

## 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
30/12/2015	250m North	9:00	YES	1515787	15	0.19	0.01	0.014	0.024	0.02	0.014	1.18
	250m West	9:00	YES	151789	15	0.11	0.01	0.005	0.015	0.018	0.0087	0.86
	250m South	9:00	YES	1515788	15	0.17	0.011	0.021	0.032	0.028	0.014	1.07
	French Bay	9:30	YES	1515800	15	0.13	0.01	0.005	0.015	0.021	0.0091	0.66
	New outfall	9:00	YES	1515801	15	0.15	0.01	0.005	0.015	0.024	0.011	1.8
27/01/2016	250m North	9:30	YES	1516187	17	0.077	0.01	0.005	0.015	0.028	0.0092	3.5
	250m West	9:30	YES	1516189	17	0.073	0.01	0.005	0.015	0.025	0.0086	2.9
	250m South	9:30	YES	1516188	17	0.072	0.01	0.005	0.015	0.027	0.0098	3.1
	French Bay	9:30	YES	1516187	17	0.095	0.01	0.005	0.015	0.041	0.011	1.9
	New outfall	9:30	YES	1516200	17	0.068	0.01	0.059	0.069	0.017	0.039	2.2
10/02/2016	250m North	9:15	YES	1516541	17	0.16	0.01	0.005	0.015	0.015	0.008	1.9
	250m West	9:15	YES	1516543	17	0.19	0.01	0.005	0.015	0.017	0.0096	2.5
	250m South	9:15	YES	1516542	17	0.18	0.01	0.005	0.015	0.008	0.011	2
	French Bay	9:15	YES	1516548	17	0.18	0.01	0.005	0.015	0.013	0.0085	2.4
	New outfall	9:15	YES	1516549	17	0.14	0.01	0.005	0.015	0.0065	0.0063	1.5
6/12/2016	250m North	7:15	YES	1613916		0.15	0.01	0.072	0.082	0.027	0.007	1
	250m West	8:10	YES	1613918		0.13	0.01	0.005	0.015	0.022	0.006	1
	250m South	8:11	YES	1613917		0.15	0.01	0.005	0.015	0.021	0.005	1
	French Bay	8:23	YES	1613923		0.12	0.01	0.005	0.015	0.019	0.004	1
	New outfall	8:19	YES	1613924		0.13	0.01	0.062	0.072	0.023	0.006	1
28/12/2016	250m North	7:15	YES	1613961		0.14	0.01	0.014	0.024	0.017	0.011	4
	250m West	6:59	YES	1613963		0.15	0.01	0.011	0.021	0.012	0.007	3.1
	250m South	7:08	YES	1613962		0.14	0.01	0.006	0.016	0.01	0.012	2.5
	French Bay	7:25	YES	1613974		0.18	0.01	0.022	0.032	0.014	0.007	2.7
	New outfall	7:03	YES	1613975		0.2	0.01	0.005	0.015	0.017	0.006	1.9
18/01/2017	250m North	8:35	YES	1614023		0.15	0.01	0.005	0.015	0.029	0.01	4.6
	250m West	8:37	YES	1614025		0.094	0.01	0.005	0.015	0.03	0.009	3.8
	250m South	8:39	YES	1614024		0.13	0.01	0.005	0.015	0.029	0.009	4.2
	French Bay	9:10	YES	1614036		0.075	0.01	0.005	0.015	0.031	0.009	4.2
	New outfall	8:42	YES	1614037		0.11	0.01	0.005	0.015	0.029	0.009	3.4
8/02/2017	250m North	8:44	YES	1614080		0.16	0.01	0.005	0.015	0.03	0.007	4.5
	250m West	8:48	YES	1614082		0.19	0.01	0.005	0.015	0.024	0.007	4.6
	250m South	8:46	YES	1614081		0.14	0.01	0.005	0.015	0.028	0.007	4
	French Bay	8:35	YES	1614087		0.13	0.01	0.005	0.015	0.03	0.008	3.4
	New outfall	8:40	YES	1614088		0.12	0.01	0.005	0.015	0.029	0.009	4
5/12/2017	250m North	9:15	YES	1715352		0.18	0.01	0.005	0.015	0.053	0.006	1
	250m West	9:10	YES	1715354		0.16	0.01	0.005	0.015	0.06	0.007	1
	250m South	9:05	YES	1715353		0.2	0.01	0.005	0.015	0.057	0.006	0.86
	French Bay	9:25	YES	1715355		0.2	0.01	0.005	0.015	0.077	0.008	1.2
	New outfall	9:20	YES	1715356		0.12	0.01	0.005	0.015	0.083	0.006	0.82
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

Legend

DIN Dissolved inorganic nitrogen  
 Not required