

**Appendix B**

# **Community Questionnaire**



## ACTION

This brochure is to inform you about a Flood Study that is being prepared for the Alexandra Canal Catchment area, and invites you to contribute to the successful completion of the study.

## COMMITTEE

A Floodplain Management Committee will soon be formed, which will be made up of a number of representatives from relevant authorities as well as community members. This committee will oversee the floodplain management process, and contribute to revisions and reviews.

## EXHIBITION

The Draft Flood Study is currently scheduled for completion in June 2010. The community will be invited to view and comment on the Draft Study, when it is displayed at the City's One Stop Shop, neighbourhood service centres and libraries.

[www.cityofsydney.nsw.gov.au](http://www.cityofsydney.nsw.gov.au)

## YOUR HELP PLEASE?

Our community consultation includes this brochure and questionnaire (for collection of historical flood data). Residents and business operators' local knowledge of the catchment and personal experiences of flooding provide an invaluable source of data. We are specifically interested in any historical records of flooding that the residents might hold, including photos, flood marks or observations. This information would allow the City to understand the current flooding mechanisms in more detail, allowing the City to later invest in the most effective flood hazard management measures.

Please complete the questionnaire and return it in the reply paid envelope, or complete it online at [www.cityofsydney.nsw.gov.au](http://www.cityofsydney.nsw.gov.au) (preferred).

Please contact:



**Cardno**  
Shaping the Future

**Cardno Lawson Treloar**

Rhys Thomson  
Ph: 9499 3000



**CITY OF SYDNEY**

**City of Sydney**

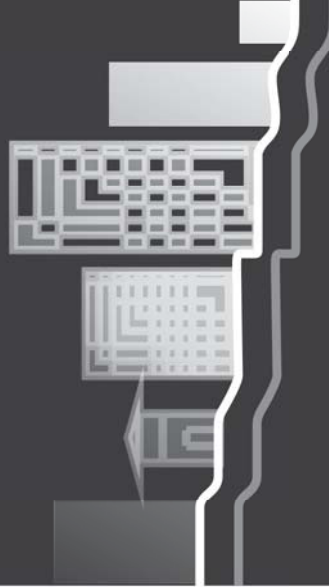
Myl Senthilvasan  
Ph: 9246 7223

To access the questionnaire online visit:  
[www.cityofsydney.nsw.gov.au](http://www.cityofsydney.nsw.gov.au)

## FOR FURTHER DETAILS?

2009

# Alexandra Canal Catchment Flood Study



**CITY OF SYDNEY**



**Cardno**  
Shaping the Future

The implementation of sound flood management is important to reduce flood damages, improving social and economic opportunities.

The City of Sydney Council has resolved to undertake a Flood Study for the Alexandra Canal Catchment area. The purpose of the Flood Study is to identify the nature of flooding in the catchment area to enable the City to better understand, plan and manage the potential flood risk.

Under the NSW Government Flood Prone Land Policy, management of flood prone land is, primarily, the responsibility of councils. The Policy specifies a staged approach to the floodplain management process (see flowchart). The City will follow this process in order to manage the floodplain in your area.

The objectives of the Alexandra Canal Catchment Flood Study are to:

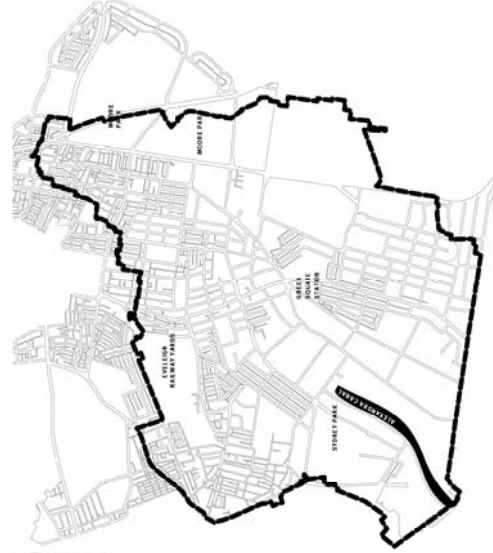
- Investigate historical flooding in the Alexandra Canal Catchment;
- Develop an electronic flood model that can be used to predict the magnitude and extent of future floods; and
- Provide the City with the necessary information to make effective investments in flood management in the future.

## INTRODUCTION

## OBJECTIVES OF THE FLOOD STUDY

The Alexandra Canal Catchment includes the suburbs of Alexandria, Erskineville, Waterloo, Surry Hills, Rosebery, Beaconsfield, Redfern, Newtown, Eveleigh, Moore Park and Zetland. Their combined catchment area is approximately 14km<sup>2</sup>, and includes residential, commercial and industrial properties, and parkland including Sydney Park and Waterloo Park.

In the past, flooding in the Alexandra Canal Catchment has caused property damage, and posed a hazard to people close to the main drainage channels or drainage paths. Flooding may also occur along natural depressions and near stormwater pits. The City is currently attempting to quantify and understand the extent of these types of flooding within the Alexandra Canal Catchment.



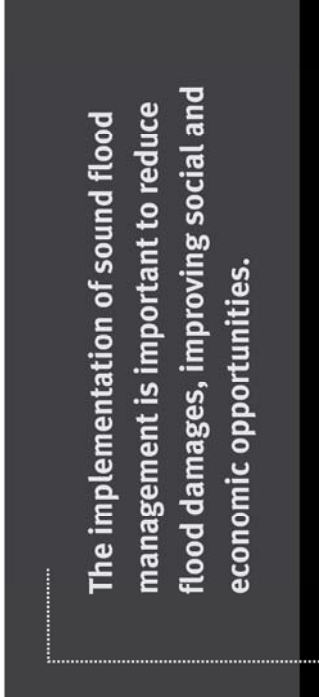
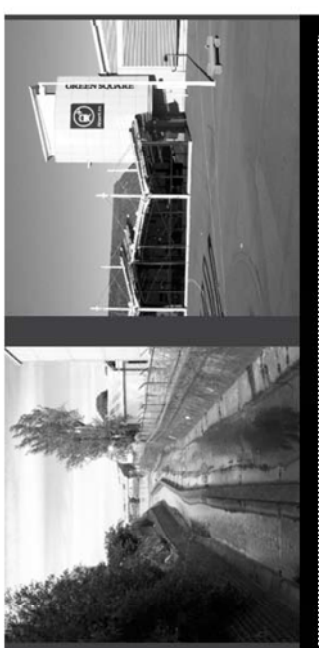
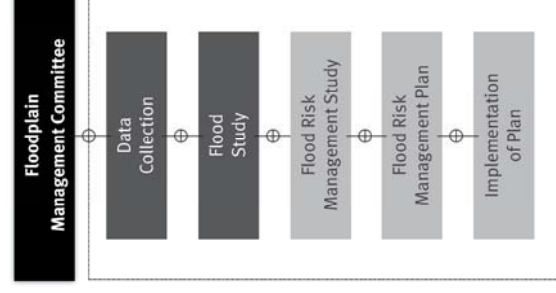
## THE STUDY AREA AND FLOODING ISSUES

## THE FLOOD STUDY

The Alexandra Canal Catchment Flood Study will be based on historical data, and include an electronic model that represents flooding in your area. The information from the Flood Study will help future planning in the City of Sydney LGA.

Following the Flood Study, a Flood Risk Management Study and Plan will be prepared, where specific flood management options will be investigated.

## FLOW CHART



**Question 8**

Did you notice any bridges and/or culverts to be blocked during the event?

Yes  No

If Yes, please provide details (please mark the location on the map if possible, and how blocked would you say it was? (e.g. 50% blocked, 80% blocked). What was causing the blockage?

\_\_\_\_\_

\_\_\_\_\_

**Question 9**

Do you have any evidence of past flood events (eg photos, video footage, watermarks on walls or posts)?

Yes  No

If YES, please give as much detail as possible:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 10**

If you have any additional information that would facilitate the Alexandra Canal Catchment Flood Study, please provide it in the space below:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 11**

Are you interested in participating in the Floodplain Risk Management Committee?

Yes  No

If Yes please provide your contact details in Question 1 for Council staff to contact you

Thank you for providing this information. Please remember to place all pages in the reply paid envelope and send to Cardno Lawson Treloar by 28 September 2009. A representative from Cardno Lawson Treloar may contact you in the near future to discuss your response.

Council will keep any persons who respond to the questionnaire included in future mail outs (related to the project).

**Introduction**

City of Sydney Council has resolved to undertake a Flood Study for the Alexandra Canal Catchment. The purpose of the Flood Study is to identify the nature of flooding in the catchment area to enable Council to better understand, plan and manage the potential flood risk.

Your local knowledge of the catchment and personal experiences of flooding provide an invaluable source of data.



**Question 1**

Can you please provide us with the following details? We may contact you to discuss some of the information that you provide in this questionnaire.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

Phone(B/H): \_\_\_\_\_

**Question 2**

How long have you lived or worked in this locality?

Years \_\_\_\_\_ Months \_\_\_\_\_

**Question 3**

How aware are you of stormwater flooding from streets or channels in the catchment? (Please tick one)

- Aware
- Some knowledge
- Not aware



Your input will allow Council to better understand the current flooding mechanisms, allowing Council to later invest in the most effective flood hazard management measures.

Alexandra Canal Catchment Flood Study  
Community Questionnaire

**Question 4**

Have you ever been inconvenienced by uncontrolled floodwater/stormwater from streets or channels in this locality?

Yes  No

✓ Answer	Dates / Times / Description
My/our daily routine was affected (eg it was difficult to get to work)	
My/our safety was threatened	
Access to our property was affected (eg driveways or roads flooded)	
Our property and/or its contents were damaged	
My/our business was unable to operate during the flooded period	
Other (please specify)	

**Question 6**

Has your residential/commercial property been flooded because of uncontrolled floodwater/stormwater from streets or channels in this locality? (surcharge of pits?)

Yes  No

If you answered Yes, where was your property flooded, and when did it occur? (You may tick more than one)

✓ Location	Dates/Times/Description
Frontyard or Backyard	
Garage or Shed	
Residential (below floor level)	
Residential (above floor level)	
Commercial (eg. Shops) (above floor level)	
Commercial (below floor level)	
Industrial (eg. Factories)	
Other (please specify)	

**Question 5**

Can you remember when that was?

Yes  No

If you answered Yes, please give us as much detail as possible. To assist, flooding may have occurred on the following dates:

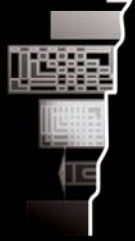
June 2007  February 2001  April 1998  February 1993   
 January 1991  January 1989  November 1988  Other

**Question 7**

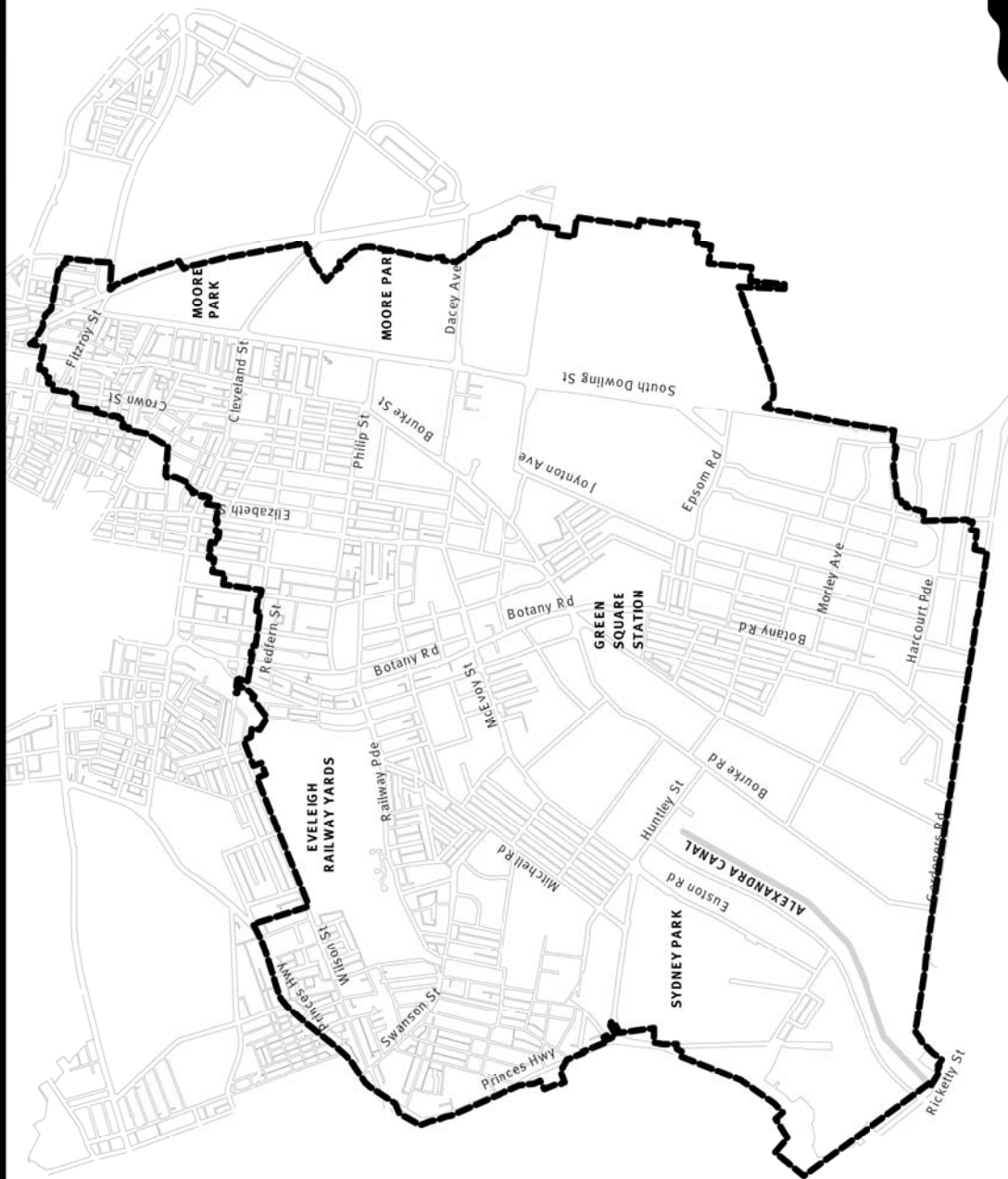
If you have experienced flooding, what other areas have you seen flooded?  
 (please mark the location on the enclosed map and include with the questionnaire in the reply paid envelope)

✓ Location	Address	Description
Residential or Commercial		
Roads or Footpaths		
Parks		
Other (please specify)		





# Alexandra Canal Catchment Flood Study









Q1		Q2		Q3		Q4 Comments										Q5									
Number	Street	Suburb	How long lived or worked in Years	Months	Years	Some Knowledge	Not Averse	Is/has been affected	Comments	Safety Threatening	Access affected	Damage	Business affected	Other	Remember Year/No	Jun-07	Apr-01	Feb-83	Jan-86	Nov-88	Other	Property Front/Back	Year	Comment	
41	Burdett St	Hecfern	40	3	1	1		1				1	Our roof, ceiling in 1 bedroom, bed & bathroom. Garden & flowers.	Main area which is severely affected is Baptist St between Phillip to Zama Streets.	Y		1								
42	Rennock St	Alexandra	21	4	1			1	Not sure of dates.						N								N		
43	Spencer St	New Bay	20			1	1		Nov-88						Y				1				N		
44	Huntley St	Alexandra	7			1		1															N		
45	Murchie St	Alexandra	48	9	1			1	Long time ago						N								N		
46	GPO Box 1393	Sydney													Y								N	Late 1960's early 1970's	
47	Cooking St	Erskineville	8	6				1							N								N		
48	Buckland St	Alexandra	9					1						A couple of winters. Our local corner has flooded during heavy rain. Cr. Buckland/Gerard Sts.	N								N		
49	Mundy Ave	Rozzbury	13	2		1		1															N		
50	Eve St	Erskineville	8			1		1																N	
51	Bonnie St	Hecfern	5	5	1			1						Travelling South down Bourke Rd after rain. Water driven through water over the road.	Y								N		
53	Newell St	Alexandra	5			1	1								N								N		
54	Bondur St	Alexandra	2			1		1							N								N		
55	Wentworth St	Alexandra	20			1		1							N								N		
56	Rennock St	Alexandra	4			1		1							N								N		
57	Ralph St	Alexandra	3	6		1		1	Issue to & from work garage to car being stuck in water.		1	June 07 flooding of water destroyed nature strips (Pleasant/Campbell Hwy)		Y									N	Oct/Sep 2008	
58	Botany Rd	Rozzbury	22			1		1							N								Y		
59	Botany Rd	Rozzbury	22			1		1							N								Y		
60	Railway Pde	Hecfern	3	2		1		1							N								N		
61	Chalmers St	Hecfern	3	2		1		1	9th Sept. 2009 Even a small storm like this caused people to people walking on the street.		1	7 Dec 2007 Water ran into our apartment. 20 Feb 2008 garage and damaged one of our lifts.		Y									N	See Q4	
62	Orwell St	Newfido	1	10		1		1							N								N		
63	Hickson St	Newfido	7			1		1	Water running down gutter, ponded at bottom of street against embankment, causing water to spill onto roadside bins flooding in it.					N									N	Can't remember dates, but it has happened twice in last 5 years - once time there was a power outage & a longer spell of wet weather.	
64	Waller St	Ultimo	2			1		1							N								N		
65	Park St	St John West	4	11		1		1							N								N		
67	Eve St	Erskineville	4			1		1							N								Y		
68	Hopkiss Ave	Richdale	metal property			1		1															N		
69	Victoria Rd	Baconfield	3	4		1		1	Flooding on Botany Road 2008. Stormwater near McDonalds Alexandra.														N		

Q1		Q2		Q3			Q4 Comments										Q5							
Number	Street	Subdiv	How long lived or worked in Years	Months Aways	Some Knowledge Aways	Not Aways	Recalls Affected	Safety Threatening	Access Affected	Damage	Business Affected	Other	Remember Year	Jun-07	Feb-01	Apr-08	Feb-03	Jan-01	Jan-05	Nov-08	Other	Property Front/Back	Year	Comment
70	Jones St	Ultimo	5	1	1		1		1	1				N	1	1						Y	1	Several times since we have lived here.
71	Batany Rd	Bloomersfield	16				1							N										
72	Ever St	Erskineville	4		1		1															N		
73	Ever St	Erskineville	10	1	1		1															N		
74	Chifford St	Moreman		1	1		1							N								N		
75	Beaumont St	Camptown	5	3	1		1							N								N		
76	Mount St	Recifern	12				1		1					N								N		
77	Chapman St	Sunny Hills	6			1	1															N		
78	Chapman St	Sunny Hills	7			1	1															N		
79	Marsden St	Erskineville	3	7	1		1															N		
80	Park St	Erskineville	5		1		1															N		
81	Smiths Lane	Erskineville	6		1		1		1					N								N		
82	McKee Rd	Erskineville	4	10		1	1							N								N		
83	Barrett St	Erskineville	4			1	1							Y								N		Around early 2009 - late 2008
84	Lawrence St	Alvanoria	4	4	1		1															N		
85	Alexander St	Alvanoria	15		1		1		1					Y		1						N		
86	Rochford Ave	Rozzberry	9		1		1															N		
87	Ralph St	Alvanoria	5	2	1		1															N		
88	Stirling Circuit	Camptown	3	6	1		1															N		
89	Stirling Circuit	Camptown	6	1	1		1															N		In heavy rain intersection of Gough and Joynter Aves flooded, water almost reached restaurant on north west corner of our building.
90	Bradford Street	Alvanoria	9				1															N		

G1		G2		G3		G4 Comments										G5			
Street	Suburb	How long lived or worked in Years	Months	Some Knowledge	Not Averse	Recalls	Access	Safety	Damage	Business	Other	Remember	Apr-98	Jan-99	Nov-98	Other	Property	Front	
Number				Avon	Avon	Y	Comment	Threatening	Comment	Affected	Comment	Y/No	Y/No	Y/No	Y/No	Y/No	Y/No	Y/No	Y/No
91 Hunter Street	Wairarapa		6	1		1							1				N		
92 Ada St	Erskineville	15		1		1	3 times in last 15 yrs. for 300m of water						1			23 yrs ago, 4.5 yrs ago & 10 yrs ago.	N		
93 Motley Ave	Rosebery	2	1	1		1											N		
94 Powell St	Wairarapa	4		1		1											N		
95 Lavender St	Alexandria	6	2	1		1	Penitence Rd was flooded										N		
96 Victoria Rd	Baconersfield	2		1		1											N		
97 Barry's Blue Gum Rd	Flindersholme	Not at all				1											N		
98 Copie St	Wairarapa	11		1		1	Work as Psychologist in area & patients in Copie St. The distressed her greatly & old damage which still causes problems 2.5 yrs later.	1					1				N	1	Frontyard received high water.
99 Royal St	Morotua	30		1		1											N		
100 Shirley St	Alexandria	2		1		1											N		
101 Shirley Ave	Alexandria	9		1		1											N		
102 Chiva Lane	Stony Hills	3	6	1		1											N		
103 Larchlan St	Wairarapa			1		1											N		
104 Queen Street	Rosebery	6	5	1		1	Heavy rain in Winter 2006 flooded Glenelg near O'Riordan St and Hart Road.										N		
105 Belmont Street	Alexandria	10		1		1											N		
106 Coulson St	Erskineville	12	9	1		1	Fast flooding over last decade causing road flooding.										N		
107 Macneil Rd	Alexandria	7		1		1											N		
108 Talpa St	Reefers			1		1											N		

Q1		Q2		Q3		Q4 Comments										Q5							
Number	Street	Subdiv	How long lived or worked in Years	Months	Some Knowledge	Not Averse	Business Affected	Safety Threatening	Damage	Access Affected	Business Affected	Other	Remember Year	Apr-01	Apr-08	Feb-03	Jan-01	Jan-08	Nov-08	Other	Property Front Yard	Year Comment	
109	Pleasant Ave	Erkineville	15		1																	N	
110	Shelburne St	Warwick		10	1																	N	
111	Bowker Rd	Alexandria	4	2	1																	N	
112	Greenman St	Alexandria	7	6	1																	N	
113	Noble St	Sherry Hills	3			1																N	
114	Noble St	Sherry Hills	14	11	1					1												N	
115	Bowker Rd	Reefers	8			1																N	
116	Bayport St	Reefers	5		1																	N	
117	Noble St	Sherry Hills	3	2		1																N	
118	Michael Rd	Erkineville	6	7	1																	N	
119	Seymour Ave	Zelland	7	3	1																	N	
120	Belmont Street	Alexandria	27		1																	N	
121	Middle St	Alexandria	4		1					1												N	April 2007
122	Lawrence St	Erkineville	4		1					1												N	
123	Victoria Park Pk	Zelland	3	2	1					1												N	Backyard Nov07 Year 7 18mm under
124	Boatyard Rd	Warwick	8		1																	N	
125	Ralph St	Alexandria	3		1																	N	
126	Rough St	Reefers	9		1																	N	
127	Boone St	Reefers	3		1																	N	
128	Delaware St	Tamazoma	2		1																	N	
129	Proctor Ave	Carleton	27		1																	N	
130	Michael Ave	Alexandria	2		1																	N	
131	Michael Rd	Erkineville	9		1																	N	
																						N	Not a daily occurrence, just affected on occasions during stormwater flooding - around Canal Rd

Q1		Q2		Q3		Q4 Comments										Q5		Property Front/Back/Other						
Number	Street	Suburb	How long lived or worked in Years	Months Awn	Some Knowledge Awn	Not Awn	Resides in N	Business Affected	Safety Threatening	Access Affected	Damage	Business Affected	Comment	Remember Yes/No	Jun-07	Feb-01	Apr-98	Feb-83	Jan-91	Nov-88	Other	Property Front/Back/Other	Year	Comment
132	Corralls St	Wray Park	4	6	1		1							N								N		
	133	Armore St	Erskineville	26			1															N		
	134	Ruffin Rd	Rosebery		3	1																N		
	135	Victory St	Beaconsfield	60	1		1				1		Many carpets replacement.	Y							Before these dates.	Y	1	
	136	Noble St	Surry Hills	31		1				1	4 January 1989 in morning. 5 August 1986 day time.			Y					1			1	Y	
	137	Walker St	Wentoo	10		1				1	Following all heavy downpours in 1984 from deep in kerb & gutter immediately outside my property.			Y							All heavy downpours.	N		
	138	Elve St	Erskineville	5			1															N		
	139	Lawrence St	Albionville	10	5	1	1	1		1				Y	1						Every heavy rainfall.	N		
	140	PO Box 795	Woy Woy Z296	45		1		1		1				N								N		
	141	Park St	Erskineville	24		1	1															N		
	142	Jennings St	Albionville	10	1		1															N		
	143	Grandstand Pop	Zetland	6		1	1	1		1				Y/N							Right after or during big rain.	N		
	144	Georgie Ave	Zetland	5	8	1																N		
	145	Mandible St	Albionville	2		1																N		
	146	Abercrombie St	Darlington	25	1	1	1				1		10/1984 flooding - back of house with flooded & backyard.	Y							October	Y	1	
	147	Rothschild Ave	Rosebery	9			1															N		
	148	Bondar St	Albionville	9		1	1															N		
	149	Powell St	Wentoo	5	9	1		1						Y	1							N		
	150	Yasou St	Beaconsfield	9			1															N		
	151	Marburyview Cres	Milsons Point Z2	5	1		1															N		
	152	Newton St	Albionville	9		1								N								Y	1	



G1		G2		G3		G4 Comments										G5									
Number	Street	Suburb	How long lived or worked in Years	Months	Some Knowledge	Not Averse	Is/has been affected	Is/has been affected	Safety Threatening	Access affected	Damage	Business affected	Other	Remember Year	Jun-07	Feb-01	Apr-98	Feb-93	Jan-91	Nov-88	Other	Property Front/ Yard	Year	Year	Year
153	Batbury Rd	Alvaradina	72	8	1	1	1	1		1			My house is 1/4 way up from bottom of street luckily house is on a slight rise so water did not come up to front gate.	N							1980/97	N			
154	Brandling St	Alvaradina																							
155	Batbury Rd	Alvaradina	17	11	1	1	1	1		1												N	1		
156	Lawrence St	Alvaradina								1															
157	Grandstair Pkwy	Zetland	6	10		1	1																		
158	Balmort Street	Alvaradina	4	5																		N			
159	Cape St	Wairarapa																							
160	Ewe St	Erlingeville	2	6		1	1	1																	
161	Balmort Street	Alvaradina	20																						
162	Erlingeville Road	Newtown	1	5		1	1																		
163	McDonald St	Mordialloc	Investor																						
164	Phillip St	Wairarapa	4	3		1	1																		
165	Shirley St	Alvaradina	5	4		1	1																		
166	Noble St	Surry Hills	1			1	1																		
167	PO Box 7566	Dagupan 3106	1																						
168	Graham St	Peelmen	1	6	1	1	1			1															
169	Norman St	Darlinghurst	6																						
170	Erlingeville Road	Newtown	6	9		1	1			1															

Q1		Q2			Q3			Q4										Q5												
Number	Street	Suburb	How long lived or worked in Years	Months	Knows Area	Some Knowledge	Not Area	N	Y	Business Affected	Damage	Comment	Safety Threatened	Comment	Access Affected	Comment	Business Affected	Comment	Other	Remember Year	Jun-07	Feb-01	Apr-98	Feb-83	Jan-81	Nov-88	Other	Property Front/Back	Year	Comment
171	Park St	Enslinville	4							1									Other	Y	1						N			
172	Benth St	Aulburn	3	2					1										Other	N							N			
173	Victoria Park Pde	Zetland	2						1											Y							N			
174	Phillip St	Nawaroo	4	1					1				1	Seen previous					These flooding episodes happen when there is a quick but severe storm.	Y	1						Y			
175	Mullens St	Balmann	8	6					1					Not really, but was closed to public on hour later.					Nothing of any significance - only flooding in the vicinity of SI & Canal Rd near Airport.	N							N			
176	Roseville Rd	St Marks	20	8					1											Y						N				
177	Harcourt Pde	Rosebery	40						1											N							N			
178	Phillip St (near 3 Black St Richmond	Wentfield	7						1											N							N			
179	Molly Ave	Rosebery	4	11					1											Y	1						N			
180	Brandling St	Awarua	50+						1											N							Y	1	Front - 1960's	
181	Kingsdune Rd	Awarua	30						1											Y							Y			
182	PO Box 24	Ngawaka	15	5					1											Y							N			
183	Shirley St	Ngawaka	7						1											Y							N			





Q1		Q2		Q3		Q4 Comments										Q5													
Number	Street	Suburb	How long lived or worked in Years	Months Avon	Some Knowledge Avon	Not Avon	Business affected	Y	N	Business affected	Damage	Access	Safety	Threatening	Business affected	Comment	Business affected	Damage	Access	Safety	Threatening	Business affected	Comment	Other	Remember	Year	Property Front	Year	Comment
206	Newton St	Alvarania	12						1																				
207	Spring St	Roubery	1						1																				
208	Hunter Street	Wairio	2	2																									
209	Restwell Road	Bosley Park																											
210	Arthur St	Sunny Hills	15																										
211	Rennick St	Alvarania	27																										
212	Powell St	Wairio	9																										
213	Spring St	Roubery		3																									
214	Victoria St	Bloomersfield	4																										
215	Botany Rd	Wairio	15																										
216	Locker bag 5010	Alvarania	26																										
217	Wendmouth Ave	Roubery	36	2																									
218	MacDonald St	Erskineville	13																										
219	Grandstand Pk	Zelland																											







Number	G6										G7				G8		G9		G10						
	Gazette/Sheet	Rate Index	Rate Index	Rate Index	Rate Index	Rate Index	Rate Index	Rate Index	Rate Index	Rate Index	Other	Road	Road	Description	Address	Description	Pass	Description	Other	Year/No	Year/No	Comment	Comment	Additional Information	
41																									When it rains the water is unable to go into gutters (because gutters) are not connected to the tree roots.
42												1	Intersection of Mitchell Rd & Anderson St	Rotary Rd, Owens Ave, Bourke Rd.						N	N				
43												1	Mitchell Rd	Local						N	N				
44																				N	N				
45																				N	N				
46										1	Later 1950's early 1970's									N	N				
47																				N	N				
48																				N	N				
49	1		1																	N	N				
50																				N	N				
51												1	Stony Hills Shopping Centre car park	Young St end of carpark approx 200mm deep.						N	N				Neighbour has to replace the gutter but as gutter has fixed this problem in Bourke St.
52																			N	N					
53																			N	N					
54																			N	N					
55																			N	N					
56																			N	N					
57																			N	N					
58																			N	N					
59																			N	N					
60																			N	N					
61	1																		N	N					
62																			N	N					
63																			N	N					
64																			N	N					
65																			N	N					
66																			N	N					
67																			N	N					
68																			N	N					
69																			N	N					

Number	G6		G7		G8		G9		G10									
	Gazebo/Shed	Comment	Rise above ft. level	Comment	Rise above ft. level	Comment	Other	Road Com Address	Description	Address	Description	Other	Year/ID	Comment	Year/ID	Comment	Additional Information	
70																		
71			1	Several times during heavy rain				1	Corner of Bolany Rd and Collins St					N		N	Some old photographs showing the house and yard taken from across the street. The house corner and yard are still intact.	
72														N				
73														N				
74														N			What is obvious this issue is a problem for some. I have never seen any other problems. I saw an investment in the area which has not surfaced in the area. (see map area Newton) from 2005 to 2009 (only).	
75														N				
76			1					1	Corner of Bolany Rd and Collins St		Roads & footpaths flood during heavy rain. Occasional have seen O'Nordan St closed by floodwaters.			N		N	Flooding caused by blocked drain at intersection of Bolany Rd and Collins St. Reclaim caused the footpath to flood. Couple of inches of water. Damage was repaired but it was evident on inspection. Part of the roadway at this point has also subsided.	Mark on map
77														N				
78														N				
79														N				
80								1	Admore Rd		Beneath Rail Bridge/intersection ... St. Enslinville Road recently flooded.			N				
81			1					1		Henry North Park	Large ponds near playground up to 4 days after heavy rain.			N				
82														N				
83			1					1	Burns St (near lead end)		Leaves blocked drains, water rose to such an extent that it rose above ground level several cars.			N		N	100% blocked drains (what are they?) Leaves & rubbish.	Mark on map
84														N				
85														N				
86			1					1	Alax-O'Nordan St		Flooding			N				
87														N				
88			1					1	Lyndon Ave south of Elizabeth St intersection.					N				
89														N			Submit on submission	
90														N				

Number	G6										G7		G8		G9		G10							
	Gazey/Shed	Rise above ft. level	Rise above ft. level	Rise above ft. level	Rise above ft. level	Rise above ft. level	Other	Road Com Address	Description	Roads/Footpaths	Address	Description	Pass	Address	Description	Pass	Address	Description	Year/N o	Comment	Year/N o	Comment	Additional Information	
91																								Mark on map
92																								Mark on map
93																								
94																								
95																								
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103																								
104																								
105																								
106																								
107																								
108																								



Number	G6										G7		G8		G9		G10			
	Gazey/Shed	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet	Res. Inlet		Res. Inlet	Res. Inlet	
109																				
110																				
111																				
112																				
113																				
114	1																			
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128																				
129																				
130																				
131																				

Number	G6				G7				G8		G9		G10														
	Gazette/Sheet	Rise above ft. level	Comment	Rise above ft. level	Comment	Can Water ft. level	Comment	Industrial	Comment	Other	Road Com Address	Description		Address	Description	Pans	Address	Description	Road/Footpaths Address	Description	Year/N o	Comment	Year/N o	Comment	Additional Information		
132																											
133																										Mark on map	
134																											
135																											
136																											Mark on map
137																											
138																											
139																											
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149																											
150																											
151																											
152																											

Number	Gazey/Shed	G6				G7				G8		G9		G10		
		Res above ft. level	Comment	Res above ft. level	Comment	Res above ft. level	Comment	Res above ft. level	Comment	Res above ft. level	Comment	Res above ft. level	Comment		Res above ft. level	Comment
153																
154																
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Number	G6										G7			G8		G9		G10		
	Garage/Shed	Res. below fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Res. above fl. level	Other	Road Com Address	Description	Paras	Address	Description	Other		Year/Photo Comment	Year/Photo Comment
171																				
172																				
173																				
174	1	Basement carpark - our residential development was water reserved according to Council Documents. It is partially flooded our basement carpark is heavily used to this today.																		
175																				
176																				
177																				
178																				
179																				
180	1	1980's																		
181																				
182																				
183																				

Number	Gazey/Sheet	G6				G7				G8			G9		G10				
		Req. above ft./level	Req. above ft./level	Req. above ft./level	Com. above ft./level	Com. below ft./level	Industrial	Comment	Other	Other	Other	Other	Year/ID	Comment	Year/ID	Comment	Additional Information		
184																			
185																			
186																			
187																			
188																			
189																			
190																			
191																			

Number	G6										G7		G8		G9		G10																										
	Gazebo/Shed	Res. Inlet ft. level	Res. above ft. level	Res. above ft. level	Com. above ft. level	Com. above ft. level	Com. Inlet ft. level	Industrial	Other	Road Com Address	Description	Road/ Footpaths Address	Description	Pans	Address	Description	Other	Year/ No	Comment	Year/ No	Comment																						
192	1	1	1															N	Existing dains could not handle water during the time it was reported that the dains were happened at the same time as a flood in the area of the potential problem.	N	It is noted that plans for a recent (07-08) development depicted a property on Kingslake Rd depicts a design to allow flood water to flow into a proposed new structure (not yet built) It appears Council should be aware of the potential problem.																						
193		1																Y	Generally the dains to be located covering dains. Also covered by parked cars - washed out leaves/hubbie back up behind car wheels, reducing ground penetration causing water to flood across footpath.	Y	Generally the dains to be located covering dains. Also covered by parked cars - washed out leaves/hubbie back up behind car wheels, reducing ground penetration causing water to flood across footpath.													Mark on map									
194		1																N		N																							
195																																											
196																																											
197																																											
198																																											
199																																											
200																																											
201																																											
202																																											
203																																											
204		1																																									
205																																											





**Appendix C**

# **Calibration Results**

Table C.1: November 1984 Calibration Results

Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference		Comments
								Diff. (m)	Based on (D=Depth, WL=Water Level)	
A	Joynton Ave, Patient Care Facility/Footpath	Flood Depth of 1.0m in a patient care area of the South Sydney hospital (Joynton Ave)	WMA	1.00-1.20m	1.07m	18.80-19.30	18.85	0.05	WL	Satisfactory comparison between observed and modelled level.
BR	Milroy Ave	Flooded 83 properties in the West Kensington areas including locations in McDougall Street, Milroy Avenue, Lenthall Street and Balfour Street. 27 of these properties were flooded above the main floor level.	WMA		0.55	25.2-25.5	24.98	-0.22	WL	The model shows that the properties in the street are flooded and the depth refers to the low point on the street.
C	Lenthall Street	Same as Above	WMA		0.78	21.3-21.7	21.63	-0.07	WL	Satisfactory comparison between observed and modelled level.
D	McDougall Street	Same as Above	WMA		1.23	24.60-24.90	24.68	-0.10	WL	The model shows that the properties in the street are flooded and the depth refers to the low point on the street.

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Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
E	25 Pleasant Ave, Erskineville	Backyard flooded. Flooding above Floor Level. Carpet in kitchen & living room had to be replaced.	CC	0.60	0.60	10.04	10.04	WL	Floor Level= 9.61. The model shows that the property is flooded and the depth and WL refer to the backyard.
F	141 Marriott St, Redfern.	Flooded to a depth 900mm in 1984. The Waterboard was doing large excavation work at North end of our street at the time. Drains in our street are sometimes full of refuse.	CC	0.90	1.00	N/A	29.49	0.10	D Floor Level= 28.79. The model shows that the property is flooded and the depth refers to the front of the property.
D G R A F T	15 Bourke Road	Flood Level was identified at S & S Scrap Metal Pty Ltd, 15 Bourke Rd and recorded above the FFL.	HT & PC	0.63	0.63	8.96	9.08	0.12m	WL Satisfactory comparison between observed and modelled level.
H T	9/15, Bowden Street		WMA *	0.80	0.80	7.85	8.10	0.25	WL Reasonable comparison between observed and modelled level.
I	Low Point in Bowden Street (Upstream of Channel)	Above Floor Level. Insufficient capacity within the road reserve to contain flows generated by storm event. Evidence in the 1984 storm event suggested backflows from drains and sewers.	WMA *	1.00	1.71	7.86	8.10	0.24	WL The flood depth in the paper store was about 1m.

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Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
J	38 Bowden Street	Above Floor Level.	WMA *			7.93	8.10	0.10	WL Satisfactory comparison between observed and modelled level.
K	STC Alcatel Building – Bowden Street.		WMA *			7.86	8.06	0.20	WL Satisfactory comparison between observed and modelled level.
L	Intersection of Collins Street and Botany Road	29 houses and 4 shops flooded. Depth of water ranged from 0.05 to 0.5. Associated low point at the intersection of Collins Street and Botany Road.	HT& PC	0.05-0.5	0.94		13.79		D The modelled depth of 0.9m is determined at the properties fronting Botany Road near the intersection. Floor levels would be expected to be above the modelled levels thus the model is considered satisfactory.

WMA = Webb, McKeown & Associates Pty Ltd (2009), CC = Community Consultation, HT&PC = Hughes Trueman & Perrens Consultants Pty Ltd (2003), WMA \* = Webb, McKeown & Associates Pty Ltd (1991)

A  
F  
T

Table C.2: - 26 January 1991 Calibration Results

Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference		Comments
								Diff. (m)	Based on (D= Depth, WL= Water Level)	
A D	Upstream of Hiles Street	Debris on fence.	WMA			9.22	9.38	0.16	WL	Satisfactory comparison between observed and modelled level.
B A F T C	Roko Packaging Pty Ltd, No 44 Hiles Street	Distinct mark on the outside wall.	WMA			9.18	9.27	0.09	WL	Satisfactory comparison between observed and modelled level.
	Between Hiles Street Bridge and A.T.Hydraulic Driveway.	Debris on fence.	WMA			9.10	9.25	0.15	WL	Satisfactory comparison between observed and modelled level.
D	A.T.Hydraulic , Hiles Street.	Distinct mark on the outside wall.	WMA			8.79	9.17	0.38	WL	Observed level is queried. Model is consistent comparing the upstream and downstream levels.

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Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
E	Between A.T.Hydraulic Driveway and McCauley Lane Bridge.	Debris on fence.	WMA			9.01	9.13	0.11	WL Satisfactory comparison between observed and modelled level.
F	McCauley Lane Bridge	Debris on fence.	WMA			8.77	8.81	0.04	WL Satisfactory comparison between observed and modelled level.
G	Upstream of McCauley Lane Bridge	Debris on Fence.	WMA			8.67	8.40	-0.27	WL The model shows that flood water overtopped the McCauley Bridge.
H	Downstream of McCauley Lane Bridge	Debris on Fence.	WMA		0.35	8.42	8.23	-0.19	WL Satisfactory comparison between the observed WL.
I	Just Behind S.T.C.Buildin g, Bowden Street.	Distinct mark on overbank.	WMA			7.51	7.54	0.03	WL Satisfactory comparison between the observed WL.
J	S.T.C.Buildin g, Bowden Street.	Distinct mark on the wall facing Bowden Street. Flood marks are clearly seen on the front wall next to the channel in	WMA	0.30	0.33	7.11	6.74	-0.37	D Water ponding at the low point on Bowden Street.



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Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
		Bowden street 0.30m above the drive way.							
K	Alexandria and Main Channel Confluence	Debris on overbank – note that the reported level is rated as “Level unsure, location well defined” in the original document.	WMA			5.40	6.02	0.62	The reported level is not confirmed and the modelled results are considered satisfactory the other calibration points upstream for this and the 1984 event.
D R A F T	Just before Maddox St car park.	Debris on overbank – note that the reported level is rated as “Level unsure, location well defined” in the original document. A subsequent inspection noted that “water might just reached the top of the coping.”	WMA			4.94	5.48	0.54	The top of bank for the channel is modelled as RL 4.97m. The carpark constructed over the channel constrains the flows and increases the flood level above the coping. The modelled results are satisfactory considering the other calibration points upstream for this and the 1984 event.



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Location ID	Location	Description	Source	Observed Flood Depth (m)	Modelled Flood Depth (m)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
M	Cope Street and Wellington Street	At the junction of Cope Street and Wellington Street water was 0.40m deep to 0.50m deep over the footpath.	WMA	0.40m-0.50m	0.51m		15.42	0.12	D Satisfactory comparison to the observed depth.
N	Boronia Street and Marriott Street	It was 0.40m deep over the footpath at the Boronia Street and Marriott Street intersection.	WMA	0.40m	0.40m		30.57		D Satisfactory comparison to the observed depth.
Q	Charles Street and Boronia Street	Flooding at Charles Street and Boronia Street was reported to be 0.40m deep	WMA	0.40m	0.38m			0.03m	D Satisfactory comparison to the observed depth.

Webb, McKeown & Associates Pty Ltd (August 1991), Sheas Creek Flood Study.

Table C.3: Validation Details - 28 February 2001 Event

Location ID	Location	Description	Source	Observed Flood Depth (m AHD)	Modelled Flood Depth (m AHD)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference		Comments
								Diff. (m)	Based on (D= Depth, WL= Water Level)	
A	20 O'Riordan Street	Extent of road inundation at the peak during the event on 28 <sup>th</sup> February was about 100m long.	HT&PC		0.38	11.21	11.28	0.07	WL	The model shows water ponding at an extent of 100m along the street.
D	Botany Road (Green Square Station)	There was clear evidence that water had entered the escalator/stairwell located on the western side of Botany Road not far from a local trapped depression point in Botany Road.	HT&PC		0.22		13.63		WL	The depth refers at the low point on the street. Pit blockage in Botany Road may have caused local flooding.
C	Joynton Avenue	Joynton Avenue flooded outside the Mercedes Dealership to a level just inside the property boundary at the driveway entry. Flood Depth is 0.2 to 0.3m above the top of kerb level.	HT&PC	0.2-0.3	0.25	16.95-17.00	17.24	-	D	The discrepancy is due to the ground level in the model at this location of 17.0m AHD that is based on ALS data.

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Location ID	Location	Description	Source	Observed Flood Depth (m AHD)	Modelled Flood Depth (m AHD)	Observed Level (m AHD)	Modelled Level (m AHD)	Difference	Comments
D	Hunter Street	The trapped depression in Hunter Street flooded during the event resulting in damage to at least one parked vehicle, and contributing in part to material damage sustained by the adjacent business on the east side of Hunter St.	HT&PC	0.50-0.60	0.52		19.96	-	Reasonable comparison between the observed depths as shown in a photo taken during the event.
E	Wyndham Street	The Wyndham Street trapped depression provided clear evidence of pit blockage contributing to flooding.	HT&PC		0.12		9.50	WL	The model shows water ponding at the low point on the street.
A	Cope Street	Flooding just above the footpath/culvert level on top of the channel.	HT&PC	0.15 - 0.20	0.20		14.60	0.02	The model shows water ponding at the low point on the street. The depth refers at the low point on the street.

HT&PC = HughesTrueman & Perrens Consultants Pty Ltd (2003)