

**Polycyclic Aromatic Hydrocarbon Results for Defra**

Application no. MLP/DC9809

Applicant: Hariwich Haven Authority

Application Title: Harwich Channel Deepening

Date Sampled: 01/09/2013



mg/kg (ppm)  
Dry weight

| LSN         | Sample No. | Location          | Dredge Area no. | Excluded | TS (%) | 23BA  | ACENAPH | ACENAPT | ANTHRAC | BAA   | BAP   | BBF   | BENZGHI | BEP   | BKF   | C1N   | C1PHEN |
|-------------|------------|-------------------|-----------------|----------|--------|-------|---------|---------|---------|-------|-------|-------|---------|-------|-------|-------|--------|
| 2013/03231  | 9          | Trial pit 24, 0m  | Area i          |          | 55     | 0.000 | 0.004   | 0.019   | 0.022   | 0.080 | 0.089 | 0.133 | 0.111   | 0.096 | 0.051 | 0.388 | 0.329  |
| 2013/03232  | 11         | Trial pit, 37, 0m | Area i          |          | 72     | 0.000 | 0.000   | 0.002   | 0.003   | 0.010 | 0.012 | 0.017 | 0.030   | 0.020 | 0.004 | 0.080 | 0.088  |
| 2013/03233  | 12         | Trial pit 27, 0m  | Area i          |          | 76     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.000   | 0.000 | 0.000 | 0.001 | 0.000  |
| 2013/03234  | 13         | Trail pit 5, 2m   | Area i          |          | 81     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.001 | 0.001   | 0.000 | 0.000 | 0.002 | 0.001  |
| 2013/03235  | 15         | Trial pit 22, 2m  | Area i          |          | 80     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.002   | 0.000 | 0.000 | 0.001 | 0.000  |
| 2013/03236  | 17         | Trial pit 15, 0m  | Area i          |          | 72     | 0.000 | 0.000   | 0.001   | 0.001   | 0.003 | 0.003 | 0.005 | 0.006   | 0.003 | 0.002 | 0.015 | 0.010  |
| 2013/03237  | 22         | Trial pit 93, 1m  | Area i          |          | 63     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.001 | 0.002 | 0.002   | 0.002 | 0.000 | 0.001 | 0.007  |
| 2013/03238  | 24         | Trial pit 5, 0m   | Area i          |          | 68     | 0.000 | 0.000   | 0.001   | 0.002   | 0.005 | 0.006 | 0.010 | 0.012   | 0.007 | 0.004 | 0.029 | 0.023  |
| 2013/03239  | 28         | Trial pit 3, 1m   | Area i          |          | 58     | 0.000 | 0.009   | 0.019   | 0.037   | 0.101 | 0.119 | 0.188 | 0.165   | 0.127 | 0.072 | 0.498 | 0.433  |
| 2013/03240  | 40         | Trial pit 94, 0m  | Area i          |          | 82     | 0.000 | 0.001   | 0.001   | 0.002   | 0.010 | 0.010 | 0.013 | 0.015   | 0.012 | 0.005 | 0.053 | 0.056  |
| 2013/03241  | 41         | Trial pit 16, 0m  | Area i          |          | 58     | 0.000 | 0.007   | 0.018   | 0.035   | 0.096 | 0.116 | 0.148 | 0.144   | 0.124 | 0.068 | 0.505 | 0.410  |
| 2013/03242  | 46         | Trial pit 7, 2m   | Area i          |          | 90     | 0.000 | 0.001   | 0.000   | 0.000   | 0.000 | 0.003 | 0.003 | 0.002   | 0.002 | 0.001 | 0.008 | 0.006  |
| 2013/03243  | 47         | Trial pit 6, 2m   | Area i          |          | 72     | 0.000 | 0.001   | 0.002   | 0.004   | 0.000 | 0.014 | 0.019 | 0.017   | 0.014 | 0.008 | 0.063 | 0.046  |
| 2013/03244  | 48         | Trial pit 3, 2m   | Area i          |          | 78     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.000   | 0.000 | 0.000 | 0.001 | 0.000  |
| 2013/03245  | 52         | Trial pit 5, 1m   | Area i          |          | 80     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.001 | 0.001 | 0.002   | 0.001 | 0.001 | 0.005 | 0.004  |
| 2013/03246  | 53         | Trial pit 22, 0m  | Area i          |          | 73     | 0.000 | 0.001   | 0.003   | 0.004   | 0.000 | 0.014 | 0.020 | 0.017   | 0.014 | 0.008 | 0.062 | 0.045  |
| 2013/03247  | 55         | Trial pit, 14 0m  | Area i          |          | 78     | 0.000 | 0.000   | 0.001   | 0.001   | 0.000 | 0.005 | 0.007 | 0.005   | 0.004 | 0.003 | 0.017 | 0.014  |
| 2013/03248  | 56         | Trial pit 4, 1m   | Area i          |          | 83     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.001 | 0.002 | 0.002   | 0.001 | 0.001 | 0.006 | 0.005  |
| 2013/03249  | 60         | Trial pit 18, 0m  | Area i          |          | 52     | 0.000 | 0.008   | 0.015   | 0.027   | 0.098 | 0.107 | 0.147 | 0.118   | 0.111 | 0.059 | 0.507 | 0.387  |
| 2013/03250  | 62         | Trial pit 22, 1m  | Area i          |          | 80     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.003   | 0.000 | 0.000 | 0.000 | 0.000  |
| 2013/03251  | 65         | Trial pit 17, 0m  | Area i          |          | 80     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.001 | 0.007   | 0.001 | 0.000 | 0.000 | 0.001  |
| 2013/03252  | 67         | Trial pit 112, 0m | Area i          |          | 64     | 0.000 | 0.000   | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.001   | 0.000 | 0.000 | 0.001 | 0.001  |
| <b>Mean</b> |            |                   |                 |          |        | 0.000 | 0.001   | 0.004   | 0.006   | 0.018 | 0.023 | 0.033 | 0.030   | 0.025 | 0.013 | 0.102 | 0.085  |

AL1 (ppm dry) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1

mg/kg (ppm)  
Dry weight

| LSN         | Sample No. | Location          | Dredge Area no. | Excluded | TS (%) | C2N   | C3N   | CHRYSEN | DBENZAH | FLUORAN | FLUOREN | INDPYR | NAPTH | PERYLEN | PHENANT | PYRENE | THC |
|-------------|------------|-------------------|-----------------|----------|--------|-------|-------|---------|---------|---------|---------|--------|-------|---------|---------|--------|-----|
| 2013/03231  | 9          | Trial pit 24, 0m  | Area i          |          | 55     | 0.584 | 0.816 | 0.062   | 0.019   | 0.155   | 0.031   | 0.088  | 0.103 | 0.050   | 0.175   | 0.124  | 341 |
| 2013/03232  | 11         | Trial pit, 37, 0m | Area i          |          | 72     | 0.128 | 0.208 | 0.008   | 0.003   | 0.013   | 0.007   | 0.011  | 0.013 | 0.052   | 0.040   | 0.016  | 80  |
| 2013/03233  | 12         | Trial pit 27, 0m  | Area i          |          | 76     | 0.000 | 0.000 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000  | 0.001 | 0.000   | 0.001   | 0.000  | 0   |
| 2013/03234  | 13         | Trail pit 5, 2m   | Area i          |          | 81     | 0.000 | 0.005 | 0.000   | 0.000   | 0.001   | 0.000   | 0.001  | 0.001 | 0.000   | 0.001   | 0.001  | 0   |
| 2013/03235  | 15         | Trial pit 22, 2m  | Area i          |          | 80     | 0.000 | 0.000 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000  | 0.001 | 0.000   | 0.001   | 0.000  | 0   |
| 2013/03236  | 17         | Trial pit 15, 0m  | Area i          |          | 72     | 0.022 | 0.033 | 0.002   | 0.001   | 0.006   | 0.001   | 0.004  | 0.004 | 0.003   | 0.006   | 0.005  | 10  |
| 2013/03237  | 22         | Trial pit 93, 1m  | Area i          |          | 63     | 0.011 | 0.009 | 0.001   | 0.001   | 0.001   | 0.000   | 0.001  | 0.001 | 0.051   | 0.003   | 0.001  | 16  |
| 2013/03238  | 24         | Trial pit 5, 0m   | Area i          |          | 68     | 0.043 | 0.063 | 0.005   | 0.002   | 0.011   | 0.002   | 0.008  | 0.007 | 0.004   | 0.012   | 0.010  | 20  |
| 2013/03239  | 28         | Trial pit 3, 1m   | Area i          |          | 58     | 0.770 | 1.138 | 0.083   | 0.030   | 0.198   | 0.038   | 0.127  | 0.121 | 0.067   | 0.220   | 0.167  | 413 |
| 2013/03240  | 40         | Trial pit 94, 0m  | Area i          |          | 82     | 0.082 | 0.135 | 0.007   | 0.002   | 0.014   | 0.003   | 0.010  | 0.011 | 0.008   | 0.024   | 0.014  | 39  |
| 2013/03241  | 41         | Trial pit 16, 0m  | Area i          |          | 58     | 0.742 | 1.092 | 0.078   | 0.025   | 0.182   | 0.038   | 0.118  | 0.120 | 0.068   | 0.205   | 0.167  | 393 |
| 2013/03242  | 46         | Trial pit 7, 2m   | Area i          |          | 90     | 0.013 | 0.019 | 0.002   | 0.000   | 0.003   | 0.001   | 0.002  | 0.002 | 0.001   | 0.003   | 0.002  | 4   |
| 2013/03243  | 47         | Trial pit 6, 2m   | Area i          |          | 72     | 0.089 | 0.133 | 0.010   | 0.003   | 0.023   | 0.004   | 0.015  | 0.016 | 0.008   | 0.023   | 0.021  | 46  |
| 2013/03244  | 48         | Trial pit 3, 2m   | Area i          |          | 78     | 0.000 | 0.000 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000  | 0.000 | 0.000   | 0.001   | 0.000  | 0   |
| 2013/03245  | 52         | Trial pit 5, 1m   | Area i          |          | 80     | 0.009 | 0.012 | 0.001   | 0.000   | 0.002   | 0.000   | 0.002  | 0.001 | 0.001   | 0.002   | 0.002  | 3   |
| 2013/03246  | 53         | Trial pit 22, 0m  | Area i          |          | 73     | 0.088 | 0.133 | 0.011   | 0.003   | 0.026   | 0.005   | 0.015  | 0.015 | 0.007   | 0.022   | 0.023  | 42  |
| 2013/03247  | 55         | Trial pit, 14 0m  | Area i          |          | 78     | 0.026 | 0.040 | 0.004   | 0.002   | 0.009   | 0.001   | 0.005  | 0.004 | 0.002   | 0.007   | 0.008  | 19  |
| 2013/03248  | 56         | Trial pit 4, 1m   | Area i          |          | 83     | 0.010 | 0.014 | 0.001   | 0.000   | 0.002   | 0.000   | 0.001  | 0.002 | 0.001   | 0.002   | 0.002  | 3   |
| 2013/03249  | 60         | Trial pit 18, 0m  | Area i          |          | 52     | 0.734 | 1.073 | 0.080   | 0.025   | 0.187   | 0.035   | 0.099  | 0.123 | 0.062   | 0.196   | 0.160  | 389 |
| 2013/03250  | 62         | Trial pit 22, 1m  | Area i          |          | 80     | 0.000 | 0.000 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000  | 0.001 | 0.000   | 0.000   | 0.000  | 1   |
| 2013/03251  | 65         | Trial pit 17, 0m  | Area i          |          | 80     | 0.000 | 0.000 | 0.000   | 0.000   | 0.001   | 0.000   | 0.000  | 0.000 | 0.001   | 0.000   | 0.000  | 3   |
| 2013/03252  | 67         | Trial pit 112, 0m | Area i          |          | 64     | 0.000 | 0.000 | 0.000   | 0.000   | 0.000   | 0.000   | 0.002  | 0.001 | 0.001   | 0.001   | 0.000  | 6   |
| <b>Mean</b> |            |                   |                 |          |        | 0.152 | 0.224 | 0.016   | 0.005   | 0.038   | 0.008   | 0.023  | 0.025 | 0.018   | 0.043   | 0.033  | 83  |

AL1 (ppm dry) 0.1 0.1 0.1 0.01 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 100

Produced by: JL  
Date: 08/11/2013

