

APPENDIX F

MULTI-CRITERIA ASSESSMENT - DRAFT

			Economic				Change in OF 100yr	Social				Environmental						Score Sub- Catchment Rank Overall Rank Overall Rank BCR			
			1.3			1				0.5											
			Benefit Cost Ratio	Implementation Complexity	Staging of Works	Reduction in risk to life and social impacts		Emergency Access and Social Disruption	Compatibility of proposed works / option with Council Plans & Policies	Community and Stakeholder Support	Heritage Conservation Areas and Heritage Items	Flora / Fauna Impacts – including Street Trees	Acid Sulfate Soils	Contaminated Land	Visual Impact	Recreation Space					
		BCR																			
			5	3	3		5	4	3	3	3	3	3	3	3	3					
HC_FM1	Additional pipes /culverts from Parramatta Road to Hawthorne Canal via Beeson Street.	0.71	2	1	2	-25	4	3	1	0	-1	0	0	0	0	0	58.8	1	2	3	
HC_FM2	Additional pipes or duplication of existing network from Reuss Street to Hawthorne Canal via Elswick Street, Flood Street and Marion Street.	0.17	1	1	2	-11	3	2	1	0	-2	0	0	0	0	0	41.7	4	9	15	
HC_FM3	Additional pipes/culverts from Elswick Street to Hawthorne Canal (via Regent Street and Darley Road). Also extra pipes at Darley Road to reduce flood depths on the Road.	0.13	1	1	2	-18	4	3	1	0	0	0	-1	0	0	0	52.2	2	4	20	
HC_FM4	Additional pipes/ culverts from William Street to Hawthorne Canal via Hubert Street and Darley Road.	0.17	1	1	2	-11	3	2	1	0	0	0	0	0	0	-1	43.2	3	7	15	
HC_FM5	Proposed culverts through the rail embankment to drain flood waters from Darley Road to Hawthorne Canal.	0.17	1	2	1	-9	2	2	1	0	0	0	-1	-3	0	0	33.7	5	13	15	
JC-FM1	Johnston Street Flow Path – Proposing additional pipes/ culverts and duplication of existing pipe network from Johnston St to Johnstons Creek open channel. Additional pipes on Parramatta Rd, Trafalgar St, Albion St and Nelson St.	0.25	1	1	2	-8	2	1	1	0	-1	0	0	0	0	0	34.2	1	12	9	
JC-FM2	Pyrmont Bridge Road Flow Path – Additional pipes or duplication of existing network from Parramatta Rd to Johnstons Creek via Pyrmont Bridge Rd.	0.32	1	2	1	-4	1	1	1	0	0	0	0	0	0	0	30.7	2	16	7	
JC-FM3	View Street Flow Path – Duplication of existing pipe network or additional pipes from View St to Johnston Creek (via Trafalgar St, Nelson St and Taylor St).	0.10	1	1	2	-1	1	1	1	0	0	0	0	0	0	0	30.7	2	16	24	
JC-FM4	Rose Street Flow Path - Additional pipes from Rose St/Johnston St to Federal Park via View St and Trafalgar St. Proposed Easement downstream of The Crescent to drain flood waters from the low point of the Rd.	0.21	1	1	2	-3	1	1	1	0	-3	0	0	0	0	0	26.2	4	23	11	
JC-FM5	Additional pipes within Johnstons Creek Catchment – At Bayview Crescent, Piper St and at Wigram Rd.	0.00	0	2	1	0	0	1	1	0	-4	0	0	0	0	0	13.0	5	34	30	
JC-FM6	A levee or embankment is proposed on Nelson Lane, starting from the northern end of Taylor Street in order to minimise flooding adjacent to Johnstons Creek.	-2.77	-4	3	0	15	-4	-3	0	0	0	-1	0	0	-2	-2	-54.2	6	37	37	
WC-FM1	Whites Creek Culvert – Proposing additional culvert or duplication of existing Whites Creek culvert from Parramatta Rd to the open channel downstream of Moore St (at Wisdom Street). Also combining WCFM2 along with this option.	0.21	1	1	2	-53	4	3	1	0	-1	0	0	0	0	-1	50.7	3	5	11	
WC-FM2	Young Street Flow Path – Proposing new pipe network from Young Street/Parramatta Road to Whites Creek culvert via Young St, Albion St, Ferris St and Clarke St. Additional pipe network from Young St to Albion Street.	0.13	1	2	0	-3	1	1	1	0	0	0	0	0	0	0	26.7	9	22	20	
WC-FM3	Balmain Road Flow Path – Additional pipe from the low point on Norton St to the existing pipe network (towards Parramatta Rd). Duplication of existing pipe network or extra pipes from Balmain Rd to Whites Creek Culvert at Hearn St.	1.59	3	1	2	-25	4	3	1	0	-1	0	0	-1	0	0	64.0	1	1	2	
WC-FM5	Detention Basin at Mackenzie Street (upstream at the intersection of Mackenzie and Milton St)	1.85	3	2	0	-21	4	3	0	0	0	-1	0	0	0	0	58.5	2	3	1	
WC-FM6	Styles Street Flow Path – Additional pipes from Mackenzie St to Whites Creek Culvert.	0.28	1	1	2	-32	4	3	1	0	-3	0	0	0	0	0	49.2	4	6	8	
WC-FM8	Annandale Street Flow Path – Duplication of existing pipe network or additional pipes from Annandale St to Whites Creek culvert.	0.14	1	2	2	-5	1	1	1	0	-3	0	0	0	0	0	30.2	8	19	19	
WC-FM10	Detention Basin at Catherine Street (War Memorial Park)	0.21	1	2	0	-8	2	2	0	0	0	-1	0	0	0	0	31.2	7	15	11	
WC-FM11	Moore Street Flow Path – Additional Pipes from Catherine St to Whites Creek along Moore Lane.	0.13	1	2	1	-9	2	1	1	0	0	0	0	0	0	0	35.7	6	11	20	
WC-FM12	Additional pipes at Brenan St and Railway PDE to reduce flooding on the roads.	0.13	1	2	2	0	0	0	1	0	-3	0	0	0	0	0	21.2	11	27	20	
WC-FM13	Whites Creek Culvert/Open Channel – Proposing additional culvert or duplication of existing Whites Creek culvert from Parramatta Rd to the open channel downstream of Moore St (WC-FM1). Widening of the open channel to convey additional flows. Upgrade Bridges at Piper Street and Brenan Street (WC-FM14)	0.23	1	-1	2	-87	4	3	1	0	0	-2	0	0	0	0	42.7	5	8	10	
WC-FM14	Whites Creek Bridge Upgrades –Upgrade Bridges at Piper Street and Brenan Street.	0.03	1	2	1	-2	1	1	2	0	-4	-1	0	0	0	0	26.2	10	23	27	
IC_FM1	Victoria Road Branch – Additional pipes from the Victoria Rd/Terry St intersection that drains into Iron Cove	0.00	0	2	0	0	0	0	1	0	0	0	0	0	0	0	11.0	4	36	30	
IC_FM2	Manning Street Branch – Additional pipes that crosses Mannings St at three locations onto other street. Toelle St, Callan St and Springside St.	0.01	1	2	1	0	0	1	1	0	-4	0	0	0	0	-1	18.2	2	31	28	

			Economic				Social				Environmental									
			1.3				1				0.5									
		BCR	Benefit Cost Ratio	Implementation Complexity	Staging of Works	Change in OF 100yr	Reduction in risk to life and social impacts	Emergency Access and Social Disruption	Compatibility of proposed works / option with Council Plans & Policies	Community and Stakeholder Support	Heritage Conservation Areas and Heritage Items	Flora / Fauna Impacts – including Street Trees	Acid Sulfate Soils	Contaminated Land	Visual Impact	Recreation Space	Score	Sub-Catchment Rank	Overall Rank	Overall Rank BCR
			5	3	3		5	4	3	3	3	3	3	3	3	3				
IC_FM3	Glover Street Branch – Additional pipe along Glover St between Perry St and Church St.	0.00	0	2	1	0	0	1	1	0	0	0	0	0	0	0	19.0	1	29	30
IC_FM4	Longview Street Branch – Additional pipes to drain flooding from the low point on Longview Street.	0.00	0	2	0	0	0	1	1	0	0	0	0	0	0	0	15.0	3	33	30
MB_FM1	Colgate Street Branch – Proposing additional pipes to be incorporated into the existing network. Starting from Darling St/Queens Pl intersection, passes along Colgate Av and drains into Mort Bay. There are also additional pipes on St Andrews St and Cooper St.	0.01	1	2	2	0	0	1	1	0	-3	0	-1	0	0	0	23.7	2	26	28
MB_FM3	Curtis Rd Branch – Propose additional pipes along Mort St and Clayton St and connecting to an additional proposed pipe on Cameron St (MB-FM4) which drains into Mort Bay.	0.00	0	2	2	0	0	1	1	0	-1	0	0	0	0	-1	20.0	3	28	30
MB_FM4	College Street Branch – Additional pipe network starting from the Cardwell/North St intersection, travelling along (SE) Macquarie St and the Curtis Rd. The pipe branches off into Phillip St, Church St and College St and finally connects into the existing Sydney Water pipe and to the proposed pipe on Cameron St which drains into Mort Bay.	0.00	0	2	2	0	0	1	1	0	-2	0	0	0	0	-1	18.5	4	30	30
MB_FM5	McKell Street Branch – Additional pipe from Short St that crosses McKell St and drain into Mort Bay	0.08	1	2	1	-1	1	1	1	0	0	0	0	0	0	-1	29.2	1	20	25
SB_FM1	Cove Street Branch – The proposed pipe starts from the Cove/Birchgrove St Intersection and then goes along Ferdinand St and connects to the existing pipe network in The Terrace. Additional pipes along Grove St, Rose St and Bay St.	0.00	0	2	1	0	0	1	1	0	-2	0	0	0	0	0	16.0	1	32	30
RB-FM1	Lilyfield Road Flow Path – Proposing additional pipes or duplication of existing pipe network. Proposed pipes connecting into the existing network at O’ Neill St. Additional pipes from the low point on Denison St to the outlet at Rozelle Bay. Additional pipe network in Quirk Street, Gordon Street and Lilyfield Road with a branch along Alfred Street.	0.37	1	1	2	-8	2	2	1	0	-3	0	-2	0	0	-1	30.7	1	16	6
RB-FM2	Additional Culverts/Pipes across Lilyfield Road at four locations. From Joseph Street along Halloran Street to Lilyfield Road, Edward St, Justin St, Cecily St and Brenan Street South of the railyards.	0.04	1	2	1	-1	1	1	1	0	0	0	0	0	-2	0	27.7	2	21	26
WB-FM1	Beattie Street Branch – Proposing a new pipe network or duplication of existing pipe network. Starting from Llewellyn St to the outlet at White Bay. The trunk drainage starts from Roseberry St at the start and Robert St to the end. Then travelling East, parallel to Robert St and eventually draining into White Bay.	0.20	1	1	2	-35	4	3	1	0	-4	0	-1	-3	0	0	41.7	1	9	14
WB-FM2	Wortley Street Branch – Proposing additional pipes to be incorporated into the existing pipe network. Additions at Creek St, Wortley St, Foy St, Hyam St, Roseberry Place and eventually crossing Robert St to drain into White bay.	0.41	1	1	2	-10	2	2	1	0	-3	0	0	0	0	-1	33.7	2	13	4
WB-FM3	Reynolds Street (Wortley Street) Proposed Basin – Proposed basin in Punch park, situated next to Reynolds St.	0.39	1	1	0	-2	1	1	0	0	-3	-1	-1	0	0	0	12.2	4	35	5
WB-FM4	Montague Street Branch and additional pipes – Proposing additional pipes from Montague St that connect into the existing network.	0.15	1	2	0	-2	1	1	1	0	-1	0	0	0	0	0	25.2	3	25	18

	Economic							Social						Environmental							
	1.3							1						0.5							
	Likely Reduction in Flood Damages		Capital Cost		Operating and Maintenance Cost	Implementation Complexity	Staging of Works	Increased Awareness	Improved Response	Emergency Access	Reduction in risk to life	Compatibility of proposed works / option with Council Plans & Policies	Community and Stakeholder Support	Heritage Conservation Areas and Heritage Items	Flora / Fauna Impacts – including Street Trees	Acid Sulfate Soils	Contaminated Land	Visual Impact	Recreation Space	Score	Rank
	5		4		4	4	3	5	5	4	5	3	3	3	3	3	3	3	3		
PM1 – Review of LEP Wording	1	\$ -	0	\$ -	0	4	0	0	0	0	1	2	0	0	0	0	0	0	0	38.3	4
PM2 – DCP Review for Effective Flood Access	0	\$ -	0	\$ -	0	4	0	0	0	1	3	1	0	0	0	0	0	0	0	42.8	2
PM3 – DCP 2013 Review for Car Parking Controls	0	\$ -	0	\$ -	0	4	0	0	0	0	3	2	0	0	0	0	0	0	0	41.8	3
PM4 – Onsite Detention Requirements	1	\$ -	0	\$ -	0	4	0	0	0	1	1	0	0	0	0	0	0	0	0	36.3	5
PM5 – Flood Planning Level	0	\$ -	0	\$ -	0	4	0	1	0	0	1	1	0	0	0	0	0	0	0	33.8	6
PM6 – Voluntary House Purchase	4	\$ 800,000	-3	\$ 126,000	-2	-2	2	0	0	0	2	0	0	0	0	0	0	1	2	11.9	9
PM7 – Voluntary House Raising	4	\$ 320,000	-2	\$ -	0	-3	2	0	0	0	1	0	0	0	0	0	0	0	0	12.8	8
PM8 – Incentives for Flood Compatible Redevelopment	4	\$ 40,000	-1	\$ 40,000	-2	-2	2	3	0	0	1	0	0	0	0	0	0	0	0	27.8	7
PM9 – Strategic Planning	3	\$ -	0	\$ -	0	3	0	0	0	1	3	3	0	0	0	0	0	0	1	64.6	1
EM1 – Information Transfer to SES	0	\$ -	0	\$ -	0	4	0	0	3	0	1	0	0	0	0	0	0	0	0	40.8	3
EM2 – Prepare a Local Flood Plan	0	\$ -	0	\$ -	0	4	0	4	4	0	1	0	0	0	0	0	0	0	0	65.8	1
EM3 – Public Awareness and Education	0	\$ 30,000	-1	\$ 5,000	-2	4	1	4	3	0	1	0	0	0	0	0	0	0	0	49.1	2
EM4 – Early Warning Alert System	0	\$ 60,000	-2	\$ 10,000	-2	-2	1	3	4	0	3	0	0	0	0	0	0	0	0	22.7	4
EM5 – Flood Warning Signs at Critical Locations	0	\$ 165,000	-2	\$ 33,000	-2	-2	2	3	3	0	3	0	0	0	0	0	0	-1	0	20.1	5
EM6 – Establish Evacuation Centres	0	\$ 100,000	-2	\$ 20,000	-2	-1	2	0	3	0	3	0	0	0	0	0	0	0	0	11.8	6
EM7 – Improved Flood Access	0	\$ 3,000,000	-4	\$ 50,000	-2	-3	2	0	0	4	4	0	0	0	0	0	0	0	0	-3	7