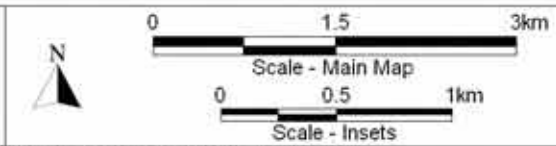


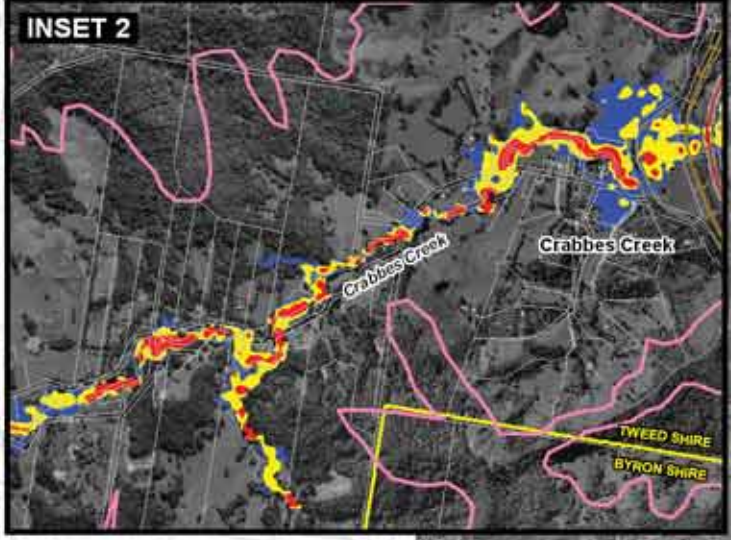
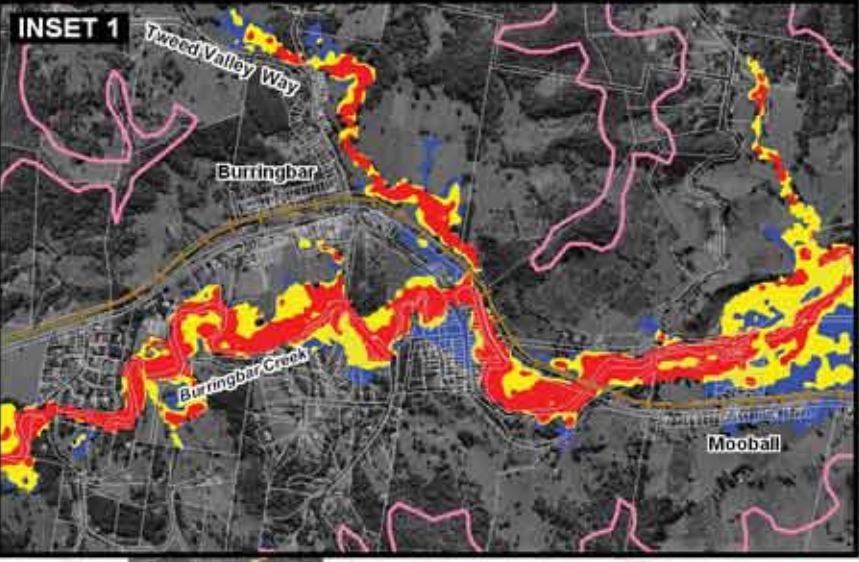
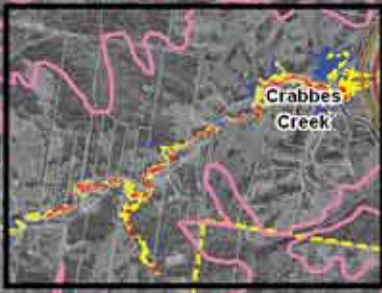
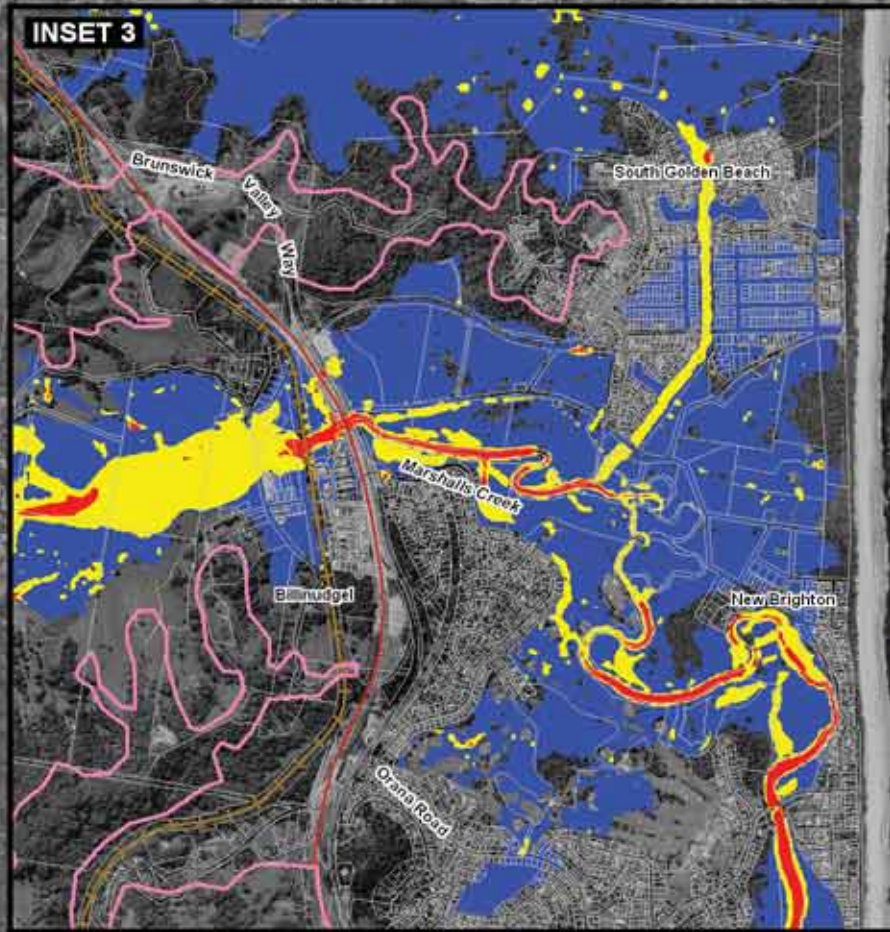
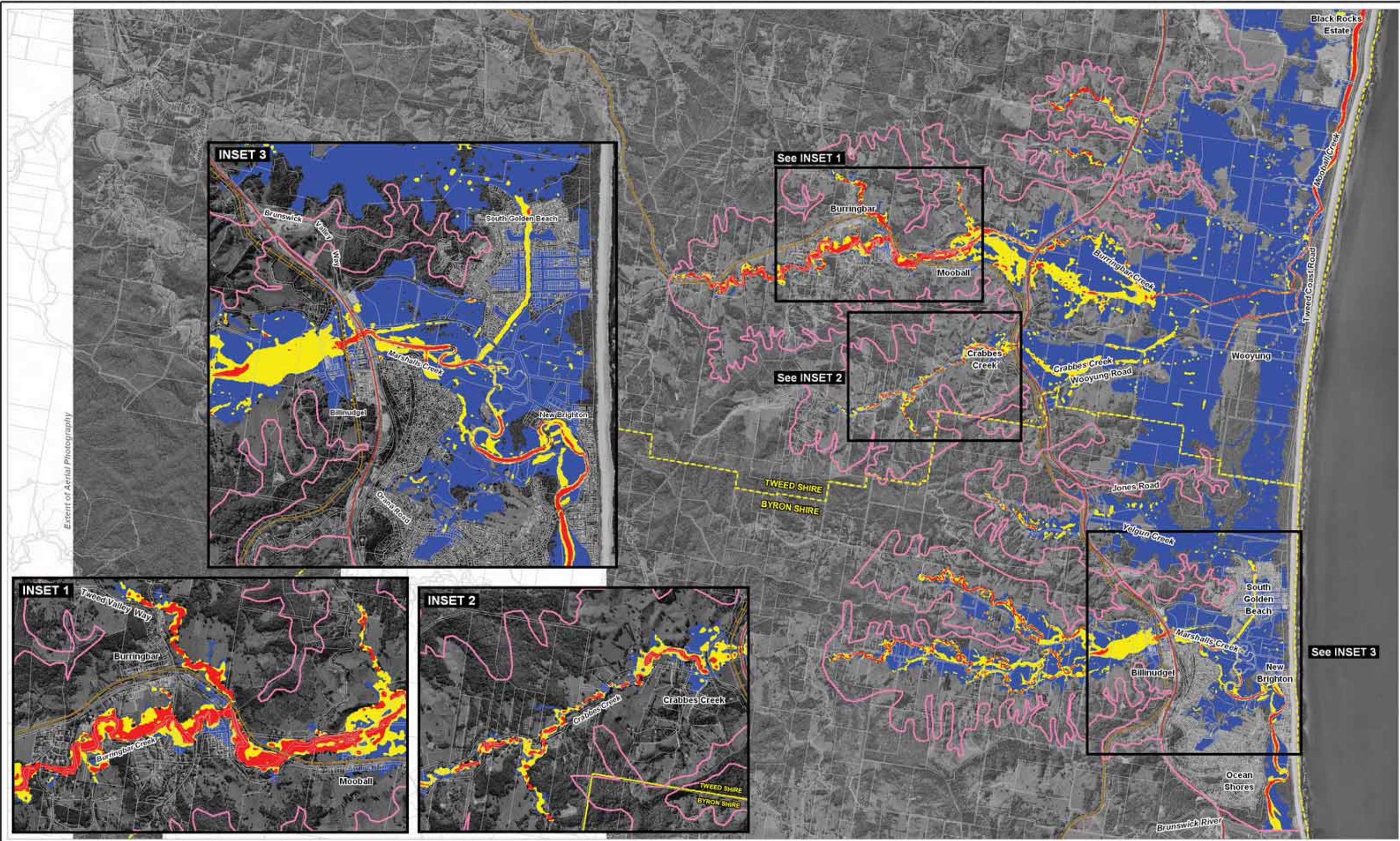
Figure:  
**Flood Map 29**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_078\_090708\_MM 5Y Flood Depths Rev.B.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

**Title:**  
**5 Year ARI Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

Scale - Main Map: 0, 1.5, 3km  
 Scale - Insets: 0, 0.5, 1km

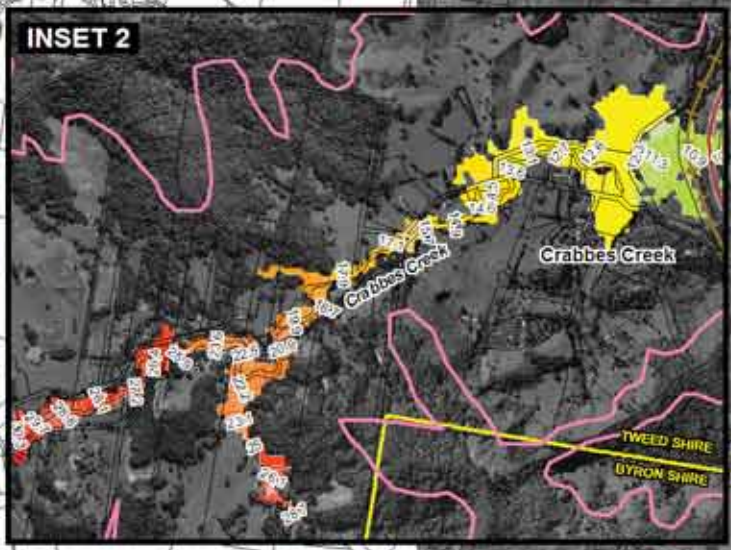
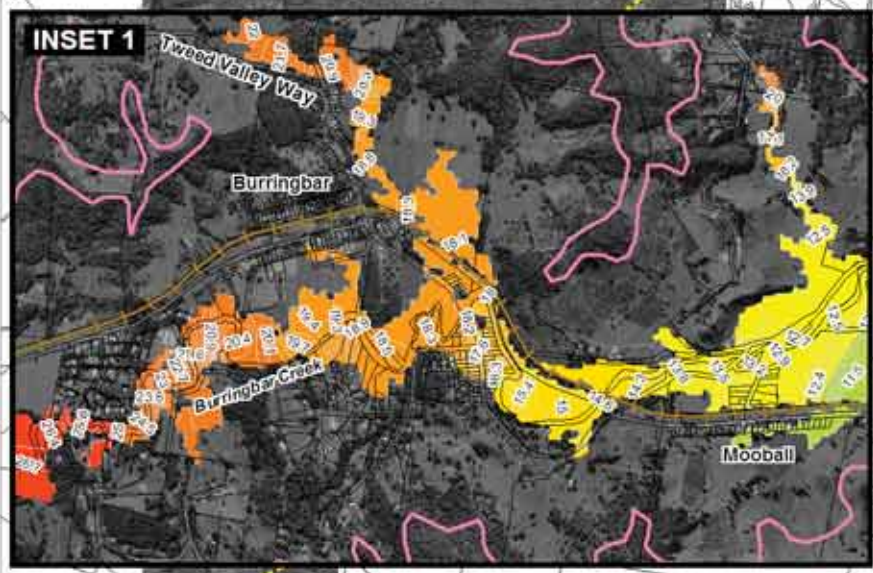
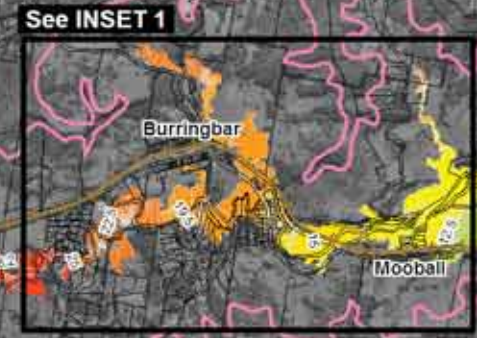
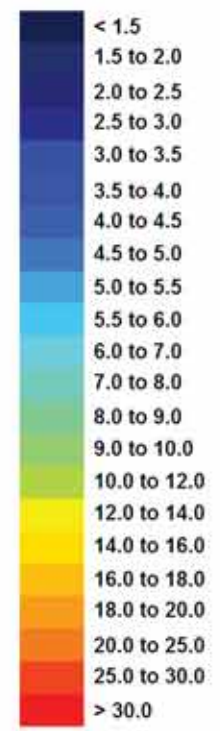
Figure: **Flood Map 30**  
 Rev: **B**

**BMT WBM**  
 www.wbmpl.com.au

Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_049\_090708\_MM 5Y Flood Velocity RevB.WOR



Peak Flood Levels (m AHD)



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD) (0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**10 Year ARI Peak Flood Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

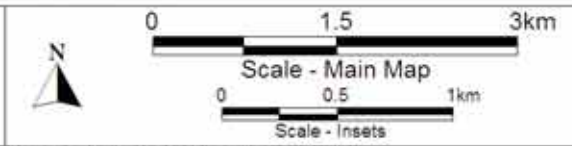
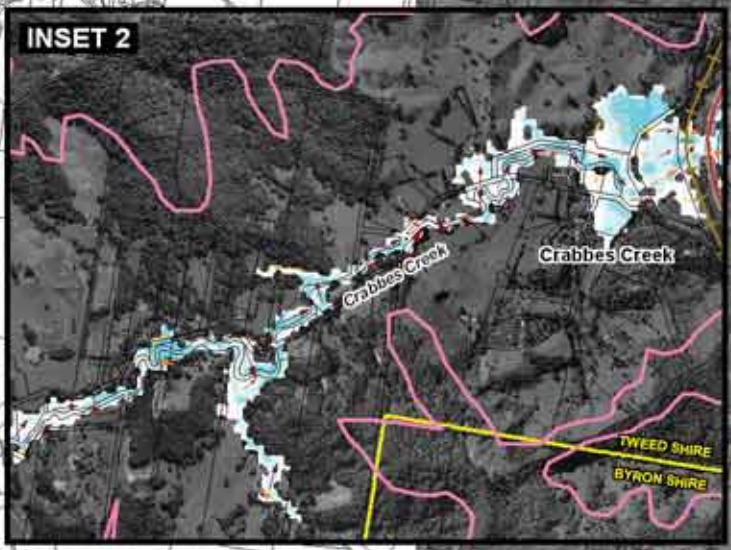
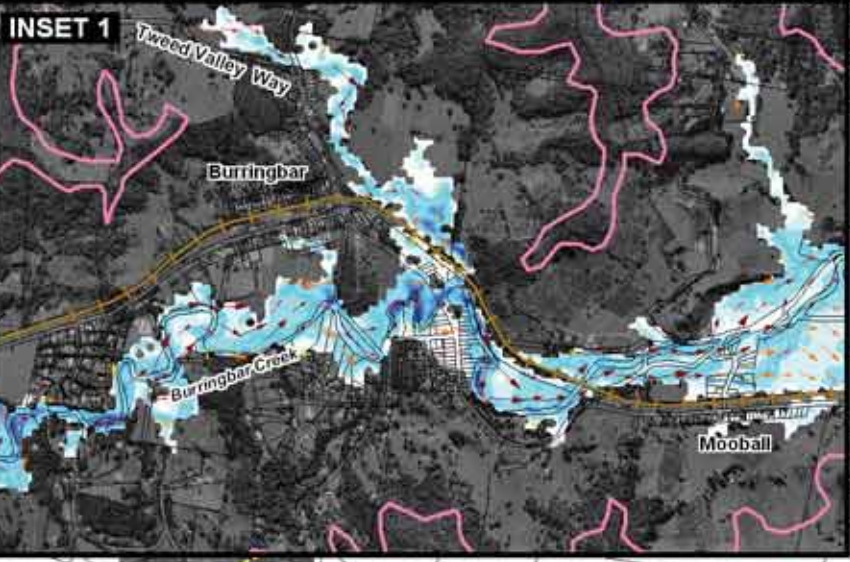
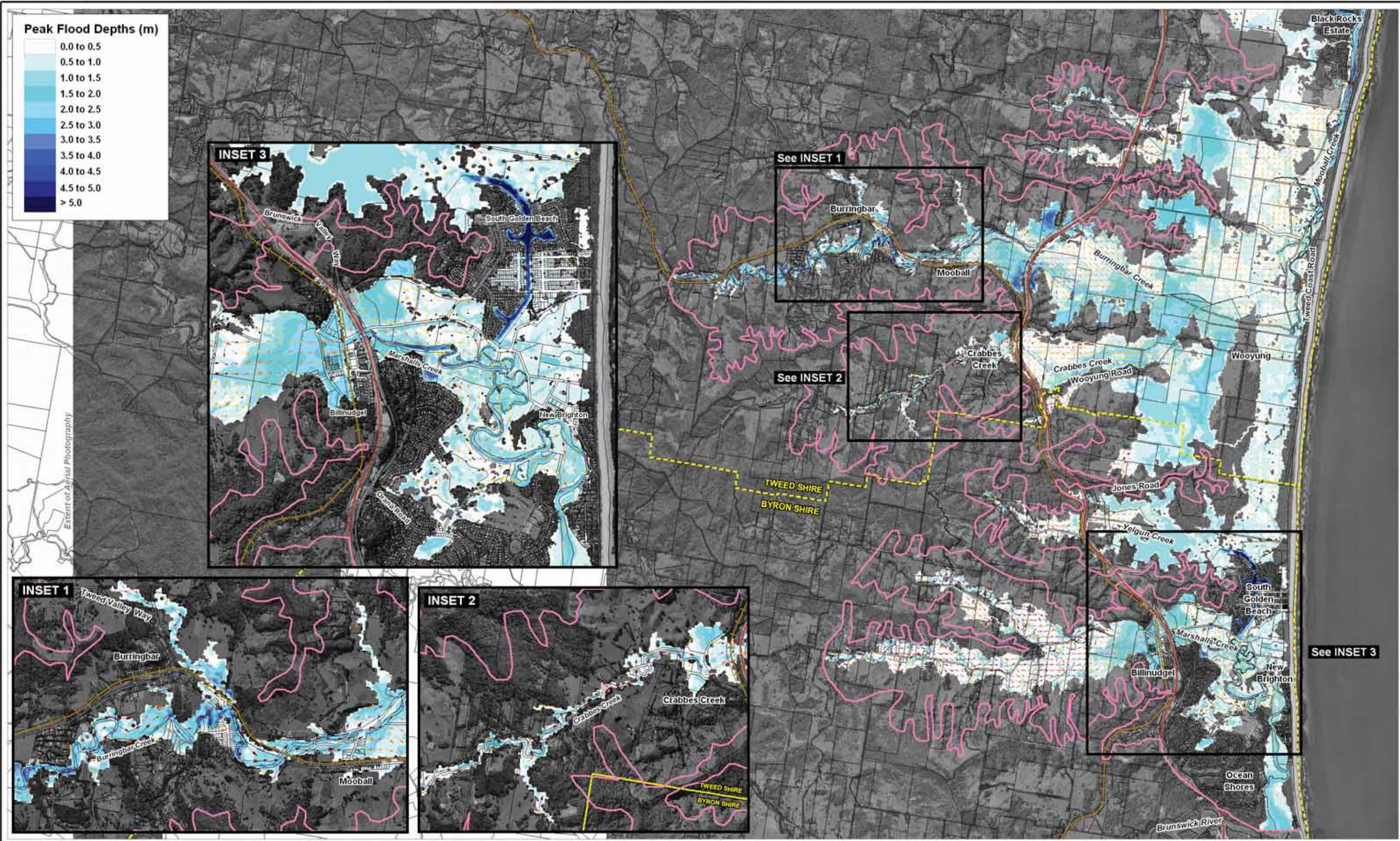
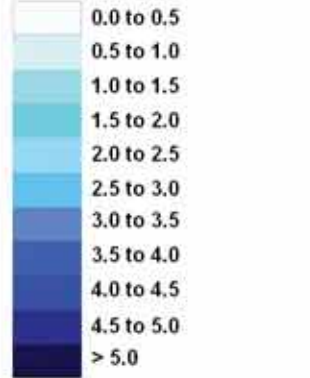


Figure: **Flood Map 31** Rev: **C**





**Peak Flood Depths (m)**



**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**10 Year ARI Peak Flood Depths  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

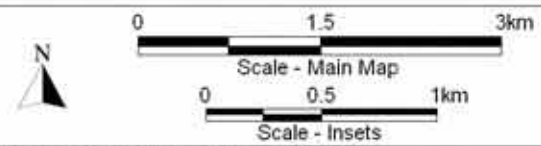
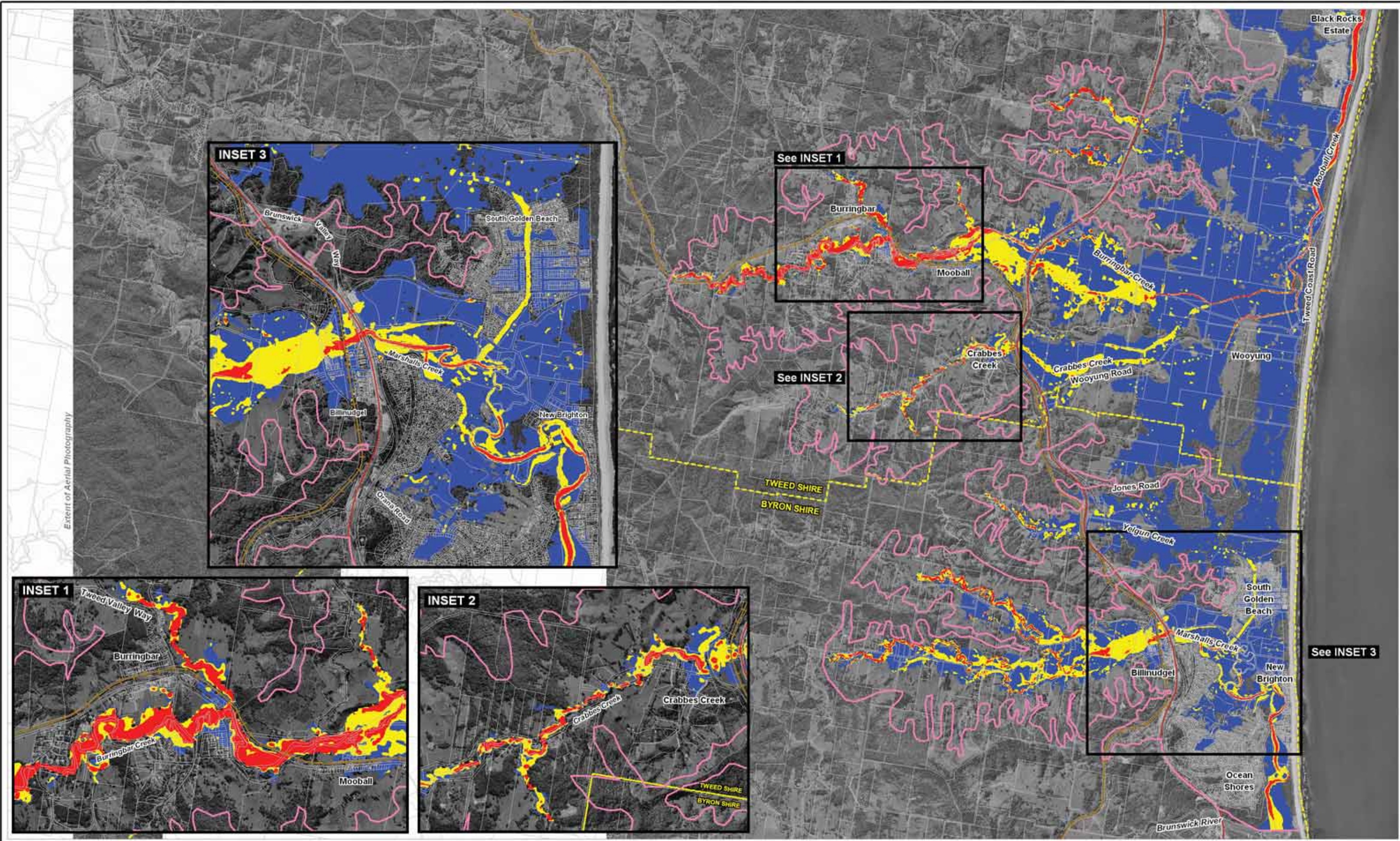


Figure:  
**Flood Map 32**

Rev:  
**B**







- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Velocity x Depth (m<sup>2</sup>/s)**
- Low (< 0.3)
  - Medium (0.3 to 1.0)
  - High (> 1.0)

Title:  
**10 Year ARI Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

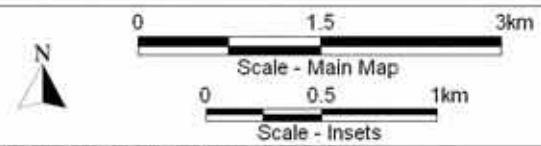


Figure:  
**Flood Map 33**

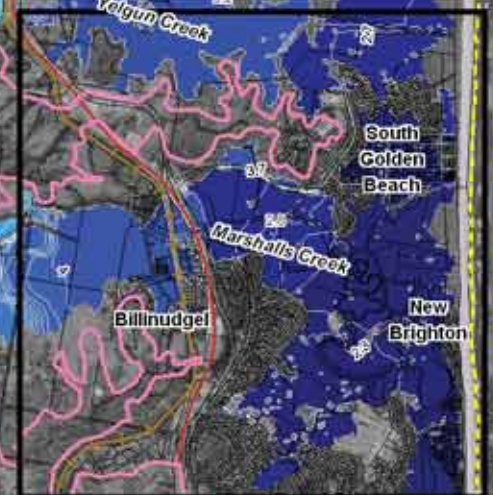
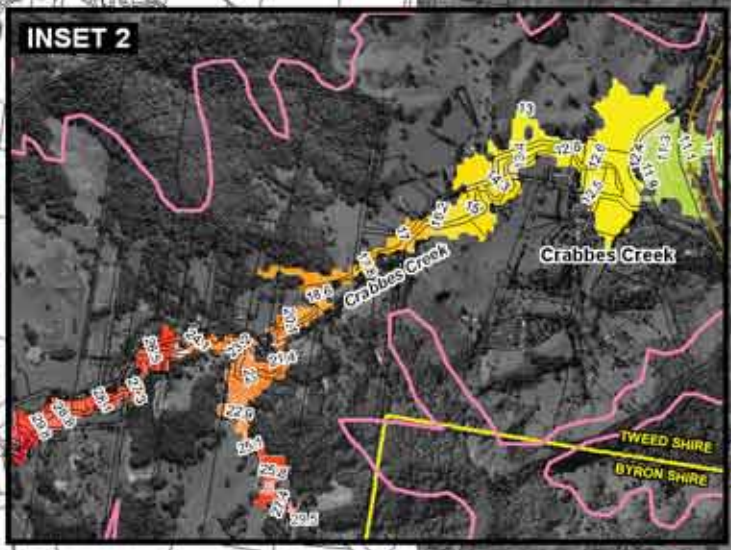
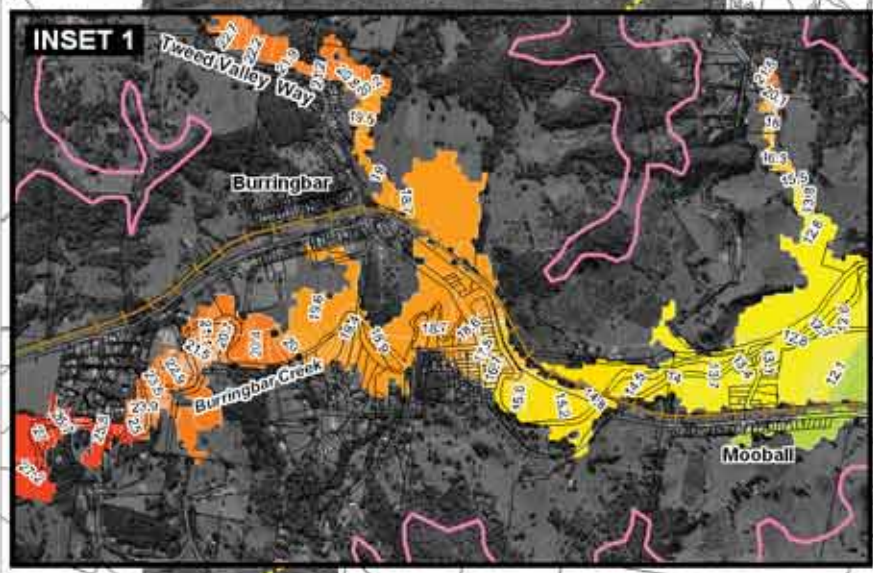
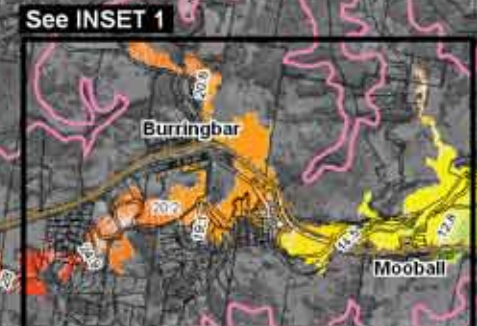
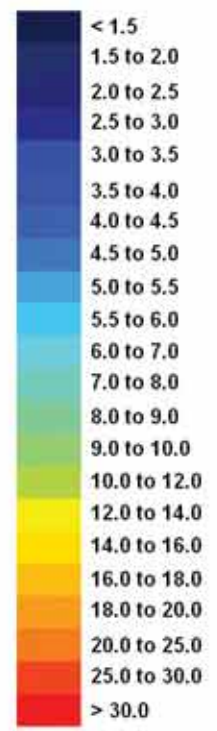
Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_050\_090708\_MM 10Y Flood Velocity RevB.WOR



Peak Flood Levels (m AHD)



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**20 Year ARI Peak Flood Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

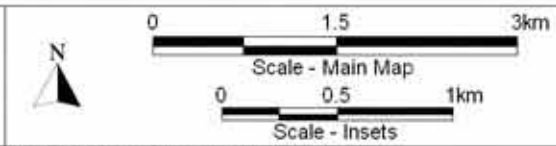
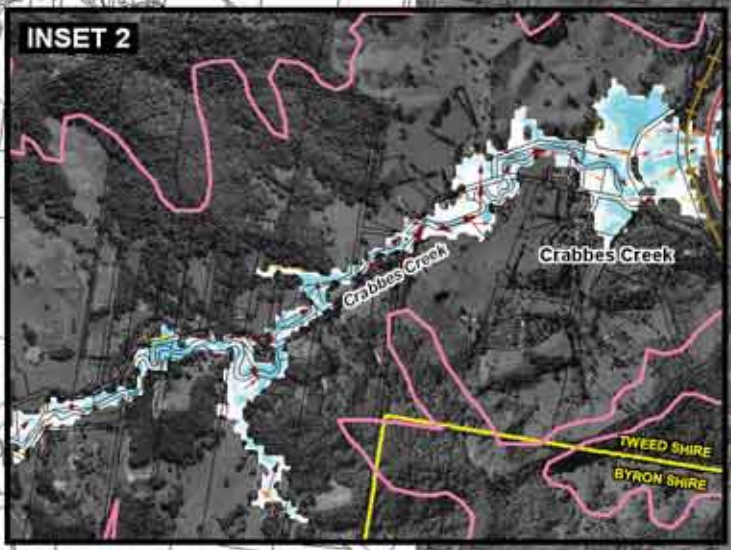
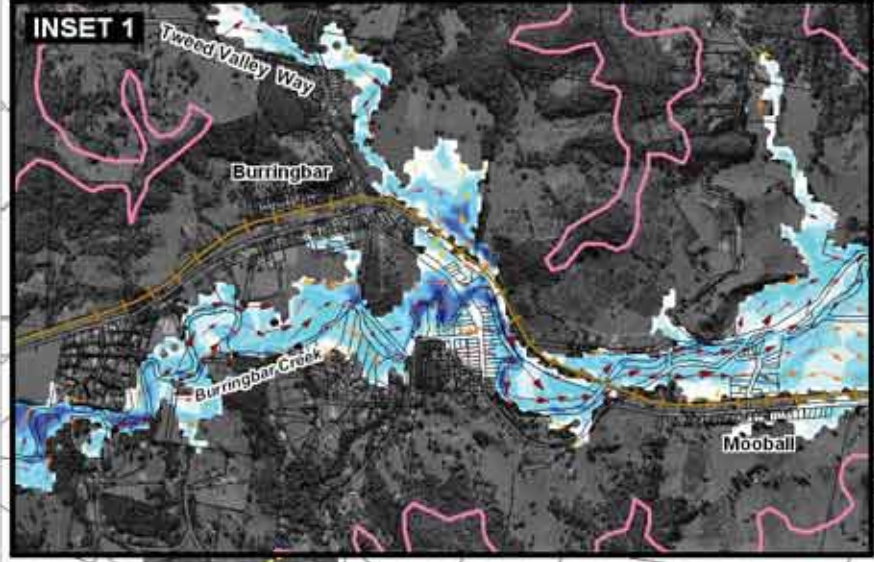
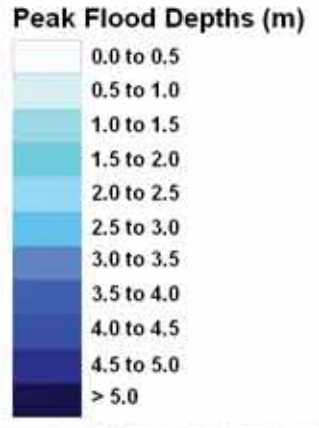
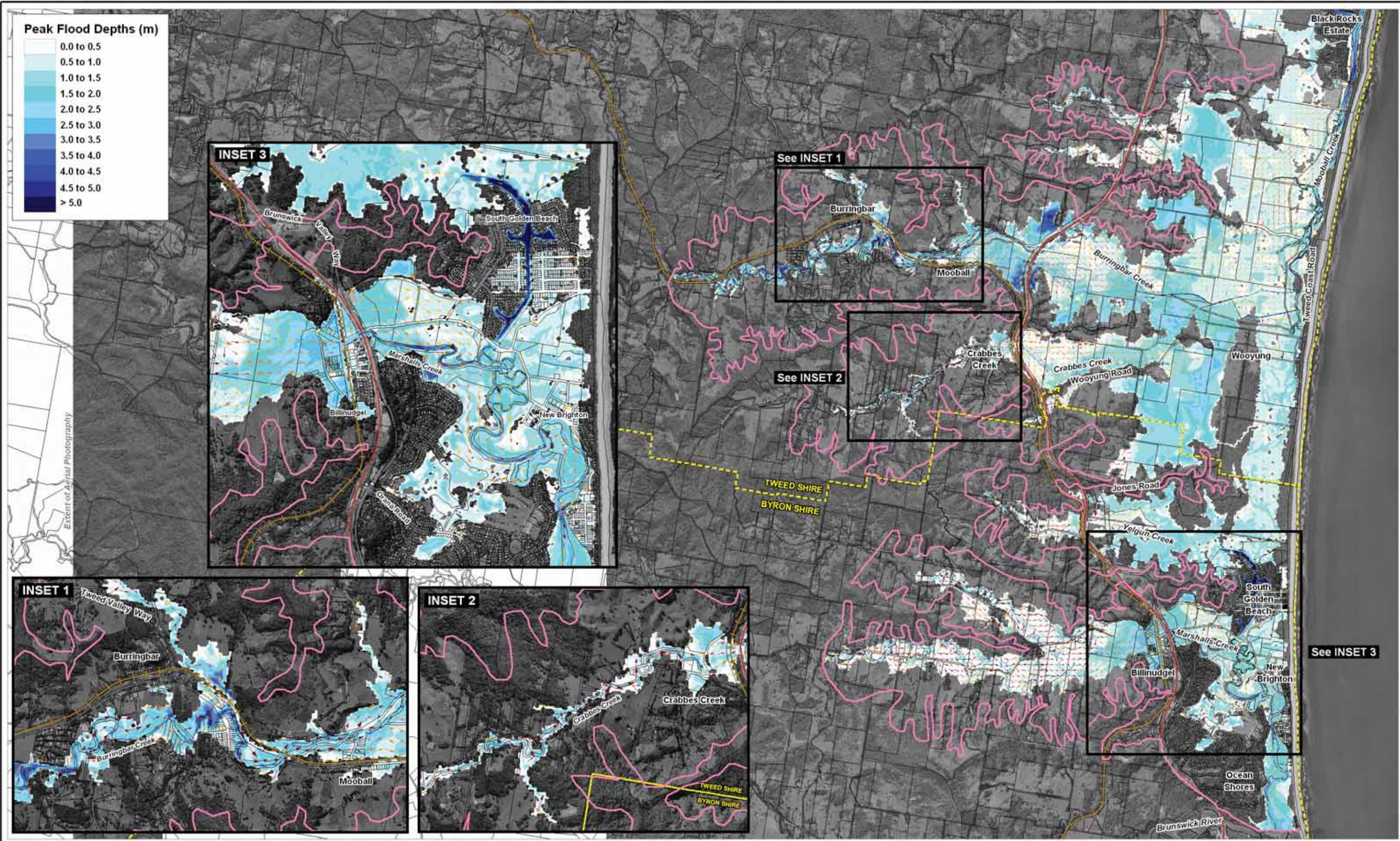


Figure:  
**Flood Map 34**

Rev:  
**B**







- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Vectors (m/s)**
- 0.0 to 0.2
  - 0.2 to 0.5
  - 0.5 to 0.8
  - > 0.8

Title:  
**20 Year ARI Peak Flood Depths  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

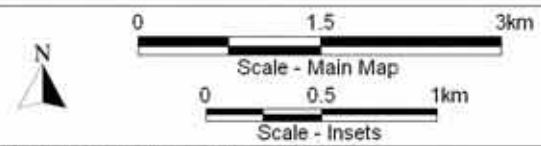


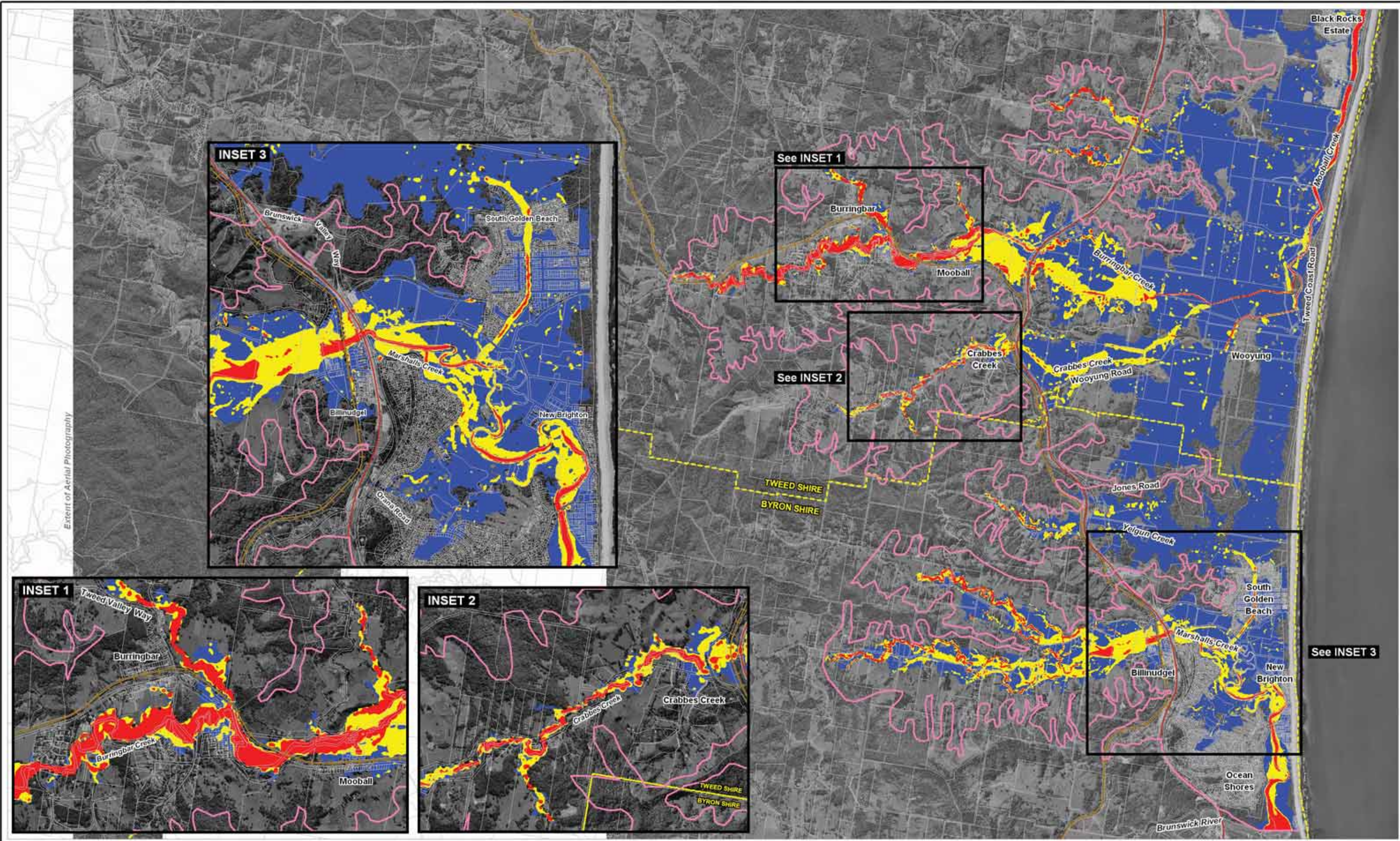
Figure:  
**Flood Map 35**

Rev:  
**B**

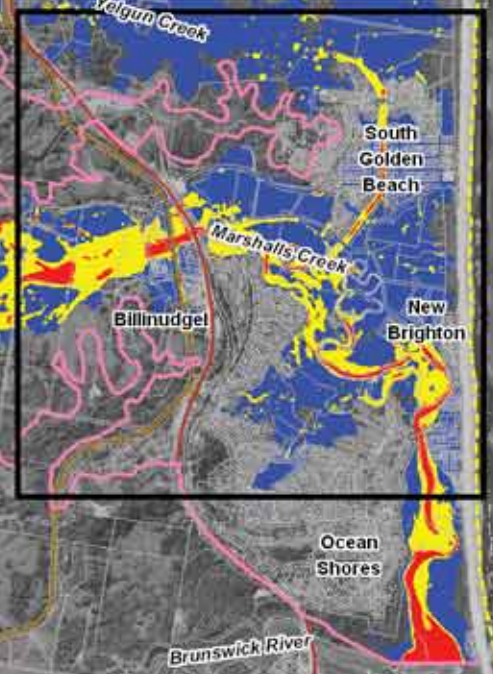
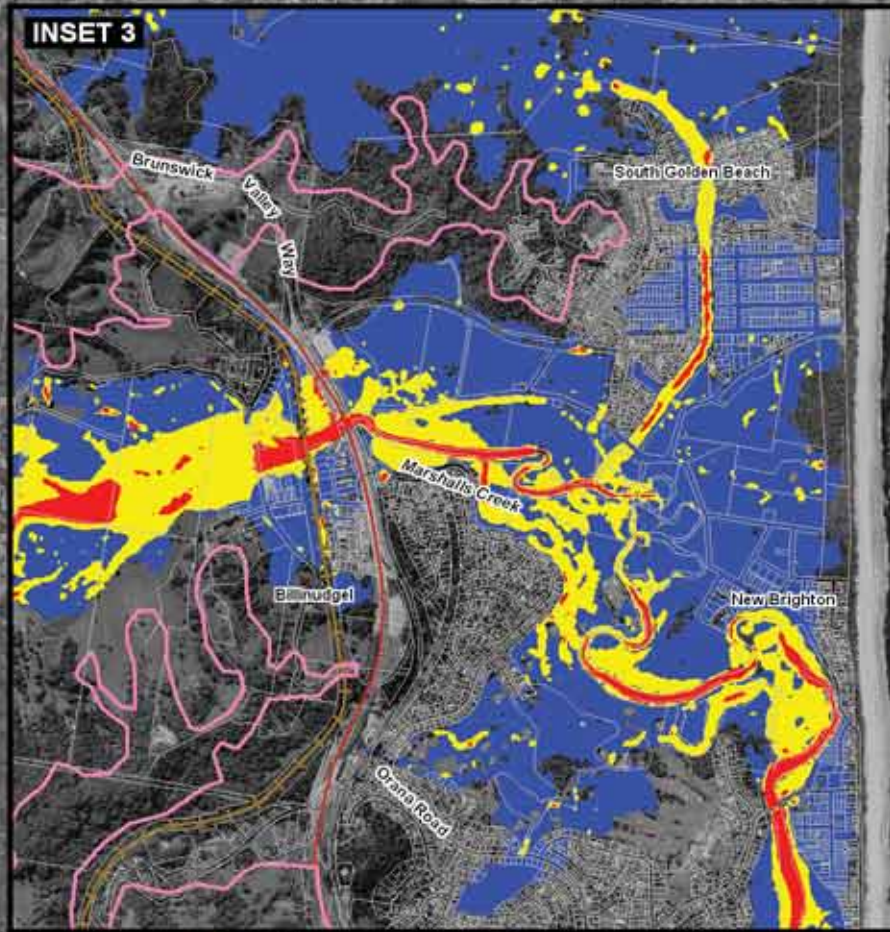
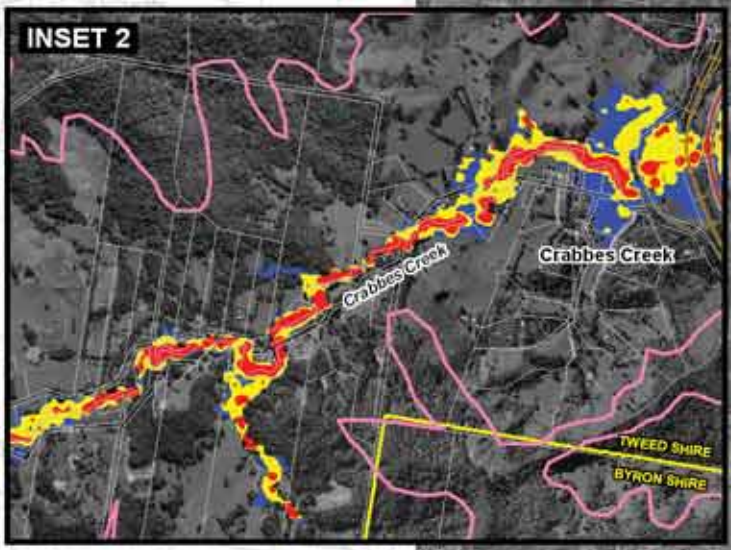
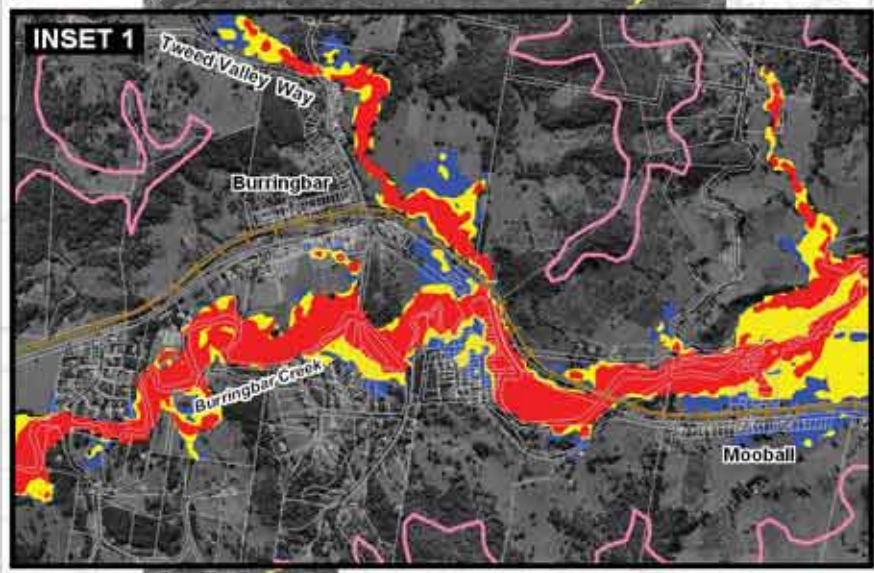


Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_076\_090708\_MM 20Y Flood Depths RevB.WOR





Extent of Aerial Photography



- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Velocity x Depth (m<sup>2</sup>/s)**
- Low (< 0.3)
  - Medium (0.3 to 1.0)
  - High (> 1.0)

**Title:**  
**20 Year ARI Peak Flood Velocity x Depth Product**  
**Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

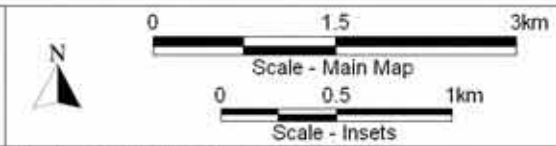


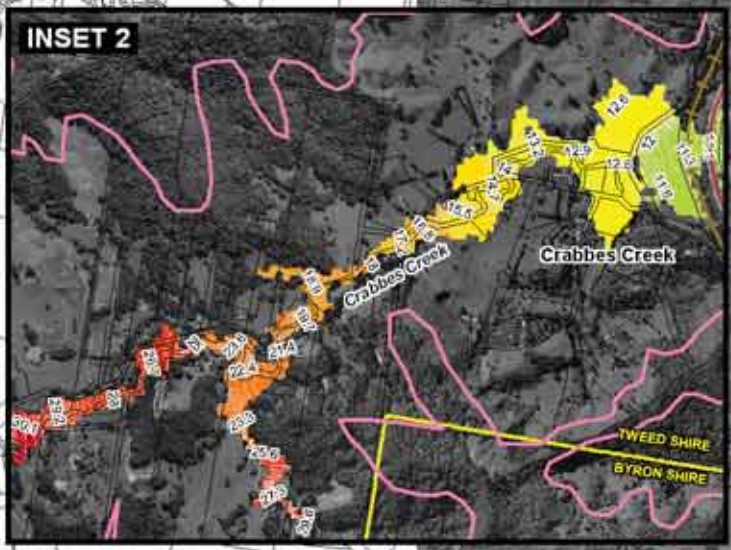
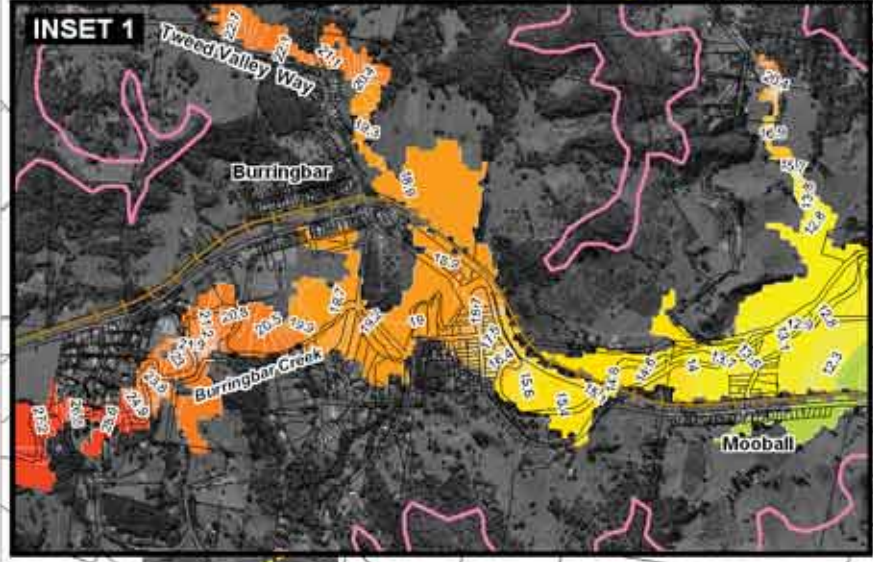
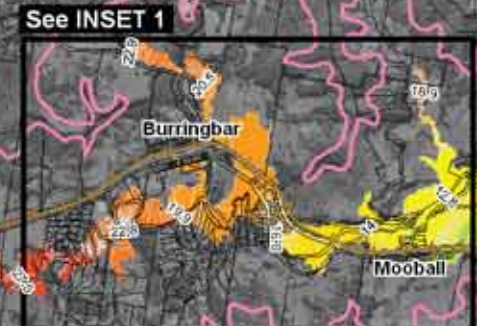
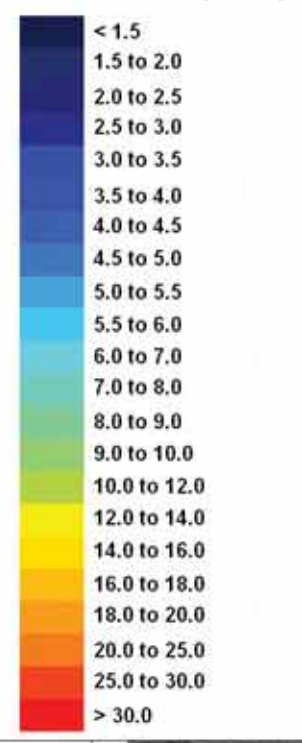
Figure: **Flood Map 36**  
 Rev: **B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_051\_090708\_MM 20Y Flood Velocity RevB.WOR



Peak Flood Levels (m AHD)



**LEGEND**

- Model Extent
- Peak Flood Level Contours (m AHD) (0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title: **50 Year ARI Peak Flood Levels Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

Figure: **Flood Map 37** Rev: **B**

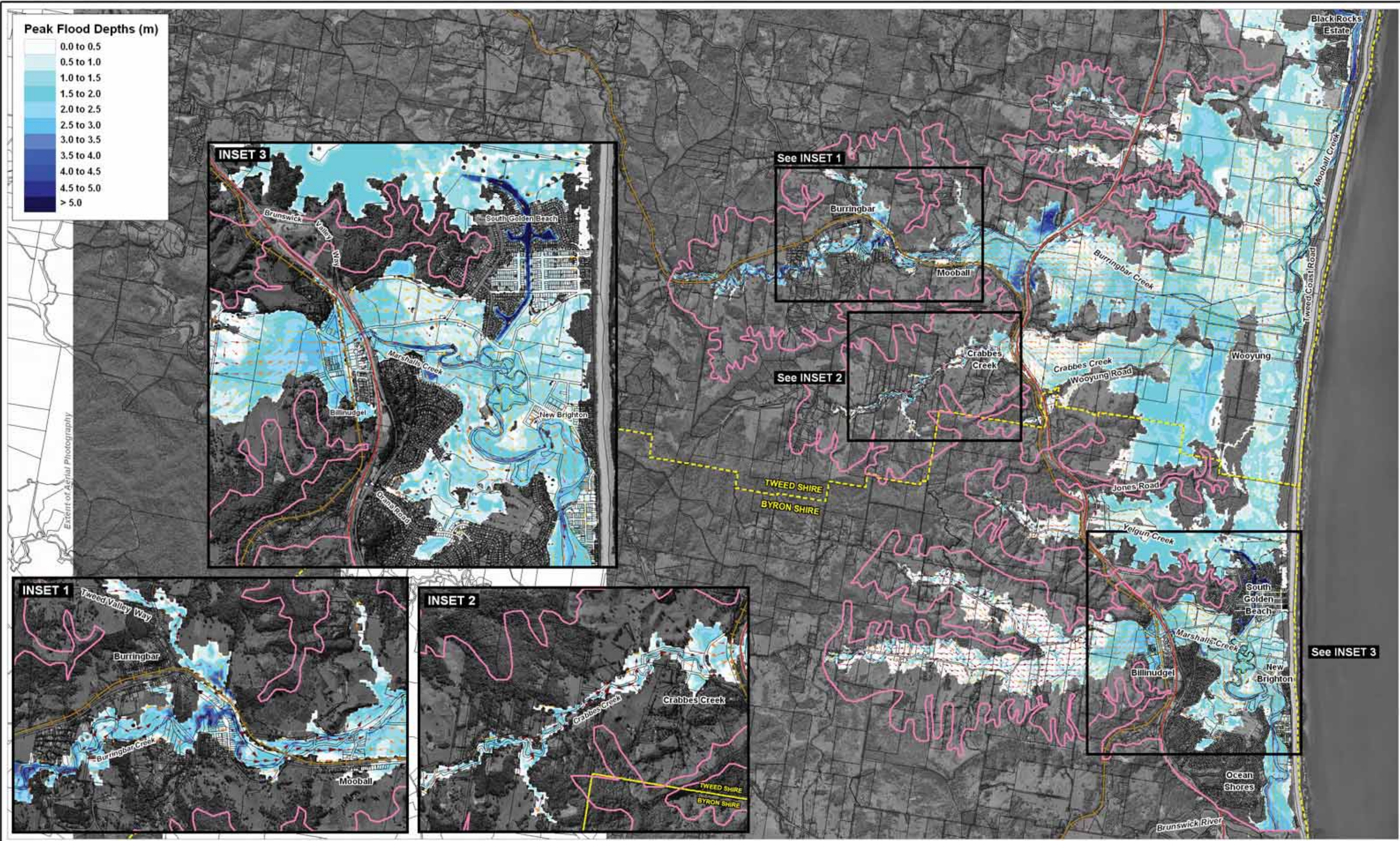
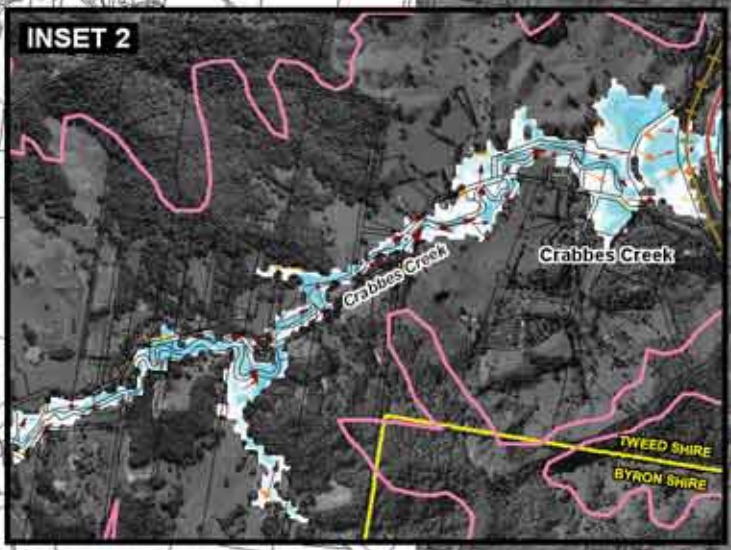
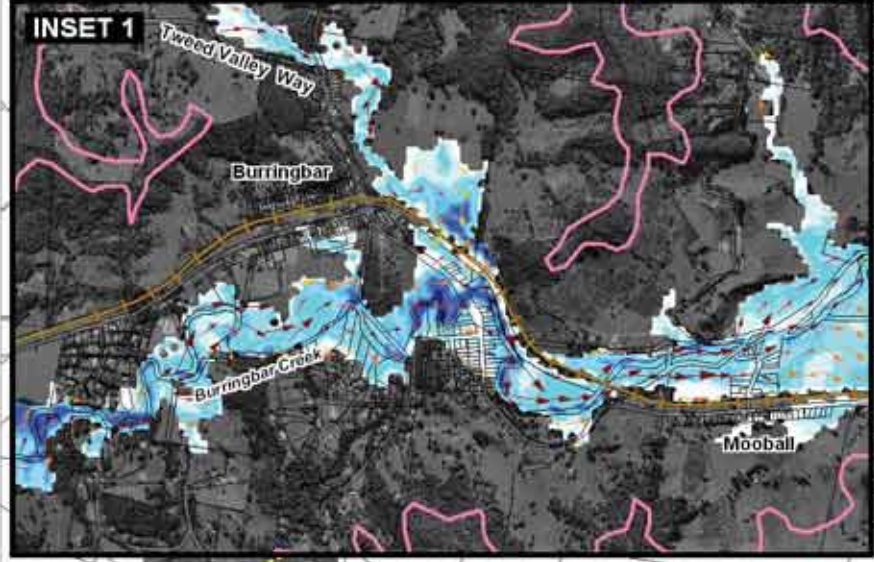
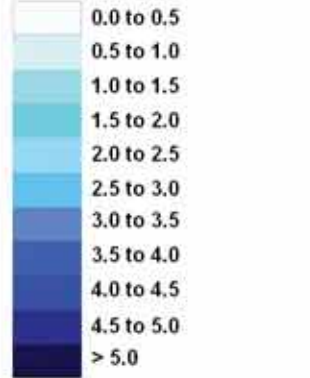
Scale - Main Map: 0 to 3km  
Scale - Insets: 0 to 1km

Filepath: I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_057\_090707\_MM 50Y Flood Levels RevB.WOR

**BMT WBM**  
www.wbmpl.com.au



**Peak Flood Depths (m)**



- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Vectors (m/s)**
- 0.0 to 0.2
  - 0.2 to 0.5
  - 0.5 to 0.8
  - > 0.8

Title:  
**50 Year ARI Peak Flood Depths  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

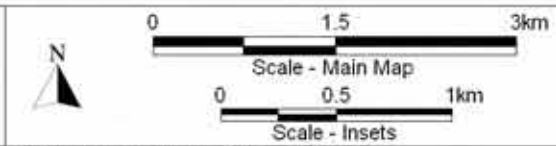


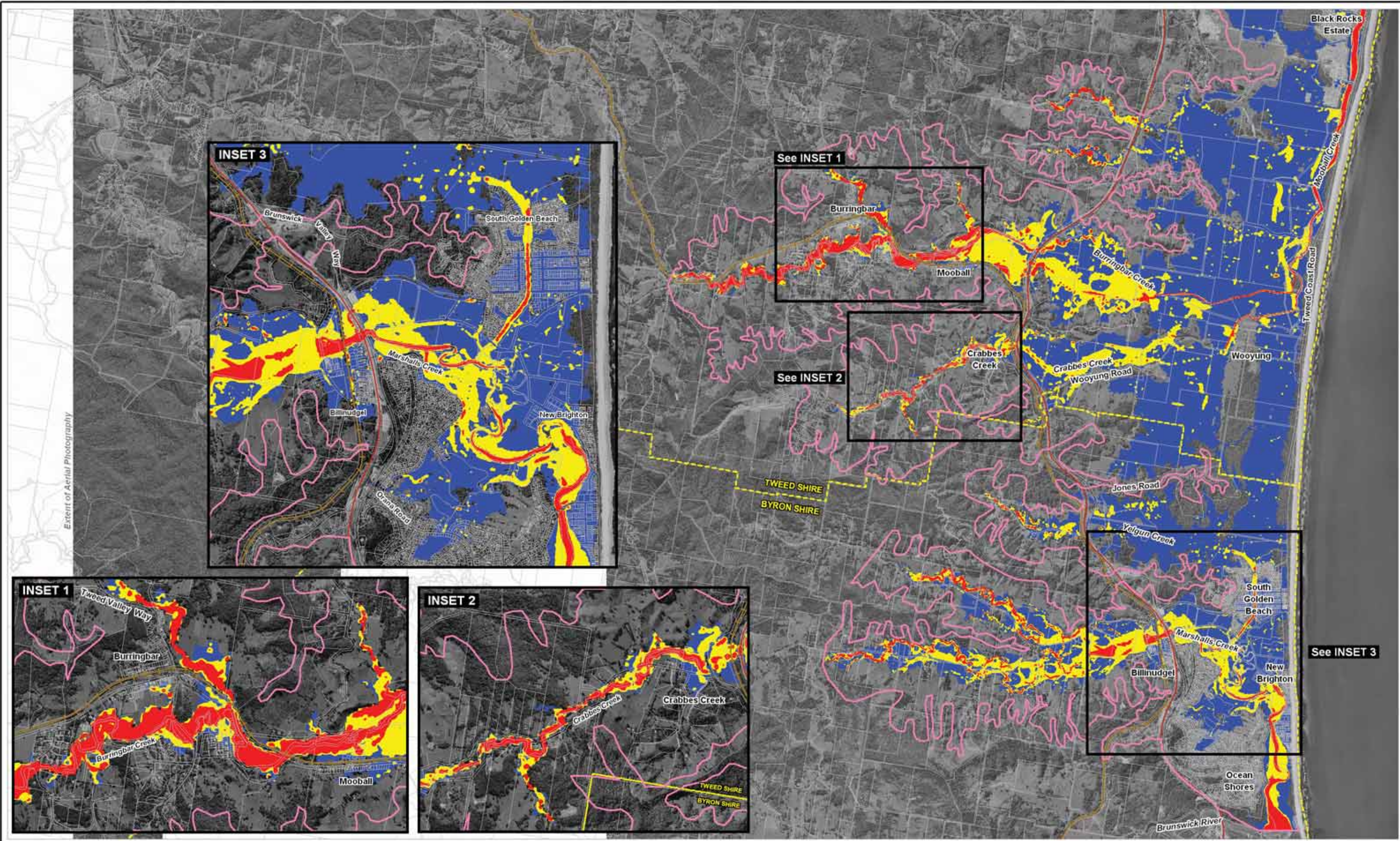
Figure:  
**Flood Map 38**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_075\_090708\_MM 50Y Flood Depths RevB.WOR





- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Velocity x Depth ( $m^2/s$ )**
- Low (< 0.3)
  - Medium (0.3 to 1.0)
  - High (> 1.0)

Title:  
**50 Year ARI Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

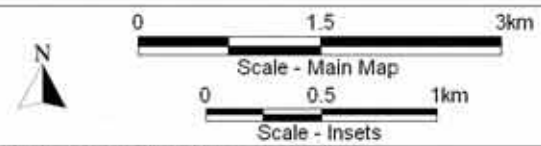


Figure:  
**Flood Map 39**

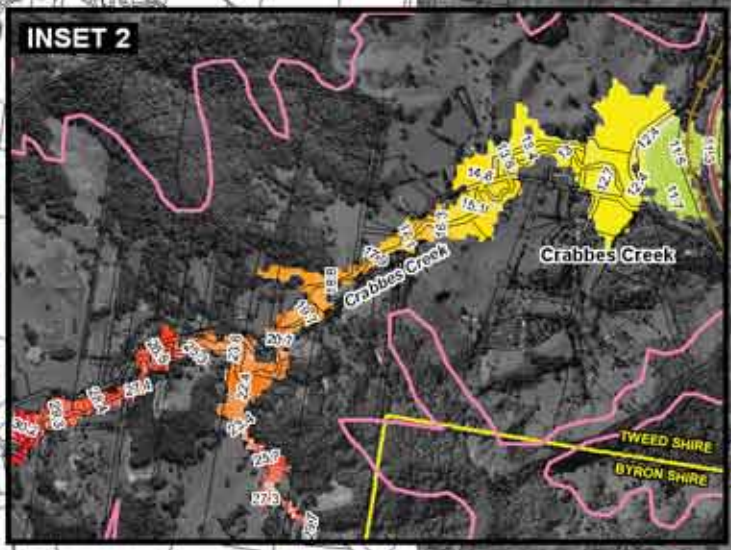
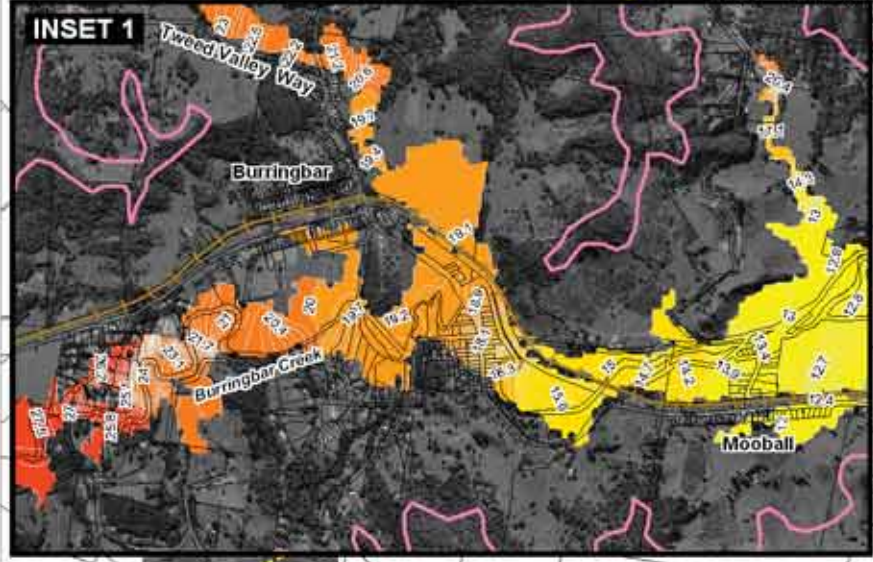
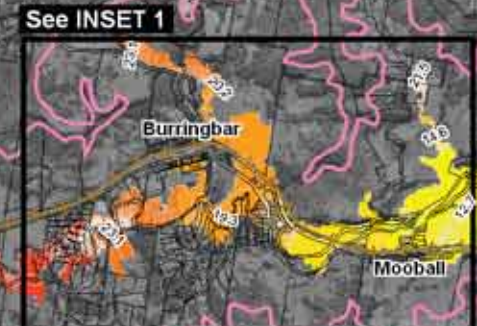
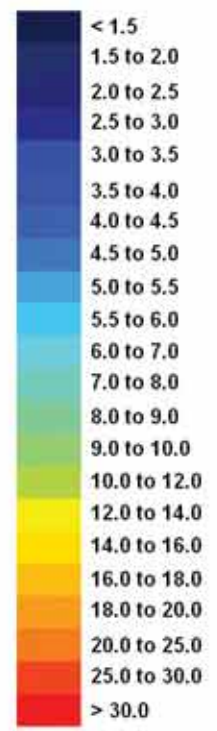
Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_061\_090708\_MM 50Y Flood Velocity RevB.WOR



Peak Flood Levels (m AHD)



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

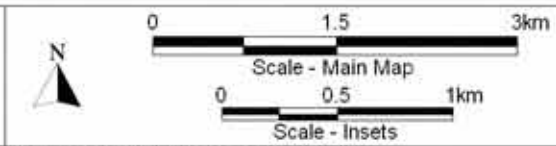


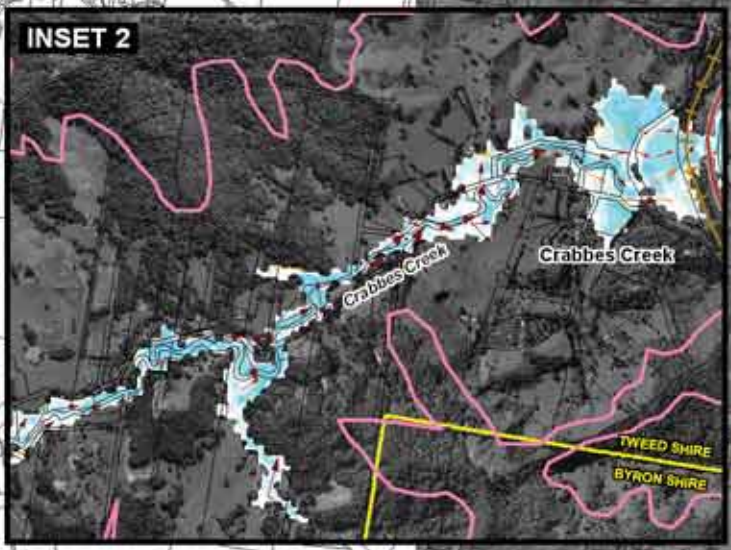
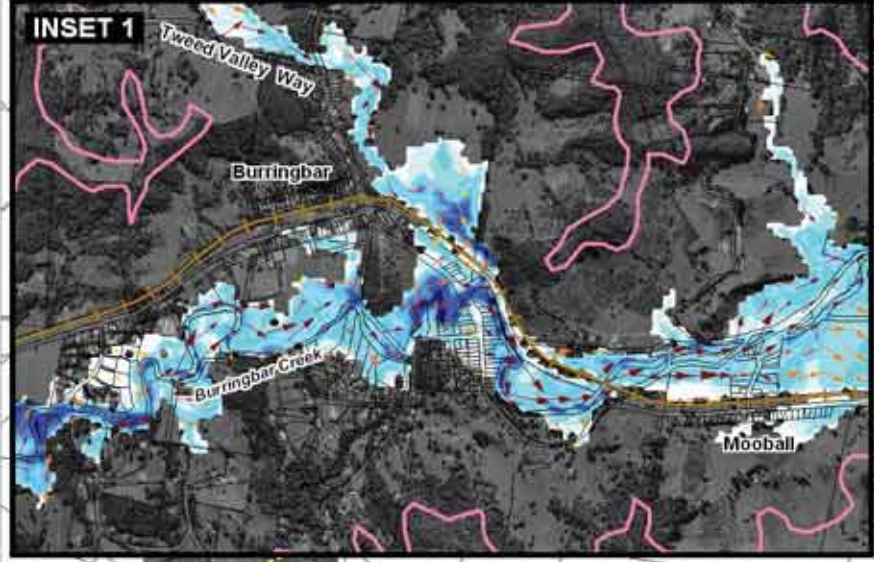
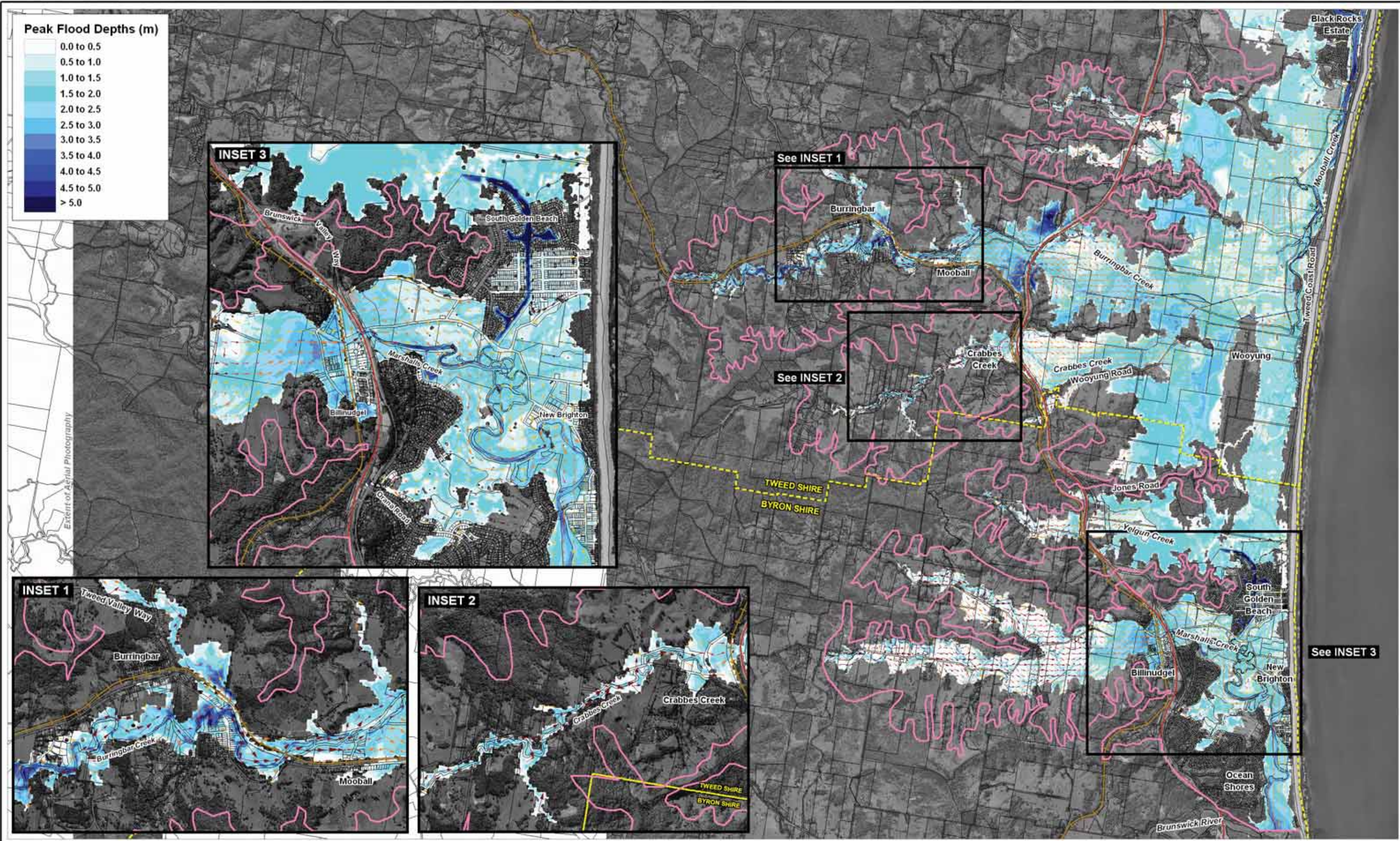
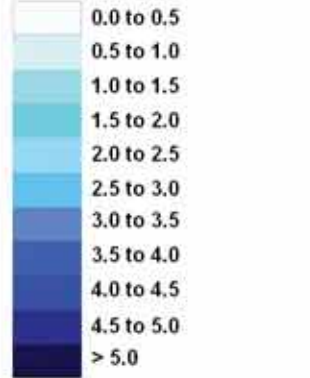
Figure: **Flood Map 40**  
Rev: **B**



Filepath: I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_040\_090707\_MM 100Y Flood Levels RevB.WOR



**Peak Flood Depths (m)**



**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:  
**100 Year ARI Peak Flood Depths  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

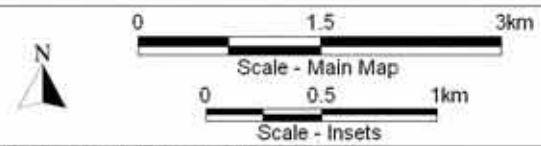


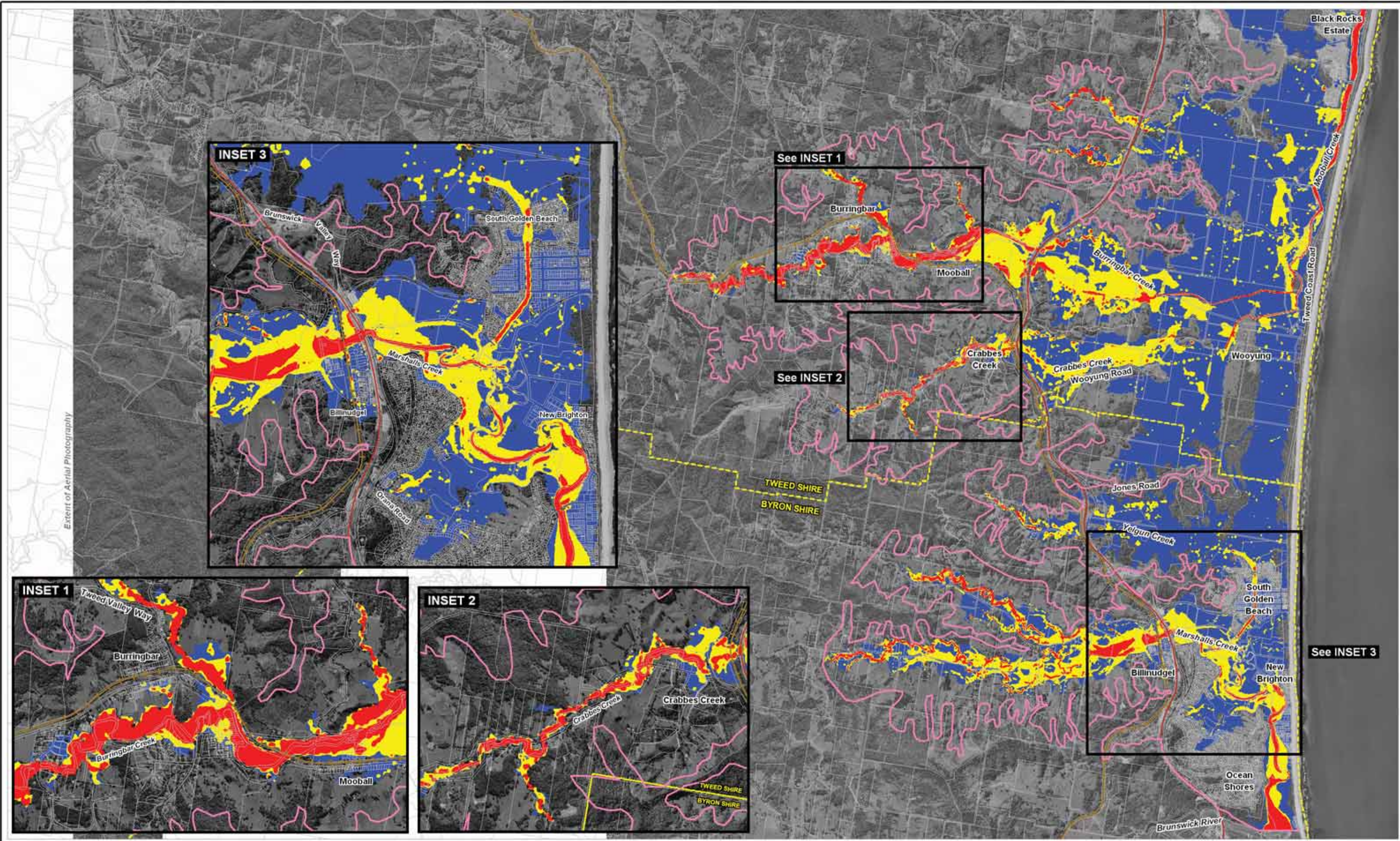
Figure:  
**Flood Map 41**

Rev:  
**B**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_042\_090708\_MM 100Y Flood Depths RevB.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

**Title:**  
**100 Year ARI Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

Scale - Main Map: 0, 1.5, 3km  
 Scale - Insets: 0, 0.5, 1km

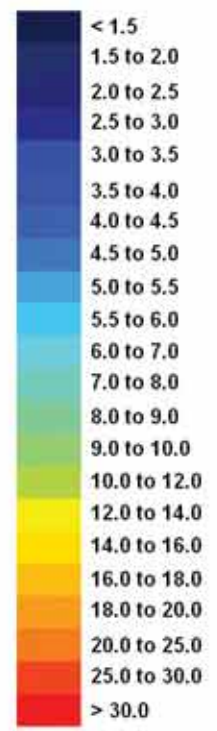
Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_044\_090708\_MM 100Y Flood Velocity RevB.WOR

Figure: **Flood Map 42**  
 Rev: **B**

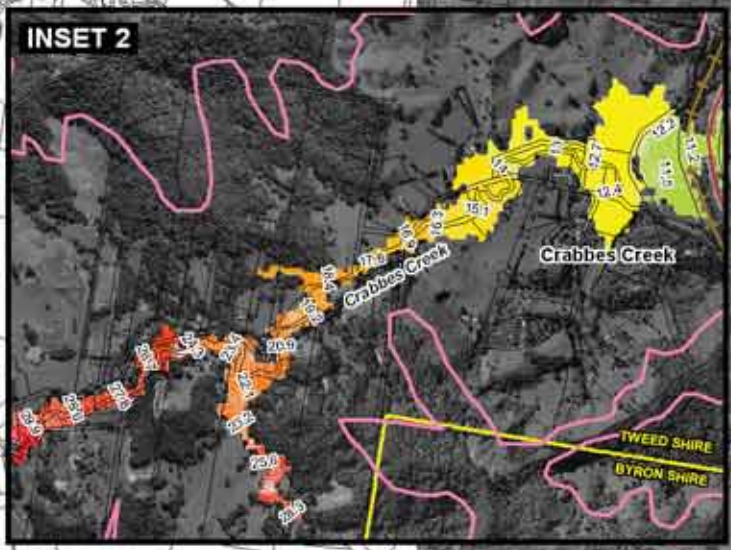
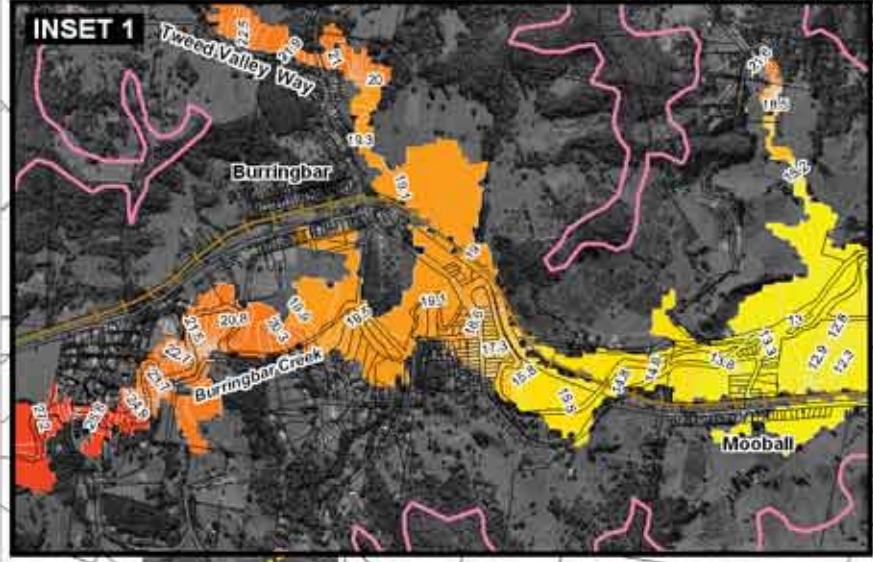
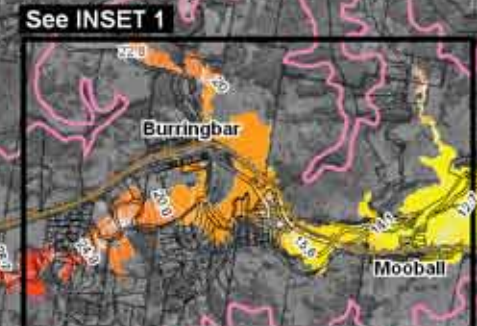
**BMT WBM**  
 www.wbmpl.com.au



Peak Flood Levels (m AHD)



Extent of Aerial Photography



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD) (0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**500 Year ARI Peak Flood Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

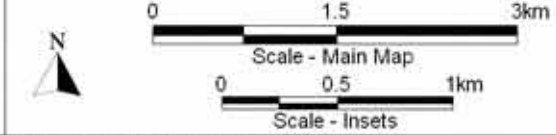


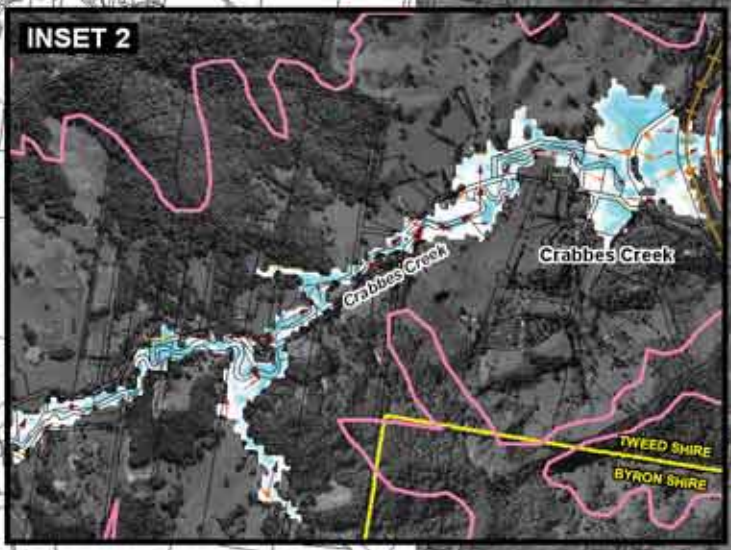
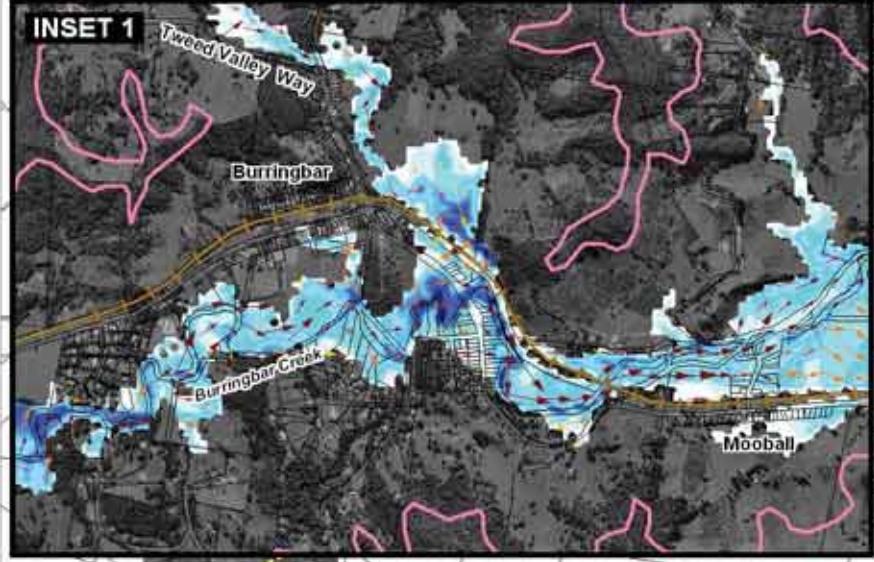
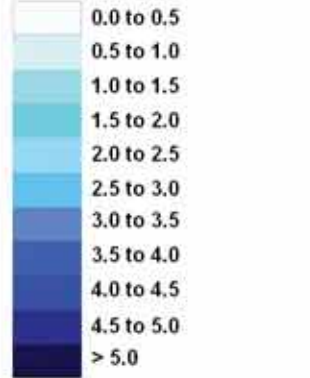
Figure: **Flood Map 43**  
Rev: **B**



Filepath: I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_058\_090707\_MM 500Y Flood Levels RevB.WOR



**Peak Flood Depths (m)**



**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

**Title:**  
**500 Year ARI Peak Flood Depths**  
**Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

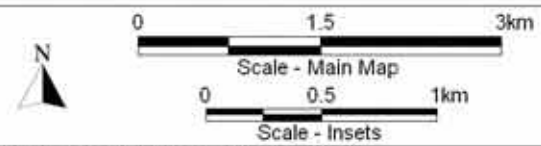
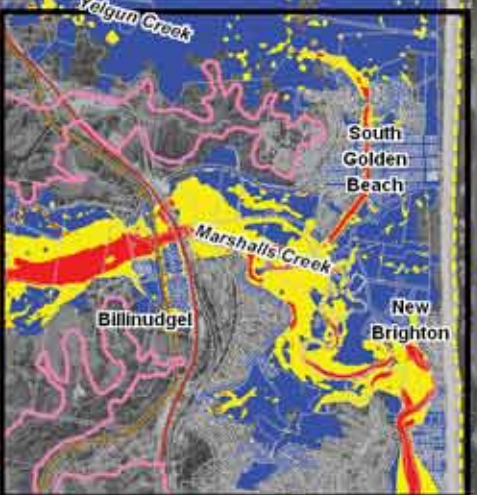
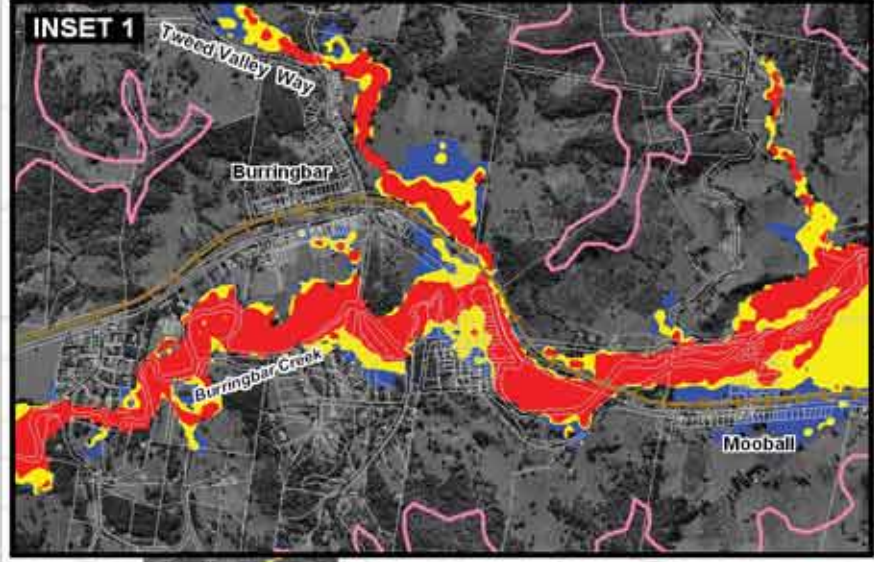
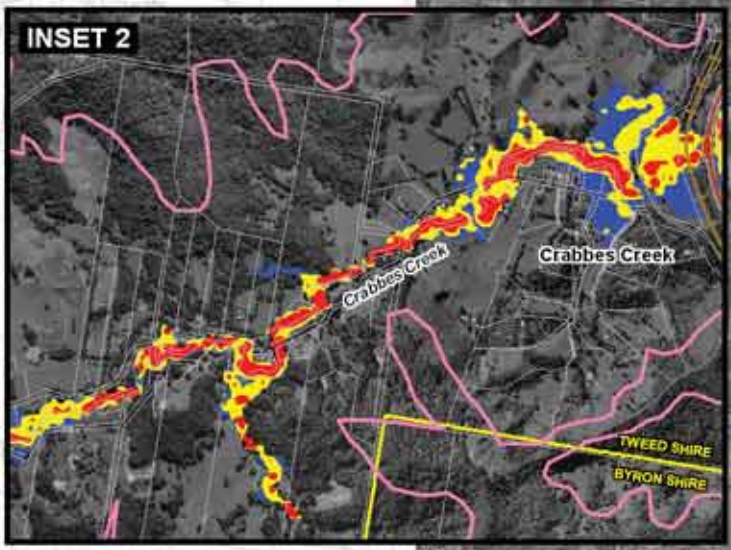
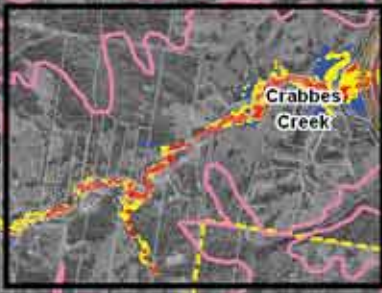
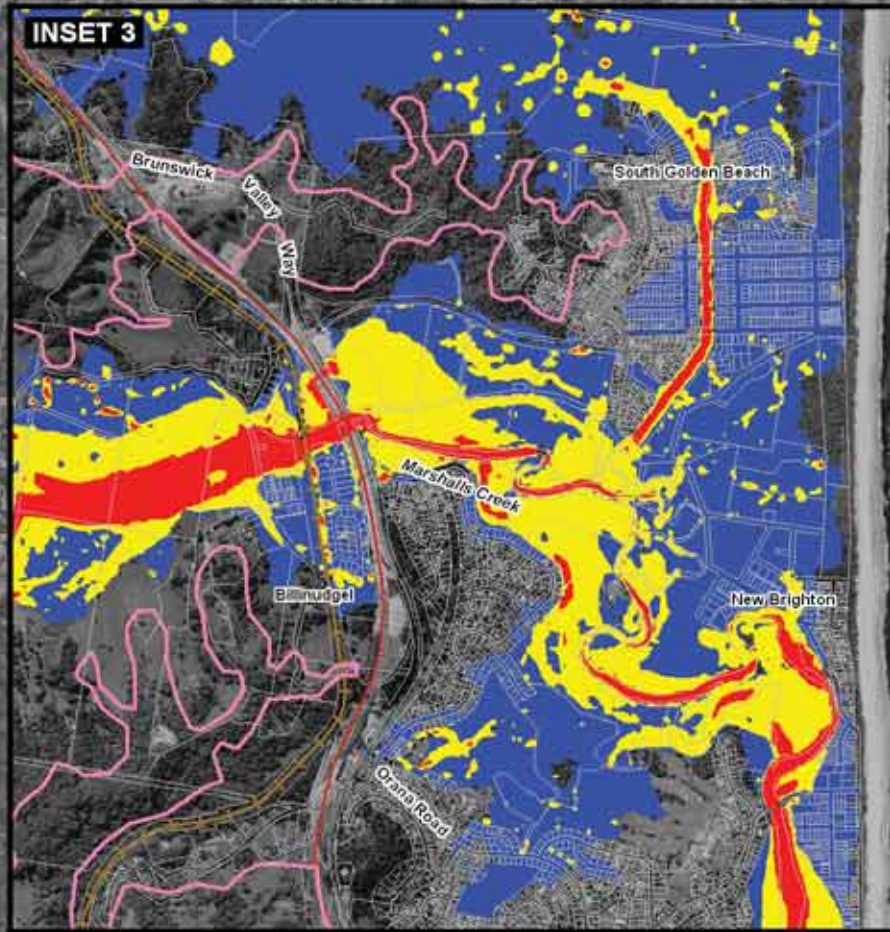
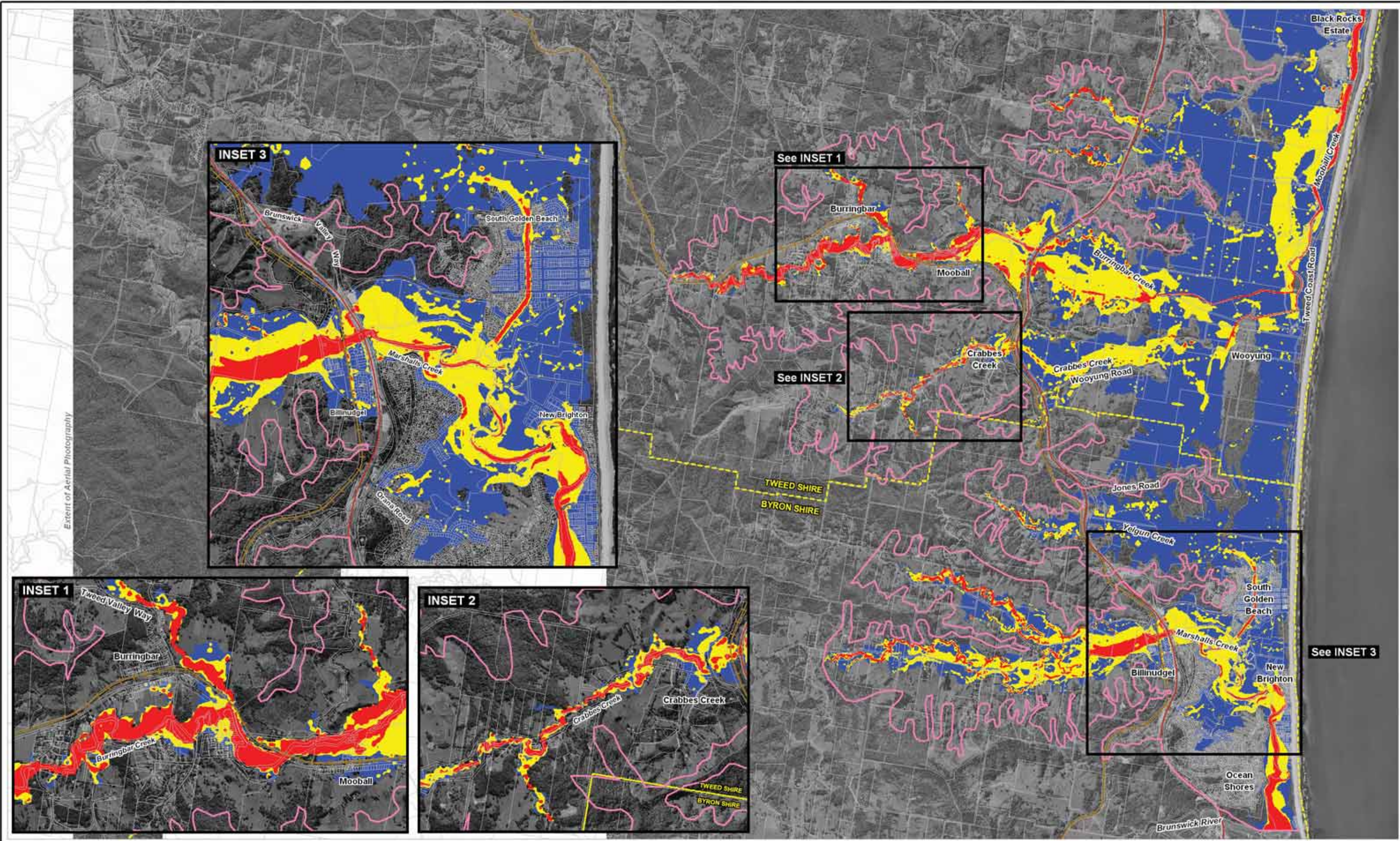


Figure: **Flood Map 44** Rev: **B**







**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Velocity x Depth (m<sup>2</sup>/s)**

- Low (< 0.3)
- Medium (0.3 to 1.0)
- High (> 1.0)

**Title:**  
**500 Year ARI Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

Scale - Main Map: 0, 1.5, 3km  
 Scale - Insets: 0, 0.5, 1km

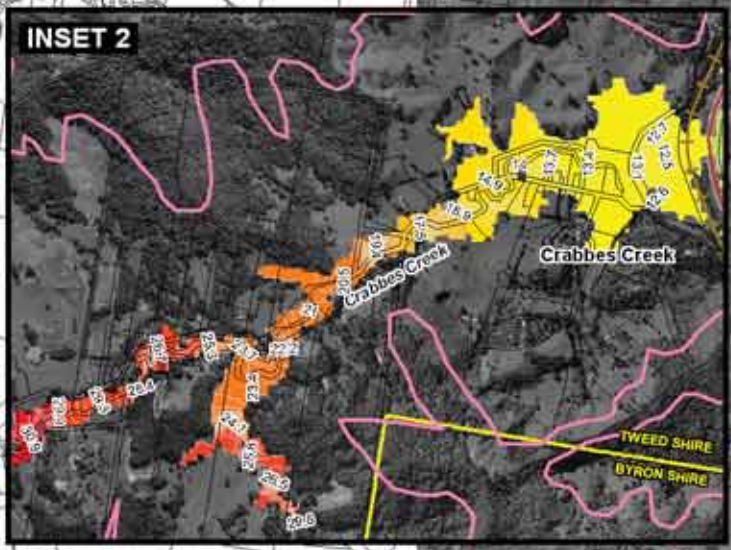
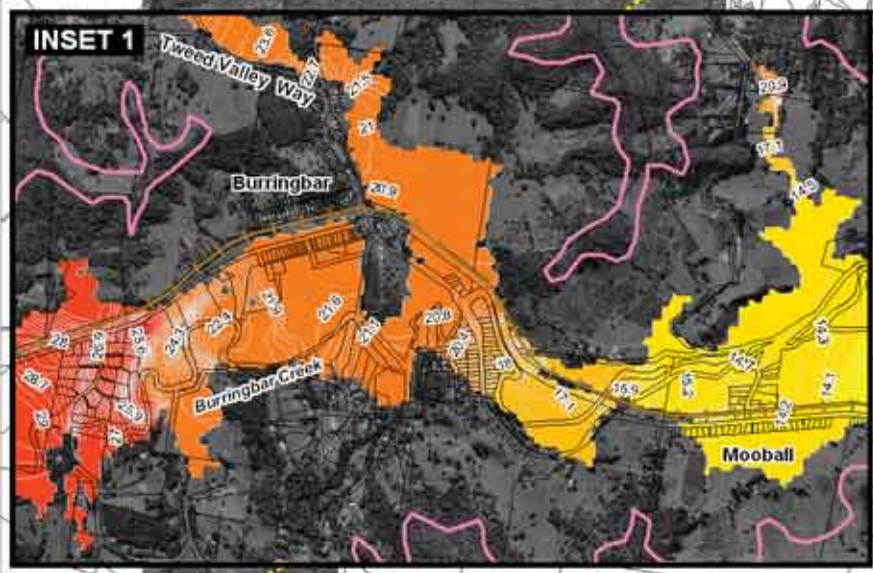
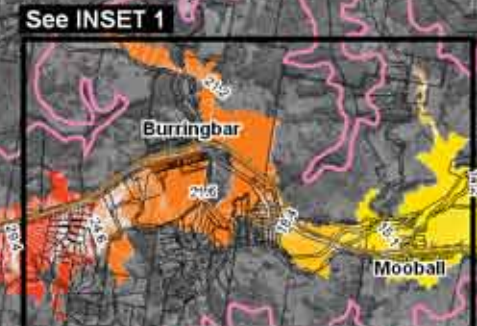
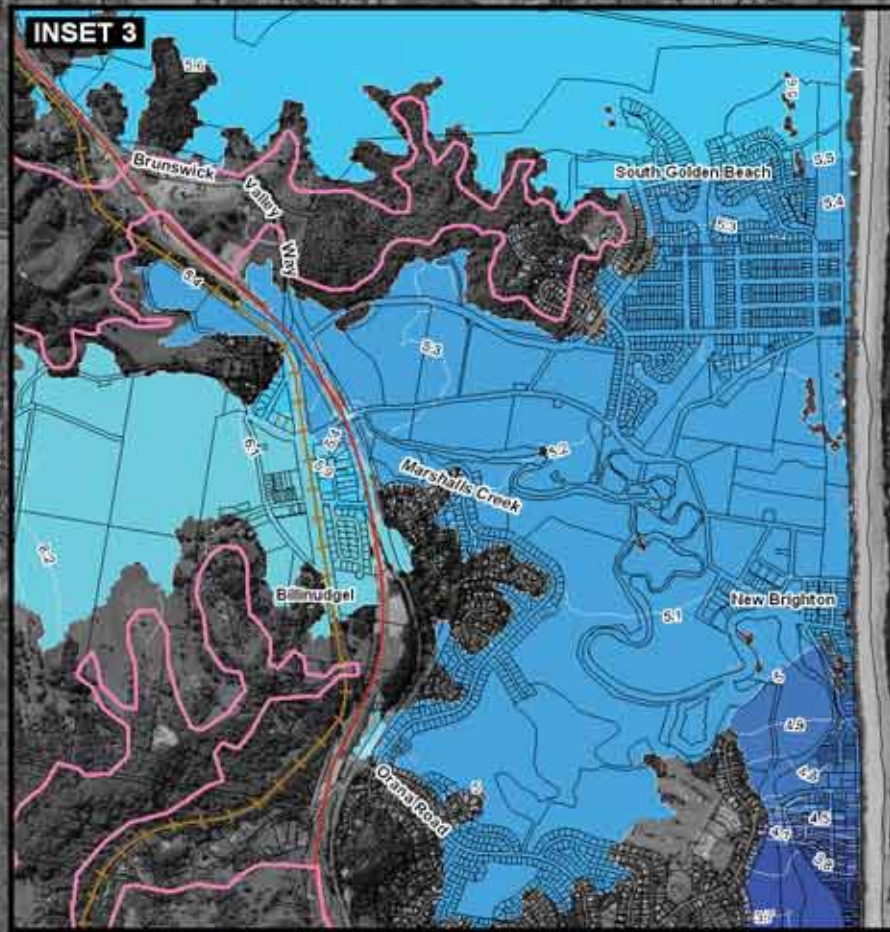
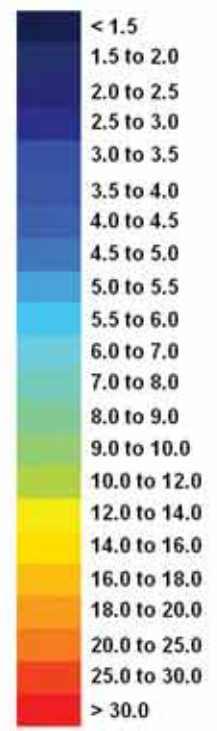
Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_063\_090708\_MM 500Y Flood Velocity RevB.WOR

Figure: **Flood Map 45**  
 Rev: **B**

www.wbmpl.com.au



Peak Flood Levels (m AHD)



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD) (0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**Probable Maximum Flood Peak Levels  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

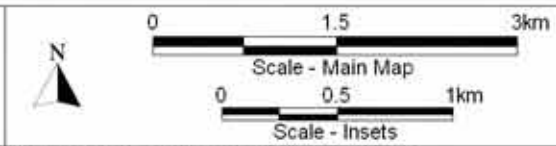


Figure:  
**Flood Map 46**

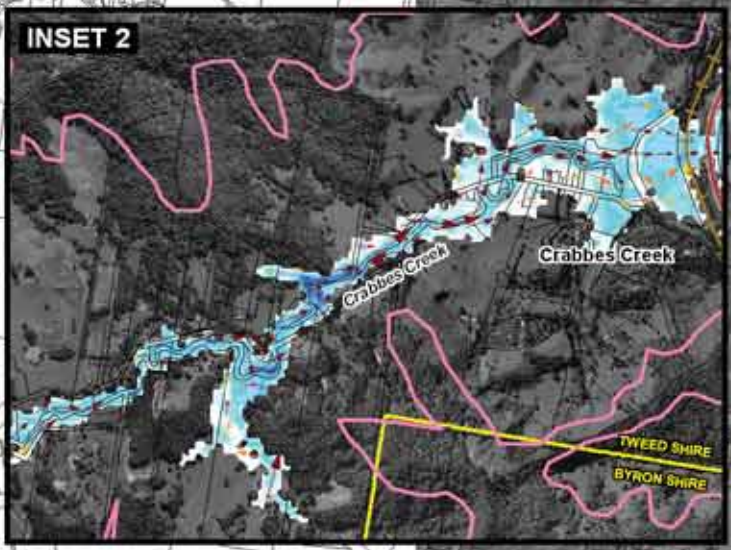
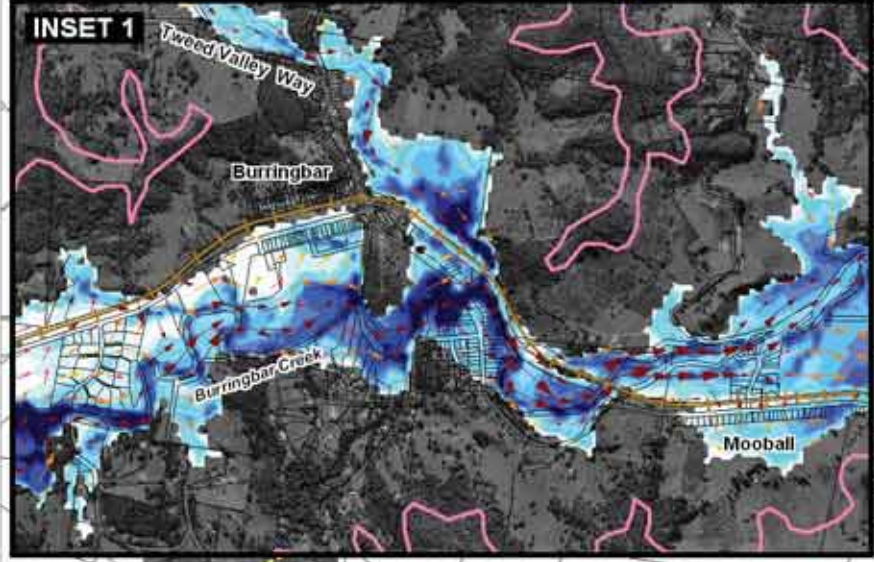
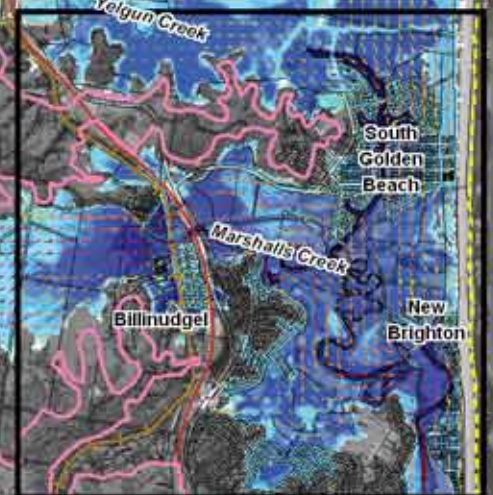
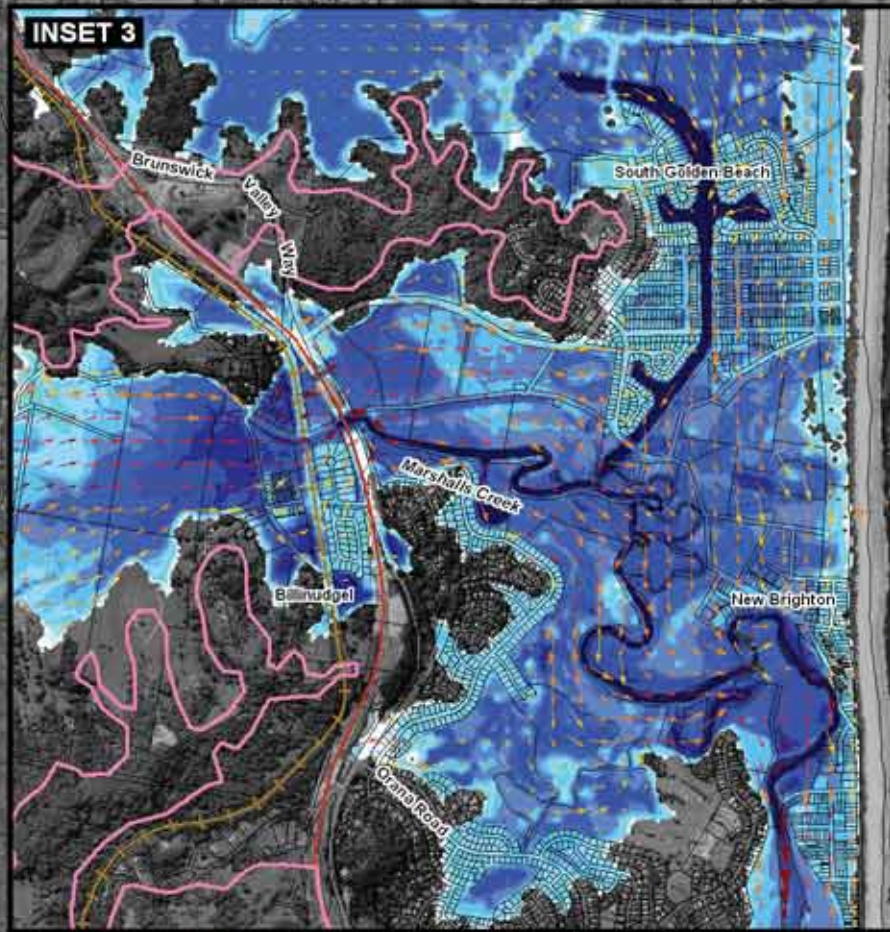
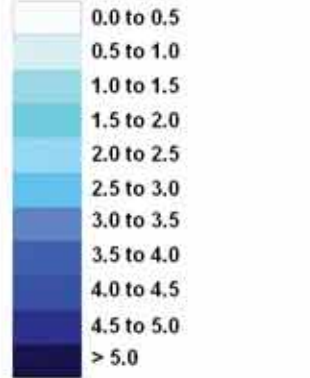
Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\IDRG\FLD\_079\_090707\_MM Probable Maximum Flood Levels.wor



**Peak Flood Depths (m)**



**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Vectors (m/s)**

- 0.0 to 0.2
- 0.2 to 0.5
- 0.5 to 0.8
- > 0.8

Title:

**Probable Maximum Peak Flood Depths  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

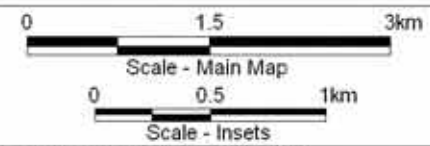


Figure:

**Flood Map 47**

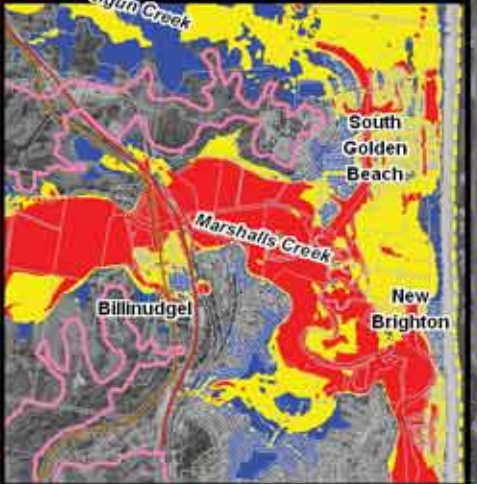
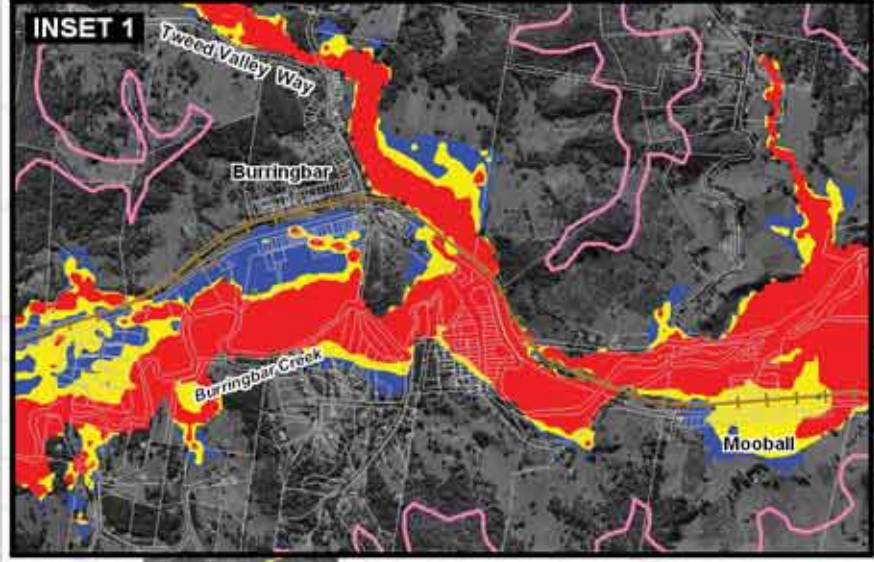
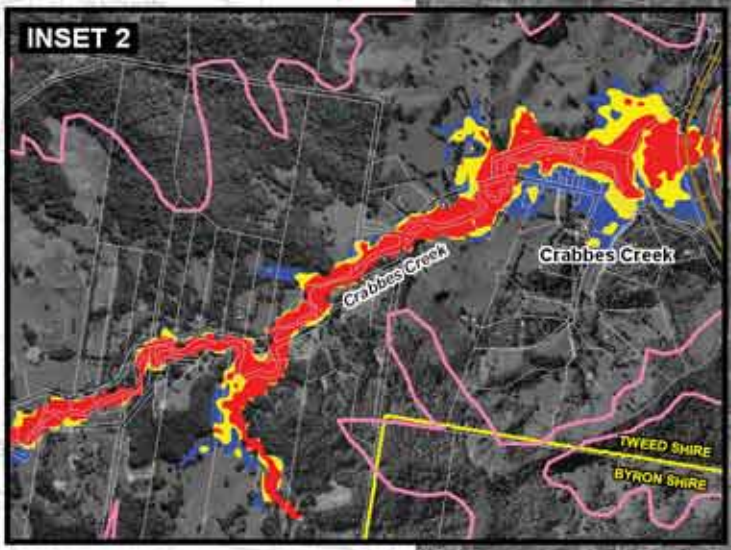
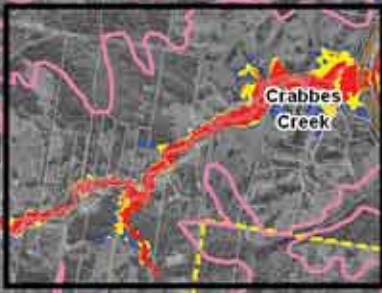
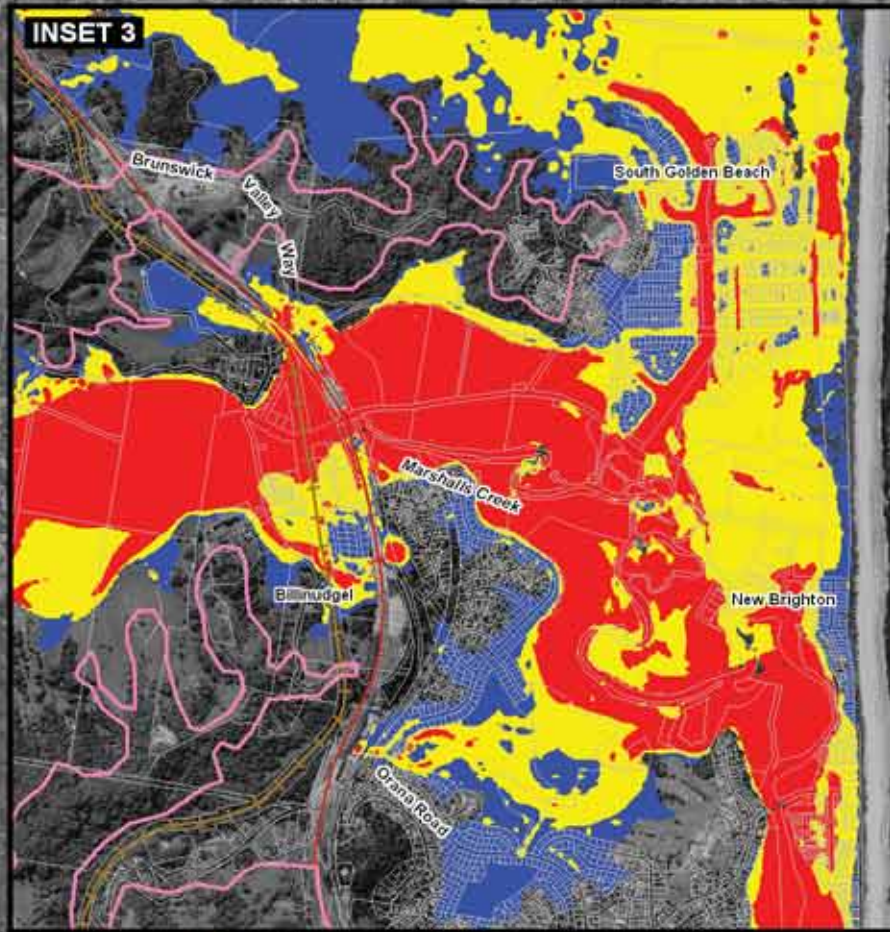
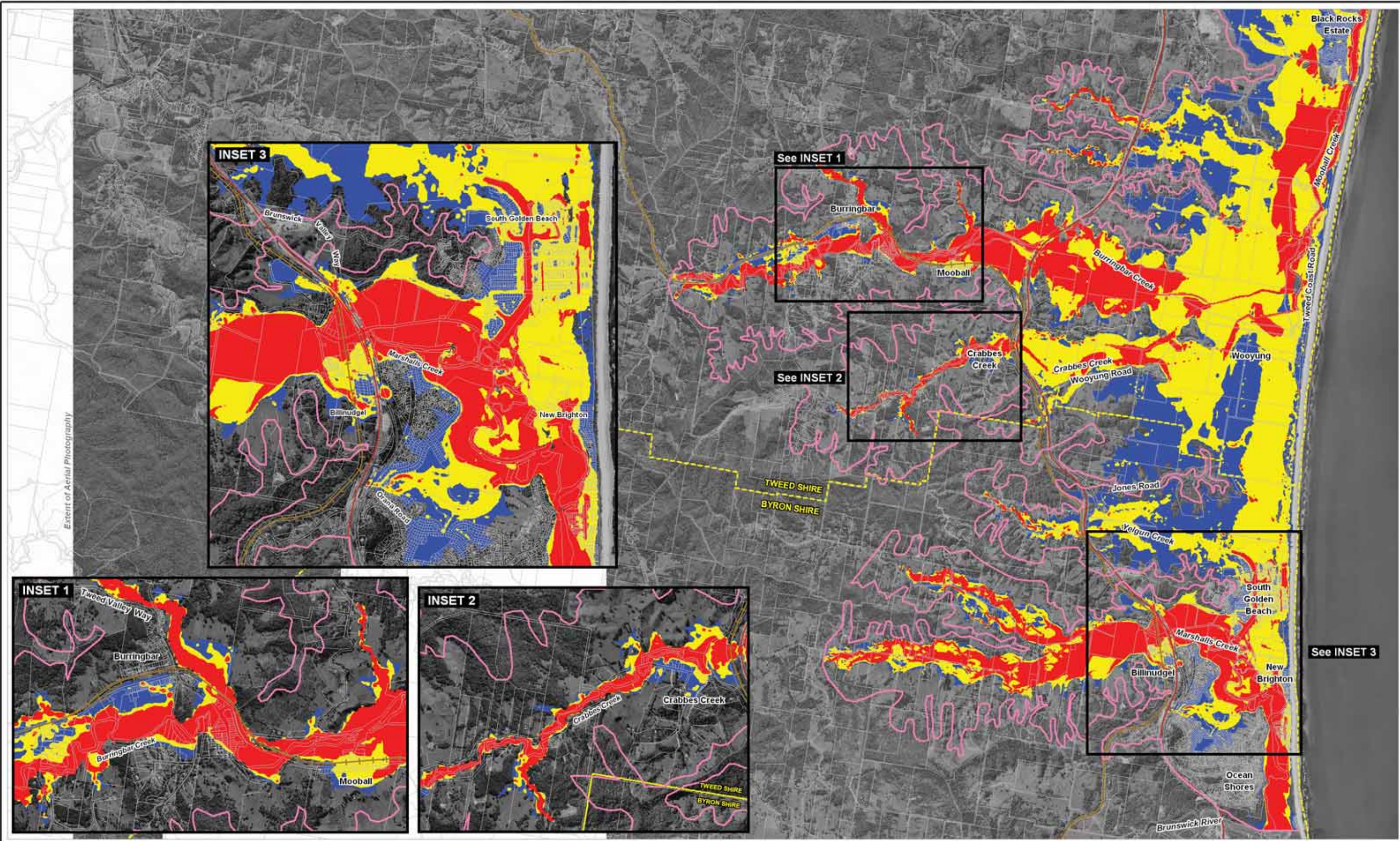
Rev:

**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_093\_090708\_MM Probable Maximum Flood Depths.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low ( $< 0.3$ )
- Medium (0.3 to 1.0)
- High ( $> 1.0$ )

**Title:**  
**Probable Maximum Peak Flood Velocity x Depth Product  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_090\_090708\_MM Probable Maximum Flood Velocity.WOR

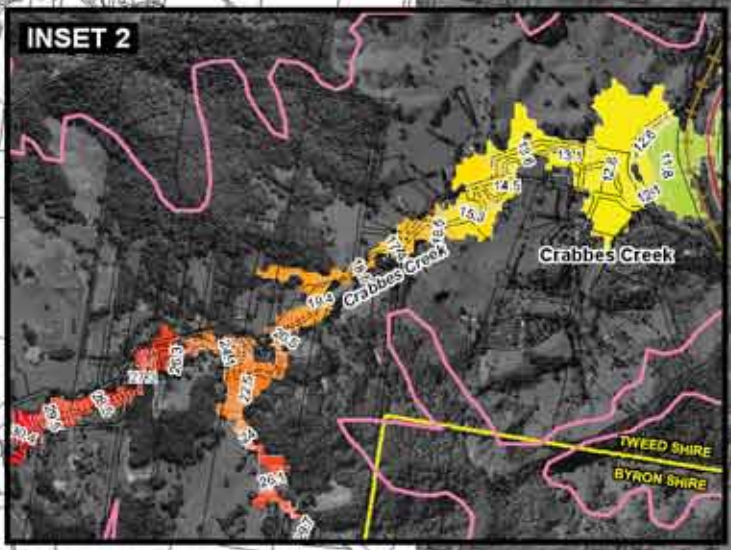
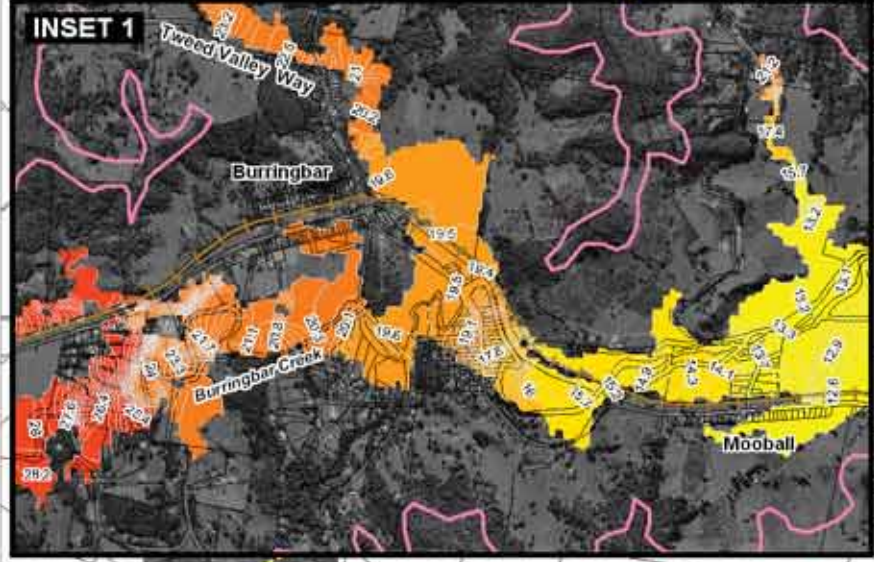
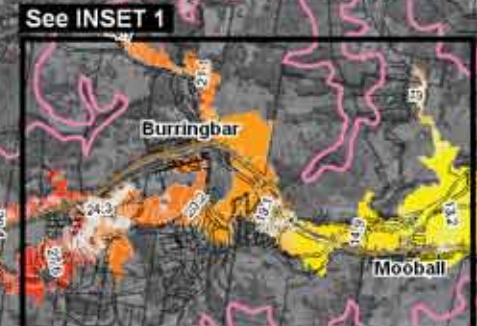
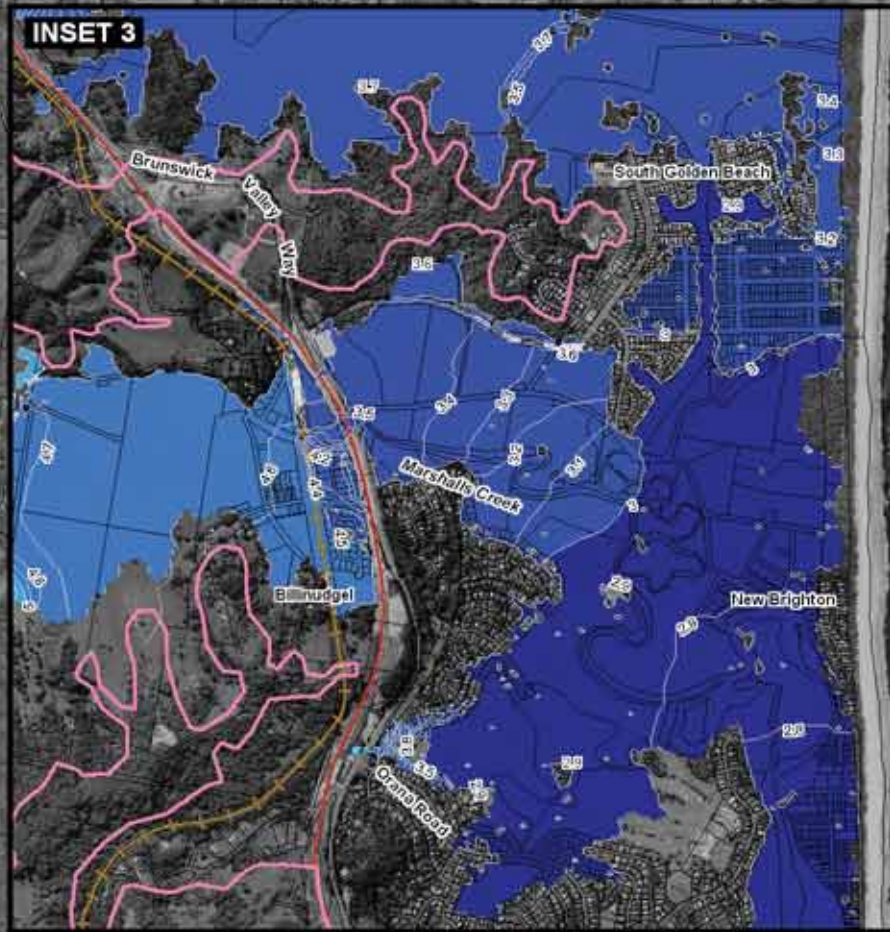
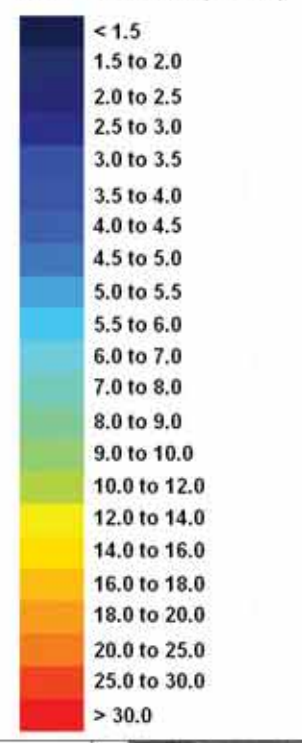
Figure:  
**Flood Map 48**

Rev:  
**A**

www.wbmpl.com.au



Peak Flood Levels (m AHD)



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Levels Medium Impacts Climate Change  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

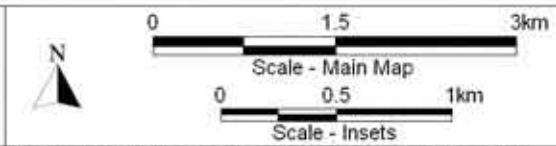


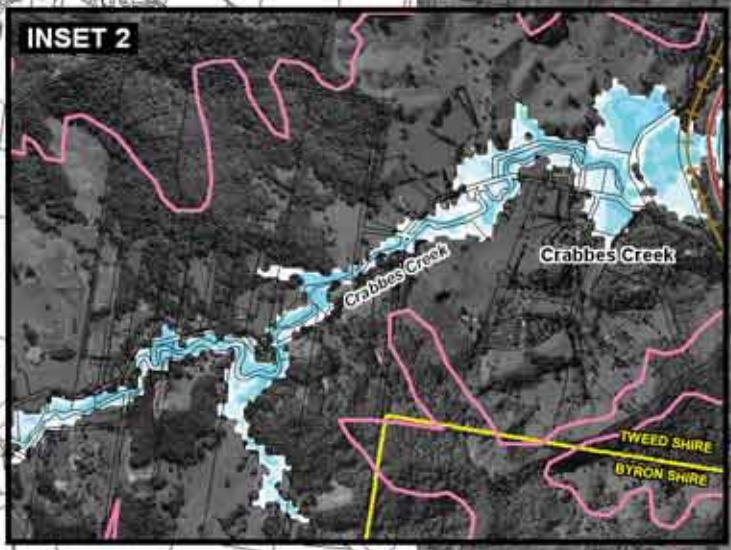
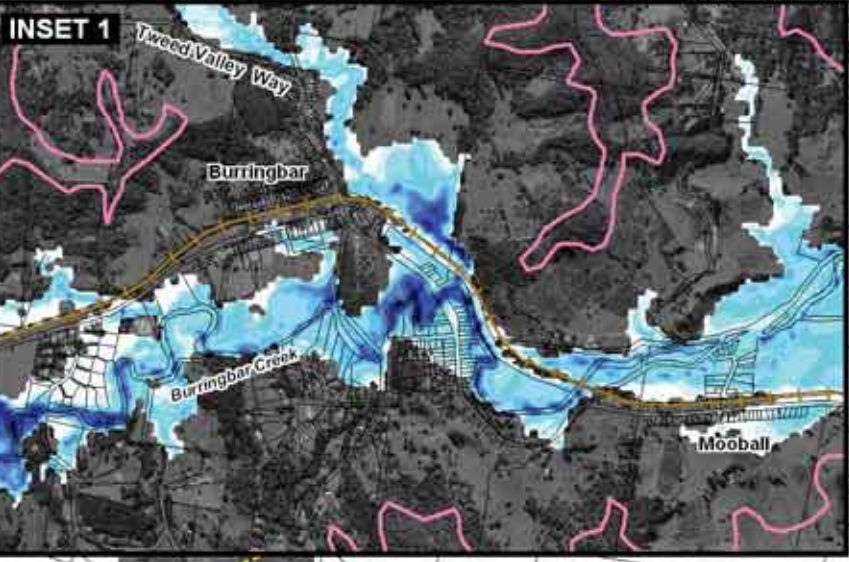
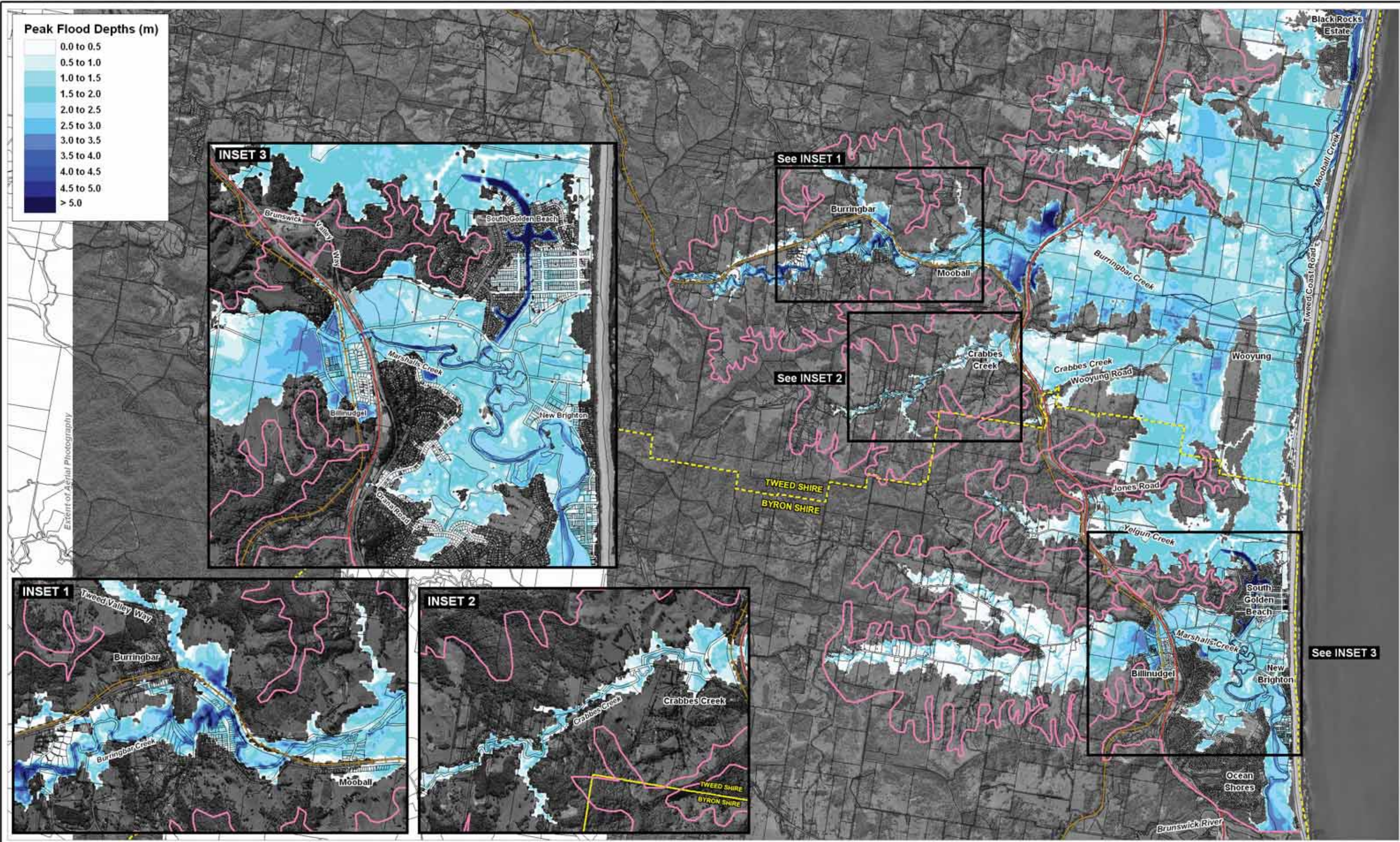
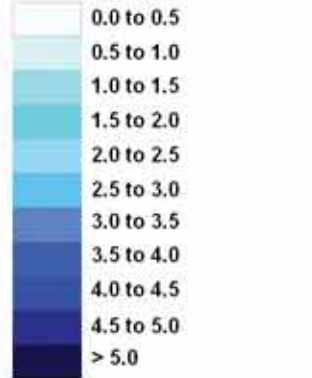
Figure:  
**Flood Map 49**

Rev:  
**A**





**Peak Flood Depths (m)**



- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Depths Medium Impacts Climate Change  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

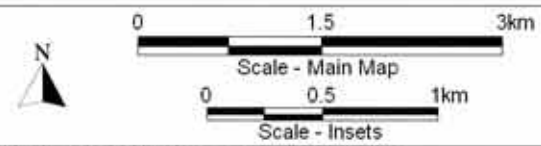


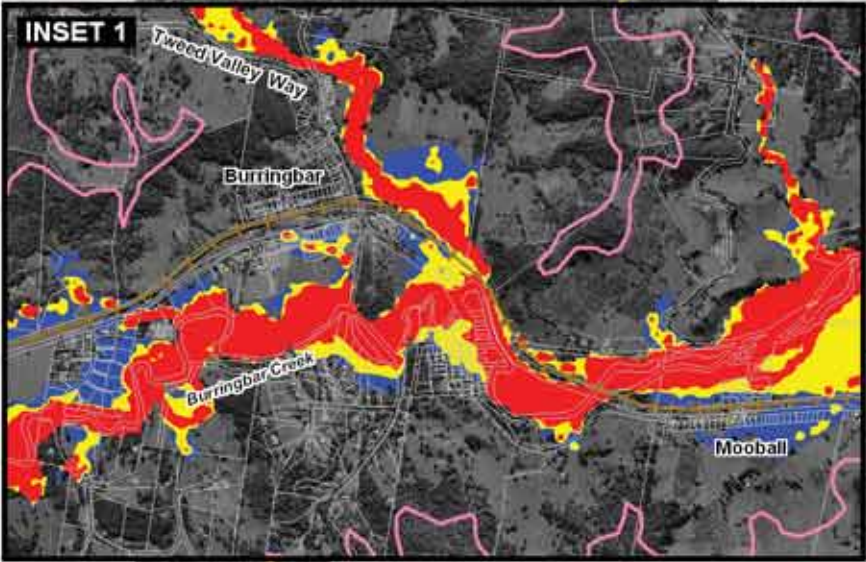
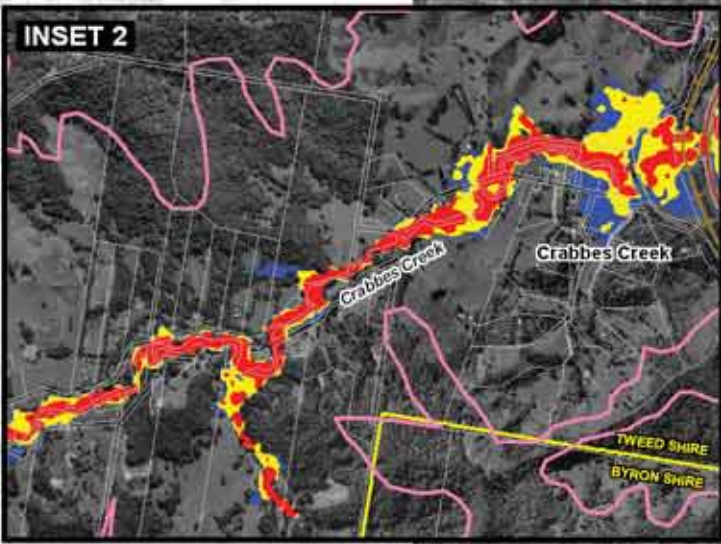
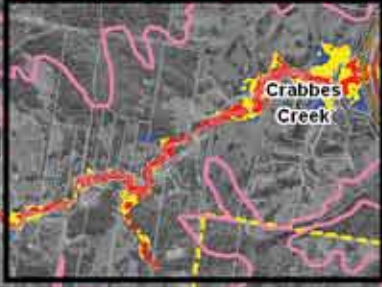
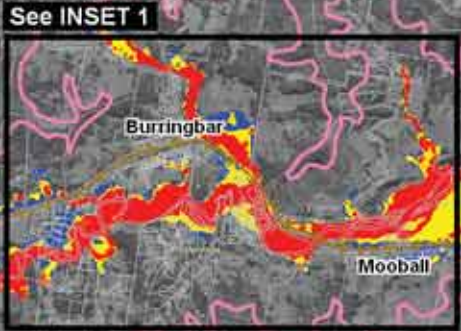
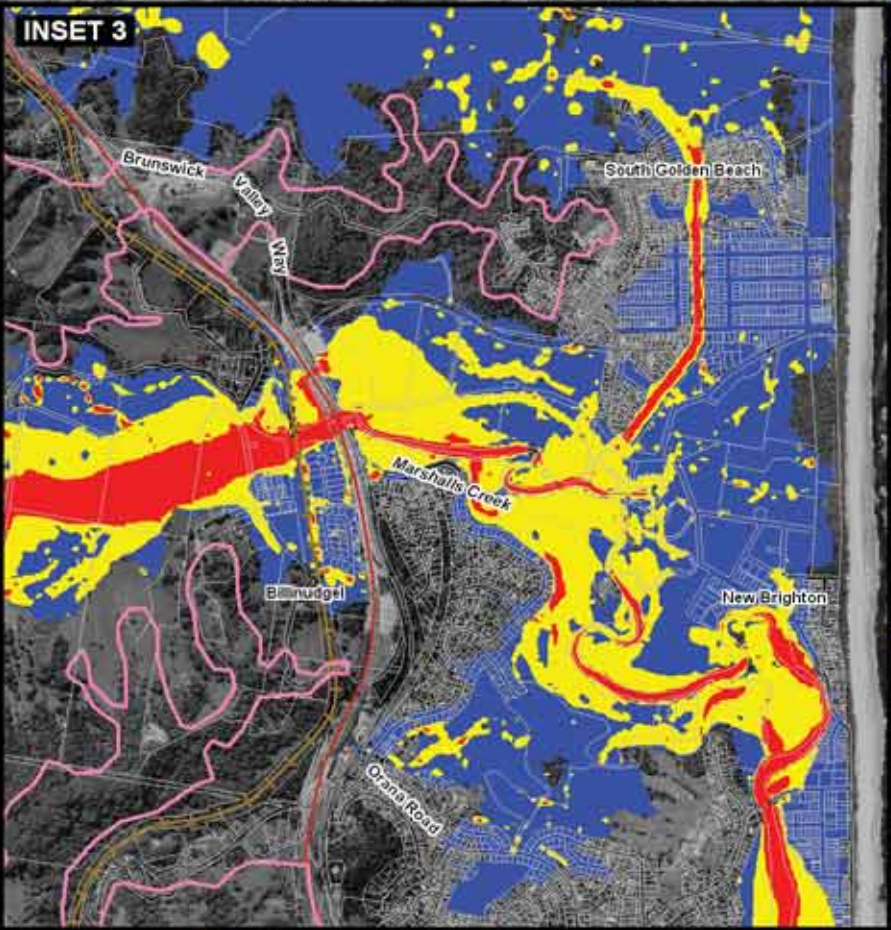
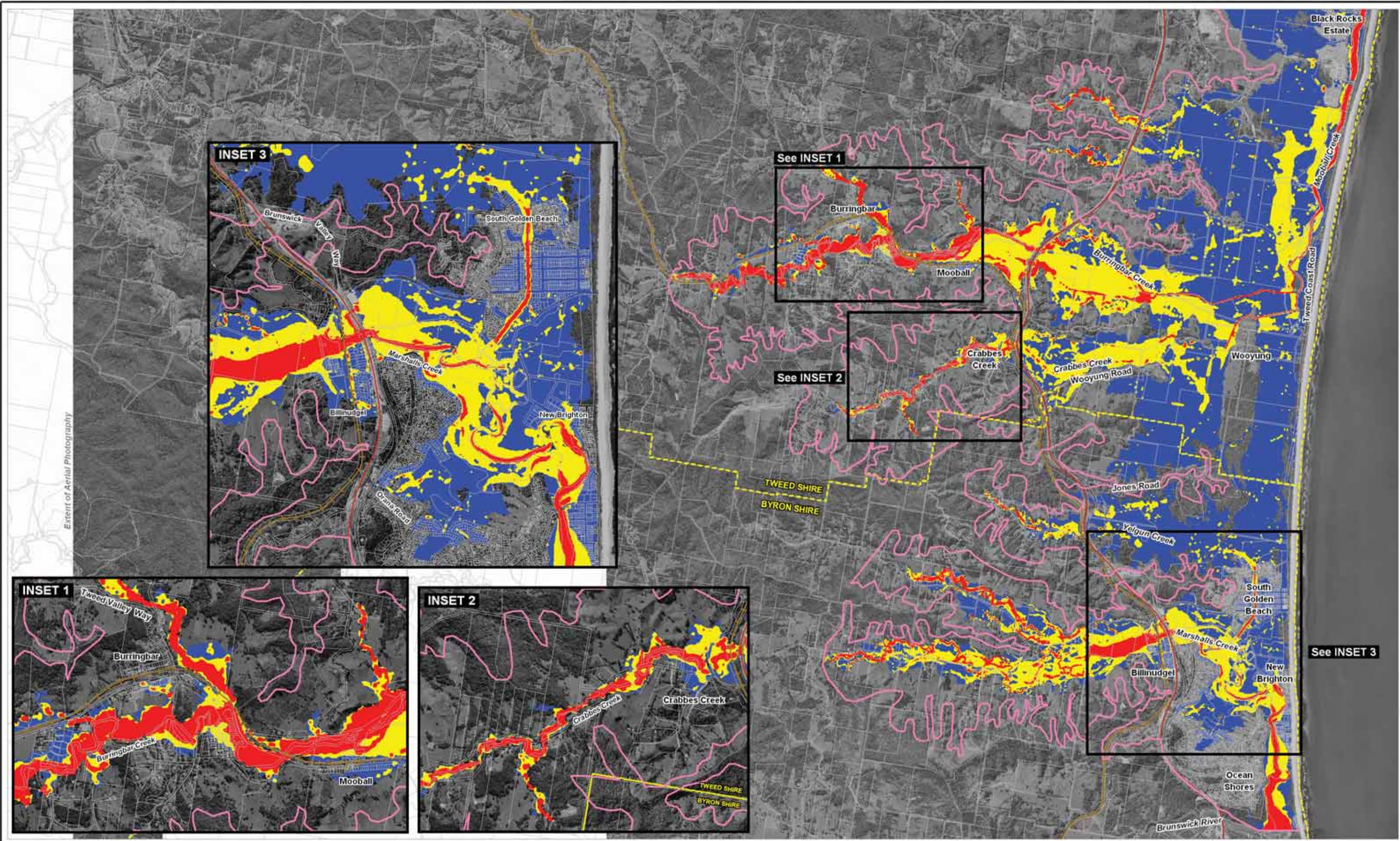
Figure:  
**Flood Map 50**

Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_098\_090708\_MM Medium Impacts Flood Depths.WOR





**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

**Peak Flood Velocity x Depth ( $m^2/s$ )**

- Low ( $< 0.3$ )
- Medium (0.3 to 1.0)
- High ( $> 1.0$ )

**Title:**  
**100 Year ARI Peak Flood Velocity x Depth Product**  
**Medium Impacts Climate Change Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

**Scale - Main Map:** 0, 1.5, 3km  
**Scale - Insets:** 0, 0.5, 1km

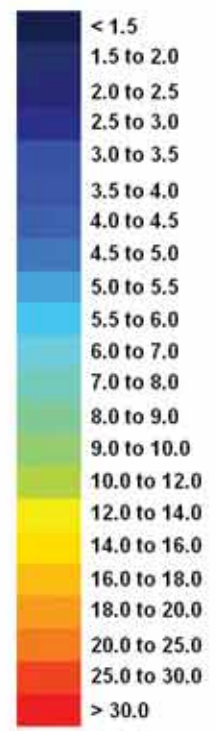
**Figure:** Flood Map 51  
**Rev:** A

**BMT WBM**  
[www.wbmpl.com.au](http://www.wbmpl.com.au)

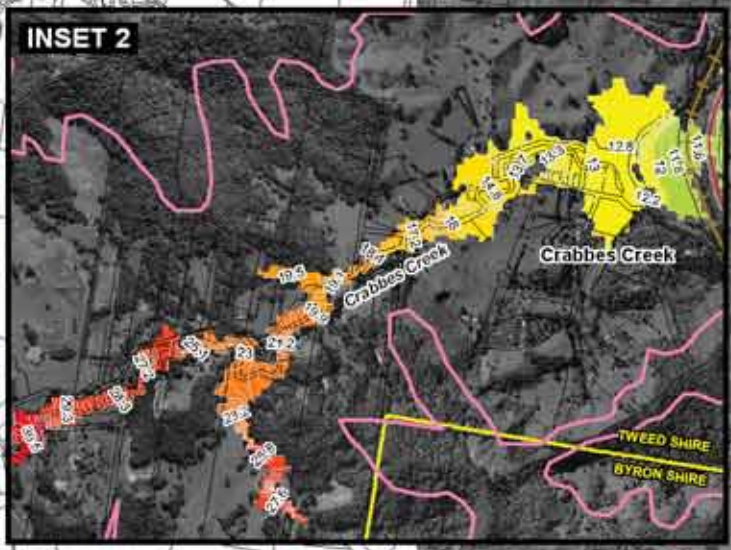
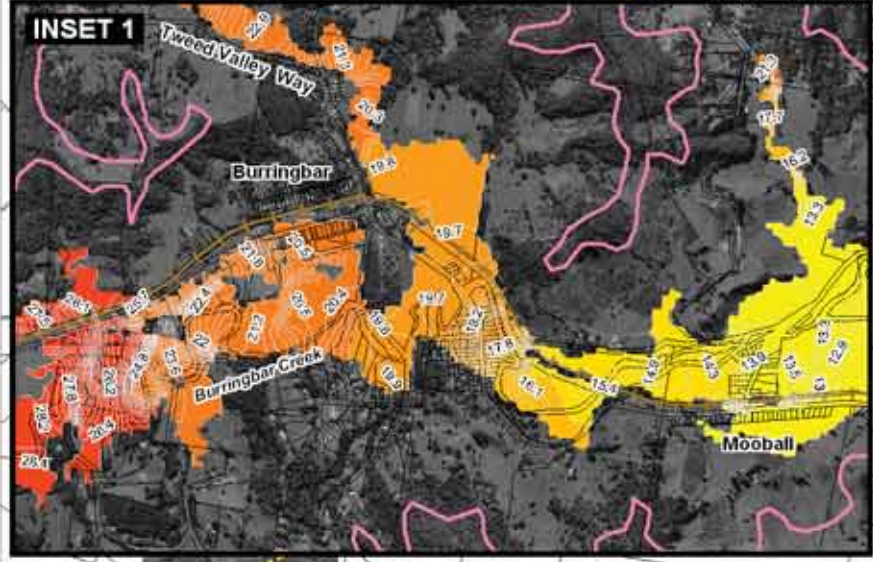
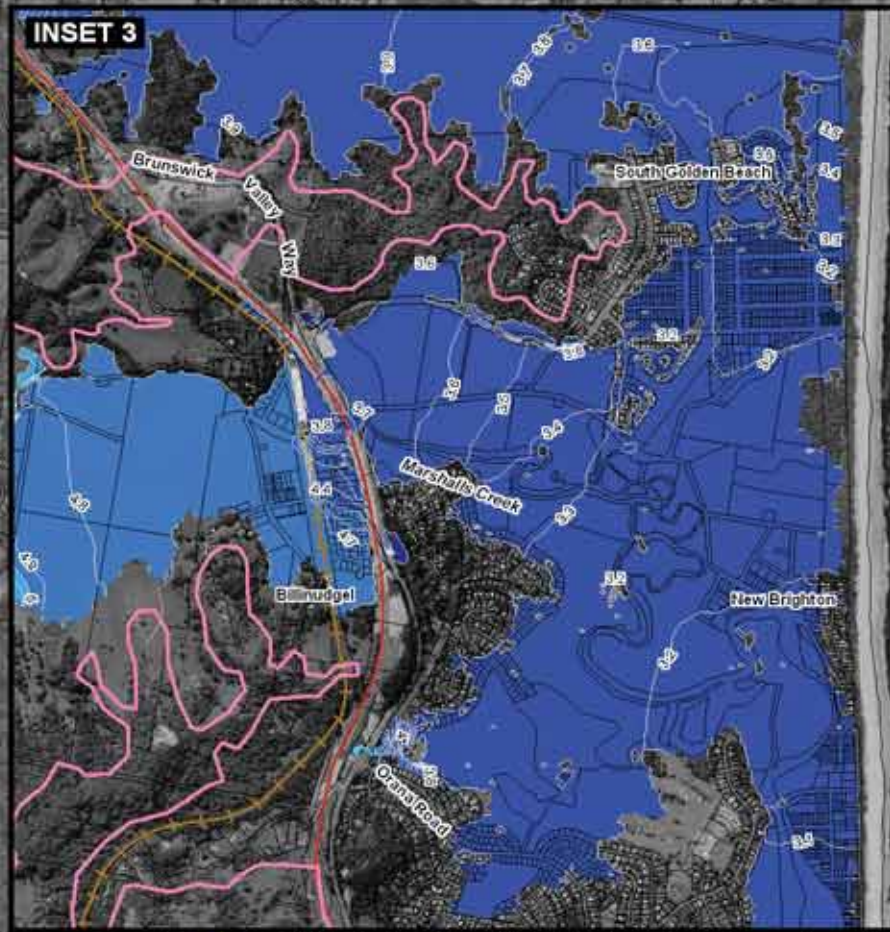
**Filepath:** I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_091\_090708\_MM Medium Impacts Flood Velocity.WOR



Peak Flood Levels (m AHD)



Extent of Aerial Photography



LEGEND

- Model Extent
- Peak Flood Level Contours (m AHD)  
(0.1m interval for 1.0 to 6.0m AHD then 1.0m interval for 6.0 to 30.0m AHD)
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Levels High Impacts Climate Change  
Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

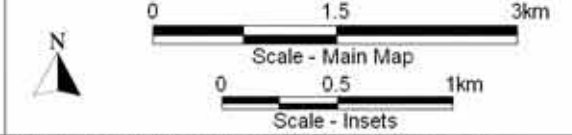


Figure:  
**Flood Map 52**

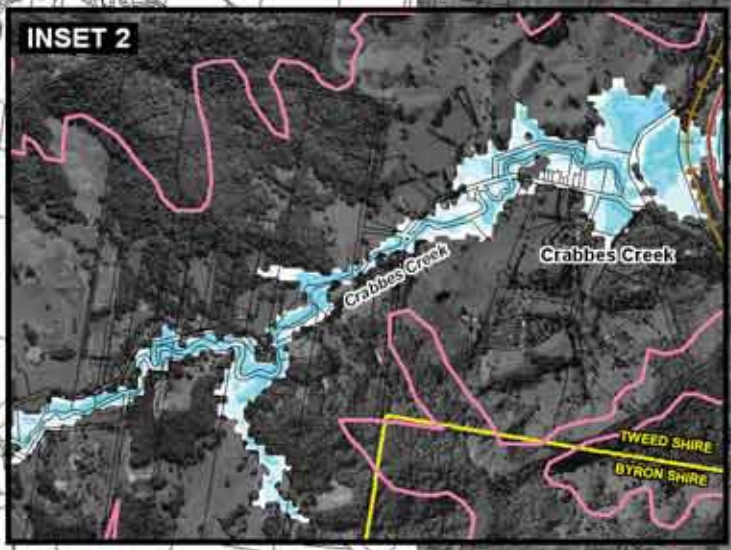
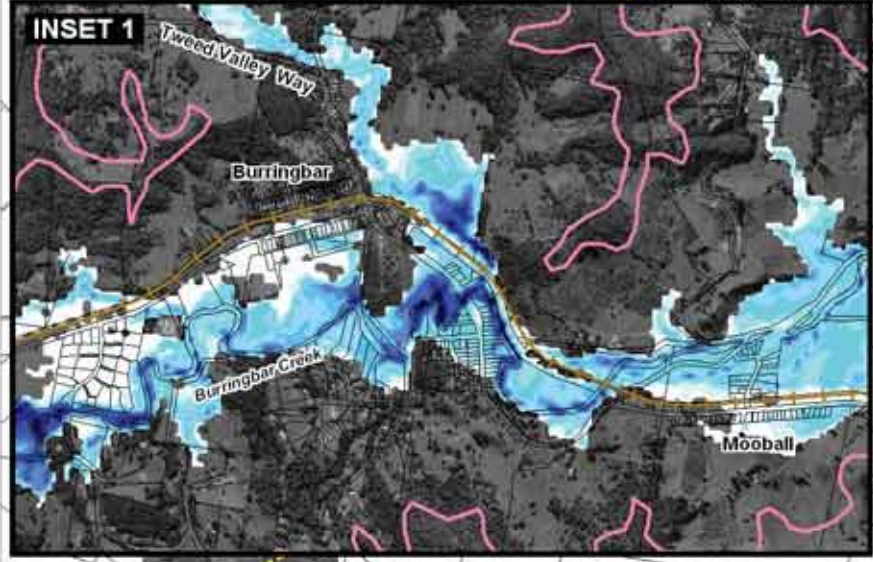
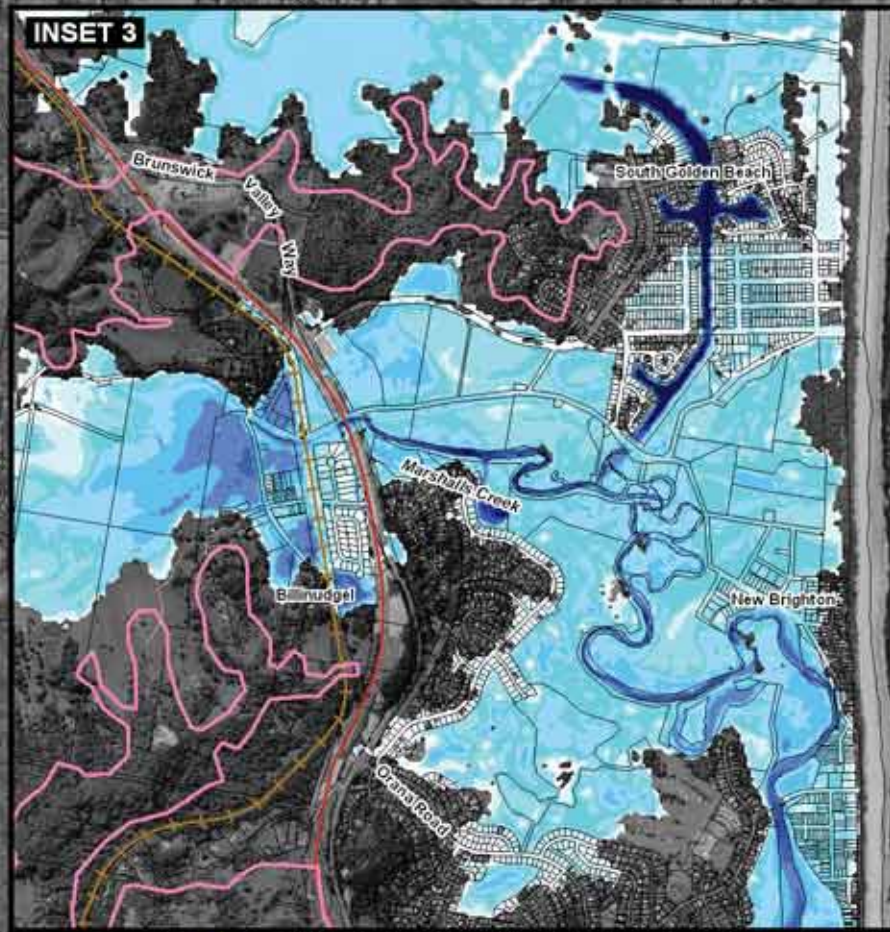
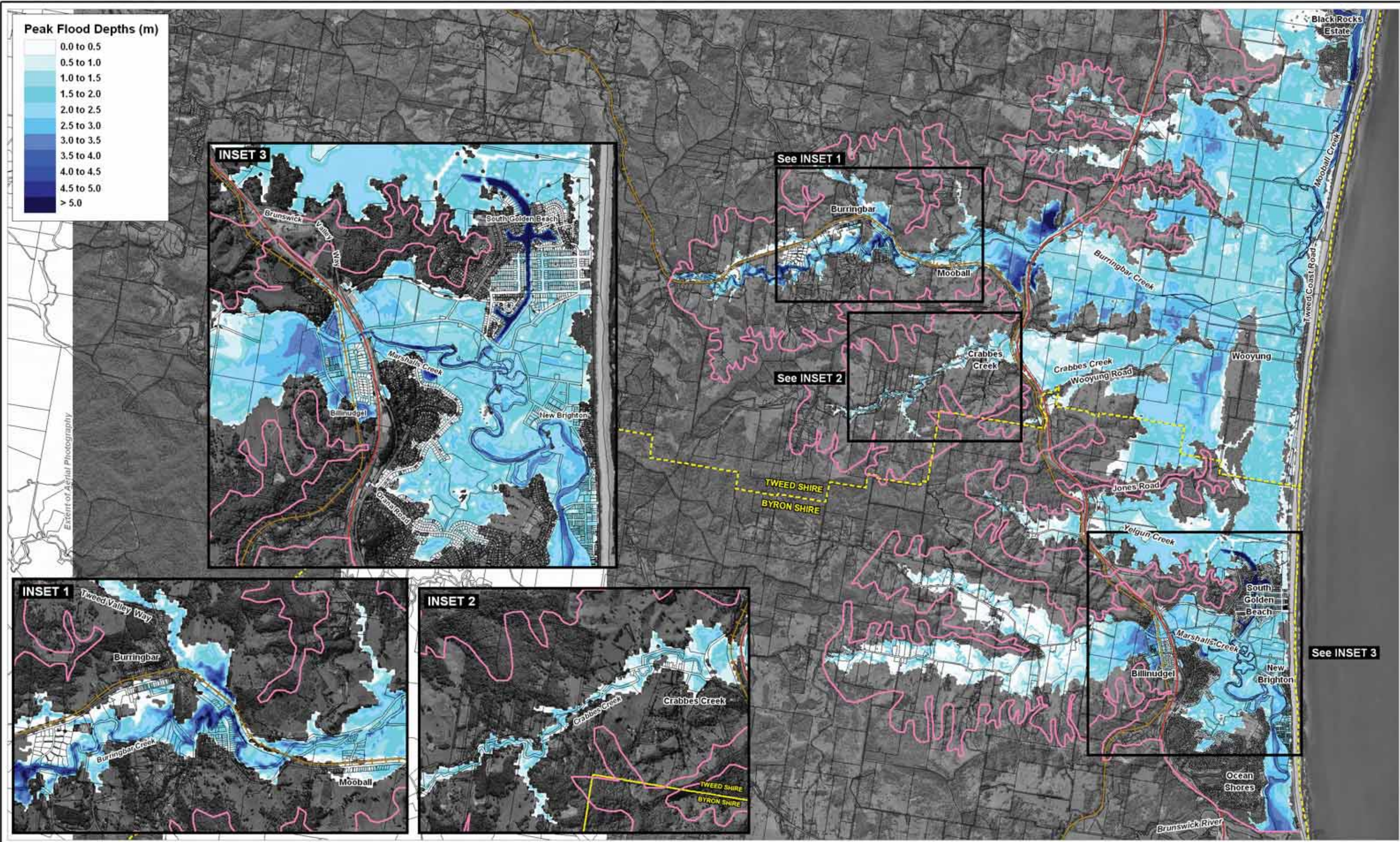
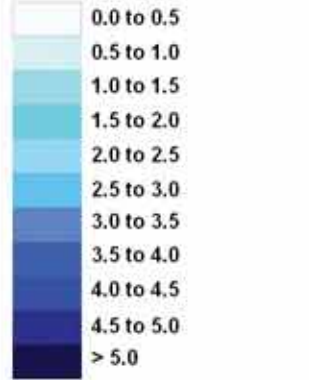
Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_081\_090708\_MM 100Y Levels High Impacts Climate Change.wor



**Peak Flood Depths (m)**



**LEGEND**

- Model Extent
- Pacific Highway (approximate location)
- Casino Murwillumbah Railway (approximate location)
- Tweed/Byron Shire Boundary
- Cadastral Boundaries

Title:  
**100 Year ARI Peak Flood Depths High Impacts Climate Change  
 Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

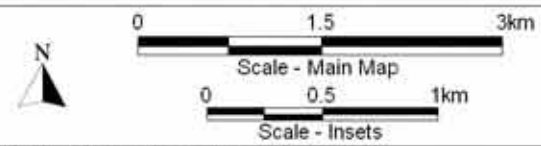


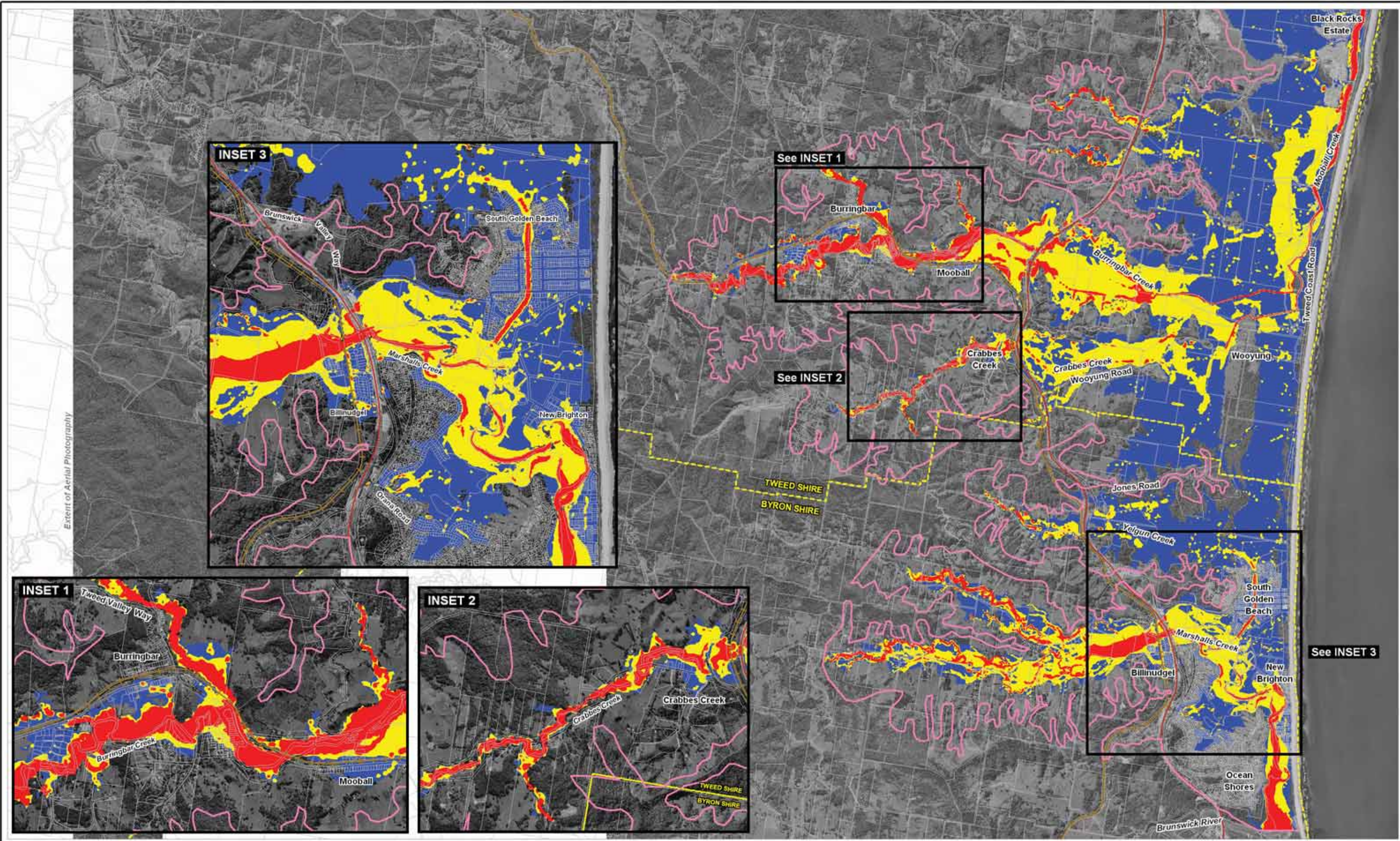
Figure:  
**Flood Map 53**

Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_098\_090708\_MM High Impacts Flood Depths.WOR





- LEGEND**
- Model Extent
  - Pacific Highway (approximate location)
  - Casino Murwillumbah Railway (approximate location)
  - Tweed/Byron Shire Boundary
  - Cadastral Boundaries

- Peak Flood Velocity x Depth ( $m^2/s$ )**
- Low ( $< 0.3$ )
  - Medium (0.3 to 1.0)
  - High ( $> 1.0$ )

Title:  
**100 Year ARI Peak Flood Velocity x Depth Product**  
**High Impacts Climate Change Mooball/Marshalls Creeks Catchments**

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.

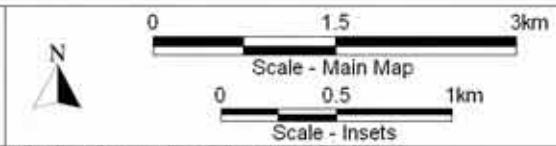


Figure:  
**Flood Map 54**

Rev:  
**A**



Filepath : I:\B16790\_I\_BRH Tweed Byron GJR\DRG\FLD\_092\_090708\_MM High Impacts Flood Velocity.WOR





**BMT WBM Brisbane**  
Level 11, 490 Upper Edward Street Brisbane 4000  
PO Box 203 Spring Hill QLD 4004  
Tel +61 7 3831 6744 Fax +61 7 3832 3627  
Email [wbm@wbmpl.com.au](mailto:wbm@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Denver**  
14 Inverness Drive East, #B132  
Englewood Denver Colorado 80112 USA  
Tel +1 303 792 9814 Fax +1 303 792 9742  
Email [wbm-denver@wbmpl.com.au](mailto:wbm-denver@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Melbourne**  
Level 5, 99 King Street Melbourne 3000  
PO Box 604 Collins Street West VIC 8007  
Tel +61 3 8620 6100 Fax +61 3 8620 6105  
Email [wbm-melbourne@wbmpl.com.au](mailto:wbm-melbourne@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Morwell**  
Cnr Hazelwood Drive & Miners Way Morwell 3840  
PO Box 888 Morwell VIC 3840  
Tel +61 3 5135 3400 Fax +61 3 5135 3444  
Email [wbm-morwell@wbmpl.com.au](mailto:wbm-morwell@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Newcastle**  
126 Belford Street Broadmeadow 2292  
PO Box 266 Broadmeadow NSW 2292  
Tel +61 2 4940 8882 Fax +61 2 4940 8887  
Email [wbm-newcastle@wbmpl.com.au](mailto:wbm-newcastle@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Perth**  
1 Brodie Hall Drive Technology Park Bentley 6102  
Tel +61 8 9328 2029 Fax +61 8 9486 7588  
Email [wbm-perth@wbmpl.com.au](mailto:wbm-perth@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Sydney**  
Suite 206, 118 Great North Road Five Dock 2046  
PO Box 129 Five Dock NSW 2046  
Tel +61 2 9713 4836 Fax +61 2 9713 4890  
Email [wbm-sydney@wbmpl.com.au](mailto:wbm-sydney@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)

**BMT WBM Vancouver**  
1190 Melville Street #700 Vancouver  
British Columbia V6E 3W1 Canada  
Tel +1 604 683 5777 Fax +1 604 608 3232  
Email [wbm-vancouver@wbmpl.com.au](mailto:wbm-vancouver@wbmpl.com.au)  
Web [www.wbmpl.com.au](http://www.wbmpl.com.au)