

A zone of reduced bearing capacity will exist landward of a receding erosion scarp. Definition of the extent of the zone of reduced bearing capacity will require professional assessment on a site by site basis. An additional allowance in this regard should be included in considering the immediate hazard zone.

The accuracy of predicting these hazard lines is subject to many uncertainties. The existence of bedrock, indurated sands and/or structures may impact on the realisation of the hazards.

Coastal features and structures have been observed and digitally plotted using photogrammetric techniques. Hazard lines have been determined and plotted relative to the photogrammetry data. Cadastral boundaries as shown may not have been survey corrected and are presented for guidance.

DATA SOURCE Update of Tweed Shire Coastal Hazard Lines **Coastal Hazards Line (2010)** Immediate Hazard Line August 2010 Prepared By: The University of New South Wales Water Research Laboratory 2050 Hazard Line 2100 Hazard Line DATA SOURCE Tweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd Coastal Hazards Line (2014) _ _ _ _ Immediate Hazard Line Maximum 2050 Hazard Line -. . Maximum 2100 Hazard Line - - -AERIAL IMAGERY 2012 SOURCE © The data contained in the product are the property of AAM Pty Ltd CADASTRE: 21 March, 2014 © Land and Property Information (LPI)

& Tweed Shire Council. Boundaries shown should be considered approximate only. **Coastal Hazard Lines Map** Figure 1.1 Sheet 1 of 26

TWEED DEVELOPMENT CONTROL PLAN

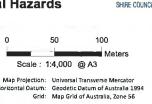


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Map identification number: DCP_B25_CHL_1_040_20140321

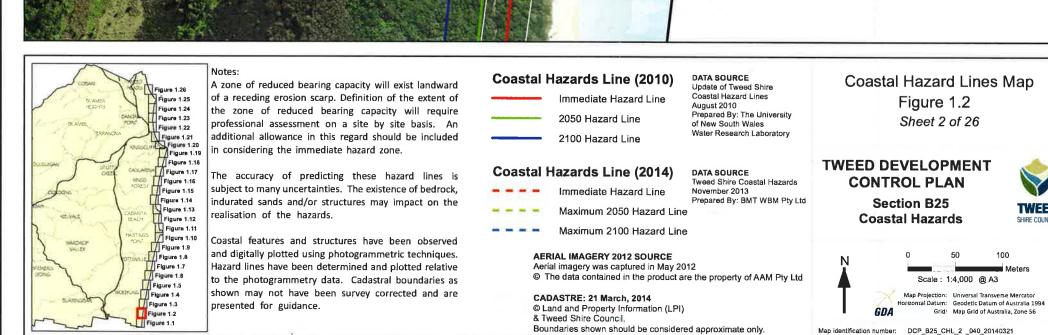
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Figure 1 26 Figure 1 25 Figure 1 24 Figure 1 23 Figure 1.22 Figure 1.22 Figure 1.21 Figure 1.20 Figure 1.20 Figure 1.19 Figure 1.10 Figure 1.16 Figure 1.14 Figure 1.14 Figure 1.14 Figure 1.10 Figure 1.10 Figure 1.2 Figure 1.4 Figure 1.10 Figure 1.10 Figure 1.10 Figure 1.2 Figure 1.1 Figure 1.22 SEL VALE VALLEY

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Coastal Hazards Line (2010) Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line Coastal Hazards Line (2014) DATA SOURCE Tweed Shire Coastal Hazards November 2013 - -_ _ Immediate Hazard Line Prepared By: BMT WBM Pty Ltd Maximum 2050 Hazard Line -Maximum 2100 Hazard Line AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd

© Land and Property Information (LPI) & Tweed Shire Council.

DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

CADASTRE: 21 March, 2014

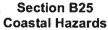
Boundaries shown should be considered approximate only.

Coastal Hazard Lines Map Figure 1.3 Sheet 3 of 26

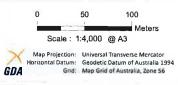
TWEED DEVELOPMENT CONTROL PLAN



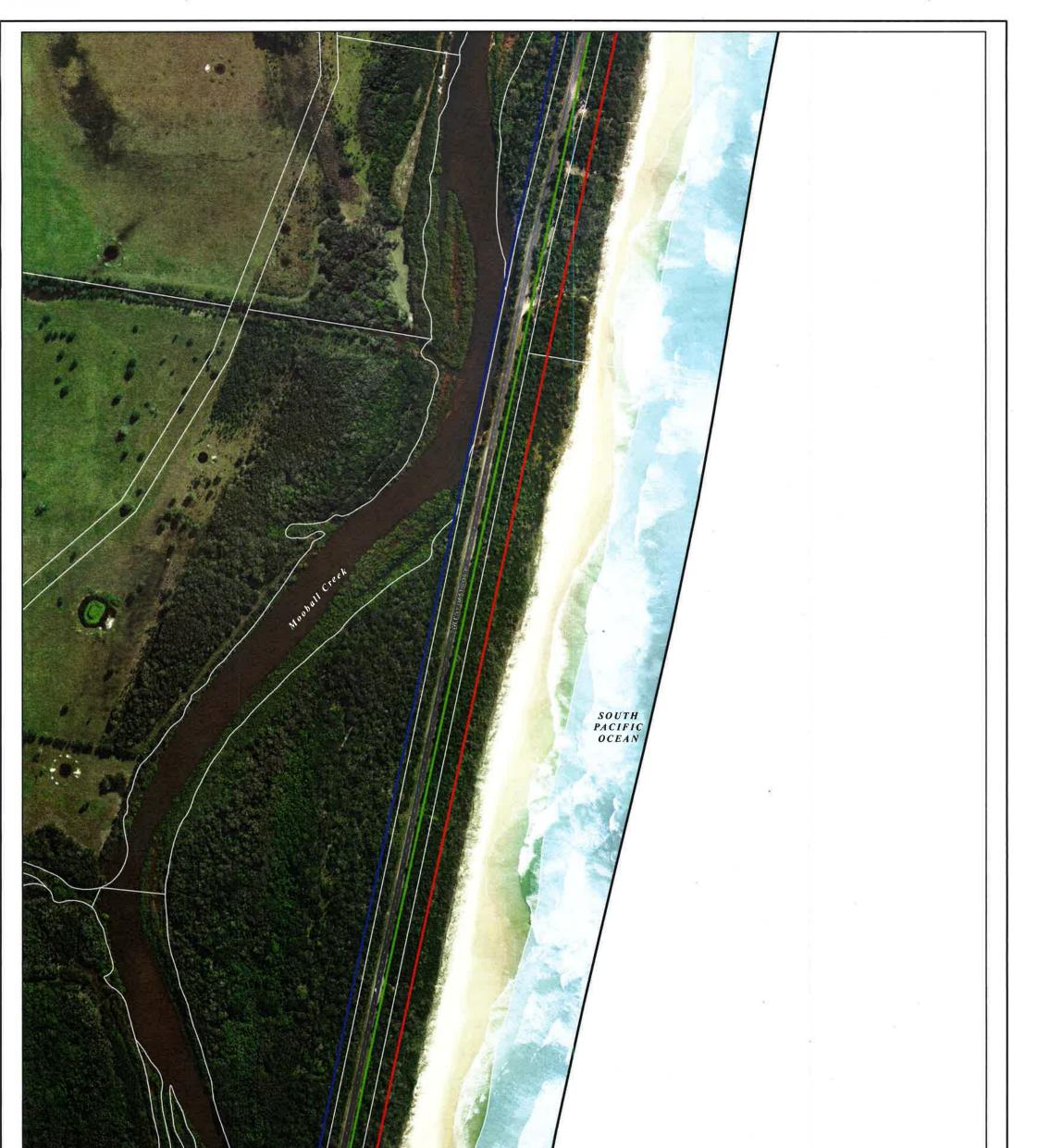
SHIRE COUNCIL

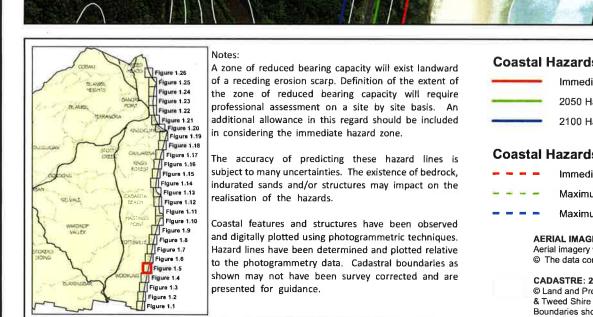


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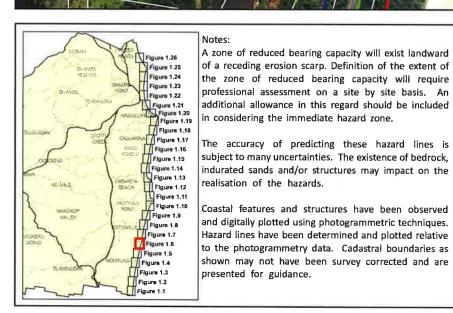
Map identification number: DCP_B25_CHL_3_040_20140321





Immediate Hazard Line 2050 Hazard Line	DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory	Coastal Hazard Lin Figure 1.5 <i>Sheet 5 of 26</i>	
 Immediate Hazard Line 	DATA SOURCE Fweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd	TWEED DEVELOPMEN CONTROL PLAN Section B25 Coastal Hazards	
AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are in CADASTRE: 21 March, 2014 © Land and Property Information (LPI) & Tweed Shire Council. Boundaries shown should be considered	the property of AAM Pty Ltd	GDA Grid: Map Grid	-





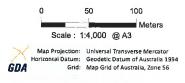
DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory **Coastal Hazards Line (2010)** Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line Coastal Hazards Line (2014) DATA SOURCE Tweed Shire Coastal Hazards November 2013 - 14 - -Immediate Hazard Line Prepared By: BMT WBM Pty Ltd Maximum 2050 Hazard Line Maximum 2100 Hazard Line - - - -AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd Ν CADASTRE: 21 March, 2014 © Land and Property Information (LPI) & Tweed Shire Council. Boundaries shown should be considered approximate only.

Coastal Hazard Lines Map Figure 1.6 Sheet 6 of 26 TWEED DEVELOPMENT CONTROL PLAN

Section B25 Coastal Hazards

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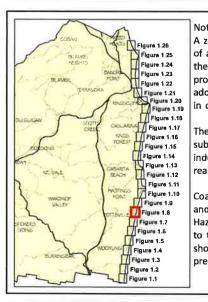
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Map identification number: DCP_825_CHL_6 _040_20140321







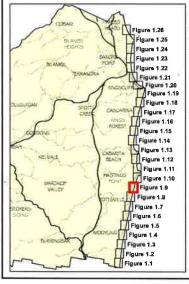
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DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory **Coastal Hazards Line (2010)** Coastal Hazard Lines Map Immediate Hazard Line Figure 1.8 2050 Hazard Line Sheet 8 of 26 2100 Hazard Line **TWEED DEVELOPMENT Coastal Hazards Line (2014)** DATA SOURCE Tweed Shire Coastal Hazards November 2013 **CONTROL PLAN** - - - -Immediate Hazard Line Prepared By: BMT WBM Pty Ltd Section B25 TWEED Maximum 2050 Hazard Line -- -**Coastal Hazards** SHIRE COUNCI Maximum 2100 Hazard Line -----AERIAL IMAGERY 2012 SOURCE 0 50 100 Ν © The data contained in the product are the property of AAM Pty Ltd Meters Scale : 1:4,000 @ A3 Map Projection: Universal Transverse Mercator iorizontal Datum: Geodetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56 CADASTRE: 21 March. 2014 © Land and Property Information (LPI) ĠDA & Tweed Shire Council. Boundaries shown should be considered approximate only. Map identification number: DCP_B25_CHL_8 _040_20140321

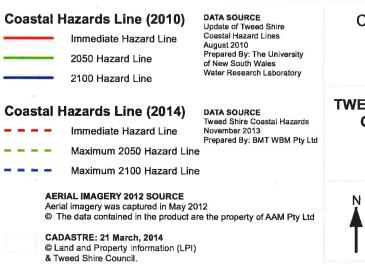




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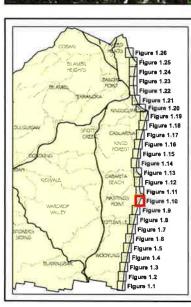
Boundaries shown should be considered approximate only.

Coastal Hazard Lines Map Figure 1.9 Sheet 9 of 26

tide y Ltd **TWEED DEVELOPMENT Section B25 Coastal Hazards Section B25 Coastal Hazards Section B25 Coastal Hazards WEED** SHIRE COUNCIL **N Meters** Scale : 1:4,000 @ A3 **Map Projection:** Universal Transverse Mercator Horizontal Datum: Geodetic Datum of Australia 1994 **GDA** Grid: Map Grid of Australia, 20ne 56

Map identification number: DCP_B25_CHL_9 _040_20140321

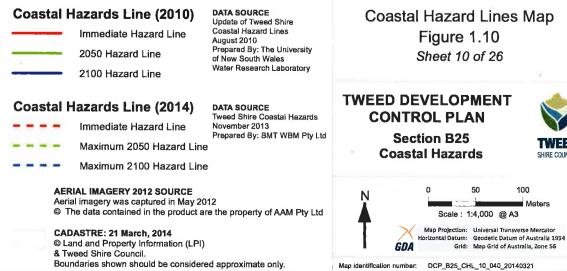




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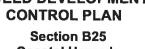
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Coastal Hazard Lines Map Figure 1.10 Sheet 10 of 26

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- Coastal Hazards Line (2010)
 DATA SOURCE

 Immediate Hazard Line
 Update of Tweed Shire

 2050 Hazard Line
 Prepared By: The University

 2100 Hazard Line
 Water Research Laboratory

 DATA SOURCE

 Update of Tweed Shire

 2050 Hazard Line
 Prepared By: The University

 2100 Hazard Line
 Water Research Laboratory

 DATA SOURCE

 Water Research Laboratory

 DATA SOURCE
 Water Research Laboratory

 Maximum 2050 Hazard Line
 DATA SOURCE

 Maximum 2050 Hazard Line
 Prepared By: BMT WBM Pty Ltd
- - Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd

CADASTRE: 21 March, 2014 © Land and Property Information (LPI) & Tweed Shire Council. Boundaries shown should be considered approximate only. Coastal Hazard Lines Map Figure 1.11 Sheet 11 of 26

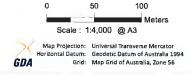
TWEED DEVELOPMENT CONTROL PLAN

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Map identification number: DCP_B25_CHL_11_040_20140321



Figure 1.26 Figure 1.25 Figure 1.25 Figure 1.24 Figure 1.23 Figure 1.23 Figure 1.23 Figure 1.23 Figure 1.23 Figure 1.20 Figure 1.20 Figure 1.20 Figure 1.20 Figure 1.20 Figure 1.20 Figure 1.21 Figure 1.20 Figure

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Coastal Hazards Line (2010) Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line

Coastal Hazards Line (2014)

- - Immediate Hazard Line
- - Maximum 2050 Hazard Line
- - Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd

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DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

> DATA SOURCE Tweed Shire Coastal Hazards

Prepared By: BMT WBM Pty Ltd

November 2013

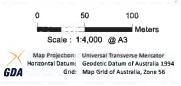
Coastal Hazard Lines Map Figure 1.12 Sheet 12 of 26

TWEED DEVELOPMENT CONTROL PLAN Section B25 Coastal Hazards

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Map identification number: DCP_B25_CHL_12_040_20140321



DATA SOURCE DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

Coastal Hazards Line (2014)

- - Immediate Hazard Line

DATA SOURCE Tweed Shire Coastal Hazard November 2013 Maximum 2050 Hazard Line Prepared By: BMT WBM Ply Ltd

- - - Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE

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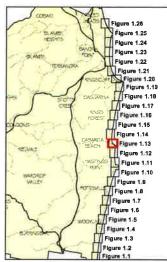
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Coastal Hazard Lines Map Figure 1.13 Sheet 13 of 26





Figure 1.26 Figure 1.25 Figure 1.24 Figure 1.23 Figure 1.23 Figure 1.22 Figure 1.24 Figure 1.24 Figure 1.29 Figure 1.19 Figure 1.19 Figure 1.16 Figure 1.13 Figure 1.13 Figure 1.14 Figure 1.13 Figure 1.15 Figure 1.15 Figure 1.2 Figure 1.5 Figure 1.5 Figure 1.4 Figure 1.4 Figure 1.4 Figure 1.5 Figure 1.4 Figure 1.4

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Boundaries shown should be considered approximate only

Map identification number: DCP_B25_CHL_14_040_20140321

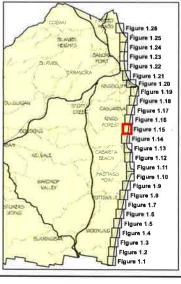
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SHIRE COUNCIL

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Meters

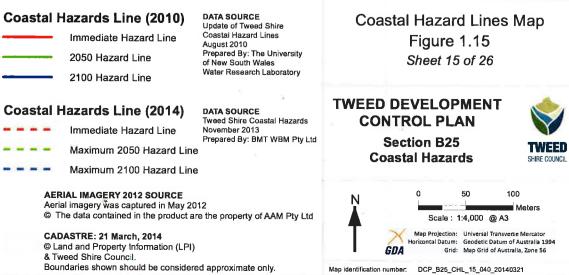




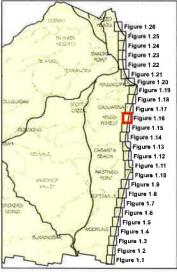
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Coastal Hazards Line (2010) Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line

Coastal Hazards Line (2014)

- Immediate Hazard Line - -
- Maximum 2050 Hazard Line -
- Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012

- © The data contained in the product are the property of AAM Pty Ltd

CADASTRE: 21 March, 2014 © Land and Property Information (LPI) & Tweed Shire Council. Boundaries shown should be considered approximate only.

DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory **TWEED DEVELOPMENT** DATA SOURCE Tweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd

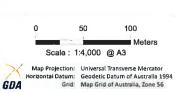
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Coastal Hazard Lines Map Figure 1.16 Sheet 16 of 26

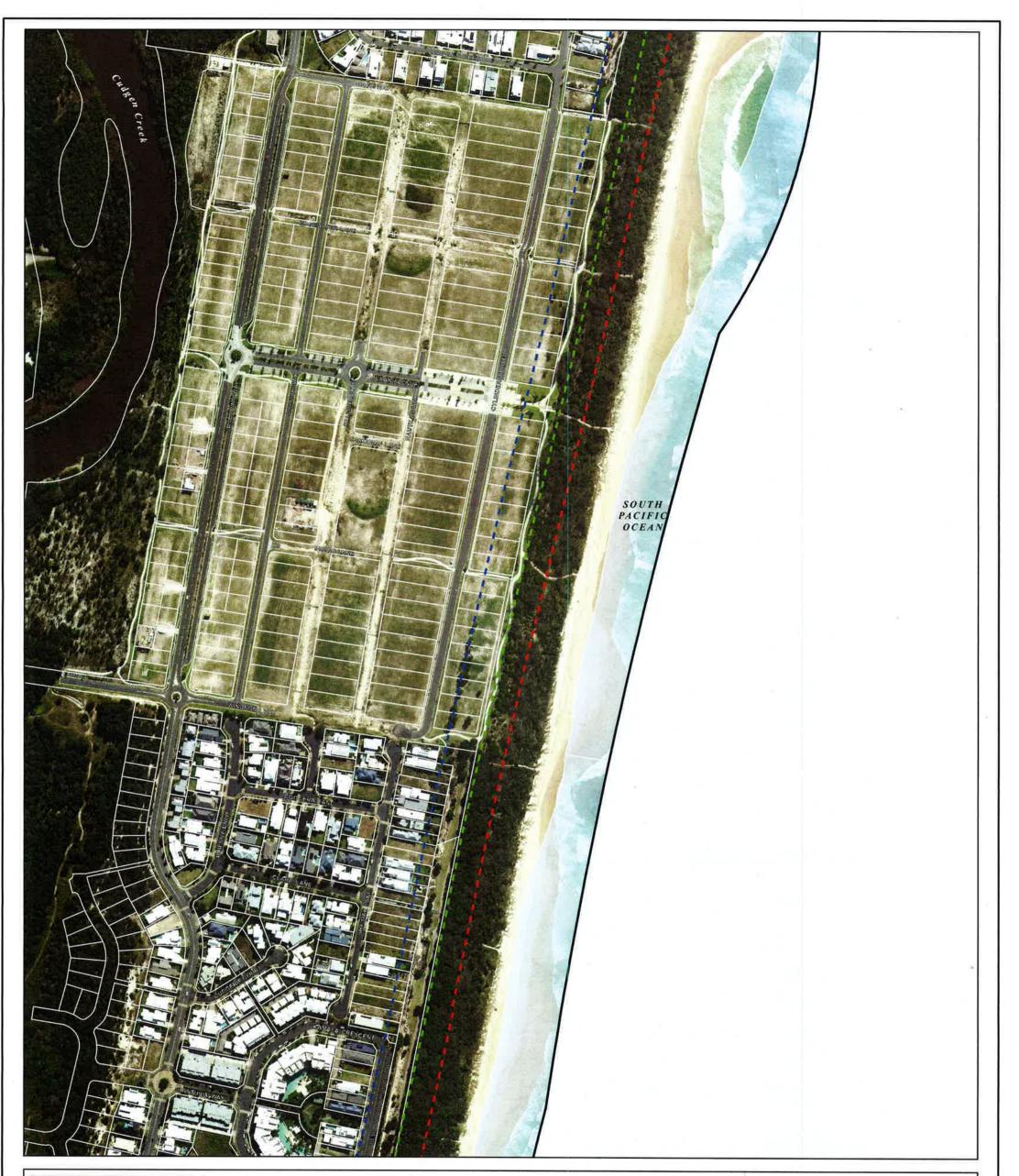


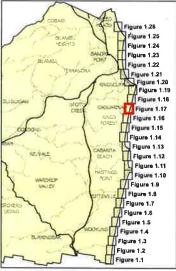


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Map identification number: DCP_B25_CHL_16_040_20140321





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Coastal Hazards Line (2014)

- Immediate Hazard Line - - - -
- -Maximum 2050 Hazard Line
- Maximum 2100 Hazard Line ----

AERIAL IMAGERY 2012 SOURCE

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DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

DATA SOURCE

Tweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd

Coastal Hazard Lines Map Figure 1.17 Sheet 17 of 26

TWEED DEVELOPMENT CONTROL PLAN

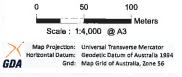
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Map identification number: DCP_B25_CHL_17_040_20140321

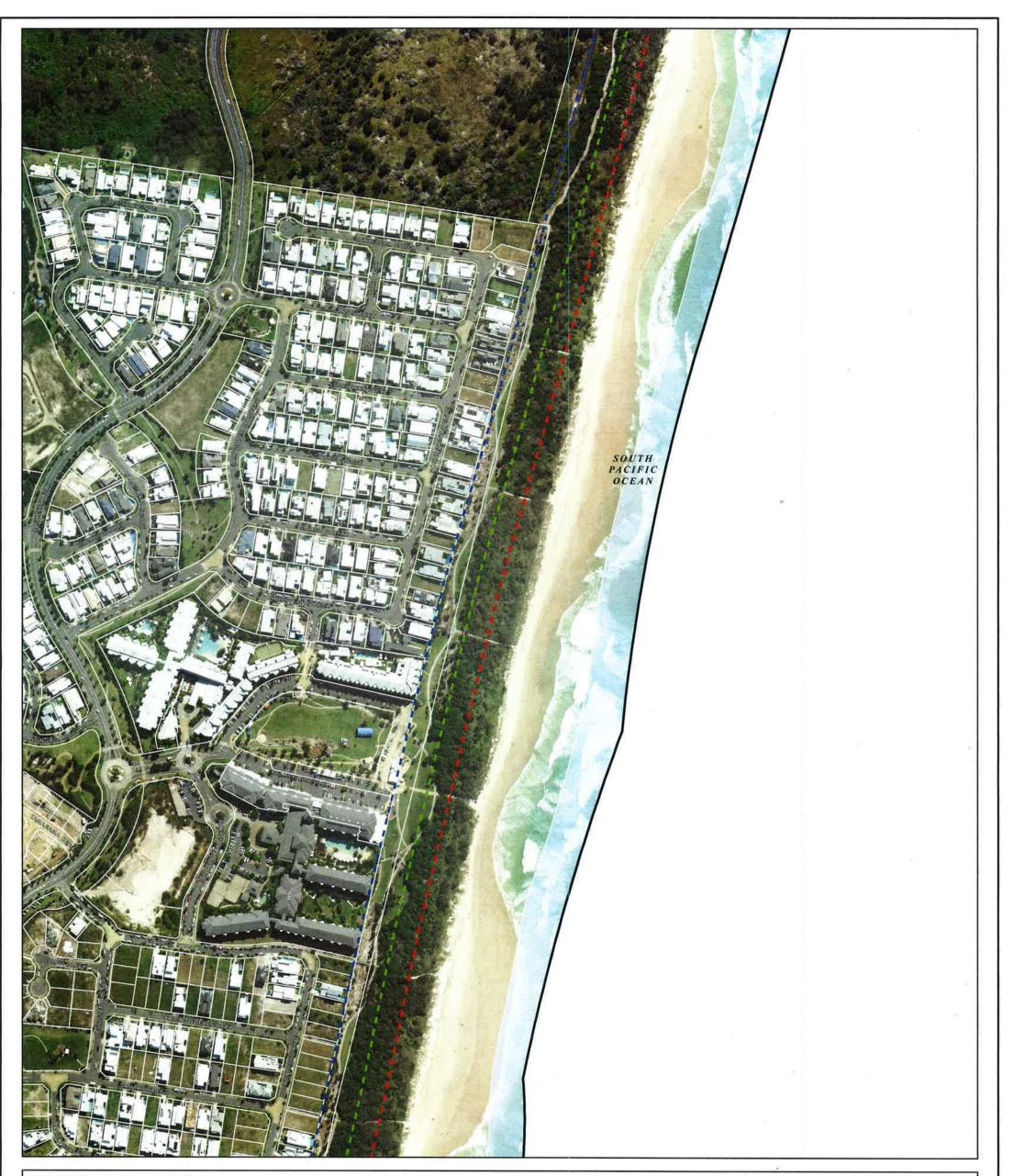


Figure 1.26 Figure 1.25 Figure 1.24 Figure 1.23 Figure 1.22 Figure 1.22 Figure 1.21 Figure 1.21 Figure 1.21 Figure 1.20 Figure 1.20 Figure 1.10 Figure 1.16 Figure 1.16 Figure 1.15 Figure 1.14 Figure 1.14 Figure 1.12 Figure 1.14 Figure 1.12 Figure 1.13 Figure 1.14 Figure 1.15 Figure 1.16 Figure 1.17 Figure 1.18 Figure 1.10 Figure 1.11 Figure 1.2 Figure 1.3 Figure 1.4 Figure 1.3 Figure 1.3 Figure 1.2 E MAG VALLEY VALLEY Figure 1.2 Figure 1.1

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Map identification number:

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TWEED

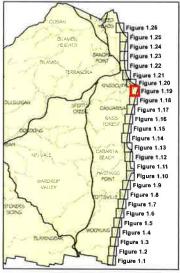
SHIRE COUNCIL

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Meters

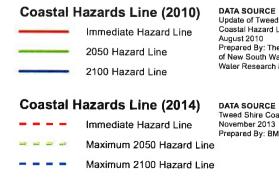




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Tweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd

AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd

CADASTRE: 21 March, 2014 © Land and Property Information (LPi) & Tweed Shire Council. Boundaries shown should be considered approximate only.

DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

Coastal Hazard Lines Map Figure 1.19 Sheet 19 of 26



Coastal Hazards







Coastal Hazards Line (2010)

Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line

DATA SOURCE Update of Tweed Shire Coaslal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

Coastal Hazards Line (2014)

- - Immediate Hazard Line - - - Maximum 2050 Hazard Line Prepared By: BMT WBM Pty Ltd - - - Maximum 2100 Hazard Line

DATA SOURCE Tweed Shire Coastal Hazard November 2013

AERIAL IMAGERY 2012 SOURCE

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CADASTRE: 21 March, 2014

© Land and Property Management Authority (LPMA) & Tweed Shire Council.

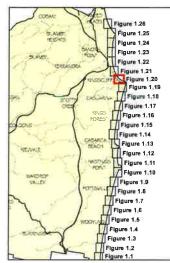
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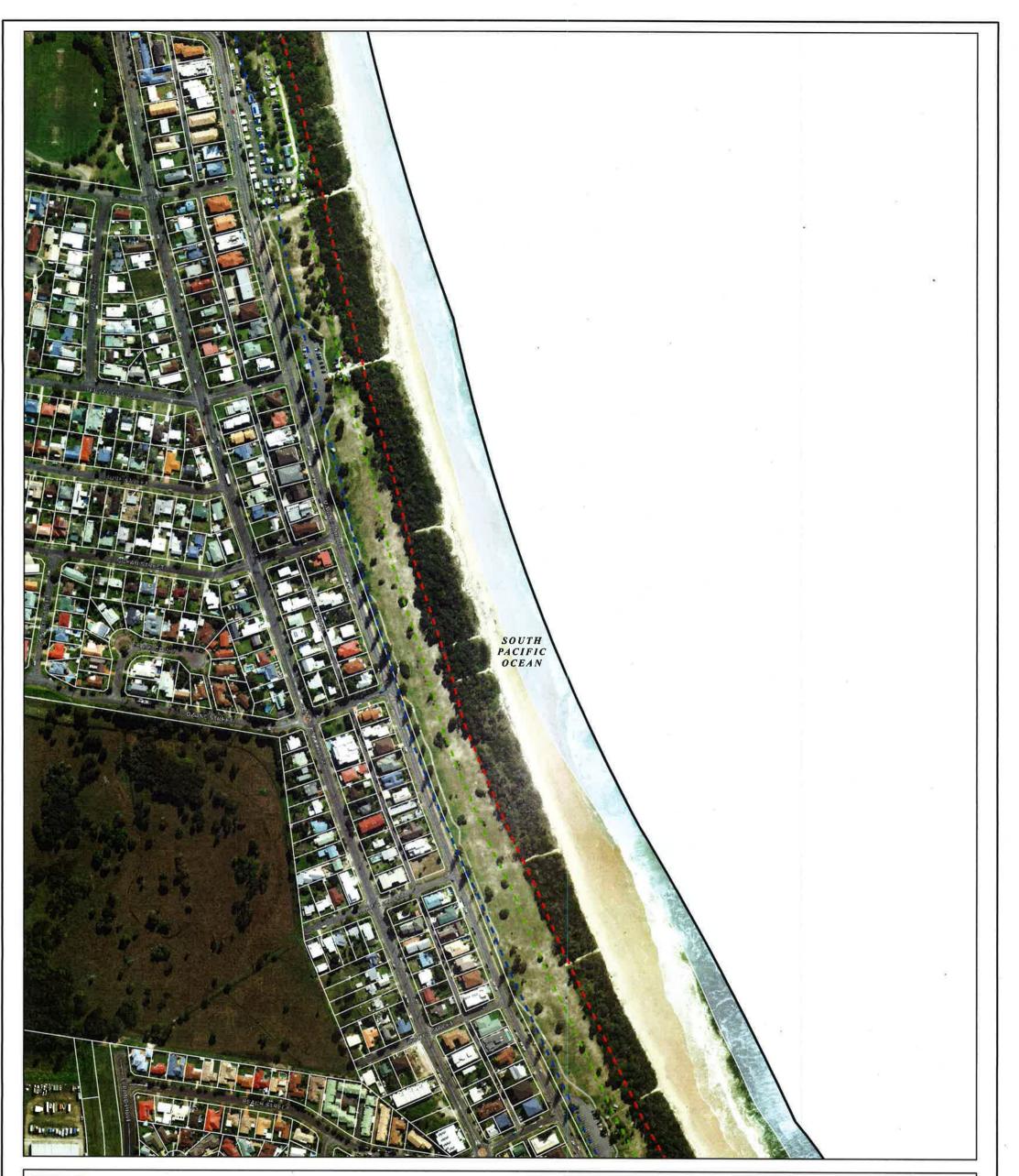
The accuracy of predicting these hazard lines is subject to many uncertainties. The existence of bedrock, indurated sands and/or structures may impact on the realisation of the hazards.

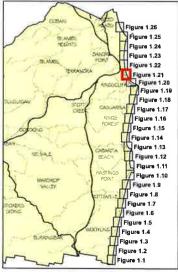
Coastal features and structures have been observed and digitally plotted using photogrammetric techniques. Hazard lines have been determined and plotted relative to the photogrammetry data. Cadastral boundaries as shown may not have been survey corrected and are presented for guidance.



Coastal Hazard Lines Map Figure 1.20 Sheet 20 of 26







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Coastal Hazards Line (2010) Immediate Hazard Line 2050 Hazard Line 2100 Hazard Line	DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory	Coastal Hazard Lines Map Figure 1.21 <i>Sheet 21 of 2</i> 6
Coastal Hazards Line (2014) Immediate Hazard Line Maximum 2050 Hazard Line Maximum 2100 Hazard Line	_	TWEED DEVELOPMENT CONTROL PLAN Section B25 Coastal Hazards
AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 The data contained in the product are the property of AAM Pty Ltd CADASTRE: 21 March, 2014 © Land and Property Information (LPI) & Tweed Shire Council. Boundaries shown should be considered approximate only.		N N N N N N N N N N N N N N



Figure 1.26 Figure 1.25 Figure 1.24 Figure 1.23 Figure 1.22 Figure 1.20 Figure 1.20 Figure 1.20 Figure 1.21 Figure 1.21 Figure 1.21 Figure 1.13 Figure 1.14 Figure 1.13 25-15 Figure 1.1 Figure 1.14 Figure 1.13 Figure 1.12 Figure 1.10 Figure 1.0 Figure 1.0 Figure 1.0 Figure 1.7 Figure 1.7 Figure 1.5 Figure 1.5 Figure 1.5 Figure 1.4 Figure 1.3 Figure 1.2 Figure 1.2 CE.WALE WHICH

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Coastal Hazards Line (2014)

- -- -Immediate Hazard Line
 - Maximum 2050 Hazard Line -
- -Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE

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DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

Tweed Shire Coastal Hazards November 2013 Prepared By: BMT WBM Pty Ltd

DATA SOURCE

Coastal Hazard Lines Map Figure 1.22 Sheet 22 of 26

TWEED DEVELOPMENT CONTROL PLAN Section B25

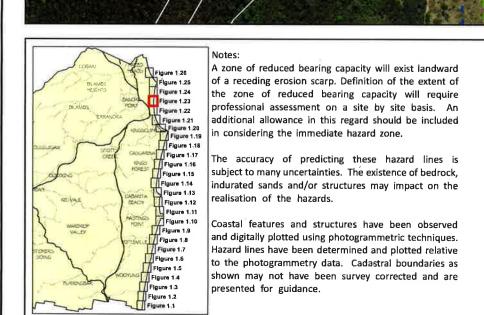
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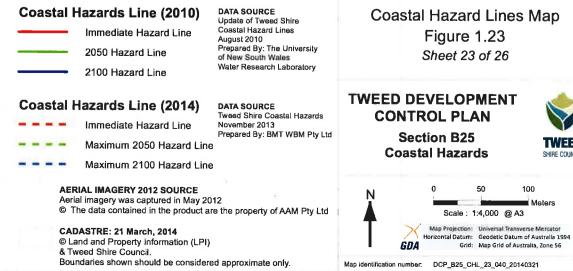






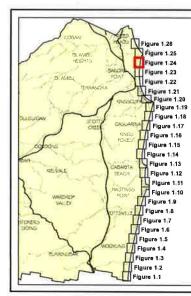






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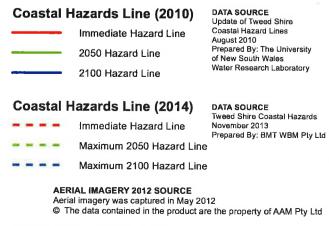




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TWEED DEVELOPMENT CONTROL PLAN

> Section B25 **Coastal Hazards**

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DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

DATA SOURCE Tweed Shire Coastal Hazards November 2013

Coastal Hazards Line (2014)

- - Immediate Hazard Line

 Maximum 2050 Hazard Line Prepared By: BMT WBM Pty Ltd - - Maximum 2100 Hazard Line

> AERIAL IMAGERY 2012 SOURCE Aerial imagery was captured in May 2012 © The data contained in the product are the property of AAM Pty Ltd

- CADASTRE: 24 March, 2014
- © Land and Property Management Authority (LPMA) & Tweed Shire Council,

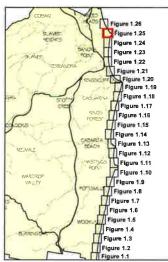
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Coastal Hazard Lines Map Figure 1.25 Sheet 25 of 26





DATA SOURCE Update of Tweed Shire Coastal Hazard Lines August 2010 Prepared By: The University of New South Wales Water Research Laboratory

Coastal Hazards Line (2014)

- - - Immediate Hazard Line

DATA SOURCE Tweed Shire Coastal Hazards November 2013 Maximum 2050 Hazard Line Prepared By: BMT WBM Pty Ltd - - - Maximum 2100 Hazard Line

AERIAL IMAGERY 2012 SOURCE

Aerial imagery was captured in May 2012
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 of AAM Pty Ltd

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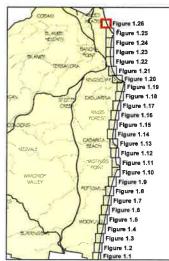
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Coastal Hazard Lines Map Figure 1.26 Sheet 26 of 26

