

Receiving environment

The table below provides results of sampling in the area receiving the discharge from the Akaroa wastewater treatment plant. Surface water samples are taken from five sites: 250m north, 250m south, 250m west of the outfall and at two control sites; one at French Bay and one at the proposed site of a new outfall. These samples are then analysed for the parameters shown below.

Sample date	Site	Sample time	Within 6 hours?*	Lab sample no.	Temp. (°C)	Total nitrogen (g/m3)	Oxides of nitrogen (g/m3)	Ammonia (g/m3)	DIN (Nox + NH3) (g/m3)	Total phosphorus (g/m3)	Dissolved reactive phosphorus (g/m3)	Chlorophyll-a
27/12/2017	250m North	9:12	YES	1715426		0.12	0.01	0.005	0.015	0.097	0.009	4
	250m West	9:16	YES	1715428		0.13	0.01	0.005	0.015	0.078	0.009	3.9
	250m South	9:14	YES	1715427		0.18	0.016	0.034	0.05	0.074	0.014	4.1
	French Bay	9:45	YES	1715429		0.13	0.01	0.005	0.015	0.097	0.009	2.9
	New outfall	9:20	YES	1715430		0.14	0.01	0.005	0.015	0.064	0.009	2.6
17/01/2018	250m North	9:12	YES	1716725	19.1	0.15	0.01	0.005	0.015	0.046	0.01	2.4
	250m West	9:13	YES	1716727	19.1	0.24	0.01	0.005	0.015	0.041	0.008	2.1
	250m South	9:15	YES	1716726	19.1	0.17	0.01	0.005	0.015	0.046	0.01	2.2
	French Bay	9:45	YES	1716729	19.1	0.15	0.01	0.005	0.015	0.044	0.009	2.4
	New outfall	9:17	YES	1716730	19.1	0.15	0.01	0.005	0.015	0.043	0.008	2.2
7/02/2018	250m North	9:00	YES	1716855	16.5	0.2	0.01	0.005	0.015	0.026	0.009	2.5
	250m West	8:48	YES	1716856	16.5	0.21	0.01	0.005	0.015	0.025	0.011	2.5
	250m South	9:10	YES	1716856	16.5	0.24	0.026	0.02	0.046	0.029	0.016	2
	French Bay	9:20	YES	1716853	16.5	0.074	0.01	0.005	0.015	0.008	0.009	2.4
	New outfall	9:15	YES	1716854	16.5	0.12	0.01	0.005	0.015	0.02	0.008	2.5
6/12/2018	250m North	10:00	YES	1814488	17	0.33	0.041	0.0062	0.0472	0.035	0.016	8
	250m West	10:05	YES	1814490	17	0.32	0.044	0.005	0.049	0.03	0.015	8.4
	250m South	10:07	YES	1814489	17	0.3	0.039	0.005	0.044	0.03	0.014	8.9
	French Bay	10:15	YES	1814491	17	0.27	0.012	0.01	0.022	0.027	0.011	7.3
	New outfall	10:10	YES	1814492	17	0.3	0.026	0.01	0.036	0.023	0.013	10
27/12/2018	250m North	9:06	YES	1814520	15.9	0.12	0.01	0.0053	0.0153	0.019	0.0031	1.2
	250m West	9:07	YES	1814522	15.9	0.098	0.01	0.0055	0.0155	0.015	0.003	1.3
	250m South	9:09	YES	1814521	15.9	0.13	0.01	0.011	0.021	0.015	0.003	1.3
	French Bay	9:41	YES	1814534	15.9	0.12	0.01	0.016	0.026	0.017	0.003	0.89
	New outfall	9:11	YES	1814535	15.9	0.13	0.01	0.0074	0.0174	0.018	0.003	0.97
17/01/2019	250m North	8:35	YES	1815770	16.8	0.26	0.01	0.005	0.015	0.027	0.0055	2
	250m West	8:40	YES	1815772	16.8	0.22	0.018	0.0067	0.0247	0.028	0.0057	2
	250m South	8:42	YES	1815771	16.8	0.19	0.01	0.005	0.015	0.026	0.0048	1.6
	French Bay	9:22	YES	1815774	16.8	0.17	0.01	0.005	0.015	0.026	0.0051	1.6
	New outfall	8:45	YES	1815775	16.8	0.24	0.01	0.005	0.015	0.025	0.0049	1.5
7/02/2019	250m North	9:13	YES	1817032	15.9	0.11	0.01	0.0073	0.0173	0.023	0.005	4.3
	250m West	9:12	YES	1817034	15.9	0.11	0.01	0.015	0.025	0.023	0.0067	4.3
	250m South	9:10	YES	1817033	15.9	0.26	0.01	0.015	0.025	0.028	0.0074	2.9
	French Bay	9:20	YES	1817039	15.9	0.19	0.01	0.026	0.036	0.025	0.0072	2.7
	New outfall	9:16	YES	1817038	15.9	0.22	0.01	0.0073	0.0173	0.019	0.0054	2.8
5/12/2019	250m North	8:30	YES	1915548	16	0.14	0.01	0.005	0.015	0.027	0.0063	4.4
	250m West	8:33	YES	1915550	16	0.14	0.01	0.005	0.015	0.026	0.0065	4.8
	250m South	8:35	YES	1915549	16	0.13	0.01	0.005	0.015	0.025	0.0062	3.7
	French Bay	8:45	YES	1915551	16	0.17	0.01	0.005	0.015	0.025	0.0051	2.5
	New outfall	8:40	YES	1915552	16	0.11	0.01	0.005	0.015	0.027	0.0057	3.9
27/12/2019	250m North	8:32	YES	1915572		0.14	0.01	0.017	0.027	0.029	0.0059	1.7
	250m West	8:36	YES	1915574		0.099	0.01	0.016	0.026	0.025	0.0056	1.4
	250m South	8:38	YES	1915573		0.14	0.01	0.015	0.025	0.03	0.0062	1.5
	French Bay	9:04	YES	1915579		0.13	0.01	0.016	0.026	0.027	0.0058	1.8
	New outfall	8:40	YES	1915577		0.11	0.01	0.016	0.026	0.026	0.005	1.6
16/01/2020	250m North	7:55	YES	1915633		0.2	0.019	0.0097	0.0287	0.026	0.0037	3
	250m West	8:00	YES	1915635		0.2	0.018	0.0076	0.0256	0.028	0.003	3.2
	250m South	8:05	YES	1915634		0.31	0.021	0.044	0.065	0.031	0.0068	3
	French Bay	8:45	YES	1915636		0.17	0.023	0.005	0.028	0.021	0.003	1.9
	New outfall	8:10	YES	1915637		0.17	0.022	0.005	0.027	0.017	0.003	1.1
3/02/2020	250m North	8:10	YES	2000502	18	0.15	0.023	0.005	0.028	0.031	0.011	3.9
	250m West	8:15	YES	2000504	18	0.22	0.024	0.005	0.029	0.03	0.011	3.1
	250m South	8:20	YES	2000503	18	0.22	0.038	0.005	0.043	0.034	0.014	2.4
	French Bay	8:30	YES	2000505	18	0.13	0.018	0.005	0.023	0.024	0.0077	8
	New outfall	8:25	YES	2000506	18	0.2	0.028	0.005	0.033	0.026	0.0099	2.1
9/12/2020	250m North	8:15	YES	2016830	16.1	0.21	0.01	0.009	0.019	0.043	0.0067	3.5
	250m West	8:20	YES	2016832	16.1	0.2	0.01	0.0078	0.0178	0.035	0.0063	3.1
	250m South	8:25	YES	2016831	16.1	0.19	0.01	0.0084	0.0184	0.037	0.006	2.9
	French Bay	8:35	YES	2016834	16.1	0.26	0.014	0.007	0.023	0.032	0.0059	2.7
	New outfall	8:30	YES	2016833	16.1	0.18	0.012	0.0076	0.0196	0.03	0.0051	2.1
30/12/2020	250m North	8:05	YES	2016851	16.7	0.15	0.01	0.0052	0.0152	0.033	0.005	2.1
	250m West	8:10	YES	2016853	16.7	0.11	0.01	0.0073	0.0173	0.031	0.009	1.8
	250m South	8:12	YES	2016852	16.7	0.15	0.01	0.0084	0.0184	0.032	0.005	2
	French Bay	8:45	YES	2016854	16.7	0.17	0.01	0.0066	0.0166	0.034	0.006	1.3
	New outfall	8:20	YES	2016855	16.7	0.17	0.01	0.0076	0.0176	0.03	0.007	1.7
13/01/2021	250m North	8:45	YES	2018387	16.9	0.25	0.014	0.005	0.014	0.021	0.0077	2.1
	250m West	8:07	YES	2018389	16.9	0.23	0.014	0.005	0.014	0.018	0.0076	1.9
	250m South	8:10	YES	2018388	16.9	0.27	0.01	0.005	0.01	0.022	0.0082	2
	French Bay	8:45	YES	2018390	16.9	0.3	0.012	0.005	0.012	0.018	0.0072	1.2
	New outfall	8:15	YES	2018391	16.9	0.24	0.016	0.005	0.016	0.018	0.0078	1.8
3/02/2021	250m North	8:05	YES	2100137	18	0.15	0.023	0.005	0.028	0.031	0.011	3.9
	250m West	8:07	YES	2100139	18	0.22	0.024	0.005	0.029	0.03	0.011	3.1
	250m South	8:09	YES	2100138	18	0.22	0.038	0.005	0.043	0.034	0.014	2.4
	French Bay	8:25	YES	2100140	18	0.13	0.018	0.005	0.023	0.024	0.0077	8
	New outfall	8:15	YES	2100136	18	0.2	0.028	0.005	0.033	0.026	0.0099	2.1

Legend
 DIN Dissolved inorganic nitrogen
 Not required