

## Greenfield example

- Design of a new development near Ballarat
- Include conveyance and basin
   infrastructure
- Do not increase peak flows in downstream natural waterway
- Only stage 1 included in basin catchment

ARR Urban Book: Coombes, Roso, Babister







	Greenfield example	A Enter coordi	RR Data Hub nates or upload a shapefie Australian Rainfall & Runoff
•	Majority of hydrology and rainfall information sourced from Data Hub	Longitude 144.005 Letitude -37.63 Liptood Shapethe <u>Islan</u> Chapter Files No The chocen	
•	Rainfall ensembles <ul> <li>Proprietary models</li> <li>download this</li> <li>information</li> </ul>	River Region ARF Parameters Storm Losses Temporal Patterns Areal Temporal Patterns DOM IFID Depths Median Persboral Depths and Median Persboral Depths and	The second and
•	Estimated rural losses <ul> <li>IL: 25 mm</li> <li>CL: 4.3 mm/hr</li> </ul> Pre-burst rainfall	Other Probund Depths and Ration Interiors Clinate Change Factors Select.All Beseflow Factors Submit	*
	ARR Urban Book: Coombes, Roso, Babister	7/01/2019	Australian Baintal & Bundat













<ul> <li>Basin designed to manage flooding and impacts on do Chapter 4, Book 9)</li> <li>Mitigate 50%, 10%, 1% AEP flows to rural target</li> <li>Use storage volume and outflow arrangements to achi</li> <li>Freeboard of 300 mm from 1% AEP maximum depth</li> <li>Emergency spillway designed for full blockage and 1%</li> <li>See Ch. 6, Book 6 for blockage discussions</li> </ul>	wnstream waterway (see eve this (retention & detention) AEP events rated Inlet spillway Outlet pipe
ARR Urban Bool: Coombes, Roso, Babister 7/01/2019	Australan Bartal & Rundt





Greenfield example • Test designs using climate change impacts	Solo AEP
<ul> <li>See Ch. 6 of Book 1; Section 7.7 of Book 8</li> </ul>	0.000 Jomin Timin 20min 25min 30min 45min 2hr 3.5hr 2hr 3hr Duration
<ul> <li>Select design life and consequence level</li> </ul>	0.100 10% AEP 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.0000 0.00000 0.00000 0.0000 0.000000 0.0000 0.0000 0.0000 0.00000 0.00000 0.000
<ul> <li>100 years for the basin and medium consequence for impacts on waterway and surrounding rural properties</li> </ul>	and the second s
Extract data from Data Hub     Used RCP 8.5 value for 2090     16.1% increase in rainfall	1% AEP
<ul> <li>Test climate change impacts using ensembles</li> </ul>	0.000 0.000 10min 15min 20min 25min 30min 45min 197 1.5m 297 3m
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