

Appendix 4. Descriptions of consented and unconsented stormwater catchments.

Catchment Name	Discharge Point	Area (ha)	Slope %	Dry weather flow rate m <sup>3</sup> s <sup>-1</sup>	Land Use	Receiving Environment	Consent No	Date of Issue	Date of Expiry	Sewage Pollution Elimination Works undertaken in catchment to date	Comment
Lyal Bay West	Lyal Bay West	98	7.5	0.01	Rural 93% Urban 7%	South Coast- high public use	WGN920068	5-Jan-94	30-Jun-10	Rehabilitation of pump station PS22 (1995). Rehabilitation of pump station PS34 (1995). Completion of cross-connection studies/repairs (1997). Rehabilitation of known sewer faults (1995 – 2000).	SPE Project has achieved a dramatic improvement in annual median FC levels. The relatively high 95%ile value indicates that there may still be significant wet weather pollution of stormwater but Figure 4.1 in BAAE Vol 2 indicates that the year 2001-02 result may be an anomaly. The situation should be closely monitored.
Hataitai	Evans Bay Culvert	126	7.6	0.05	Urban-residential	South Coast- high public use	WGN920071	8-Feb-94	30-Jun-10	Completion of cross-connection studies/repairs (1997). Installation of back-up systems to prevent overflows from pump stations 16, 17, (1997-98). Rehabilitation of known sewer faults (2003).	SPE Project appears to have largely eliminated both dry weather leakage and wet weather leakages/overflows into the stormwater system.
Newtown OPT	OPT Culvert	448	3.8	0.15	90% Open space 10% residential	Harbour- high public use	WGN920076	8-Feb-94	30-Jun-13	Completion of cross-connection studies and repairs (90% completed by June 1999). Rehabilitation of known sewer faults causing pollution of stormwater (2002).	SPE Project has significantly reduced both the dry weather leakage and the wet weather leakages/overflows, although both the current median and 95%ile values indicate that sewer faults remain. Constructed overflow at Drummond St has an estimated ARI of 1 in 2.5 years.
Tory St	Tory St Culvert	44	4.2	0.03	Urban	Harbour- high public use	WGN 920070	8-Feb-94	30-Jun-18	Drain rehabilitation works (1993-96)	SPE Project works have not significantly reduced FC numbers. Data indicates continued existence of sewer faults in catchment.
Taranaki St	Taranaki Culvert	69	8	0.025	Urban-residential	Harbour- high public use	WGN920072	8-Feb-94	30-Jun-09	Completion of cross-connection studies/repairs (2003). Rehabilitation of known sewer faults (2003).	SPE Project has achieved a significant improvement
Waring Taylor	Waring Taylor Culvert	50	6.8	0.01	Urban-residential	Operational port area-Low public use	WGN920075	8-Feb-94	30-Jun-11	Completion of cross-connection studies/repairs (2003).Rehabilitation of known sewer faults (2003).	FC levels have been moderately elevated over past ten years, but some indication of a downward trend over past 3 years, possibly caused by recent implementation of SPE Project in this catchment.
Davis	Davis St Culvert	187	4.9	0.05	Urban- central city	Operational port area-Low public use	WGN920074	8-Feb-94	30-Jun-13	Rehabilitation of PS10 and PS21 (2000). Other work, including cross-connection studies and repairs in progress.	SPE Project has achieved significant improvements but it is apparent that the frequency of stormwater monitoring is too low to pick up the known periodic (ARI 3 months) overflows of raw sewage to the Davis St Culvert from the Interceptor at Murphy Street.
Tinakori	Thorndon Quay	99	2.8	0.02	Urban- central city	Operational port area-Low public use	WGN920073	8-Feb-94	30-Jun-13	Some drain rehabilitation works 1997 – 2000. Other works, including cross-connection studies, in progress.	SPE Project has achieved significant improvements.
Ngauranga	Ngauranga Stream	840	5.5	0.15	Urban 88% open space 12%	Harbour- Low public use	WGN920069	8-Feb-94	30-Jun-13	Completion of cross-connection studies/repairs (2003).	SPE Project has not achieved any significant changes in FC content of stream over past 10 years. Results consistent with approx 35% urbanisation of catchment with minimal sewage contamination.
Island Bay	Island Bay Culvert	500	4.5	0.1	Urban-residential	South Coast- high public use	WGN920065	8-Feb-94	30-Jun-09	Installation of backup system to prevent sewage overflows at PS37 (1994).Completion of cross-section studies/ repairs (1996). Rehabilitation of known sewer faults causing pollution of stormwater (1999).Triplification of Kilbirnie Sewer Main (1999).	SPE Project has achieved major improvements over past 9 years. Appears to have significantly reduced both dry weather leakage and wet weather leakages/overflows of sewage into stormwater system.
Houghton Bay	Princess Bay & Houghton Bay	104	8.6	0.002	Parks and reserves	South Coast- low public use	WGN010080 [20836]	27-Feb-01	23-Mar-36	Rehabilitation/overflow prevention PS36 (1994). Completion of cross-connection studies/repairs (1996). Rehabilitation of known sewer faults (1996).	SPE Project appears to have largely eliminated dry weather leakage of sewage but 95% ile FC values indicate that wet weather overflows or leakages may still be occurring.
Owhiro Bay	Owhiro Bay Stream	953	ND	0.1	Open space	South Coast- low public use	WGN92066	5-Jan-94	Expired 30/06/2003	Backup system to prevent sewage overflow PS39 (1995). Completion of cross-connection studies/repairs (1996). Rehabilitation of known sewer faults (1998).	Annual median FC levels relatively consistent over 10 years, ranging from 736 to 1400 cfn/100 mls. The 95% ile shows apparent decline. Results consistent with partially urbanised catchment with no significant sewage leaks or wet weather overflows.
Lyal Bay East	Lyal Bay East	42	1.9	0.01	Urban-residential	South Coast- recreational		Unconsented			
Seatoun	Seatoun	96	11	10 (l/s)	Urban-residential	Harbour - high public use		Unconsented			
Miramar	Miramar Culvert	394	2.5	0.02	Urban-residential	Harbour - high public use		Unconsented		Rehabilitation of pump station PS24 (1999).	SPE Project has achieved some reductions in both dry weather and wet weather contamination, with a notable downward trend in the past 4 years (see section 6 of BAAE Vol 2).
Kilbirnie	Cobham Drive Culvert	130	1.2	ND	Urban-residential	Harbour- Low public use		Unconsented		Rehabilitation of pump station PS17 (1997).Rehabilitation of pump station PS18 (1998).	SPE Project has achieved a reduction in both dry weather and wet weather FC levels but over past 5 years the median FC level has been gradually increasing.
Rongotai	Rongotai Culvert	18	1.8	0.002	Urban-residential	Harbour Low public use		Unconsented			
Grafton/ Rata	Hataitai Beach	84	26.1	ND	Urban-residential	Harbour - high public use		Unconsented			
Oriental Bay	Oriental Bay	51	32.1	0.02	Urban-residential	Harbour- recreational		Unconsented			
Te Aro	Taranaki Culvert	235	8.7	0.025	Urban- central city	Harbour- high public use		Unconsented		Gluznee Street overflow sealed.	Data shows that FC levels have remained relatively low (compared to other urban areas) with annual median values ranging from a minimum of 100 cfu/100 ml in 97/98 to a max of 4,000
Hunter Street	Lambton Culvert	12	ND	ND	Urban- central city	Harbour - high public use		Unconsented			
Harris St	Harris St Culvert	18	2.2	1 (l/s)	Central city	Harbour- high public use		Unconsented			
Bowen St	Bowen St Culvert	62	6.5	0.01	Urban 88% open space 12%	Operational port area- Low public use		Unconsented		Rehabilitation of pump station PS9 (2000).	These results indicate that SPE Project has achieved little in this catchment; it appears that significant sewage faults remain, including dry weather leakage and wet weather overflows.
Kaiwharawhara Stream	Kaiwharawhara Stream	1770	2.8	0.1	Urban-residential	Harbour- high public use		Unconsented			