Appendix C: Status of Model Scenario Runs

Stormwater Modelling Scenario	**Development Scenario**	**Applicant Run Completed**	**Council Run Completed**	**Comments**	
20% AEP	Pre-development	Yes	Yes	Current climate 2130 RCP 8.5+ HIRDS3	Typically, stormwater models go through a Calibration, Validation and Verification process (usually in that order). Calibration: where the model input parameters are adjusted so the modelled simulation accurately reflects measured storm events. Validation: Testing the calibrated model against various storm events to confirm if the model accurately predicts real-world conditions / measured storm data. Verification: independent peer review process of the model or a comparison against another model. The BOPRC model has been calibrated, validation and verified. The Maven model has not been through a calibration or validation process. The 1% storm event modelled in the Maven Model has been verified by comparison to the BOPRC model but not against actual flood events. The peer review process found that the 1% AEP flood is comparable with the peak water levels modelled by BOPRC (in limited locations). The BOPRC model has been verified against three large storm events.
	Post-development	Yes	Yes	Current climate 2130 RCP 8.5+ HIRDS3	
10% AEP	Pre-Development	Yes	No	Current climate 2130 RCP 8.5+ HIRDS3	
	Post-Development	Yes	No		
5% AEP	Pre-development	No	No	Current climate 2130 RCP 8.5+ HIRDS3	
	Post-Development	No	No		
50% AEP	Pre-development	Yes	No	Current climate 2130 RCP 8.5+ HIRDS3	
	Post-Development	Yes	No		
1% AEP	Pre-development	Yes	Yes	Current climate 2130 RCP 8.5+ HIRDS3	

	Post-development	Yes	Yes	Current climate 2130 RCP 8.5+ HIRDS3	Therefore, the peer review process outlined the use of the model was only appropriate for the macro-scale assessment of floodplain filling effects associated with the proposed development for the 1% AEP (100-year ARI) event at a concept level.
0.2% AEP	Pre-development	Yes	Yes	Current climate 2130 RCP 8.5+ HIRDS3	
	Post-development	Yes	Yes	2130 RCP 8.5+ HIRDS3	
Pumps Off	Pre-development	Yes	Yes	1% AEP: Current climate 2130 RCP 8.5+ HIRDS3	
	Post-development	Yes	Yes	1% AEP: Current climate 2130 RCP 8.5+ HIRDS3	
1% AEP Breach	Pre-development	No	Yes	Current climate: • Kaituna Dominant 2130 RCP 8.5+: HIRDS3 • Bell Rd Dominant • Tide Dominant	Pre-Development report shared with BRLP. BOPRC have completed post development breach modelling. BOPRC have not engaged AWA to prepare a report on the outcomes / outputs of this modelling. Effects maps have been shown with our assessment that raised concerns to be addressed. We would expect this work to be undertaken by BRLP. We are working with BRLP to prepare and share the breach model so they can consider the outputs, associated effects resulting from this modelling work and respond accordingly.
	Post-development	No	Yes	2130 RCP 8.5+: • Kaituna Dominant	
0.2% AEP Breach	Pre-development	No	Yes	2130 RCP 8.5+: • HIRDS3 • Tide Dominant	
	Post Development	No	No		