

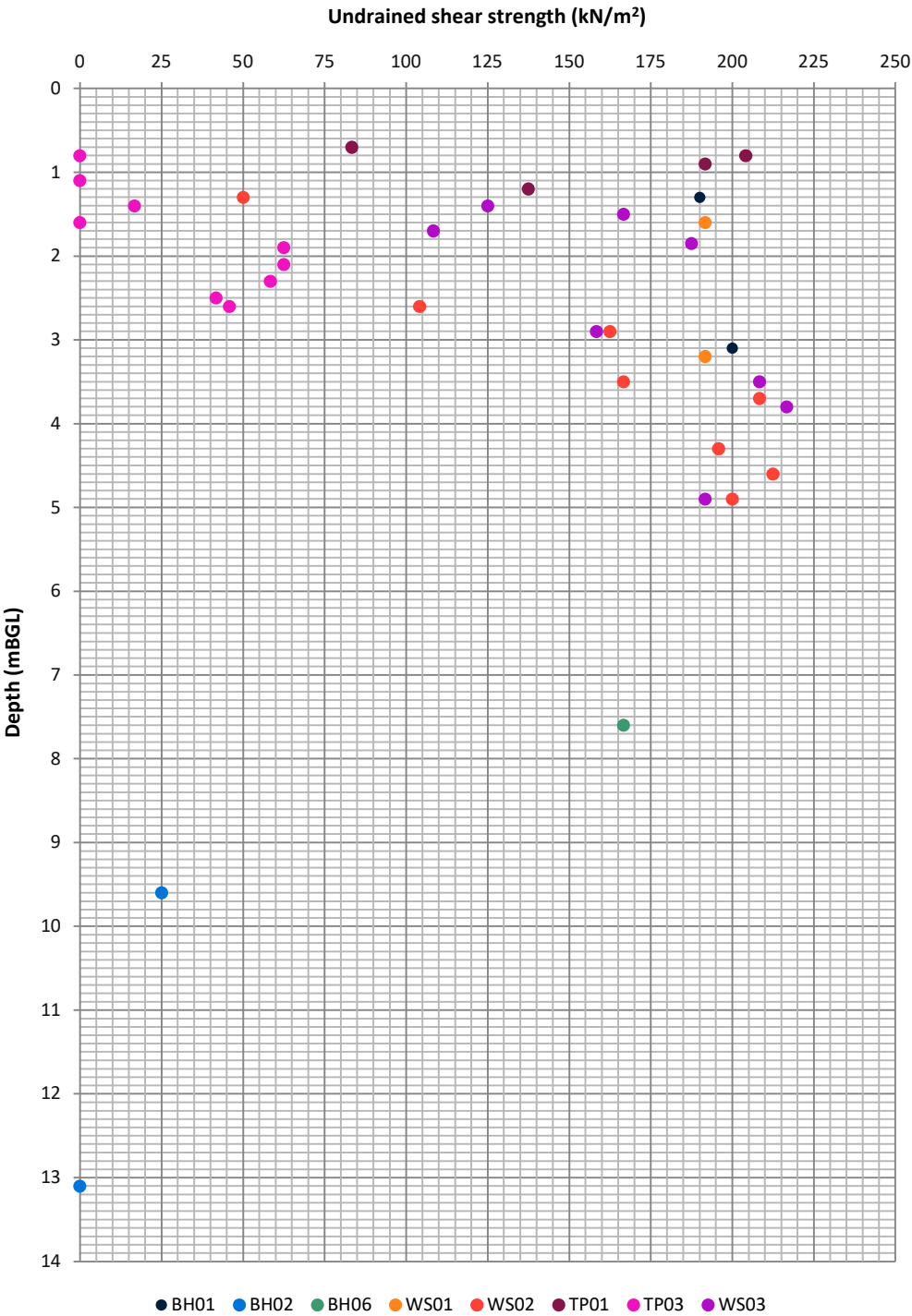
## **Appendix E     In Situ Test Results**

## Table summarising Pocket Penetrometer results

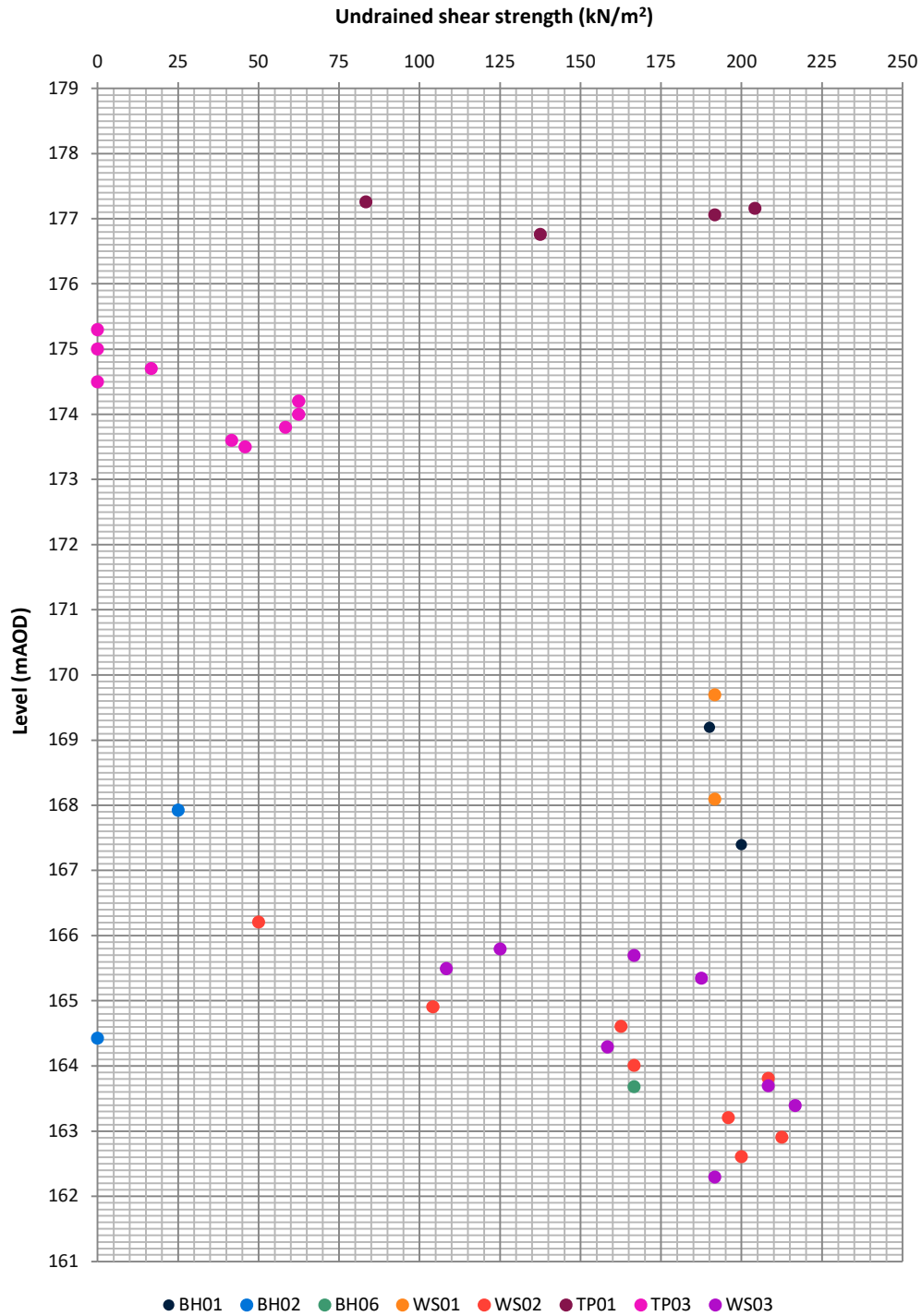
\* Instrument limit reached.

| Location | Start Depth (m) | Results 1-3    | Average | Undrained Shear Strength (kN/m <sup>2</sup> ) |
|----------|-----------------|----------------|---------|-----------------------------------------------|
| BH01     | 1.30            | 3.4/4/4        | 3.80    | 190                                           |
| BH01     | 3.10            | 4/4/4          | 4.00    | 200                                           |
| BH02     | 13.10           | 0/0/0          | 0.00    | 0                                             |
| BH02     | 9.60            | 0.5/0.5/0.5    | 0.50    | 25                                            |
| BH06     | 7.60            | 4/3/3          | 3.33    | 167                                           |
| WS01     | 3.20            | 3.75/3.75/4    | 3.83    | 192                                           |
| WS01     | 1.60            | 3.75/3.75/4    | 3.83    | 192                                           |
| WS02     | 4.90            | 4/4/4          | 4.00    | 200                                           |
| WS02     | 4.60            | 4.25/4.25/4.25 | 4.25    | 213                                           |
| WS02     | 4.30            | 4/4/3.75       | 3.92    | 196                                           |
| WS02     | 3.70            | 4.25/4.25/4    | 4.17    | 208                                           |
| WS02     | 3.50            | 3.25/3.25/3.5  | 3.33    | 167                                           |
| WS02     | 2.90            | 3.25/3.25/3.25 | 3.25    | 163                                           |
| WS02     | 2.60            | 2/2/2.25       | 2.08    | 104                                           |
| WS02     | 1.30            | 1/1/1          | 1.00    | 50                                            |
| TP01     | 1.20            | 3/2.75/2.5     | 2.75    | 138                                           |
| TP01     | 0.90            | 3.5/4/4        | 3.83    | 192                                           |
| TP01     | 0.80            | 4/4.25/4       | 4.08    | 204                                           |
| TP01     | 0.70            | 1.75/1.75/1.5  | 1.67    | 83                                            |
| TP03     | 2.60            | 1/1/0.75       | 0.92    | 46                                            |
| TP03     | 2.50            | 1/0.75/0.75    | 0.83    | 42                                            |
| TP03     | 2.30            | 1.25/1/1.25    | 1.17    | 58                                            |
| TP03     | 2.10            | 1/1/1.75       | 1.25    | 63                                            |
| TP03     | 1.90            | 1.25/1.25/1.25 | 1.25    | 63                                            |
| TP03     | 1.60            | 0/0/0          | 0.00    | 0                                             |
| TP03     | 1.40            | 0.25/0.5/0.25  | 0.33    | 17                                            |
| TP03     | 1.10            | 0/0/0          | 0.00    | 0                                             |
| TP03     | 0.80            | 0/0            | 0.00    | 0                                             |
| WS03     | 4.90            | 3.5/4/4        | 3.83    | 192                                           |
| WS03     | 3.80            | 4.5/4.5/4      | 4.33    | 217                                           |
| WS03     | 3.50            | 4/4/4.5        | 4.17    | 208                                           |
| WS03     | 2.90            | 3.5/3/3        | 3.17    | 158                                           |
| WS03     | 1.70            | 2/2.5/2        | 2.17    | 108                                           |
| WS03     | 1.40            | 2.5/2/3        | 2.50    | 125                                           |
| WS03     | 1.85            | 3.75/4/3.5     | 3.75    | 188                                           |
| WS03     | 1.50            | 3.5/3.5/3      | 3.33    | 167                                           |

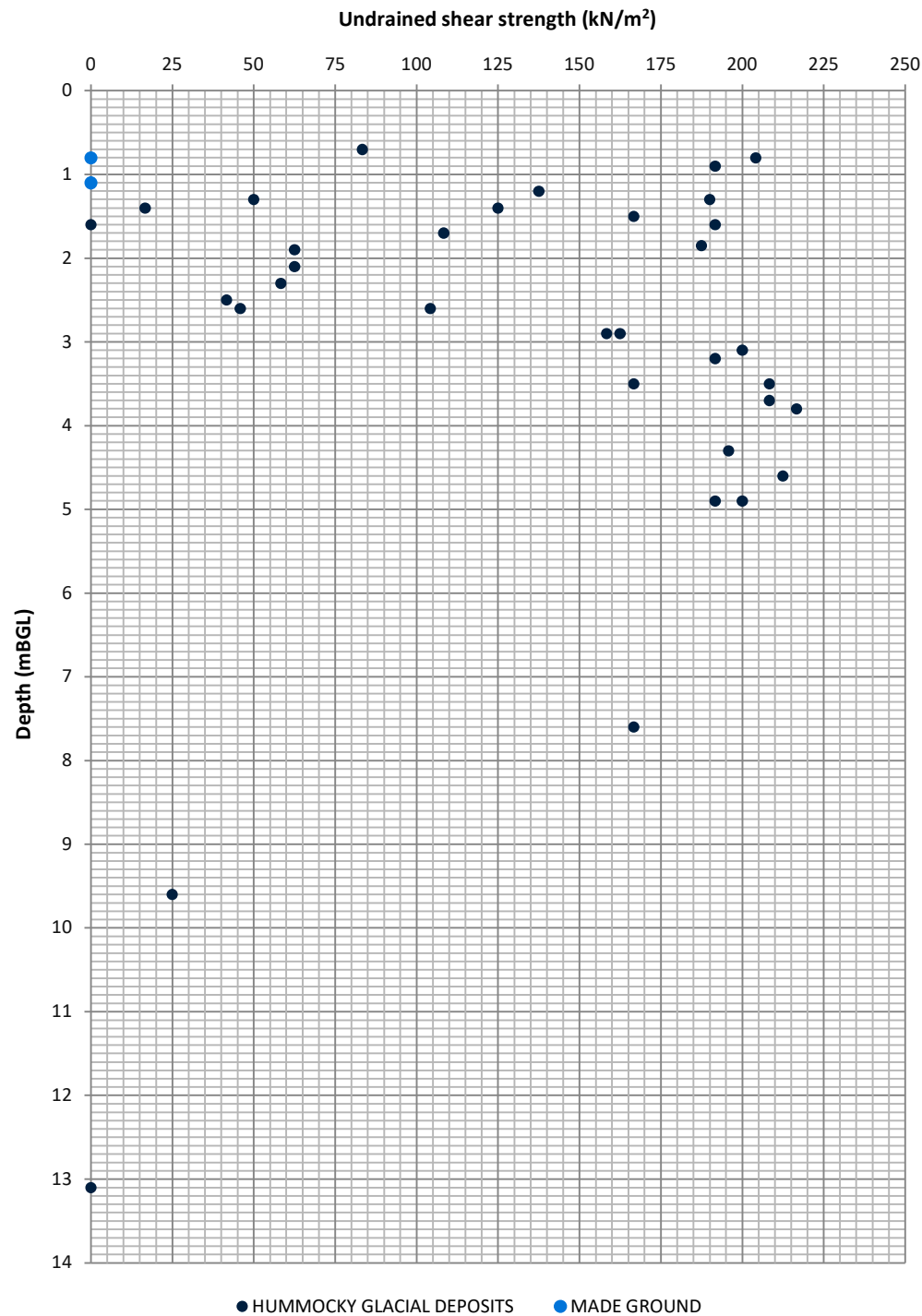
Plot summarising Pocket Penetrometer results versus depth filtered by location



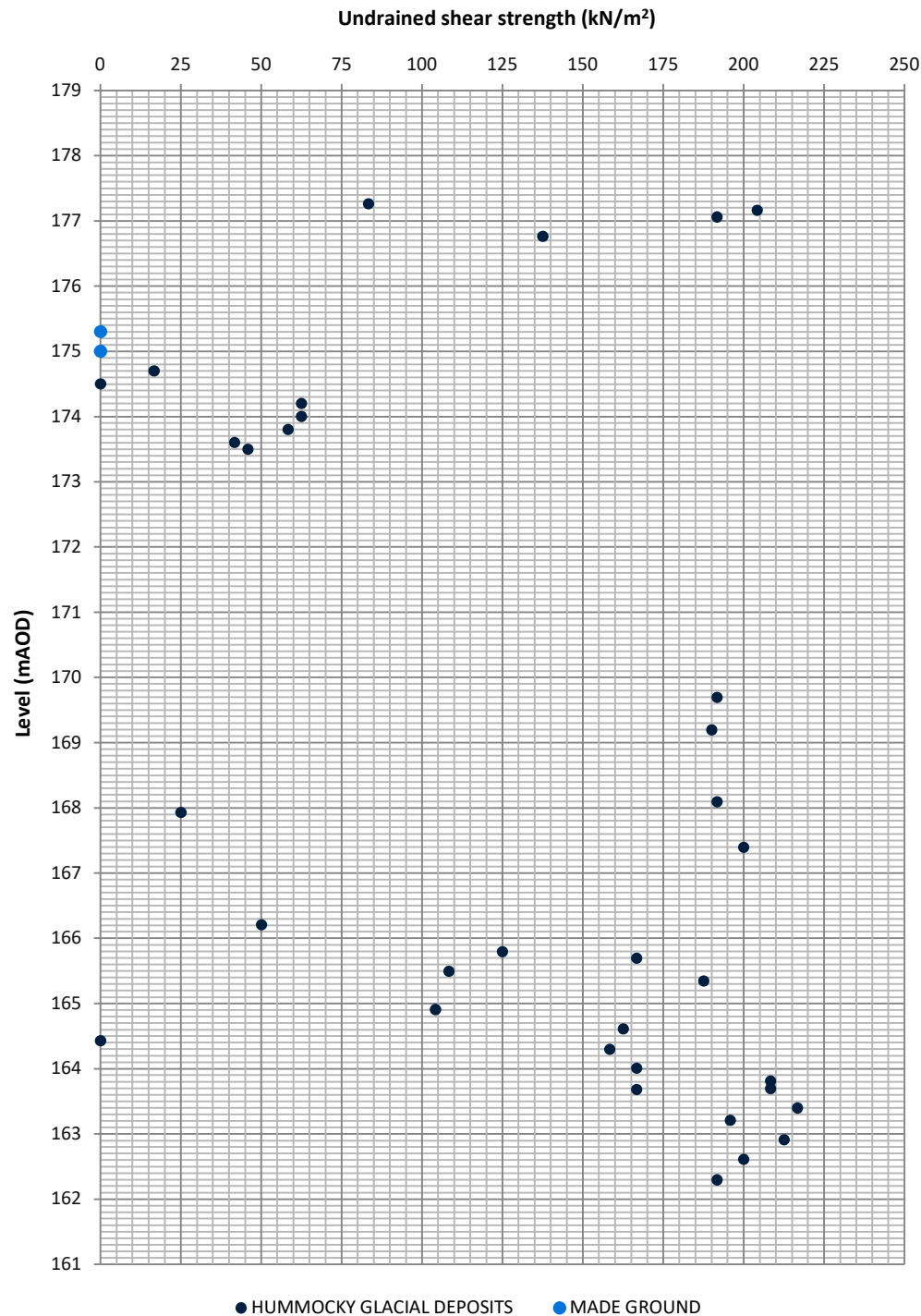
Plot summarising Pocket Penetrometer results versus level filtered by location



Plot summarising Pocket Penetrometer results versus depth filtered by geology



Plot summarising Pocket Penetrometer results versus level filtered by geology



## Table summarising Shear Vane results

\* Instrument limit reached.

| Location | Start Depth (m) | Results 1-3 | Average | Undrained Shear Strength (kN/m <sup>2</sup> ) |
|----------|-----------------|-------------|---------|-----------------------------------------------|
| TP04     | 2.40            | 6/4/4       | 4.67    | 12                                            |
| TP04     | 2.20            | 6/6/4       | 5.33    | 26                                            |
| TP04     | 2.00            | 10/12/12    | 11.33   | 25                                            |
| TP04     | 1.80            | 10/10/10    | 10.00   | 23                                            |
| TP04     | 1.60            | 10/10/10    | 10.00   | 51                                            |
| TP04     | 1.40            | 22/22/22    | 22.00   | 11                                            |
| TP07     | 2.60            | 28/28/26    | 27.33   | 64                                            |
| TP07     | 2.40            | 32/30/32    | 31.33   | 73                                            |
| TP07     | 2.10            | 34/36/34    | 34.67   | 81                                            |
| TP07     | 1.80            | 40/36/38    | 38.00   | 89                                            |
| TP07     | 1.60            | 44/52/38    | 44.67   | 104                                           |
| TP07     | 1.30            | 32/34/34    | 33.33   | 78                                            |
| TP07     | 1.00            | 22/32/24    | 26.00   | 61                                            |
| TP07     | 0.70            | 28/33/24    | 28.33   | 66                                            |
| TP07     | 0.40            | 26/32/32    | 30.00   | 70                                            |
| TP08     | 1.80            | 22/34/28    | 28.00   | 65                                            |
| TP08     | 1.60            | 54/48/36    | 46.00   | 107                                           |
| TP09     | 3.00            | 20/20/18    | 19.33   | 45                                            |
| TP09     | 2.70            | 18/16/22    | 18.67   | 43                                            |
| TP09     | 2.40            | 28/32/26    | 28.67   | 67                                            |
| TP09     | 2.10            | 100/78/88   | 88.67   | 45                                            |
| TP09     | 1.90            | 98/112/106  | 105.33  | 44                                            |
| TP09     | 1.70            | 96/104/90   | 96.67   | 41                                            |
| TP09     | 1.50            | 26/26/25    | 25.67   | 60                                            |
| TP09     | 1.30            | 60/68/48    | 58.67   | 137                                           |
| TP09     | 1.10            | 44/56/48    | 49.33   | 115                                           |
| TP09     | 0.80            | 72/44/56    | 57.33   | 134                                           |
| TP09     | 0.50            | 42/72/48    | 54.00   | 126                                           |
| TP10     | 3.50            | 56/60/58    | 58.00   | 24                                            |
| TP10     | 3.40            | 80/96/78    | 84.67   | 27                                            |
| TP10     | 3.20            | 24/30/28    | 27.33   | 64                                            |
| TP10     | 3.00            | 40/52/58    | 50.00   | 21                                            |
| TP10     | 2.80            | 50/54/58    | 54.00   | 126                                           |
| TP10     | 2.50            | 30/28/34    | 30.67   | 13                                            |
| TP10     | 2.30            | 30/48/34    | 37.33   | 87                                            |
| TP10     | 2.10            | 72/78/86    | 78.67   | 33                                            |
| TP10     | 1.80            | 24/24/32    | 26.67   | 62                                            |
| TP10     | 1.50            | 28/30/34    | 30.67   | 71                                            |
| TP10     | 1.20            | 20/30/26    | 25.33   | 59                                            |

## Table summarising Shear Vane results

\* Instrument limit reached.

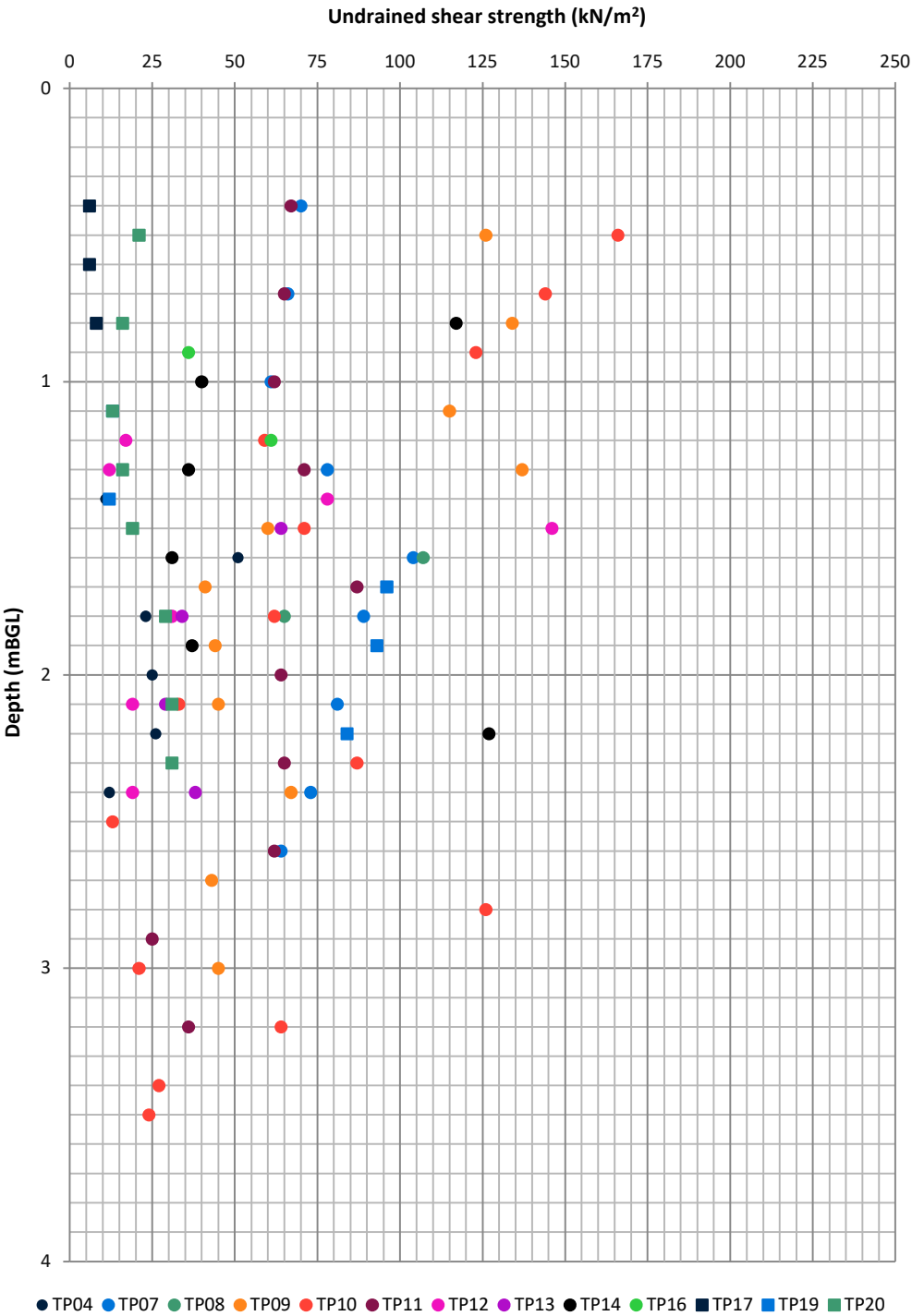
| Location | Start Depth (m) | Results 1-3 | Average | Undrained Shear Strength (kN/m <sup>2</sup> ) |
|----------|-----------------|-------------|---------|-----------------------------------------------|
| TP10     | 0.90            | 50/58/50    | 52.67   | 123                                           |
| TP10     | 0.70            | 58/58/70    | 62.00   | 144                                           |
| TP10     | 0.50            | 64/72/78    | 71.33   | 166                                           |
| TP11     | 3.20            | 16/12/18    | 15.33   | 36                                            |
| TP11     | 2.90            | 12/8/12     | 10.67   | 25                                            |
| TP11     | 2.60            | 28/26/26    | 26.67   | 62                                            |
| TP11     | 2.30            | 32/28/24    | 28.00   | 65                                            |
| TP11     | 2.00            | 24/30/28    | 27.33   | 64                                            |
| TP11     | 1.70            | 34/40/38    | 37.33   | 87                                            |
| TP11     | 1.30            | 32/30/30    | 30.67   | 71                                            |
| TP11     | 1.00            | 32/24/24    | 26.67   | 62                                            |
| TP11     | 0.70            | 24/28/32    | 28.00   | 65                                            |
| TP11     | 0.40            | 20/32/34    | 28.67   | 67                                            |
| TP12     | 2.40            | 50/38/48    | 45.33   | 19                                            |
| TP12     | 2.10            | 50/40/48    | 46.00   | 19                                            |
| TP12     | 1.80            | 68/80/76    | 74.67   | 31                                            |
| TP12     | 1.50            | 70/68/50    | 62.67   | 146                                           |
| TP12     | 1.40            | 44/28/45    | 39.00   | 78                                            |
| TP12     | 1.30            | 30/28/28    | 28.67   | 12                                            |
| TP12     | 1.20            | 42/38/38    | 39.33   | 17                                            |
| TP13     | 2.40            | 90/96/86    | 90.67   | 38                                            |
| TP13     | 2.10            | 64/62/80    | 68.67   | 29                                            |
| TP13     | 1.80            | 78/82/82    | 80.67   | 34                                            |
| TP13     | 1.50            | 30/24/28    | 27.33   | 64                                            |
| TP14     | 2.20            | 62/48/54    | 54.67   | 127                                           |
| TP14     | 1.90            | 72/90/100   | 87.33   | 37                                            |
| TP14     | 1.60            | 70/72/82    | 74.67   | 31                                            |
| TP14     | 1.30            | 90/78/92    | 86.67   | 36                                            |
| TP14     | 1.00            | 18/22/12    | 17.33   | 40                                            |
| TP14     | 0.80            | 52/56/42    | 50.00   | 117                                           |
| TP16     | 1.20            | 22/32/24    | 26.00   | 61                                            |
| TP16     | 0.90            | 18/24/16    | 19.33   | 36                                            |
| TP17     | 0.80            | 18/22/20    | 20.00   | 8                                             |
| TP17     | 0.60            | 12/14/18    | 14.67   | 6                                             |
| TP17     | 0.40            | 18/16/12    | 15.33   | 6                                             |
| TP19     | 2.20            | 38/40/30    | 36.00   | 84                                            |
| TP19     | 1.90            | 38/40/42    | 40.00   | 93                                            |
| TP19     | 1.70            | 34/50/40    | 41.33   | 96                                            |
| TP19     | 1.40            | 28/30/28    | 28.67   | 12                                            |

Table summarising Shear Vane results

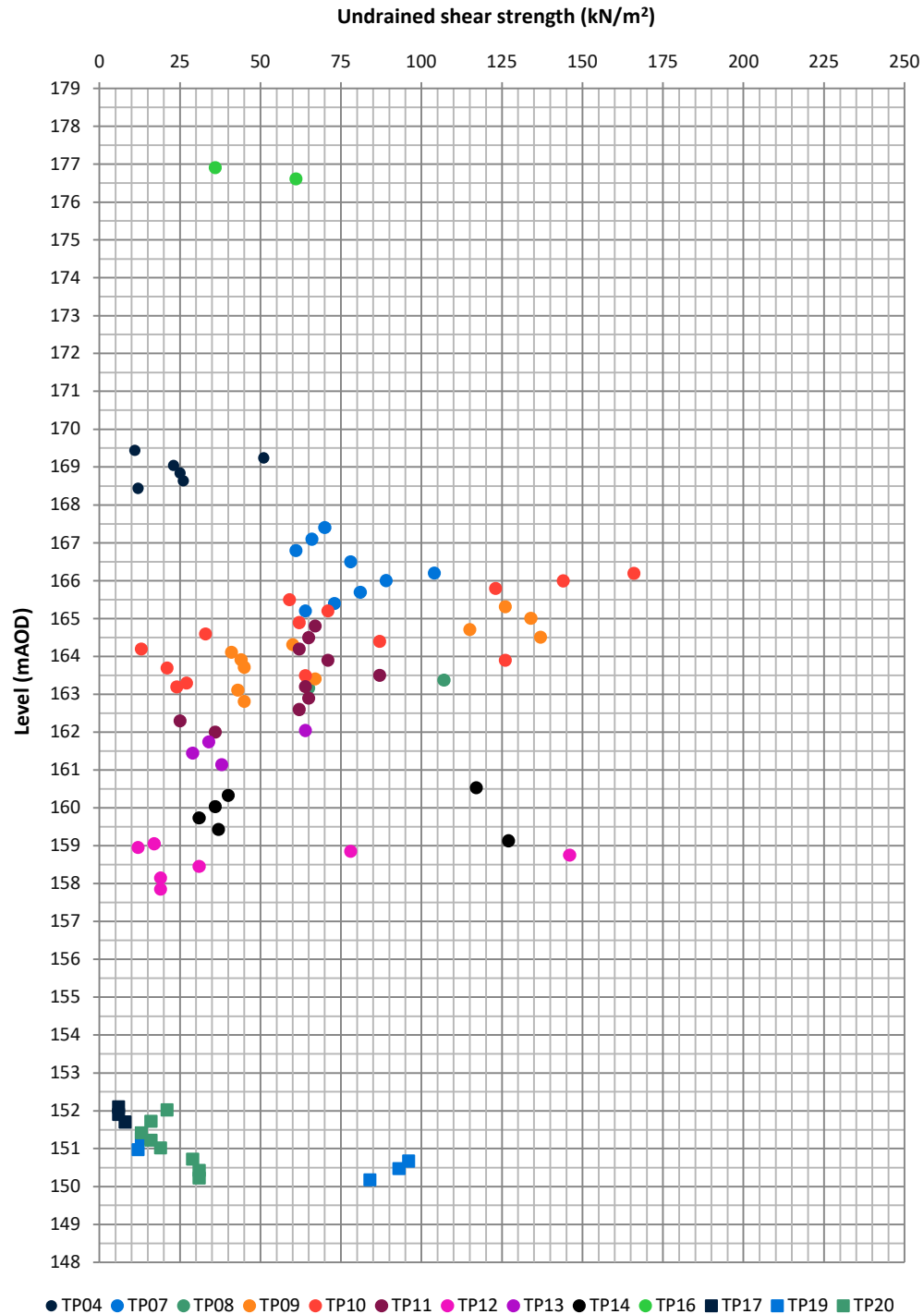
\* Instrument limit reached.

| Location | Start Depth (m) | Results 1-3 | Average | Undrained Shear Strength (kN/m <sup>2</sup> ) |
|----------|-----------------|-------------|---------|-----------------------------------------------|
| TP19     | 1.10            | 32/26/38    | 32.00   | 13                                            |
| TP20     | 2.30            | 80/64/75    | 73.00   | 31                                            |
| TP20     | 2.10            | 78/64/76    | 72.67   | 31                                            |
| TP20     | 1.80            | 62/74/68    | 68.00   | 29                                            |
| TP20     | 1.50            | 38/50/48    | 45.33   | 19                                            |
| TP20     | 1.30            | 40/34/40    | 38.00   | 16                                            |
| TP20     | 1.10            | 42/28/26    | 32.00   | 13                                            |
| TP20     | 0.80            | 38/42/34    | 38.00   | 16                                            |
| TP20     | 0.50            | 42/48/62    | 50.67   | 21                                            |

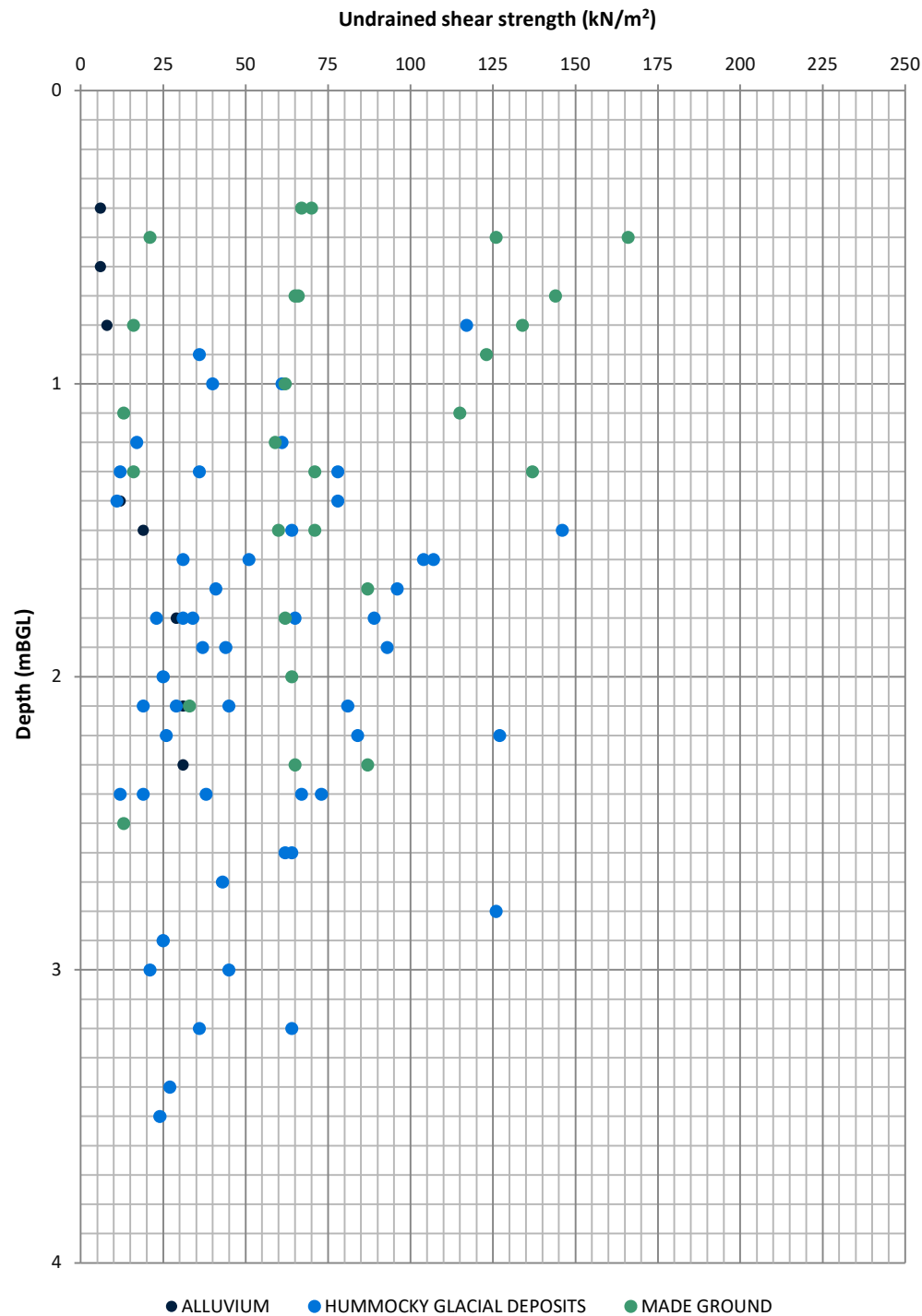
Plot summarising Shear Vane results versus depth filtered by location



Plot summarising Shear Vane results versus level filtered by location



Plot summarising Shear Vane results versus depth filtered by geology



Plot summarising Shear Vane results versus level filtered by geology

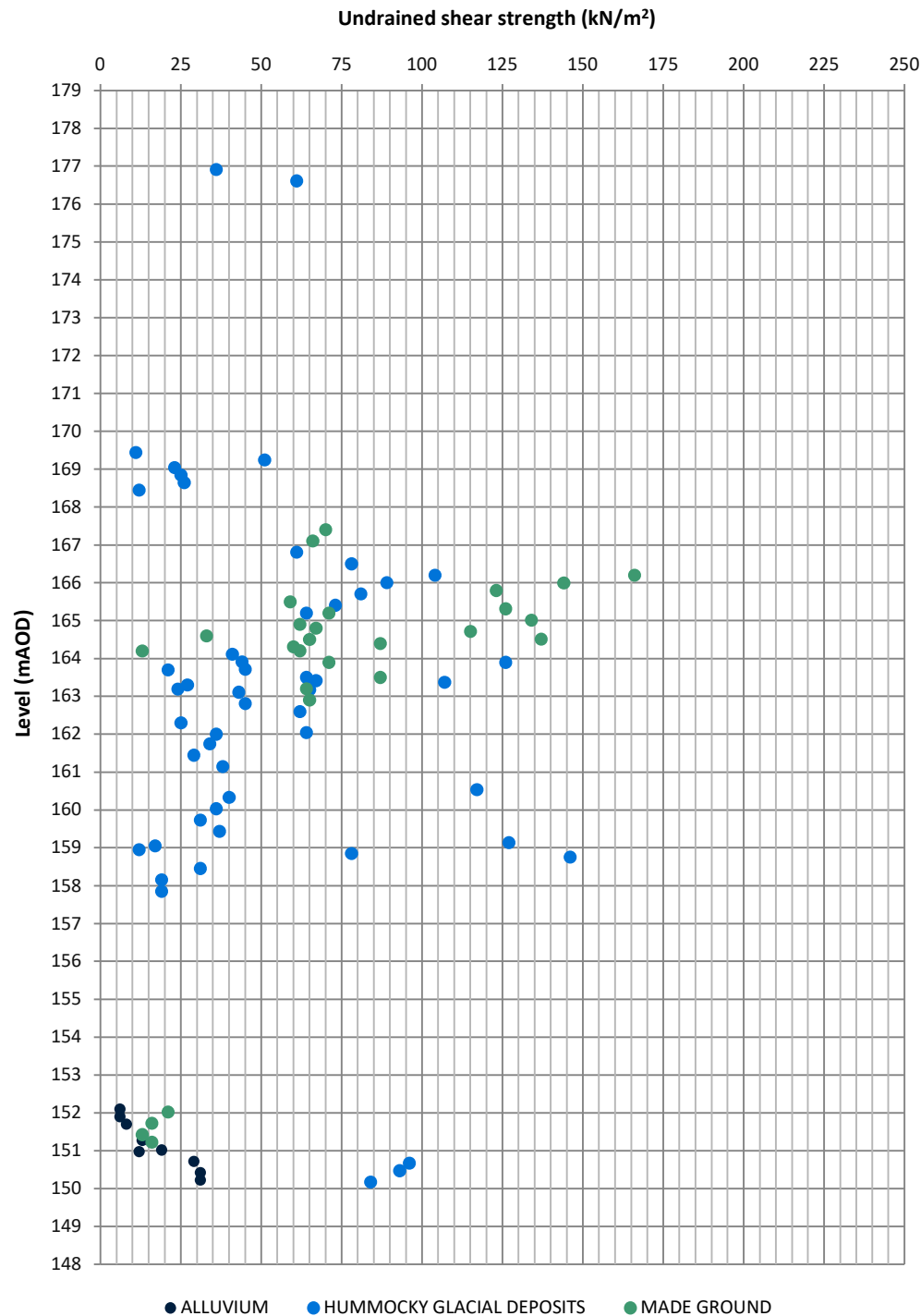


Table summarising Standard Penetration Test (SPT) results

| Location | Start Depth (m) | Penetration (mm) |             |               |            |               |            |
|----------|-----------------|------------------|-------------|---------------|------------|---------------|------------|
|          |                 | Seating 1-2      | Main 1-4    | Total Seating | Total Main | Total Seating | Total Main |
| BH01     | 8.50            | 2/4              | 6/8/10/12   | 6             | 36         | 150           | 300        |
| BH01     | 3.00            | 1/2              | 3/4/4/5     | 3             | 16         | 150           | 300        |
| BH01     | 13.00           | 6/10             | 14/16/20/0  | 16            | 50         | 150           | 225        |
| BH01     | 14.50           | 4/9              | 12/14/16/8  | 13            | 50         | 150           | 260        |
| BH01     | 5.50            | 1/2              | 3/4/4/5     | 3             | 16         | 150           | 300        |
| BH01     | 4.00            | 1/2              | 3/4/5/5     | 3             | 17         | 150           | 300        |
| BH01     | 10.00           | 2/5              | 7/9/11/12   | 7             | 39         | 150           | 300        |
| BH01     | 7.00            | 1/2              | 3/4/5/6     | 3             | 18         | 150           | 300        |
| BH01     | 1.20            | 1/1              | 1/1/1/1     | 2             | 4          | 150           | 300        |
| BH02     | 5.00            | 3/5              | 4/4/5/6     | 8             | 19         | 150           | 300        |
| BH02     | 6.50            | 2/3              | 4/5/6/7     | 5             | 22         | 150           | 300        |
| BH02     | 2.00            | 3/3              | 4/4/5/7     | 6             | 20         | 150           | 300        |
| BH02     | 15.00           | 3/4              | 3/4/5/6     | 7             | 18         | 150           | 300        |
| BH02     | 8.00            | 4/5              | 7/8/9/9     | 9             | 33         | 150           | 300        |
| BH02     | 3.00            | 2/4              | 2/2/2/3     | 6             | 9          | 150           | 300        |
| BH02     | 14.00           | 2/2              | 2/3/3/4     | 4             | 12         | 150           | 300        |
| BH02     | 11.00           | 3/4              | 4/5/7/8     | 7             | 24         | 150           | 300        |
| BH02     | 9.50            | 2/3              | 3/4/4/5     | 5             | 16         | 150           | 300        |
| BH03     | 15.00           | 2/2              | 2/3/3/4     | 4             | 12         | 150           | 300        |
| BH03     | 12.50           | 3/4              | 4/5/6/8     | 7             | 23         | 150           | 300        |
| BH03     | 11.00           | 3/4              | 4/5/5/6     | 7             | 20         | 150           | 300        |
| BH03     | 4.00            | 1/1              | 0/1/1/2     | 2             | 4          | 150           | 300        |
| BH03     | 3.00            | 1/1              | 2/2/2/3     | 2             | 9          | 150           | 300        |
| BH03     | 9.50            | 2/3              | 3/4/4/6     | 5             | 17         | 150           | 300        |
| BH03     | 6.50            | 2/3              | 2/3/3/4     | 5             | 12         | 150           | 300        |
| BH03     | 5.00            | 2/2              | 2/1/1/2     | 4             | 6          | 150           | 300        |
| BH03     | 14.00           | 3/4              | 4/5/6/6     | 7             | 21         | 150           | 300        |
| BH03     | 1.20            | 3/3              | 4/3/3/3     | 6             | 13         | 150           | 300        |
| BH04     | 13.50           | 4/5              | 5/5/5/4     | 9             | 19         | 150           | 300        |
| BH04     | 12.00           | 6/9              | 11/11/14/15 | 15            | 51         | 150           | 300        |
| BH04     | 10.50           | 7/8              | 13/13/16/8  | 15            | 50         | 150           | 240        |
| BH04     | 6.00            | 4/4              | 5/5/5/6     | 8             | 21         | 150           | 300        |
| BH04     | 3.00            | 4/5              | 7/8/10/9    | 9             | 34         | 150           | 300        |
| BH04     | 7.50            | 4/4              | 5/6/6/6     | 8             | 23         | 150           | 300        |
| BH04     | 2.00            | 3/4              | 4/5/5/7     | 7             | 21         | 150           | 300        |
| BH04     | 1.20            | 3/3              | 3/4/4/3     | 6             | 14         | 150           | 300        |
| BH04     | 9.00            | 8/6              | 8/8/8/9     | 14            | 33         | 150           | 300        |
| BH04     | 4.50            | 3/4              | 3/4/5/4     | 7             | 16         | 150           | 300        |
| BH05     | 14.00           | 1/2              | 3/4/4/4     | 3             | 15         | 150           | 300        |
| BH05     | 9.50            | 2/2              | 2/2/3/3     | 4             | 10         | 150           | 300        |

Table summarising Standard Penetration Test (SPT) results

| Location | Start Depth (m) | Penetration (mm) |            |               |            |               |            |
|----------|-----------------|------------------|------------|---------------|------------|---------------|------------|
|          |                 | Seating 1-2      | Main 1-4   | Total Seating | Total Main | Total Seating | Total Main |
| BH05     | 8.00            | 2/3              | 3/3/3/3    | 5             | 12         | 150           | 300        |
| BH05     | 5.00            | 2/3              | 4/5/6/6    | 5             | 21         | 150           | 300        |
| BH05     | 12.50           | 1/2              | 3/3/4/4    | 3             | 14         | 150           | 300        |
| BH05     | 11.00           | 1/2              | 2/3/3/4    | 3             | 12         | 150           | 300        |
| BH05     | 4.00            | 2/3              | 4/5/5/6    | 5             | 20         | 150           | 300        |
| BH05     | 3.00            | 2/3              | 4/4/5/5    | 5             | 18         | 150           | 300        |
| BH05     | 6.50            | 2/3              | 4/4/4/4    | 5             | 16         | 150           | 300        |
| BH05     | 2.00            | 1/3              | 3/4/5/5    | 4             | 17         | 150           | 300        |
| BH05     | 1.20            | 1/3              | 3/3/4/4    | 4             | 14         | 150           | 300        |
| BH06     | 13.50           | 1/2              | 3/3/4/4    | 3             | 14         | 150           | 300        |
| BH06     | 9.00            | 1/2              | 3/4/4/4    | 3             | 15         | 150           | 300        |
| BH06     | 1.50            | 2/2              | 3/3/4/4    | 4             | 14         | 150           | 300        |
| BH06     | 12.00           | 1/2              | 3/3/3/4    | 3             | 13         | 150           | 300        |
| BH06     | 7.50            | 1/2              | 3/4/5/6    | 3             | 18         | 150           | 300        |
| BH06     | 4.50            | 1/2              | 2/3/3/4    | 3             | 12         | 150           | 300        |
| BH06     | 10.50           | 1/2              | 3/3/4/4    | 3             | 14         | 150           | 300        |
| BH06     | 15.00           | 1/2              | 3/4/4/4    | 3             | 15         | 150           | 300        |
| BH07     | 12.00           | 1/3              | 4/4/4/4    | 4             | 16         | 150           | 300        |
| BH07     | 4.50            | 1/2              | 3/3/4/4    | 3             | 14         | 150           | 300        |
| BH07     | 1.50            | 1/2              | 2/4/5/5    | 3             | 16         | 150           | 300        |
| BH07     | 15.00           | 1/2              | 3/3/4/5    | 3             | 15         | 150           | 300        |
| BH07     | 13.50           | 1/2              | 3/4/5/4    | 3             | 16         | 150           | 300        |
| BH07     | 10.50           | 2/4              | 6/8/9/9    | 6             | 32         | 150           | 300        |
| BH07     | 7.50            | 1/2              | 2/3/3/3    | 3             | 11         | 150           | 300        |
| BH07     | 6.00            | 1/1              | 2/3/3/4    | 2             | 12         | 150           | 300        |
| BH07     | 3.00            | 1/3              | 4/5/6/6    | 4             | 21         | 150           | 300        |
| BH08     | 12.00           | 2/3              | 3/4/4/4    | 5             | 15         | 150           | 300        |
| BH08     | 7.50            | 5/7              | 8/10/10/11 | 12            | 39         | 150           | 300        |
| BH08     | 15.00           | 3/4              | 5/5/5/6    | 7             | 21         | 150           | 300        |
| BH08     | 13.50           | 3/3              | 3/4/4/4    | 6             | 15         | 150           | 300        |
| BH08     | 4.50            | 4/6              | 8/10/10/11 | 10            | 39         | 150           | 300        |
| BH08     | 10.50           | 4/4              | 4/5/5/5    | 8             | 19         | 150           | 300        |
| BH08     | 9.00            | 5/8              | 8/10/10/12 | 13            | 40         | 150           | 300        |
| BH08     | 6.00            | 3/5              | 7/8/10/10  | 8             | 35         | 150           | 300        |
| BH08     | 3.00            | 2/3              | 3/3/4/5    | 5             | 15         | 150           | 300        |
| BH08     | 1.50            | 3/3              | 4/4/4/5    | 6             | 17         | 150           | 300        |
| BH09     | 15.00           | 2/2              | 3/3/2/3    | 4             | 11         | 150           | 300        |
| BH09     | 14.00           | 5/8              | 8/8/8/8    | 13            | 32         | 150           | 300        |
| BH09     | 9.50            | 2/2              | 2/2/3/5    | 4             | 12         | 150           | 300        |
| BH09     | 6.50            | 3/3              | 3/4/4/5    | 6             | 16         | 150           | 300        |

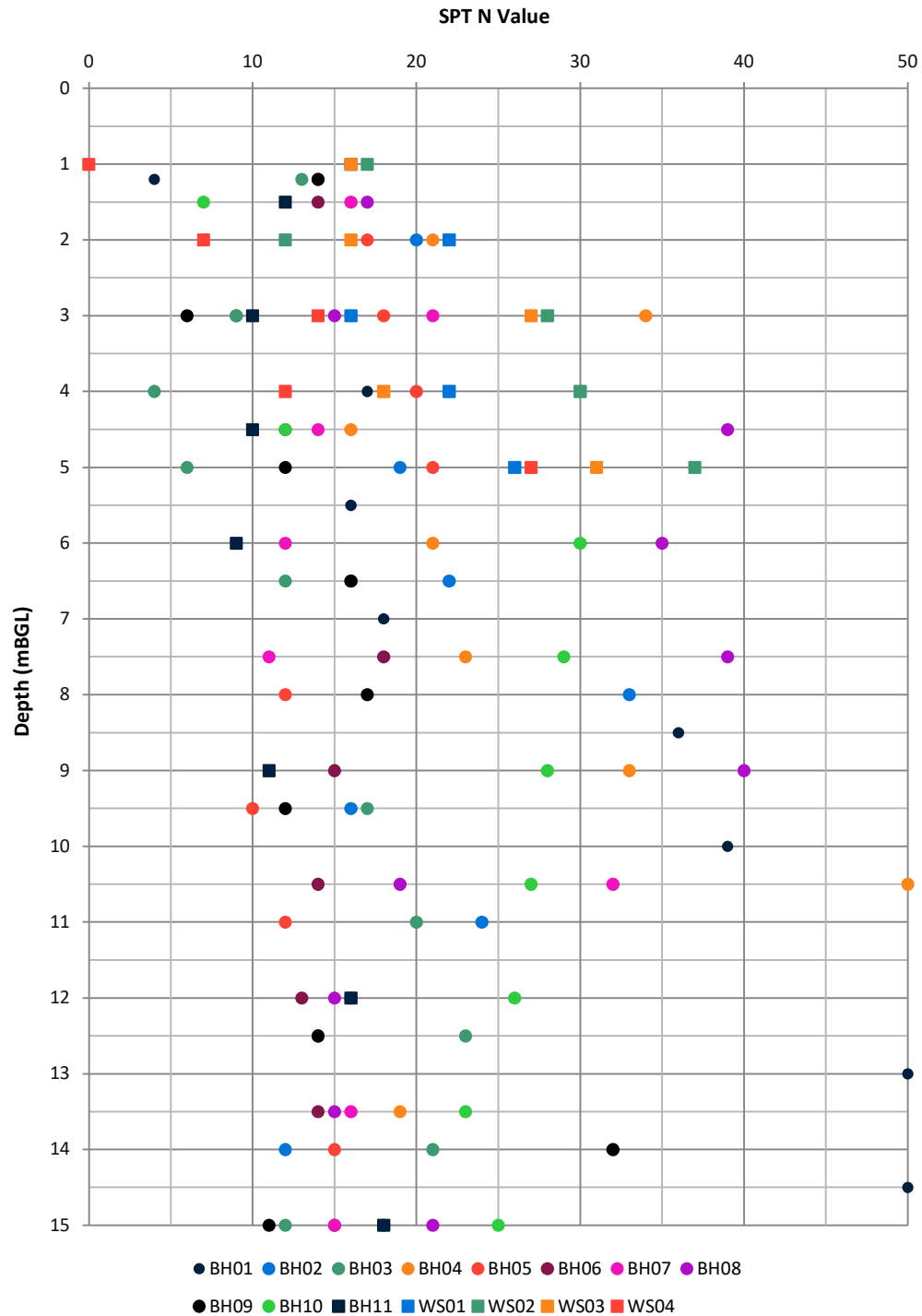
Table summarising Standard Penetration Test (SPT) results

| Location | Start Depth (m) | Penetration (mm) |          |               |            |               |            |
|----------|-----------------|------------------|----------|---------------|------------|---------------|------------|
|          |                 | Seating 1-2      | Main 1-4 | Total Seating | Total Main | Total Seating | Total Main |
| BH09     | 8.00            | 2/4              | 5/5/4/3  | 6             | 17         | 150           | 300        |
| BH09     | 5.00            | 2/3              | 3/3/3/3  | 5             | 12         | 150           | 300        |
| BH09     | 12.50           | 4/3              | 3/3/4/4  | 7             | 14         | 150           | 300        |
| BH09     | 3.00            | 2/2              | 1/2/1/2  | 4             | 6          | 150           | 300        |
| BH09     | 1.20            | 2/3              | 3/3/4/4  | 5             | 14         | 150           | 300        |
| BH10     | 15.00           | 2/3              | 5/6/7/7  | 5             | 25         | 150           | 300        |
| BH10     | 10.50           | 2/4              | 6/6/7/8  | 6             | 27         | 150           | 300        |
| BH10     | 4.50            | 1/2              | 3/3/3/3  | 3             | 12         | 150           | 300        |
| BH10     | 1.50            | 1/1              | 1/1/1/4  | 2             | 7          | 150           | 300        |
| BH10     | 13.50           | 1/3              | 5/5/6/7  | 4             | 23         | 150           | 300        |
| BH10     | 6.00            | 3/5              | 6/8/8/8  | 8             | 30         | 150           | 300        |
| BH10     | 9.00            | 3/5              | 6/7/7/8  | 8             | 28         | 150           | 300        |
| BH10     | 7.50            | 2/4              | 6/7/8/8  | 6             | 29         | 150           | 300        |
| BH10     | 12.00           | 2/4              | 6/6/7/7  | 6             | 26         | 150           | 300        |
| BH11     | 1.50            | 1/2              | 3/3/3/3  | 3             | 12         | 150           | 300        |
| BH11     | 15.00           | 2/3              | 4/4/5/5  | 5             | 18         | 150           | 300        |
| BH11     | 12.00           | 1/2              | 3/4/4/5  | 3             | 16         | 150           | 300        |
| BH11     | 4.50            | 1/2              | 3/2/2/3  | 3             | 10         | 150           | 300        |
| BH11     | 3.00            | 1/2              | 2/3/2/3  | 3             | 10         | 150           | 300        |
| BH11     | 9.00            | 1/2              | 2/3/3/3  | 3             | 11         | 150           | 300        |
| BH11     | 6.00            | 1/2              | 2/3/2/2  | 3             | 9          | 150           | 300        |
| WS01     | 5.00            | 4/4              | 5/7/6/8  | 8             | 26         | 150           | 300        |
| WS01     | 4.00            | 3/4              | 5/6/5/6  | 7             | 22         | 150           | 300        |
| WS01     | 1.00            | 4/4              | 3/4/4/5  | 8             | 16         | 150           | 300        |
| WS01     | 2.00            | 4/4              | 5/6/5/6  | 8             | 22         | 150           | 300        |
| WS01     | 3.00            | 3/3              | 4/4/4/4  | 6             | 16         | 150           | 300        |
| WS02     | 1.00            | 4/4              | 4/4/4/5  | 8             | 17         | 150           | 300        |
| WS02     | 5.00            | 4/8              | 7/9/9/12 | 12            | 37         | 150           | 300        |
| WS02     | 4.00            | 6/6              | 6/8/8/8  | 12            | 30         | 150           | 300        |
| WS02     | 2.00            | 1/2              | 2/3/3/4  | 3             | 12         | 150           | 300        |
| WS02     | 3.00            | 4/6              | 6/7/7/8  | 10            | 28         | 150           | 300        |
| WS03     | 5.00            | 3/4              | 6/8/8/9  | 7             | 31         | 150           | 300        |
| WS03     | 4.00            | 4/4              | 4/4/5/5  | 8             | 18         | 150           | 300        |
| WS03     | 2.00            | 3/3              | 4/4/4/4  | 6             | 16         | 150           | 300        |
| WS03     | 3.00            | 4/5              | 6/7/7/7  | 9             | 27         | 150           | 300        |
| WS03     | 1.00            | 2/2              | 3/4/4/5  | 4             | 16         | 150           | 300        |
| WS04     | 2.00            | 1/1              | 1/2/2/2  | 2             | 7          | 150           | 300        |
| WS04     | 1.00            | 0/0              | 0/0/0/0  | 0             | 0          | 150           | 300        |
| WS04     | 4.00            | 1/1              | 2/3/3/4  | 2             | 12         | 150           | 300        |
| WS04     | 5.00            | 5/7              | 6/6/7/8  | 12            | 27         | 150           | 300        |

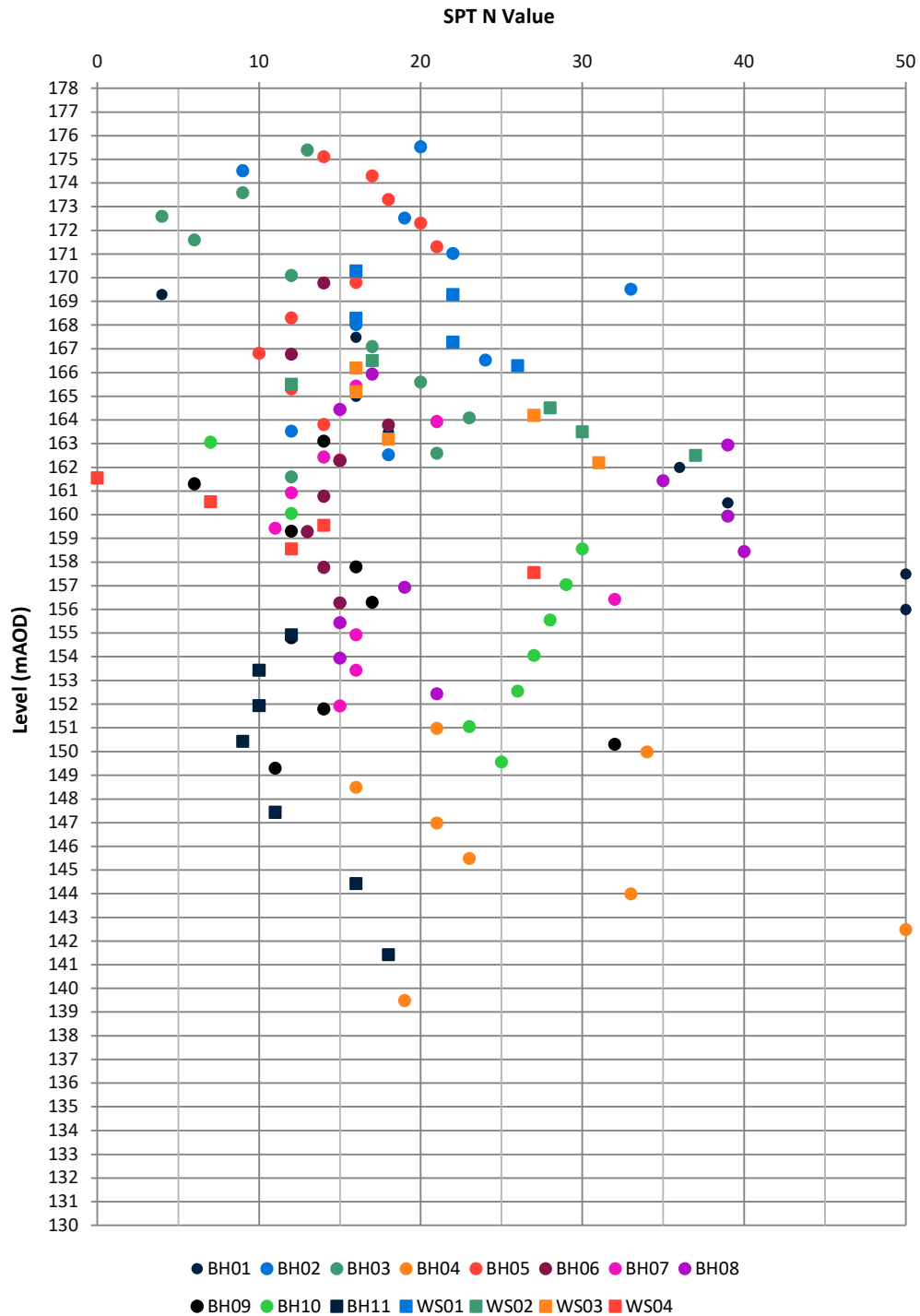
Table summarising Standard Penetration Test (SPT) results

| Location | Start Depth (m) | Penetration (mm) |          |               |            |               |            |
|----------|-----------------|------------------|----------|---------------|------------|---------------|------------|
|          |                 | Seating 1-2      | Main 1-4 | Total Seating | Total Main | Total Seating | Total Main |
| WS04     | 3.00            | 2/2              | 3/3/4/4  | 4             | 14         | 150           | 300        |

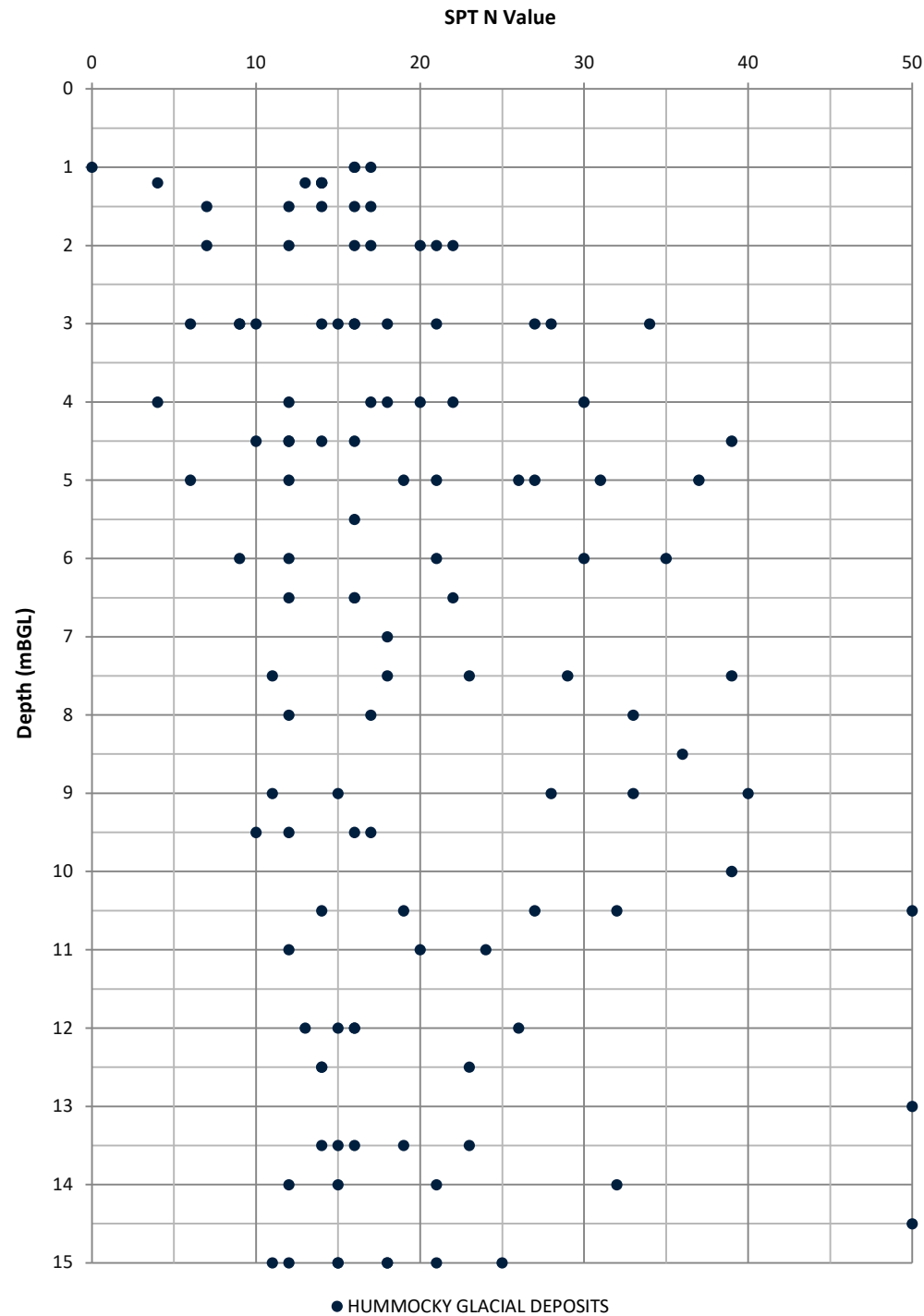
## Plot summarising Standard Penetration Test (SPT) results versus depth filtered by location



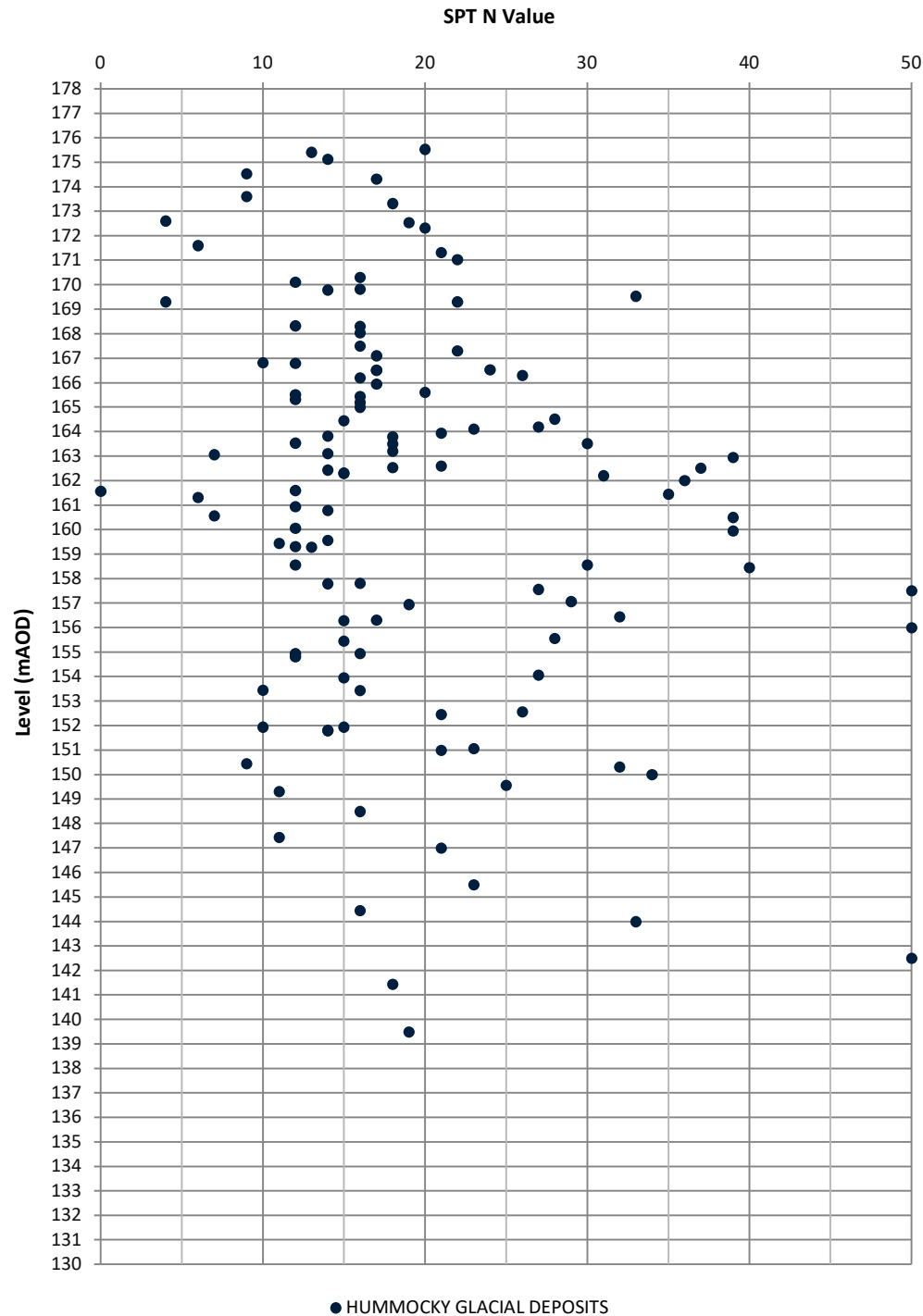
Plot summarising Standard Penetration Test (SPT) results versus level filtered by location



Plot summarising Standard Penetration Test (SPT) results versus depth filtered by geology



Plot summarising Standard Penetration Test (SPT) results versus level filtered by geology



## **Appendix F      Post Fieldwork Monitoring**

Site Record Type: In-situ parameter readings

Technician: Curtis Neylon / Josh Townrow

Instrument: AQUA TROLL 500

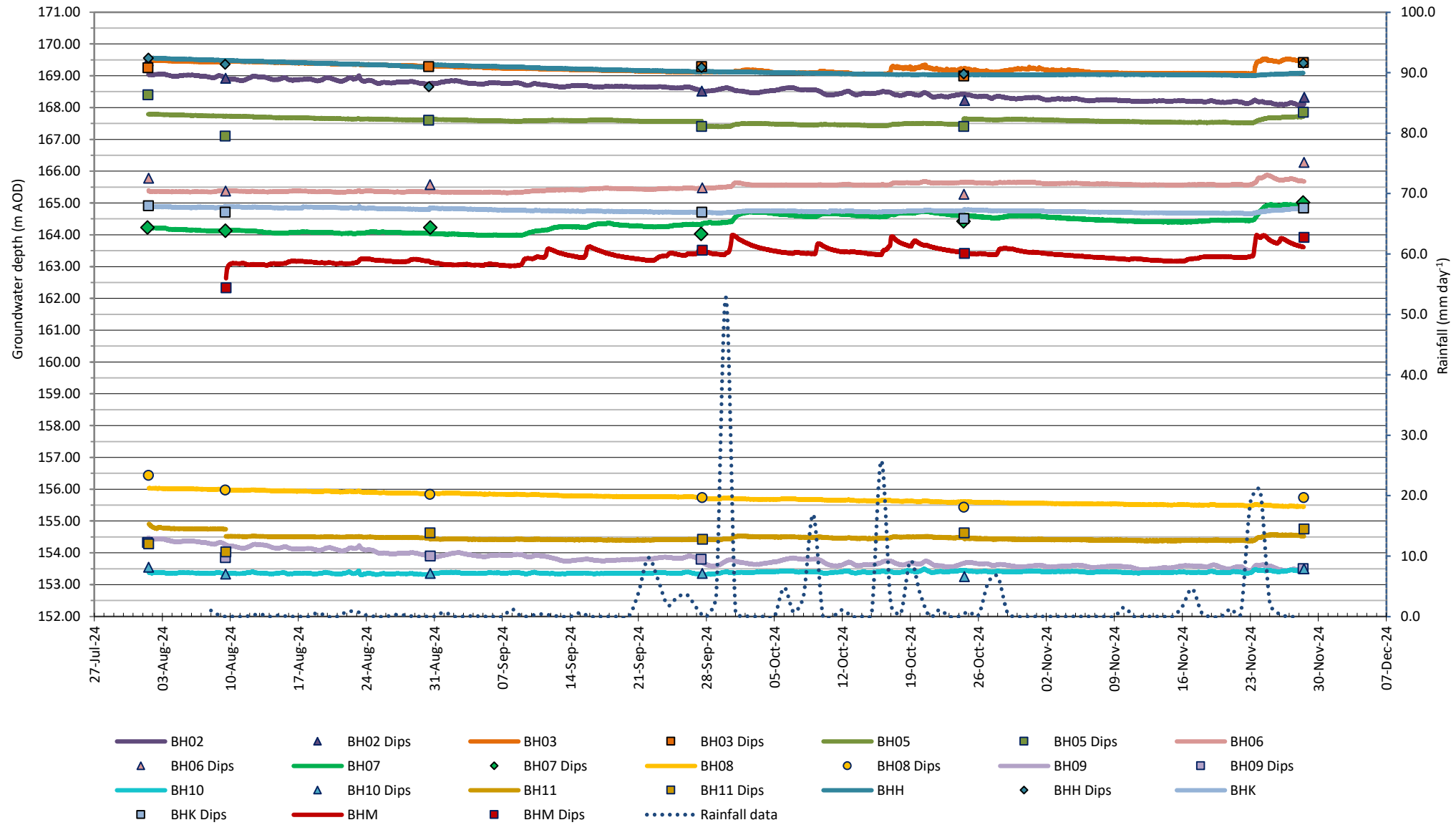
| Date / Time      | Location | Turbidity (NTU) | pH  | ORP (mV) | Specific Conductivity (µS/cm) | Total Dissolved Solids (ppt) | RDO Saturation (%Sat) |
|------------------|----------|-----------------|-----|----------|-------------------------------|------------------------------|-----------------------|
| 22/02/2022 14:03 | Spring 1 | 0.0             | 6.5 | 38.0     | 0.078                         | 0.00005                      | 97.4                  |
| 22/02/2022 13:32 | Spring 2 | 0.0             | 6.8 | 15.2     | 0.077                         | 0.00005                      | 97.7                  |
| 22/02/2023 13:07 | Spring 3 | 0.0             | 5.9 | 29.1     | 0.078                         | 0.00005                      | 97.6                  |
| 22/02/2023 12:40 | Spring 4 | 0.0             | 6.2 | 2.0      | 0.911                         | 0.00059                      | 96.8                  |
| 14/03/2023 12:13 | Spring 1 | 0.0             | 5.6 | 37.96    | 0.078                         | 0.00005                      | 97.7                  |
| 14/03/2023 11:44 | Spring 2 | 0.0             | 6.1 | -20.6    | 0.082                         | 0.00005                      | 97.4                  |
| 14/03/2023 11:25 | Spring 3 | 0.0             | 6.1 | 43.8     | 3.000                         | 0.00195                      | 98.1                  |
| 14/03/2023 11:57 | Spring 4 | 0.0             | 5.8 | 14.3     | 0.080                         | 0.00005                      | 97.4                  |
| 29/03/2023 11:37 | Spring 1 | 0.8             | 6.0 | -11.3    | 3.586                         | 0.00233                      | 98.8                  |
| 29/03/2023 10:53 | Spring 2 | 0.4             | 7.4 | -65.6    | 30.200                        | 0.01965                      | 97.2                  |
| 29/03/2023 12:14 | Spring 3 | 4.6             | 6.0 | 24.9     | 1.333                         | 0.00087                      | 98.2                  |
| 29/03/2023 11:54 | Spring 4 | 1.1             | 6.3 | 5.8      | 1.256                         | 0.00082                      | 98.1                  |

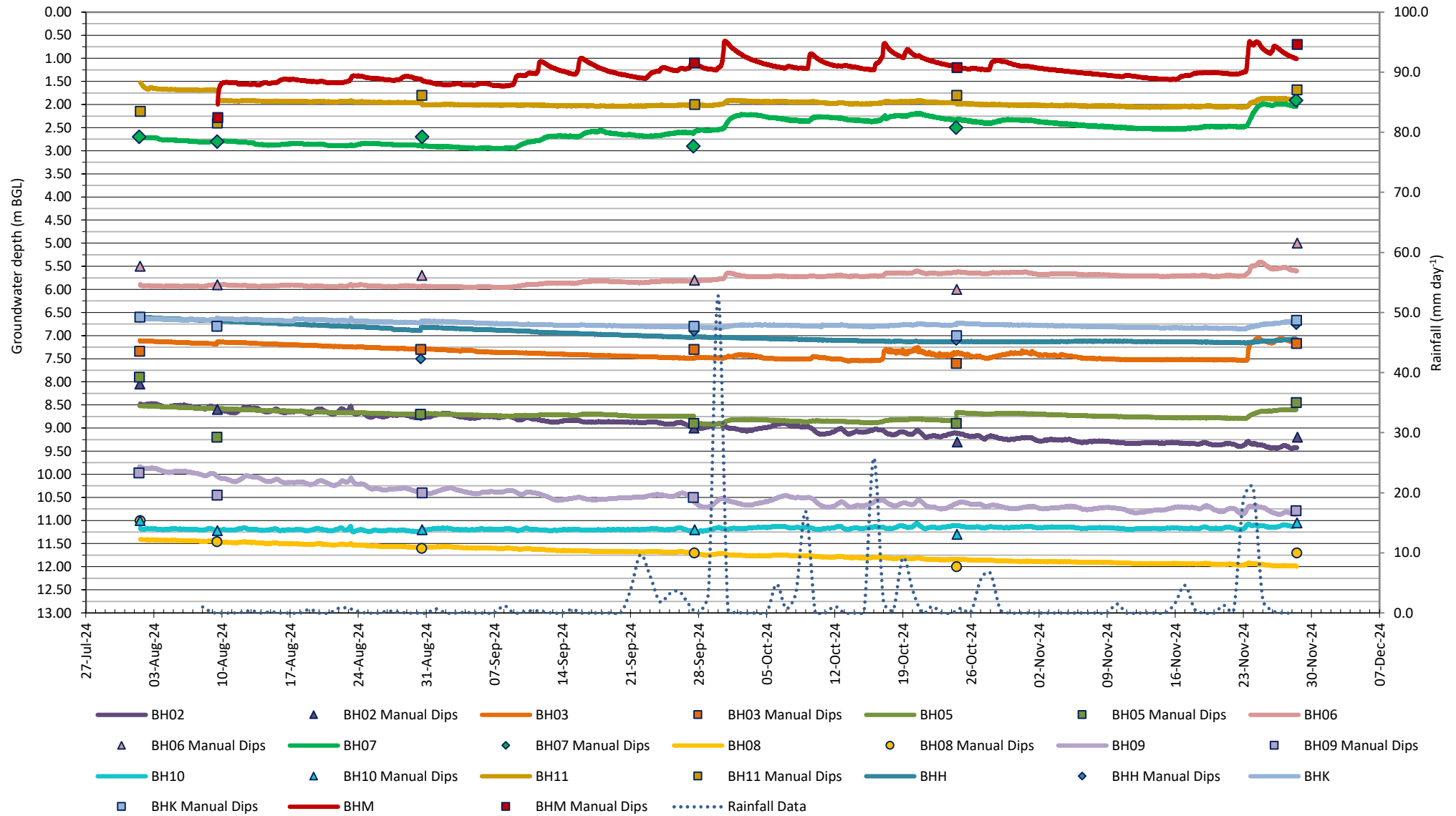
Ground gas and groundwater monitoring results

Notes

- 1) The instrument limit of detection has been adopted where no gas flows or concentrations have been recorded (indicated in grey italics).  
2) Atmospheric temperature (\*) data sourced from local weather station data.  
3) CH4 = methane; CO2 = carbon dioxide; O2 = oxygen; PPM = parts per million CO = carbon monoxide; H2S = hydrogen sulphide.  
4) Gas Screening Values (GSVs) are rounded to 3 decimal places.

| Worst case scenario |       |          |                   |                       |         |                           |                                |                    | 0.6             | 0.9                    | 0.8    | 3.7                    | 3.4    | 18.6                  | 18.6    | 2                 | 0                | 0.01                   | 0.00   | 0.02                   | 0.02   | GREEN                     | GREEN  | ONE                                                |       |
|---------------------|-------|----------|-------------------|-----------------------|---------|---------------------------|--------------------------------|--------------------|-----------------|------------------------|--------|------------------------|--------|-----------------------|---------|-------------------|------------------|------------------------|--------|------------------------|--------|---------------------------|--------|----------------------------------------------------|-------|
| Average scenario    |       |          |                   |                       |         |                           |                                |                    | 0.2             | 0.2                    | 0.1    | 1.1                    | 1.0    | 20.1                  | 20.1    | 0                 | 0                | 0.00                   | 0.00   | 0.00                   | 0.00   | GREEN                     | GREEN  | ONE                                                |       |
| Date                | Time  | Location | Install Reference | Install Response Zone |         | Atmospheric Pressure (mB) | Atmospheric Temperature (°C) * | Depth to Water (m) | Gas Steady Flow | CH <sub>4</sub> (%v/v) |        | CO <sub>2</sub> (%v/v) |        | O <sub>2</sub> (%v/v) |         | Other Gases (PPM) |                  | GSV (CH <sub>4</sub> ) |        | GSV (CO <sub>2</sub> ) |        | Indicative NHBC Guideline |        | Indicative (steady) CIRIA Characteristic Situation | Notes |
|                     |       |          |                   | Response Zone (mBGL)  | Flooded |                           |                                |                    | l/Hr            | Peak                   | Steady | Peak                   | Steady | Minimum               | Average | CO                | H <sub>2</sub> S | Peak                   | Steady | Peak                   | Steady | Peak                      | Steady |                                                    |       |
| 01/08/2024          | 13:33 | WS01     | 1                 | 1.00 - 5.00           | No      | 993                       | 22                             | Dry                | 0               | 0.0                    | 0.0    | 0.5                    | 0.2    | 20.2                  | 21.0    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 30/08/2024          | 12:06 | WS01     | 1                 | 1.00 - 5.00           | No      | 1006                      | 19                             | Dry                | 0               | 0.0                    | 0.0    | 0.7                    | 0.4    | 19.3                  | 19.5    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 27/09/2024          | 10:14 | WS01     | 1                 | 1.00 - 5.00           | No      | 983                       | 11                             | Dry                | 0.2             | 0.1                    | 0.1    | 0.1                    | 0.1    | 20.8                  | 20.9    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 24/10/2024          | 11:05 | WS01     | 1                 | 1.00 - 5.00           | No      | 999                       | 12                             | Dry                | 0               | 0.1                    | 0.1    | 0.6                    | 0.6    | 20.5                  | 20.5    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 28/11/2024          | 09:24 | WS01     | 1                 | 1.00 - 5.00           | No      | 1008                      | 1                              | Dry                | 0.5             | 0.1                    | 0.1    | 0.1                    | 0.1    | 21.3                  | 21.4    | 0                 | 0                | 0.001                  | 0.001  | 0.001                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 01/08/2024          | 13:24 | WS02     | 1                 | 1.00 - 5.00           | No      | 994                       | 22                             | Dry                | 0               | 0.0                    | 0.0    | 1.1                    | 1.1    | 20.1                  | 20.1    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 30/08/2024          | 12:24 | WS02     | 1                 | 1.00 - 5.00           | No      | 1006                      | 19                             | Dry                | 0               | 0.0                    | 0.0    | 0.4                    | 0.4    | 19.1                  | 19.5    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 27/09/2024          | 10:26 | WS02     | 1                 | 1.00 - 5.00           | No      | 984                       | 11                             | Dry                | 0.2             | 0.1                    | 0.1    | 0.6                    | 0.6    | 20.3                  | 20.3    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 24/10/2024          | 11:15 | WS02     | 1                 | 1.00 - 5.00           | Yes     | 999                       | 12                             | 0.60               | 0               | 0.1                    | 0.1    | 0.3                    | 0.3    | 20.7                  | 20.7    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 28/11/2024          | 09:35 | WS02     | 1                 | 1.00 - 5.00           | Yes     | 1009                      | 1                              | 0.55               | 0.6             | 0.1                    | 0.1    | 0.4                    | 0.4    | 21.3                  | 21.3    | 0                 | 0                | 0.001                  | 0.001  | 0.002                  | 0.002  | GREEN                     | GREEN  | CS-1                                               |       |
| 01/08/2024          | 13:41 | WS03     | 1                 | 1.00 - 2.00           | No      | 993                       | 22                             | Dry                | 0               | 0.0                    | 0.0    | 0.2                    | 0.7    | 20.9                  | 20.5    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 30/08/2024          | 11:29 | WS03     | 1                 | 1.00 - 2.00           | No      | 1006                      | 19                             | Dry                | 0               | 0.1                    | 0.0    | 0.3                    | 0.3    | 20.1                  | 20.1    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 27/09/2024          | 10:36 | WS03     | 1                 | 1.00 - 2.00           | No      | 985                       | 11                             | Dry                | 0.2             | 0.1                    | 0.1    | 1.6                    | 1.6    | 18.6                  | 18.6    | 0                 | 0                | 0.000                  | 0.000  | 0.003                  | 0.003  | GREEN                     | GREEN  | CS-1                                               |       |
| 24/10/2024          | 11:24 | WS03     | 1                 | 1.00 - 2.00           | Yes     | 999                       | 12                             | 0.90               | 0               | 0.1                    | 0.1    | 0.5                    | 0.5    | 20.3                  | 20.3    | 0                 | 0                | 0.000                  | 0.000  | 0.001                  | 0.001  | GREEN                     | GREEN  | CS-1                                               |       |
| 28/11/2024          | 09:46 | WS03     | 1                 | 1.00 - 2.00           | Yes     | 1009                      | 1                              | 0.60               | 0.5             | 0.2                    | 0.1    | 1.1                    | 1.0    | 20.8                  | 20.8    | 0                 | 0                | 0.001                  | 0.001  | 0.006                  | 0.005  | GREEN                     | GREEN  | CS-1                                               |       |
| 01/08/2024          | 13:51 | WS04     | 1                 | 1.00 - 5.00           | Yes     | 993                       | 22                             | 0.60               | 0               | 0.0                    | 0.0    | 0.2                    | 0.0    | 20.9                  | 20.1    | 0                 | 0                | 0.000                  | 0.000  | 0.000                  | 0.000  | GREEN                     | GREEN  | CS-1                                               |       |
| 30/08/2024          | 11:50 | WS04     | 1                 | 1.00 - 5.00           | Yes     | 985                       | 19                             | 0.60               | 0.2             | 0.3                    | 0.3    | 3.7                    | 3.4    | 18.6                  | 18.6    | 2                 | 0                | 0.001                  | 0.001  | 0.007                  | 0.007  | GREEN                     | GREEN  | CS-1                                               |       |
| 27/09/2024          | 10:45 | WS04     | 1                 | 1.00 - 5.00           | Yes     | 985                       | 11                             | 0.60               | 0.2             | 0.3                    | 0.3    | 3.7                    | 3.4    | 18.6                  | 18.6    | 2                 | 0                | 0.001                  | 0.001  | 0.007                  | 0.007  | GREEN                     | GREEN  | CS-1                                               |       |
| 24/10/2024          | 11:36 | WS04     | 1                 | 1.00 - 5.00           | Yes     | 1000                      | 12                             | 0.40               | 0               | 0.6                    | 0.5    | 2.4                    | 2.2    | 19.7                  | 19.7    | 0                 | 0                | 0.001                  | 0.001  | 0.002                  | 0.002  | GREEN                     | GREEN  | CS-1                                               |       |
| 28/11/2024          | 09:59 | WS04     | 1                 | 1.00 - 5.00           | Yes     | 1010                      | 1                              | 0.38               | 0.5             | 0.9                    | 0.8    | 2.9                    | 2.7    | 20.3                  | 20.3    | 0                 | 0                | 0.005                  | 0.004  | 0.015                  | 0.014  | GREEN                     | GREEN  | CS-1                                               |       |





Title  
Groundwater Monitoring Data: m BGL

Scale  
As shown

Appendix  
F