

## Appendix C Climate Change Flood Maps



1:5,000 012: <b>2</b> 5 50 75 100 125			100-yr ARI Flood Extents (Existing Climate)	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058   B   6 October 2008
Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56	GHD	100yr ARI Flood Extents 2100 climate	Climate Change Flooding Impact	Figure C	C.11	

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1:5,000 012: <b>2</b> 5 50 75 100 125			100-yr ARI Flood Extents (Existing Climate)	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058 B 6 October 2008
Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56	U	GHD	100yr ARI Flood Extents 2100 climate	Climate Change Flooding Impact	Figure C	C.12

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1:5,000 012.925 50 75 100 125			100-yr ARI Flood Extents (Existing Climate)	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058 B 6 October 2008
Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56	GH	100yr ARI Flood Extents 2100 climate	Climate Change Flooding Impact	Figure C	C.13	

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1:5,000 012:525 50 75 100 125			100-yr ARI Flood Extents (Existing Climate)	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058   B   6 October 2008
Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56	U	GHD	100yr ARI Flood Extents 2100 climate	Climate Change Flooding Impact	Figure (	C.14

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1:5,000 012.525 50 75 100 125	$\frown$		100-yr ARI Flood Extents (Existing Climate)	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058 B 6 October 2008
Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56	U	GHD	100yr ARI Flood Extents 2100 climate	Climate Change Flooding Impact	Figure C	2.15



1:5 000	I	I	Climate Change Increase (m) 30% Increased Rainfall Intensity	Coal & Allied	Job Number	21-16058
012 05 50 75 100 125				Report for Lower Hunter Land	Revision	В
				Project - Phase 2	Date	6 October 2008
Metres		CED		Climate Change		
Map Projection: Transverse Mercator				Olimate Onarige		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56			00, 05, 0, 01,	Flooding Impact	Figure C	.21

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1:5 000	1	1	Climate Change Increase (m) 30% Increased Rainfall Intensity	Coal & Allied	Job Number	21-16058
010 05 50 75 100 105				Report for Lower Hunter Land	Revision	В
				Project - Phase 2	Date	6 October 2008
Metres		GiD	و خ دې دې	Climate Change		
Map Projection: Transverse Mercator				Onnate Onlange		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56			000 03 02 02 01	Flooding Impact	Figure C	5.22

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1.5 000	1	I	Climate Change Increase (m) 30% Increased Rainfall Intensity	Coal & Allied	Job Number	21-16058
				Report for Lower Hunter Land	Revision	В
				Project - Phase 2	Date	6 October 2008
Metres		GiD		Climate Change		
Map Projection: Transverse Mercator			, O. , O. , O. , S. , S. , S.	Climate Change		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56		1 commences in the	0'00 0'72 0'2 0'1'	Flooding Impact	Figure C	5.23

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1.5 000	I	1	Climate Change Increase (m) 30% Increased Rainfall Intensity	Coal & Allied	Job Number	21-16058
012 65 50 75 100 125				Report for Lower Hunter Land	Revision	В
				Project - Phase 2	Date	6 October 2008
Metres		CEID		Climate Change		
Map Projection: Transverse Mercator				Omnate Onlange		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56		A DESCRIPTION OF TAXABLE PARTY.	000 02° 05 01°	Flooding Impact	Figure C	5.24

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1:5 000	1	I	Climate Change Increase (m) 30% Increased Rainfall Intensity	Coal & Allied	Job Number	21-16058
012 55 50 75 100 125				Report for Lower Hunter Land	Revision	В
				Project - Phase 2	Date	6 October 2008
Metres		CED		Climate Change		
Map Projection: Transverse Mercator				Olimate Onarige		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56			000 03, 05 03,	Flooding Impact	Figure C	.25

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## Appendix D Water Sensitive Urban Design Strategy





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1:5,000 0 20 40 80 120 160 200		Bioretention/Detention Basins	Coal & Allied Report for Lower Hunter Land Project - Phase 2	Job Number Revision Date	21-16058 B 6 October 2008
Metres	GH	100-yr ARI Flood Extents (existing)	Water Sensitive Urban		
Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56			Design Strategy	Figure	D.2

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# 370,000 NOTE: In some locations, minor filling of the flood fringe would be required to ensure roadways and lots remain flood free. In a number of locations, minor tributaries, would be incorporated in the development footprint as part of the stormwater system. The development will not lead to significant increases in flood levels, flood damages, flood behaviour or flood hazard at the site or elsewhere

WSUD STRATEGY



In 1977

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Runoff treated on individual lots, before discharge to the street drainage system. (Infiltration and retention devices,permeable paving,swales & other landscape measures etc)
Runoff from roads treated using vegetated infiltration swales (bio-retention in the invert) along the identified main overland flow routes adjacent to the roads plus smaller bioretention basins upstream of local road crossings in steeper areas. In other areas the basins would be located offline, discharging to riparian corridors. The basins would provided both detention and water quality treatment function

- Gross pollutant traps and other structural measures would be provided throughout critical locations as required - Provision of rainwater tanks maximised in accordance with Council's requirements.

- Detention provided on individual lots, before discharge to the street drainage system. This will be achieved using tanks, landscape measures and/or detention zones in rainwater tanks

Precinct scale detention basins are proposed at locations where local roads cross over creeks and tributaries
 Habitable floor levels will either be at or above the Flood Planning Level

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In flood storage and flood way areas, filling and development will not lead to a significant increase in flood levels, flood damages, flood behaviour or flood hazard at the site or elsewhere. Provision of adequate and acceptable compensating works to offset must be provided; and

- In flood prone areas, effective evacuation procedures will be provided.



1:5,000 0 20 40 80 120 160 200 Metres Map Projection: Transverse Mercator Horizontal Datum: Geocentric Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56

Coal & AlliedJob Number21-16058Report for Lower Hunter LandRevisionBProject - Phase 2Date6 October 2008Water Sensitive UrbanFigure D.4

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