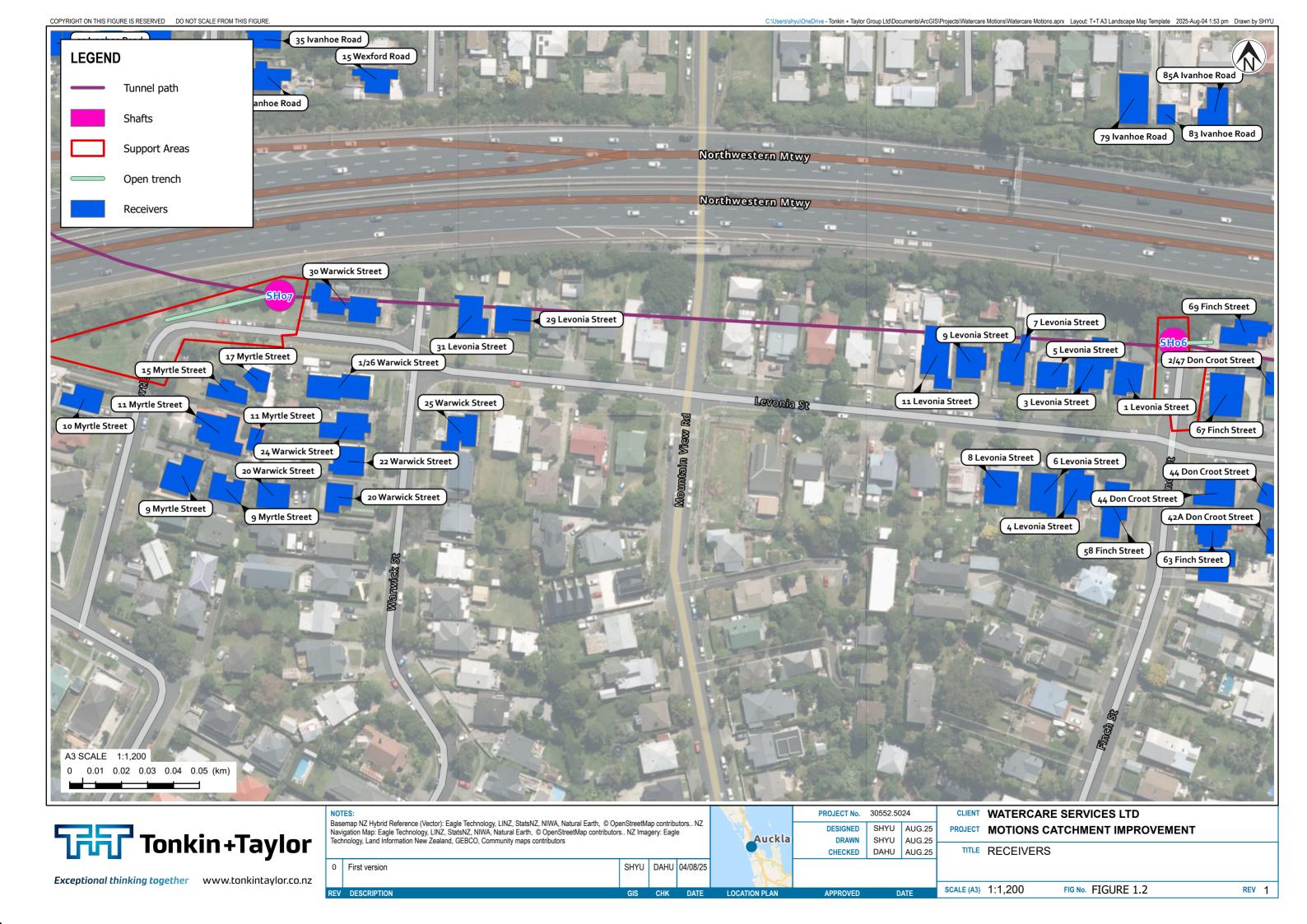
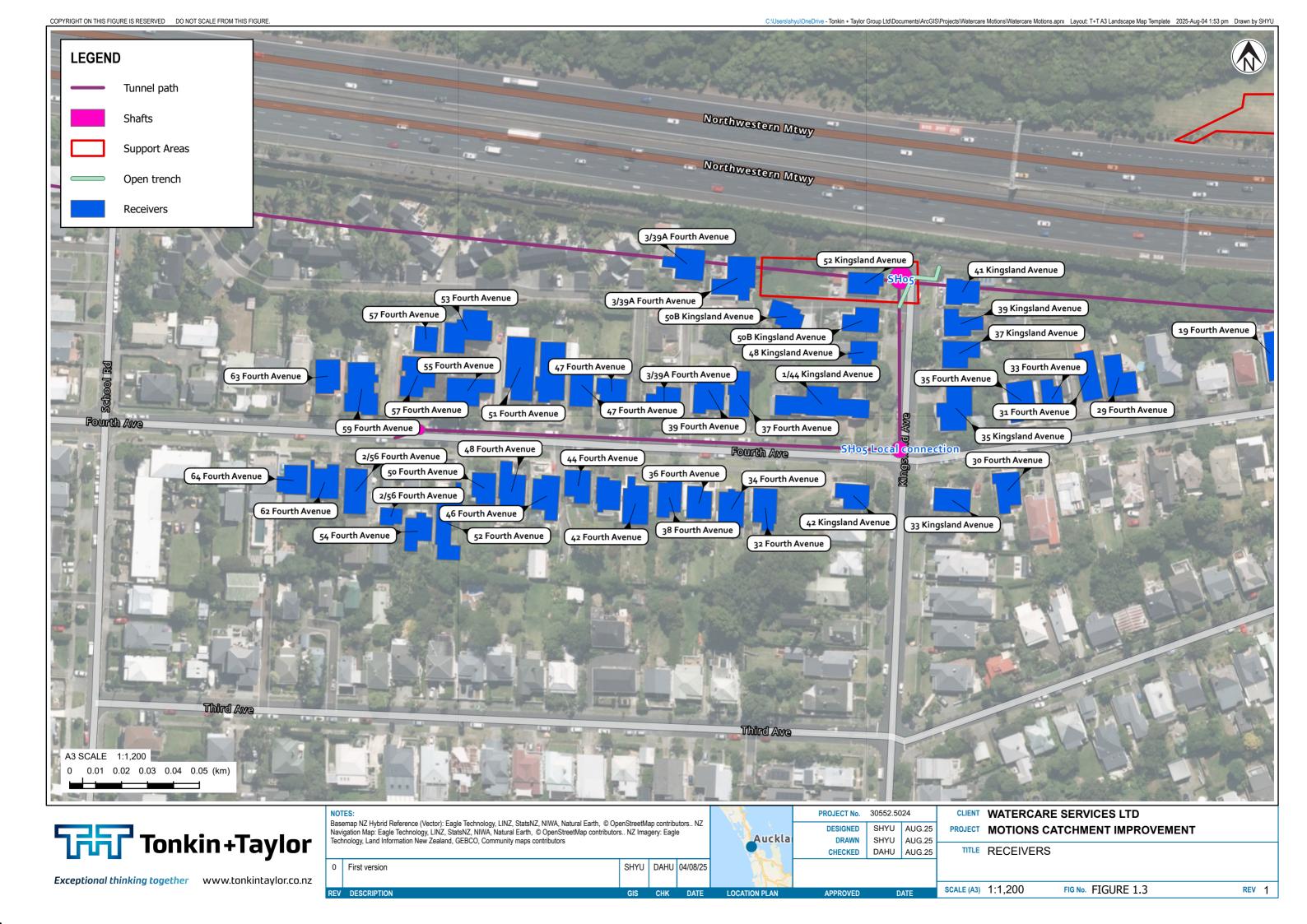
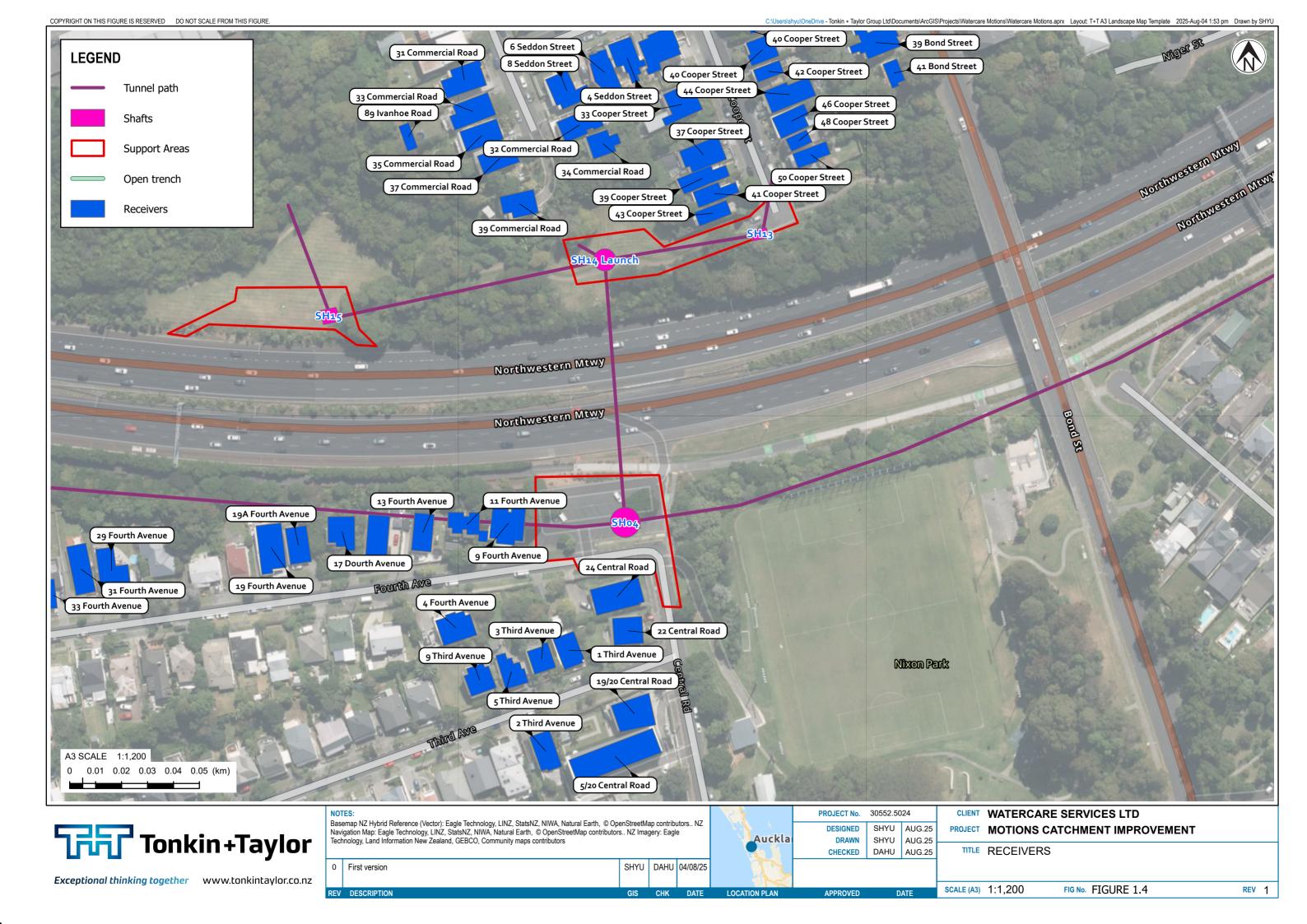


## Appendix C – Receivers map









## Appendix D – Predicted noise and vibration levels

The following table (ordered by Shaft sites) provides the highest predicted noise and vibration level (worst case) for various construction acitivities when works are at the closest location to each receiver for all locations (including works within the road reserve identified in italics and greyed out). Highest noise levels are typically at first floor level or above. A 2 m barrier has been included as part of the standard mitigation process for Watercare. Where predictions exceed applicable noise limits between 70-80 dB  $L_{Aeq(15min)}$  are identified in yellow and noise levels above 80 dB  $L_{Aeq}(15min)$  are in red.

Where a receiver falls within the assessment area for non-road reserve works but is situated closer to a local connection shaft within the road reserve, this has been noted and the corresponding results are shown in brackets.

Vibration levels shown are for the worst case of both shaft and open trenching scenarios. Where an exceedance of the relevant DIN 4150-3:1999 is predicted, these are due to open trenching works.

RID	Use	Address	No. of floor s	Nearest shaft	Shaft Construction, dB L <sub>Aeq (15min)</sub>	Open trenching, dB L <sub>Aeq(15min)</sub>	Vibration, mm/s PPV
121	Commercial	29 East Street	2	SH01	85	84	4-5
120	Commercial /Heritage	4 South Street	2	SH01	72	82	4-5
231	Commercial	Karangahape Station	4	SH01	71	65	1-2
119	Commercial	15A Cross Street	4	SH01	69	63	1-2
233	Residential	18 East Street	1	SH01	67	71	1-2
234	Commercial	20 East Street	2	SH01	69	72	1-2
201	Residential	9 Suffolk Street	2	SH02	68	72	2-3
200	Residential	14 Suffolk Street	2	SH02	67	68	1-2
202	Residential	9 Suffolk Street	2	SH02	66	66	2-3
45	Residential	25 Mostyn Street	2	SH03	84	75	4-5
52	Residential	22 Mostyn Street	2	SH03	80	70	2-3
43	Residential	23 Mostyn Street	2	SH03	79	70	2-3
51	Residential	20 Mostyn Street	2	SH03	79	68	2-3
46	Residential	18 Mostyn Street	2	SH03	76	66	1-2
47	Residential	16 Mostyn Street	2	SH03	74	63	1-2
42	Residential	28 Buchanan Street	2	SH03	73	82	6-7
44	Residential	30 Buchanan Street	2	SH03	72	85	6-7
57	Residential	14 Mostyn Street	2	SH03	72	64	1-2
40	Residential	26 Buchanan Street	2	SH03	72	76	2-3
59	Residential	19 Mostyn Street	2	SH03	71	60	1-2
60	Residential	21 Mostyn Street	2	SH03	71	59	1-2
58	Residential	12 Mostyn Street	2	SH03	69	59	1-2
54	Residential	19 Richbourne Street	2	SH03	68	60	1-2
55	Residential	17 Richbourne Street	2	SH03	67	59	1-2



39	Residential	24 Buchanan Street	2	SH03	66	66	2-3
53	Residential	15 Richbourne Street	2	SH03	66	52	1-2
36	Residential	29 Buchanan Street	2	SH03	65	77	3-4
61	Residential	17 Mostyn Street	2	SH03	64	54	1-2
35	Residential	27 Buchanan Street	2	SH03	64	73	2-3
41	Residential	31 Buchanan Street	2	SH03	64	77	3-4
37	Residential	20 Buchanan Street	2	SH03	64	63	1-2
56	Residential	10 Mostyn Street	2	SH03	61	53	1-2
38	Residential	22 Buchanan Street	2	SH03	61	64	1-2
48	Residential	9 Richbourne Street	2	SH03	60	50	1-2
34	Residential	18 Buchanan Street	2	SH03	59	60	1-2
49	Residential	11 Richbourne Street	2	SH03	59	51	1-2
50	Residential	13 Richbourne Street	2	SH03	58	50	1-2
139	Residential	24 Central Road	2	SH04	81	71	2-3
144	Residential	1 Third Avenue	2	SH04	73	64	1-2
145	Residential	9 Fourth Avenue	1	SH04	71	64	1-2
143	Residential	3 Third Avenue	2	SH04	71	62	1-2
138	Residential	22 Central Road	2	SH04	70	60	1-2
146	Residential	5 Third Avenue	2	SH04	68	59	1-2
148	Residential	4 Fourth Avenue	2	SH04	68	59	1-2
147	Residential	11 Fourth Avenue	2	SH04	67	55	1-2
141	Residential	19/20 Central Road	2	SH04	66	58	1-2
95	Residential	19 Fourth Avenue	1	SH04	66	53	1-2
114	Residential	17 Fourth Avenue	2	SH04	65	54	1-2
149	Residential	9 Third Avenue	2	SH04	65	57	1-2
140	apartment	5/20 Central Road	3	SH04	65	57	1-2
115	Residential	15 Fourth Avenue	1	SH04	65	53	1-2
150	Residential	13 Fourth Avenue	1	SH04	64	54	1-2
113	Residential	19A Fourth Avenue	1	SH04	64	52	1-2
112	Residential	19 Fourth Avenue	1	SH04	63	52	1-2
142	Residential	2 Third Avenue	1	SH04	57	47	1-2
235	Residential	52 Kingsland Avenue	1	SH05	101	81	7-8
97	Residential	50B Kingsland Avenue	1	SH05	82	79	4-5
100	Residential	41 Kingsland Avenue	1	SH05	78	84	5-6
105	Residential	37 Kingsland Avenue	2	SH05	76	72	2-3
99	Residential	39 Kingsland Avenue	1	SH05	76	75	3-4
108	Residential	48 Kingsland Avenue	1	SH05	75	72	2-3
96	Residential	50B Kingsland Avenue	2	SH05	72	66	1-2
66	Residential	3/39A Fourth Avenue	1	SH05	67	62	1-2
63	Residential	37 Fourth Avenue	2	SH05	66	58	1-2
64	Residential	39 Fourth Avenue	2	SH05	64	56	1-2
65	Residential	3/39A Fourth Avenue	1	SH05	64	57	1-2
111	Residential	29 Fourth Avenue	1	SH05	62	54	1-2
110	Residential	31 Fourth Avenue	1	SH05	61	54	1-2
106	Residential	35 Kingsland Avenue	2	SH05 (local)	75 (81)	69	2-3
109	Residential	1/44 Kingsland Avenue	2	SH05 (local)	71 (80)	66	2-3
107	Residential	42 Kingsland Avenue	2	SH05 (local)	67 (78)	60	2-3
101	Residential	33 Fourth Avenue	2	SH05 (local)	65 (65)	54	1-2
104	Residential	33 Kingsland Avenue	2	SH05 (local)	65 (65)	59	2-3
102	Residential	35 Fourth Avenue	1	SH05 (local)	62 (67)	53	1-2
103	Residential	30 Fourth Avenue	2	SH05 (local)	60 (72)	54	1-2
260	Residential	57 Fourth Avenue	1	SH05 (local)	84	-	3-4



259	Residential	55 Fourth Avenue	1	SH05 (local)	80	_	3-4
239	Residential	59 Fourth Avenue	1	SH05 (local)	80	_	3-4
256	Residential	52 Fourth Avenue	1	SH05 (local)	77	-	2-3
257	Residential	50 Fourth Avenue	1	SH05 (local)	76	-	2-3
240	Residential	2/56 Fourth Avenue	1	SH05 (local)	76	_	2-3
258	Residential	53 Fourth Avenue	1	SH05 (local)	75	_	1-2
255	Residential	54 Fourth Avenue	1	SH05 (local)	75	_	1-2
238	Residential	62 Fourth Avenue	1	SH05 (local)	72	_	2-3
262	Residential	32 Fourth Avenue	1	SH05 (local)	71	_	2-3
252	Residential	51 Fourth Avenue	1	SH05 (local)	71	-	3-4
254	Residential	46 Fourth Avenue	1	SH05 (local)	70	_	2-3
251	Residential	49 Fourth Avenue	1	SH05 (local)	69	_	3-4
241	Residential	2/56 Fourth Avenue	1	SH05 (local)	68	_	1-2
236	Residential	64 Fourth Avenue	1	SH05 (local)	67	-	1-2
250	Residential	44 Fourth Avenue	1	SH05 (local)	67	_	3-4
243	Residential	36 Fourth Avenue	1	SH05 (local)	67	_	2-3
249	Residential	47 Fourth Avenue	1	SH05 (local)	67	_	3-4
244	Residential	34 Fourth Avenue	1	SH05 (local)	66	-	2-3
248	Residential	47 Fourth Avenue	1	SH05 (local)	66	_	3-4
261	Residential	57 Fourth Avenue	1	SH05 (local)	65	_	1-2
247	Residential	42 Fourth Avenue	1	SH05 (local)	64	_	2-3
246	Residential	42 Fourth Avenue	1	SH05 (local)	63	_	2-3
245	Residential	3/39A Fourth Avenue	1	SH05 (local)	62	_	3-4
242	Residential	38 Fourth Avenue	1	SH05 (local)	62	-	2-3
237	Residential	63 Fourth Avenue	1	SH05 (local)	59	_	2-3
253	Residential	48 Fourth Avenue	1	SH05 (local)	59	_	3-4
232	Residential	67 Finch Street	1	SH06	88	69	3-4
75	Residential	1 Levonia Street	1	SH06	79	71	3-4
78	Residential	69 Finch Street	2	SH06	78	86	5-6
76	Residential	3 Levonia Street	1	SH06	76	68	2-3
79	Residential	44 Don Croot Street	2	SH06	72	63	1-2
84	Residential	69 Finch Street	2	SH06	71	67	1-2
77	Residential	58 Finch Street	1	SH06	70	61	1-2
	Residential	4 Levonia Street	2	SH06	70	60	1-2
83	Residential	2/47 Don Croot Street	1	SH06	69	69	2-3
74	Residential	7 Levonia Street	1	SH06	68	59	1-2
80	Residential	63 Finch Street	2	SH06	68	58	1-2
67	Residential	69 Finch Street	2	SH06	67	63	1-2
69	Residential	61 Finch Street	1	SH06	65	51	1-2
118	Residential	85A Ivanhoe Road	2	SH06	64	58	1-2
117	Residential	79 Ivanhoe Road	2	SH06	64	58	1-2
68	Residential	45 Don Croot Street	1	SH06	64	60	1-2
86	Residential	11 Levonia Street	1	SH06	63	55	1-2
71	Residential	6 Levonia Street	1	SH06	63	57	1-2
81	Residential	44 Don Croot Street	1	SH06	63	57	1-2
116	Residential	83 Ivanhoe Road	1	SH06	62	55	1-2
70	Residential	8 Levonia Street	2	SH06	62	51	1-2
73	Residential	5 Levonia Street	1	SH06	59	50	1-2
85	Residential	9 Levonia Street	1	SH06	58	46	1-2
82	Residential	42A Don Croot Street	1	SH06	58	50	1-2
87	Residential	30 Warwick Street	2	SH07	89	76	4-5
22	Residential	17 Myrtle Street	2	SH07	79	72	2-3
		,		2	. 0	. 2	· <del>-</del>



17	Residential	15 Myrtle Street	1	SH07	73	69	2-3
		1/26 Warwick Street,					
88	Residential	Morningside, Auckland	1	SH07	72	63	2-3
21	Residential	11 Myrtle Street	1	SH07	69	60	1-2
20	Residential	20 Warwick Street	1	SH07	66	58	1-2
15	Residential	10 Myrtle Street	1	SH07	66	64	1-2
92	Residential	25 Warwick Street	11	SH07	66	56	1-2
89	Residential	24 Warwick Street	11	SH07	65	60	1-2
90	Residential	22 Warwick Street	1	SH07	64	57	1-2
91	Residential	20 Warwick Street	1	SH07	63	56	1-2
18	Kindergarde	11 Myrtle Street	1	SH07	62	65	1-2
93	Residential	31 Levonia Street	1	SH07	60	55	1-2
16	Residential	9 Myrtle Street	1	SH07	58	63	1-2
62	Residential	15 Wexford Road	1	SH07	58	51	1-2
19	Residential	9 Myrtle Street	1	SH07	54	57	1-2
94	Residential	29 Levonia Street	1	SH07	49	52	1-2
2	Residential	29 Ivanhoe Road	1	SH07a	78	73	2-3
12	Apartments	90/744 Great North Road	3	SH07a	77	62	2-3
1	Residential	25 Ivanhoe Road	2	SH07a	77	71	2-3
220	Residential	27 Ivanhoe Road	2	SH07a	77	71	2-3
3			<u>_</u> 1	SH07a	74	73	2-3
4	Residential	12 Ivanhoe Road 31 Ivanhoe Road	<u> </u>	SH07a SH07a	73	73	2-3
	Residential		3	SH07a SH07a	72	66	1-2
11	Apartments	44/88 Tuarangi Road 57/736 Great North	<u> </u>	ъп∪/a	12	00	1-2
13	Apartments	Road	3	SH07a	72	65	1-2
14	Residential	19 Ivanhoe Road	2	SH07a	71	65	1-2
217	Residential	23 Ivanhoe Road	2	SH07a	71	65	1-2
218	Residential	21 Ivanhoe Road	2	SH07a	71	65	1-2
219	Residential	17 Ivanhoe Road	2	SH07a	71	65	1-2
8	Residential	16 Ivanhoe Road	1	SH07a	66	72	2-3
6	Residential	18 Ivanhoe Road	1	SH07a	65	67	2-3
7	Residential	35 Ivanhoe Road	1	SH07a	65	73	2-3
10	Residential	86 Tuarangi Road	1	SH07a	63	59	1-2
5	Residential	33 Ivanhoe Road	1	SH07a	63	66	1-2
9	Residential	82 Tuarangi Road	1	SH07a	57	60	1-2
216	Commercial	751 Great North Road	1	SH08	54	40	1-2
151	Commercial	27 Edinburgh Street	1	SH09	88	58	4-5
159	Commercial	16 Edinburgh Street	1	SH09	74	52	2-3
156	Commercial	23 Edinburgh Street	1	SH09	73	52	2-3
161	Residential	12 Edinburgh Street	1	SH09	67	50	1-2
158	Residential	7 Abbey Street	1	SH09	66	50	1-2
157	Residential	21 Edinburgh Street	1	SH09	65	47	1-2
154	Residential	11 Edinburgh Street	1	SH09	64	48	1-2
162	Residential	8 Edinburgh Street	1	SH09	61	50	1-2
153	Residential	4 Ophir Street	1	SH09	58	51	1-2
160	Residential	10 Edinburgh Street	1	SH09	57	41	1-2
163	Residential	1 Cobden Street	1	SH09	54	53	1-2
155	Residential	7 Abbey Street	1	SH09	51	42	1-2
		7 7 Abbey Street,					
165	Commercial	Auckland Central,	1	SH09	50	45	1-2
199	Residential	4B/6 Winchester Street	1	SH10	80	79	3-4
152	Commercial	20 Gundry Street	1	SH10	77	75	3-4
198	Residential	15 Gundry Street	1	SH10	72	73	3-4



203	Residential	4C/1 Ophir Street	1	SH10	70	63	1-2
167	Residential	14 Gundry Street	1	SH10	67	62	1-2
168	Residential	11 Gundry Street	1	SH10	67	62	1-2
166	Residential	16 Gundry Street	1	SH10	66	61	1-2
164	Residential	10 Gundry Street	1	SH10	64	58	1-2
204	Residential	4C/1 Ophir Street	1	SH10	53	41	1-2
224	Residential	15 Burgoyne Street	1	SH11	88	51	5
225	Residential	16 Nixon	3	SH11	81	54	3-4
209	Residential	17/8 Burgoyne Street	2	SH11	76	53	2-3
226	Residential	13 Burgoyne Street	1	SH11	75	50	2-3
214	Commercial	25 Nixon Street	3	SH11	74	53	1-2
230	Residential	11 Buygoyne Street	5	SH11	72	50	1-2
208	Residential	17/8 Burgoyne Street	2	SH11	68	47	1-2
215	apartments	1 Burgoyne Street	5	SH11	65	49	1-2
213	Commercial	21 Nixon Street	3	SH11	59	51	1-2
210	School	19 Monmouth Street	1	SH11	57	50	1-2
212	Commercial	17 Nixon Street	3	SH11	56	49	1-2
206	Residential	17/8 Burgoyne Street	1	SH11	56	42	1-2
205	Residential	21 Newton Road	1	SH11	55	47	1-2
228	Commercial	12 Nixon Street	1	SH11	53	49	1-2
227	Residential	14 Nixon Street	2	SH11	53	50	2-3
207	Residential	17/8 Burgoyne Street	1	SH11	51	41	1-2
211	Residential	15 Nixon Street	1	SH11	50	42	1-2
186	Residential	1/14 Fleet Street	3	SH12a	85	42	3-4
187	Residential	103/22 Fleet Street	5	SH12a	79	46	2-3
193	Apartments	37 Fleet Street	5	SH12a	78	54	2-3
197	Residential	19-35 Fleet Street	5	SH12a	76	54	1-2
222	Apartments	10 Fleet Street	3	SH12a	74	47	1-2
188	Residential	11 Fleet Street	1	SH12a	72	47	1-2
191	Residential	9 Fleet Street	2	SH12a	71	45	1-2
185	Residential	12B Fleet Street	2	SH12a	71	47	2-3
192	Residential	26 Fleet Street	2	SH12a	70	44	1-2
194	Residential	6 Piwakawaka Street	5	SH12a	70	58	1-2
	Residential	28 Fleet Street	1	SH12a	69	34	1-2
100	rtoordornar	3/30 Fleet Street (bldg		011124			
169	Residential	1)	1	SH12a	69	39	1-2
181	Residential	4E MacAulay Street	2	SH12a	68	44	1-2
184	Residential	8 Fleet Street	1	SH12a	67	43	1-2
172	Residential	11 Couldry Street	1	SH12a	67	36	1-2
180	Residential	8A MacAulay Street	1	SH12a	66	39	1-2
176	Residential	20 Norwich Street	1	SH12a	66	45	0-1
179	Residential	10A Macaulay Street	1	SH12a	66	39	1-2
171	Residential	16 Couldry Street	1	SH12a	65	40	1-2
173	Residential	1 Couldry Street	1	SH12a	65	44	1-2
178	Residential	3 Diamond Street	1	SH12a	65	35	1-2
177	Residential	18 Norwich Street	1	SH12a	65	45	1-2
170	Residential	3/30 Fleet Street (Bldg 2)	1	SH12a	64	44	1-2
182	Residential	1/6 Fleet Street	2	SH12a	63	49	1-2
174	Residential	25 Rendall Place	1	SH12a	62	39	1-2
175	Residential	23 Rendall Place	1	SH12a	62	40	1-2
190	Residential	7 Fleet Street	1	SH12a	61	37	1-2
189	Residential	91 Newton Road	1	SH12a	60	51	1-2

## **Motions Catchment Improvement Project**



183	Residential	4 Fleet Street	1	SH12a	59	46	1-2
196	Residential	19-35 Fleet Street	1	SH12a	52	47	1-2
26	Heritage	43 Cooper Street	2	SH13	85	77	3-4
25	Heritage	41 Cooper Street	2	SH13	82	77	3-4
29	Heritage	37 Cooper Street	1	SH13	80	74	2-3
221	Heritage	39 Cooper Street	2	SH13	80	74	2-3
132	Heritage	50 Cooper Street	2	SH13	78	78	3-4
131	Heritage	48 Cooper Street	2	SH13	77	76	3-4
129	Heritage	46 Cooper Street	2	SH13	76	72	2-3
130	Heritage	44 Cooper Street	2	SH13	73	69	2-3
28	Heritage	33 Cooper Street	1	SH13	71	66	1-2
127	Heritage	42 Cooper Street	2	SH13	70	66	1-2
128	Residential	40 Cooper Street	1	SH13	69	63	1-2
27	Residential	2 Seddon Street	2	SH13	68	60	1-2
122	Residential	41 Bond Street	2	SH13	67	59	1-2
126	Residential	40 Cooper Street	1	SH13	61	58	1-2
124	Residential	39 Bond Street	2	SH13	59	52	1-2
125	Residential	37 Bond Street	1	SH13	53	46	1-2
24	Residential	39 Commercial Road	2	SH14	76	71	2-3
32	Residential	34 Commercial Road	1	SH14	71	66	1-2
33	Residential	32 Commercial Road	2	SH14	71	66	1-2
137	Residential	37 Commercial Road	2	SH14	70	62	1-2
30	Residential	4 Seddon Street	2	SH14	67	58	1-2
133	Residential	89 Ivanhoe Road	1	SH14	67	53	1-2
136	Residential	35 Commercial Road	2	SH14	65	54	1-2
23	Residential	8 Seddon Street	2	SH14	65	59	1-2
135	Residential	33 Commercial Road	2	SH14	65	53	1-2
31	Residential	6 Seddon Street	2	SH14	63	57	1-2
134	Residential	31 Commercial Road	2	SH14	62	50	1-2