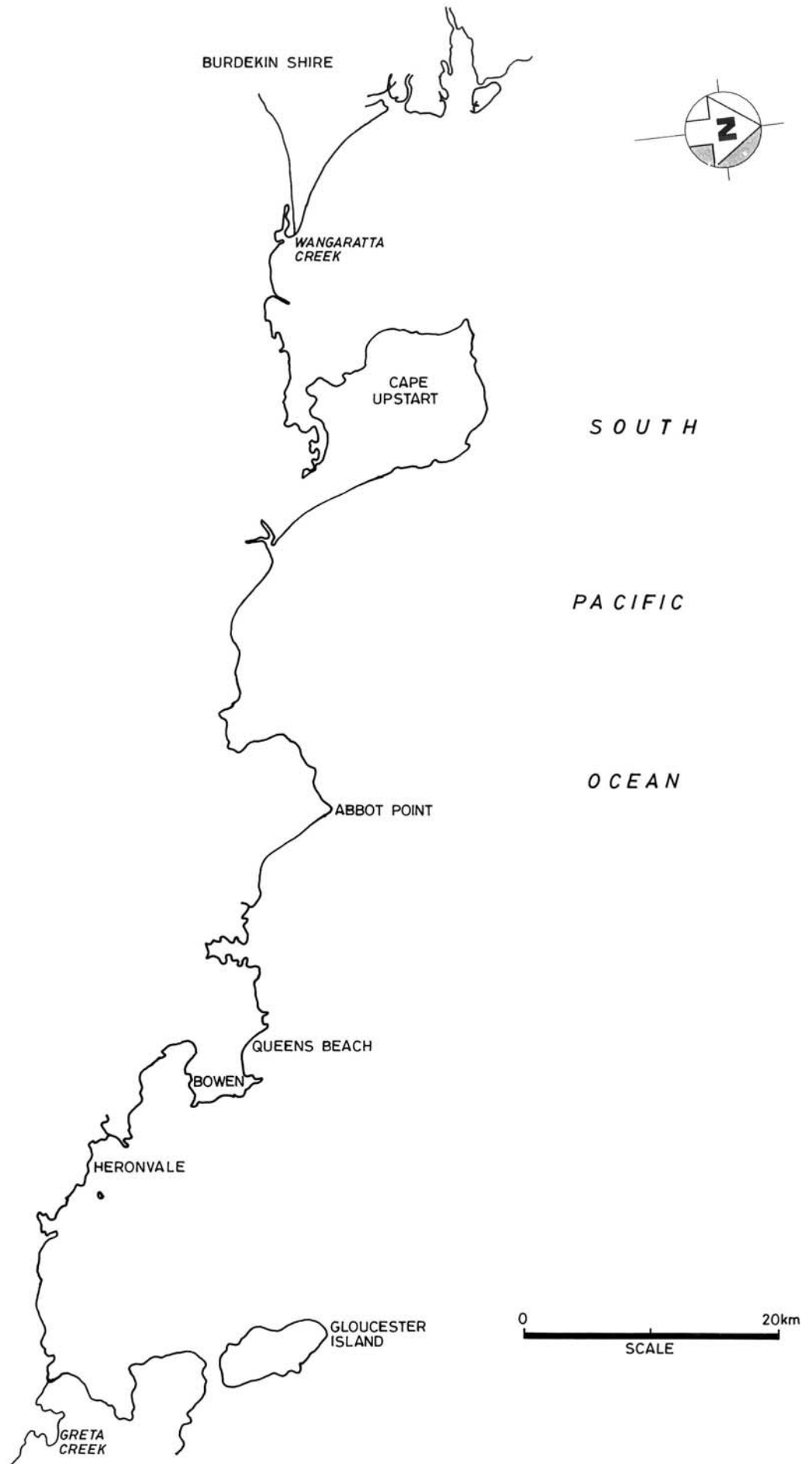


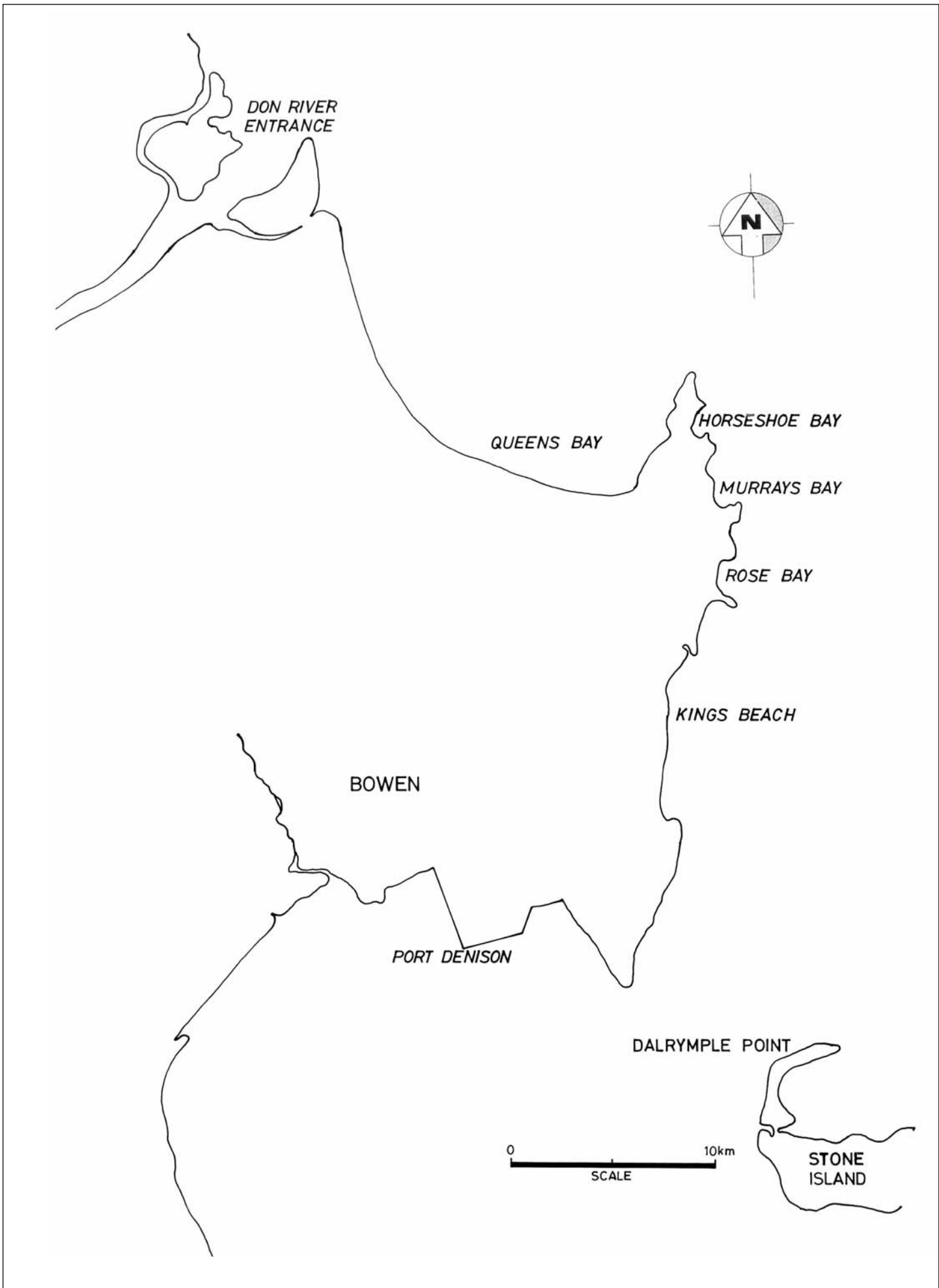
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J2170/R2057 13/06/2003
 File: J2170\Figures\R2057\Figure1.cdr

Bowen Storm Tide Study
 LOCALITY PLAN

Figure 1







View to the North from Bowen Jetty to Bowen Foreshore



View to the South from Bowen Jetty to Bowen Foreshore





Typical Back Beach Area at Heronvale



Shoreline at Queen's Beach SLSC



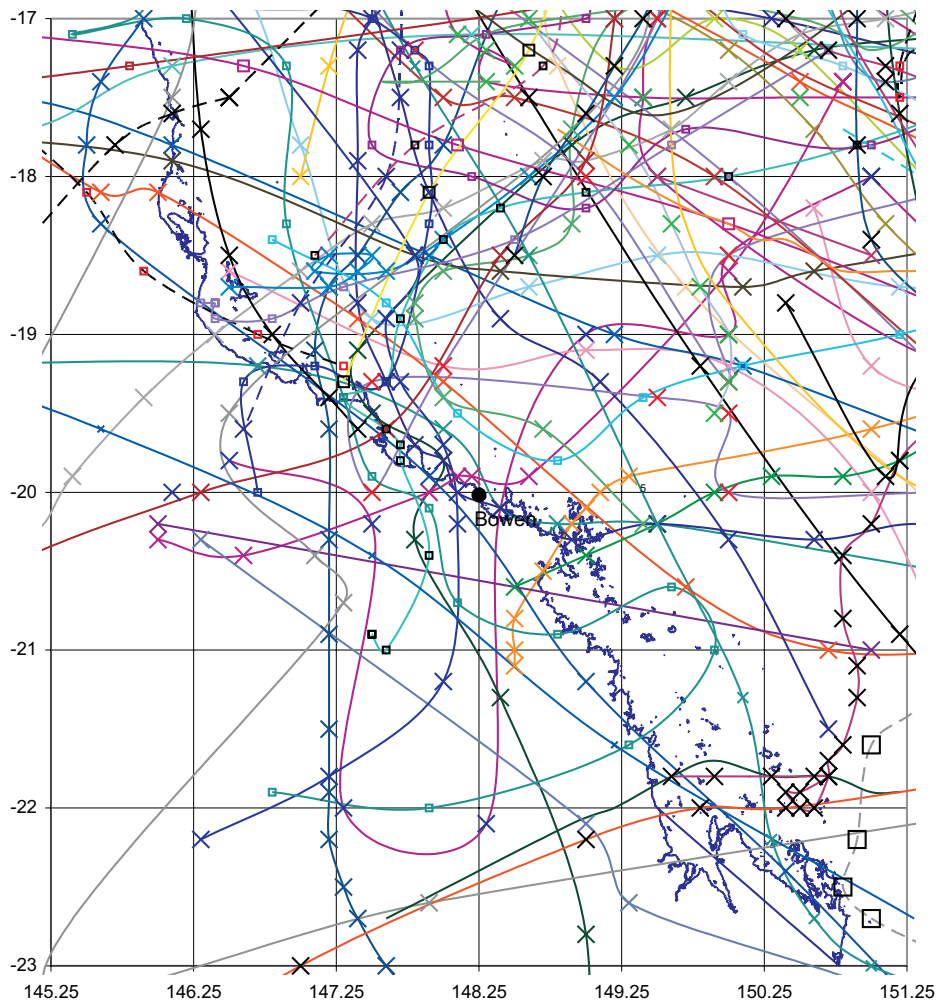


Southern Arm of the Don River



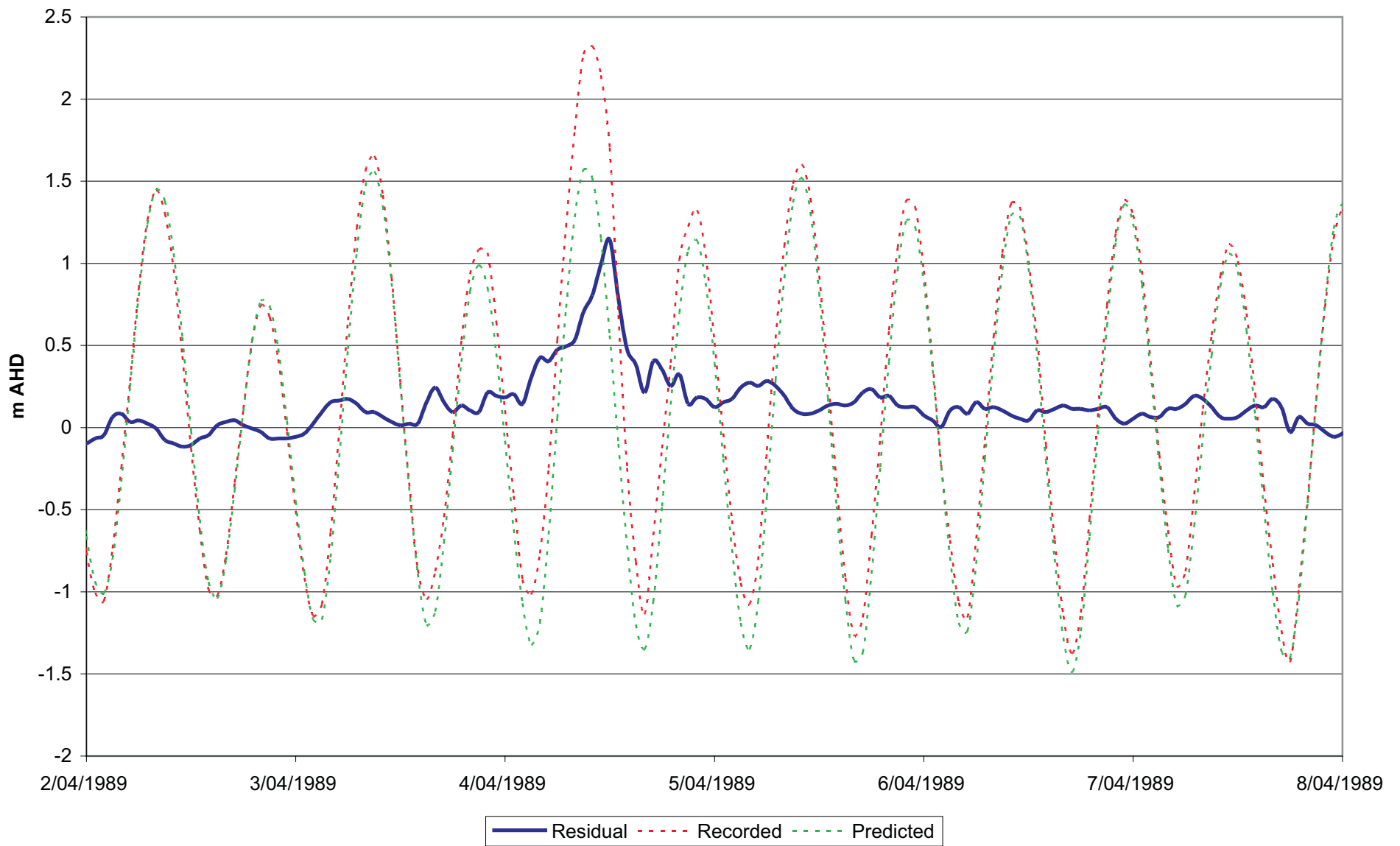
Molongle Creek Berth Facilities





248	253
259	272
278	280
286	293
301	304
338Flora	341Judy
360Elaine	376Bridget
383Ada	397Gertie
399Fiona	405Althea
431Una	434Vera
437Yvonne	447Gloria
468Dawn	470Watorea
476Keith	482Otto
492Hal	495Gordon
496Kerry	523Freda
600	628
637	640
647	649
652	770Aivu
725Pierre	743Vernon
744Winifred	762Charlie
771Deillah	775Felicity
778Ivor	790Joy
835Celeste	857Gillian
858Justin	859Ita
865Katrina	885Tessi
897Paul	243
310	334Gertie
435Wanda	461David
475June	700Grace
702Ingrid	706Lance
718Dominic	720Des
721Elinor	898Ruth
899Simon	264
562	



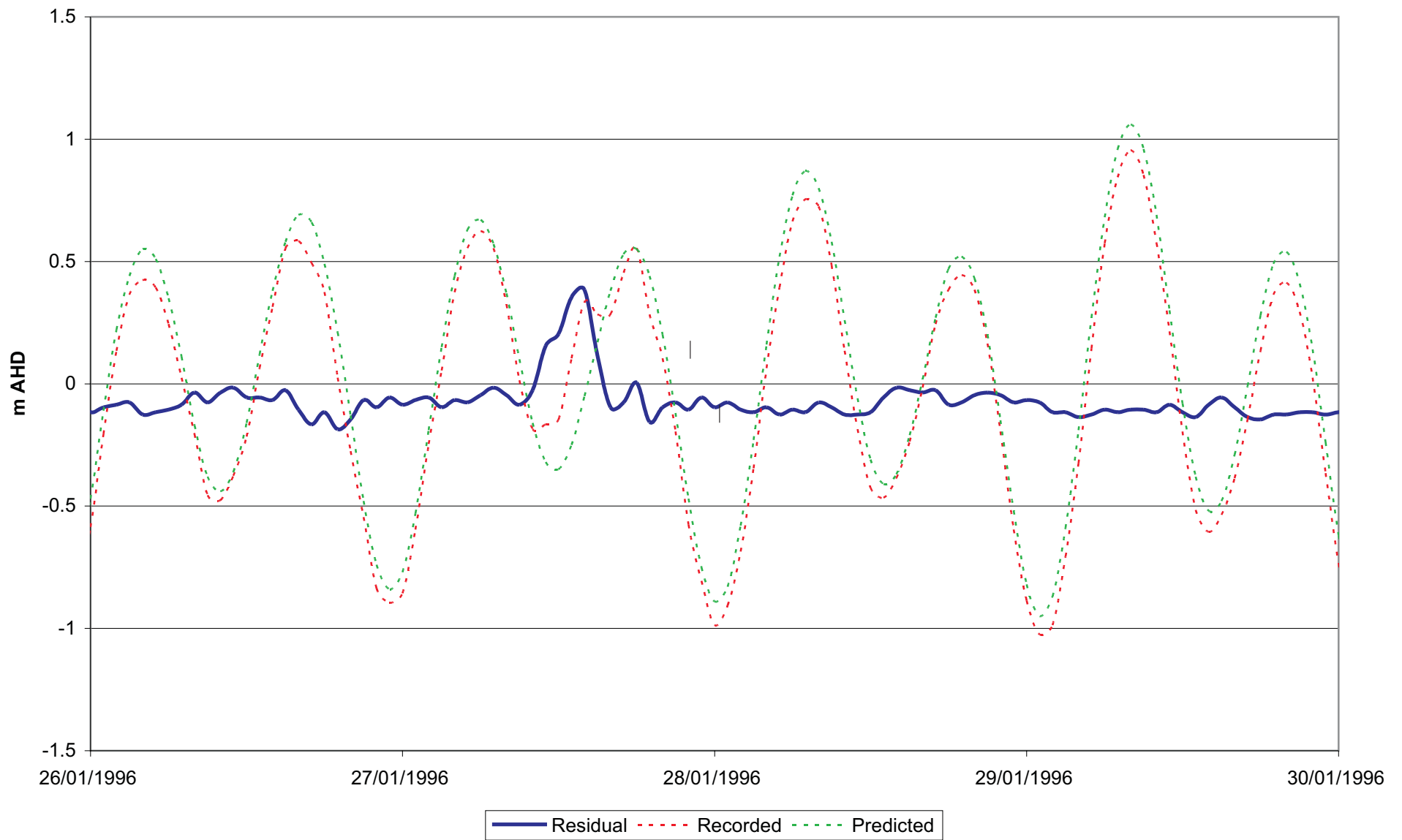


Lawson and Treloar

J2170/R2057 13/06/2003
 File: J2170\Figures\R2057\Figure8.cdr

Bowen Storm Tide Study
 PREDICTED TIDE AND RECORDED WATER LEVELS
 CYCLONE AIVU - BOWEN

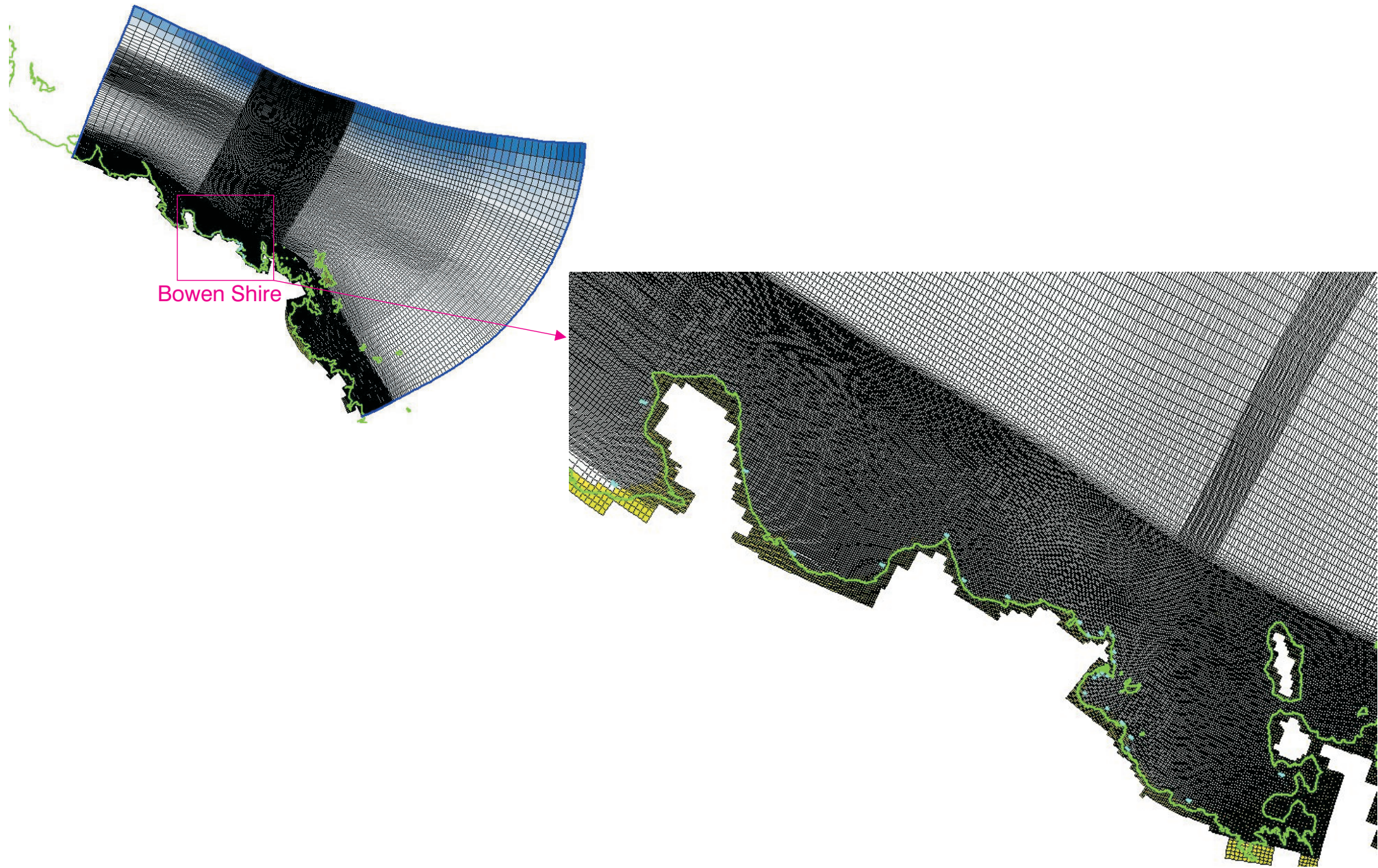
Figure 8



Lawson and Treloar

J2170/R2057 13/06/2003
 File: J2170\Figures\R2057\Figure9.cdr

Bowen Storm Tide Study
PREDICTED TIDE AND RECORDED WATER LEVELS
CYCLONE CELESTE - BOWEN
 Figure 9



Bowen Shire

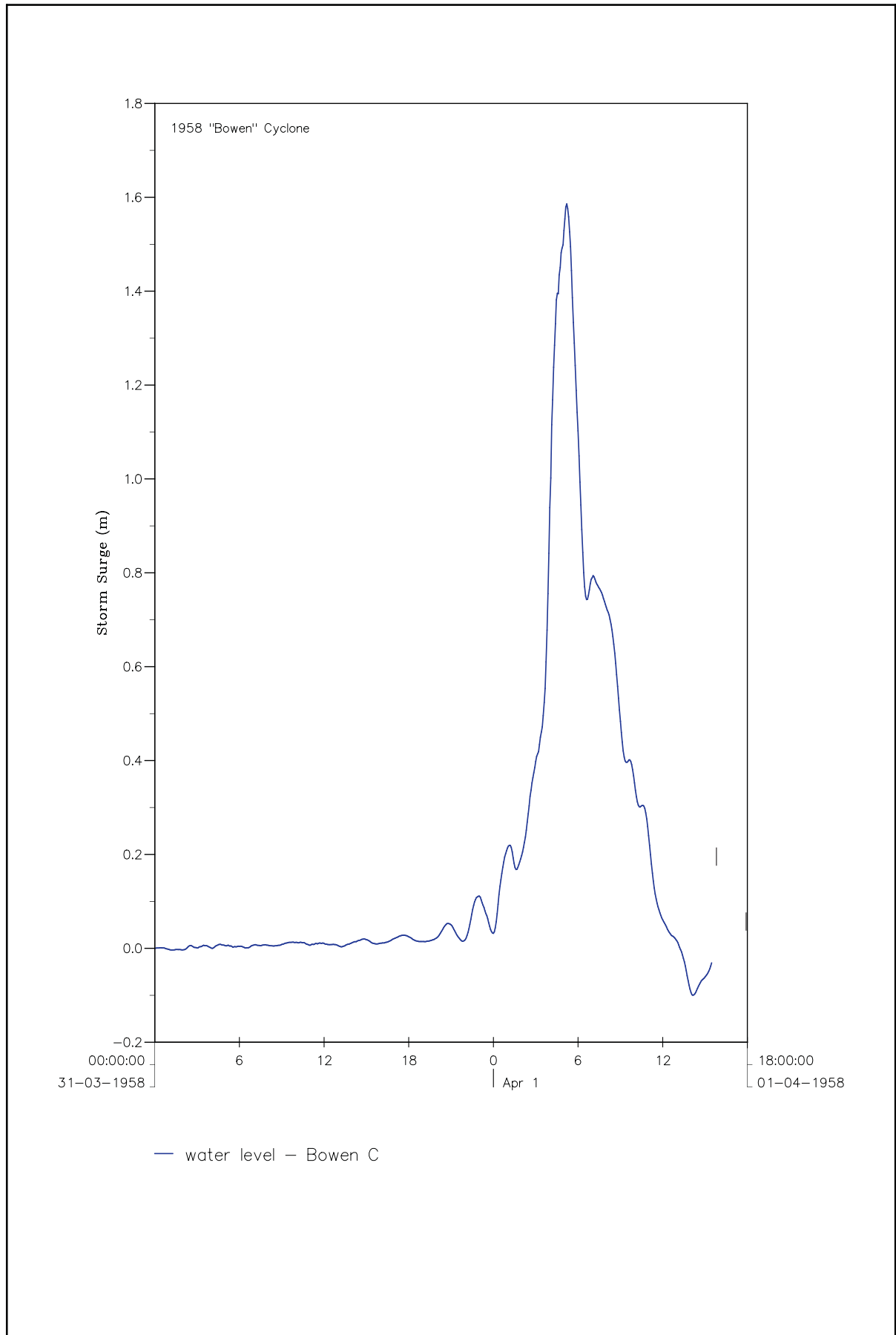


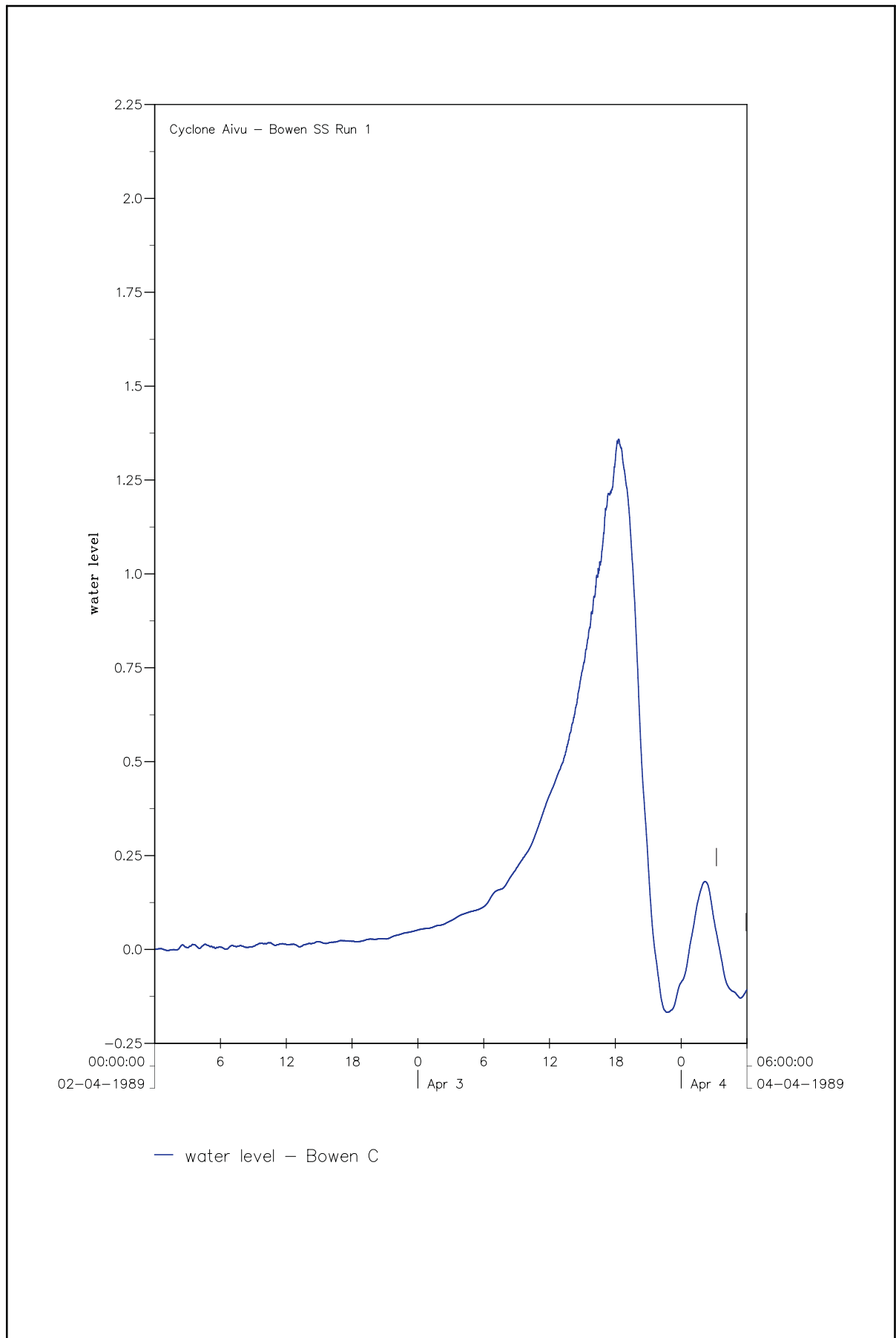
Lawson and Treloar

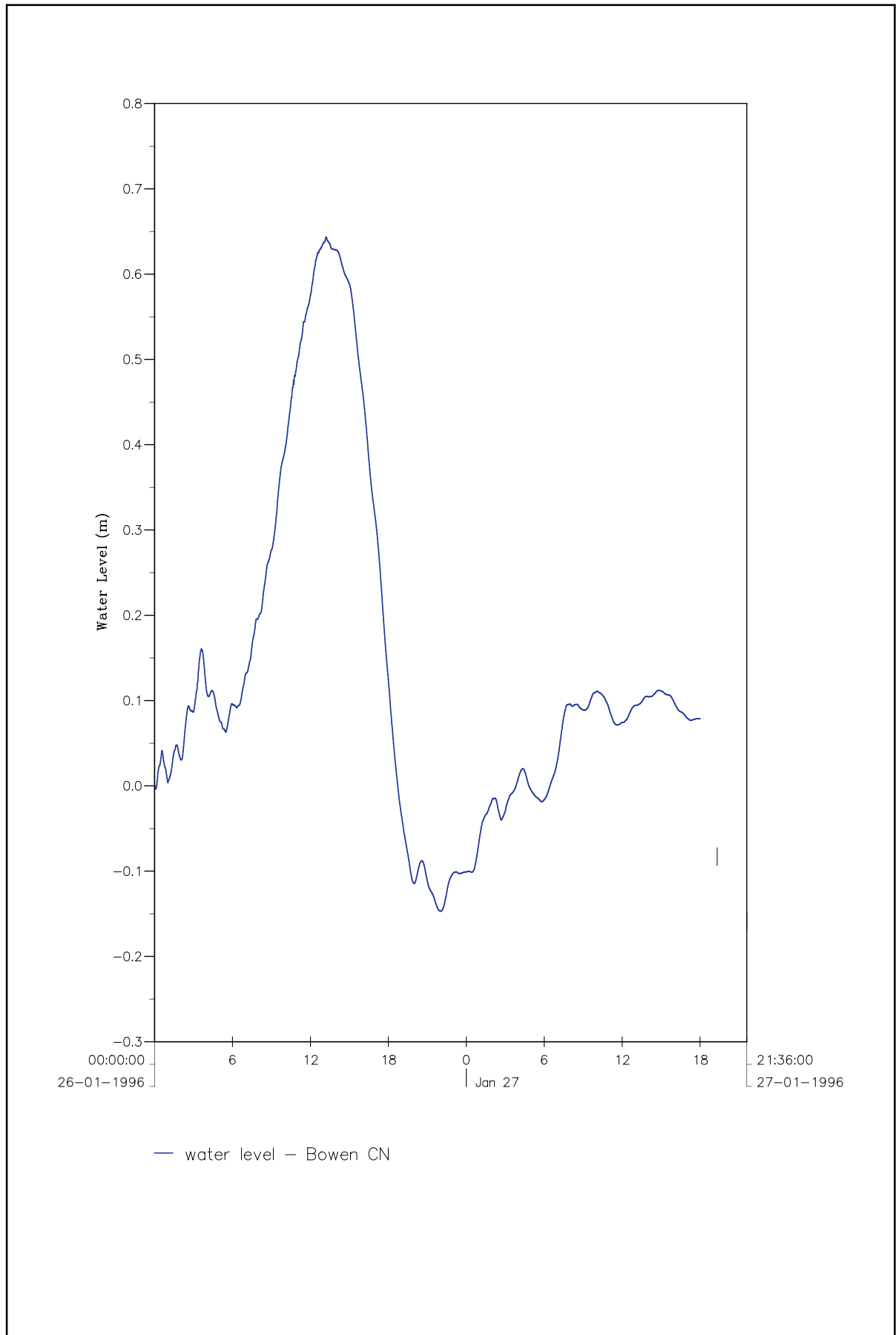
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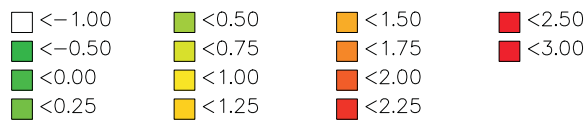
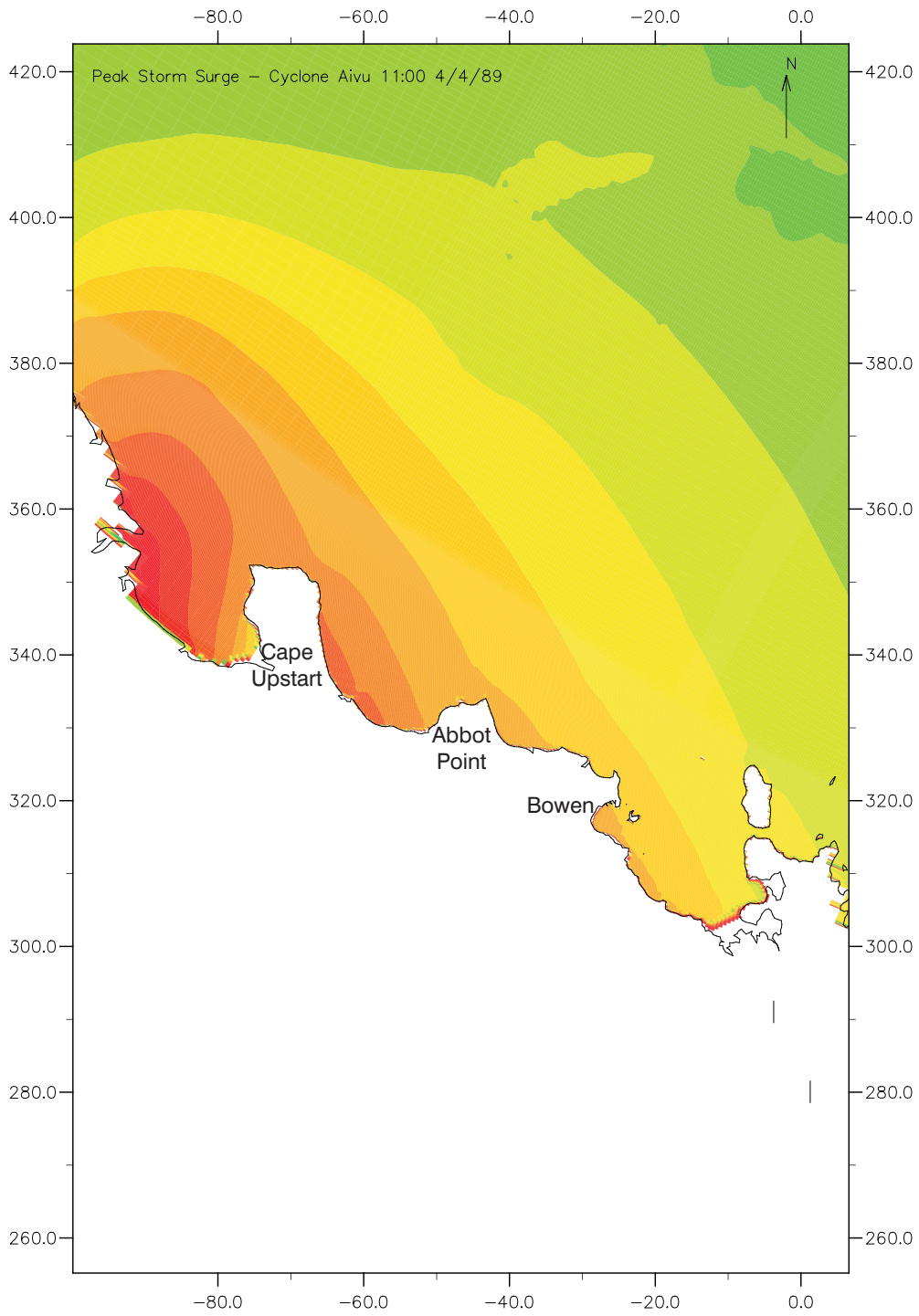
Bowen Storm Tide Study
DELFT3D FLOW GRID
BOWEN SHIRE MODEL

Figure 10









Storm Surge (m)

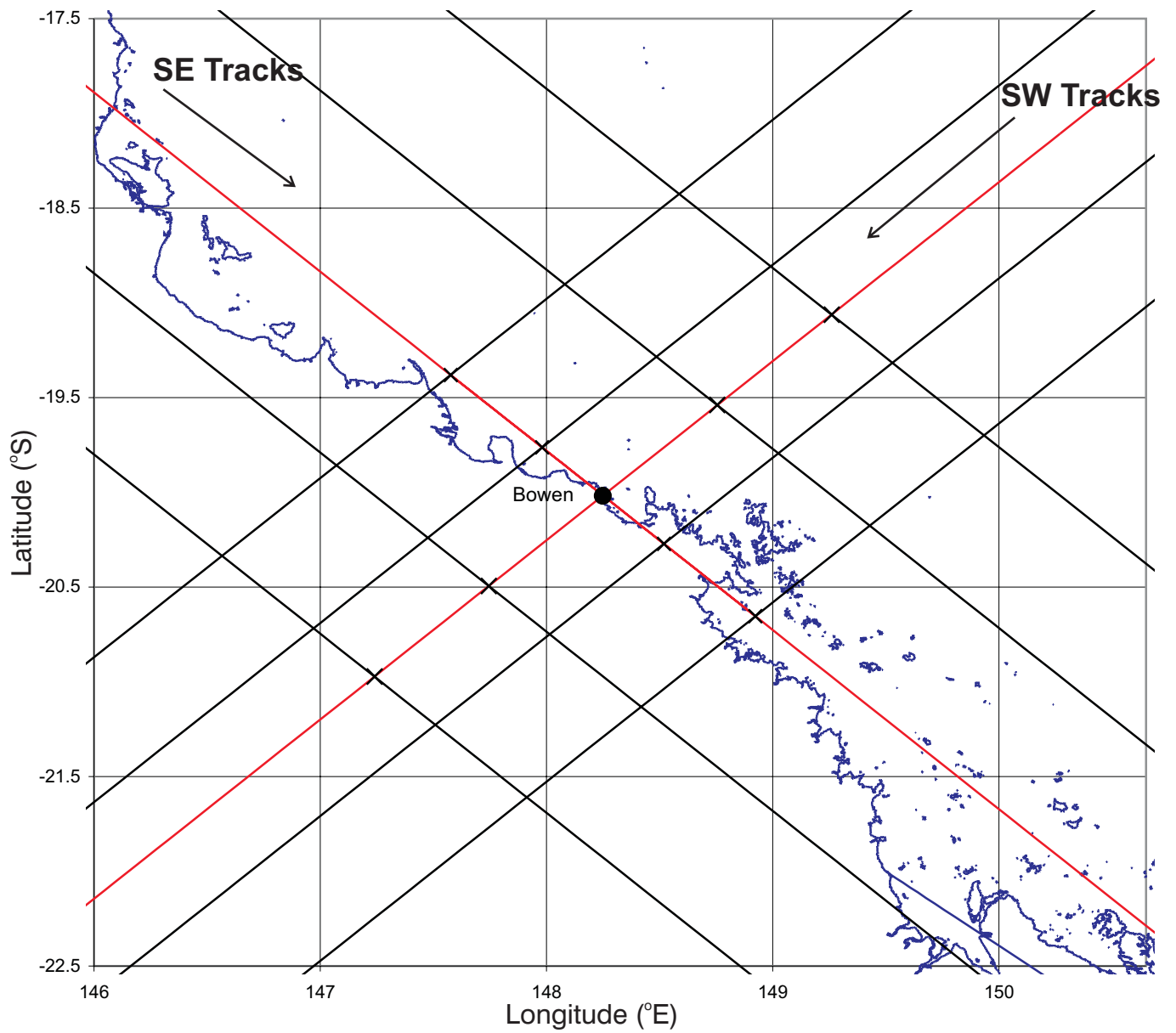


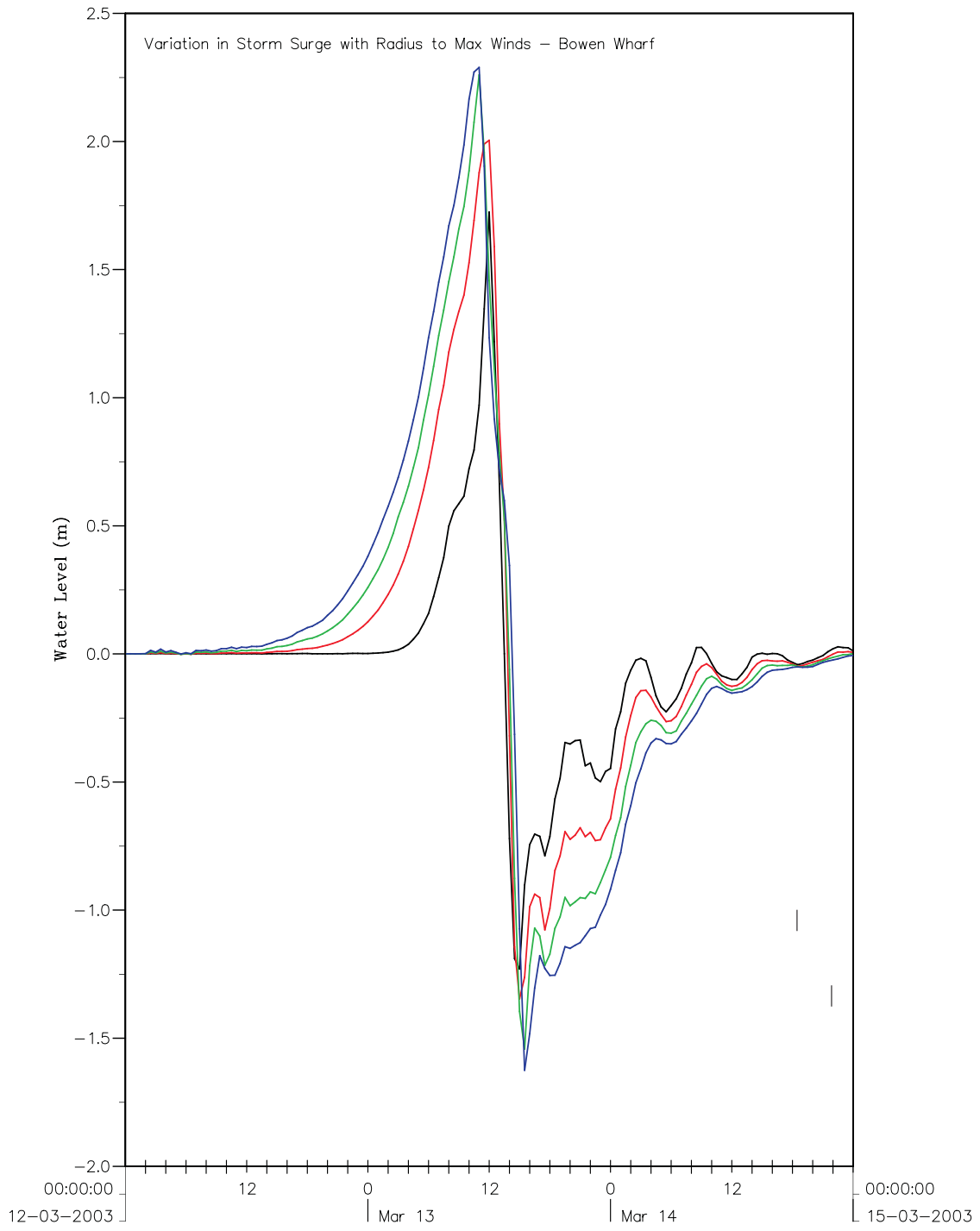
Lawson and Treloar

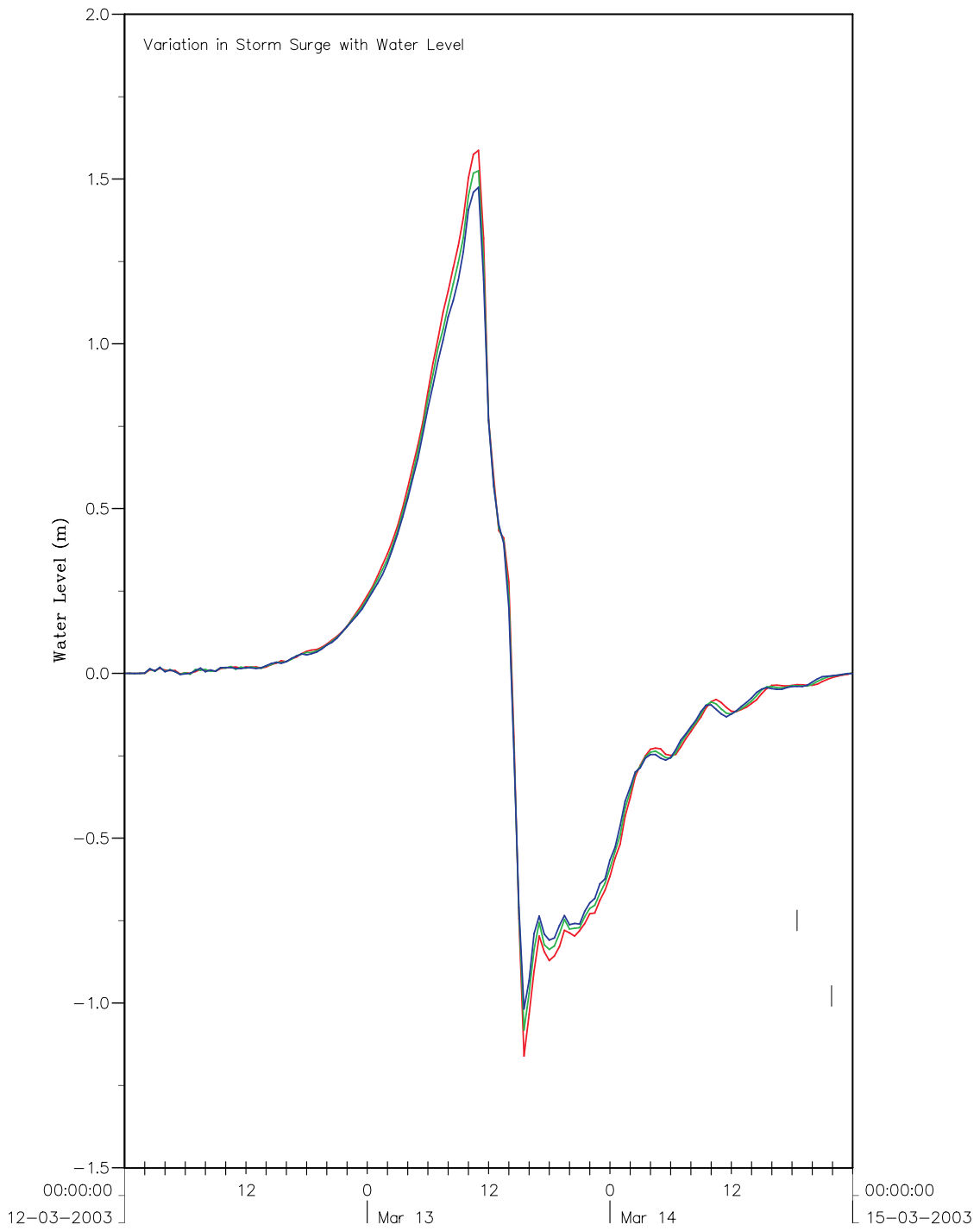
J2170/R2057 13/06/2003
File: J2170\Figures\R2057\Figure14.cdr

Bowen Storm Tide Study
PEAK STORM SURGE IN THE BOWEN SHIRE
CYCLONE AIVU

Figure 14







- SS Bowen Wharf — -1m MSL
- SS Bowen Wharf — MSL
- SS Bowen Wharf — +1m MSL

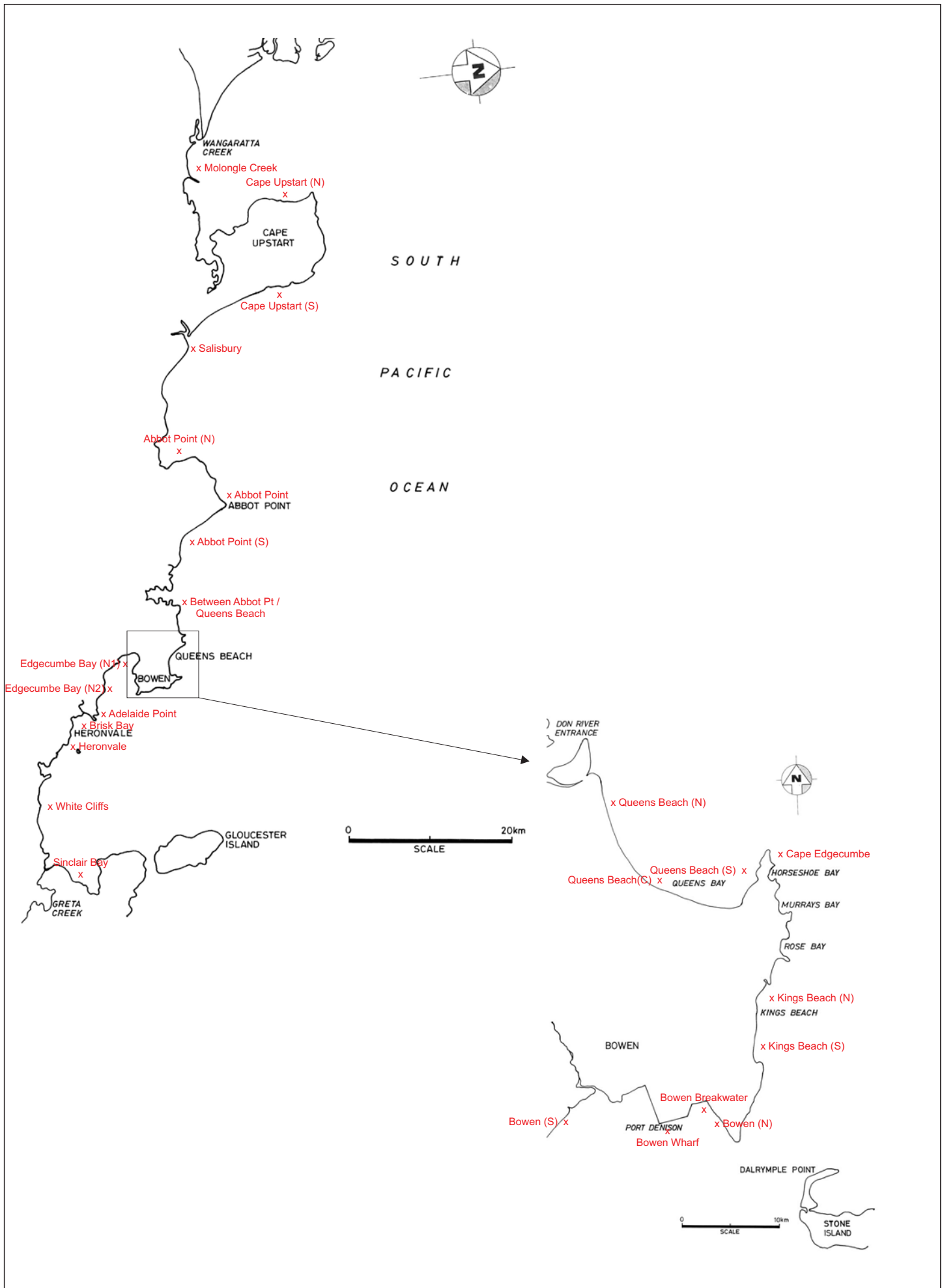


Lawson and Treloar

J2170/R2057 13/06/2003
File: J2170\Figures\R2057\Figure17.cdr

Bowen Storm Tide Study
PEAK STORM SURGE AT BOWEN
SENSITIVITY TO TIDE LEVEL

Figure 17

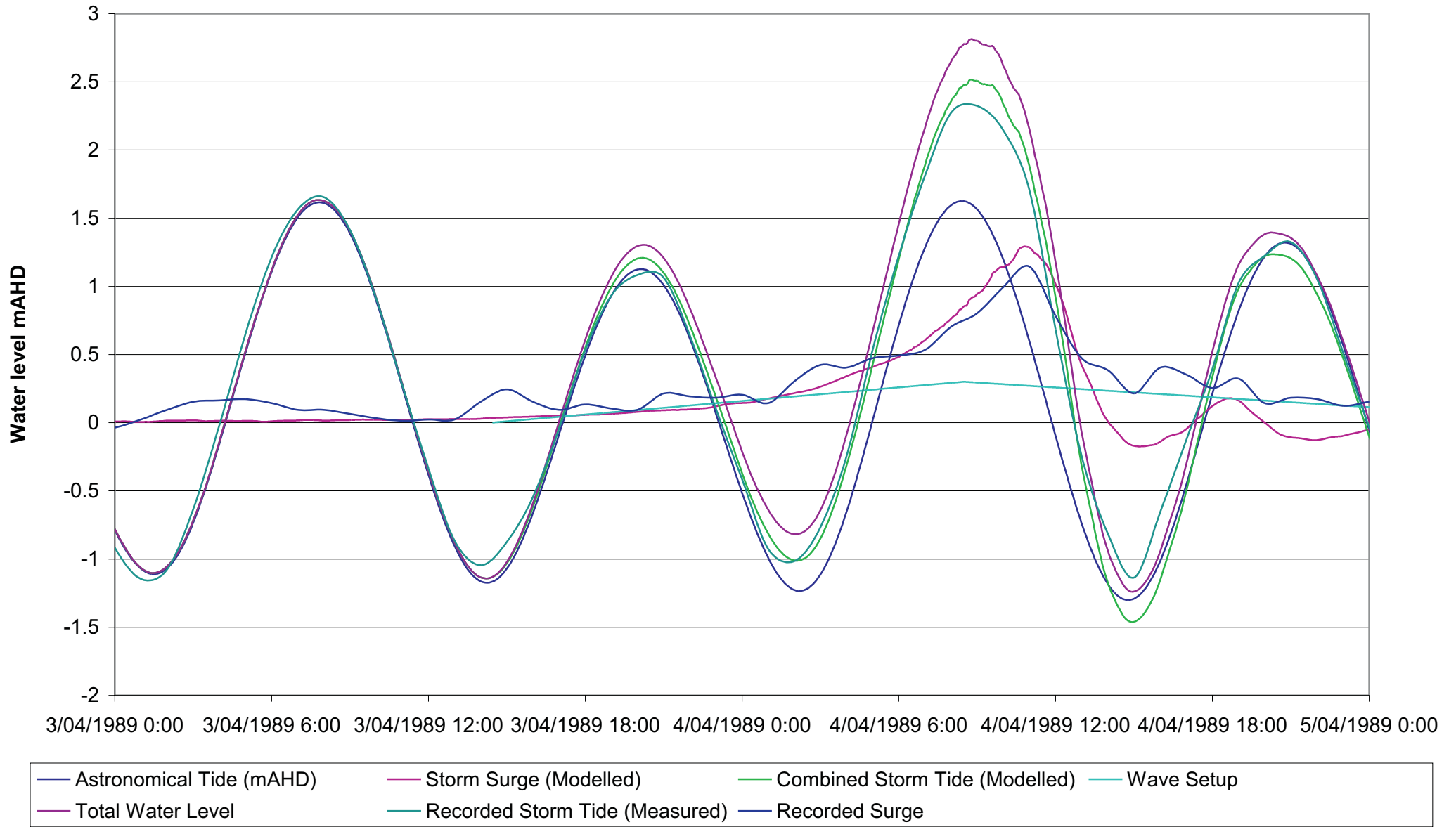


Lawson and Treloar

J2170/R2057 13/05/2003
 File: J2170\Figures\R2057\Figure18.cdr

Bowen Storm Tide Study
STORM TIDE OUTPUT LOCATIONS

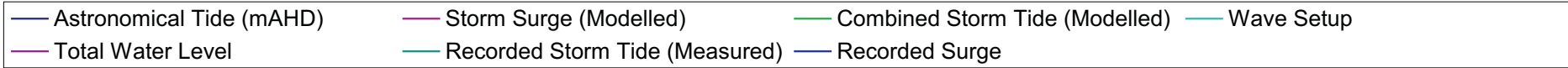
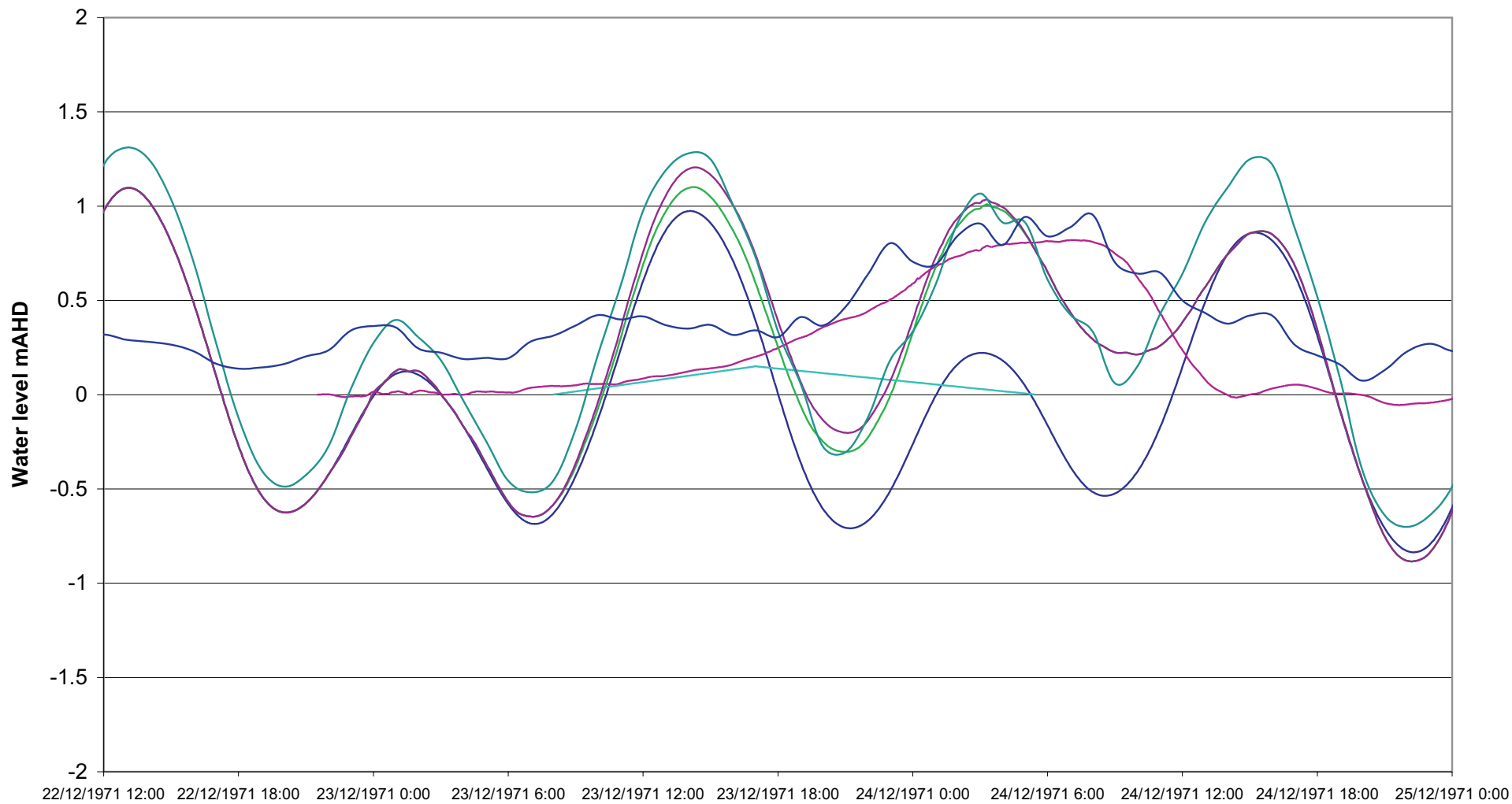
Figure 18



Lawson and Treloar

J2170/R2057 13/06/2003
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Bowen Storm Tide Study
PEAK STORM SURGE IN THE BOWEN REGION DURING CYCLONE AIVU

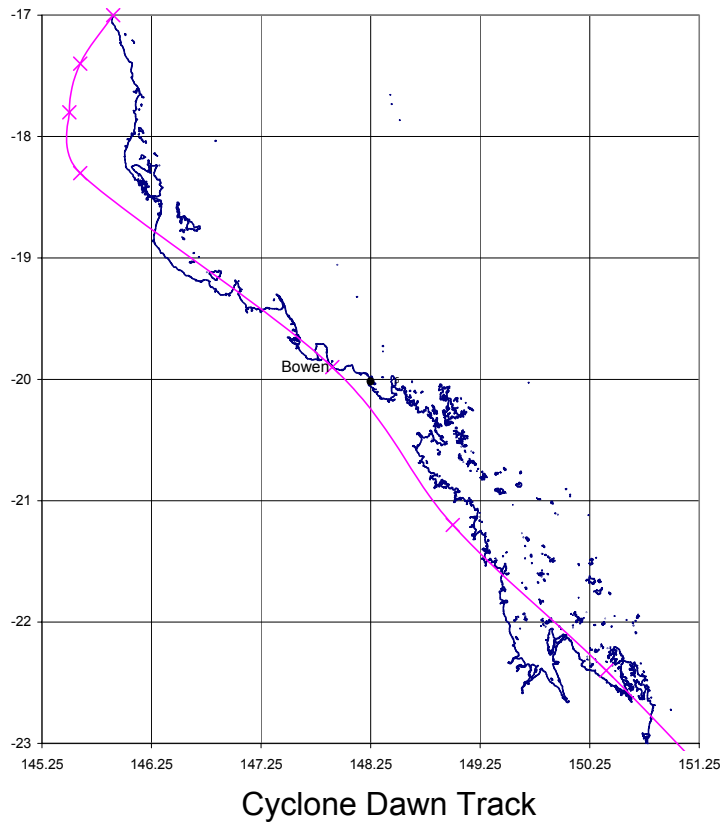


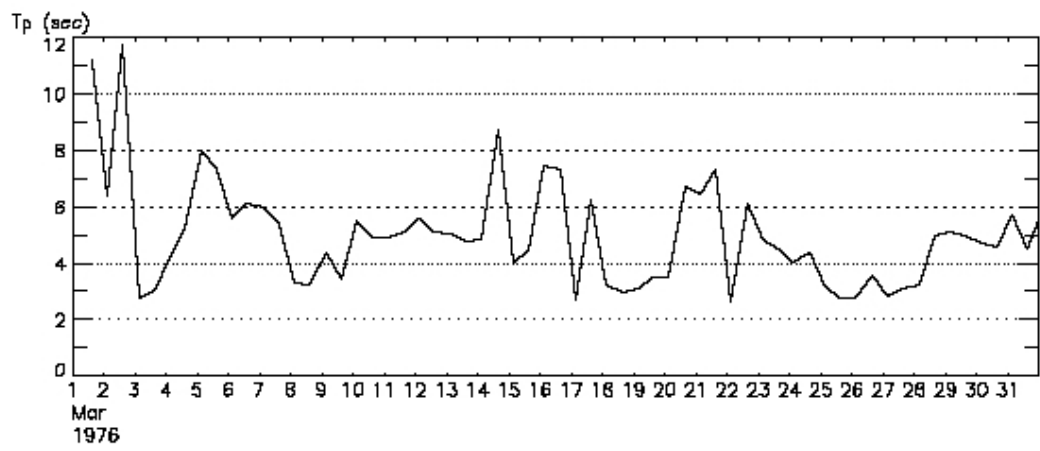
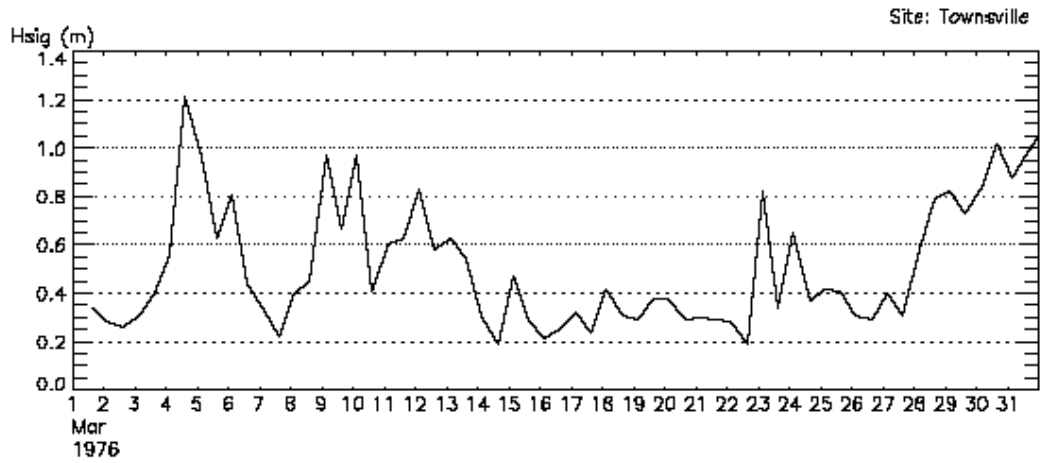
Lawson and Treloar

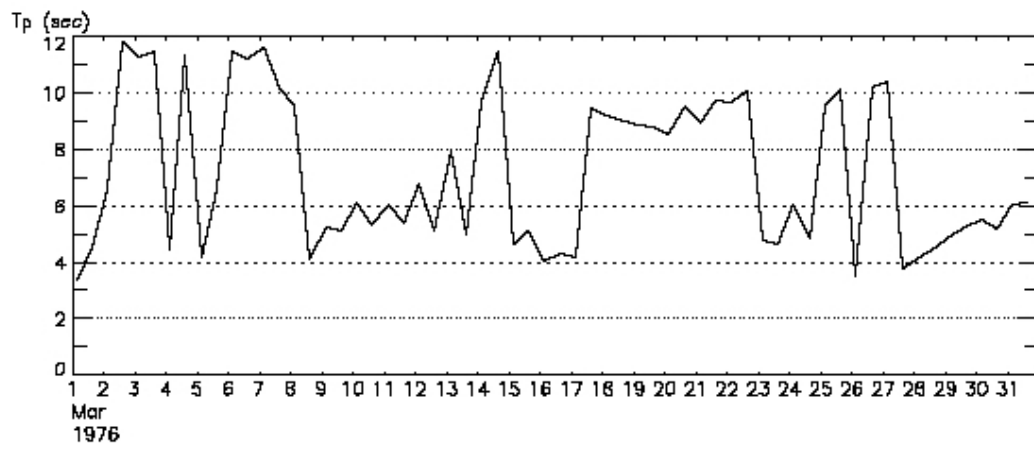
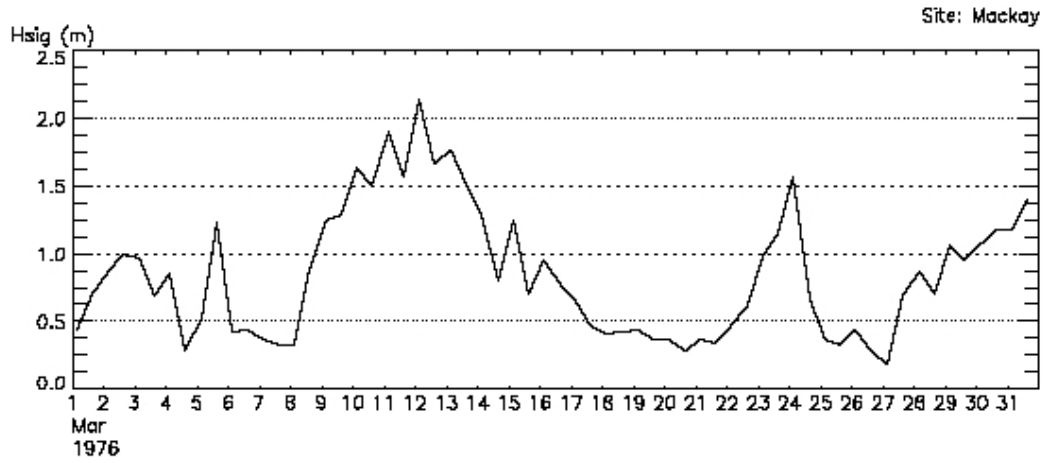
J2170/R2057 13/06/2003
File: J2170\Figures\R2057\Figure20.cdr

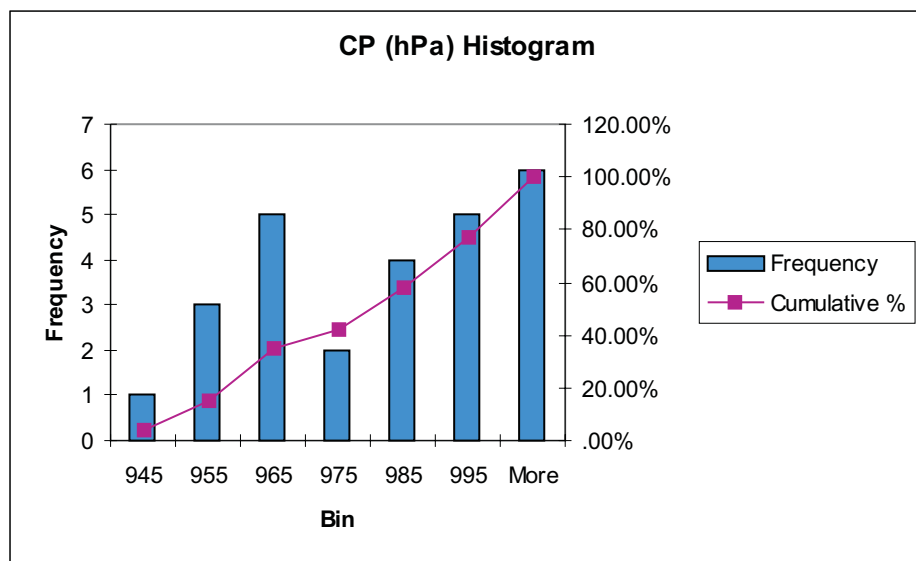
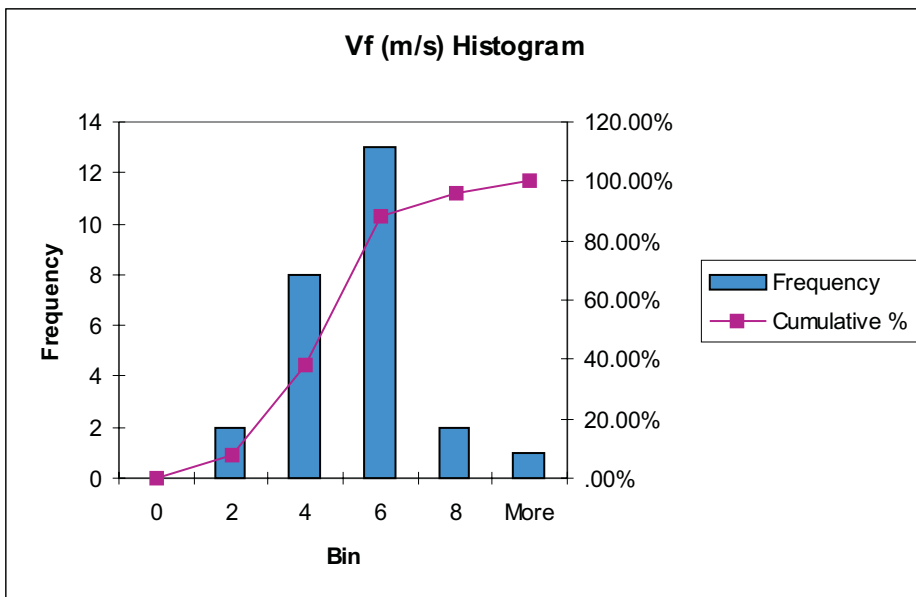
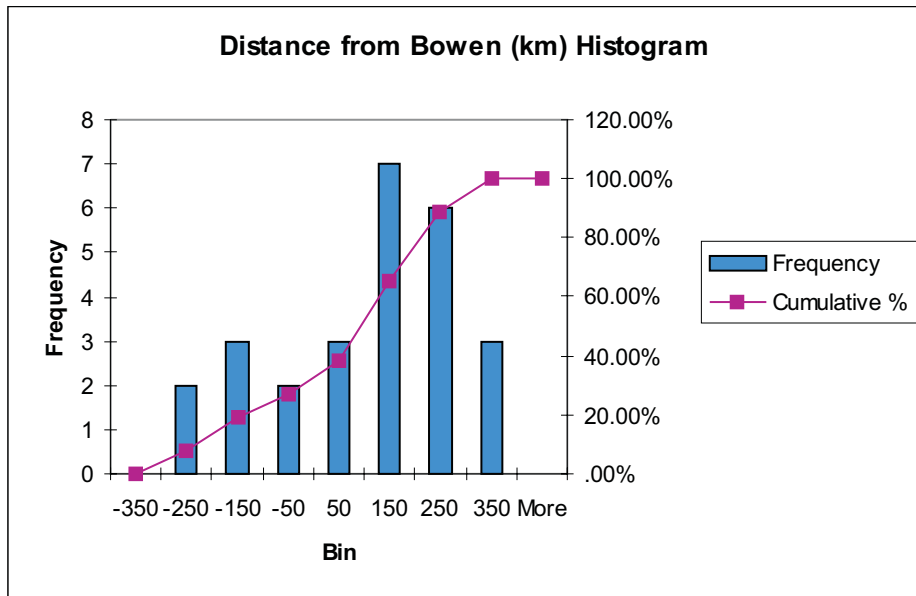
Bowen Storm Tide Study
PEAK STORM SURGE IN THE BOWEN REGION DURING CYCLONE ALTHEA

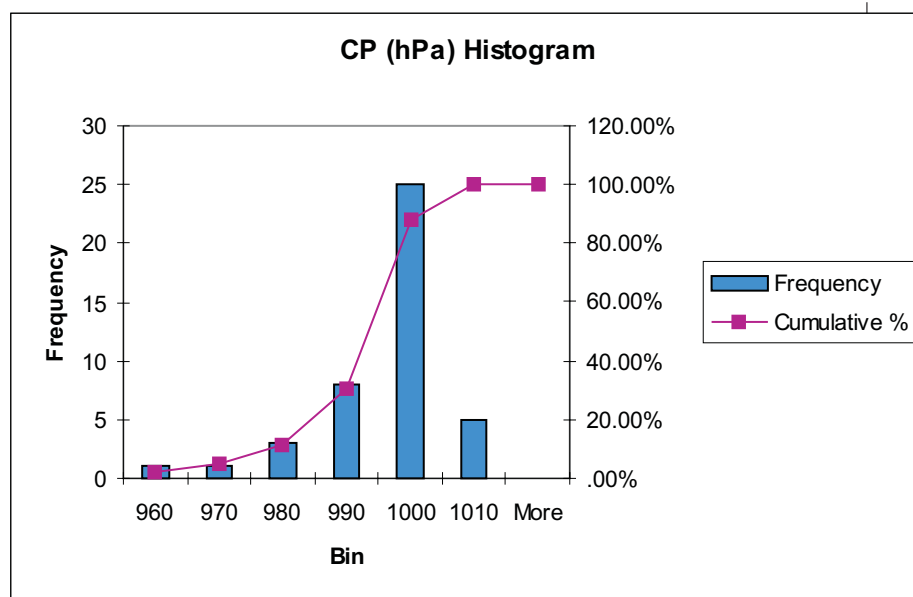
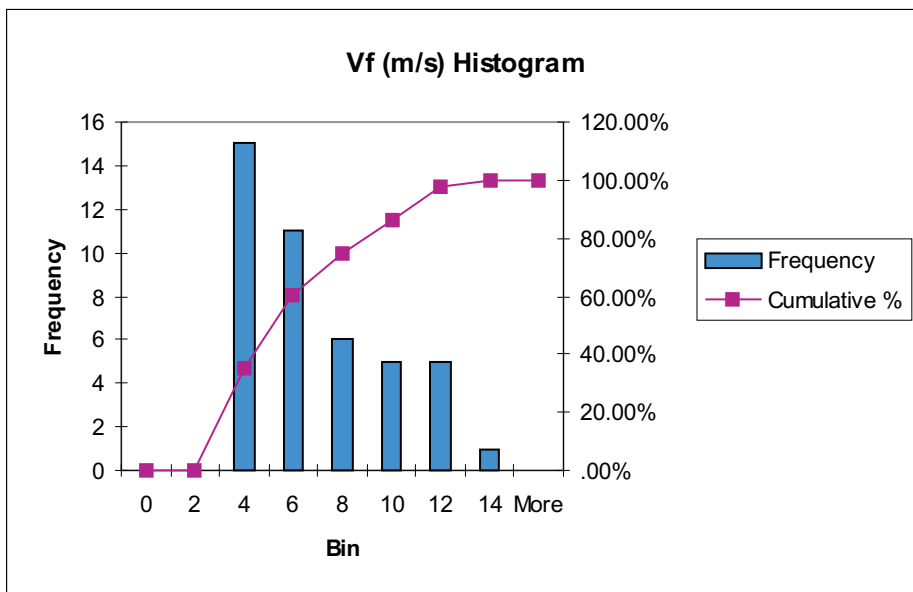
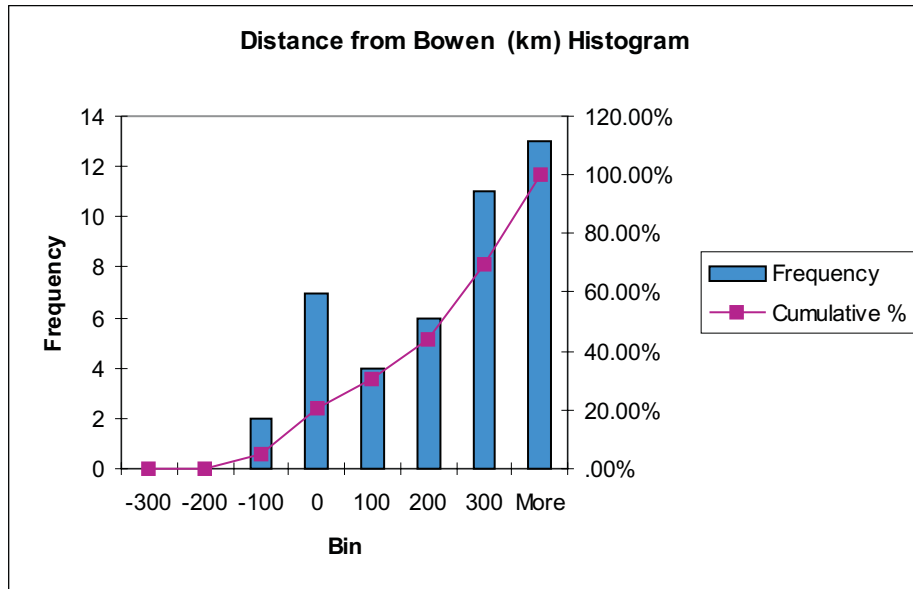
Figure 20











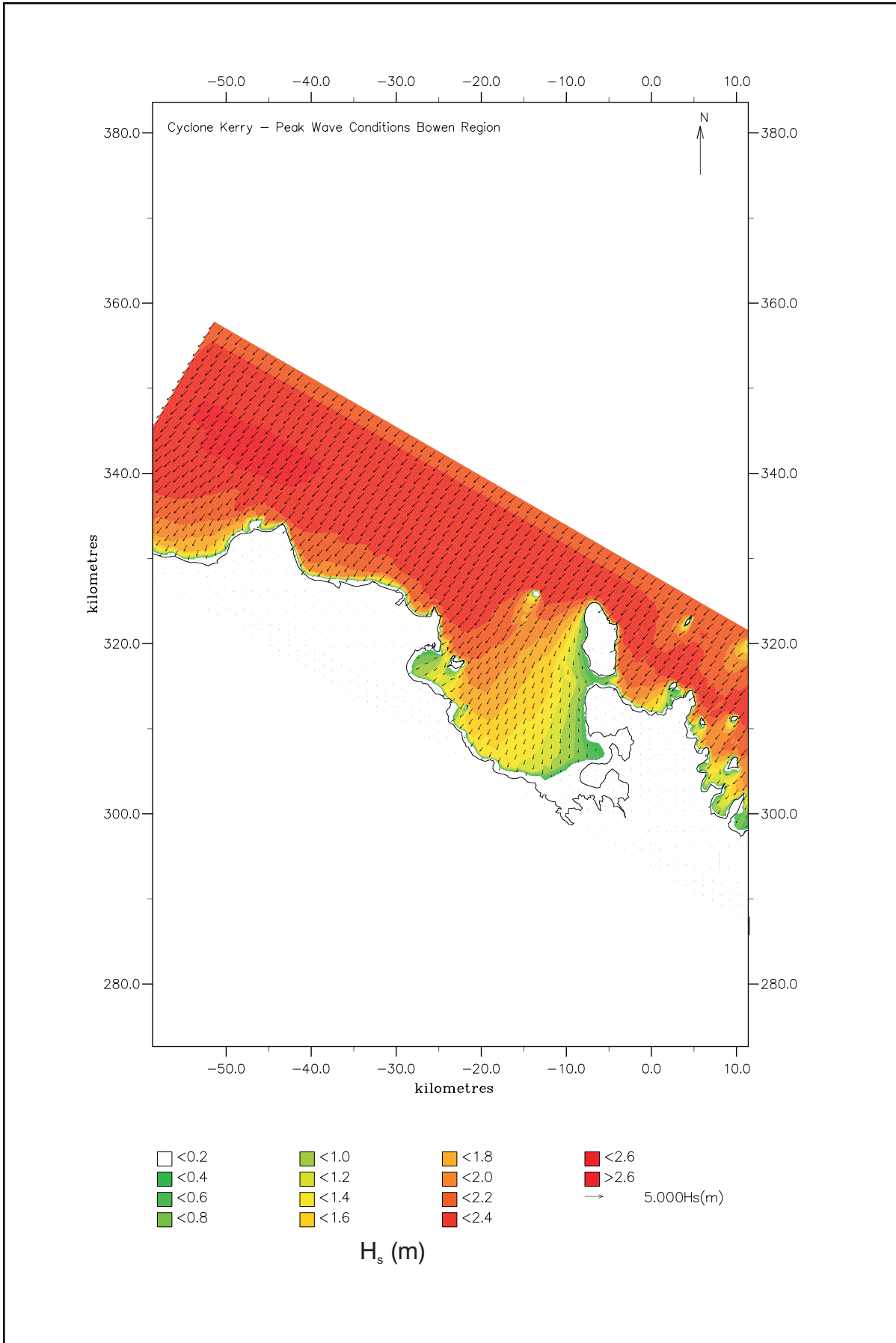
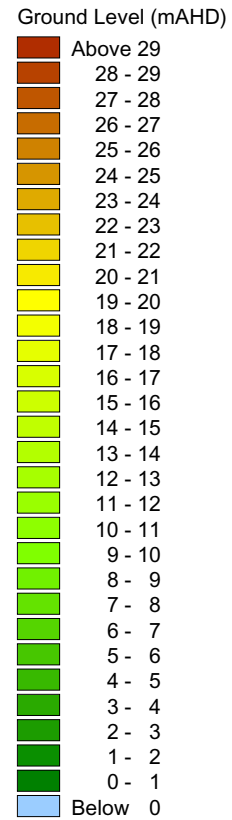
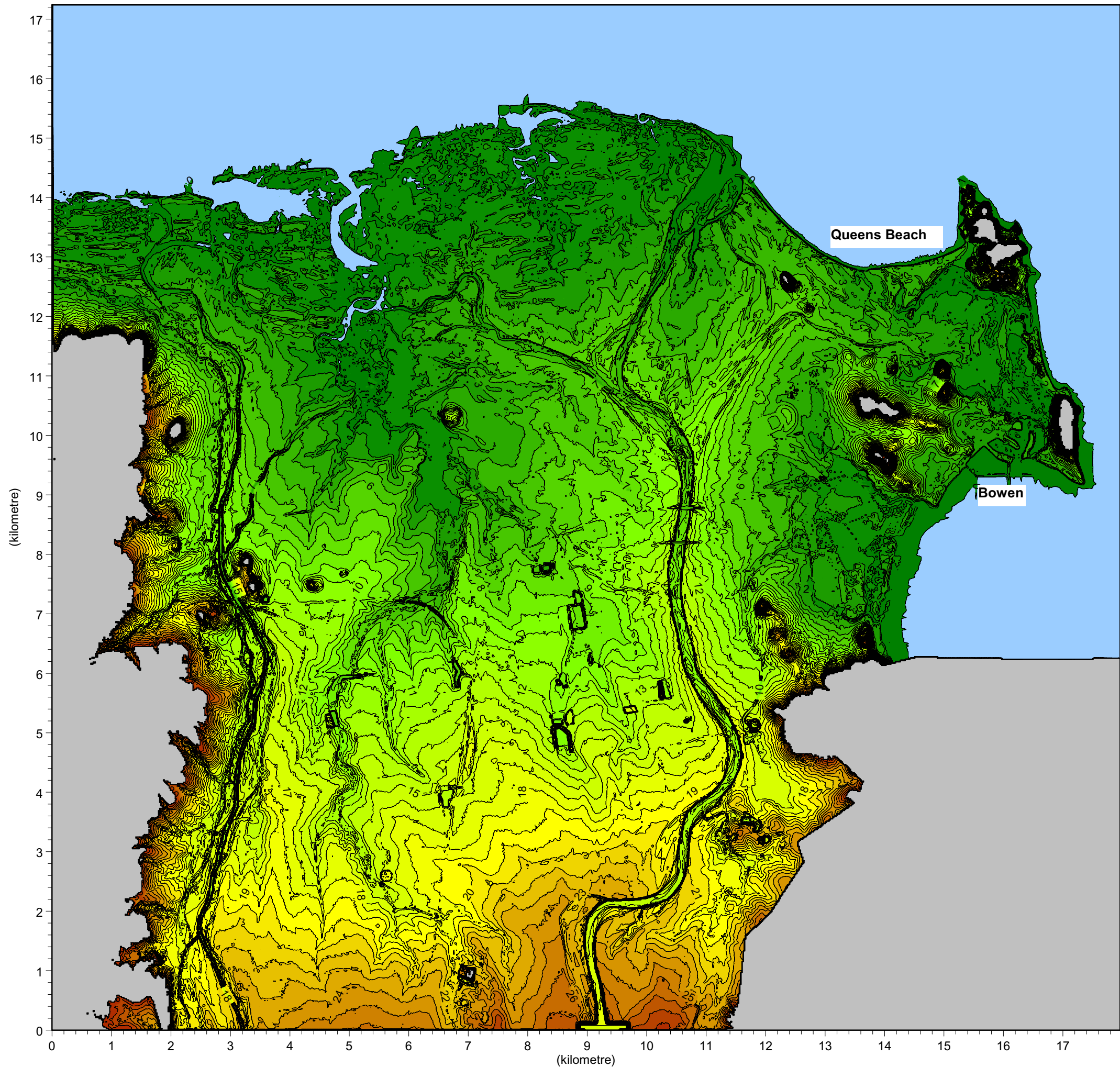




FIGURE 22: URBS MODEL LAYOUT

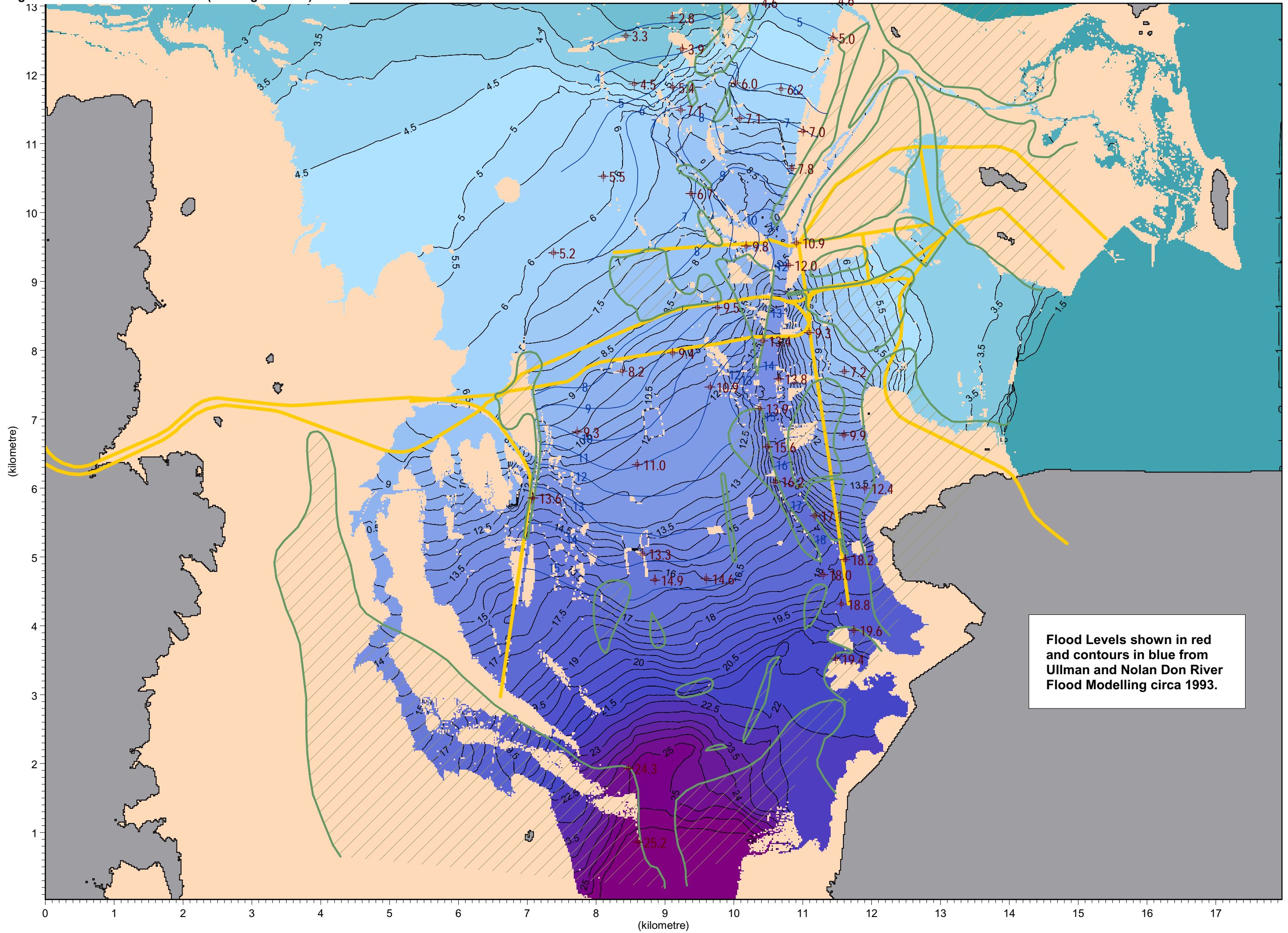
Figure 23: MIKE 21 Model Extent



C:\Jobs\509302\ww\MIKE21\Topo\Topo11_20m.dfs2

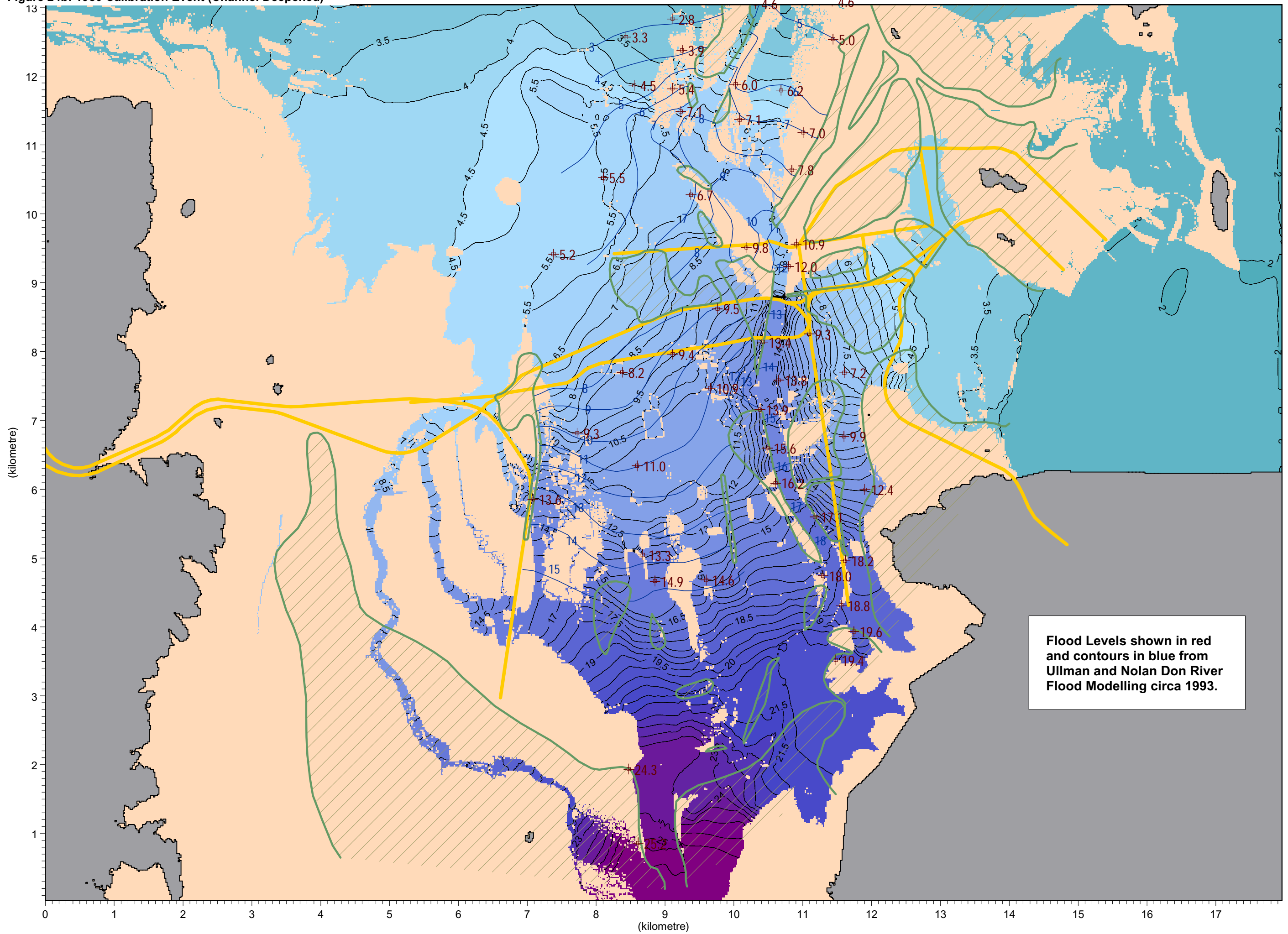
Scale 1:66470

Figure 24a: 1980 Calibration Event (Existing Channel)



C:\Jobs\509302\MIKE21\Results\1980PeakFlow_4a.dfs2

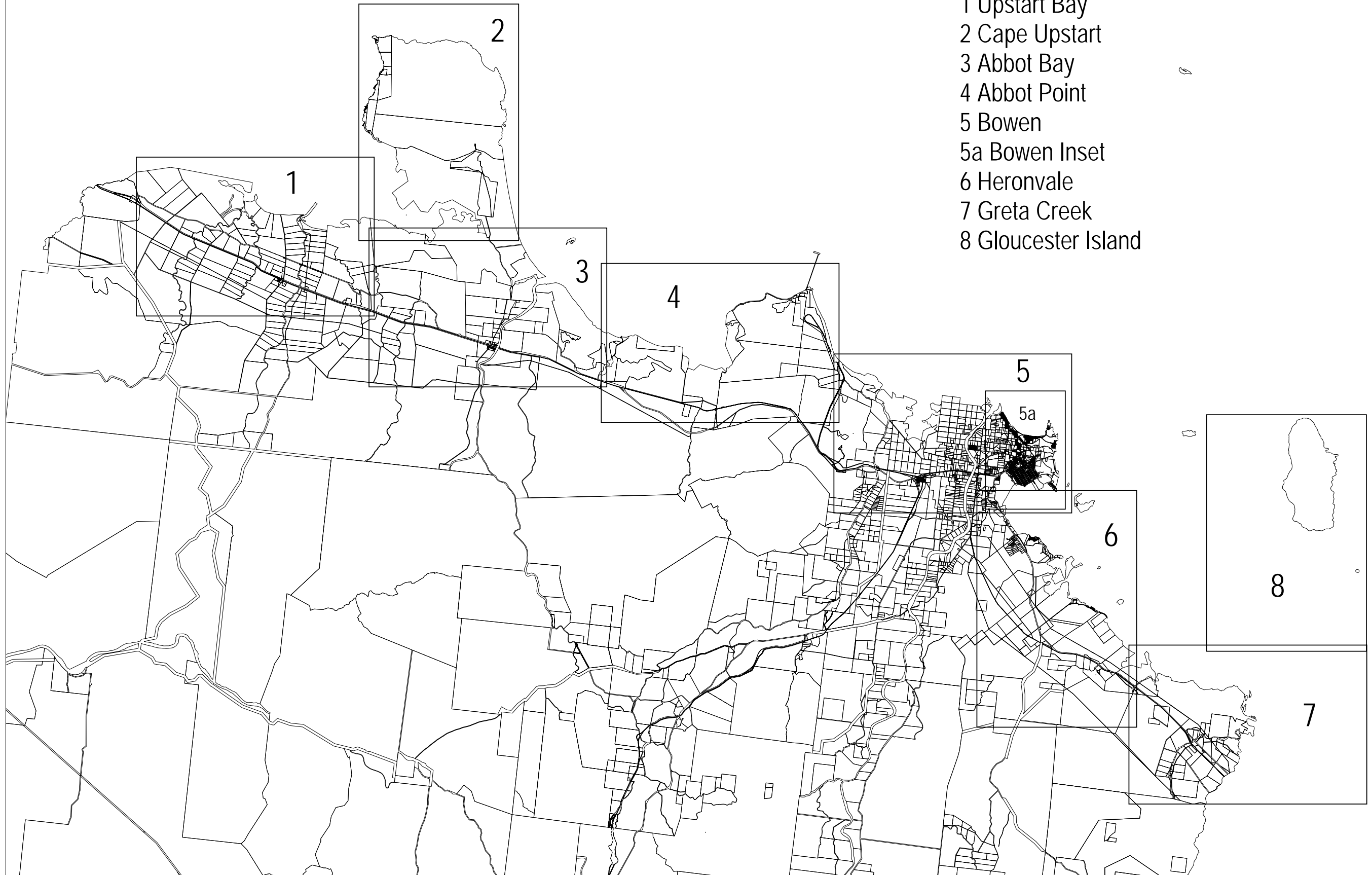
Figure 24b: 1980 Calibration Event (Channel Deepened)



C:\Jobs\509302\ww\MIKE21\Results\1980PeakFlow_9a.dfs2



- 1 Upstart Bay
- 2 Cape Upstart
- 3 Abbot Bay
- 4 Abbot Point
- 5 Bowen
- 5a Bowen Inset
- 6 Heronvale
- 7 Greta Creek
- 8 Gloucester Island



509302WW FILE: Figure 25 Map_Layout_Rev1.WOR REVISION: 1

FIGURE 25: MAP LAYOUT

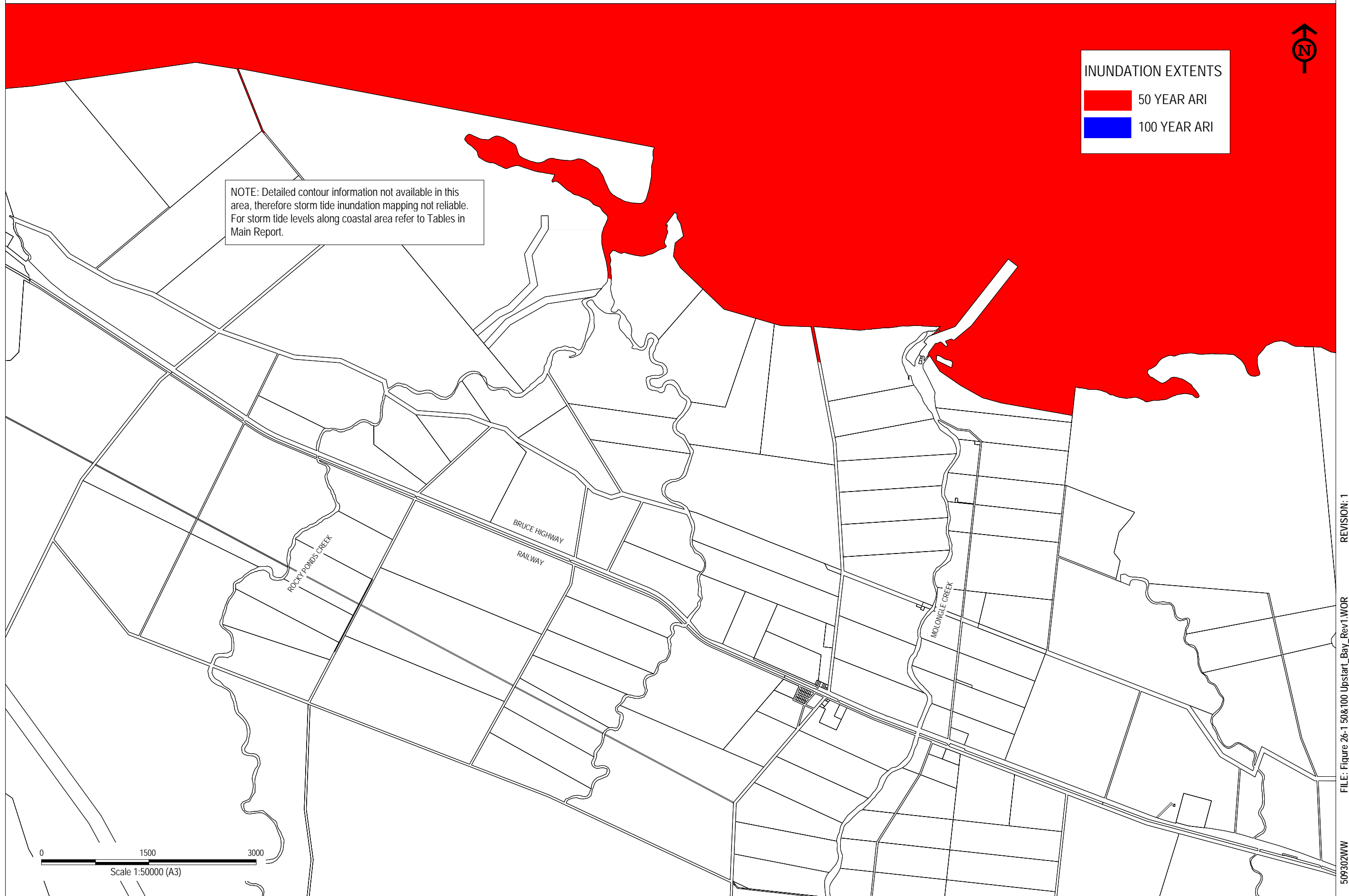




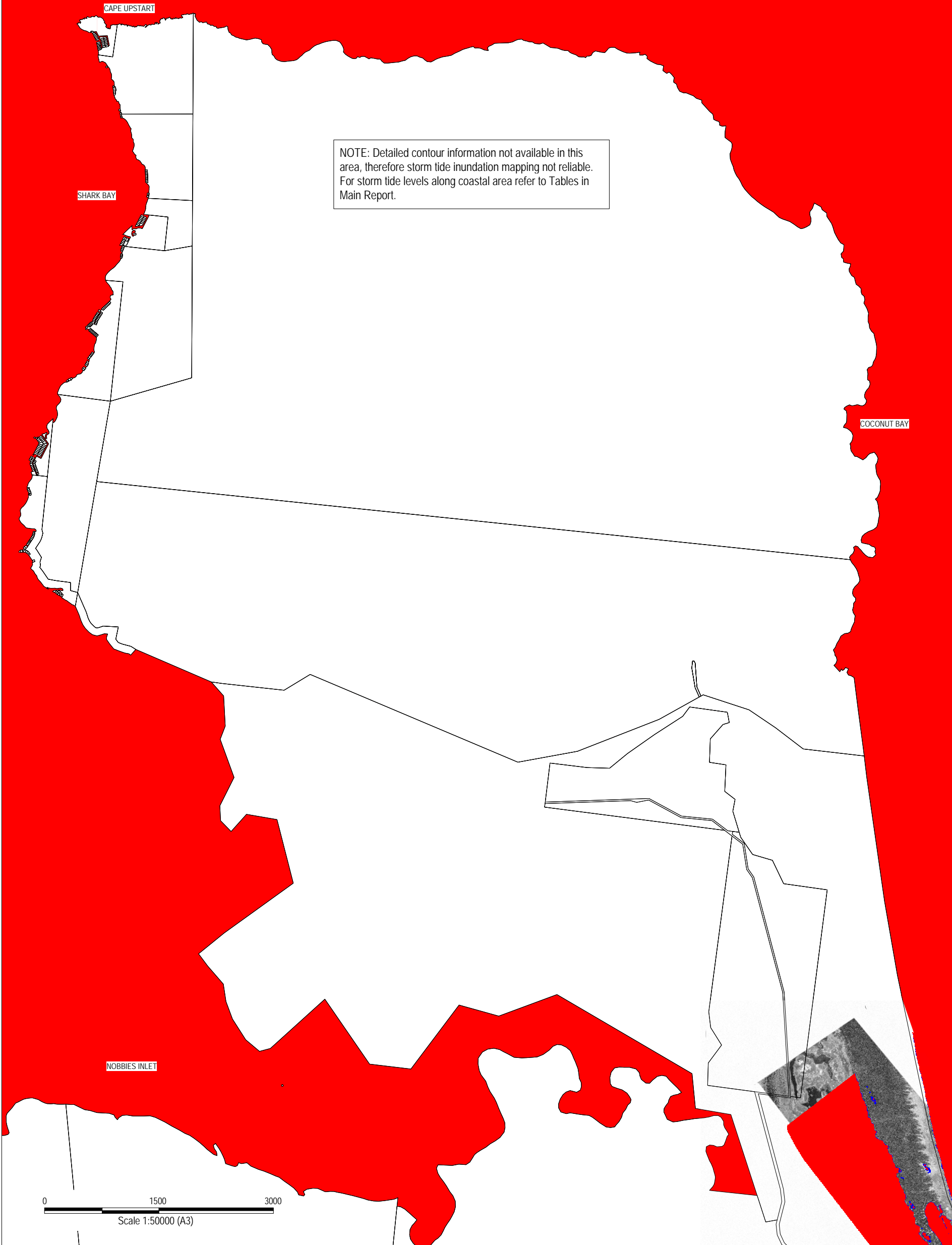
FIGURE 26-1: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - UPSTART BAY



INUNDATION EXTENTS

	50 YEAR ARI
	100 YEAR ARI

NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.



REVISION: 1

FILE: Figure 26-2 50&100_Cape_Upstart_Rev1.WOR

JOB NO.

FIGURE 26-2: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - CAPE UPSTART

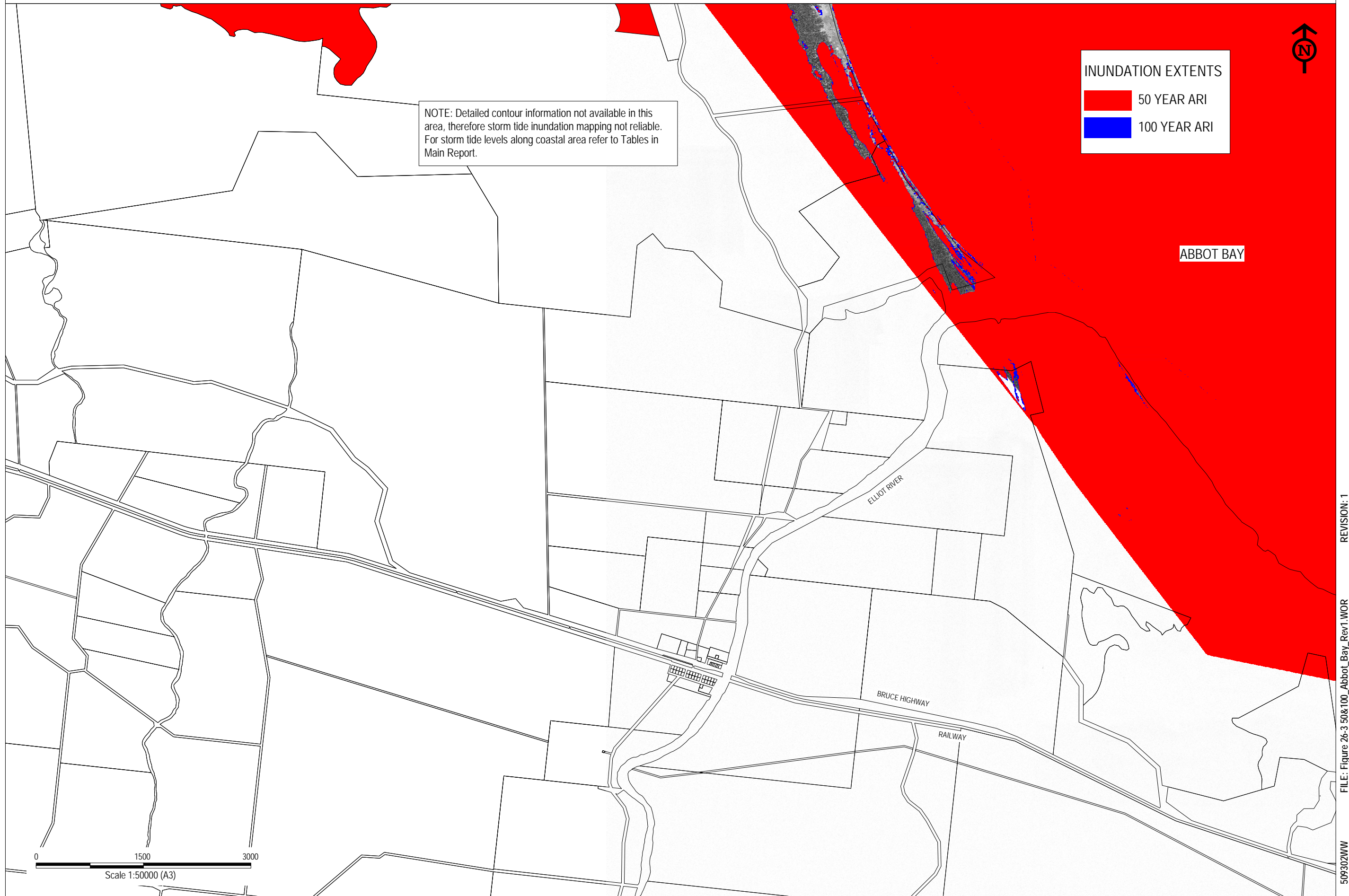


FIGURE 26-3: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - ABBOT BAY

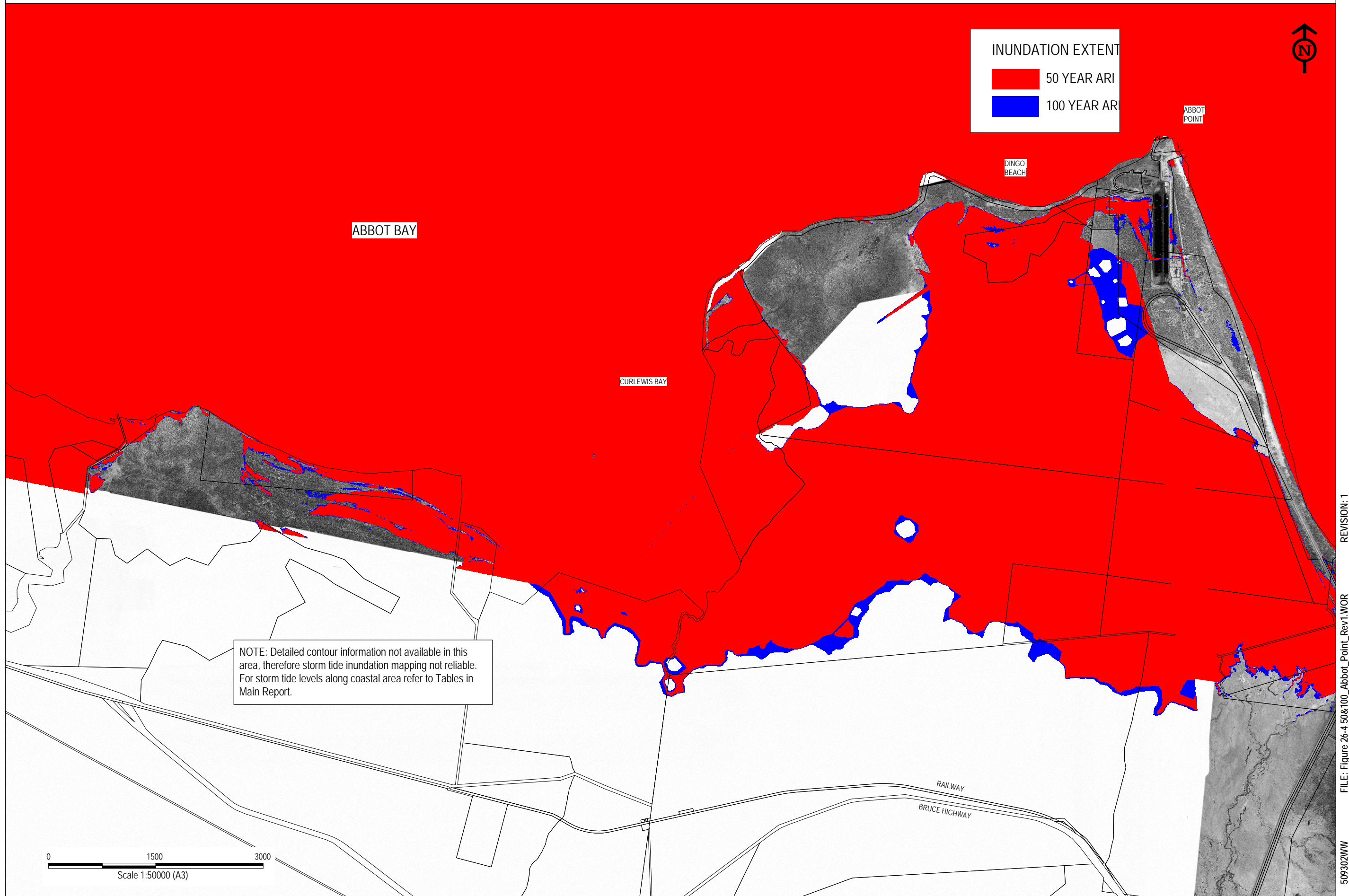
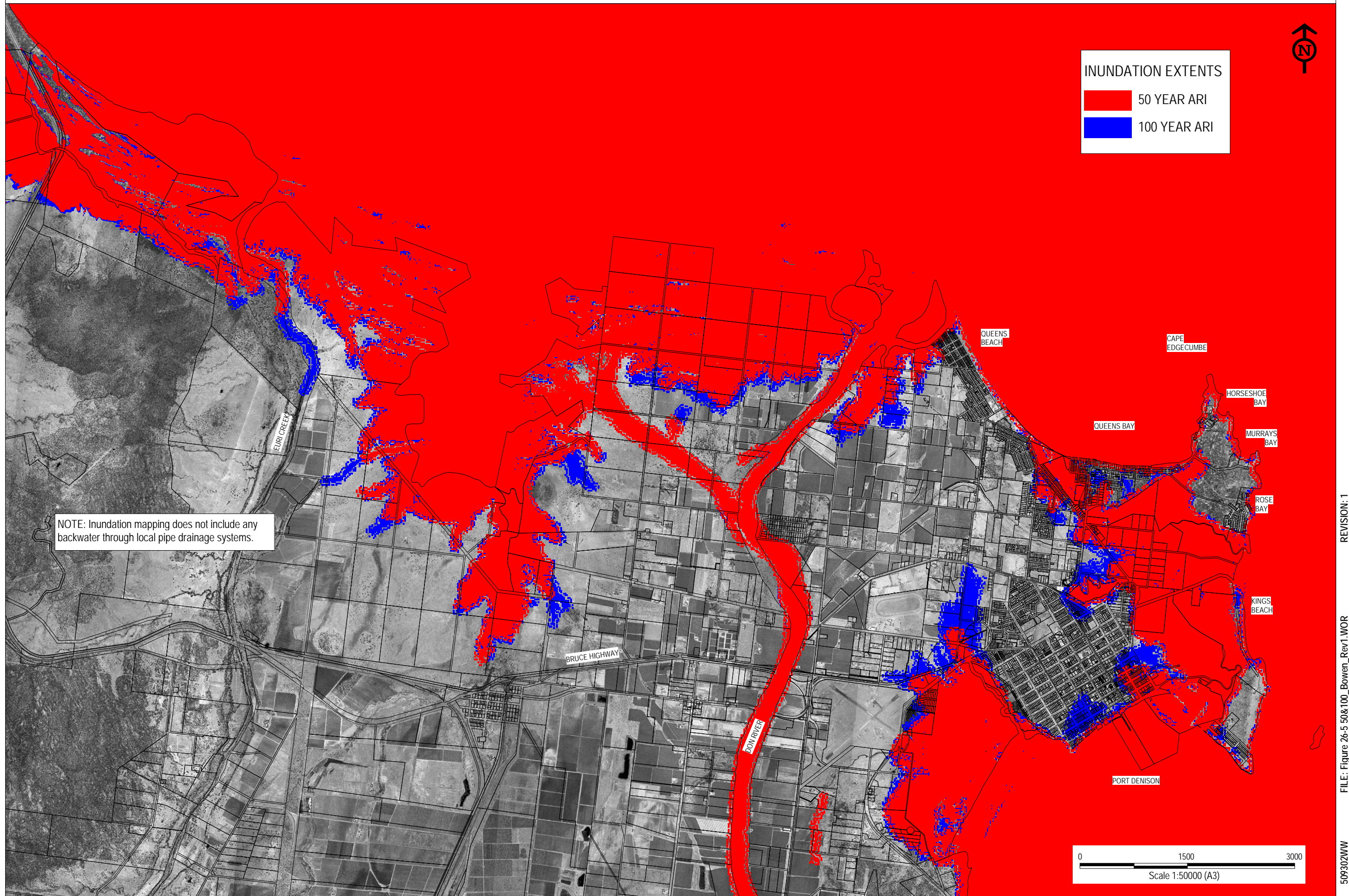


FIGURE 26-4: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - ABBOT POINT





REVISION: 1
FILE: Figure 26-5 50&100_Bowen_Rev1.WOR
509302WW

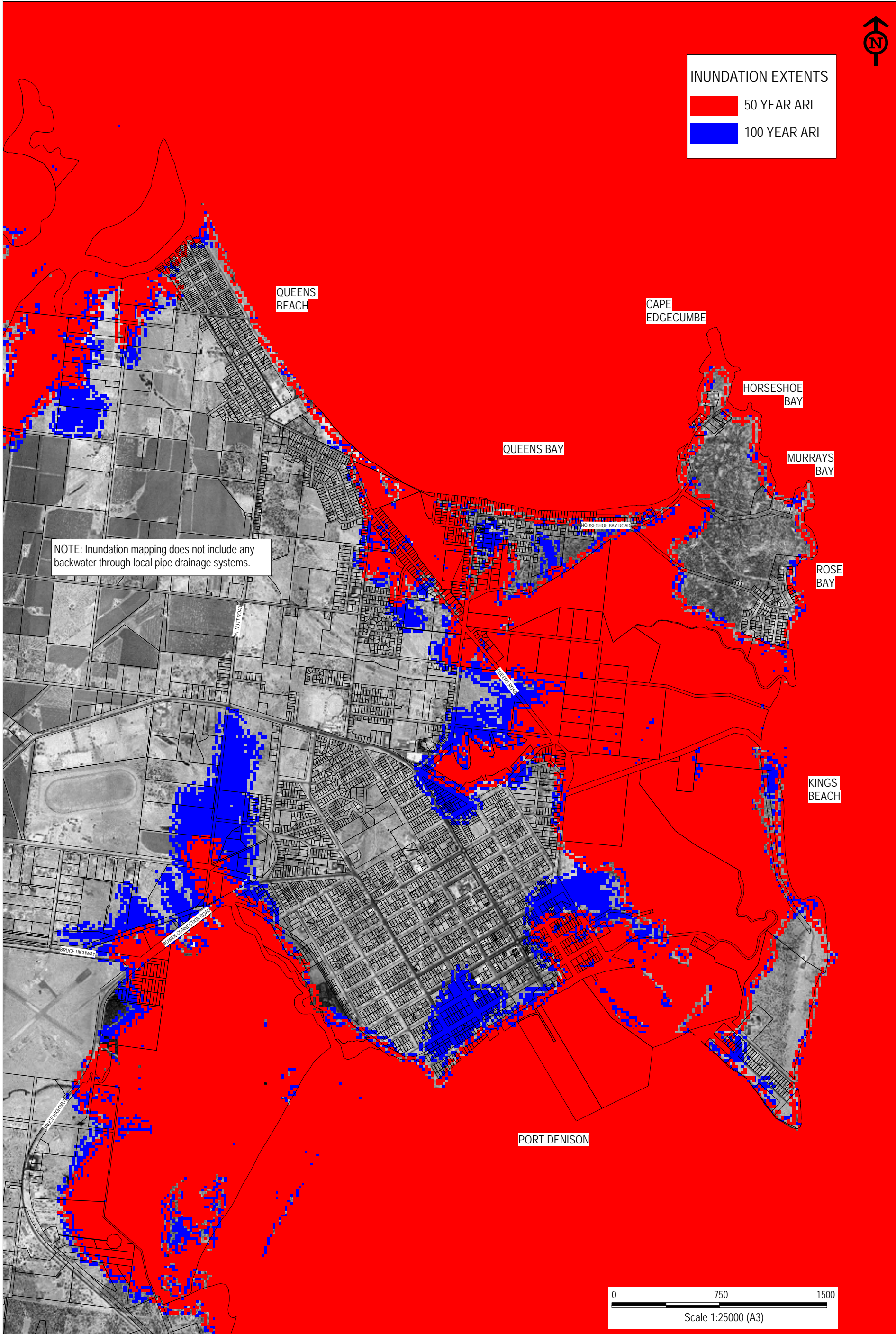
FIGURE 26-5: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - BOWEN



INUNDATION EXTENTS

	50 YEAR ARI
	100 YEAR ARI

NOTE: Inundation mapping does not include any backwater through local pipe drainage systems.

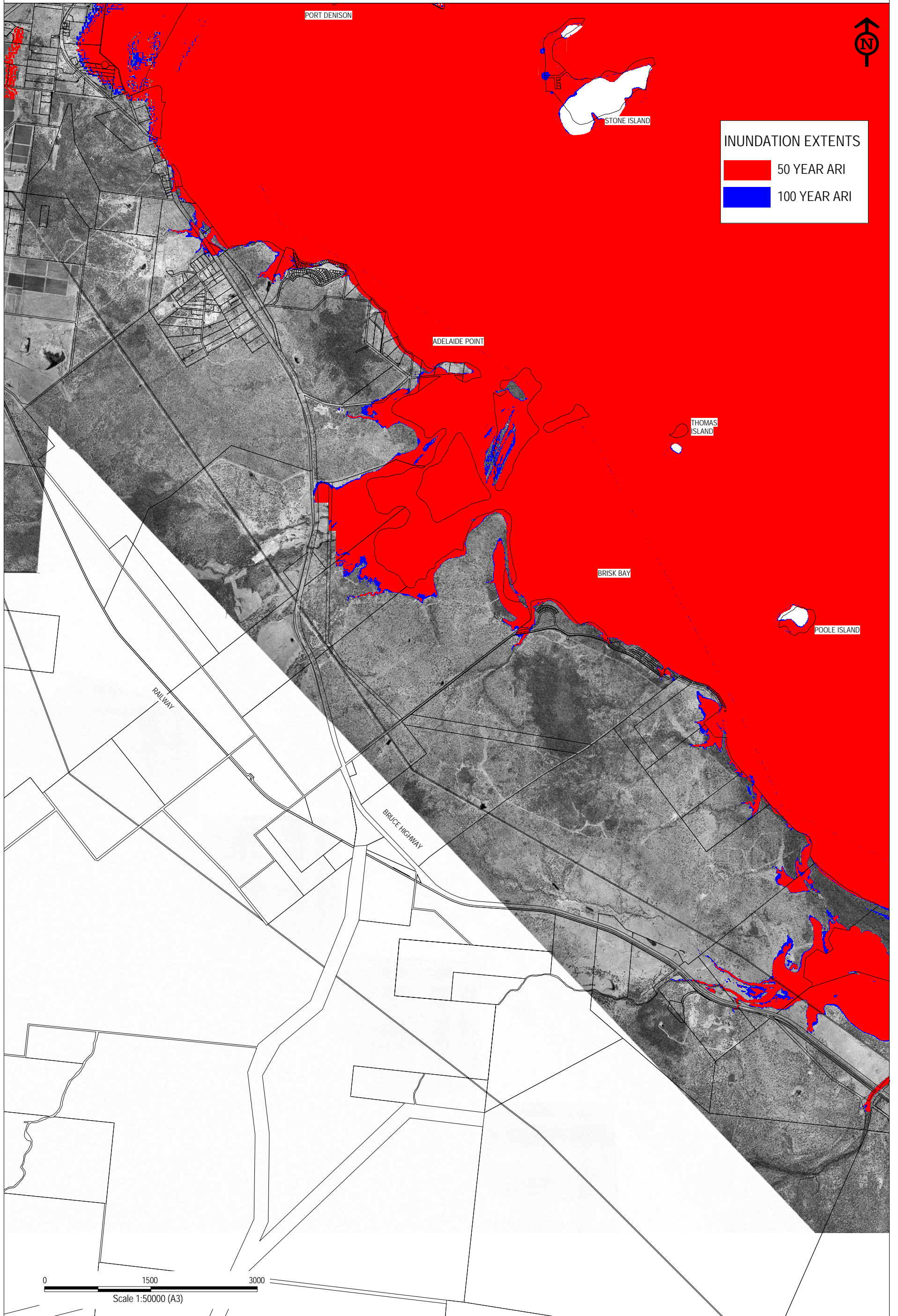


REVISION: 1

FILE: Figure 26-5a 50&100_Inundation_Bowen_Inset_Rev1.WOR

509302WV

FIGURE 26-5A: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



REVISION: 1

FILE: Figure 26-6 50&100_Heronvale_Rev1.WOR

509302MWW

FIGURE 26-6: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - HERONVALE

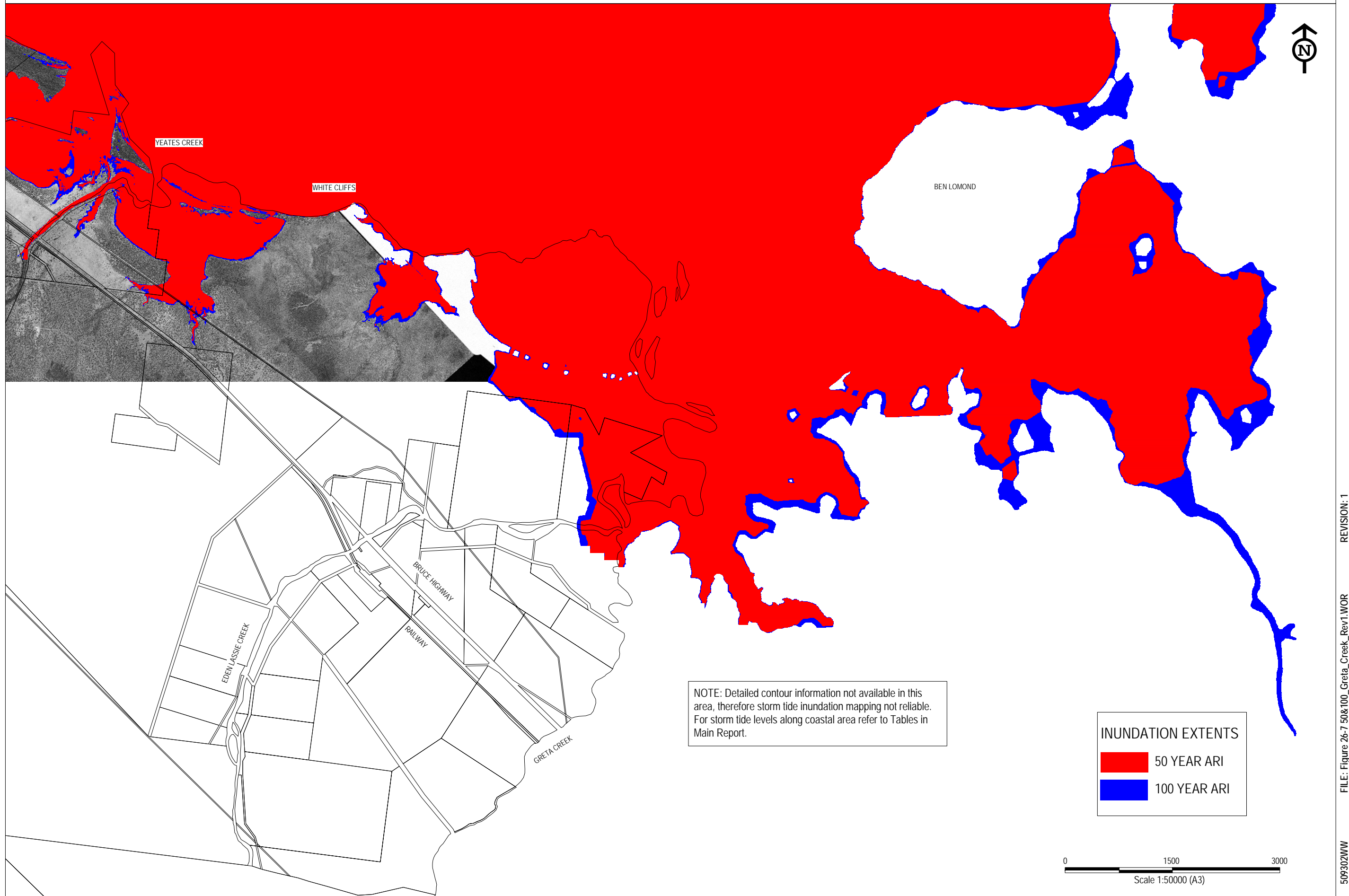




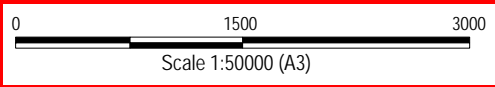
FIGURE 26-7: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - GRETA CREEK



NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.

INUNDATION EXTENTS

	50 YEAR ARI
	100 YEAR ARI



REVISION: 1

FILE: Figure 26-8 50&100_Gloucester_Island_Rev1.WOR

509302WW

FIGURE 26-8: 50 AND 100 YEAR ARI STORM SURGE INUNDATION - GLOUCESTER ISLAND

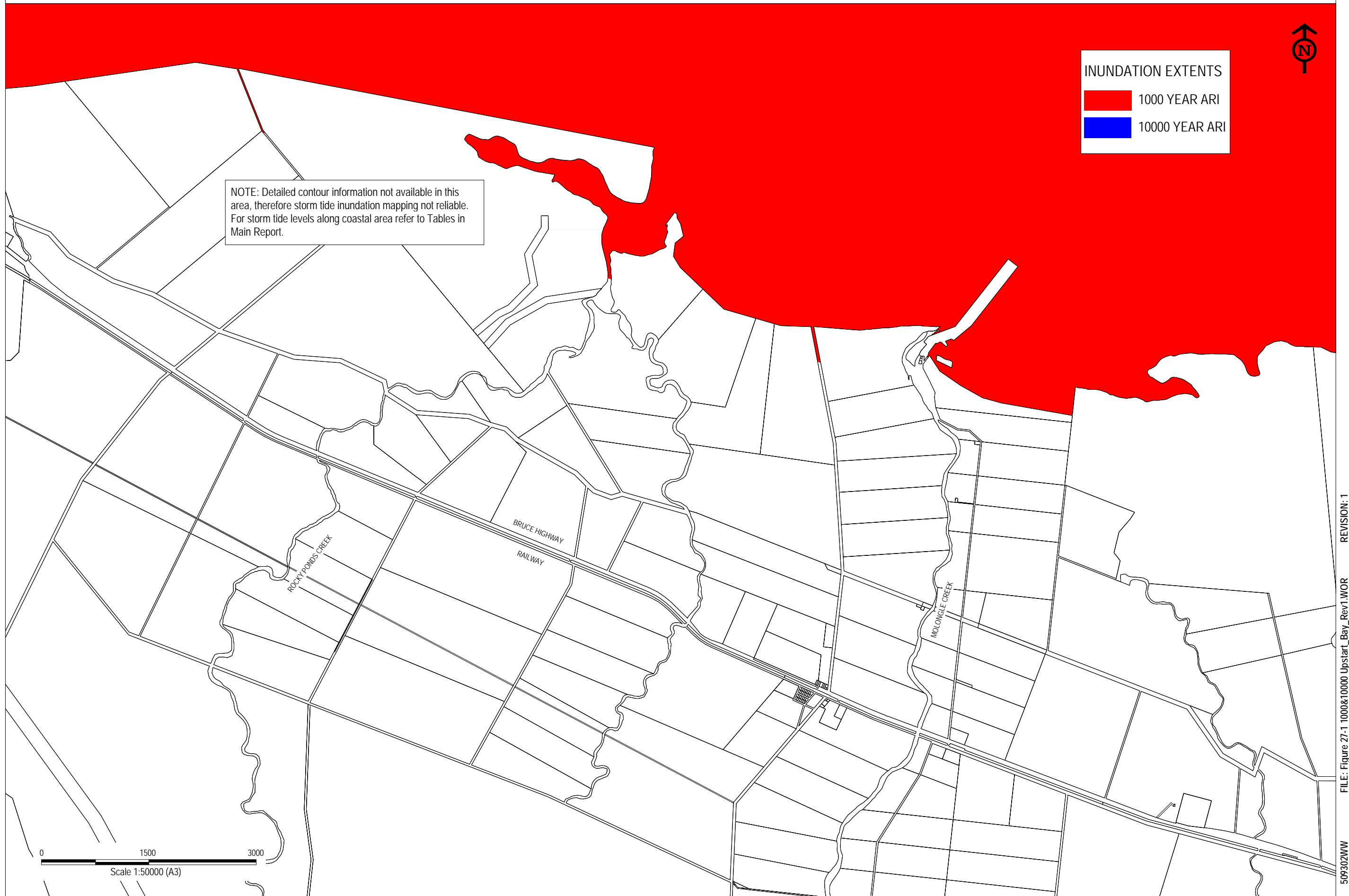




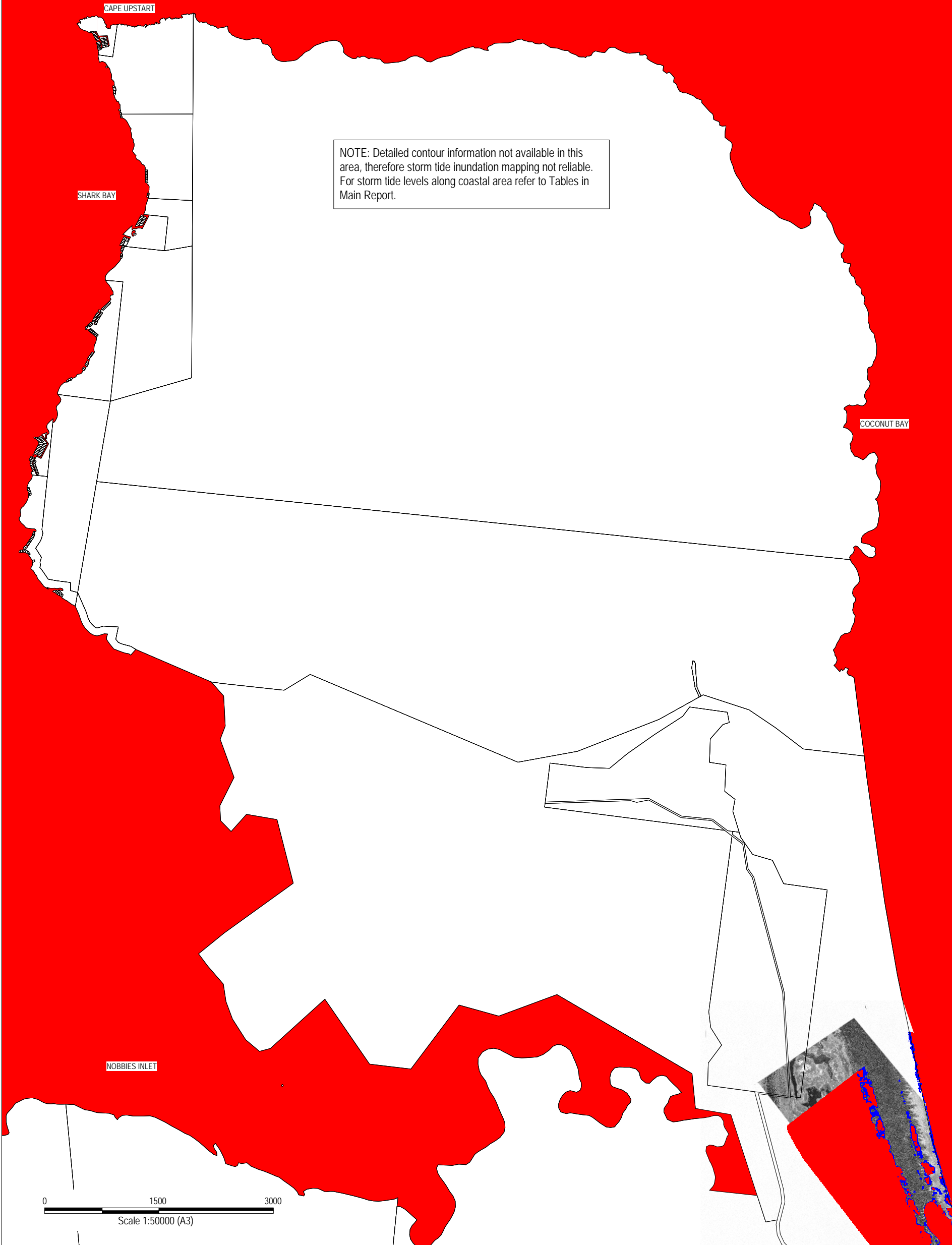
FIGURE 27-1: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - UPSTART BAY



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI

NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.



REVISION: 1

FILE: Figure 27-2 1000&10000_Cape_Upstart_Rev1.WOR

509302WW

FIGURE 27-2: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - CAPE UPSTART

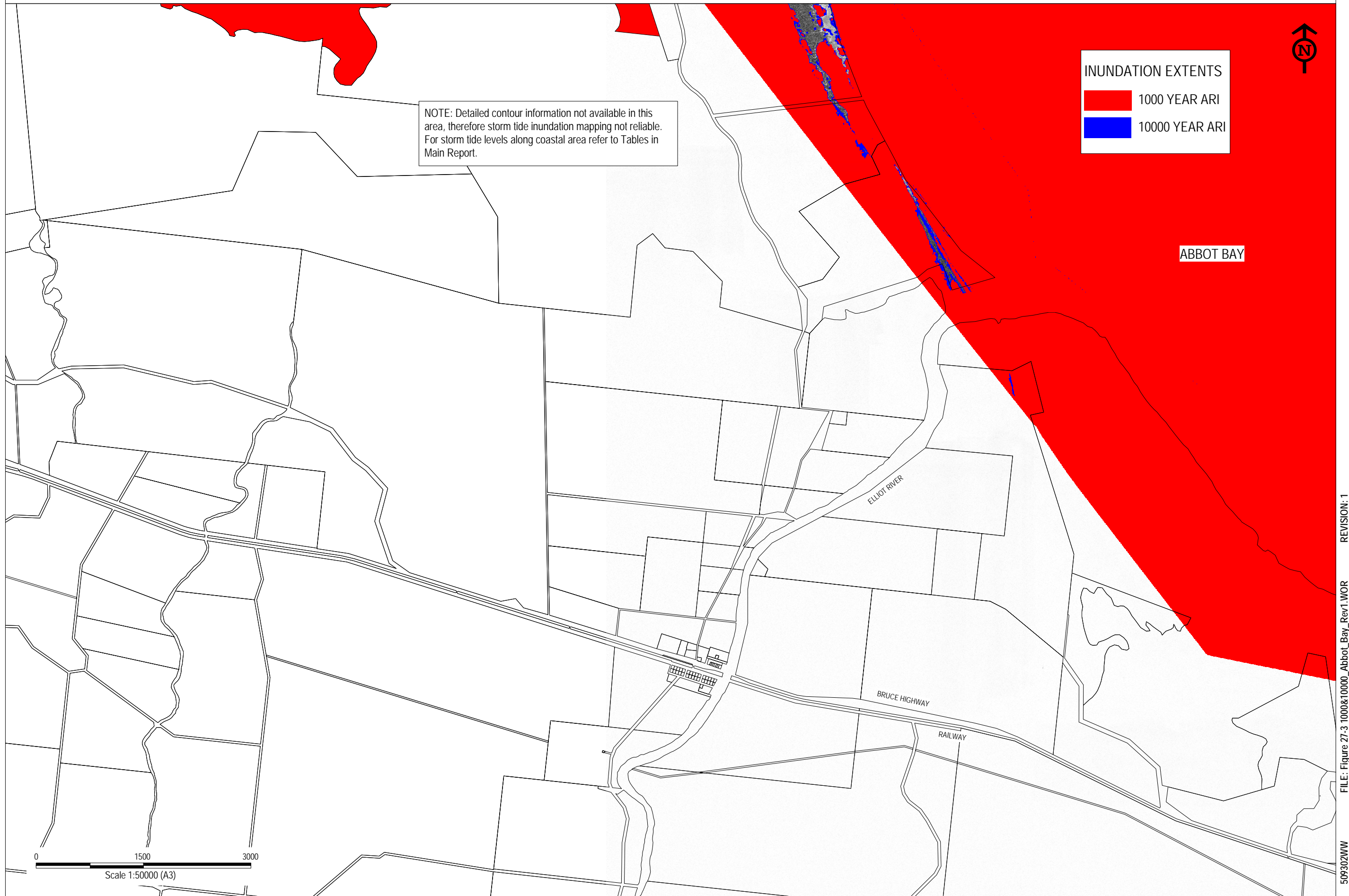


FIGURE 27-3: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - ABBOT BAY

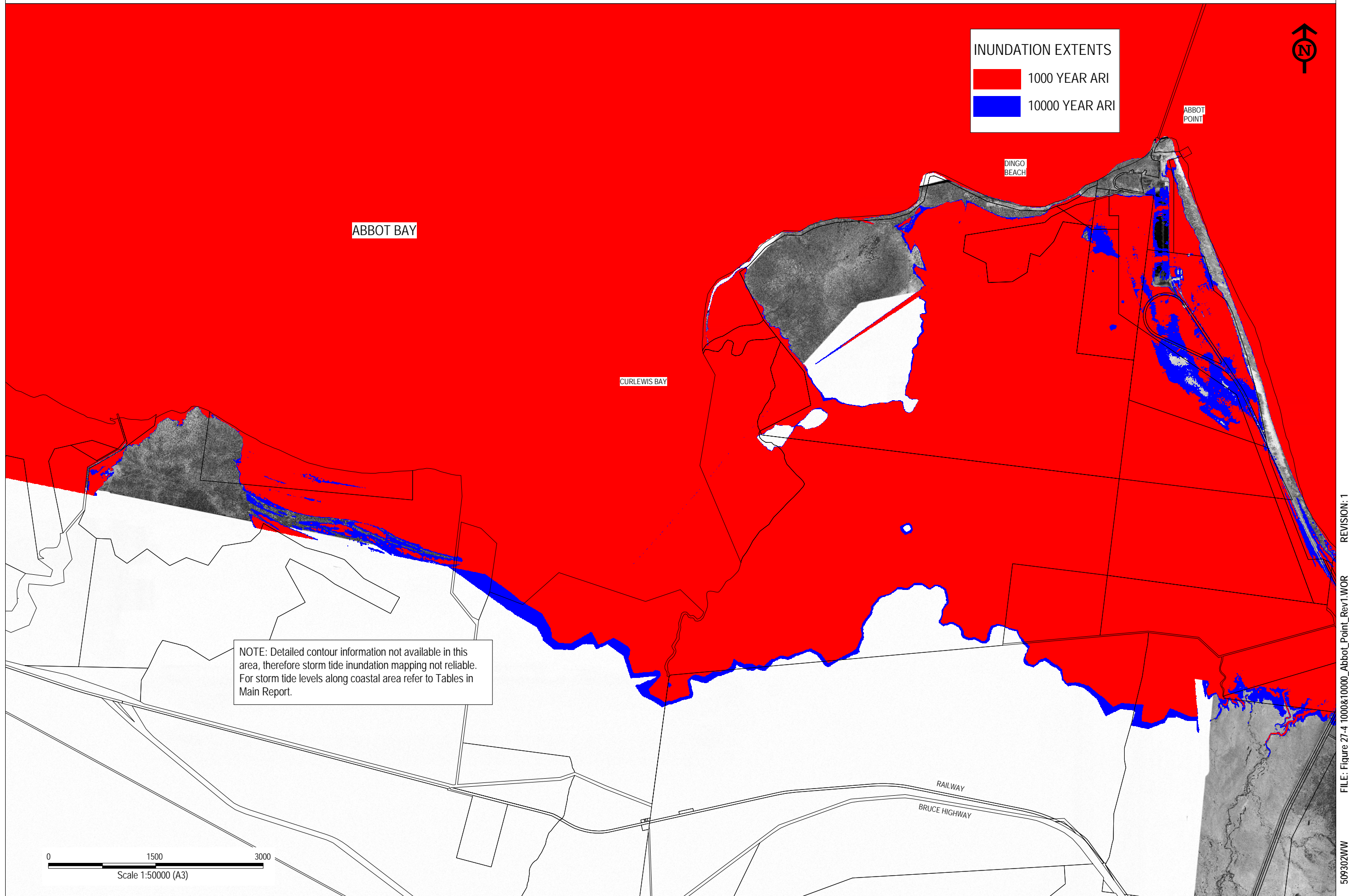
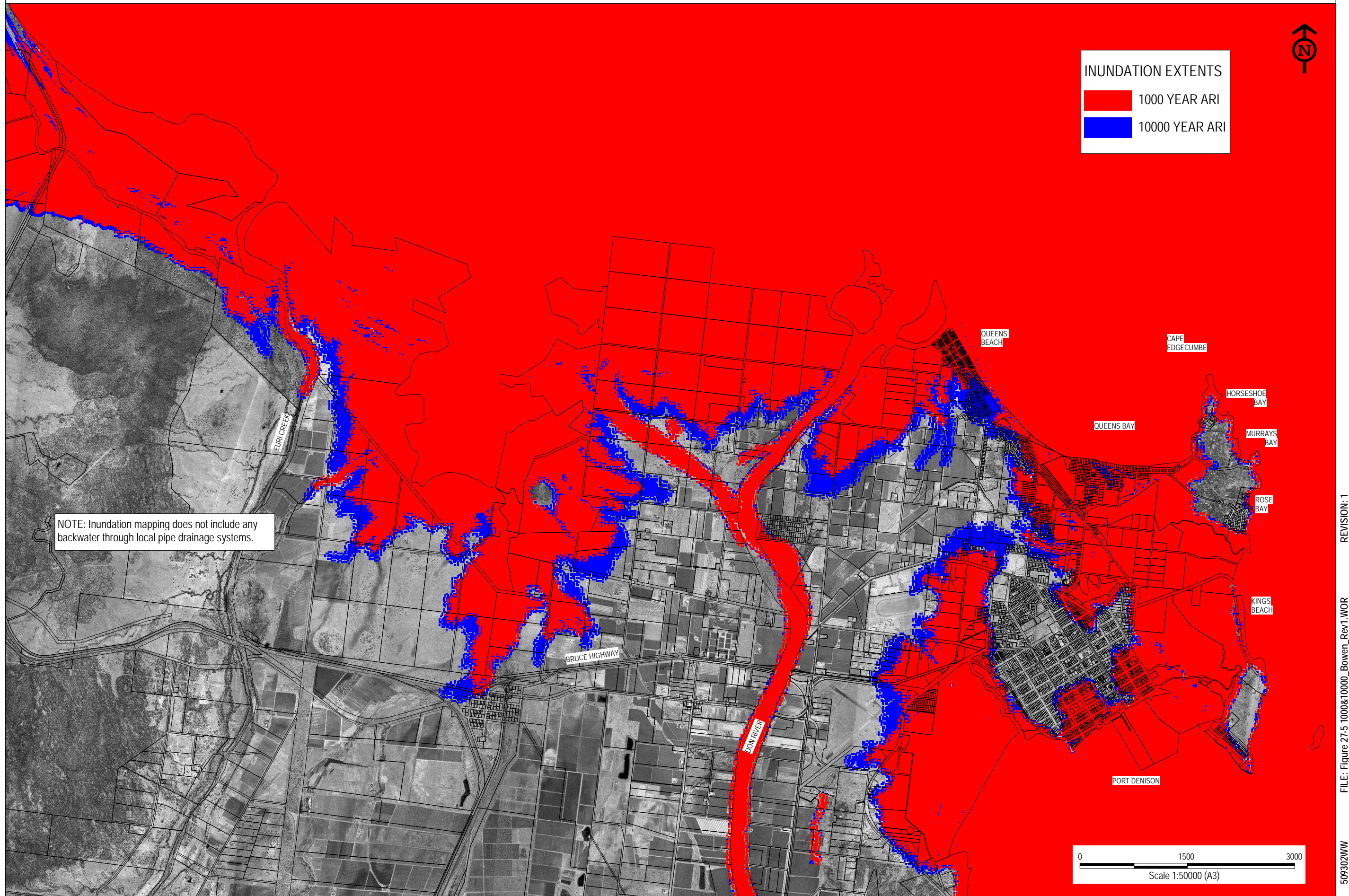


FIGURE 27-4: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - ABBOT POINT





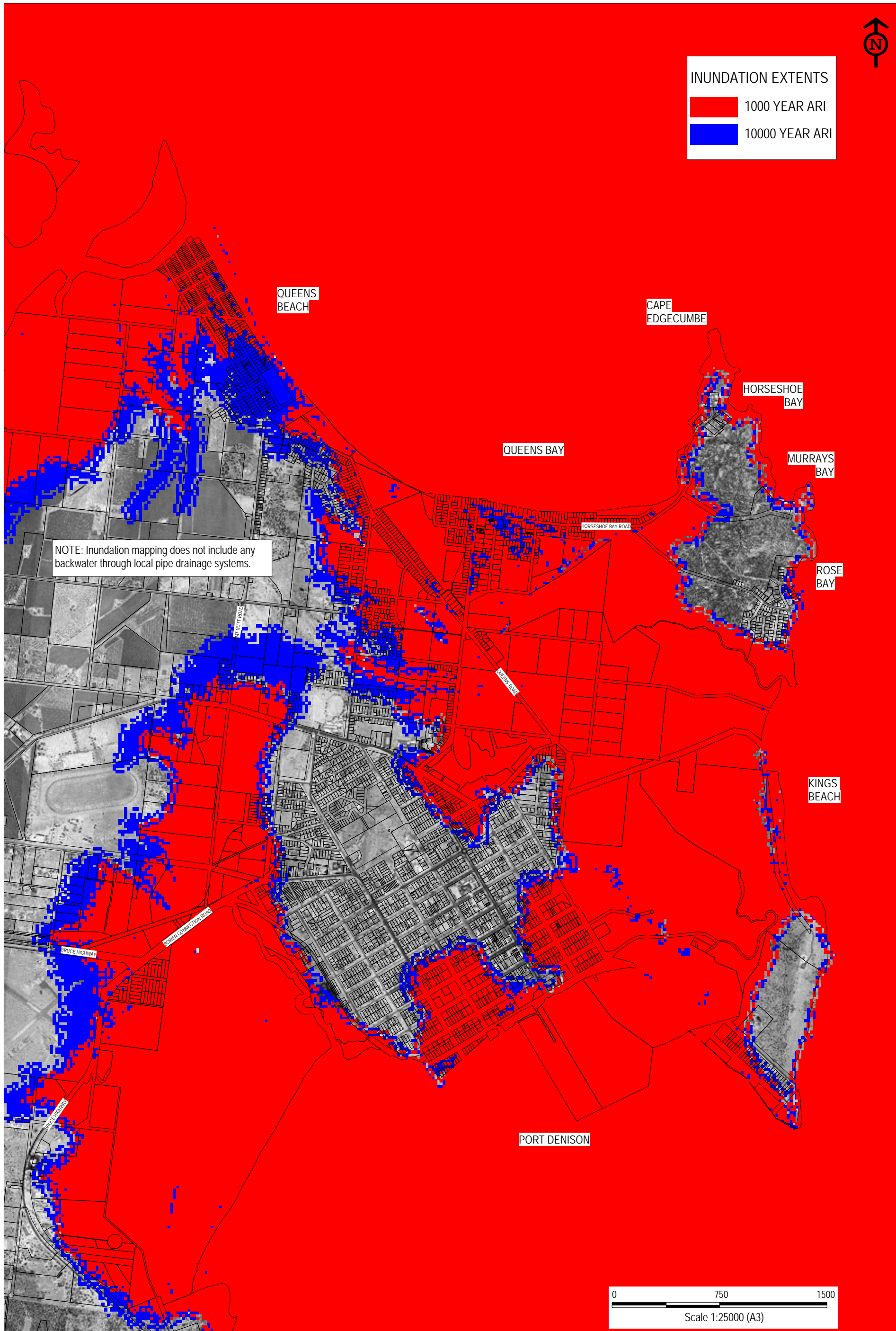
509302WW
FILE: Figure 27-5_1000&10000_Bowen_Rev1.WOR
REVISION: 1

FIGURE 27-5: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI



REVISION: 1



FILE: Figure 27-5a 1000&10000_Inundation_Bowen_Inset_Rev1.WOR

509302WV

FIGURE 27-5A: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI

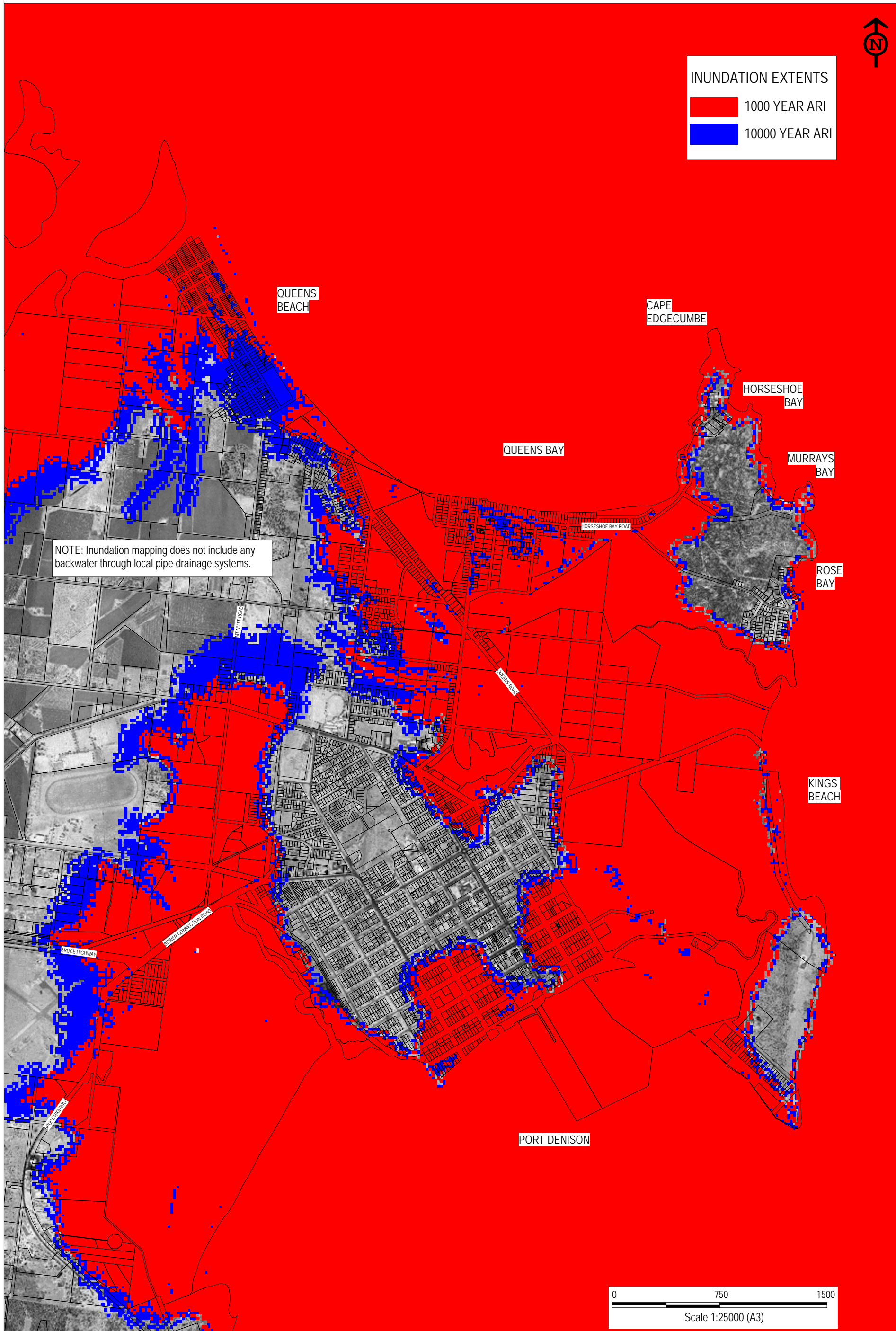


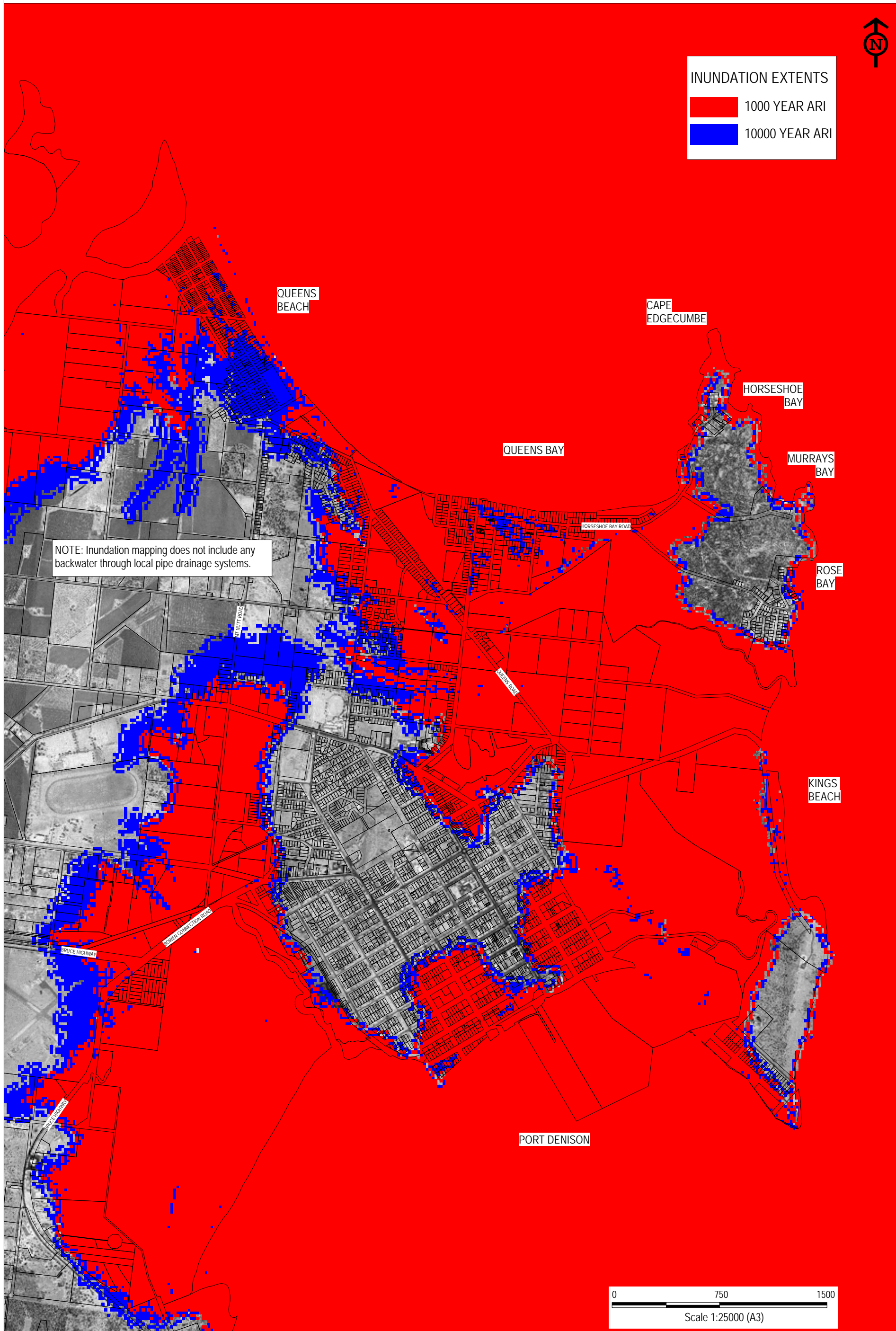


FIGURE 27-5A: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI



REVISION: 1



FILE: Figure 27-5a 1000&10000_Inundation_Bowen_Inset_Rev1.WOR

509302WV

FIGURE 27-5A: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI

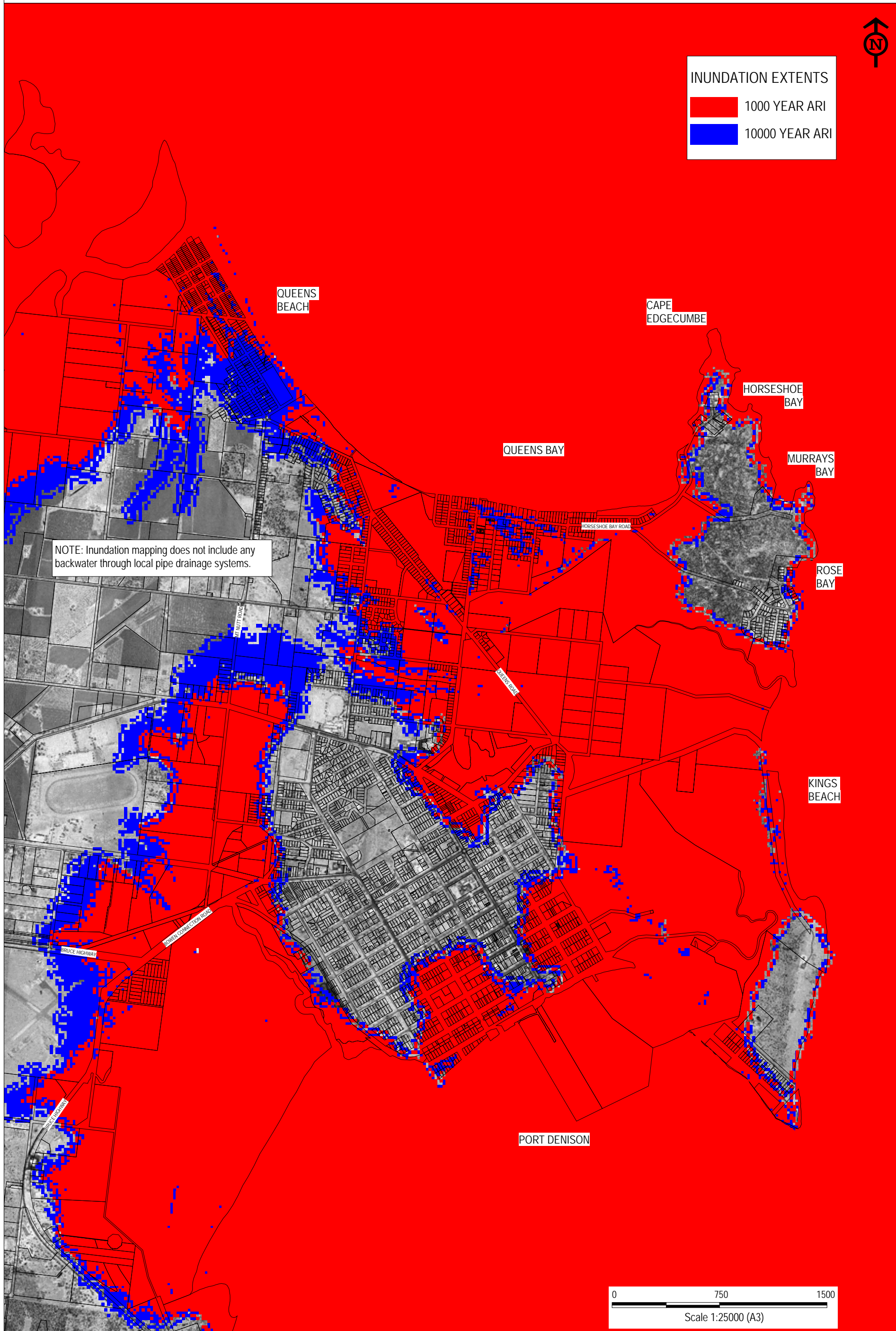




FIGURE 27-5A: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI

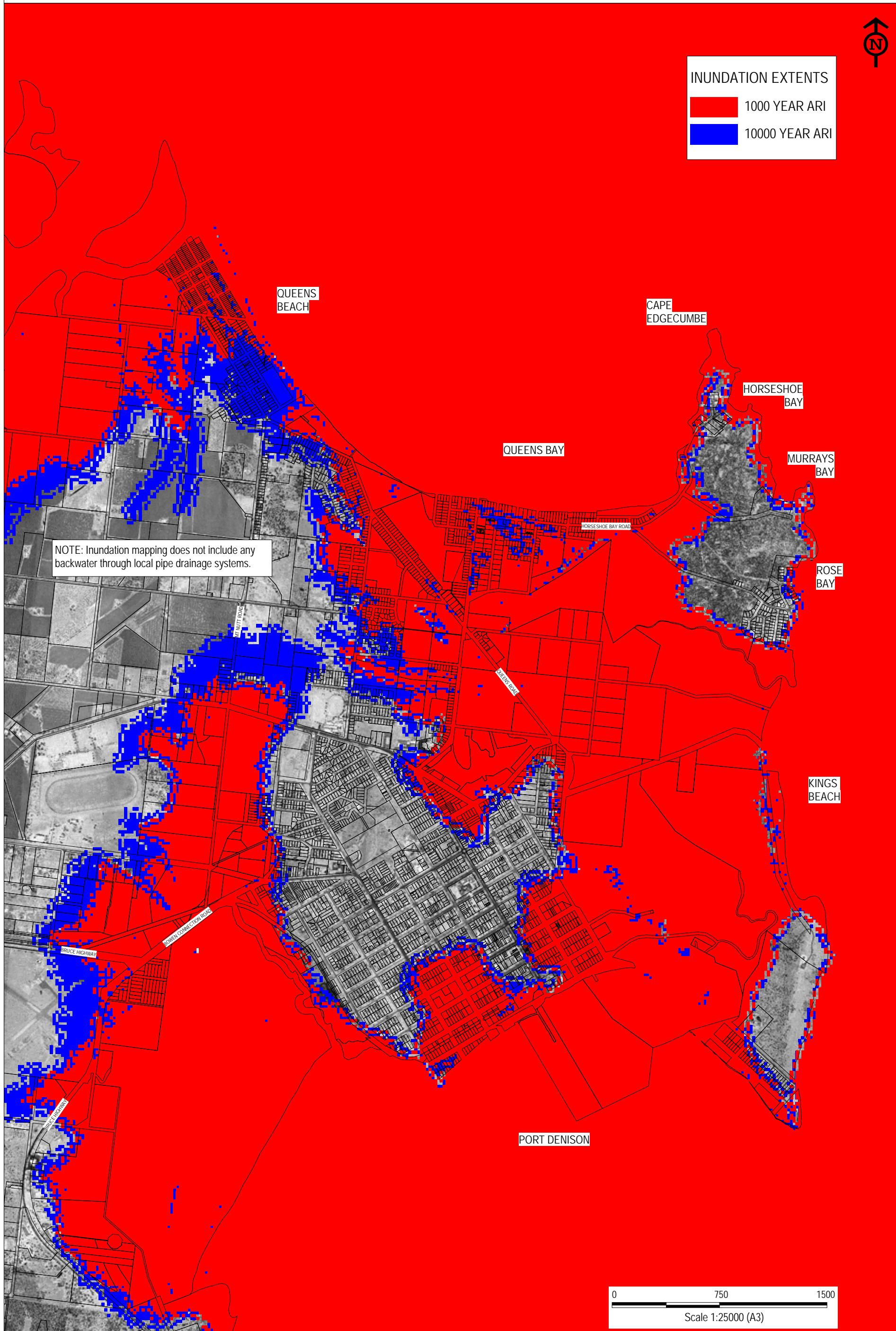
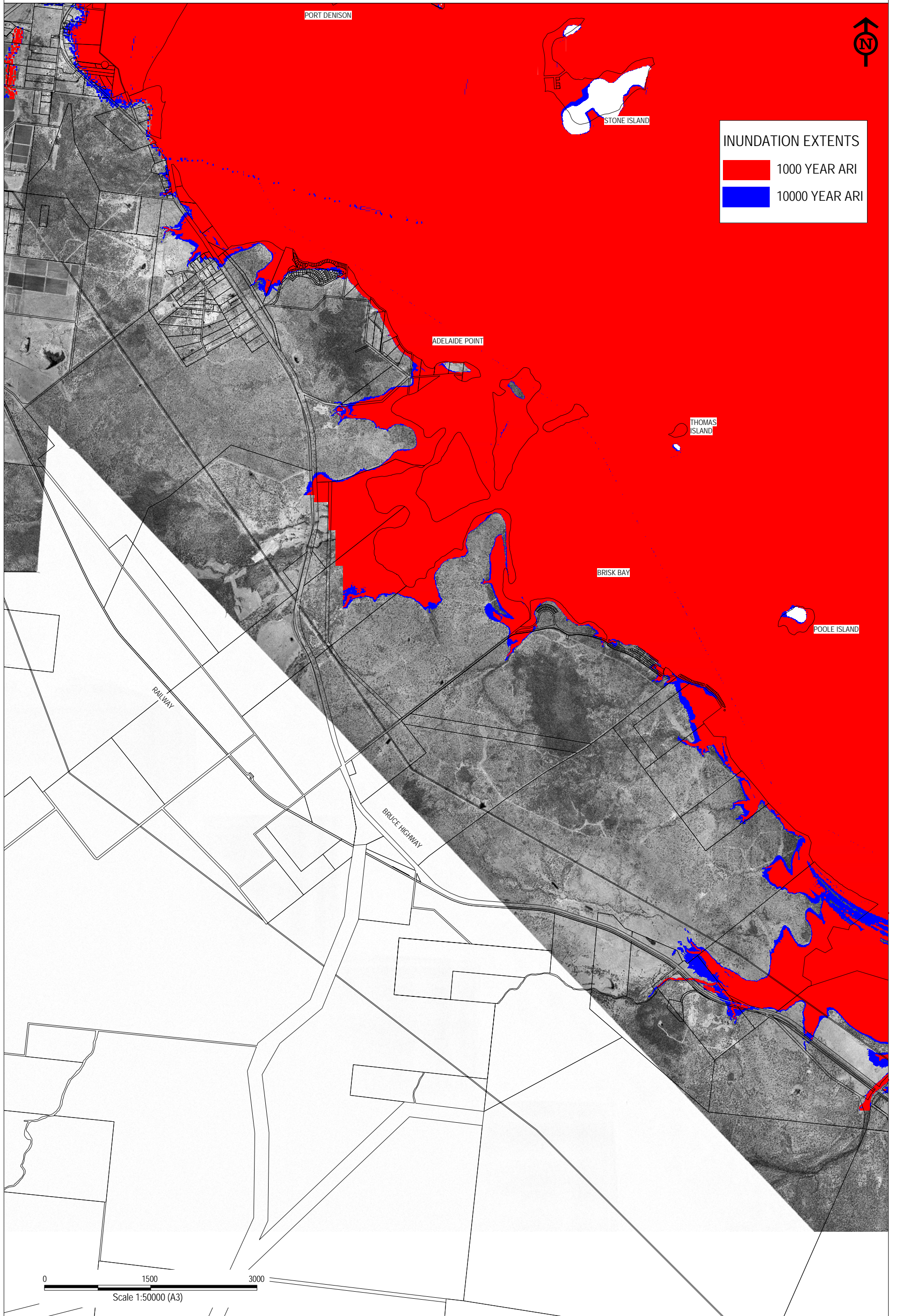


FIGURE 27-5A: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - BOWEN INSET



REVISION: 1

FILE: Figure 27-6 1000&10000_Heronvale_Rev1.WOR

509302WW

FIGURE 27-6: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - HERONVALE

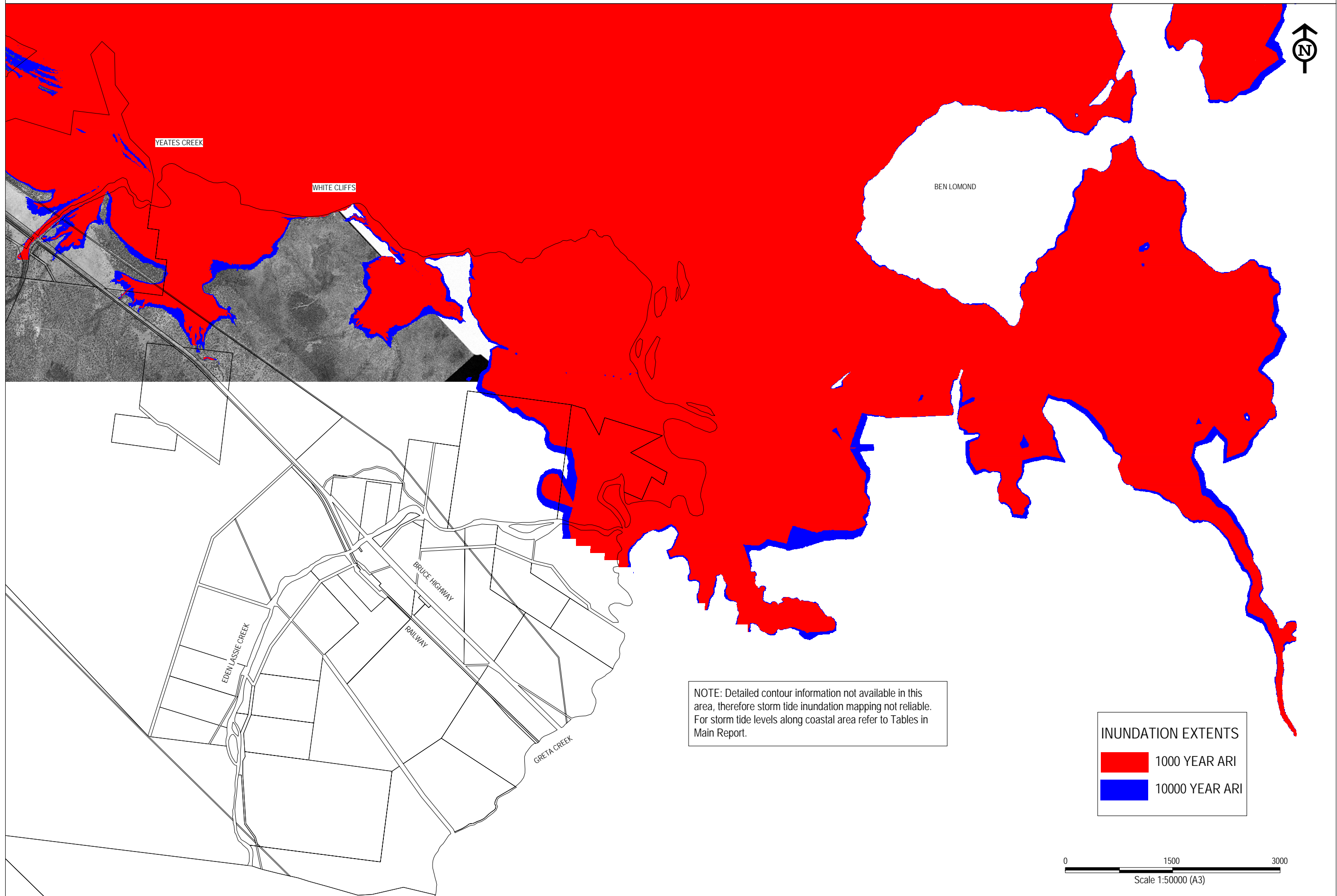




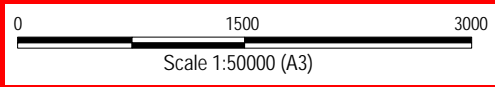
FIGURE 27-7: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - GRETA CREEK



NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.

INUNDATION EXTENTS

	1000 YEAR ARI
	10000 YEAR ARI



REVISION: 1

FILE: Figure 27-8 1000&10000_Gloucester_Island_Rev1.WOR

509302WW

FIGURE 27-8: 1000 AND 10000 YEAR ARI STORM SURGE INUNDATION - GLOUCESTER ISLAND

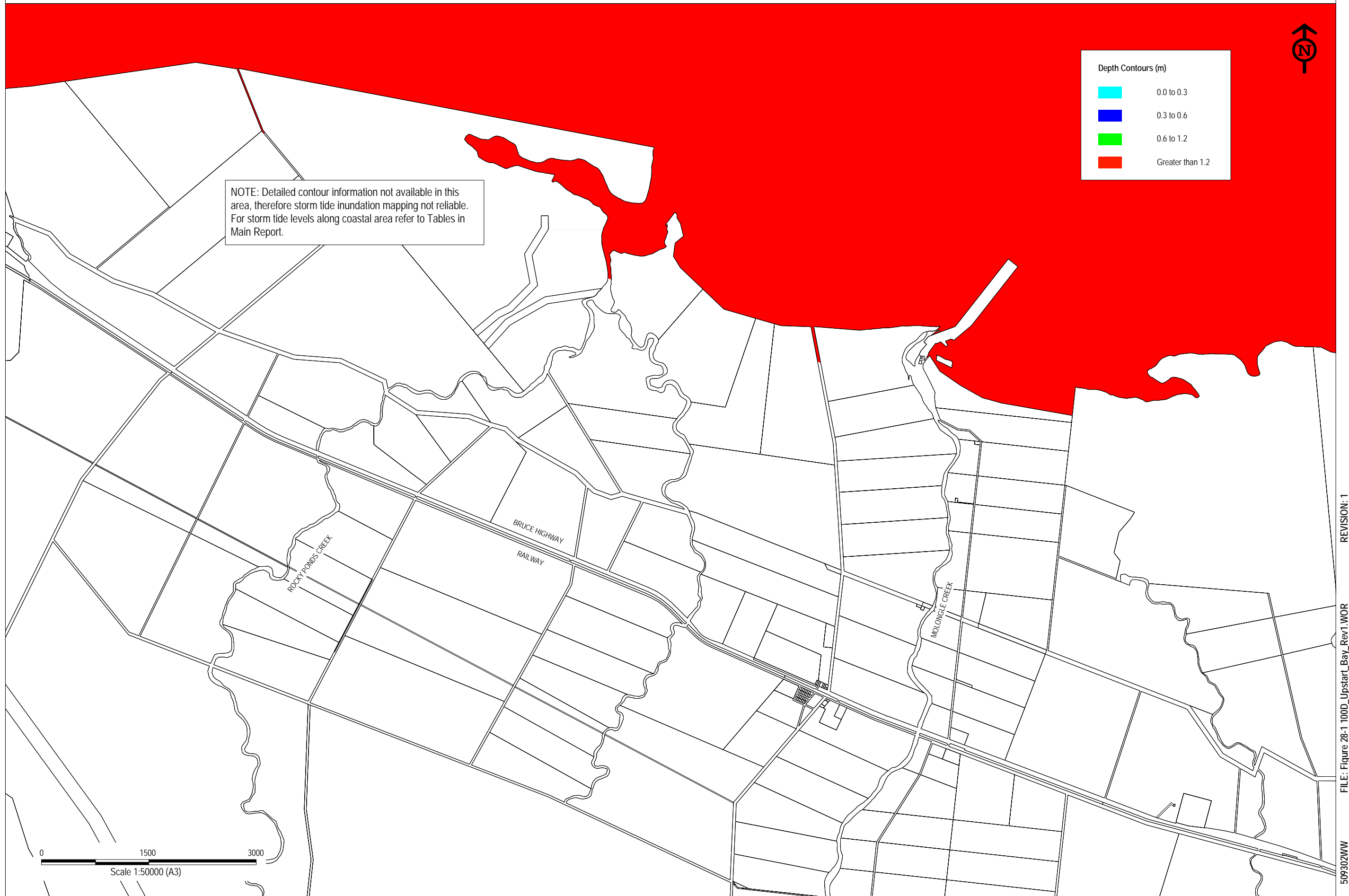


FIGURE 28-1: 100 YEAR ARI HAZARD (DEPTHS) - UPSTART BAY

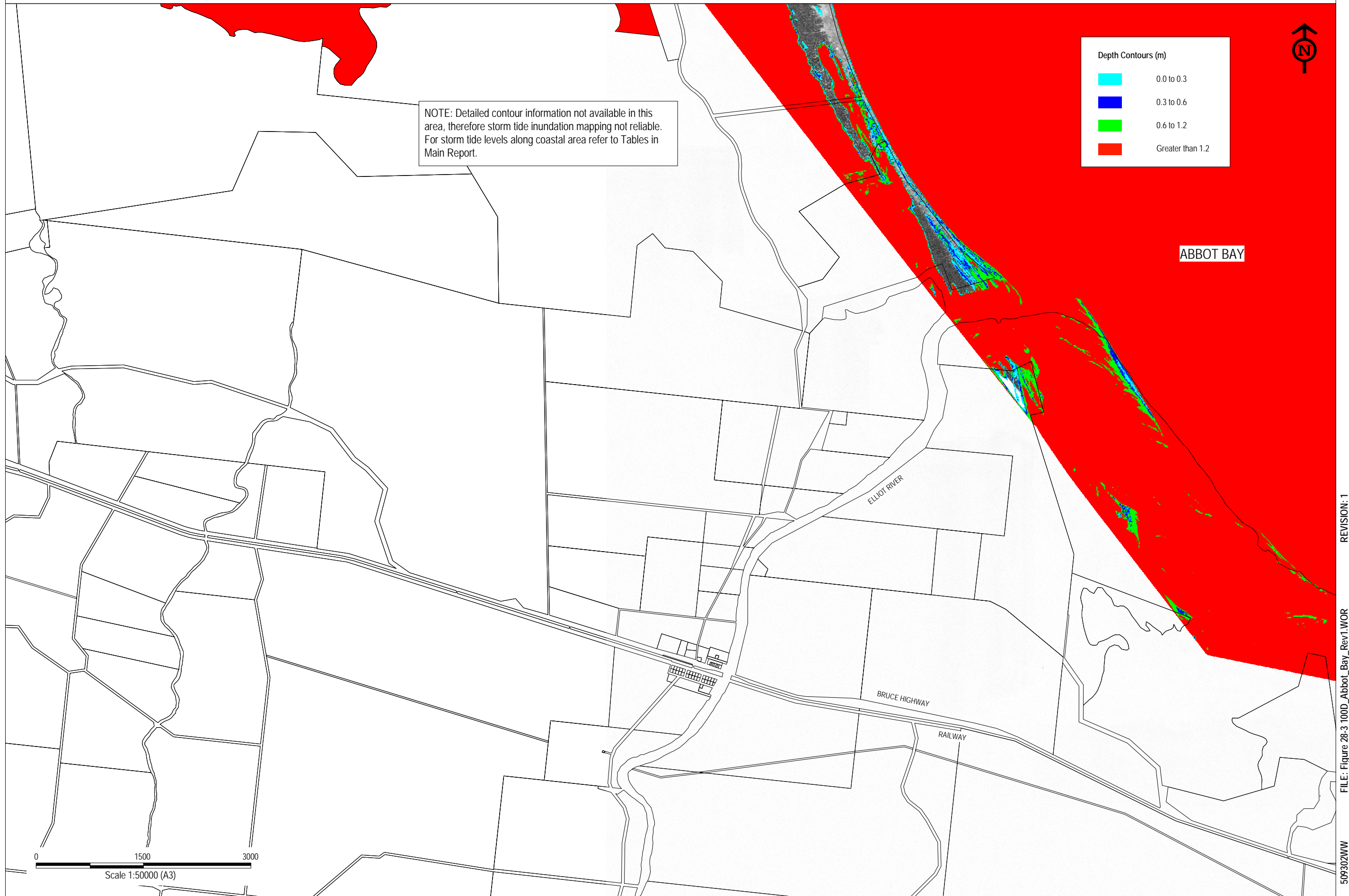


FIGURE 28-3: 100 YEAR ARI HAZARD (DEPTHS) - ABBOT BAY

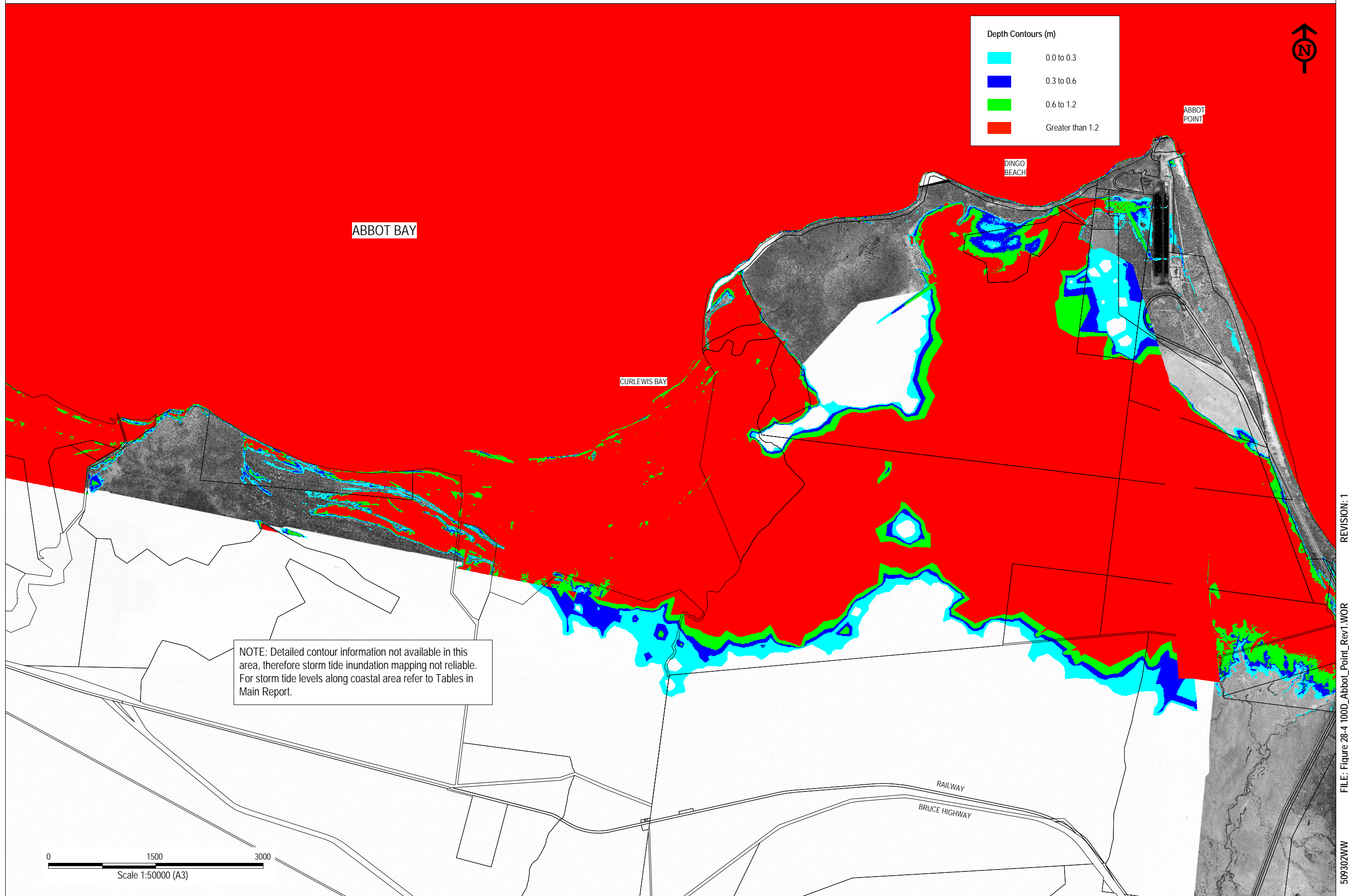
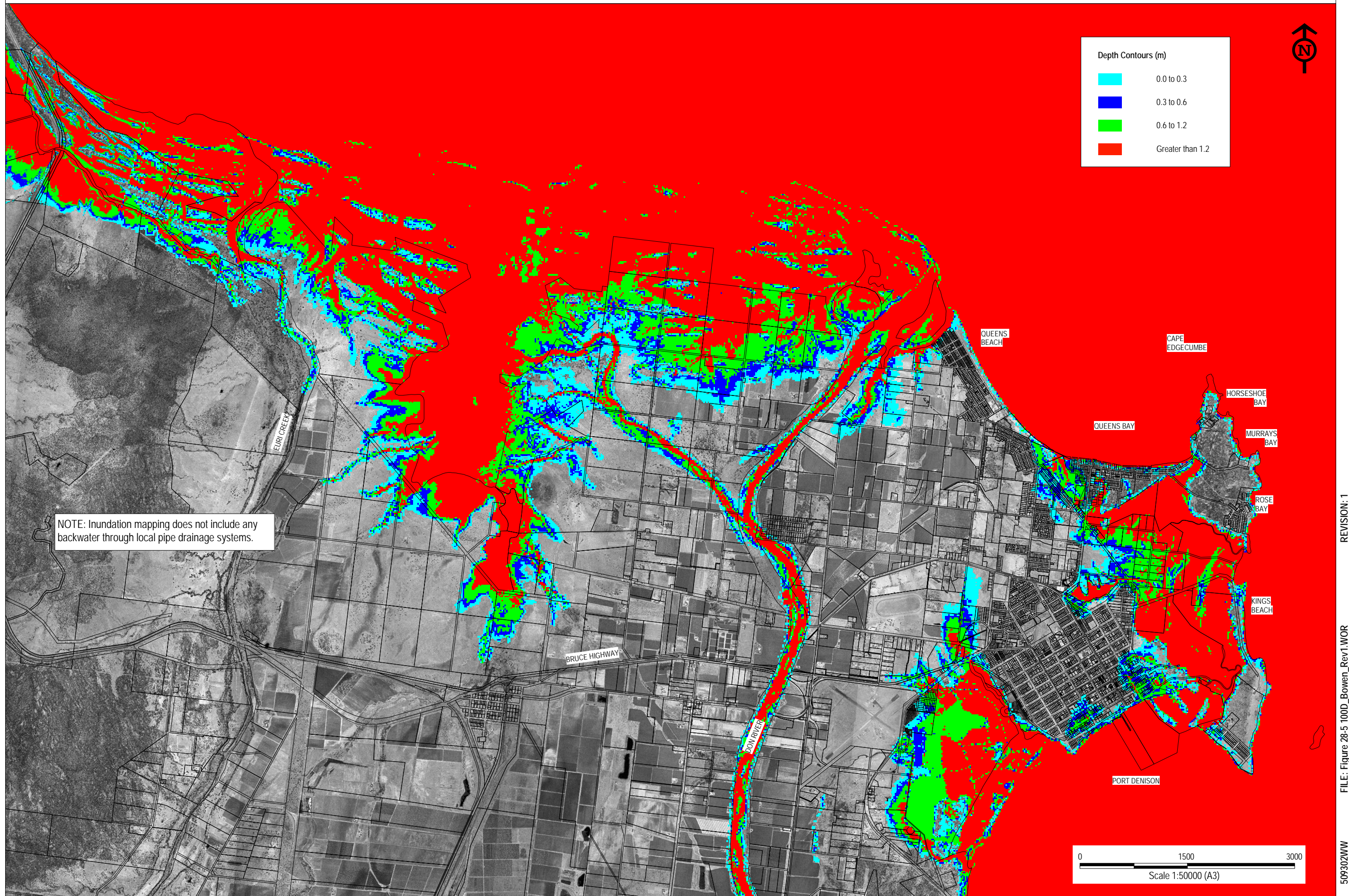


FIGURE 28-4: 100 YEAR ARI HAZARD (DEPTHS) - ABBOT POINT

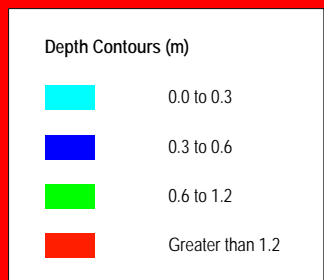


REVISION: 1

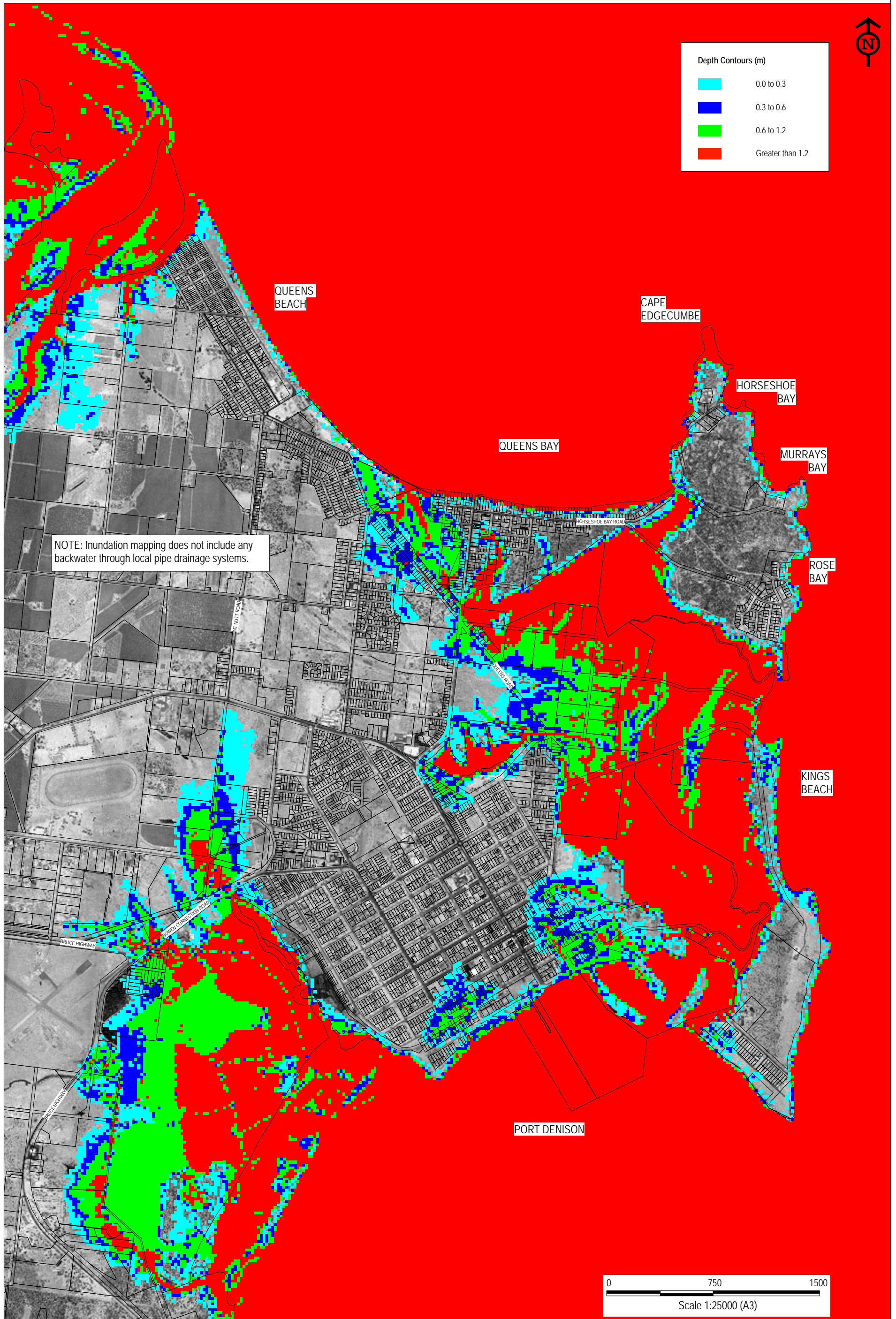
FILE: Figure 28-5 100D_Bowen_Rev1.WOR

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FIGURE 28-5: 100 YEAR ARI HAZARD (DEPTHS) - BOWEN



NOTE: Inundation mapping does not include any backwater through local pipe drainage systems.



REVISION: 1

FILE: Figure 28-5a 100D_Inundation_Bowen_Inset_Rev1.WOR

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FIGURE 28-5A: 100 YEAR ARI HAZARD (DEPTHS) - BOWEN INSET

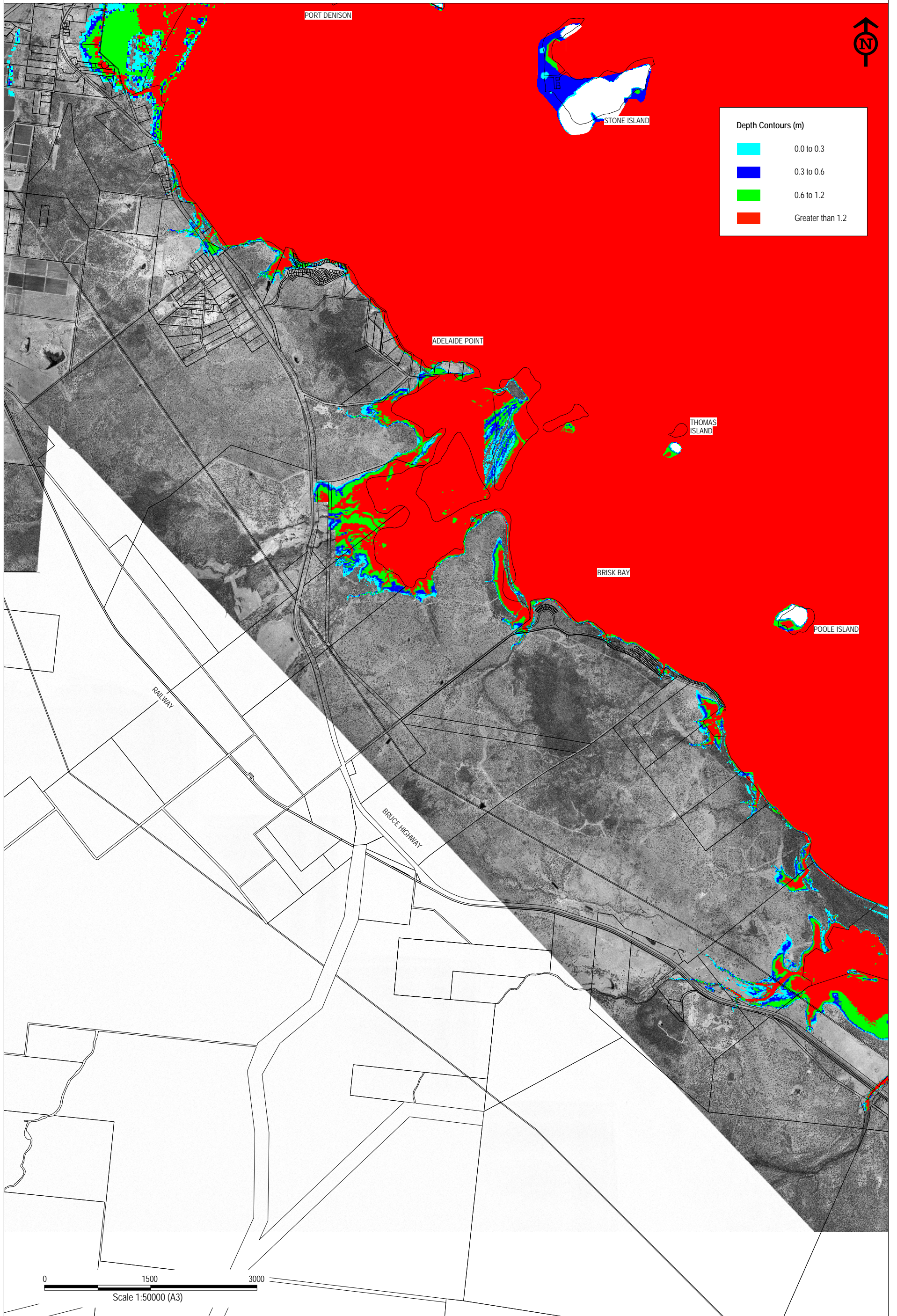


FIGURE 28-6: 100 YEAR ARI HAZARD (DEPTHS) - HERONVALE

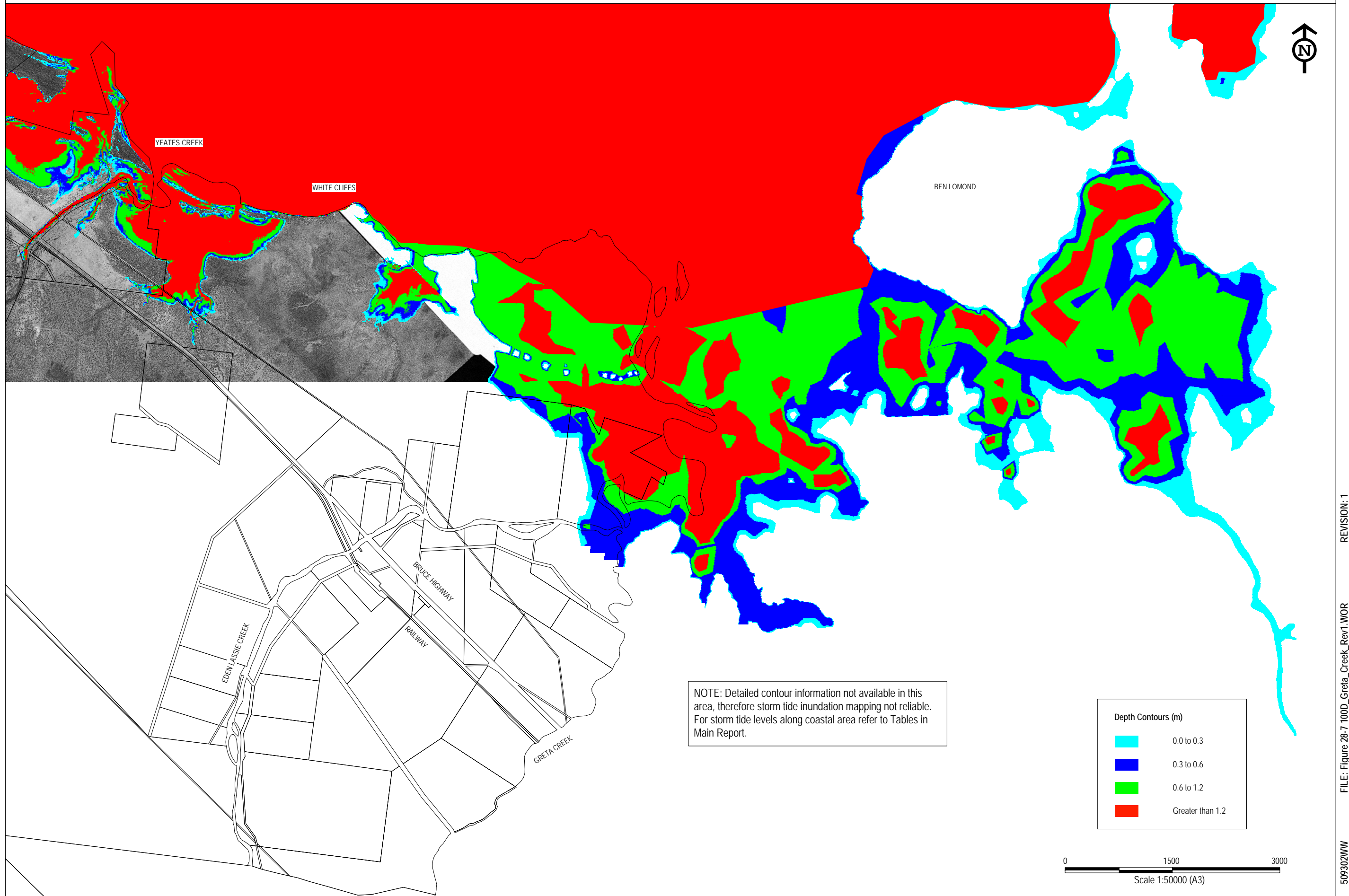






FIGURE 28-7: 100 YEAR ARI HAZARD (DEPTHS) - GRETA CREEK



NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.

Depth Contours (m)	
	0.0 to 0.3
	0.3 to 0.6
	0.6 to 1.2
	Greater than 1.2

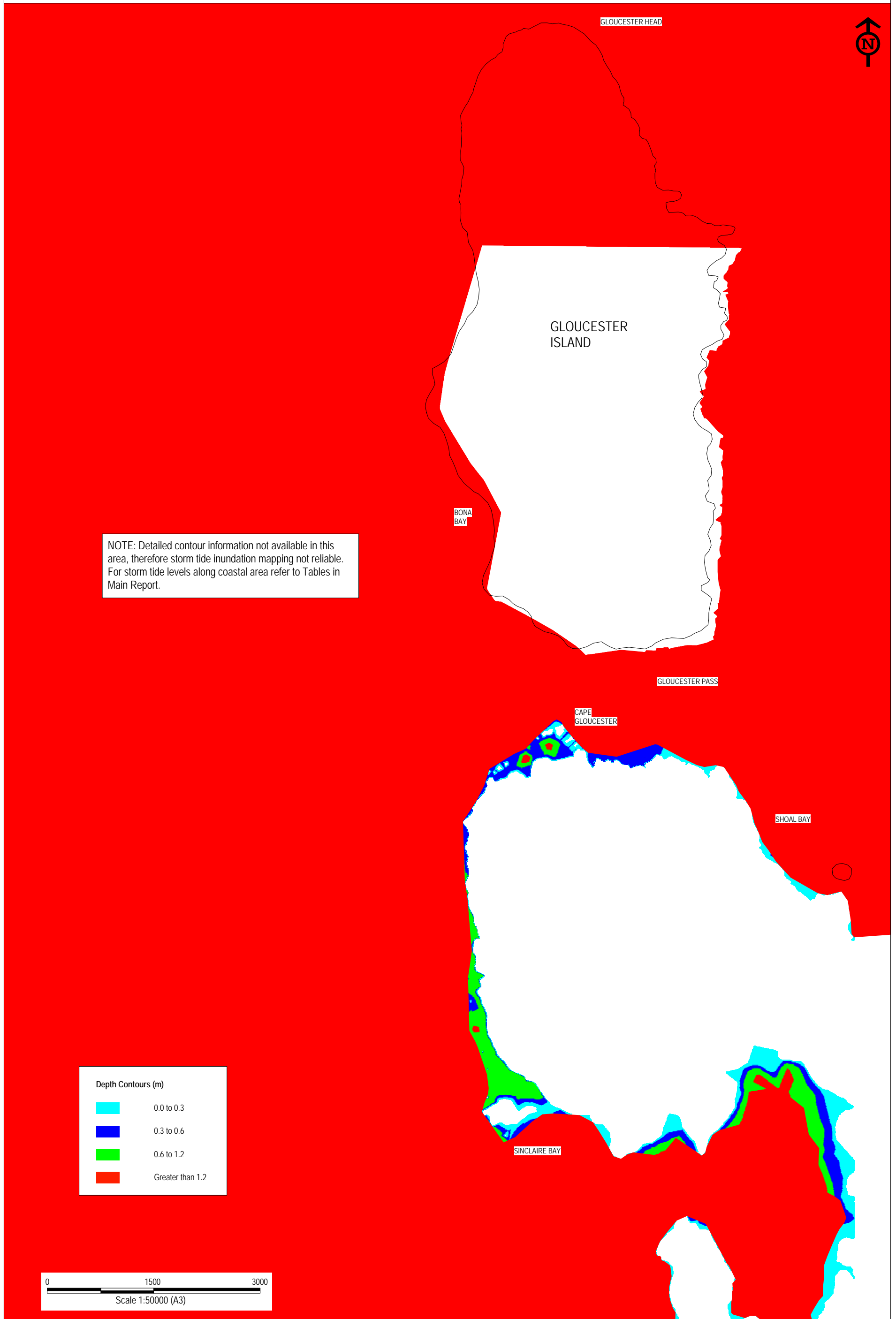
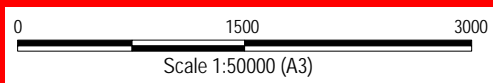


FIGURE 28-8: 100 YEAR ARI HAZARD (DEPTHS) - GLOUCESTER ISLAND

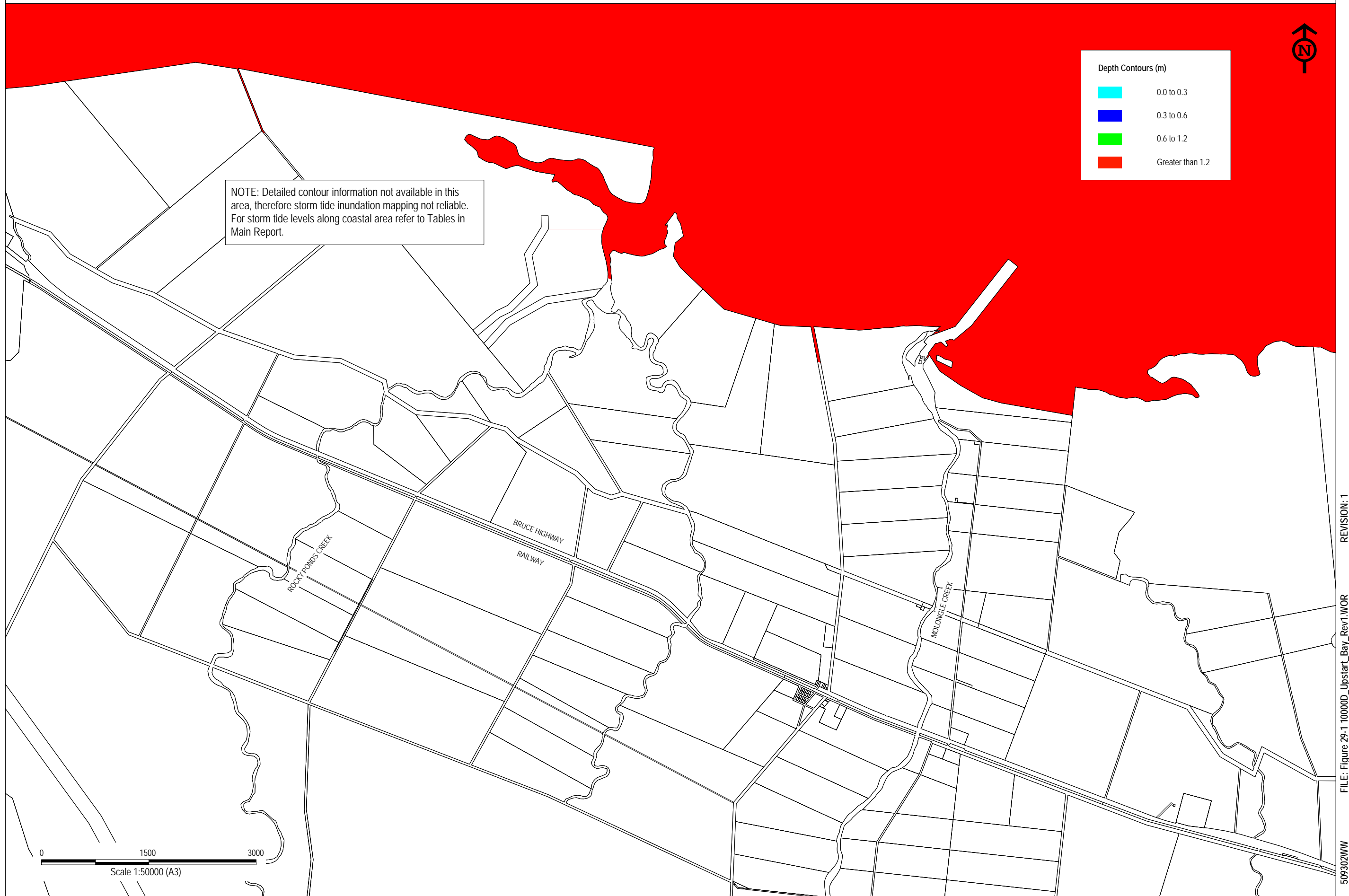
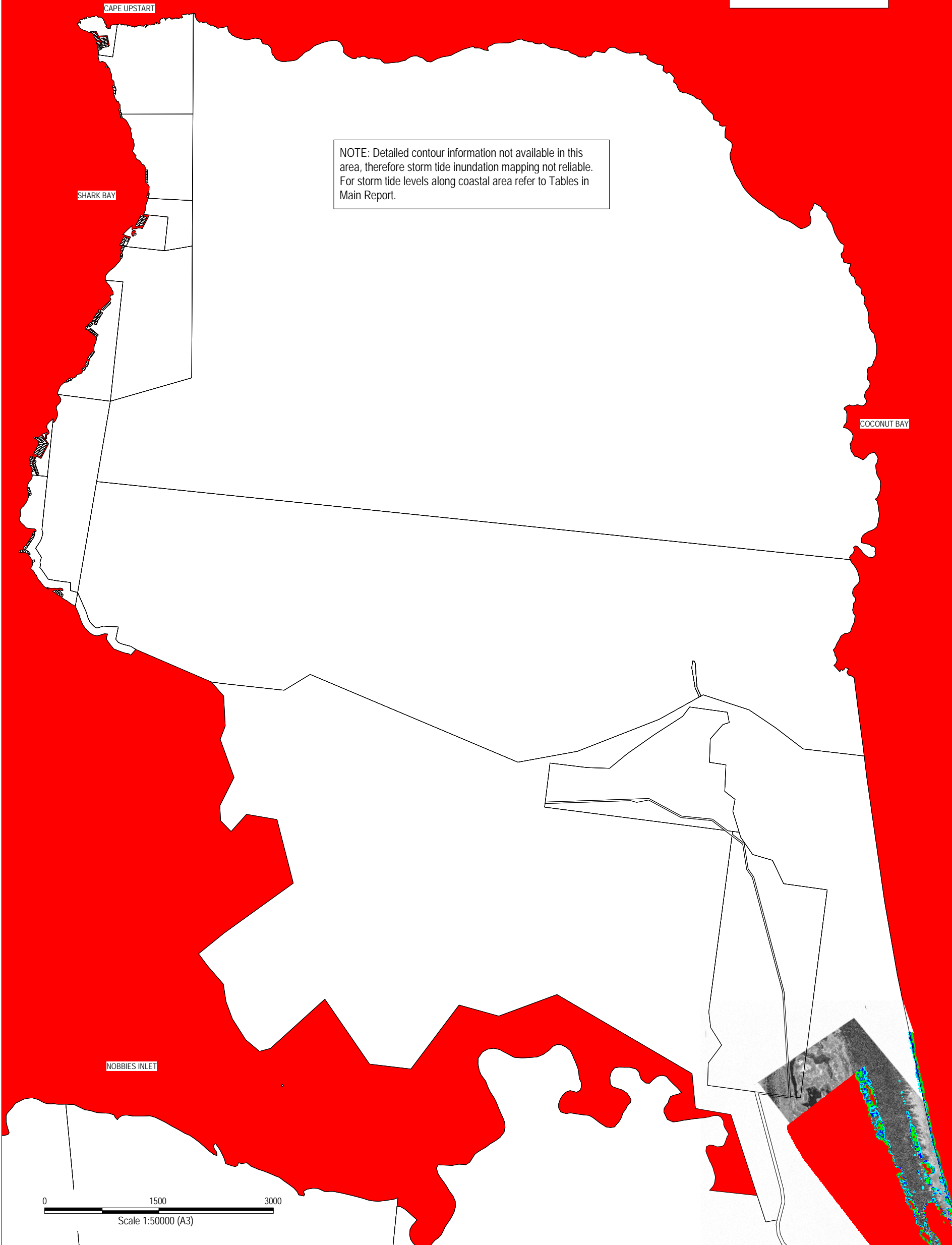


FIGURE 29-1: 10000 YEAR ARI HAZARD (DEPTHS) - UPSTART BAY



Depth Contours (m)	
	0.0 to 0.3
	0.3 to 0.6
	0.6 to 1.2
	Greater than 1.2

NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.

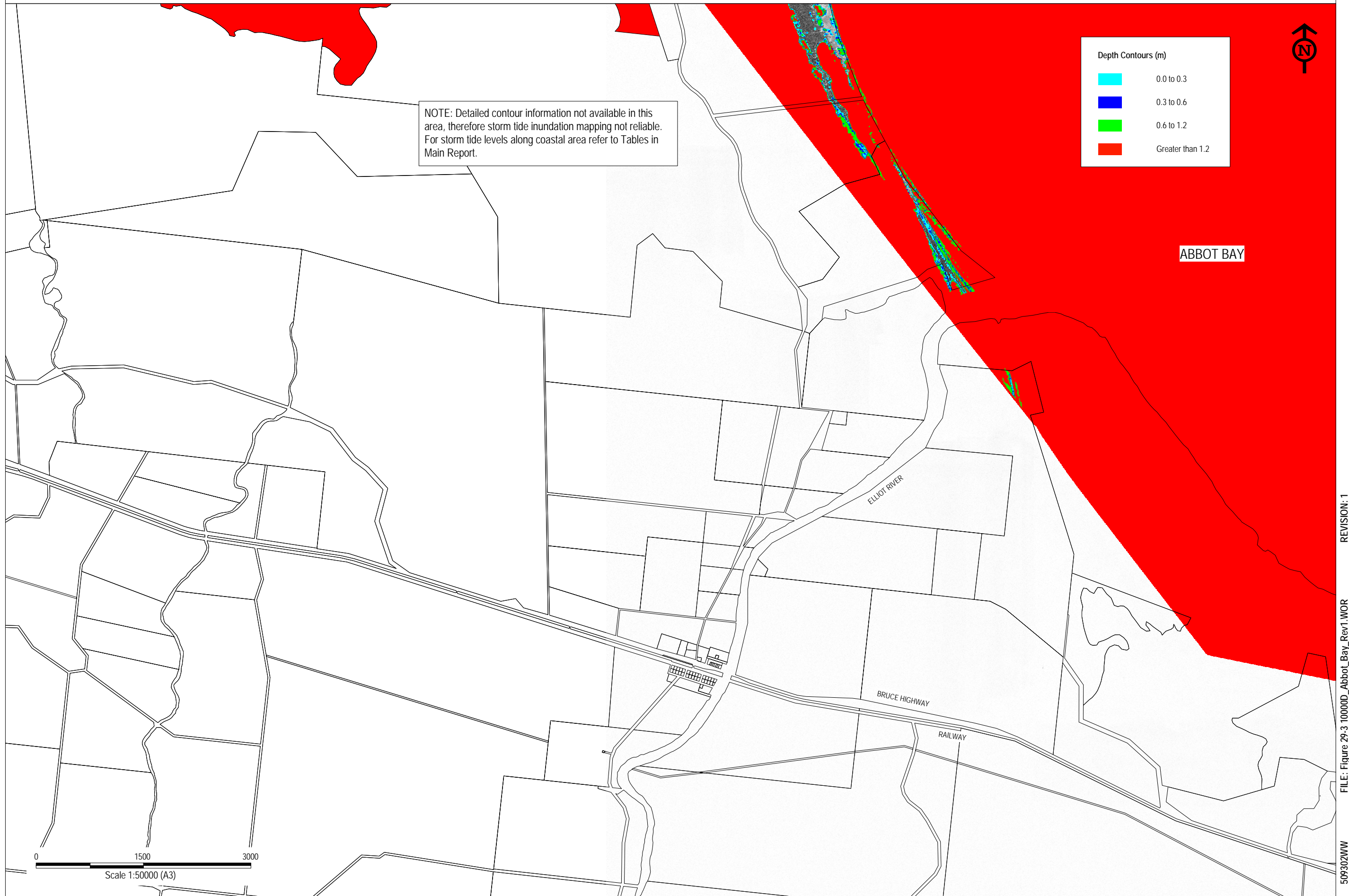


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FILE: Figure 29-2 10000D_Cape_Upstart_Rev1.WOR

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FIGURE 29-2: 10000 YEAR ARI HAZARD (DEPTHS) - CAPE UPSTART



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FILE: Figure 29-3 10000D_Abbot_Bay_Rev1.WOR
REVISION: 1

FIGURE 29-3: 10000 YEAR ARI HAZARD (DEPTHS) - ABBOT BAY

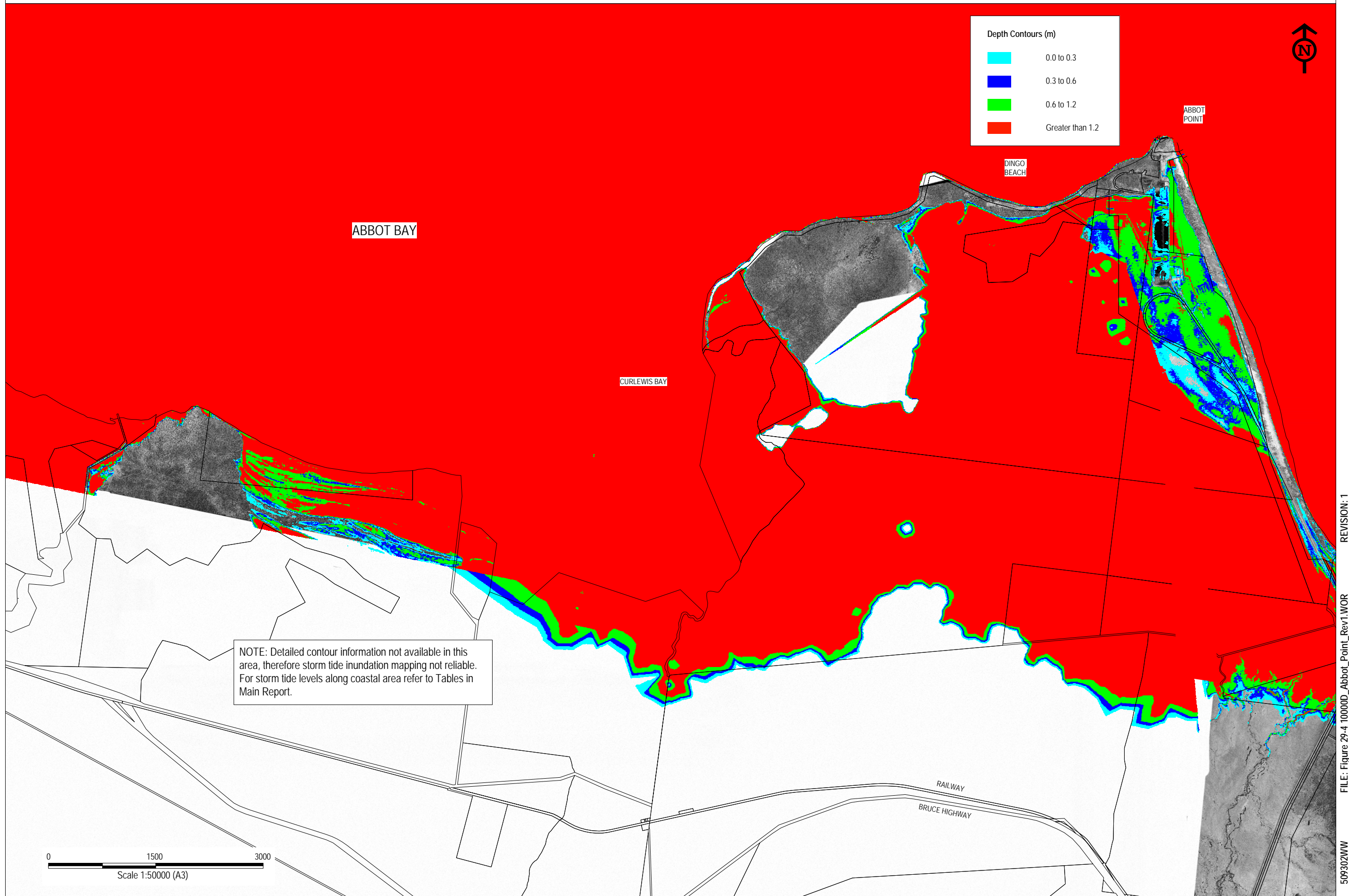
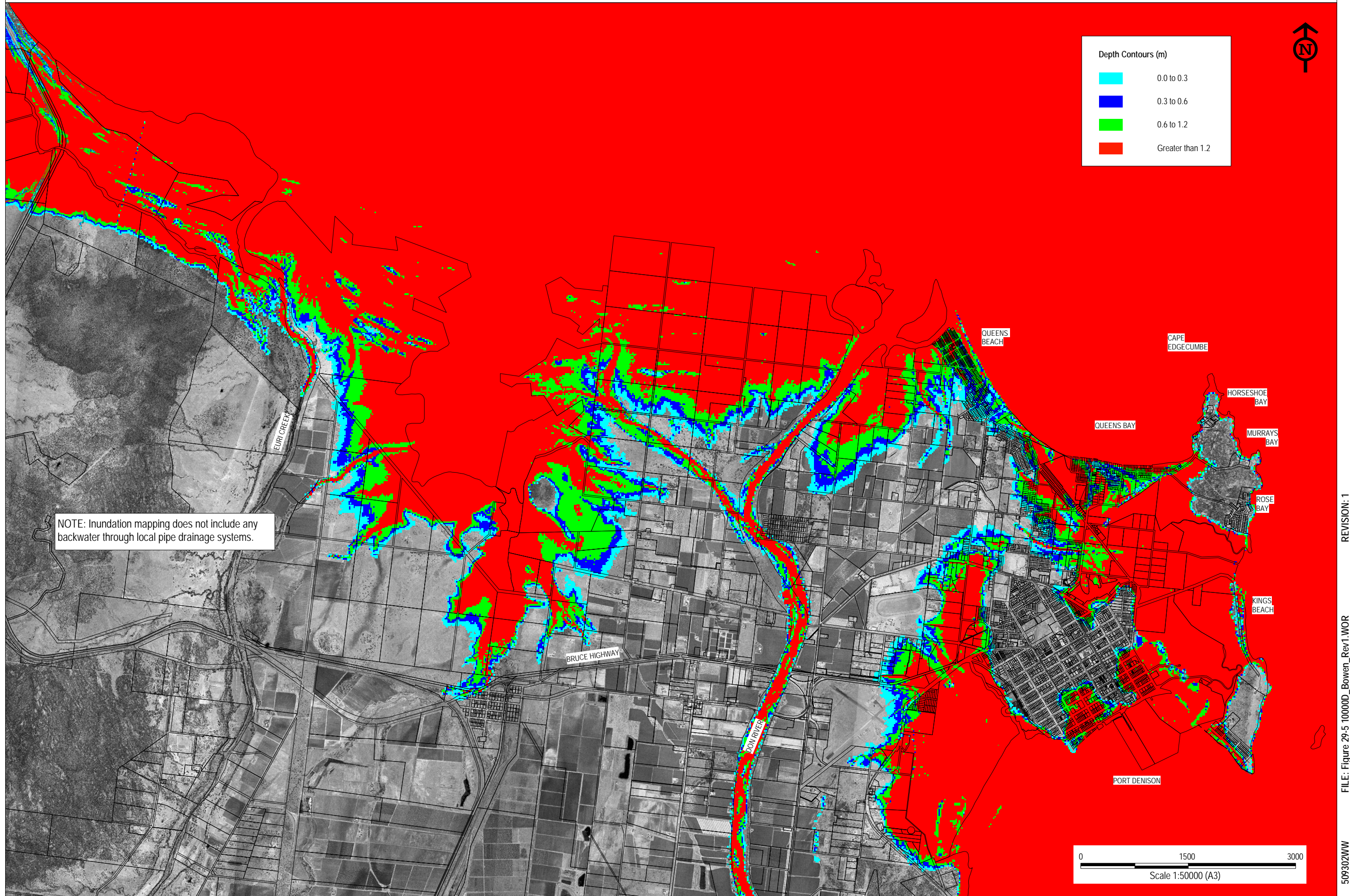


FIGURE 29-4: 1000 YEAR ARI HAZARD (DEPTHS) - ABBOT POINT



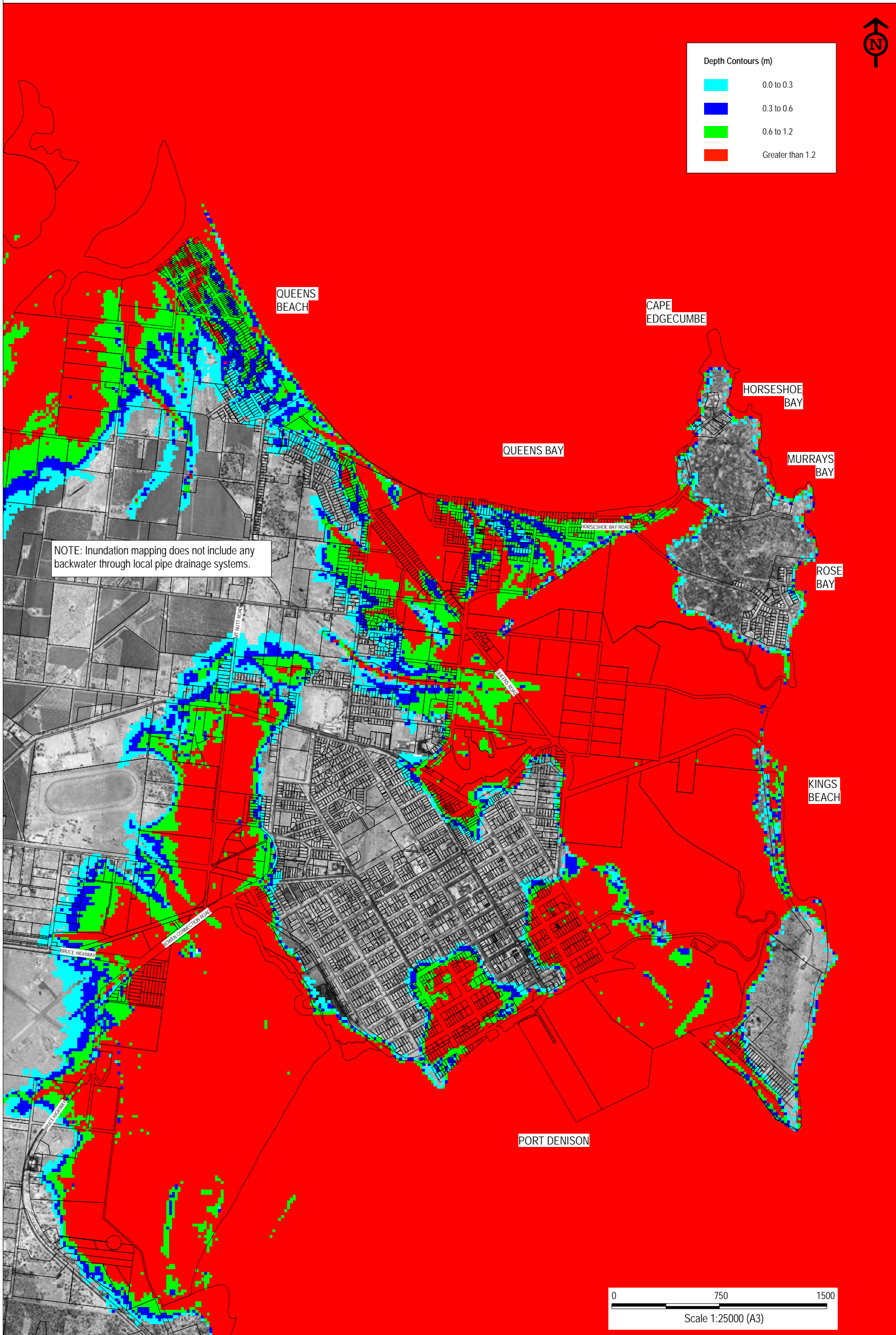
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FILE: Figure 29-5 10000D_Bowen_Rev1.WOR
REVISION: 1

FIGURE 29-5: 10000 YEAR ARI HAZARD (DEPTHS) - BOWEN



Depth Contours (m)	
	0.0 to 0.3
	0.3 to 0.6
	0.6 to 1.2
	Greater than 1.2

NOTE: Inundation mapping does not include any backwater through local pipe drainage systems.



REVISION: 1

FILE: Figure 29-5a 10000D_Inundation_Bowen_Inset_Rev1.WOR

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FIGURE 29-5A: 10000 YEAR ARI HAZARD (DEPTHS) - BOWEN INSET

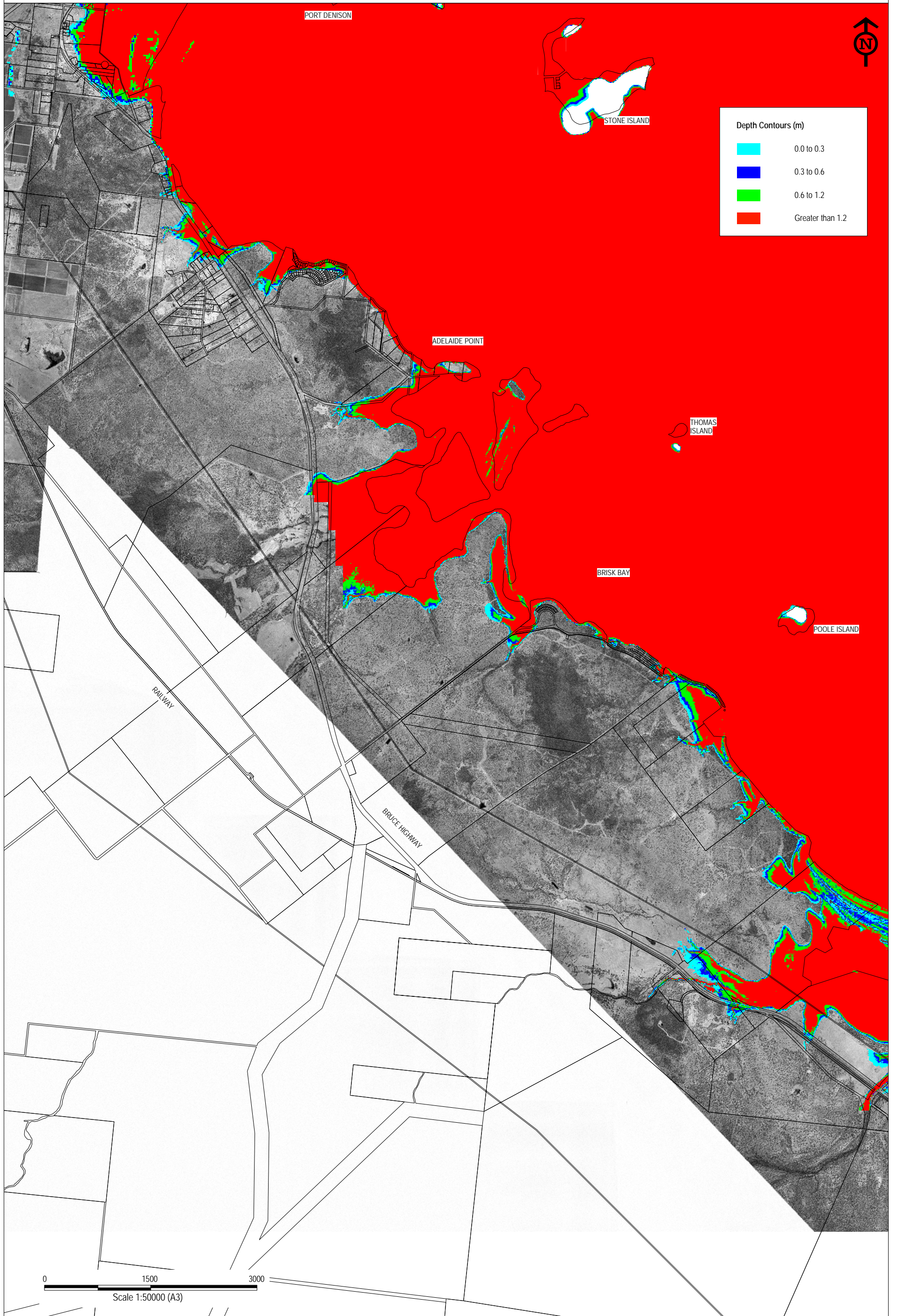


FIGURE 29-6: 10000 YEAR ARI HAZARD (DEPTHS) - HERONVALE

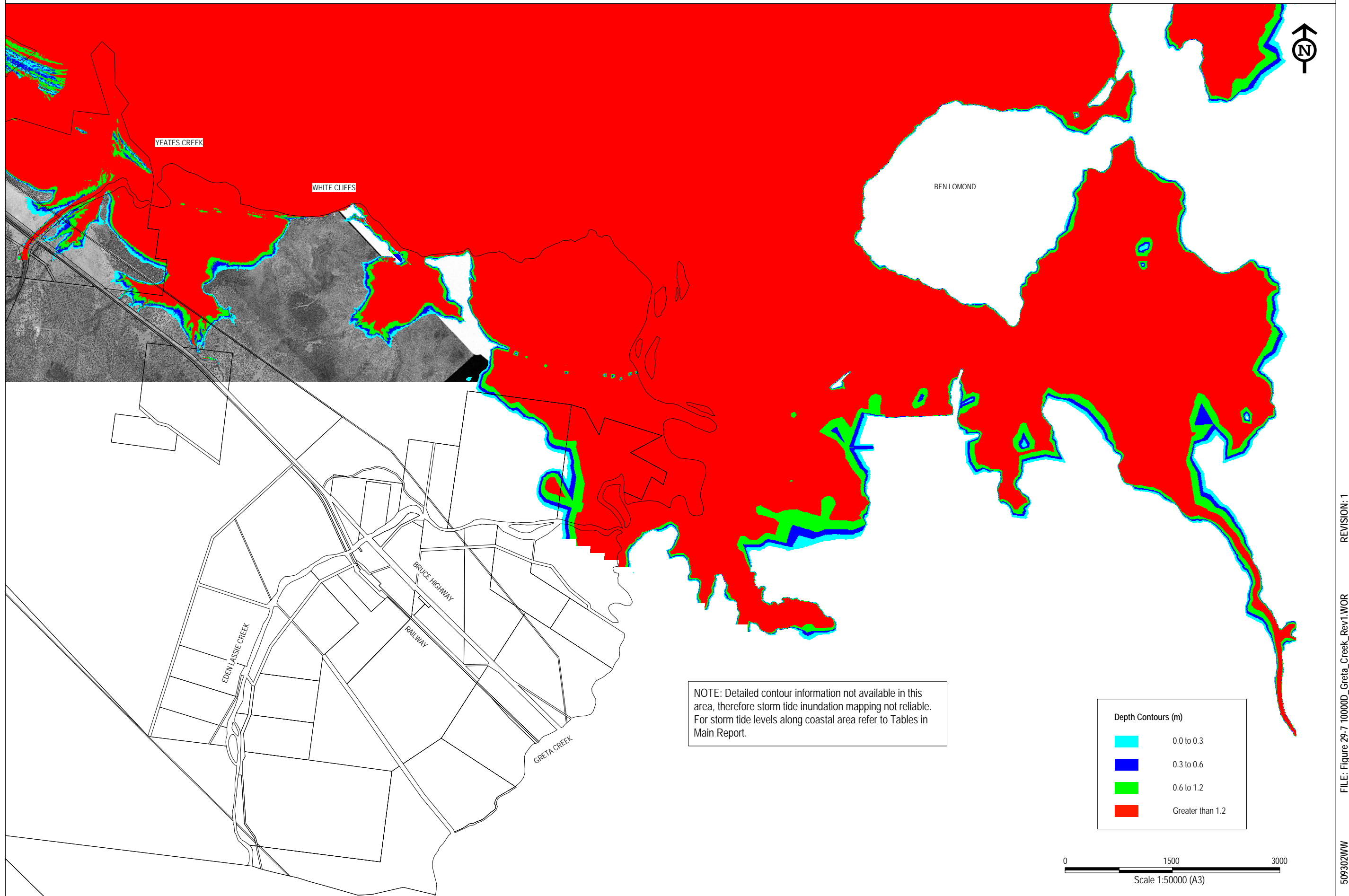






FIGURE 29-7: 10000 YEAR ARI HAZARD (DEPTHS) - GRETA CREEK



NOTE: Detailed contour information not available in this area, therefore storm tide inundation mapping not reliable. For storm tide levels along coastal area refer to Tables in Main Report.

Depth Contours (m)	
	0.0 to 0.3
	0.3 to 0.6
	0.6 to 1.2
	Greater than 1.2

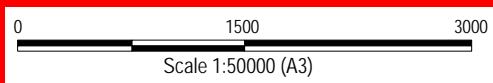
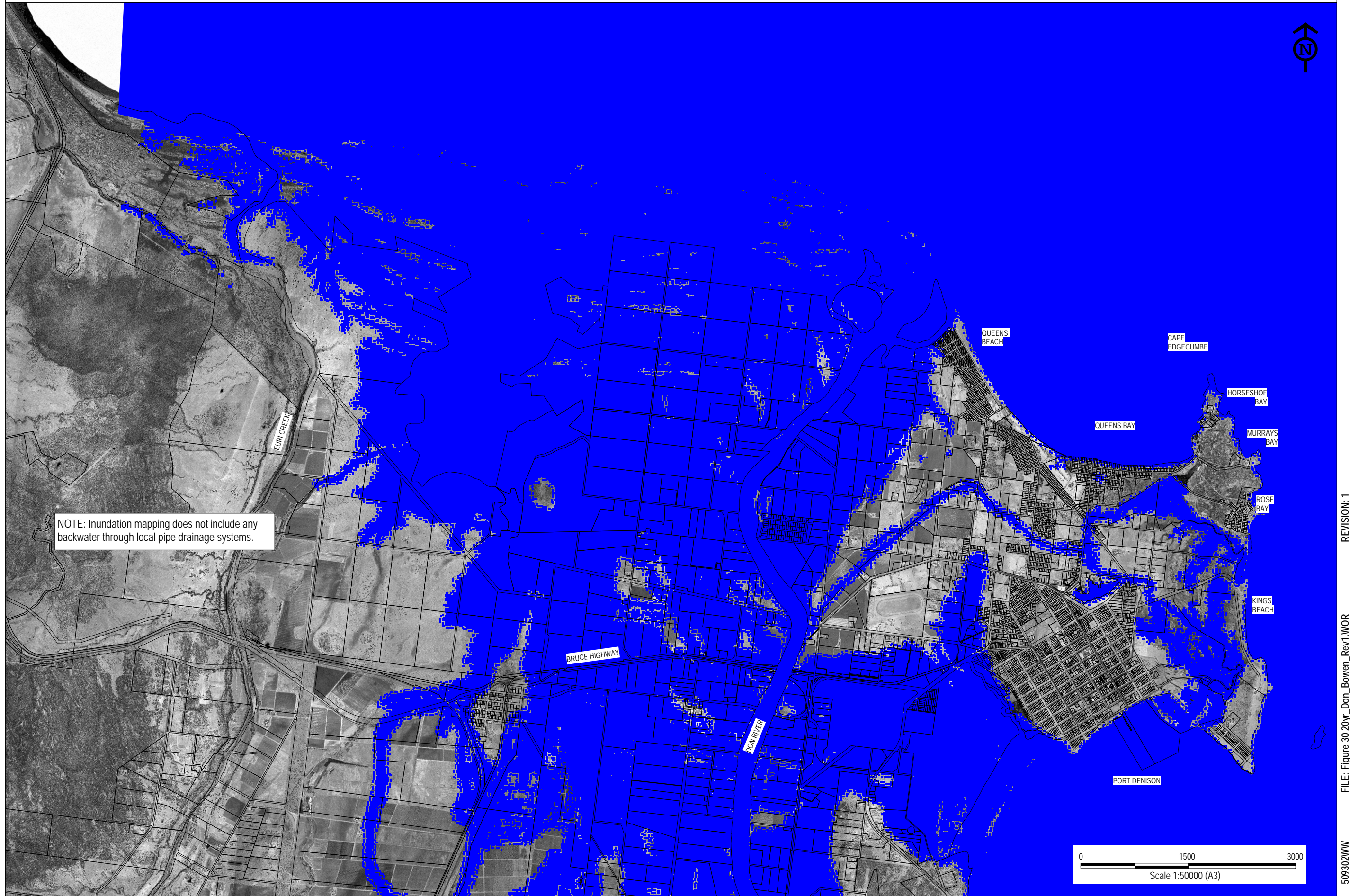


FIGURE 29-8: 10000 YEAR ARI HAZARD (DEPTHS) - GLOUCESTER ISLAND

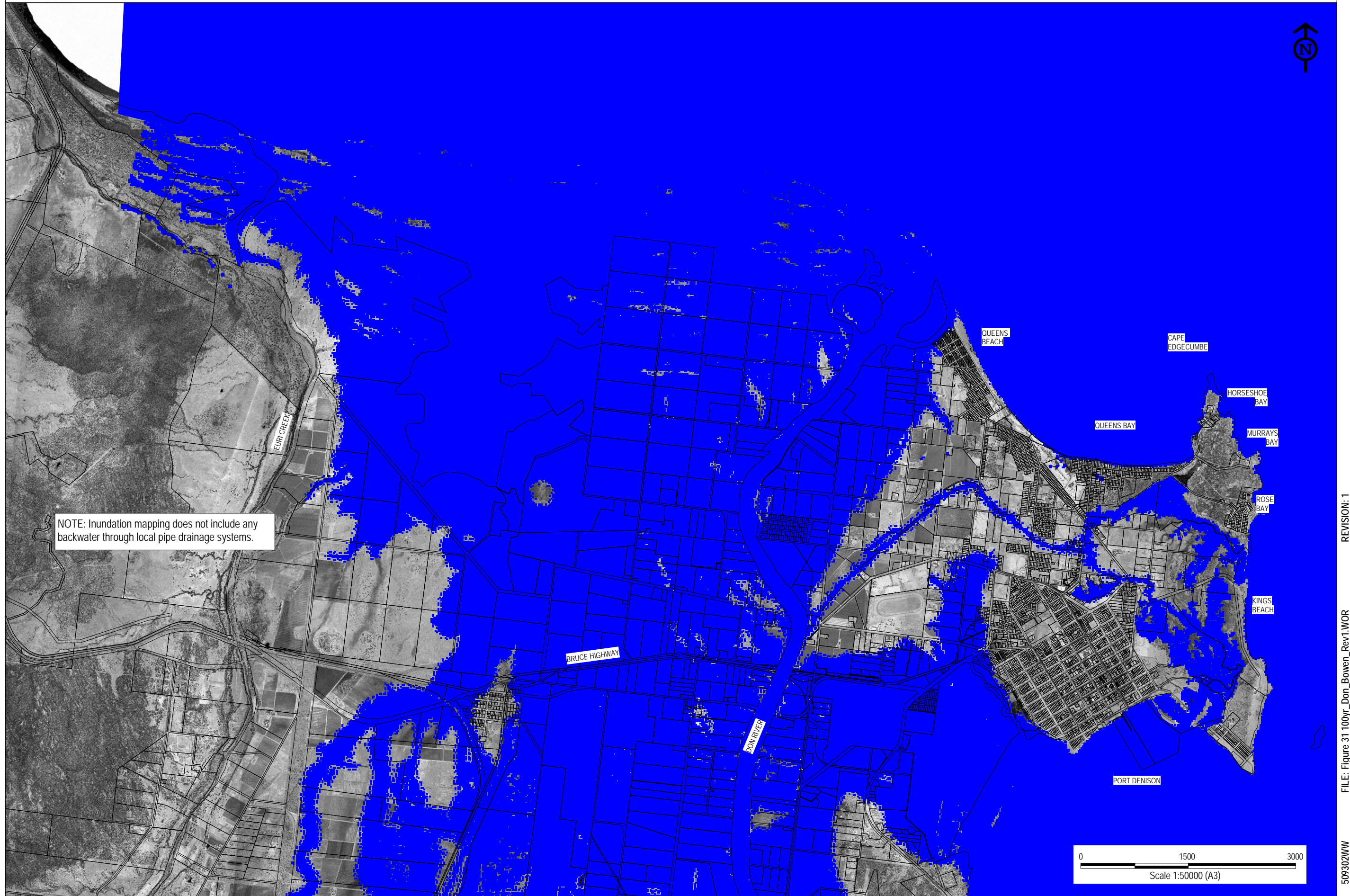


REVISION: 1

FILE: Figure 30 20yr_Don_Bowen_Rev1.WOR

509302WW

FIGURE 30: DON RIVER 20 YEAR ARI DESIGN EVENT INUNDATION EXTENTS

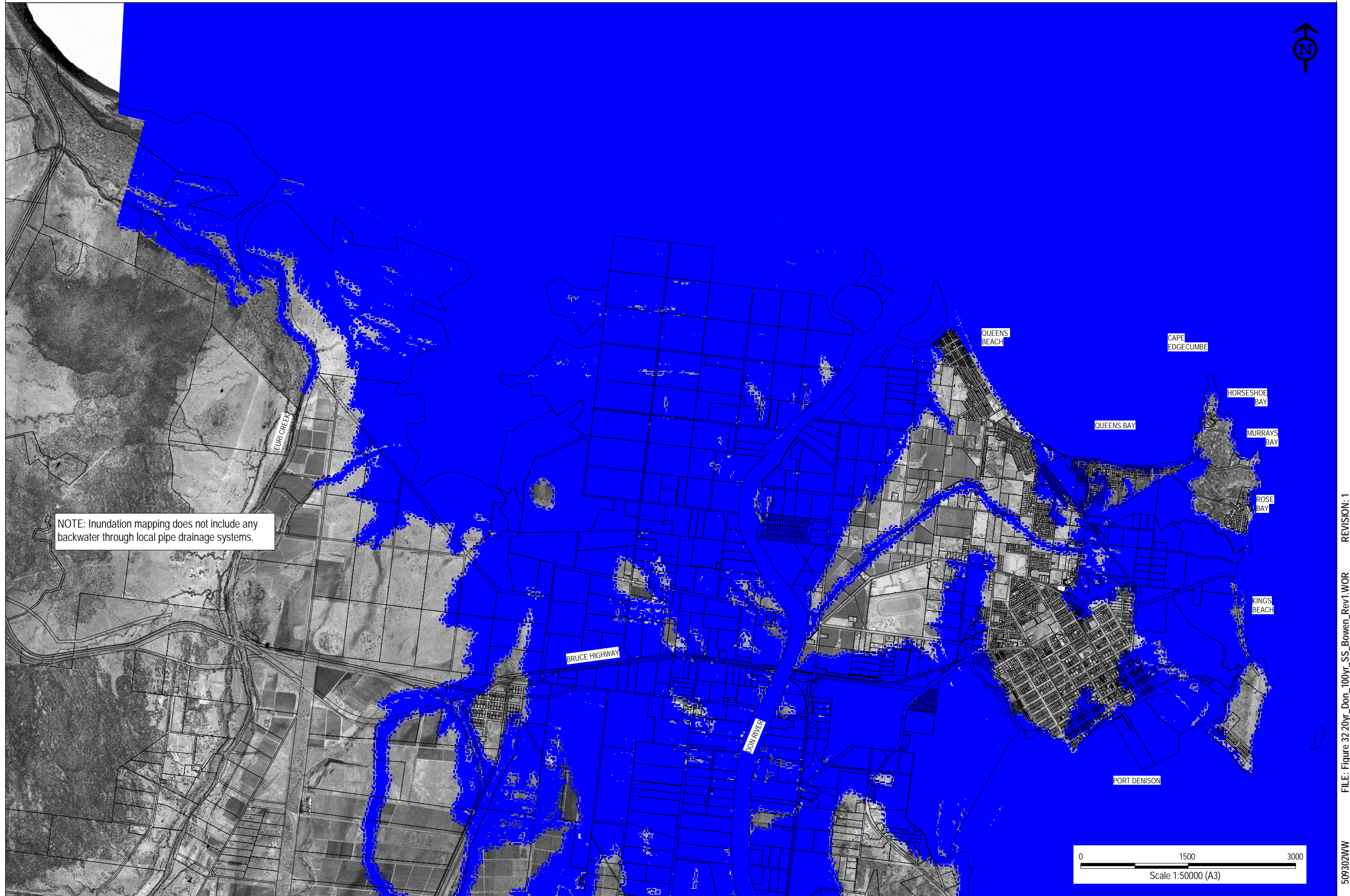


REVISION: 1

FILE: Figure 31 100yr_Don_Bowen_Rev1.WOR

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FIGURE 31: DON RIVER 100 YEAR ARI DESIGN EVENT INUNDATION EXTENTS



509302WW FILE: Figure 32 20yr_Don_100yr_SS_Bowen_Rev1.WOR REVISION: 1

FIGURE 32: COMBINED DON RIVER 20 YEAR ARI EVENT WITH 100 YEAR ARI STORM SURGE EVENT - INUNDATION EXTENTS

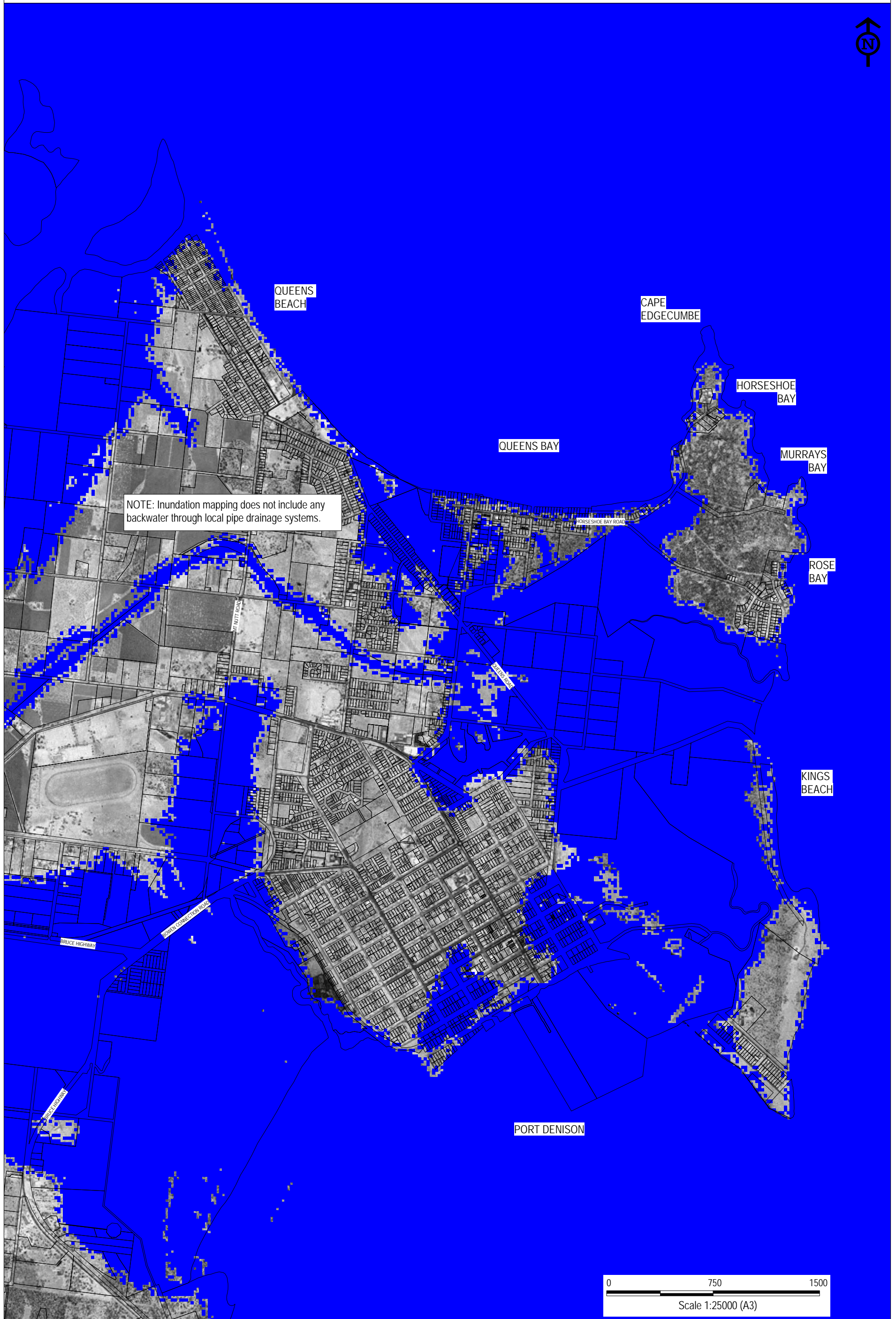
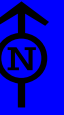


FIGURE 32A: DON RIVER 20 YEAR ARI DESIGN EVENT COMBINED WITH 100 YEAR ARI STORM SURGE EVENT INUNDATION EXTENTS - BOWEN INSET

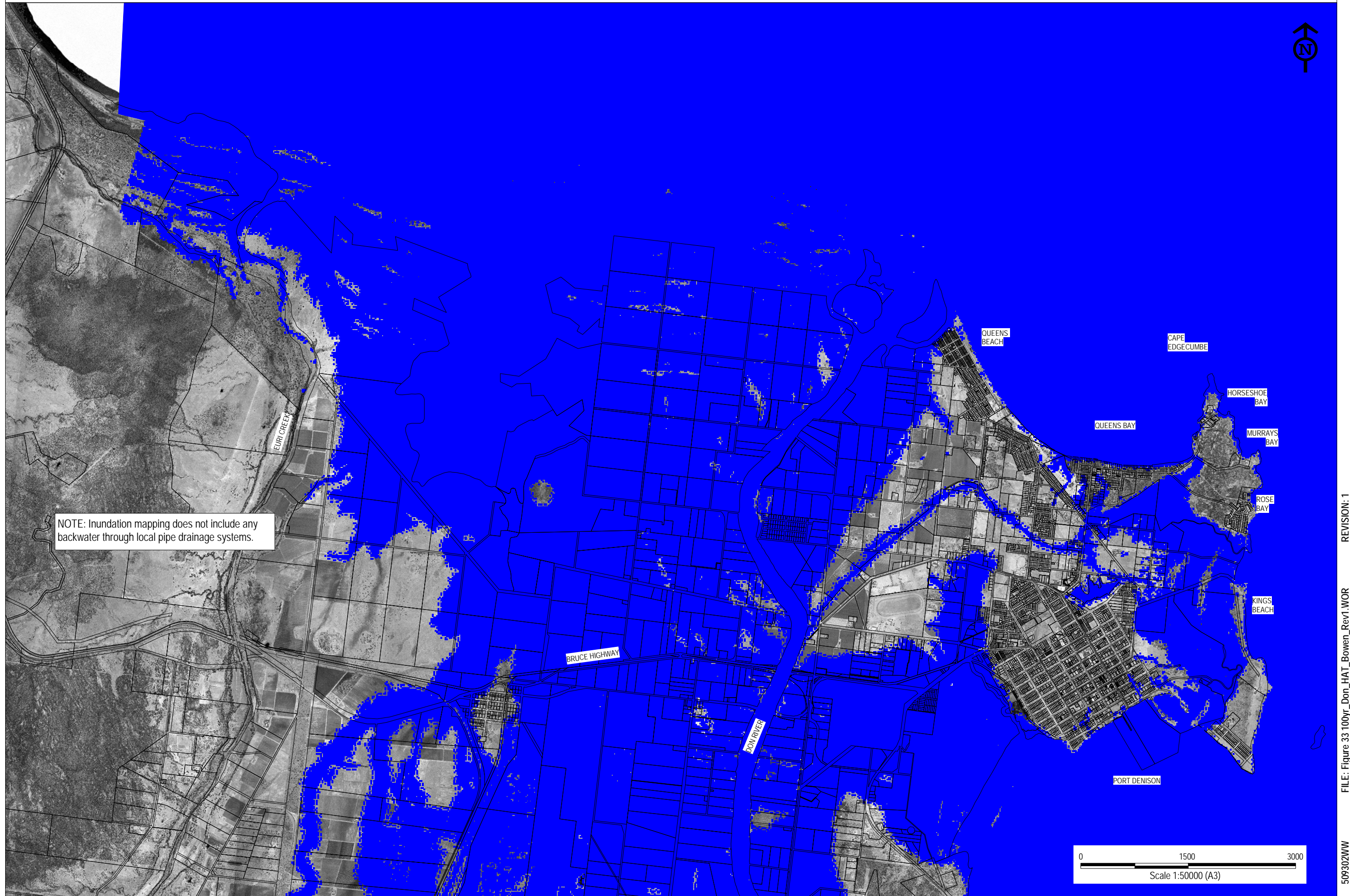


FIGURE 33: COMBINED DON RIVER 100 YEAR ARI
EVENT WITH HAT - INUNDATION EXTENTS

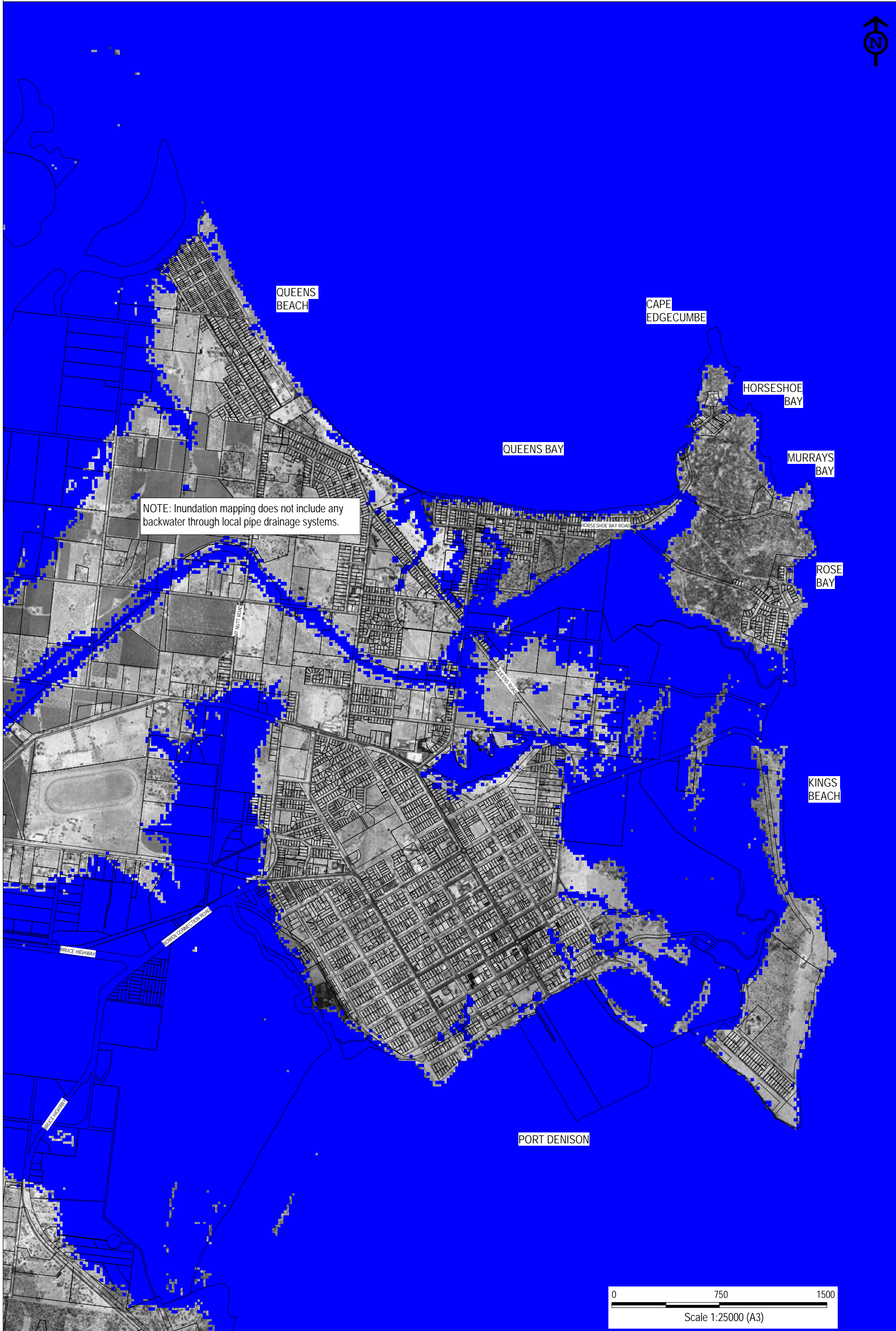
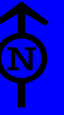


FIGURE 33A: DON RIVER 100 YEAR ARI DESIGN EVENT COMBINED WITH HAT TAILWATER LEVEL INUNDATION EXTENTS - BOWEN INSET