**A deeper water site (35m-38m) off the Noises Islands.**

**Data has been filtered for weather – periods when wind speed is over 10kts have been excluded – this was to ensure SPLs were controlled by vessel noise presence and not confounded by weather.**

**Linear Regression** Friday, July 31, 2020, 4:24:35 PM

**Data source:** data 4 in CorrelationStats

Vessel = -540.289 + (5.926 \* SPL)

N = 30 Missing Observations = 33

R = 0.840 Rsqr = 0.705 Adj Rsqr = 0.695

Standard Error of Estimate = 14.711

**Coefficient Std. Error t P**

Constant -540.289 70.904 -7.620 <0.001

SPL 5.926 0.724 8.183 <0.001

Analysis of Variance:

**DF SS MS F P**

Regression 1 14490.325 14490.325 66.961 <0.001

Residual 28 6059.175 216.399

Total 29 20549.500 708.603

Normality Test (Shapiro-Wilk) Passed (P = 0.189)

Constant Variance Test: Passed (P = 0.089)

Power of performed test with alpha = 0.050: 1.000



**A shallow water site (13-17m) within the Rangitoto Channel. Data filtered for weather as well, so periods above 10kts wind speeds removed.**

**Linear Regression** Thursday, July 23, 2020, 12:10:41 PM

**Data source:** ST1\_RC in CorrelationStats

Vessel Noise Presence = -513.398 + (5.114 \* SPL)

N = 46 Missing Observations = 4

R = 0.868 Rsqr = 0.753 Adj Rsqr = 0.748

Standard Error of Estimate = 11.125

**Coefficient Std. Error t P**

Constant -513.398 47.959 -10.705 <0.001

SPL 5.114 0.441 11.589 <0.001

Analysis of Variance:

**DF SS MS F P**

Regression 1 16624.220 16624.220 134.311 <0.001

Residual 44 5446.071 123.774

Total 45 22070.292 490.451

Normality Test (Shapiro-Wilk) Passed (P = 0.815)

Constant Variance Test: Passed (P = 0.776)

Power of performed test with alpha = 0.050: 1.000



**Simple comparison between two treatments (Pre-Lockdown and Post-Lockdown).**

**Location (refer to the plot at the end): ST1RC**

**Mann-Whitney Rank Sum Test** Tuesday, July 21, 2020, 10:42:41 AM

**Data source:** ST1RC in Pre vs Post Lockdown Stats

**Normality Test (Shapiro-Wilk)** Failed (P < 0.050)

**Group N Missing Median 25% 75%**

Pre Lockdown 377 245 109.712 105.085 115.763

Post Lockdown 247 133 102.451 100.948 106.218

Mann-Whitney U Statistic= 2645.000

T = 9200.000 n(small)= 114 n(big)= 132 (P = <0.001)

The difference in the median values between the two groups is greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

**Descriptive Statistics:** Thursday, August 06, 2020, 12:25:55 PM

**Data source:** ST1RC in Pre vs Post Lockdown Stats

**Column Size Missing Mean Std Dev Std. Error C.I. of Mean**

Pre Lockdown 377 246 111.388 7.422 0.648 1.283

Post Lockdown 247 133 104.471 5.424 0.508 1.006

**Column Range Max Min Median 25% 75%**

Pre Lockdown 34.038 135.978 101.940 109.561 105.075 115.635

Post Lockdown 26.184 125.696 99.512 102.451 100.948 106.218

**Column Skewness Kurtosis K-S Dist. K-S Prob. SWilk W SWilk Prob**

Pre Lockdown 0.992 0.570 0.121 <0.001 0.915 <0.001

Post Lockdown 1.881 3.293 0.224 <0.001 0.767 <0.001

**Column Sum Sum of Squares**

Pre Lockdown 14591.868 1632525.077

Post Lockdown 11909.653 1247533.581

**Location (refer to the plot at the end): ST2NS**

**Mann-Whitney Rank Sum Test** Tuesday, July 21, 2020, 10:46:03 AM

**Data source:** ST2NS in Pre vs Post Lockdown Stats

**Normality Test (Shapiro-Wilk)** Failed (P < 0.050)

**Group N Missing Median 25% 75%**

Pre Lockdown 310 226 109.433 108.057 113.172

Post Lockdown 135 61 106.709 106.333 107.544

Mann-Whitney U Statistic= 1041.000

T = 3816.000 n(small)= 74 n(big)= 84 (P = <0.001)

The difference in the median values between the two groups is greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

**Descriptive Statistics:** Thursday, August 06, 2020, 12:21:47 PM

**Data source:** Plotting in Pre vs Post Lockdown Stats

**Column Size Missing Mean Std Dev Std. Error C.I. of Mean**

Pre Lockdown 310 226 111.610 5.328 0.581 1.156

Post Lockdown 135 61 108.529 5.130 0.596 1.188

**Column Range Max Min Median 25% 75%**

Pre Lockdown 22.840 129.342 106.502 109.433 108.057 113.172

Post Lockdown 23.384 128.512 105.127 106.709 106.333 107.544

**Column Skewness Kurtosis K-S Dist. K-S Prob. SWilk W SWilk Prob**

Pre Lockdown 1.718 2.308 0.213 <0.001 0.775 <0.001

Post Lockdown 2.759 6.769 0.341 <0.001 0.540 <0.001

**Column Sum Sum of Squares**

Pre Lockdown 9375.201 1048717.987

Post Lockdown 8031.159 873535.902

**Location (refer to the plot at the end): ST3TM**

**Mann-Whitney Rank Sum Test** Tuesday, July 21, 2020, 10:29:46 AM

**Data source:** ST3TM in Pre vs Post Lockdown Stats

**Normality Test (Shapiro-Wilk)** Failed (P < 0.050)

**Group N Missing Median 25% 75%**

Pre Lockdown 238 80 116.924 114.633 120.517

Post Lockdown 259 145 112.590 111.789 115.685

Mann-Whitney U Statistic= 3910.000

T = 10465.000 n(small)= 114 n(big)= 158 (P = <0.001)

The difference in the median values between the two groups is greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

**Descriptive Statistics:** Thursday, August 06, 2020, 12:23:26 PM

**Data source:** ST3TM in Pre vs Post Lockdown Stats

**Column Size Missing Mean Std Dev Std. Error C.I. of Mean**

Pre Lockdown 238 80 117.655 4.289 0.341 0.674

Post Lockdown 259 145 113.665 2.465 0.231 0.457

**Column Range Max Min Median 25% 75%**

Pre Lockdown 22.362 131.277 108.914 116.924 114.633 120.517

Post Lockdown 10.057 119.514 109.458 112.590 111.789 115.685

**Column Skewness Kurtosis K-S Dist. K-S Prob. SWilk W SWilk Prob**

Pre Lockdown 0.438 -0.184 0.0852 0.007 0.981 0.029

Post Lockdown 0.741 -0.543 0.175 <0.001 0.912 <0.001

**Column Sum Sum of Squares**

Pre Lockdown 18589.447 2190023.963

Post Lockdown 12957.773 1473527.854

**Location (refer to the plot at the end): ST4AH**

**Mann-Whitney Rank Sum Test** Tuesday, July 21, 2020, 10:32:56 AM

**Data source:** ST4AH in Pre vs Post Lockdown Stats

**Normality Test (Shapiro-Wilk)** Failed (P < 0.050)

**Group N Missing Median 25% 75%**

Pre Lockdown 330 246 100.352 97.182 104.782

Post Lockdown 523 349 94.244 93.249 96.414

Mann-Whitney U Statistic= 1914.000

T = 16272.000 n(small)= 84 n(big)= 174 (P = <0.001)

The difference in the median values between the two groups is greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

**Descriptive Statistics:** Thursday, August 06, 2020, 12:23:47 PM

**Data source:** ST4AH in Pre vs Post Lockdown Stats

**Column Size Missing Mean Std Dev Std. Error C.I. of Mean**

Pre Lockdown 330 246 101.570 5.496 0.600 1.193

Post Lockdown 523 349 95.297 2.875 0.218 0.430

**Column Range Max Min Median 25% 75%**

Pre Lockdown 25.644 117.961 92.317 100.352 97.182 104.782

Post Lockdown 16.264 108.406 92.143 94.244 93.249 96.414

**Column Skewness Kurtosis K-S Dist. K-S Prob. SWilk W SWilk Prob**

Pre Lockdown 0.899 0.814 0.0991 0.040 0.943 0.001

Post Lockdown 1.793 3.792 0.157 <0.001 0.823 <0.001

**Column Sum Sum of Squares**

Pre Lockdown 8531.915 869096.924

Post Lockdown 16581.731 1581624.158

**Location (refer to the plot at the end): ST5HG**

**Mann-Whitney Rank Sum Test** Tuesday, July 21, 2020, 10:35:40 AM

**Data source:** ST5HG in Pre vs Post Lockdown Stats

**Normality Test (Shapiro-Wilk)** Failed (P < 0.050)

**Group N Missing Median 25% 75%**

Pre Lockdown 329 245 98.284 94.123 104.414

Post Lockdown 506 332 92.519 88.760 95.967

Mann-Whitney U Statistic= 3463.000

T = 14723.000 n(small)= 84 n(big)= 174 (P = <0.001)

The difference in the median values between the two groups is greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

**Descriptive Statistics:** Thursday, August 06, 2020, 12:24:05 PM

**Data source:** ST5HG in Pre vs Post Lockdown Stats

**Column Size Missing Mean Std Dev Std. Error C.I. of Mean**

Pre Lockdown 329 245 98.932 6.712 0.732 1.457

Post Lockdown 506 332 93.037 4.805 0.364 0.719

**Column Range Max Min Median 25% 75%**

Pre Lockdown 35.310 122.504 87.194 98.284 94.123 104.414

Post Lockdown 25.403 112.428 87.025 92.519 88.760 95.967

**Column Skewness Kurtosis K-S Dist. K-S Prob. SWilk W SWilk Prob**

Pre Lockdown 0.466 0.674 0.0687 0.403 0.962 0.015

Post Lockdown 0.897 0.755 0.105 <0.001 0.925 <0.001

**Column Sum Sum of Squares**

Pre Lockdown 8310.307 825896.077

Post Lockdown 16188.468 1510123.925

