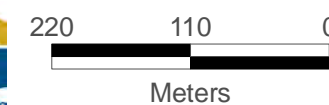
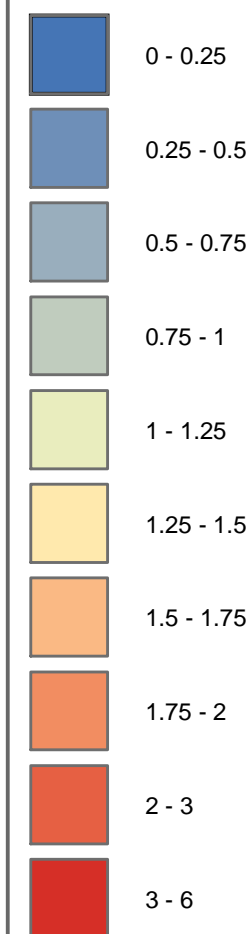


LEGEND

Flow Velocity [m/s]



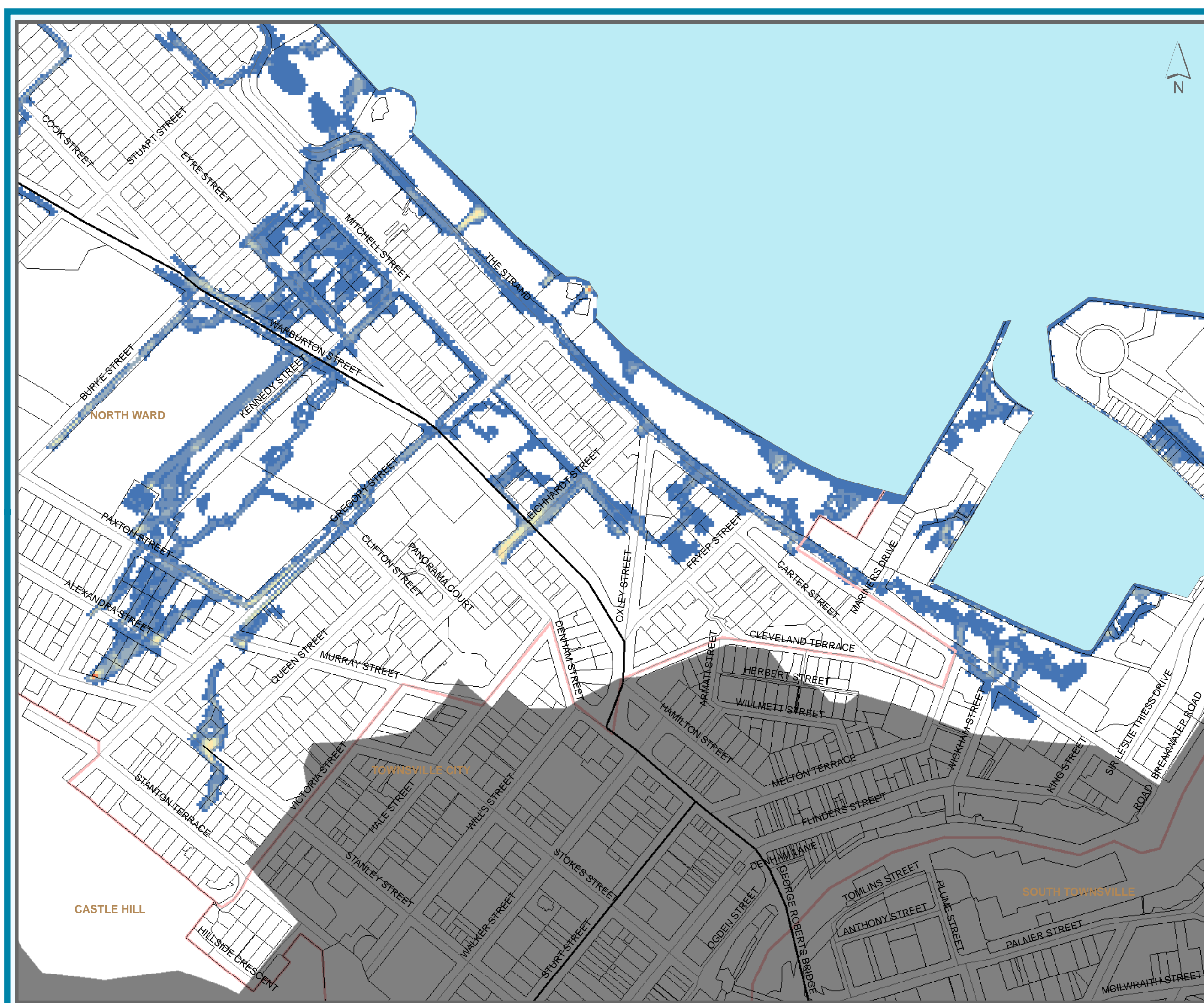
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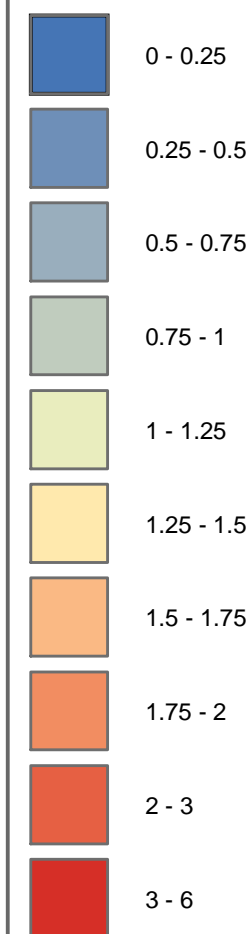
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Figure A34: 2y Flood
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Flow Velocity [m/s]



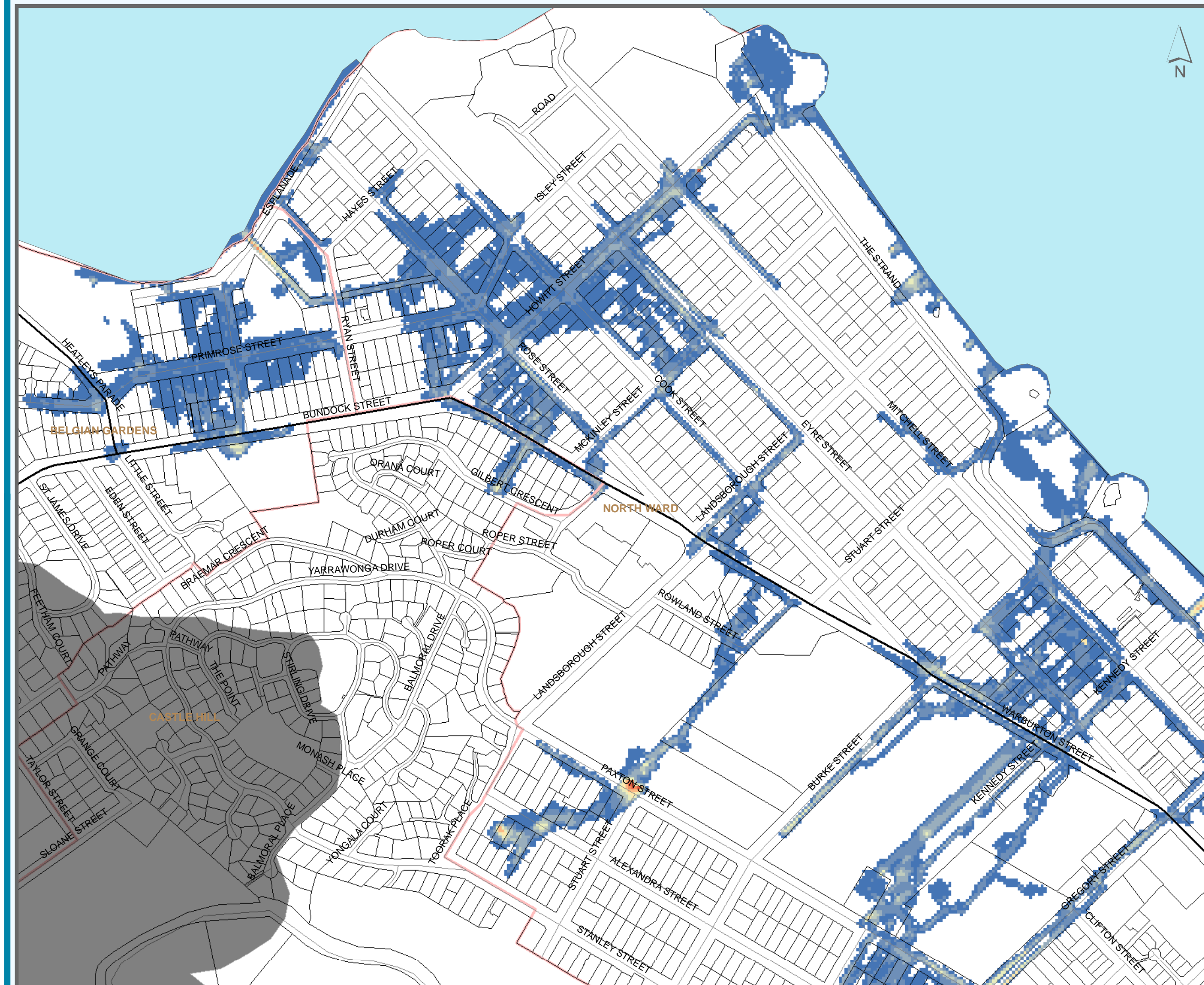
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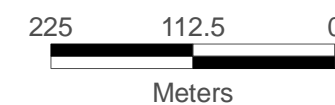
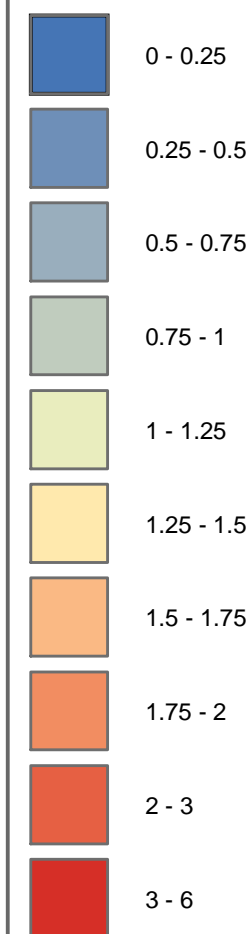
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Figure A35: 5y Flood
Envelope 1 of 2



LEGEND

Flow Velocity [m/s]



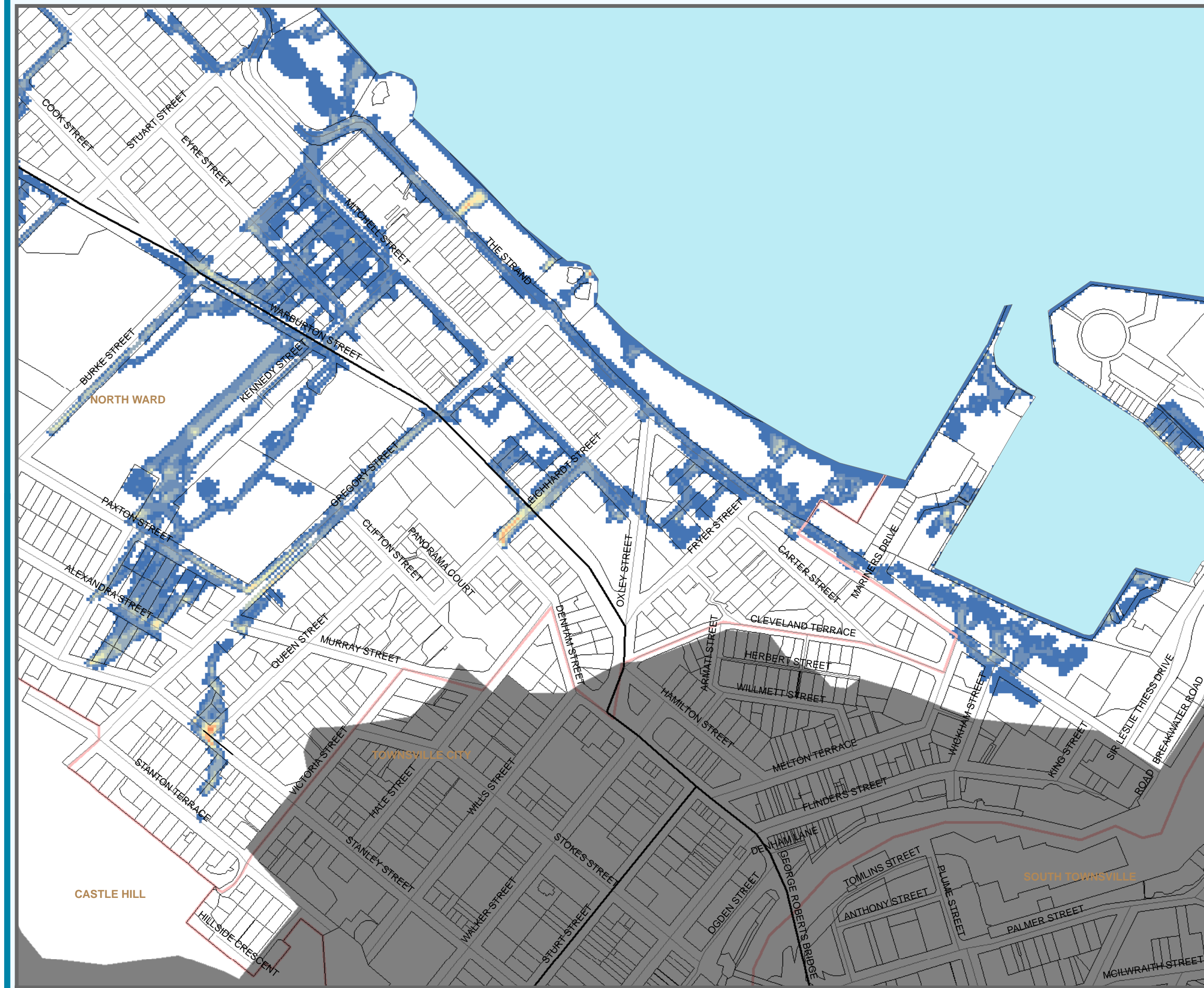
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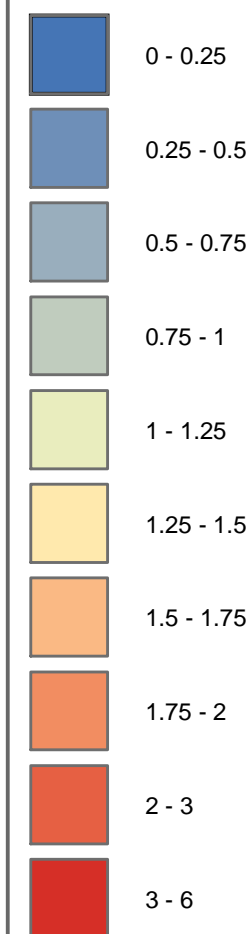
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Figure A36: 5y Flood
Envelope 2 of 2



LEGEND

Flow Velocity [m/s]



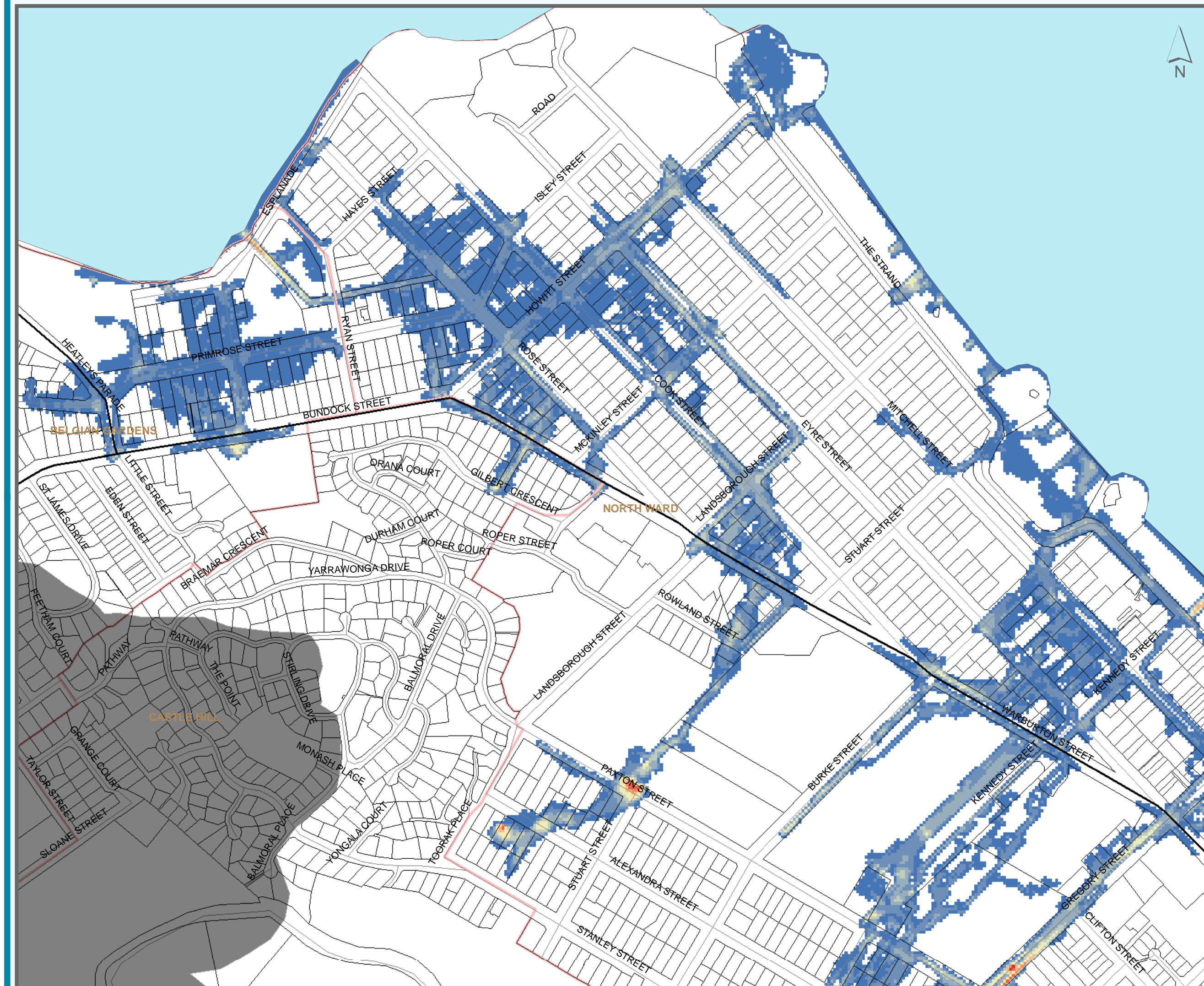
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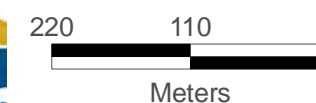
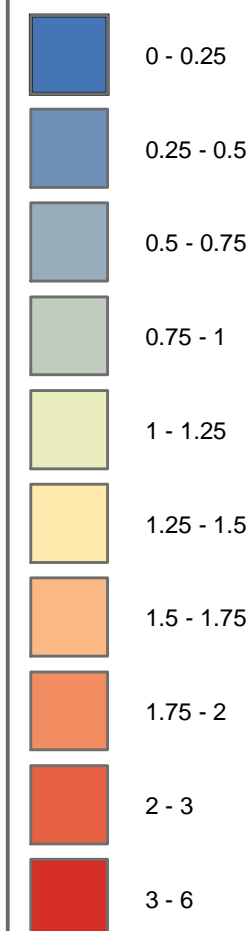
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Figure A37: 10y Flood
Envelope 1 of 2



LEGEND

Flow Velocity [m/s]



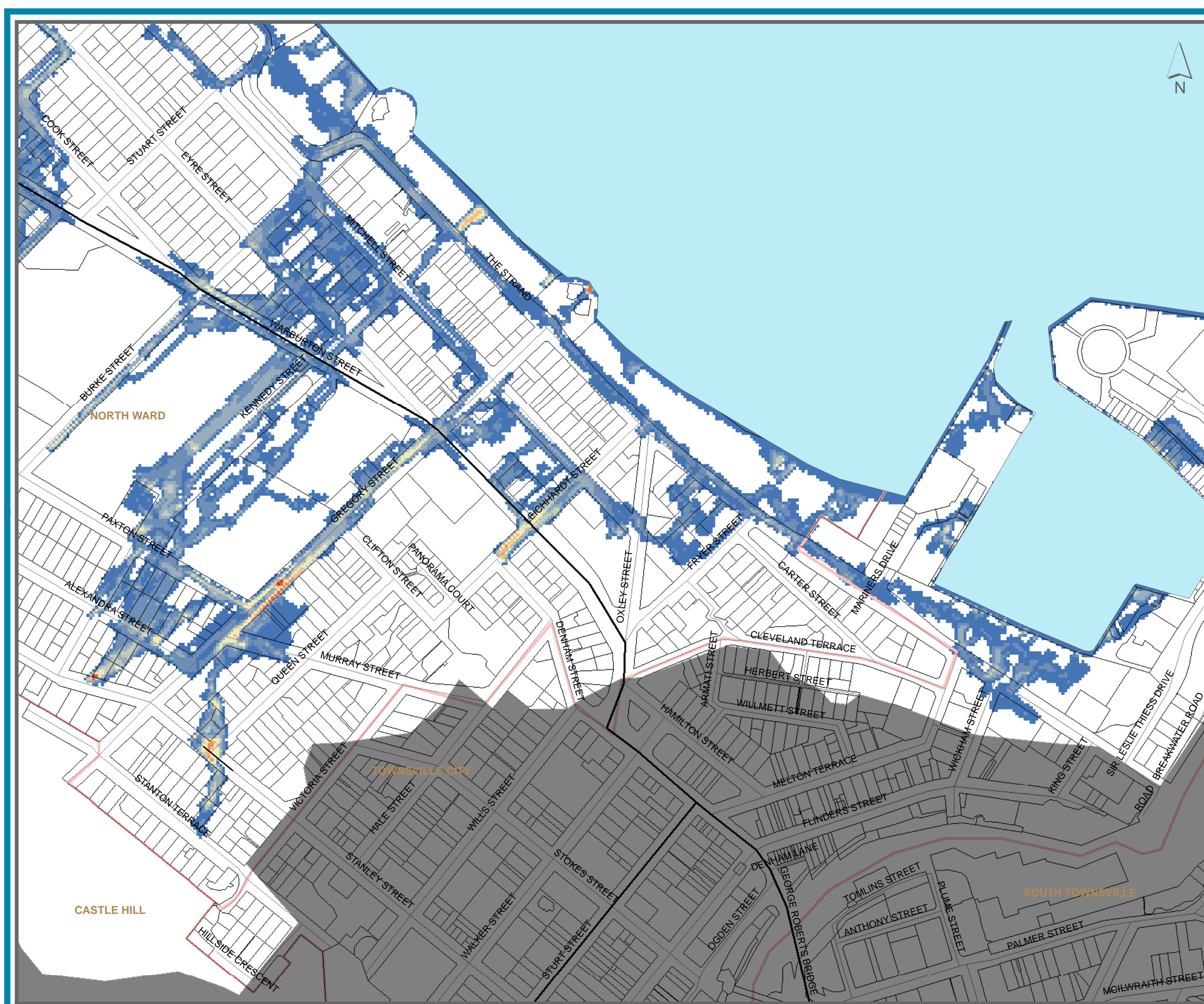
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DIGITAL FILE: mxd

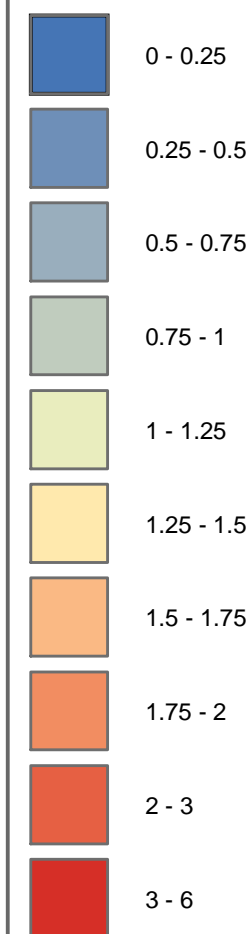
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Figure A38: 10y Flood
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LEGEND

Flow Velocity [m/s]



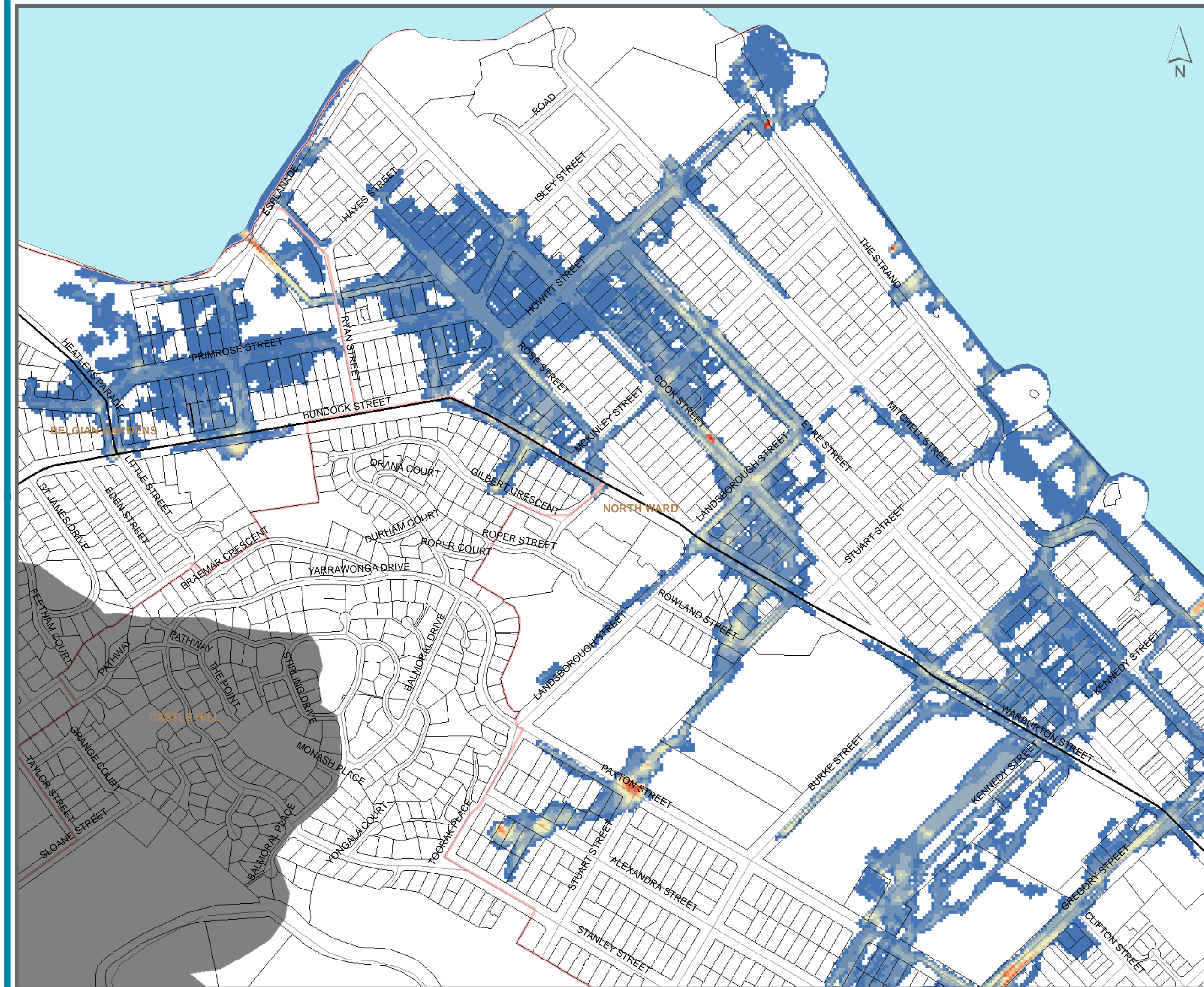
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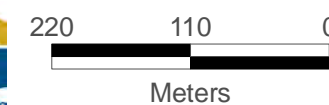
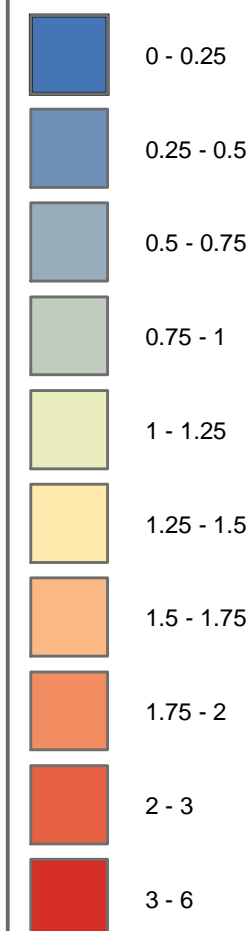
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Figure A39: 20y Flood
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Flow Velocity [m/s]



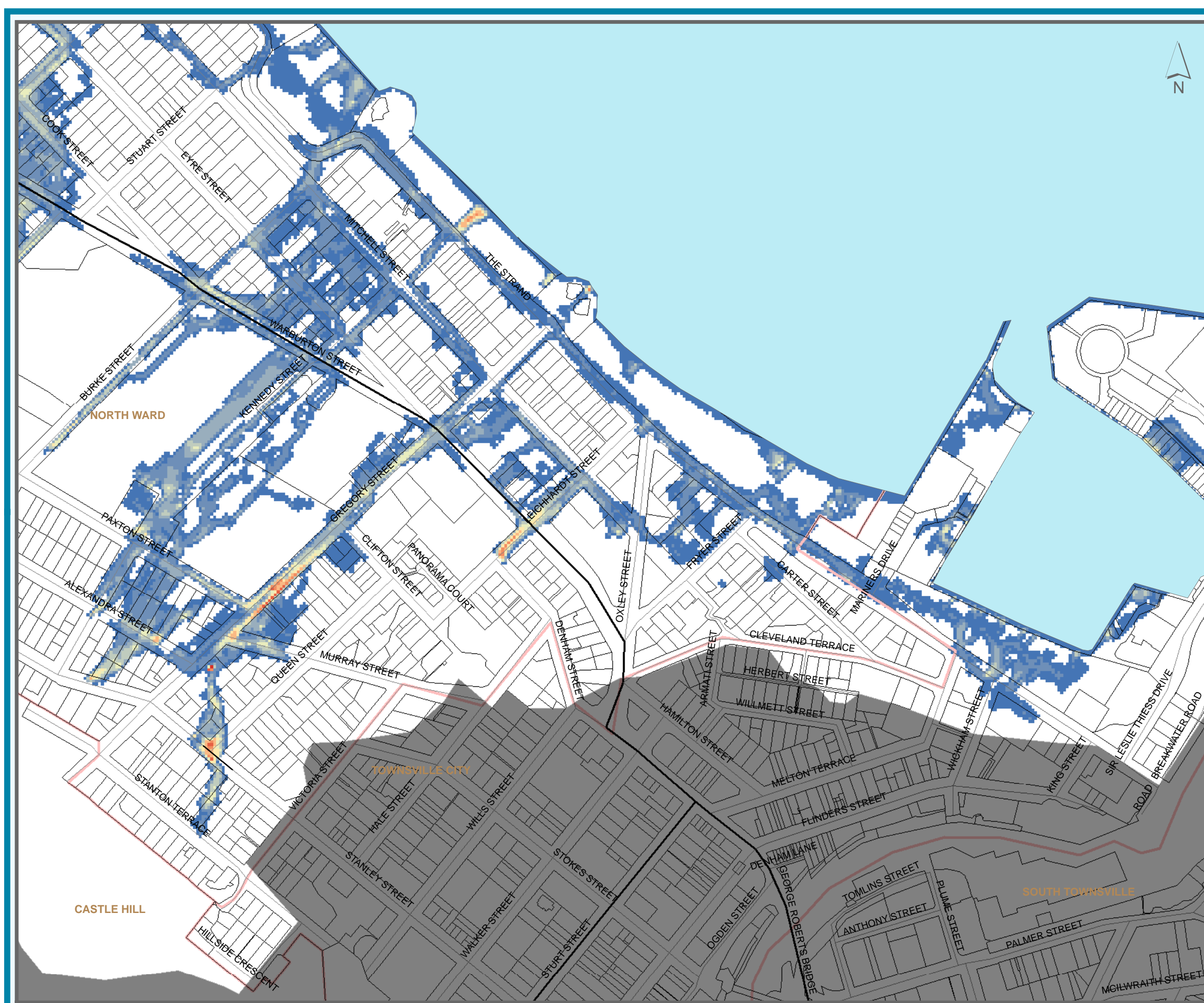
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DIGITAL FILE: mxd

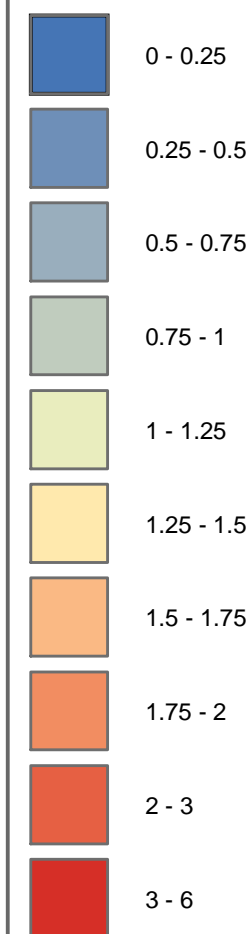
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Figure A40: 20y Flood
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Flow Velocity [m/s]



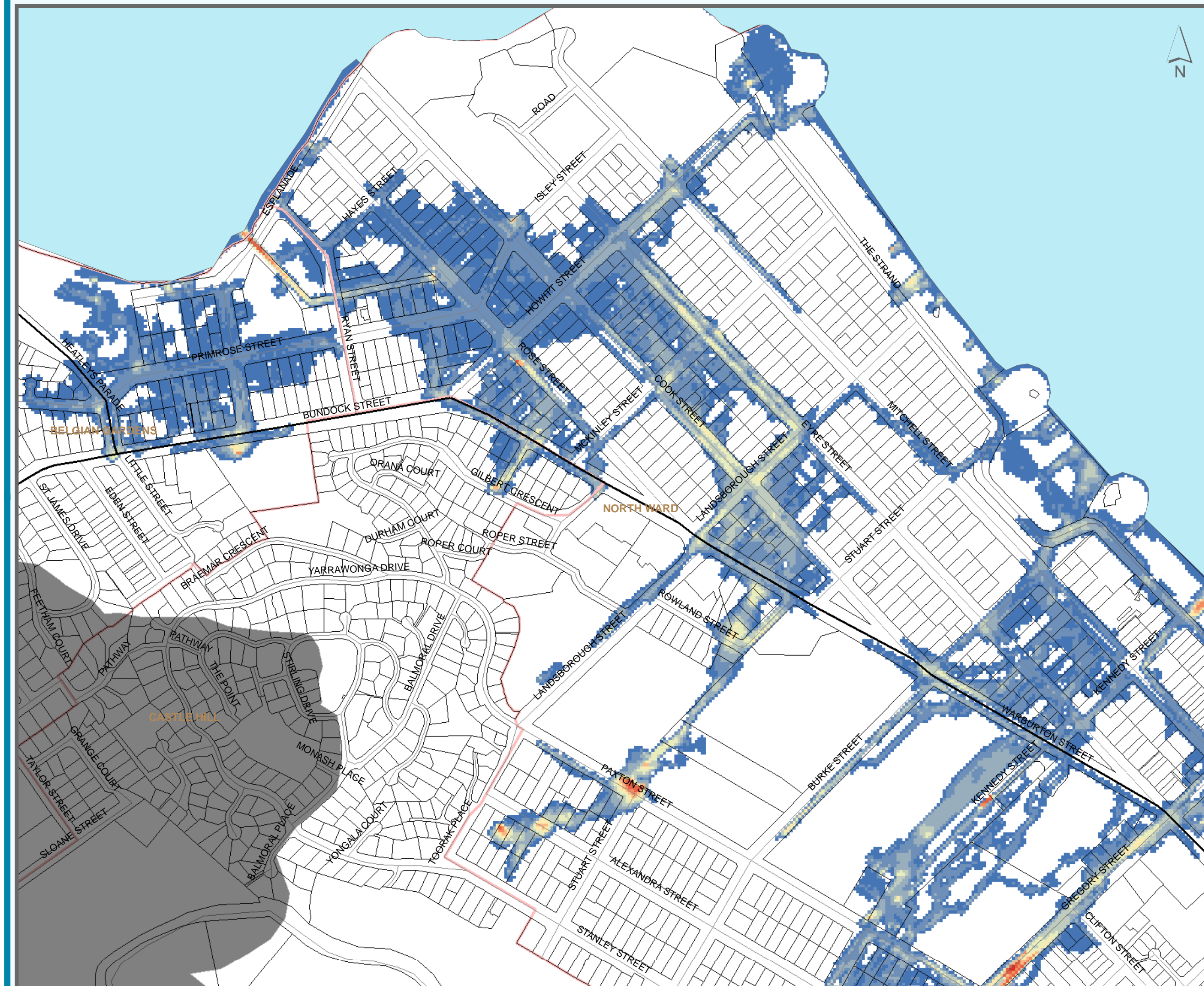
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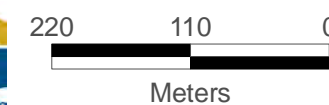
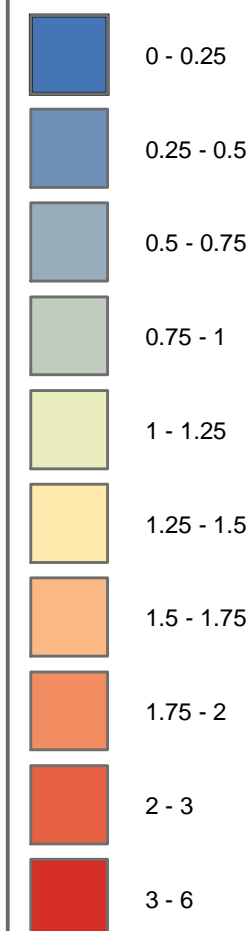
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Figure A41: 50y Flood
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LEGEND

Flow Velocity [m/s]



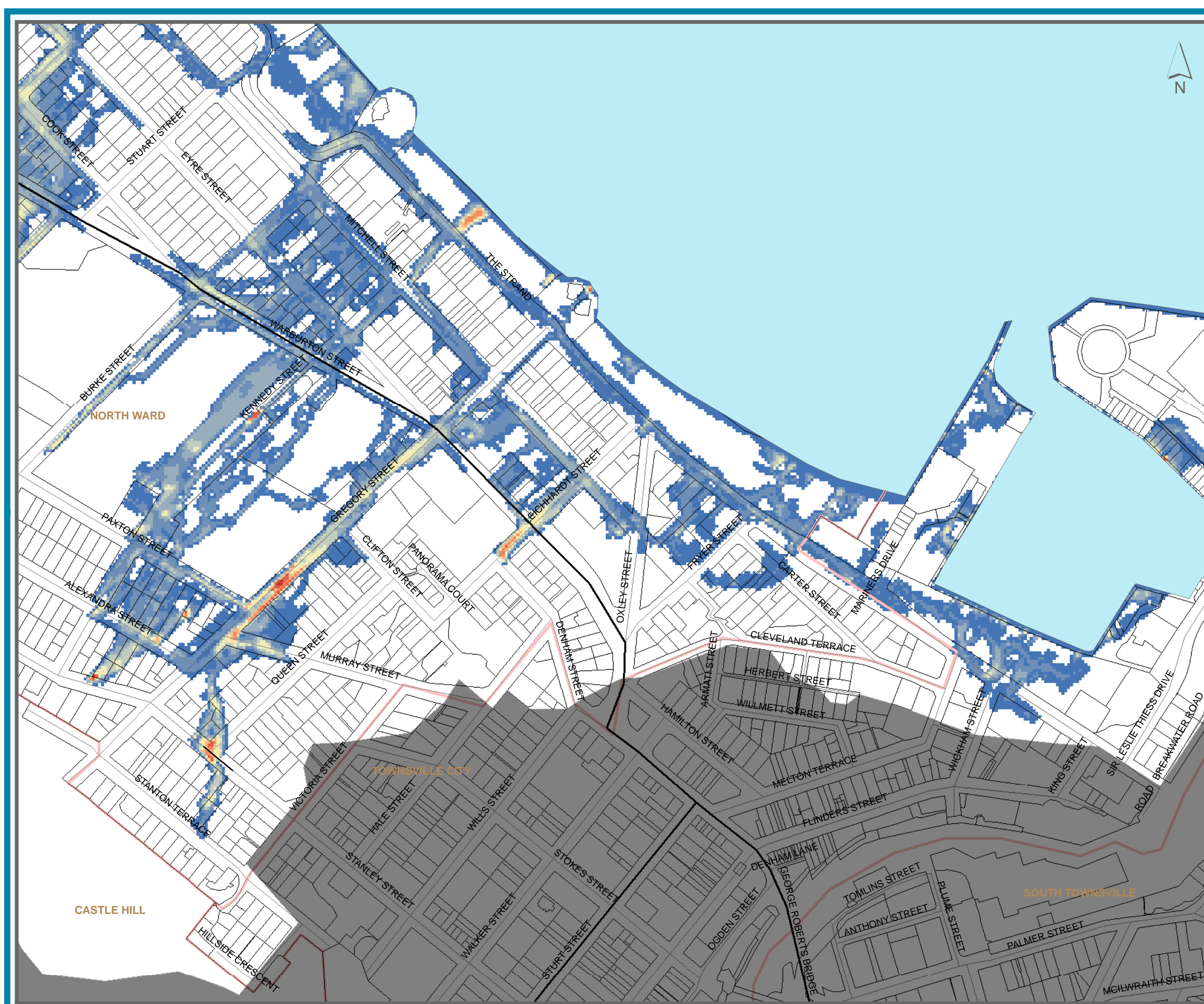
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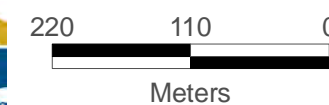
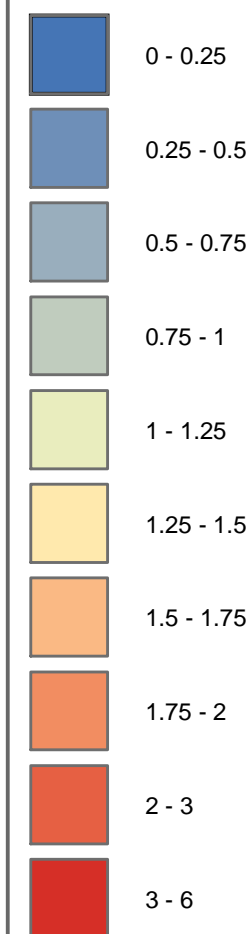
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Figure A42: 50y Flood
Envelope 2 of 2



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Flow Velocity [m/s]



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Figure A43: 100y Flood
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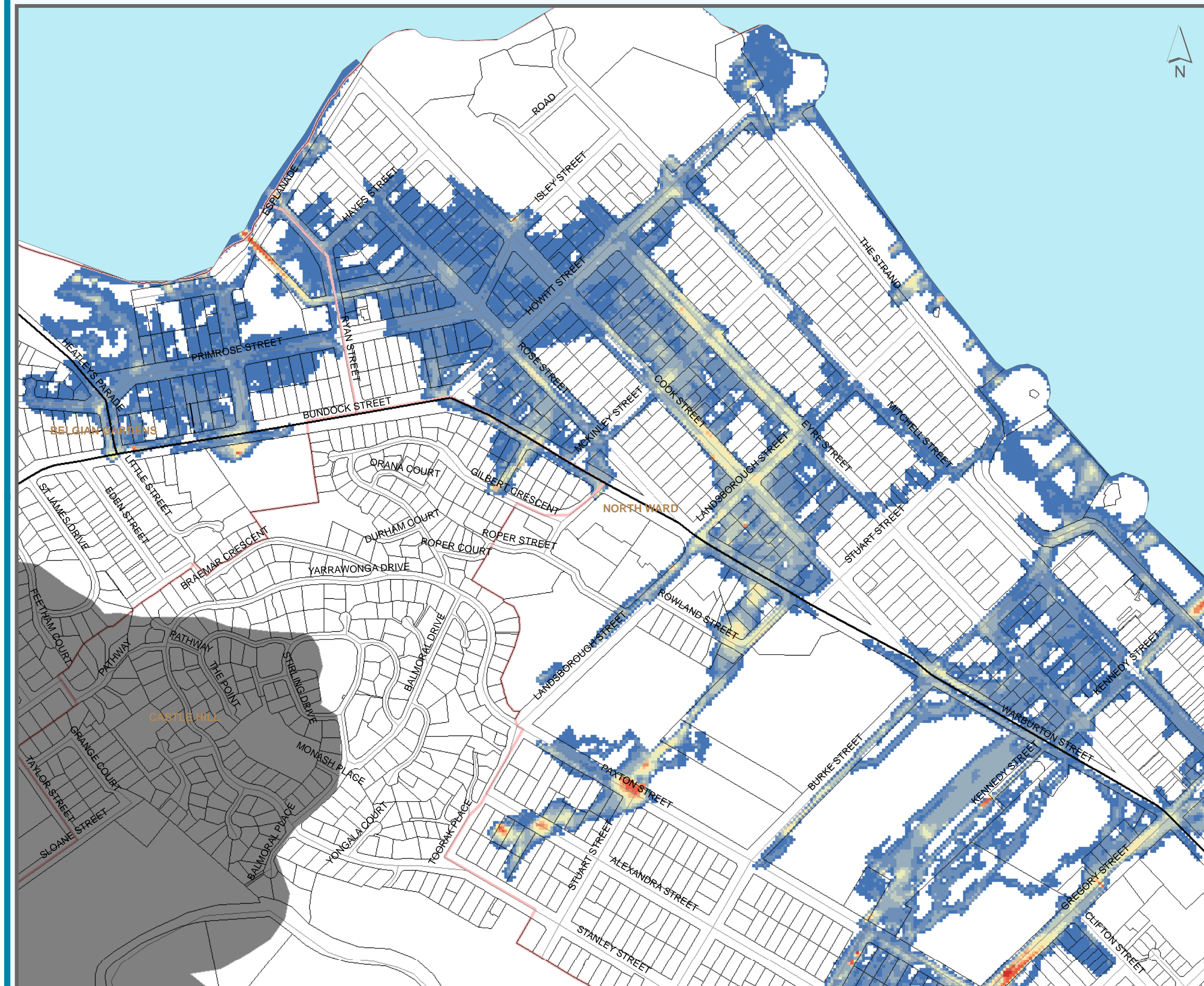
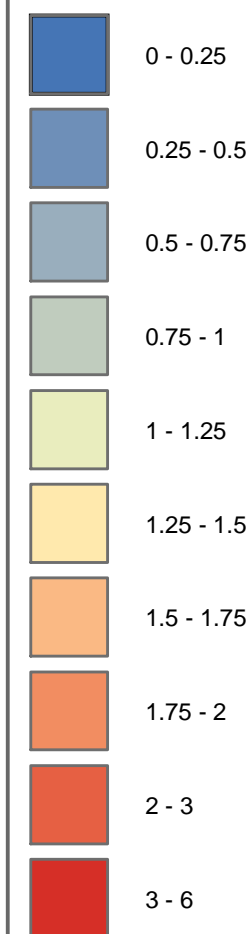


Figure A44: 100y Flood Envelope 2 of 2

LEGEND

Flow Velocity [m/s]



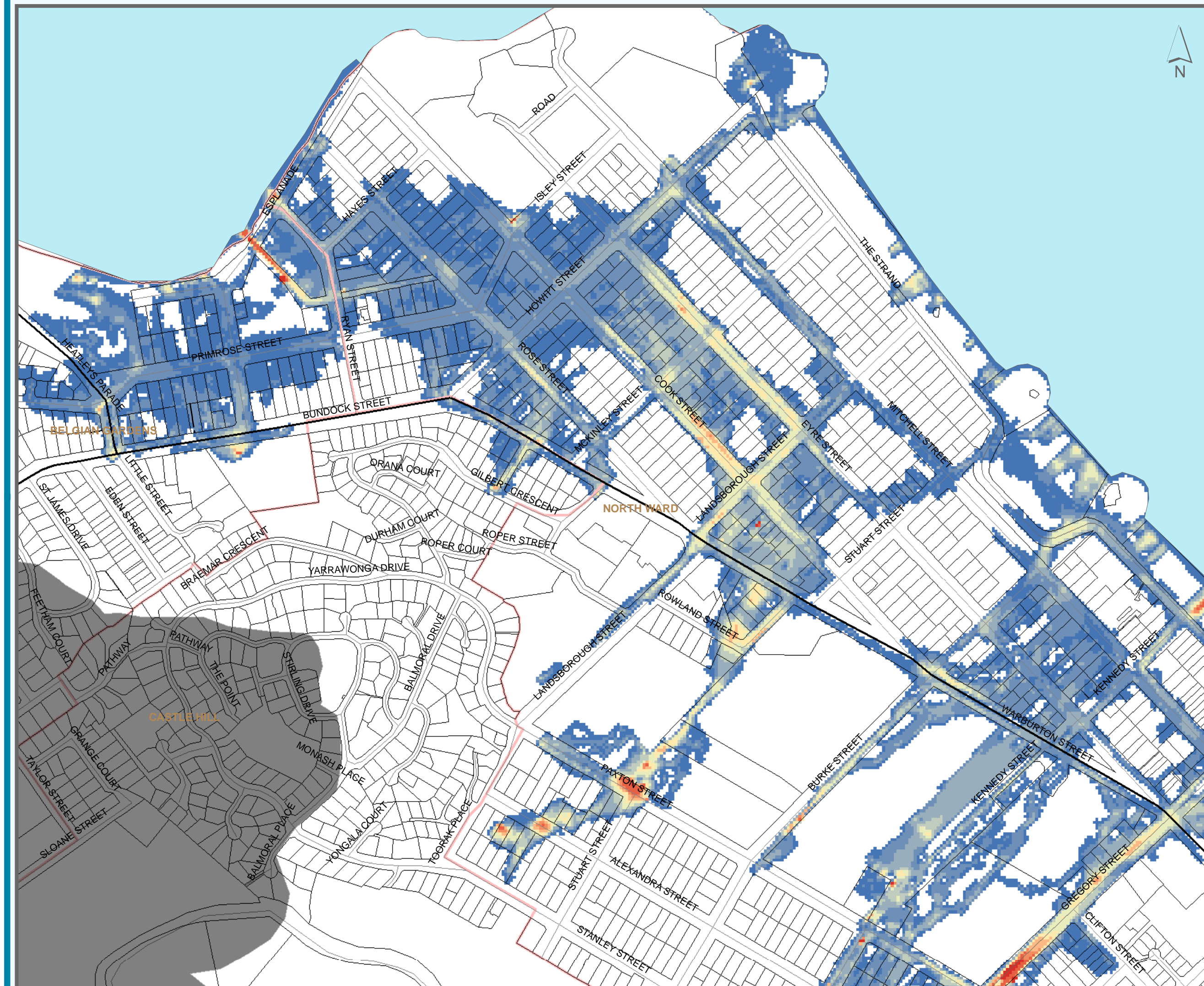
SCALE: 1:6,000 @ A3

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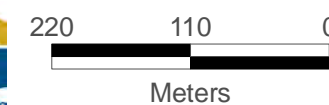
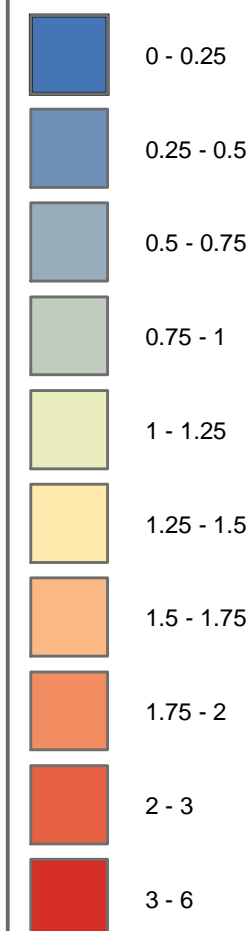
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Figure A45: 500y Flood
Envelope 1 of 2



LEGEND

Flow Velocity [m/s]



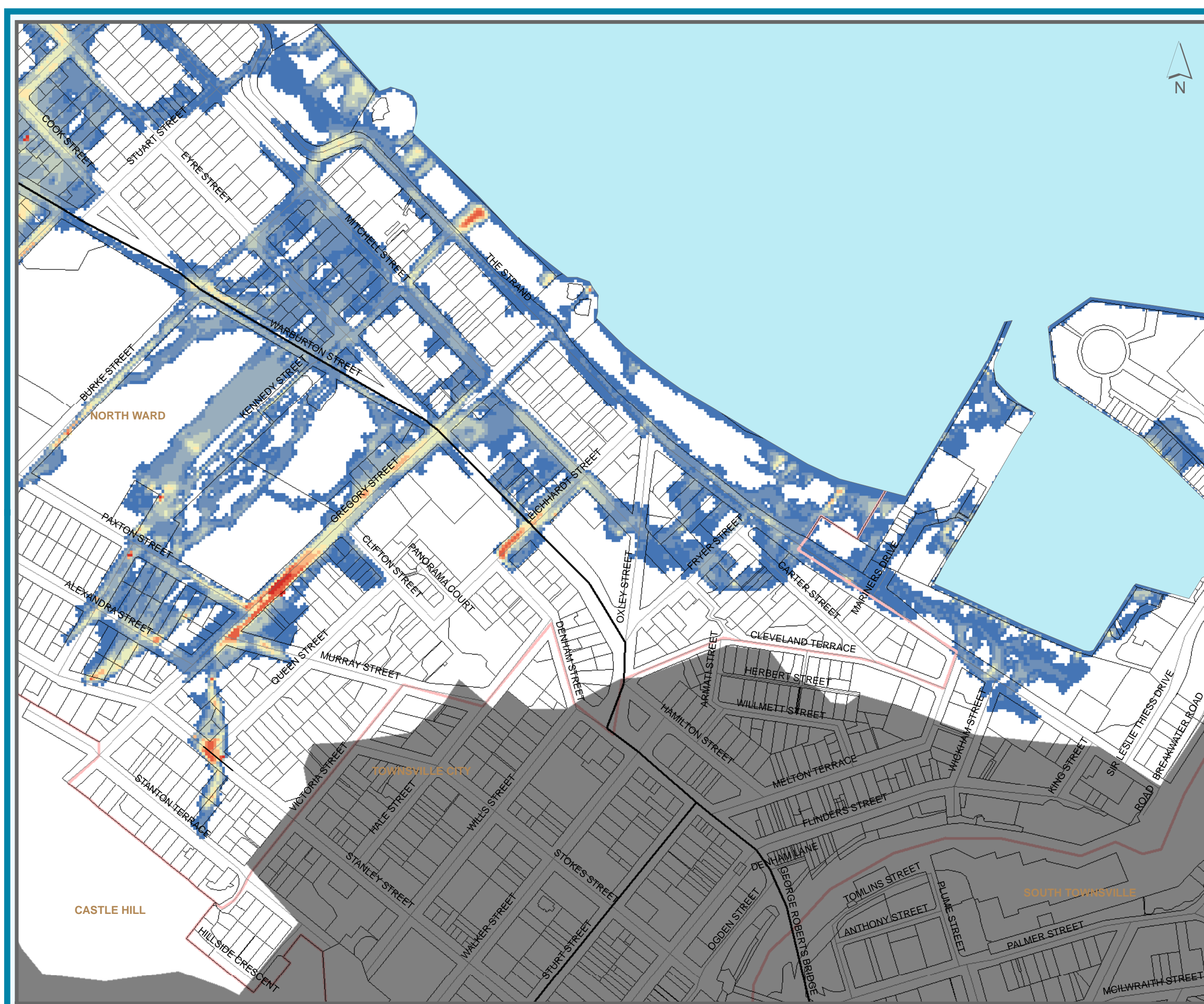
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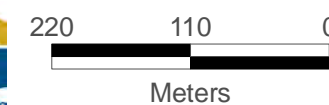
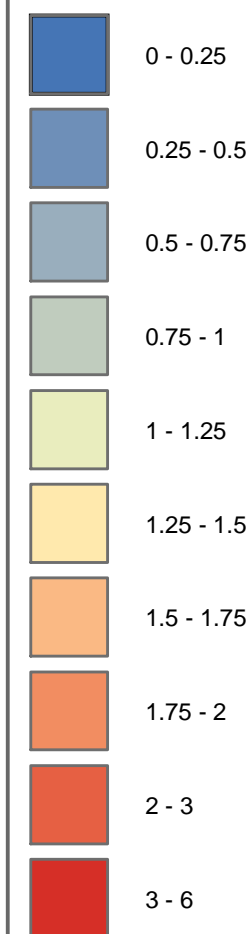
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Figure A46: 500y Flood
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LEGEND

Flow Velocity [m/s]



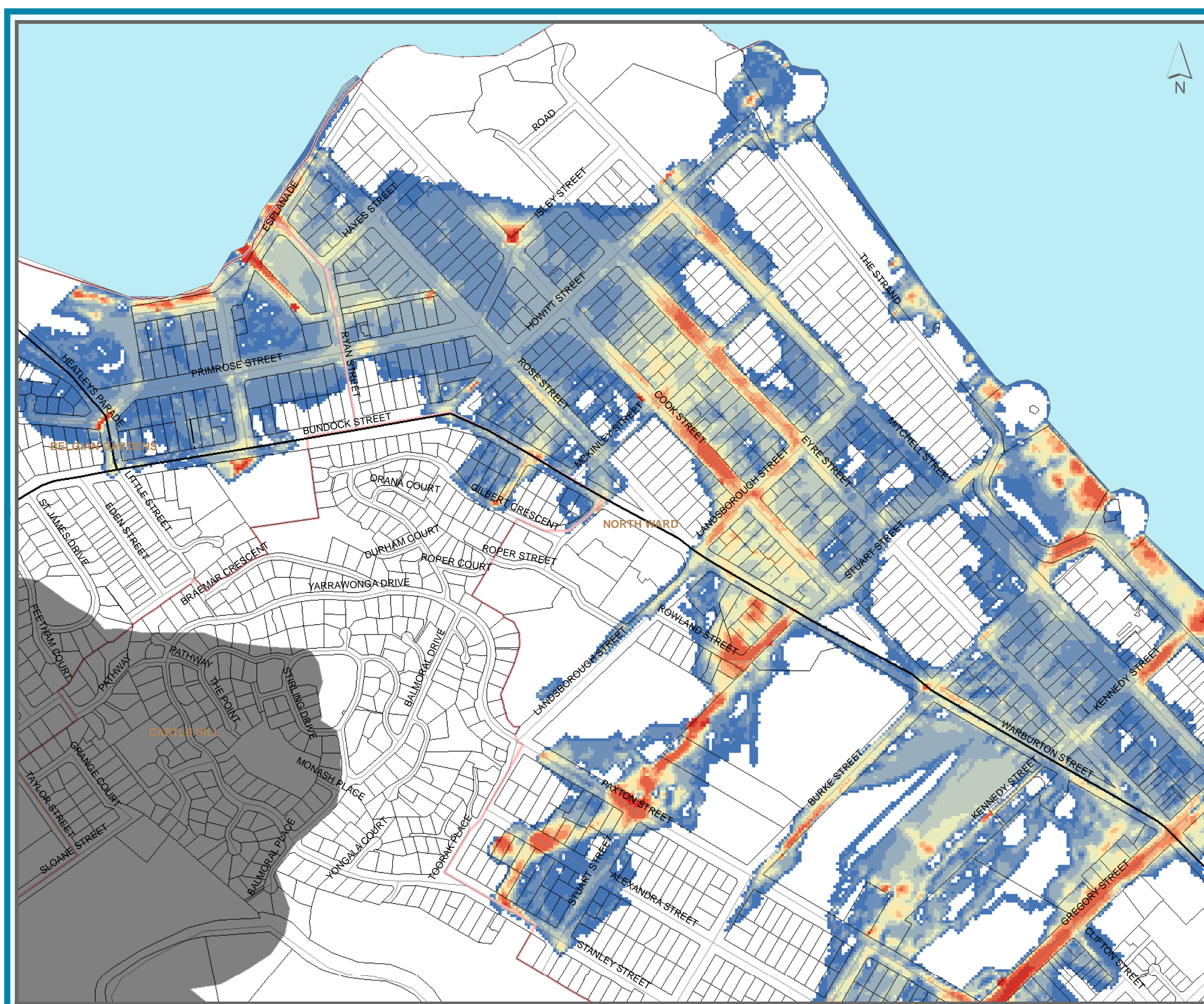
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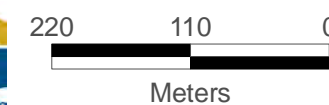
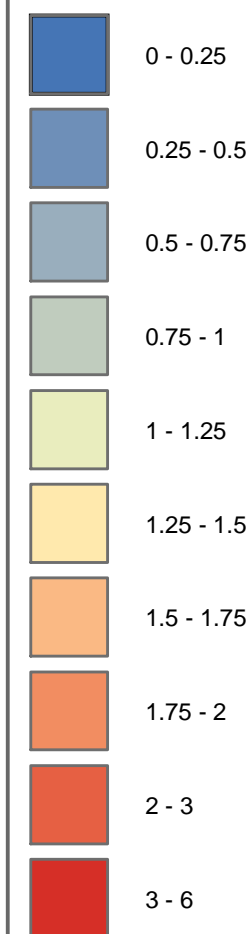
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Figure A47: PMF Flood
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LEGEND

Flow Velocity [m/s]



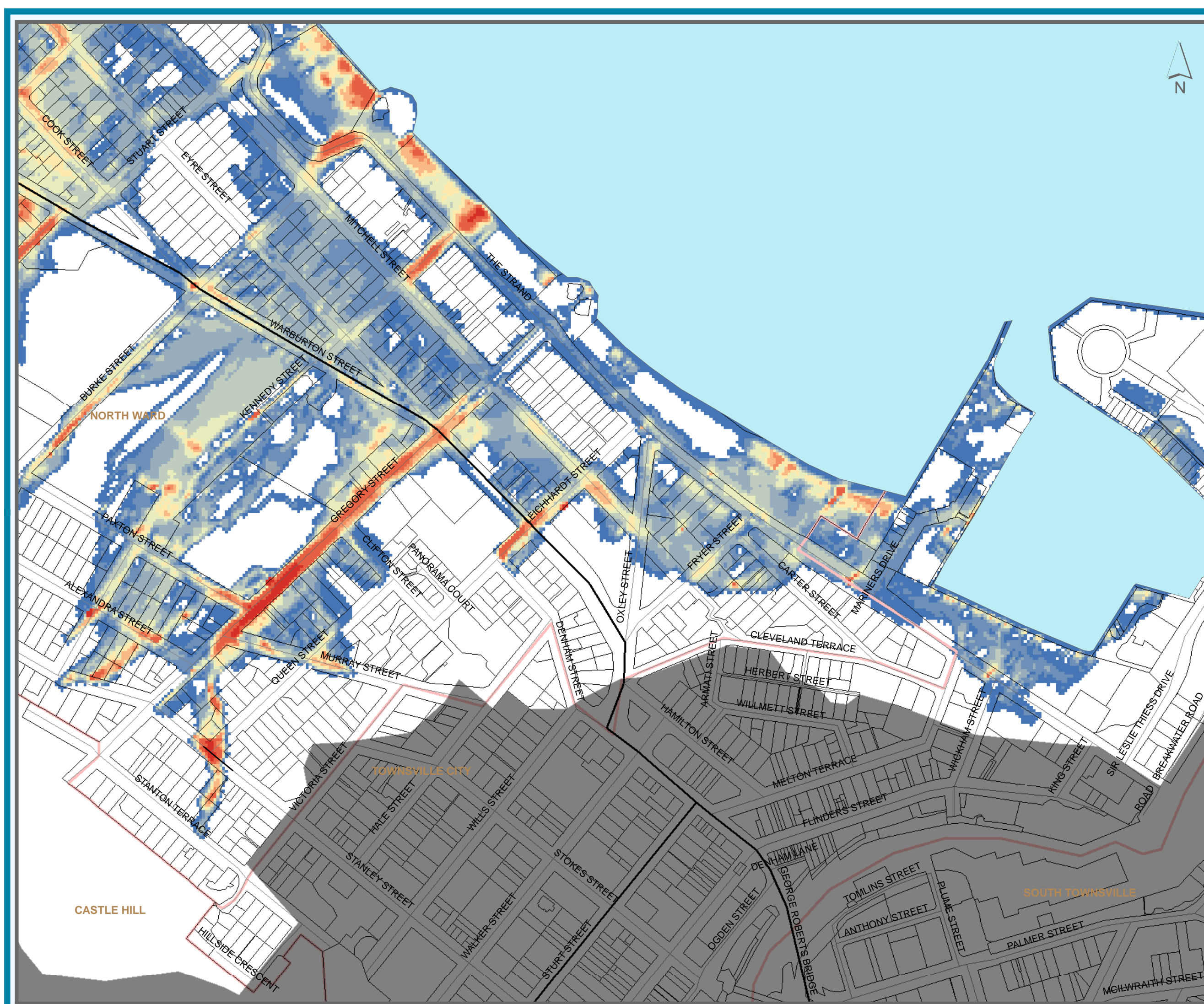
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Figure A48: PMF Flood
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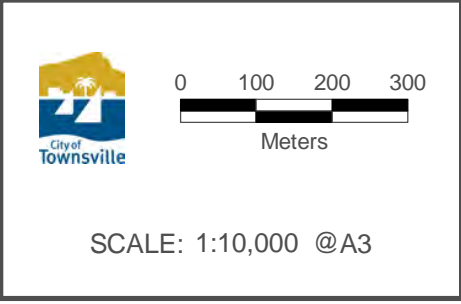
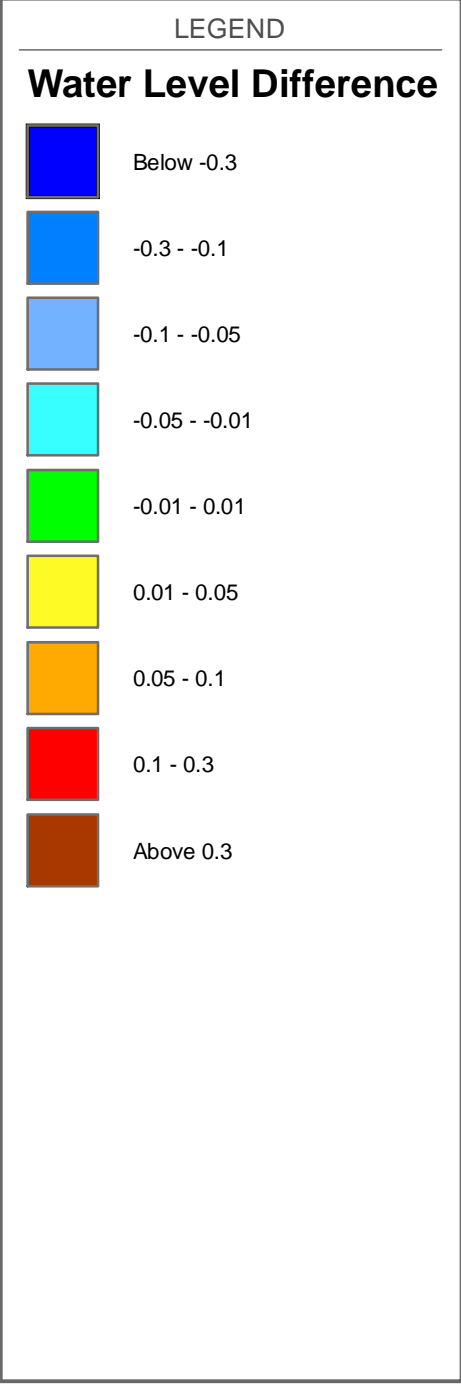
Appendix B

Rational Method Calculations

| Table B1: Rational Method Calculations | | | | | | | |
|--|--------|--------|--------|--------|--------|-----------|--------|
| Catchment | N1 | N2 | N3 | N5 | N6 | N7 | N8 |
| XP-RAFTS | | | | | | | |
| Max event 50y | 60m | 60m | 60m | 60m | 60m | 90m | 60m |
| Flow 50y (cms) | 10.4 | 7.8 | 24.6 | 37.5 | 16.7 | 27.4 | 14.0 |
| Max event 2y | 90m | 45m | 60m | 90m | 60m | 30m & 90m | 60m |
| Flow 2y (cms) | 3.8 | 3.4 | 9.9 | 11.6 | 6.7 | 9.0 | 5.4 |
| Area (Hectares) | 23.52 | 18.38 | 68.74 | 100.37 | 50.67 | 66.48 | 27.79 |
| Area (km2) | 0.24 | 0.18 | 0.69 | 1.00 | 0.51 | 0.66 | 0.28 |
| unit area flow 50y (cms/km2) | 44.3 | 42.2 | 35.8 | 37.3 | 32.9 | 41.2 | 50.5 |
| unit area flow 2y (cms/km2) | 16.2 | 18.5 | 14.4 | 11.6 | 13.3 | 13.5 | 19.6 |
| Rational Method | | | | | | | |
| Time of Concentration (min) | 16 | 21 | 51 | 31.4 | 28.5 | 32.5 | 18.5 |
| Average Rainfall Intensity 50y (mm/h) | 205 | 183 | 121 | 154 | 160 | 149 | 191 |
| Average Rainfall Intensity 2y (mm/h) | 99 | 88 | 58 | 74 | 77 | 72 | 92 |
| Area (ha) | 23.52 | 18.38 | 68.74 | 100.37 | 50.67 | 68.97 | 27.79 |
| Fraction Impervious | 0.48 | 0.60 | 0.51 | 0.33 | 0.51 | 0.48 | 0.56 |
| Intensity 1h10y (mm/h) | 81 | 81 | 81 | 82 | 82 | 82 | 82 |
| C10 | 0.80 | 0.82 | 0.80 | 0.77 | 0.81 | 0.80 | 0.81 |
| Frequency Factor for 50y | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| Coefficient of Discharge for 50y | 0.91 | 0.94 | 0.92 | 0.88 | 0.93 | 0.91 | 0.93 |
| Frequency Factor for 2y | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Coefficient of Discharge for 2y | 0.68 | 0.70 | 0.68 | 0.65 | 0.68 | 0.68 | 0.69 |
| Conversion factor | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 |
| Peak Flow Rate for 50y (m3/s) | 12.3 | 8.8 | 21.3 | 37.9 | 20.9 | 26.1 | 13.8 |
| Peak Flow Rate for 2y (m3/s) | 4.4 | 3.1 | 7.5 | 13.4 | 7.4 | 9.3 | 4.9 |
| Rational Flow compared to RAFTS flow 50y [%] | 85 | 88 | 116 | 99 | 80 | 105 | 102 |
| Rational Flow compared to RAFTS flow 2y [%] | 87 | 108 | 131 | 87 | 91 | 96 | 111 |

Appendix C

Climate Change Difference Maps

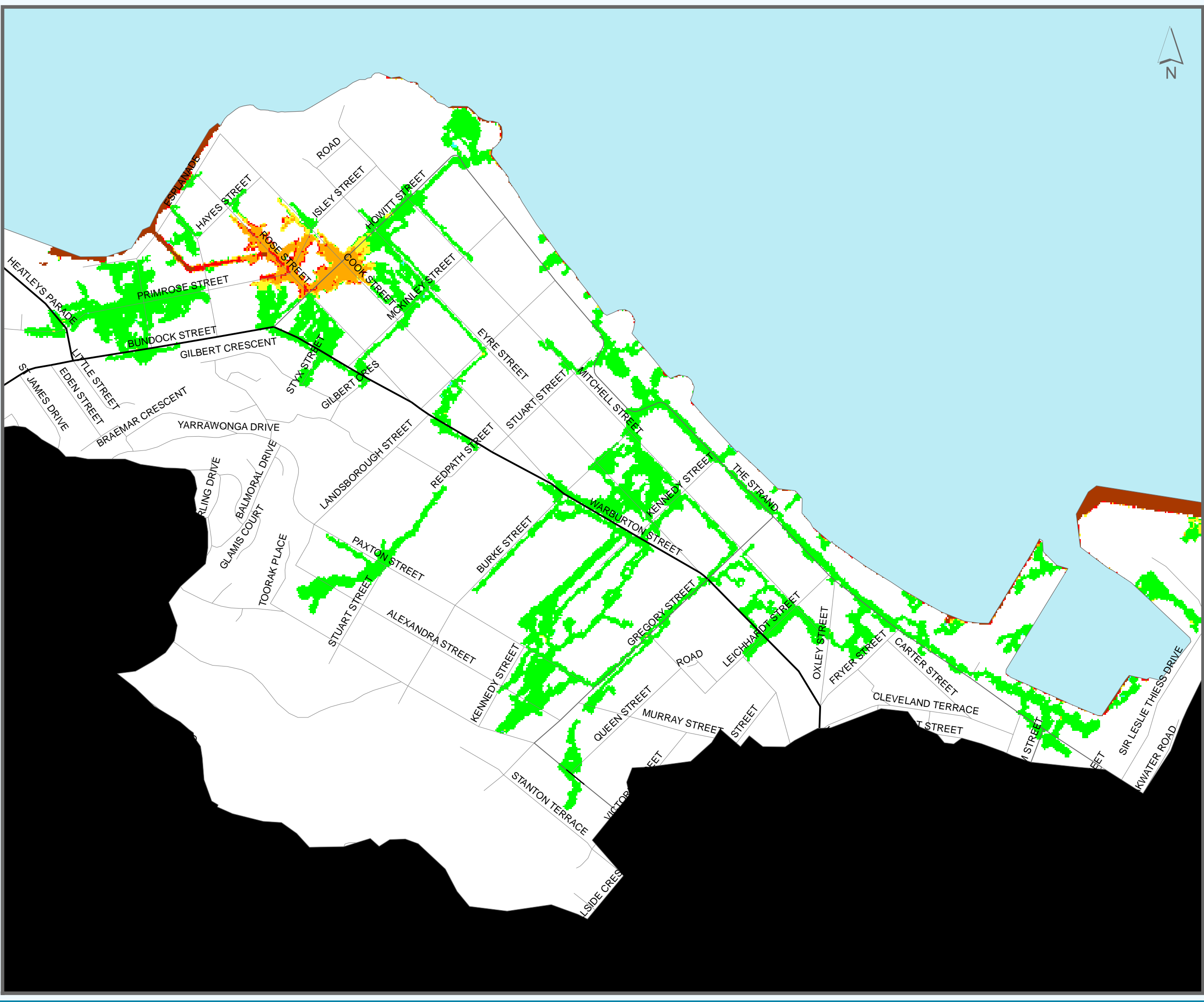


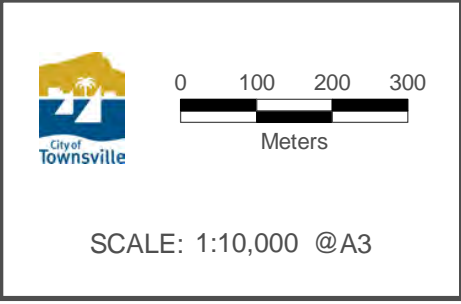
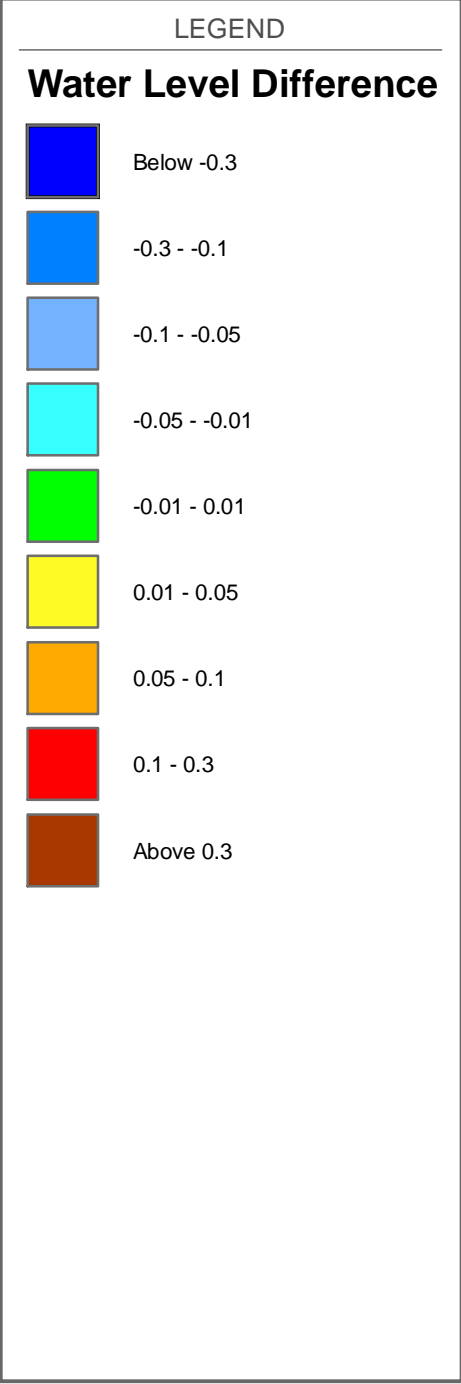
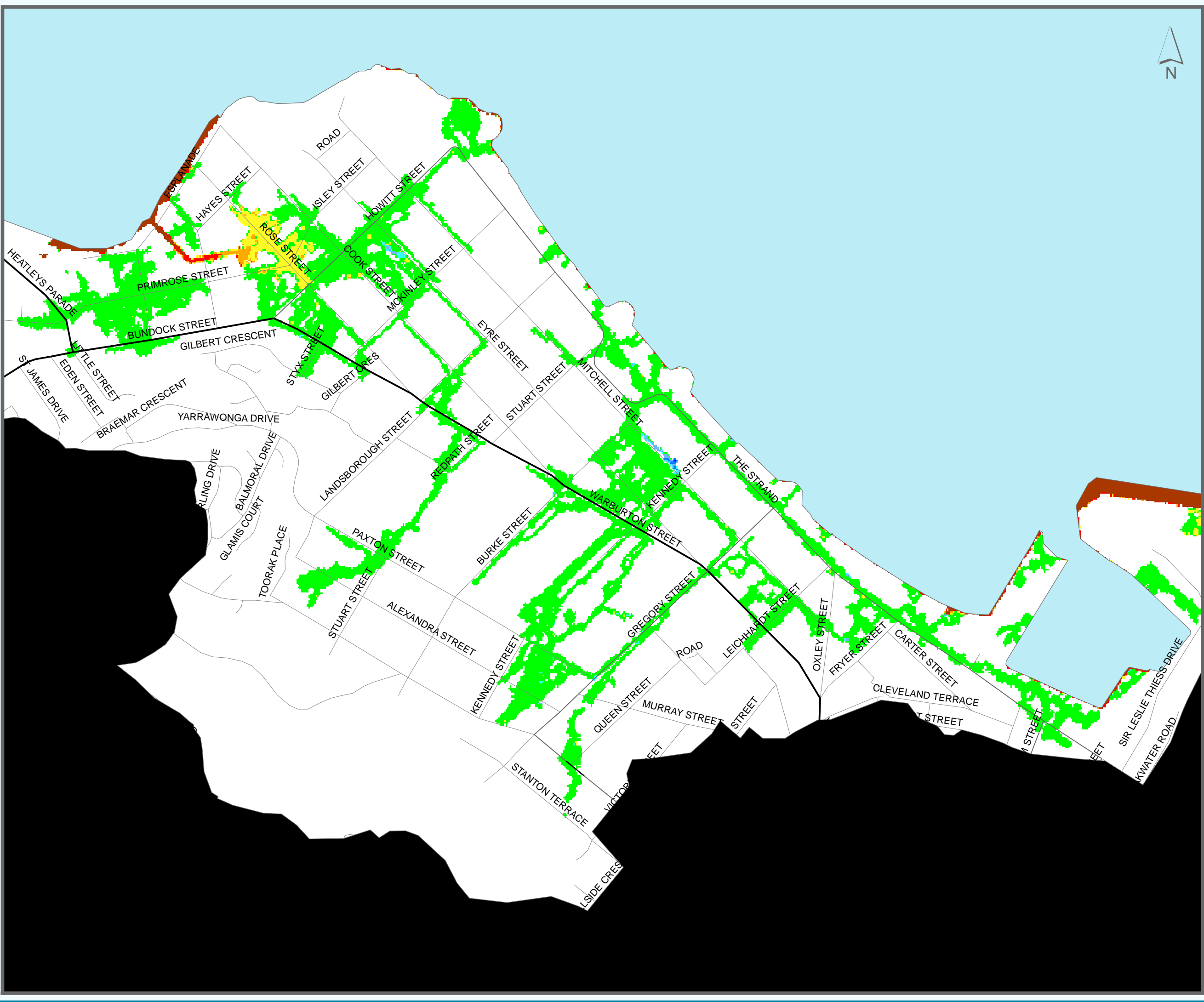
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Figure C1: Climate Change Water Level Difference for 2 year ARI



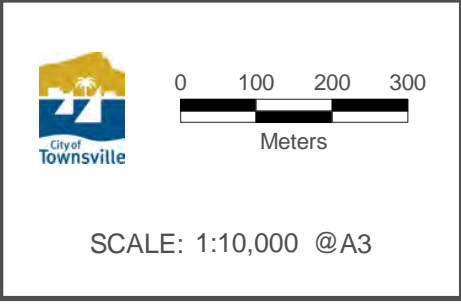
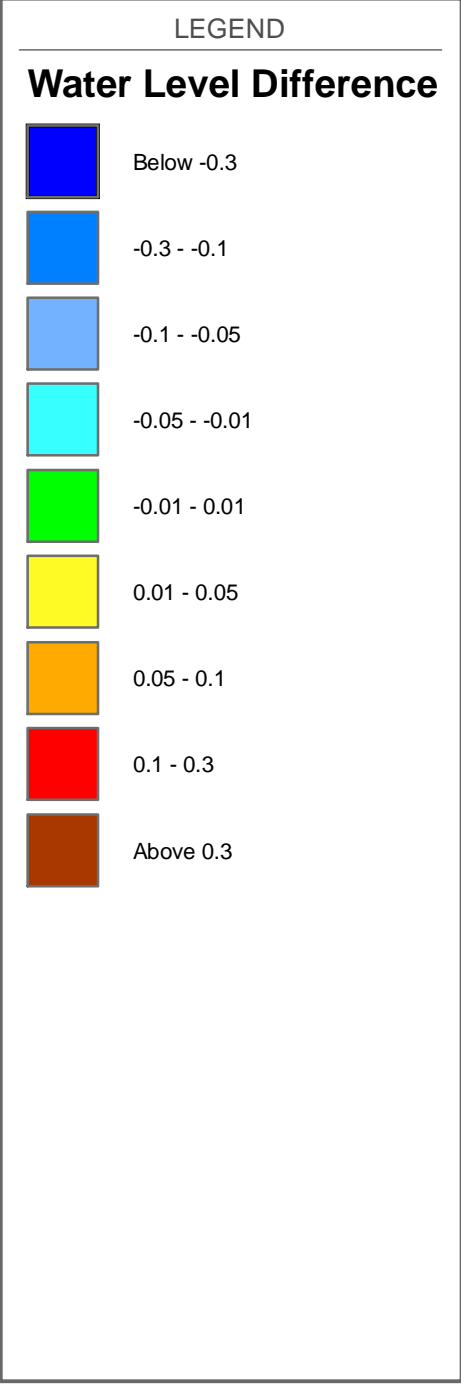
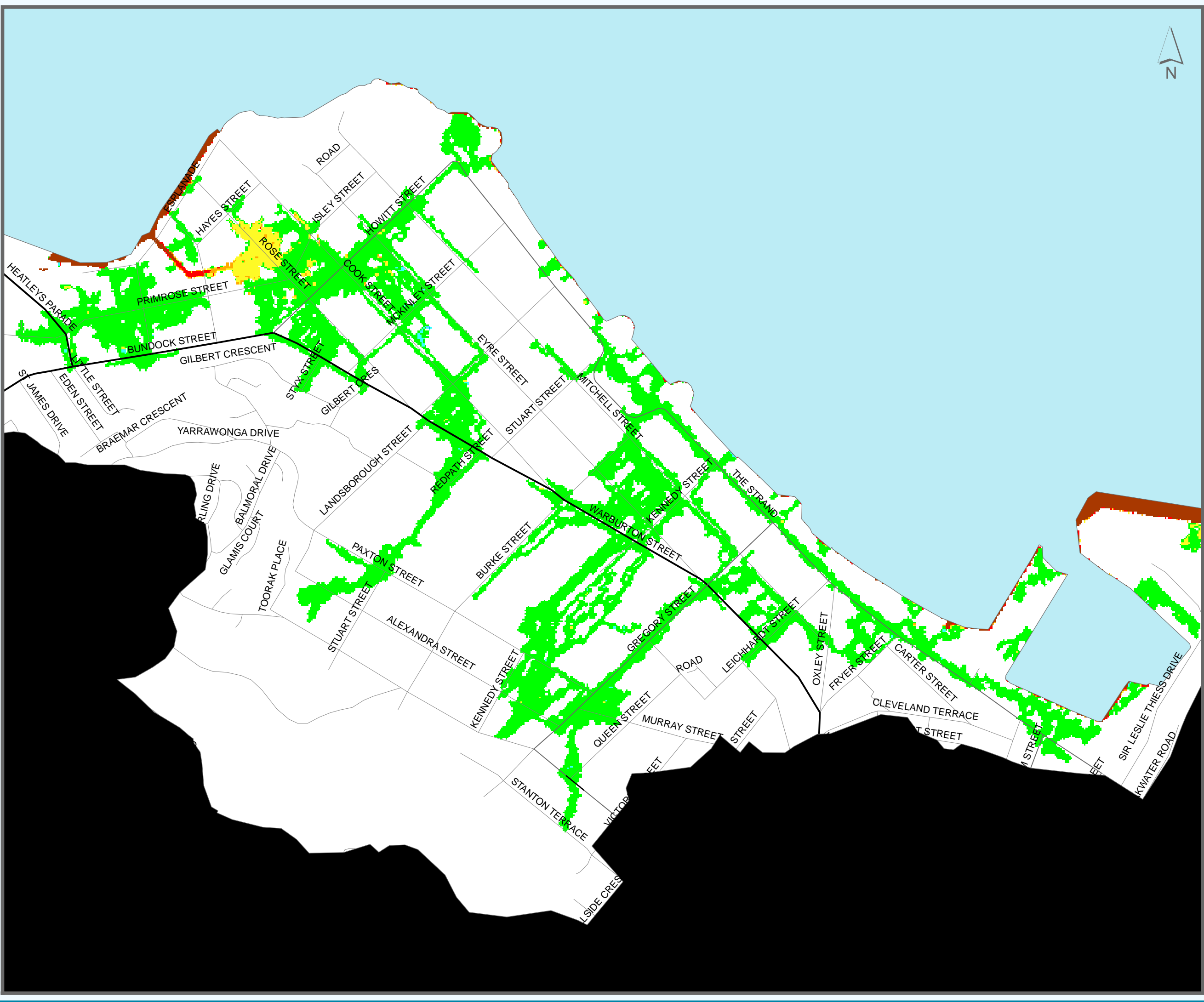


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Figure C2: Climate Change Water LevelDifference for 5 year ARI

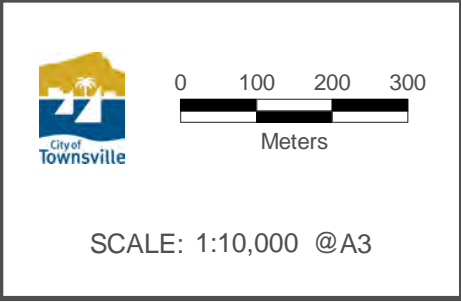
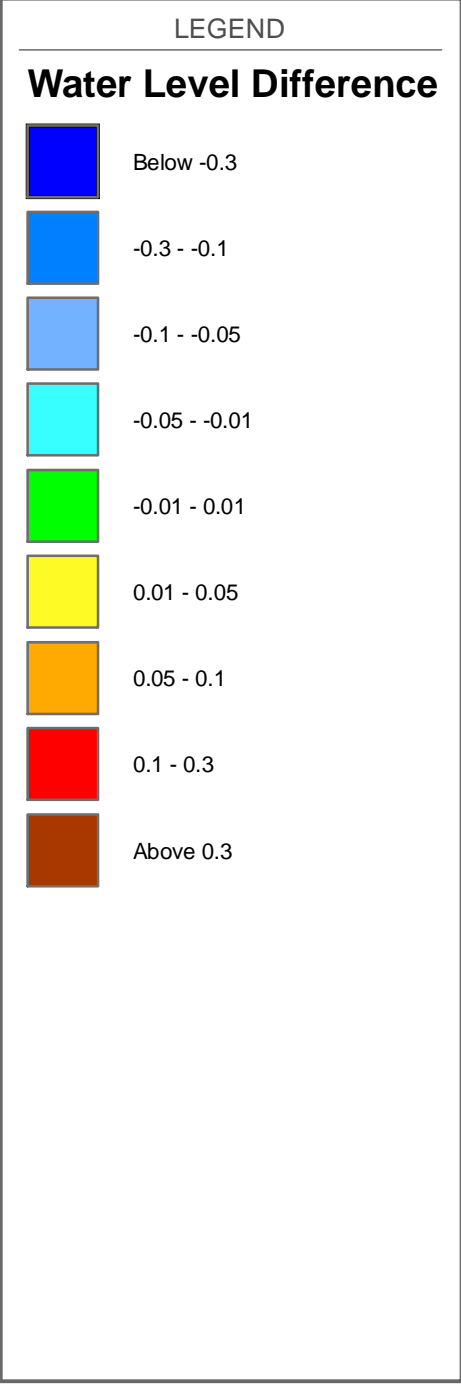


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Figure C3: Climate Change Water LevelDifference for 10 year ARI

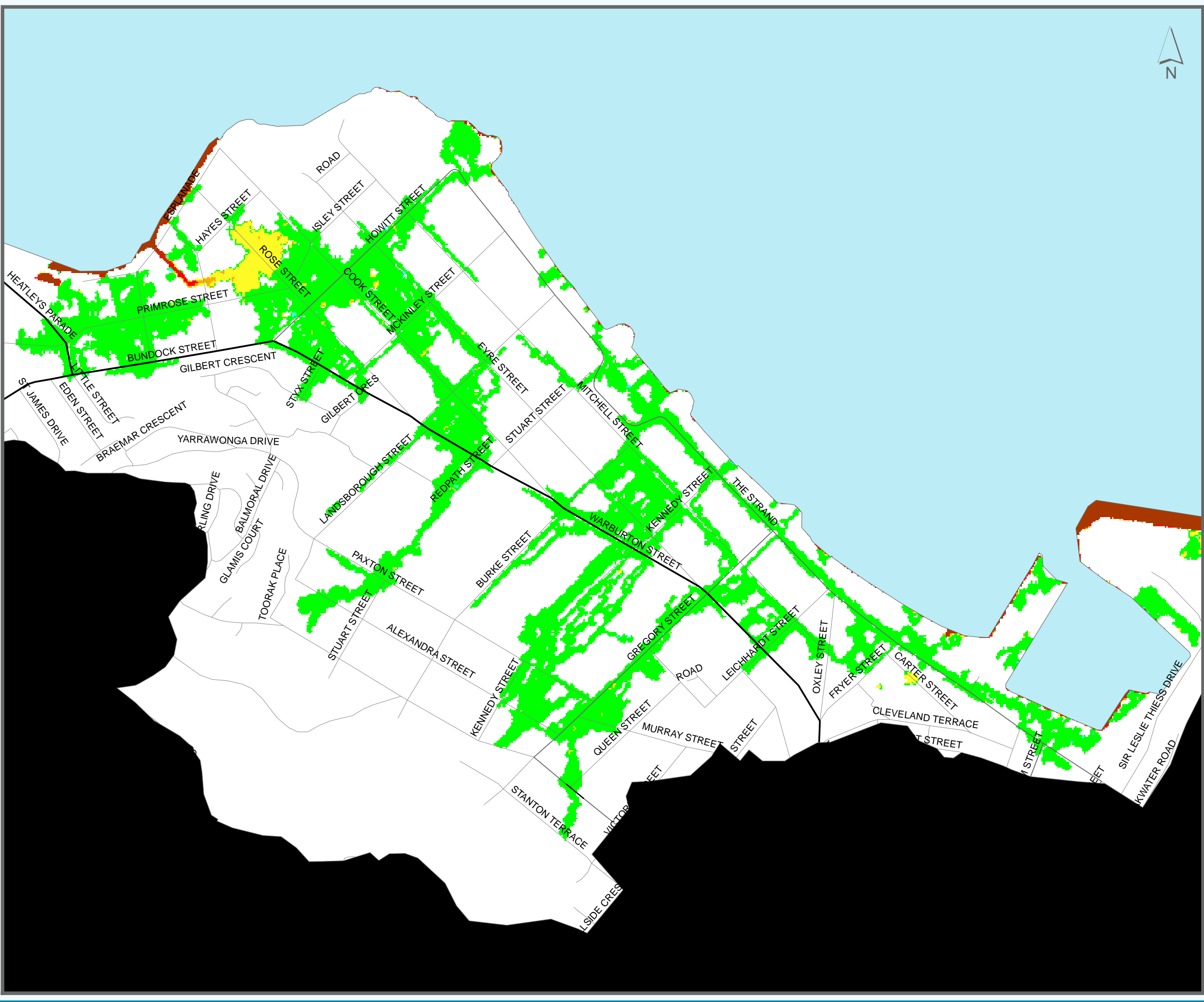


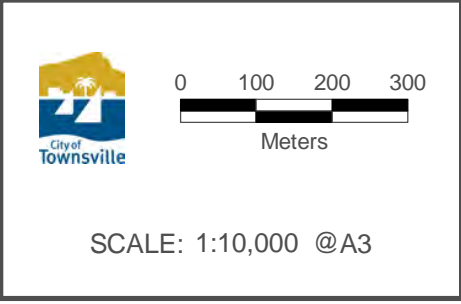
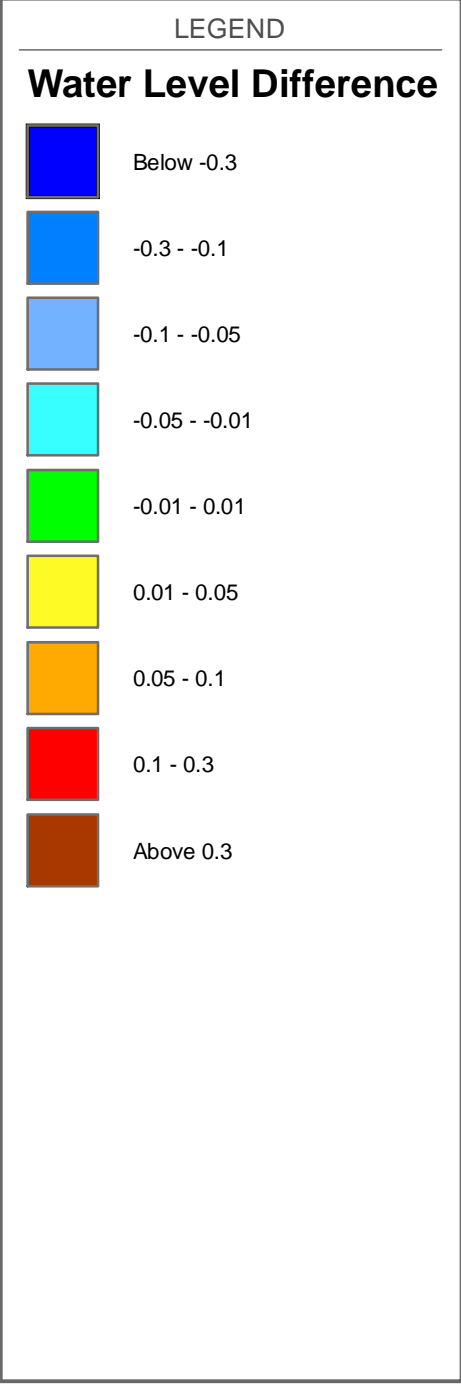
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Figure C4: Climate Change Water LevelDifference for 20 year ARI



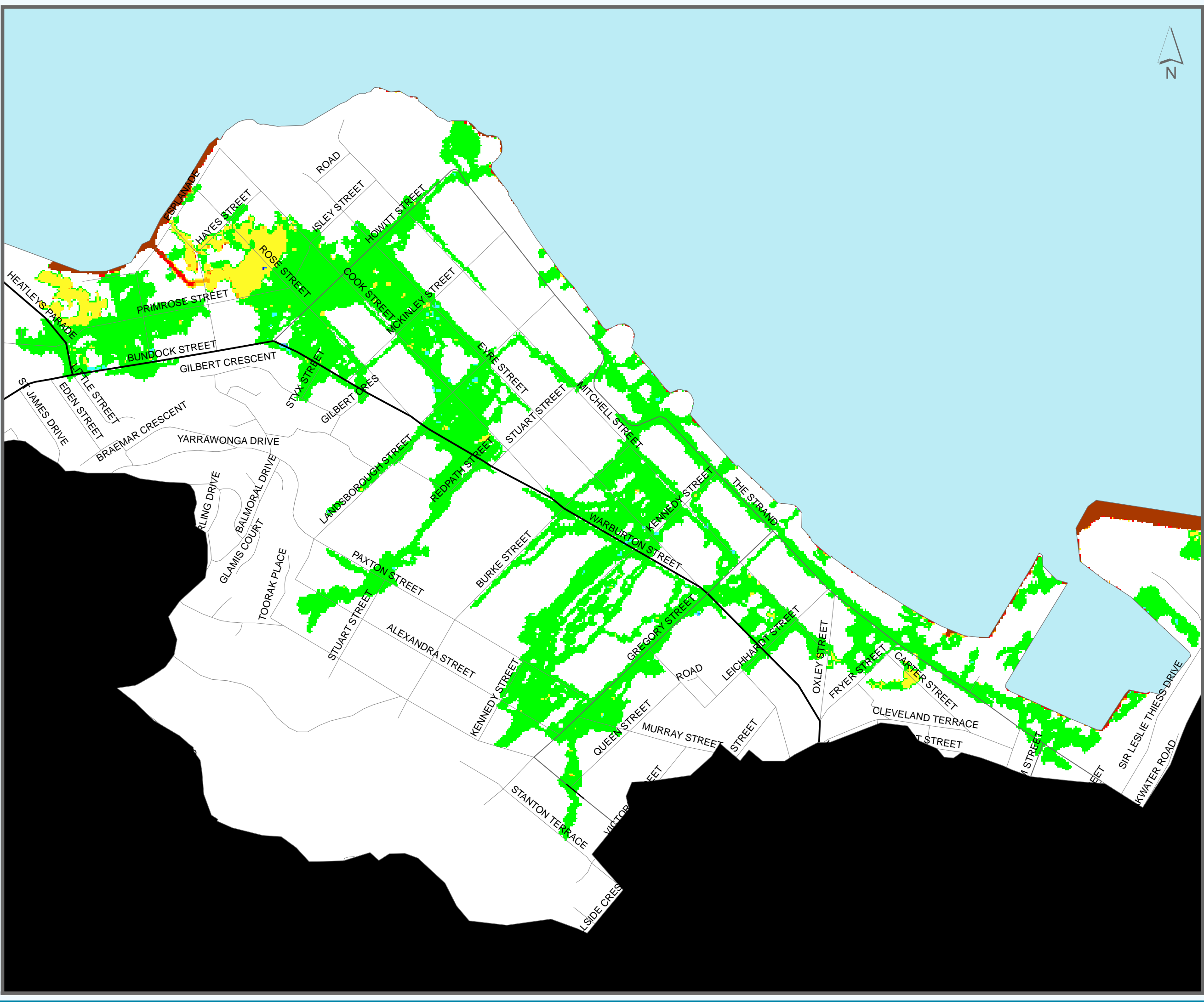


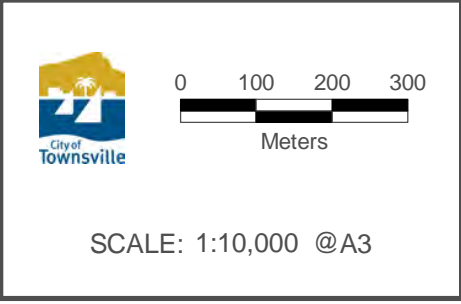
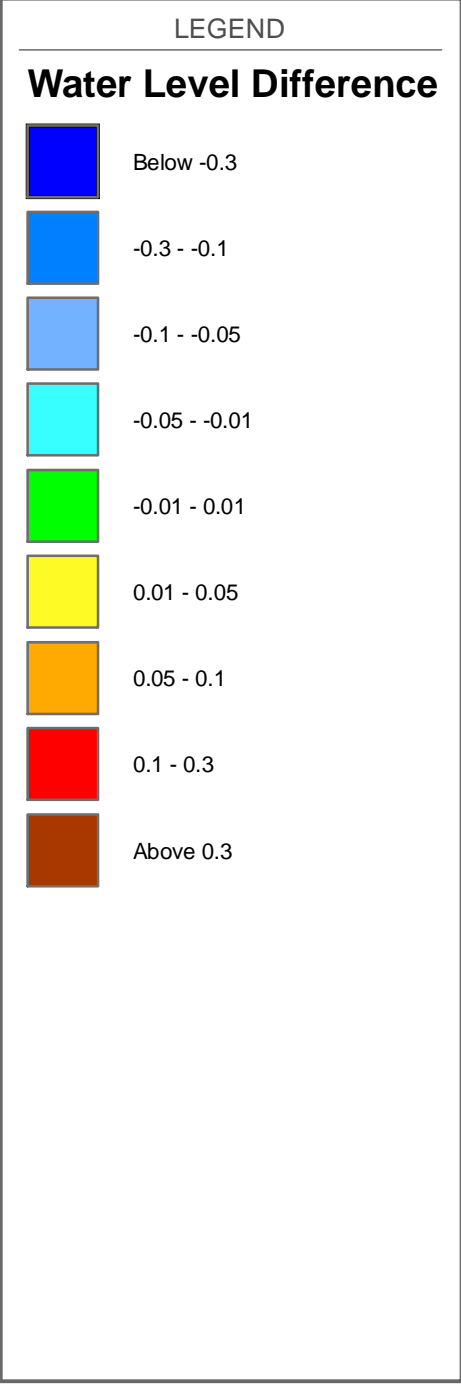
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Figure C5: Climate Change Water Level Difference for 50 year ARI





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Figure C6: Climate Change Water Level Difference for 100 year ARI

