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**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

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|   |   |
|---|---|
| <b>Title - Sujet</b><br>Remedial Excavation Shannon Park  |   |
| <b>Solicitation No. - N° de l'invitation</b><br>EB218-191957/A  | <b>Amendment No. - N° modif.</b><br>003                             |
| <b>Client Reference No. - N° de référence du client</b><br>EB218-19-1957  | <b>Date</b><br>2018-11-22   |
| <b>GETS Reference No. - N° de référence de SEAG</b><br>PW-\$PWA-110-5814  |   |
| <b>File No. - N° de dossier</b><br>PWA-8-80074 (110)  | <b>CCC No./N° CCC - FMS No./N° VME</b>                              |
| <b>Solicitation Closes - L'invitation prend fin<br/>at - à 02:00 PM<br/>on - le 2018-11-29</b>  | <b>Time Zone</b><br>Fuseau horaire<br>Atlantic Standard Time<br>AST |
| <b>F.O.B. - F.A.B.</b><br><b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/> |   |
| <b>Address Enquiries to: - Adresser toutes questions à:</b><br>Collier (PWA), Susan   | <b>Buyer Id - Id de l'acheteur</b><br>pwa110                        |
| <b>Telephone No. - N° de téléphone</b><br>(902) 401-3352 ( )  | <b>FAX No. - N° de FAX</b><br>(902) 496-5016                        |
| <b>Destination - of Goods, Services, and Construction:</b><br><b>Destination - des biens, services et construction:</b>   |   |

**Instructions: See Herein**

**Instructions: Voir aux présentes**

|  |  |
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| <b>Signature</b>   | <b>Date</b>                                  |

La présente modification 003 vise à répondre aux questions suivantes :

Question 1 :

Y a-t-il des métaux du sol analyse du lixiviat / résultats disponibles pour échantillon MW4-02-2 (Tableau E-3, de métaux dans les sols)? Les concentrations d'arsenic dépasser certaines de l'installation d'élimination des sols critères d'acceptation pour l'arsenic. Une analyse du lixiviat nécessaires pour confirmer l'acceptation du sol de ce domaine.

Réponse 1 :

En examinant le rapport historique qui avait l'original des résultats pour MW4-02-2, il a été noté qu'il y a une erreur dans la valeur de l'arsenic a été effectuée à l'Annexe B - Tableau E-3. La concentration d'arsenic pour échantillon MW4-02-2 (0-0.6m) devrait être 48 mg/kg (non 485 mg/kg). Cette concentration est dans les champs de tir se produisent normalement.

Question 2 :

Est-il possible de préciser les emplacements des échantillons MW4-02-2 et TH18-01-GS1 de dessin 300-1? Certains des points d'échantillonnage ne sont pas clairement indiqués sur le dessin. Ancien quai par rapport à l'ancienne aire de stationnement.

Réponse 2 :

L'emplacement des MW4-02-2, par rapport aux autres PTM dans le domaine de l'ancien parc de stationnement est fournie sur le dessin ci-joint 300-1. Ce qui concerne TH18-01, il s'agissait d'un échantillon qui était situé sur la rive sous la laisse des hautes eaux hors les limites du projet et n'est pas pertinent pour ce projet d'assainissement.

Question 3 :

Quel est le délai analyses d'échantillons de sols? Quel est le délai entre l'analyse des échantillons / la réception et être en mesure de remplacer des domaines de l'excavation? Le délai d'exécution (échantillon)

Réponse 3 :

Veuillez vous reporter à la section 31 23 33,01, clause 2.9.1.2 concernant l'échantillonnage de confirmation, l'analyse et l'évaluation en ce qui concerne le remblayage.

Question 4 :

Seriez-vous en mesure de fournir le rapport Stantec complète, y compris le trou de billes?

Réponse 4 :

Disponible trou de billes sont fournis voir ci-joint. Remplir les rapports historiques seront fournis au soumissionnaire retenu.

Question 5 :

Des échantillons ont été analysés pour les espèces en péril et EC? Si oui, cette information peut être fournie? Si non, cette analyse être fait et l'information fournie avant la date de clôture de l'appel d'offres.

Réponse 5 :

Oui, quatre échantillons pour SAR et EC ont été recueillies et traitées, tous les résultats sont ci-dessous SAR et EC des lignes directrices. La chimie des tableaux et dessin montrant les emplacements sont inclus.

Question 6 :

Pouvez-vous fournir diagraphies et l'emplacement du diagramme pour les enquêtes antérieures au site?

Réponse 6 :

Voir la réponse 4

Question 7 :

Y a-t-il des données analytiques pour le sodium ratio d'adsorption (SAR) et la conductivité électrique (EC) disponible? Si non, il sera communiqué avant la date de clôture de l'appel d'offres?

Réponse 7 :

Oui, quatre échantillons pour SAR et EC ont été recueillies et traitées, tous les résultats sont ci-dessous SAR et EC des lignes directrices. La chimie des tableaux et dessin montrant les emplacements sont inclus.

TOUTES LES AUTRES MODALITÉS ET CONDITIONS RESTENT LES MÊMES.

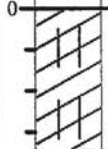
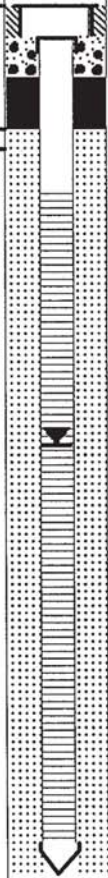


## Monitoring Well: MW1-02-3

Client: DCC

Location: Shannon Park

Project No: 20475B

Logged By: Roger Goyette

| Depth (m) | Strata Plot   | Description  | Depth/Elev. | Sample No. | Sample Type | N value | Recovery (%) | Headspace (ppm) | Well Data  | Remarks                                | Depth (m) |
|-----------|---|--|-------------|------------|-------------|---------|--------------|-----------------|--|--|-----------|
| 0         |   | Ground Surface   | 0           |            |             |         |              |                 |  |  | 0         |
|           |    | Dark brown organic sandy clay soil. No hydrocarbon odour |             | 1          | SS          | 11      | 20           | 5               |  | Flushmount Cap,<br>J-Plug<br>Bentonite |           |
|           |   |  |             | 2          | SS          | ref     | 2            | 5               |  |  |           |
| 1         |   | Cobbles and boulders                                     | -1          |            |             |         |              |                 |  |  | 1         |
| 2         |   |  | -2          |            |             |         |              |                 |  |  | 2         |
| 3         |  | Quartzite Bedrock  | -3          |            |             |         |              |                 |  |  | 3         |
| 4         |   |  | -4          |            |             |         |              |                 |  |  | 4         |
| 5         |   | End of Borehole  | -5          |            |             |         |              |                 |  |  | 5         |

Drilling Co.: Boart longyear

Hole Size: 100 mm

Drilling Method: Flight Auger, HQ core

TOC: 3.01 m

Drilling Date: 13 Nov, 2002

Water Level Date: 29 Nov, 2002



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## Monitoring Well: MW4-02-1

**Client:** DCC

**Location:** Shannon Park

**Project No:** 20475B

**Logged By:** Roger Goyette

| Depth (m) | Strata Plot | Description   | Depth/Elev. | Sample No. | Sample Type | N value | Recovery (%) | Headspace (ppm) | Well Data | Remarks                                | Depth (m) |
|-----------|-------------|---|-------------|------------|-------------|---------|--------------|-----------------|-----------|--|-----------|
| 0         |             | Ground Surface  | 0           |            |             |         |              |                 |           |  | 0         |
|           |             |   |             | 1          | SS          | 7       | 30           | 25              |           | Flushmount Cap,<br>J-Plug<br>Bentonite |           |
|           |             | Brown sandy clay w/ some gravel. Layer of black medium grained well sorted sand. No hydrocarbon odour |             | 2          | SS          | ref     | 10           | 30              |           |  |           |
| 1         |             |   | -1          |            |             |         |              |                 |           |  | 1         |
|           |             | cobbles   |             |            |             |         |              |                 |           | Screen PVC<br>slot #10                 |           |
| 2         |             |   | -2          |            |             |         |              |                 |           |  | 2         |
|           |             | Beige gravelly till with some cobbles.  |             |            |             |         |              |                 |           | Silica Sand                            |           |
| 3         |             |   | -3          |            |             |         |              |                 |           |  | 3         |
|           |             | Boulders/Bedrock  |             |            |             |         |              |                 |           |  |           |
| 4         |             |   | -4          |            |             |         |              |                 |           |  | 4         |
|           |             | End of Borehole   |             |            |             |         |              |                 |           | Well point                             |           |
| 5         |             |   | -5          |            |             |         |              |                 |           |  | 5         |

Drilling Co.: Boart longyear

Hole Size: 100 mm

Drilling Method: Flight Auger, HQ core

TOC: 3.49 m

Drilling Date: 13 Nov, 2002

Water Level Date: 29 Nov, 2002

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## Monitoring Well: MW4-02-2

**Client:** DCC

**Location:** Shannon Park

**Project No:** 20475B

**Logged By:** Roger Goyette

| Depth (m) | Strata Plot | Description  | Depth/Elev. | Sample No. | Sample Type | N value | Recovery (%) | Headspace (ppm) | Well Data | Remarks                                | Depth (m) |
|-----------|-------------|--|-------------|------------|-------------|---------|--------------|-----------------|-----------|--|-----------|
| 0         |             | Ground Surface   | 0           |            |             |         |              |                 |           |  | 0         |
|           |             | Brown silty clay w/ some gravel.<br>Layer of black medium grained<br>well sorted sandy material<br>(ashes). No Hydrocarbon odour |             | 1          | SS          | ref     | 20           | 15              |           | Flushmount Cap,<br>J-Plug<br>Bentonite |           |
| 1         |             |  | -1          |            |             |         |              |                 |           |  | 1         |
| 2         |             |  | -2          |            |             |         |              |                 |           | Screen PVC<br>slot #10                 | 2         |
| 3         |             | cobbles/Boulders   | -3          |            |             |         |              |                 |           | Silica Sand                            | 3         |
| 4         |             |  | -4          |            |             |         |              |                 |           | Well point                             | 4         |
| 5         |             | End of Borehole  | -5          |            |             |         |              |                 |           |  | 5         |

Drilling Co.: Boart longyear

Hole Size: 100 mm

Drilling Method: Flight Auger, HQ core

TOC: 3.77 m

Drilling Date: 13 Nov, 2002

Water Level Date: 29 Nov, 2002



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# TEST PIT: TP15-01

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 97.21 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |  |                                     | SAMPLE DETAILS |             |                    |                            |
|--------------------|-------------|--|-------------------------------------|----------------|-------------|--------------------|----------------------------|
| Depth              | Graphic Log | Lithologic Description                                 | Elevation (m AMSL)<br>Depth (m BGS) | Sample Number  | Sample Type | Lab Analyses       | Vapour Concentration (ppm) |
| (ft) (m)           |             | Ground Surface   | 97.21<br>0.00                       |                |             |                    | 40 80 120 160              |
| 0.5                |             | Dark brown to brown SILTY SAND with gravel and cobbles |                                     | 1              | SA          | TPH/BTEX, MET, PAH | 5                          |
| 1.0                |             |  |                                     | 2              | SA          | TPH/BTEX, MET, PAH | 0                          |
| 1.5                |             |  |                                     |                |             |                    |                            |
| 2.0                |             |  |                                     | 3              | SA          |                    | 0                          |
| 2.5                |             |  |                                     |                |             |                    |                            |
| 3.0                |             |  |                                     |                |             |                    |                            |
| 3.5                |             |  |                                     |                |             |                    |                            |
| 4.0                |             |  |                                     |                |             |                    |                            |
| 4.5                |             |  | 95.81<br>1.40                       | 4              | SA          |                    | 5                          |
| 5.0                |             | Black PEAT   |                                     |                |             |                    |                            |
| 5.5                |             |  |                                     |                |             |                    |                            |
| 6.0                |             |  | 95.38<br>1.83                       |                |             |                    |                            |
| 6.5                |             | End of TEST PIT  |                                     |                |             |                    |                            |
| 7.0                |             |  |                                     |                |             |                    |                            |
| 7.5                |             |  |                                     |                |             |                    |                            |
| 8.0                |             |  |                                     |                |             |                    |                            |
| 8.5                |             |  |                                     |                |             |                    |                            |
| 9.0                |             |  |                                     |                |             |                    |                            |
| 9.5                |             |  |                                     |                |             |                    |                            |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

Sheet 1 of 1

STANTEC BOREHOLE AND WELL V2 121413946\_SHANNON\_PARK.GPJ STANTEC - DATA TEMPLATE.GDT 1/22/16 GWHALEN



# TEST PIT: TP15-02

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 96.95 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |   | SAMPLE DETAILS                            |               |             |                       |                               |
|--------------------|-----|-------------|---|---|---------------|-------------|-----------------------|-------------------------------|
| Depth              |     | Graphic Log | Lithologic Description  | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number | Sample Type | Lab Analyses          | Vapour Concentration<br>(ppm) |
| (ft)               | (m) |             |   |   |               |             |                       |                               |
|                    |     |             | Ground Surface  | 96.95                                     |               |             |                       | ●                             |
|                    |     |             | Dark brown SILTY SAND with gravel and cobbles<br>- roots and organics | 0.00                                      | 1             | SA          |                       | 0                             |
| 0.5                | 0.2 |             |   |   |               |             |                       |                               |
| 1.0                | 0.4 |             |   | 96.49                                     | 2             | SA          |                       | 10                            |
| 1.5                | 0.6 |             | Dark brown SILTY SAND with gravel                                     | 0.46                                      |               |             |                       |                               |
| 2.0                | 0.8 |             |   |   |               |             |                       |                               |
| 2.5                | 1.0 |             |   |   | 3             | SA          |                       | 5                             |
| 3.0                | 1.2 |             |   | 95.73                                     |               |             |                       |                               |
| 3.5                | 1.4 |             | Dark brown SANDY SILT<br>- trace gravel                               | 1.22                                      |               |             |                       |                               |
| 4.0                | 1.6 |             |   |   | 4             | SA          | TPH/BTEX, MET,<br>PAH | 10                            |
| 4.5                | 1.8 |             |   | 95.12                                     |               |             |                       |                               |
| 5.0                | 2.0 |             | End of TEST PIT   | 1.83                                      |               |             |                       |                               |
| 5.5                | 2.2 |             |   |   |               |             |                       |                               |
| 6.0                | 2.4 |             |   |   |               |             |                       |                               |
| 6.5                | 2.6 |             |   |   |               |             |                       |                               |
| 7.0                | 2.8 |             |   |   |               |             |                       |                               |
| 7.5                |     |             |   |   |               |             |                       |                               |
| 8.0                |     |             |   |   |               |             |                       |                               |
| 8.5                |     |             |   |   |               |             |                       |                               |
| 9.0                |     |             |   |   |               |             |                       |                               |
| 9.5                |     |             |   |   |               |             |                       |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

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# TEST PIT: TP15-03

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 98.04 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |  | SAMPLE DETAILS                      |               |             |                    |                            |
|--------------------|-----|-------------|--|-------------------------------------|---------------|-------------|--------------------|----------------------------|
| Depth              |     | Graphic Log | Lithologic Description                                 | Elevation (m AMSL)<br>Depth (m BGS) | Sample Number | Sample Type | Lab Analyses       | Vapour Concentration (ppm) |
| (ft)               | (m) |             |  |                                     |               |             |                    |                            |
|                    |     |             | Ground Surface   | 98.04                               |               |             |                    |                            |
|                    |     |             | Red brown TOPSOIL with organics                        | 0.00                                | 1             | SA          |                    | 5                          |
| 0.5                | 0.2 |             | Brown SANDY SILT<br>- some gravel                      | 0.15                                | 2             | SA          | TPH/BTEX, MET, PAH | 0                          |
| 1.0                | 0.4 |             |  |                                     |               |             |                    |                            |
| 1.5                | 0.6 |             |  |                                     |               |             |                    |                            |
| 2.0                | 0.8 |             | Black PEAT   | 97.33                               |               |             |                    |                            |
| 2.5                |     |             |  | 0.71                                |               |             |                    |                            |
|                    |     |             | Grey brown fine SAND<br>- some sandstone<br>- boulders | 97.23                               | 3             | SA          | TPH/BTEX, MET, PAH | 10                         |
| 3.0                | 1.0 |             |  | 0.81                                |               |             |                    |                            |
| 3.5                | 1.2 |             |  |                                     |               |             |                    |                            |
| 4.0                | 1.4 |             | End of TEST PIT  | 96.82                               |               |             |                    |                            |
| 4.5                | 1.6 |             |  | 1.22                                |               |             |                    |                            |
| 5.0                | 1.8 |             |  |                                     |               |             |                    |                            |
| 5.5                | 2.0 |             |  |                                     |               |             |                    |                            |
| 6.0                | 2.2 |             |  |                                     |               |             |                    |                            |
| 6.5                | 2.4 |             |  |                                     |               |             |                    |                            |
| 7.0                | 2.6 |             |  |                                     |               |             |                    |                            |
| 7.5                | 2.8 |             |  |                                     |               |             |                    |                            |
| 8.0                |     |             |  |                                     |               |             |                    |                            |
| 8.5                |     |             |  |                                     |               |             |                    |                            |
| 9.0                |     |             |  |                                     |               |             |                    |                            |
| 9.5                |     |             |  |                                     |               |             |                    |                            |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

Sheet 1 of 1

# TEST PIT: TP15-04

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 98.50 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |   |   | SAMPLE DETAILS |             |                    |                                   |
|--------------------|-----|-------------|---|---|----------------|-------------|--------------------|-----------------------------------|
| Depth              |     | Graphic Log | Lithologic Description                              | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses       | Vapour Concentration<br><br>(ppm) |
| (ft)               | (m) |             |   |   |                |             |                    |                                   |
|                    |     |             | Ground Surface                                      | 98.50                                     |                |             |                    | ●                                 |
|                    |     |             | Black SAND with ash and fine gravel                 | 0.00                                      | 1              | SA          | TPH/BTEX, MET, PAH | 0                                 |
| 0.5                | 0.2 |             |   | 98.20                                     |                |             |                    |                                   |
| 1.0                | 0.4 |             | Brown grey SILTY SAND with gravel<br>- some cobbles | 0.30                                      | 2              | SA          |                    | 0                                 |
| 1.5                |     |             |   |   |                |             |                    |                                   |
| 2.0                | 0.6 |             |   |   |                |             |                    |                                   |
| 2.5                | 0.8 |             |   |   |                |             |                    |                                   |
| 3.0                | 1.0 |             |   |   | 3              | SA          |                    | 0                                 |
| 3.5                |     |             |   |   |                |             |                    |                                   |
| 4.0                | 1.2 |             |   |   |                |             |                    |                                   |
| 4.5                | 1.4 |             |   |   |                |             |                    |                                   |
| 5.0                | 1.6 |             |   |   | 4              | SA          |                    | 0                                 |
| 5.5                |     |             |   |   |                |             |                    |                                   |
| 6.0                | 1.8 |             |   | 96.67                                     |                |             |                    |                                   |
| 6.0                |     |             | End of TEST PIT                                     | 1.83                                      |                |             |                    |                                   |
| 6.5                | 2.0 |             |   |   |                |             |                    |                                   |
| 7.0                | 2.2 |             |   |   |                |             |                    |                                   |
| 7.5                |     |             |   |   |                |             |                    |                                   |
| 8.0                | 2.4 |             |   |   |                |             |                    |                                   |
| 8.5                | 2.6 |             |   |   |                |             |                    |                                   |
| 9.0                | 2.8 |             |   |   |                |             |                    |                                   |
| 9.5                |     |             |   |   |                |             |                    |                                   |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

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# TEST PIT: TP15-05

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 97.91 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |   |   | SAMPLE DETAILS |             |                    |                               |
|--------------------|-------------|---|---|----------------|-------------|--------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description                              | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses       | Vapour Concentration<br>(ppm) |
|                    |             | Ground Surface                                      | 97.91                                     |                |             |                    |                               |
|                    |             | Dark brown gravel<br>- some silty sand              | 0.00                                      | 1              | SA          |                    | 5                             |
| 0.5                |             |   |   |                |             |                    |                               |
| 1.0                |             | Brown grey SILTY SAND with gravel<br>- some cobbles | 97.71                                     | 2              | SA          | TPH/BTEX, MET, PAH | 10                            |
| 1.5                |             |   | 0.20                                      |                |             |                    |                               |
| 2.0                |             |   |   |                |             |                    |                               |
| 2.5                |             |   |   |                |             |                    |                               |
| 3.0                |             |   |   | 3              | SA          |                    | 0                             |
| 3.5                |             |   |   |                |             |                    |                               |
| 4.0                |             |   |   |                |             |                    |                               |
| 4.5                |             |   |   |                |             |                    |                               |
| 5.0                |             |   |   | 4              | SA          |                    | 0                             |
| 5.5                |             |   |   |                |             |                    |                               |
| 6.0                |             |   |   |                |             |                    |                               |
| 6.5                |             | End of TEST PIT                                     | 96.08                                     |                |             |                    |                               |
| 7.0                |             |   | 1.83                                      |                |             |                    |                               |
| 7.5                |             |   |   |                |             |                    |                               |
| 8.0                |             |   |   |                |             |                    |                               |
| 8.5                |             |   |   |                |             |                    |                               |
| 9.0                |             |   |   |                |             |                    |                               |
| 9.5                |             |   |   |                |             |                    |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



# TEST PIT: TP15-06

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 97.73 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |                 |   | SAMPLE DETAILS                            |               |             |                    |                                   |
|--------------------|-----|-----------------|---|---|---------------|-------------|--------------------|-----------------------------------|
| Depth              |     | Graphic Log     | Lithologic Description                                | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number | Sample Type | Lab Analyses       | Vapour Concentration<br><br>(ppm) |
| (ft)               | (m) |                 |   |   |               |             |                    |                                   |
|                    |     |                 | Ground Surface  | 97.73                                     |               |             |                    | ●                                 |
|                    |     |                 | Brown SILTY SAND<br>- some organics<br>- trace gravel | 0.00                                      | 1             | SA          | TPH/BTEX, MET, PAH | 5                                 |
| 0.5                | 0.2 |                 | Brown grey SILTY SAND with gravel and cobbles         | 0.15                                      | 2             | SA          |                    | 5                                 |
| 1.0                | 0.4 |                 |   |   |               |             |                    |                                   |
| 1.5                | 0.6 |                 |   |   |               |             |                    |                                   |
| 2.0                | 0.8 |                 |   |   |               |             |                    |                                   |
| 2.5                | 1.0 |                 |   |   |               |             |                    |                                   |
| 3.0                | 1.2 |                 |   |   |               |             |                    |                                   |
| 3.5                | 1.4 |                 |   |   |               |             |                    |                                   |
| 4.0                | 1.6 |                 |   |   |               |             |                    |                                   |
| 4.5                | 1.8 |                 |   |   |               |             |                    |                                   |
| 5.0                |     |                 |   |   | 4             | SA          | TPH/BTEX, MET, PAH | 5                                 |
| 5.5                |     |                 |   |   |               |             |                    |                                   |
| 6.0                |     |                 |   | 95.90                                     |               |             |                    |                                   |
| 6.0                |     | End of TEST PIT |   | 1.83                                      |               |             |                    |                                   |
| 6.5                | 2.0 |                 |   |   |               |             |                    |                                   |
| 7.0                | 2.2 |                 |   |   |               |             |                    |                                   |
| 7.5                | 2.4 |                 |   |   |               |             |                    |                                   |
| 8.0                | 2.6 |                 |   |   |               |             |                    |                                   |
| 8.5                | 2.8 |                 |   |   |               |             |                    |                                   |
| 9.0                |     |                 |   |   |               |             |                    |                                   |
| 9.5                |     |                 |   |   |               |             |                    |                                   |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

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# TEST PIT: TP15-07

**Project:** SHANNON PARK  
**Client:** PUBLIC WORKS & GOVERNMENT SERVICES CANADA  
**Location:** SHANNON PARK, DARTMOUTH, NS  
**Number:** 121413946  
**Field investigator:** D. BUGDEN  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 14-Dec-2015  
**Ground surface elevation:** 97.30 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |   | SAMPLE DETAILS                            |               |             |                       |                               |
|--------------------|-----|-------------|---|---|---------------|-------------|-----------------------|-------------------------------|
| Depth              |     | Graphic Log | Lithologic Description                        | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number | Sample Type | Lab Analyses          | Vapour Concentration<br>(ppm) |
| (ft)               | (m) |             |   |   |               |             |                       |                               |
|                    |     |             | Ground Surface                                | 97.30                                     |               |             |                       | ●                             |
|                    |     |             | Brown SILTY SAND<br>- trace gravel            | 0.00                                      | 1             | SA          |                       | 0                             |
| 0.5                | 0.2 |             | Brown grey SILTY SAND with gravel and cobbles | 0.15                                      | 2             | SA          | TPH/BTEX, MET,<br>PAH | 0                             |
| 1.0                | 0.4 |             |   |   |               |             |                       |                               |
| 1.5                | 0.6 |             |   |   |               |             |                       |                               |
| 2.0                | 0.8 |             |   |   |               |             |                       |                               |
| 2.5                | 1.0 |             |   |   | 3             | SA          |                       | 0                             |
| 3.0                | 1.2 |             |   |   |               |             |                       |                               |
| 3.5                | 1.4 |             |   |   |               |             |                       |                               |
| 4.0                | 1.6 |             |   |   | 4             | SA          |                       | 0                             |
| 4.5                | 1.8 |             |   |   |               |             |                       |                               |
| 5.0                |     |             |   |   |               |             |                       |                               |
| 5.5                |     |             |   |   |               |             |                       |                               |
| 6.0                |     |             | End of TEST PIT                               | 95.47                                     |               |             |                       |                               |
|                    |     |             |   | 1.83                                      |               |             |                       |                               |
| 6.5                | 2.0 |             |   |   |               |             |                       |                               |
| 7.0                | 2.2 |             |   |   |               |             |                       |                               |
| 7.5                | 2.4 |             |   |   |               |             |                       |                               |
| 8.0                | 2.6 |             |   |   |               |             |                       |                               |
| 8.5                | 2.8 |             |   |   |               |             |                       |                               |
| 9.0                |     |             |   |   |               |             |                       |                               |
| 9.5                |     |             |   |   |               |             |                       |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: M. FLINN

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## TEST PIT: TP6

**Project:** TUFTS COVE  
**Client:** MILLBROOK FIRST NATION  
**Location:** TUFTS COVE, DARTMOUTH, NOVA SCOTIA  
**Number:** 121620293  
**Field investigator:** D. GRAHAM  
**Contractor:** DEXTER

**Drilling method:** 200 KOMATSU EXCAVATOR  
**Date started/completed:** 14-Dec-2016  
**Ground surface elevation:** 8.33 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |  |   | SAMPLE DETAILS |             |
|--------------------|-----|-------------|--|---|----------------|-------------|
| Depth              |     | Graphic Log | Lithologic Description   | Elevation<br>(m AMSL)<br>Depth<br>(m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |             |  |   |                |             |
|                    |     |             | Ground Surface   | 8.33                                      |                |             |
|                    |     |             | ROOTMAT/TOPSOIL  | 0.00                                      |                |             |
| 0.5                |     |             |  |   |                |             |
|                    | 0.2 |             |  |   |                |             |
| 1.0                |     |             |  | 8.03                                      |                |             |
|                    | 0.4 |             | Compact reddish brown silty sand TILL<br>- trace to some gravel<br>- some cobbles and boulders | 0.30                                      | 1              | SA          |
| 1.5                |     |             |  |   |                |             |
| 2.0                | 0.6 |             |  |   |                |             |
| 2.5                |     |             |  |   |                |             |
|                    | 0.8 |             |  |   |                |             |
| 3.0                |     |             |  |   | 2              | SA          |
|                    | 1.0 |             |  |   |                |             |
| 3.5                |     |             |  |   |                |             |
|                    | 1.2 |             | - bedrock inferred at 1.2 metres at west end of test pit                                       |   |                |             |
| 4.0                |     |             |  |   |                |             |
|                    | 1.4 |             |  |   |                |             |
| 4.5                |     |             |  |   |                |             |
|                    | 1.6 |             |  |   |                |             |
| 5.0                |     |             |  |   |                |             |
|                    | 1.8 |             | - refusal on inferred bedrock  | 6.50                                      |                |             |
| 6.0                |     |             | End of TEST PIT  | 1.83                                      |                |             |
|                    |     |             |  |   |                |             |
| 6.5                |     |             |  |   |                |             |

**Notes:**  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 n/a - not available



Drawn By/Checked By: M. FLINN

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STANTEC BOREHOLE AND WELL V2 121420293\_TUFTS\_COVE.GPJ STANTEC - DATA TEMPLATE.GDT 2/1/17 GWHALEN

## TEST PIT: TP7

**Project:** TUFTS COVE  
**Client:** MILLBROOK FIRST NATION  
**Location:** TUFTS COVE, DARTMOUTH, NOVA SCOTIA  
**Number:** 121620293  
**Field investigator:** D. GRAHAM  
**Contractor:** DEXTER

**Drilling method:** 200 KOMATSU EXCAVATOR  
**Date started/completed:** 14-Dec-2016  
**Ground surface elevation:** 5.00 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |  |                    |               | SAMPLE DETAILS |             |
|--------------------|-------------|--|--------------------|---------------|----------------|-------------|
| Depth              | Graphic Log | Lithologic Description   | Elevation (m AMSL) | Depth (m BGS) | Sample Number  | Sample Type |
| (ft) (m)           |             | Ground Surface   | 5.00               |               |                |             |
|                    |             | ROOTMAT/TOPSOIL  | 0.00               |               |                |             |
| 1                  |             |  | 4.70               |               |                |             |
|                    |             | Orange-brown SAND with silt<br>- some root hairs   | 0.30               |               |                |             |
| 0.5                |             |  | 4.54               |               |                |             |
| 2                  |             | Compact to dense brown silty sand with gravel TILL<br>- occasional cobbles and boulders<br>- frequency of cobbles and boulders increasing with depth | 0.46               |               | 1              | SA          |
| 3                  |             |  |                    |               |                |             |
| 4                  |             |  |                    |               | 2              | SA          |
| 5                  |             |  |                    |               |                |             |
| 6                  |             |  |                    |               |                |             |
| 7                  |             |  |                    |               |                |             |
| 8                  |             |  |                    |               |                |             |
| 9                  |             |  |                    |               |                |             |
| 10                 |             |  |                    |               |                |             |
| 11                 |             |  |                    |               | 3              | SA          |
| 12                 |             |  |                    |               |                |             |
| 13                 |             |  |                    |               |                |             |
| 14                 |             | End of TEST PIT  | 0.73               |               |                |             |
|                    |             |  | 4.27               |               |                |             |
| 15                 |             |  |                    |               |                |             |
| 16                 |             |  |                    |               |                |             |
| 17                 |             |  |                    |               |                |             |

Notes:  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 n/a - not available



Drawn By/Checked By: M. FLINN

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# TEST PIT: TP8

**Project:** TUFTS COVE  
**Client:** MILLBROOK FIRST NATION  
**Location:** TUFTS COVE, DARTMOUTH, NOVA SCOTIA  
**Number:** 121620293  
**Field investigator:** D. GRAHAM  
**Contractor:** DEXTER

**Drilling method:** 200 KOMATSU EXCAVATOR  
**Date started/completed:** 14-Dec-2016  
**Ground surface elevation:** 7.68 m AMSL  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |   |                                     |  | SAMPLE DETAILS |             |
|--------------------|-------------|---|-------------------------------------|--|----------------|-------------|
| Depth              | Graphic Log | Lithologic Description  | Elevation (m AMSL)<br>Depth (m BGS) |  | Sample Number  | Sample Type |
| (ft) (m)           |             | Ground Surface  | 7.68                                |  |                |             |
|                    |             | ROOTMAT/TOPSOIL   | 0.00                                |  |                |             |
|                    |             |   | 7.53                                |  |                |             |
| 1                  |             | FILL: Brown silty sand<br>- frequent roots<br>- occasional cobbles and boulders   | 0.15                                |  | 1              | SA          |
| 2                  |             |   |                                     |  | 2              | SA          |
| 3                  |             |   | 6.77                                |  |                |             |
| 4                  |             | Dense brown silty sand with gravel TILL<br>- occasional to some cobbles and boulders<br>- bedrock inferred at 1.2 metres at north end of test pit | 0.91                                |  |                |             |
| 5                  |             |   |                                     |  | 3              | SA          |
| 6                  |             |   |                                     |  |                |             |
| 7                  |             |   |                                     |  |                |             |
| 8                  |             |   |                                     |  |                |             |
| 9                  |             |   |                                     |  |                |             |
| 10                 |             | - refusal on inferred bedrock   | 4.63                                |  |                |             |
|                    |             | End of TEST PIT   | 3.05                                |  |                |             |
| 11                 |             |   |                                     |  |                |             |
| 12                 |             |   |                                     |  |                |             |
| 13                 |             |   |                                     |  |                |             |
| 14                 |             |   |                                     |  |                |             |
| 15                 |             |   |                                     |  |                |             |
| 16                 |             |   |                                     |  |                |             |
| 17                 |             |   |                                     |  |                |             |
| 18                 |             |   |                                     |  |                |             |
| 19                 |             |   |                                     |  |                |             |
| 20                 |             |   |                                     |  |                |             |
| 21                 |             |   |                                     |  |                |             |
| 22                 |             |   |                                     |  |                |             |
| 23                 |             |   |                                     |  |                |             |
| 24                 |             |   |                                     |  |                |             |
| 25                 |             |   |                                     |  |                |             |
| 26                 |             |   |                                     |  |                |             |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available




Drawn By/Checked By: M. FLINN

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# TEST PIT: TP16-01

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |   |  |               | SAMPLE DETAILS |             |
|--------------------|-----|---|--|---------------|----------------|-------------|
| Depth              |     | Graphic Log   | Lithologic Description                               | Depth (m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |   |  |               |                |             |
|                    |     |   | Ground Surface                                       |               |                |             |
| 0.5                | 0.2 |  | Brown to orange silty SAND with cobbles and boulders | 0.00          | 1              | SA          |
| 1.0                | 0.4 |   |  |               |                |             |
| 1.5                | 0.6 |   |  |               |                |             |
| 2.0                | 0.6 |   |  |               |                |             |
| 2.5                | 0.8 |   |  |               |                |             |
| 3.0                | 1.0 |   | End of TEST PIT                                      | 0.60          |                |             |
| 3.5                | 1.2 |   |  |               |                |             |
| 4.0                | 1.4 |   |  |               |                |             |
| 4.5                | 1.6 |   |  |               |                |             |
| 5.0                | 1.8 |   |  |               |                |             |
| 5.5                | 2.0 |   |  |               |                |             |
| 6.0                | 2.2 |   |  |               |                |             |
| 6.5                | 2.4 |   |  |               |                |             |
| 7.0                | 2.6 |   |  |               |                |             |
| 7.5                | 2.8 |   |  |               |                |             |
| 8.0                |     |   |  |               |                |             |
| 8.5                |     |   |  |               |                |             |
| 9.0                |     |   |  |               |                |             |
| 9.5                |     |   |  |               |                |             |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available



Drawn By/Checked By: M. DUGUAY

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## TEST PIT: TP16-02

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |  |               | SAMPLE DETAILS |             |
|--------------------|-------------|--|---------------|----------------|-------------|
| Depth              | Graphic Log | Lithologic Description                                 | Depth (m BGS) | Sample Number  | Sample Type |
| (ft) (m)           |             | Ground Surface   |               |                |             |
|                    |             | ORGANIC MATERIAL                                       | 0.00          |                |             |
| 0.5                |             | Dark brown to brown silty SAND with gravel and cobbles | 0.15          | 1              | SA          |
| 0.2                |             |  |               |                |             |
| 1.0                |             |  |               |                |             |
| 0.4                |             |  |               |                |             |
| 1.5                |             |  |               | 2              | SA          |
| 2.0                |             |  |               |                |             |
| 0.6                |             |  |               |                |             |
| 2.5                |             |  |               |                |             |
| 3.0                |             |  |               |                |             |
| 0.8                |             |  |               |                |             |
| 3.5                |             |  |               |                |             |
| 1.0                |             |  |               |                |             |
| 4.0                |             |  |               |                |             |
| 1.2                |             |  |               |                |             |
| 4.5                |             |  |               |                |             |
| 1.4                |             |  |               |                |             |
| 5.0                |             | End of TEST PIT  | 1.60          |                |             |
| 1.6                |             |  |               |                |             |
| 5.5                |             |  |               |                |             |
| 1.8                |             |  |               |                |             |
| 6.0                |             |  |               |                |             |
| 2.0                |             |  |               |                |             |
| 6.5                |             |  |               |                |             |
| 2.2                |             |  |               |                |             |
| 7.0                |             |  |               |                |             |
| 2.4                |             |  |               |                |             |
| 7.5                |             |  |               |                |             |
| 2.6                |             |  |               |                |             |
| 8.0                |             |  |               |                |             |
| 2.8                |             |  |               |                |             |
| 8.5                |             |  |               |                |             |
| 2.8                |             |  |               |                |             |
| 9.0                |             |  |               |                |             |
| 2.8                |             |  |               |                |             |
| 9.5                |             |  |               |                |             |
| 2.8                |             |  |               |                |             |

Notes:  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 n/a - not available



Drawn By/Checked By: M. DUGUAY


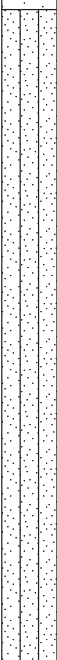



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STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN

# TEST PIT: TP16-03

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |   |  |               | SAMPLE DETAILS |             |
|--------------------|-----|---|--|---------------|----------------|-------------|
| Depth              |     | Graphic Log   | Lithologic Description                                 | Depth (m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |   |  |               |                |             |
|                    |     |    | Ground Surface   | 0.00          |                |             |
|                    |     |    | ORGANIC material                                       |               |                |             |
| 0.5                | 0.2 |   | Dark brown to brown silty SAND with gravel and cobbles | 0.15          | 1              | SA          |
| 1.0                | 0.4 |   |  |               |                |             |
| 1.5                | 0.6 |   |  |               |                |             |
| 2.0                | 0.8 |   |  |               | 2              | SA          |
| 2.5                | 1.0 |   |  |               |                |             |
| 3.0                | 1.2 |   |  |               |                |             |
| 3.5                | 1.4 |   |  |               | 3              | SA          |
| 4.0                | 1.6 |   |  |               |                |             |
| 4.5                | 1.8 |   |  |               |                |             |
| 5.0                | 2.0 |   |  |               | 4              | SA          |
| 5.5                | 2.2 |   |  |               |                |             |
| 6.0                | 2.4 |   |  |               |                |             |
| 6.5                | 2.6 | 5   | SA   |               |                |             |
| 7.0                | 2.8 |   |  |               |                |             |
| 7.5                | 3.0 |   |  |               |                |             |
| 8.0                | 3.2 |   |  |               |                |             |
| 8.5                | 3.4 |   |  |               |                |             |
| 9.0                | 3.6 |   |  |               |                |             |
| 9.5                | 3.8 |   |  |               |                |             |
|                    |     |  | Black PEAT   | 1.80          |                |             |
|                    |     |  | Grey silty CLAY with gravel<br>- wet                   | 2.00          |                |             |
| 7.0                | 2.8 |  | End of TEST PIT  | 2.80          |                |             |
| 7.5                | 3.0 |   |  |               |                |             |
| 8.0                | 3.2 |   |  |               |                |             |
| 8.5                | 3.4 |   |  |               |                |             |
| 9.0                | 3.6 |   |  |               |                |             |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available



Drawn By/Checked By: M. DUGUAY


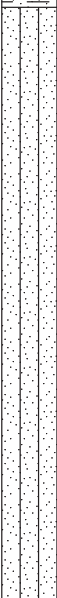
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STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN

# TEST PIT: TP16-04

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |  |  |               | SAMPLE DETAILS |             |
|--------------------|-----|--|--|---------------|----------------|-------------|
| Depth              |     | Graphic Log  | Lithologic Description                         | Depth (m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |  | Ground Surface                                 |               |                |             |
|                    |     |   | Black organic material - roots                 | 0.00          |                |             |
| 0.5                | 0.2 |  |  |               |                |             |
| 1.0                | 0.4 |  | Brown grey silty SAND with gravel and boulders | 0.30          | 1              | SA          |
| 1.5                | 0.6 |  |  |               |                |             |
| 2.0                | 0.8 |  |  |               |                |             |
| 2.5                | 1.0 |  |  |               | 2              | SA          |
| 3.0                | 1.2 |  |  |               |                |             |
| 3.5                | 1.4 |  |  |               |                |             |
| 4.0                | 1.6 |  |  |               |                |             |
| 4.5                | 1.8 |  |  |               | 3              | SA          |
| 5.0                | 2.0 |  |  |               |                |             |
| 5.5                | 2.2 |  |  |               |                |             |
| 6.0                | 2.4 |  |  |               |                |             |
| 6.5                | 2.6 |  |  |               |                |             |
| 7.0                | 2.8 |  |  |               |                |             |
| 7.5                |     |  |  |               |                |             |
| 8.0                |     |  |  |               |                |             |
| 8.5                |     |  |  |               |                |             |
| 9.0                |     |  |  |               |                |             |
| 9.5                |     |  |  |               |                |             |
|                    |     |  | End of TEST PIT                                | 1.80          |                |             |

Notes:  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 n/a - not available



Drawn By/Checked By: M. DUGUAY

Sheet 1 of 1

STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN

# TEST PIT: TP16-05

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |  |               | SAMPLE DETAILS |             |
|--------------------|-----|-------------|--|---------------|----------------|-------------|
| Depth              |     | Graphic Log | Lithologic Description   | Depth (m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |             |  |               |                |             |
|                    |     |             | Ground Surface   |               |                |             |
|                    |     |             | Grey to brown silty SAND and gravel                                    | 0.00          | 1              | SA          |
| 0.5                | 0.2 |             | Brown to grey silty SAND with cobbles and gravel<br>- boulders present | 0.20          |                |             |
| 1.0                | 0.4 |             |  |               | 2              | SA          |
| 1.5                | 0.6 |             |  |               |                |             |
| 2.0                | 0.8 |             |  |               | 3              | SA          |
| 2.5                | 1.0 |             |  |               |                |             |
| 3.0                | 1.2 |             |  |               | 4              | SA          |
| 3.5                | 1.4 |             |  |               |                |             |
| 4.0                | 1.6 |             |  |               |                |             |
| 4.5                | 1.8 |             |  |               |                |             |
| 5.0                | 2.0 |             |  |               |                |             |
| 5.5                | 2.2 |             |  |               |                |             |
| 6.0                | 2.4 |             |  |               |                |             |
| 6.5                |     |             |  |               |                |             |
| 7.0                |     |             |  |               |                |             |
| 7.5                |     |             |  |               |                |             |
| 8.0                |     |             |  |               |                |             |
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Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available



Drawn By/Checked By: M. DUGUAY

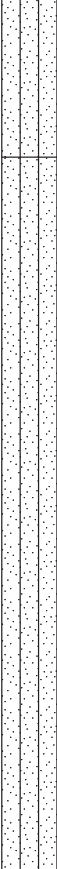
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STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN

# TEST PIT: TP16-06

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |  |   |               |               | SAMPLE DETAILS |  |
|--------------------|-----|--|---|---------------|---------------|----------------|--|
| Depth              |     | Graphic Log  | Lithologic Description  | Depth (m BGS) | Sample Number | Sample Type    |  |
| (ft)               | (m) |  |   |               |               |                |  |
|                    |     |  | Ground Surface  |               |               |                |  |
| 0.5                | 0.2 |  | Dark brown silty SAND with gravel and cobbles<br>- roots and organic material | 0.00          | 1             | SA             |  |
| 1.0                | 0.4 |  | Brown to dark brown silty SAND with gravel and cobbles                        | 0.40          |               |                |  |
| 1.5                | 0.6 |  |   |               | 2             | SA             |  |
| 2.0                | 0.8 |  |   |               |               |                |  |
| 2.5                | 1.0 |  |   |               |               |                |  |
| 3.0                | 1.2 |  |   |               | 3             | SA             |  |
| 3.5                | 1.4 |  |   |               |               |                |  |
| 4.0                | 1.6 |  |   |               |               |                |  |
| 4.5                | 1.8 |  |   |               | 4             | SA             |  |
| 5.0                | 2.0 |  |   |               |               |                |  |
| 5.5                | 2.2 |  |   |               |               |                |  |
| 6.0                | 2.4 |  |   |               |               |                |  |
| 6.5                | 2.6 |  |   |               |               |                |  |
| 7.0                | 2.8 |  |   |               |               |                |  |
| 7.5                |     |  | End of TEST PIT   | 2.20          |               |                |  |
| 8.0                |     |  |   |               |               |                |  |
| 8.5                |     |  |   |               |               |                |  |
| 9.0                |     |  |   |               |               |                |  |
| 9.5                |     |  |   |               |               |                |  |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available



Drawn By/Checked By: M. DUGUAY

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STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN



# TEST PIT: TP16-07

**Project:** SUPPLEMENTAL ESA  
**Client:** MILBROOK FIRST NATION  
**Location:** TUFTS COVE  
**Number:** 121414424  
**Field investigator:** H. NEWELL  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** EXCAVATOR  
**Date started/completed:** 15-Sep-2016  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |     |             |   |               | SAMPLE DETAILS |             |
|--------------------|-----|-------------|---|---------------|----------------|-------------|
| Depth              |     | Graphic Log | Lithologic Description                              | Depth (m BGS) | Sample Number  | Sample Type |
| (ft)               | (m) |             |   |               |                |             |
|                    |     |             | Ground Surface                                      |               |                |             |
|                    |     |             | Dark brown GRAVEL<br>- some silty sand              | 0.00          |                |             |
| 0.5                |     |             |   |               |                |             |
|                    | 0.2 |             | Brown grey silty SAND with gravel<br>- some cobbles | 0.20          |                |             |
| 1.0                |     |             |   |               |                |             |
|                    | 0.4 |             |   |               |                |             |
| 1.5                |     |             |   |               |                |             |
|                    | 0.6 |             |   |               |                |             |
| 2.0                |     |             |   |               |                |             |
|                    | 0.8 |             |   |               |                |             |
| 2.5                |     |             |   |               |                |             |
|                    | 1.0 |             |   |               |                |             |
| 3.0                |     |             |   |               |                |             |
|                    | 1.2 |             |   |               |                |             |
| 3.5                |     |             |   |               |                |             |
|                    | 1.4 |             |   |               |                |             |
| 4.0                |     |             |   |               |                |             |
|                    | 1.6 |             |   |               |                |             |
| 4.5                |     |             |   |               |                |             |
|                    | 1.8 |             |   |               |                |             |
| 5.0                |     |             |   |               |                |             |
|                    | 2.0 |             |   |               |                |             |
| 5.5                |     |             | - boulders present                                  |               |                |             |
|                    | 2.2 |             |   |               |                |             |
| 6.0                |     |             |   |               | 1              | SA          |
|                    | 2.4 |             |   |               |                |             |
| 6.5                |     |             | End of TEST PIT                                     | 2.00          |                |             |
|                    | 2.6 |             |   |               |                |             |
| 7.0                |     |             |   |               |                |             |
|                    | 2.8 |             |   |               |                |             |
| 7.5                |     |             |   |               |                |             |
|                    | 3.0 |             |   |               |                |             |
| 8.0                |     |             |   |               |                |             |
|                    | 3.2 |             |   |               |                |             |
| 8.5                |     |             |   |               |                |             |
|                    | 3.4 |             |   |               |                |             |
| 9.0                |     |             |   |               |                |             |
|                    | 3.6 |             |   |               |                |             |
| 9.5                |     |             |   |               |                |             |
|                    | 3.8 |             |   |               |                |             |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
n/a - not available



Drawn By/Checked By: M. DUGUAY

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STANTEC BOREHOLE AND WELL V2 121414424\_TUFTSCOVE\_SEPT2016.GPJ STANTEC - DATA TEMPLATE.GDT 10/25/16 GWHALEN

# BOREHOLE: BH17-01

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 24-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 45228.334805  
**Northing:** 4947733.76698

| SUBSURFACE PROFILE |             |   |                  |               | SAMPLE DETAILS |          |         |                 |                               |
|--------------------|-------------|---|------------------|---------------|----------------|----------|---------|-----------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description  | Depth<br>(m BGS) | Sample Number | Sample Type    | Recovery | N Value | Lab Analyses    | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface  | 0.00             |               |                |          |         |                 |                               |
| 0.5                |             | Silty BOULDERS and COBBLES<br>- dry to moist<br>- refusal at 1.52 m BGS |                  |               |                |          |         |                 |                               |
| 1.0                |             |   |                  |               |                |          |         |                 |                               |
| 1.5                |             |   |                  |               |                |          |         |                 |                               |
| 2.0                |             |   |                  | 1             | SS             | 300      | 77/229  | CCME/PHCs, FOCs | 10                            |
| 2.5                |             |   |                  |               |                |          |         |                 |                               |
| 3.0                |             |   |                  |               |                |          |         |                 |                               |
| 3.5                |             |   |                  |               |                |          |         |                 |                               |
| 4.0                |             |   |                  | 2             | AS             | n/a      | n/a     |                 | 5                             |
| 4.5                |             |   |                  |               |                |          |         |                 |                               |
| 5.0                |             | End of Borehole   | 1.52             |               |                |          |         |                 |                               |
| 5.5                |             |   |                  |               |                |          |         |                 |                               |
| 6.0                |             |   |                  |               |                |          |         |                 |                               |
| 6.5                |             |   |                  |               |                |          |         |                 |                               |
| 7.0                |             |   |                  |               |                |          |         |                 |                               |
| 7.5                |             |   |                  |               |                |          |         |                 |                               |
| 8.0                |             |   |                  |               |                |          |         |                 |                               |
| 8.5                |             |   |                  |               |                |          |         |                 |                               |
| 9.0                |             |   |                  |               |                |          |         |                 |                               |
| 9.5                |             |   |                  |               |                |          |         |                 |                               |
| 10.0               |             |   |                  |               |                |          |         |                 |                               |
| 10.5               |             |   |                  |               |                |          |         |                 |                               |
| 11.0               |             |   |                  |               |                |          |         |                 |                               |
| 11.5               |             |   |                  |               |                |          |         |                 |                               |
| 12.0               |             |   |                  |               |                |          |         |                 |                               |
| 12.5               |             |   |                  |               |                |          |         |                 |                               |
| 13.0               |             |   |                  |               |                |          |         |                 |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
SS - split-spoon sample  
AS - auger sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# BOREHOLE: BH17-02

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 24-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 451238.801437  
**Northing:** 4947411.58937

| SUBSURFACE PROFILE |             |                        |                  |               | SAMPLE DETAILS |          |         |                    |                               |
|--------------------|-------------|------------------------|------------------|---------------|----------------|----------|---------|--------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description | Depth<br>(m BGS) | Sample Number | Sample Type    | Recovery | N Value | Lab Analyses       | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface         | 0.00             |               |                |          |         |                    |                               |
| 0.5                |             | Sandy GRAVEL - dry     |                  |               |                |          |         |                    |                               |
| 1.0                |             |                        |                  |               |                |          |         |                    |                               |
| 1.5                |             |                        |                  |               |                |          |         |                    |                               |
| 2.0                |             |                        |                  | 1             | SS             | 450      | 19      | PAHs, PCBs, METALS | 10                            |
| 2.5                |             |                        |                  |               |                |          |         |                    |                               |
| 3.0                |             |                        |                  |               |                |          |         |                    |                               |
| 3.5                |             | Brown SILT             | 0.91             |               |                |          |         |                    |                               |
| 4.0                |             |                        |                  | 2             | SS             | 180      | 17      |                    | 5                             |
| 4.5                |             |                        |                  |               |                |          |         |                    |                               |
| 5.0                |             |                        |                  |               |                |          |         |                    |                               |
| 5.5                |             |                        |                  |               |                |          |         |                    |                               |
| 6.0                |             |                        |                  | 3             | SS             | 180      | 58      |                    | 10                            |
| 6.5                |             |                        |                  |               |                |          |         |                    |                               |
| 7.0                |             |                        |                  |               |                |          |         |                    |                               |
| 7.5                |             | End of Borehole        | 2.13             |               |                |          |         |                    |                               |
| 8.0                |             |                        |                  |               |                |          |         |                    |                               |
| 8.5                |             |                        |                  |               |                |          |         |                    |                               |
| 9.0                |             |                        |                  |               |                |          |         |                    |                               |
| 9.5                |             |                        |                  |               |                |          |         |                    |                               |
| 10.0               |             |                        |                  |               |                |          |         |                    |                               |
| 10.5               |             |                        |                  |               |                |          |         |                    |                               |
| 11.0               |             |                        |                  |               |                |          |         |                    |                               |
| 11.5               |             |                        |                  |               |                |          |         |                    |                               |
| 12.0               |             |                        |                  |               |                |          |         |                    |                               |
| 12.5               |             |                        |                  |               |                |          |         |                    |                               |
| 13.0               |             |                        |                  |               |                |          |         |                    |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
SS - split-spoon sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# BOREHOLE: BH17-03

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** n/a  
**Northing:** n/a

| SUBSURFACE PROFILE |             |   |               | SAMPLE DETAILS |             |              |                            |
|--------------------|-------------|---|---------------|----------------|-------------|--------------|----------------------------|
| Depth              | Graphic Log | Lithologic Description  | Depth (m BGS) | Sample Number  | Sample Type | Lab Analyses | Vapour Concentration (ppm) |
| (ft) (m)           |             | Ground Surface  | 0.00          |                |             |              | 40 80 120 160              |
| 0.5                |             | FILL: Black to dark grey gravel - refusal on inferred bedrock |               |                |             |              |                            |
| 1.0                |             |   |               |                |             |              |                            |
| 1.5                |             |   |               |                |             |              |                            |
| 2.0                |             |   |               | 1              | AS          | CCME/PHCs    | 5                          |
| 2.5                |             |   |               |                |             |              |                            |
| 3.0                |             |   |               |                |             |              |                            |
| 3.5                |             |   |               | 2              | AS          | CCME/PHCs    | 5                          |
| 4.0                |             |   |               |                |             |              |                            |
| 4.5                |             |   |               |                |             |              |                            |
| 5.0                |             | End of Borehole   | 1.40          |                |             |              |                            |
| 5.5                |             |   |               |                |             |              |                            |
| 6.0                |             |   |               |                |             |              |                            |
| 6.5                |             |   |               |                |             |              |                            |
| 7.0                |             |   |               |                |             |              |                            |
| 7.5                |             |   |               |                |             |              |                            |
| 8.0                |             |   |               |                |             |              |                            |
| 8.5                |             |   |               |                |             |              |                            |
| 9.0                |             |   |               |                |             |              |                            |
| 9.5                |             |   |               |                |             |              |                            |
| 10.0               |             |   |               |                |             |              |                            |
| 10.5               |             |   |               |                |             |              |                            |
| 11.0               |             |   |               |                |             |              |                            |
| 11.5               |             |   |               |                |             |              |                            |
| 12.0               |             |   |               |                |             |              |                            |
| 12.5               |             |   |               |                |             |              |                            |
| 13.0               |             |   |               |                |             |              |                            |

Notes:  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 AS - auger sample  
 ppm - parts per million by volume  
 n/a - not available



Drawn By/Checked By: K. CAMERON

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STANTEC BOREHOLE AND WELL V2 121414846\_SHANNON\_PARK\_OCT2017.GPJ STANTEC - DATA TEMPLATE.GDT 12/8/17 GWHALEN

# BOREHOLE: BH17-04

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452289.920767  
**Northing:** 4947725.87184

| SUBSURFACE PROFILE |             |  |                  | SAMPLE DETAILS |             |                         |                               |
|--------------------|-------------|--|------------------|----------------|-------------|-------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description                         | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses            | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface                                 | 0.00             |                |             |                         |                               |
| 0.5                |             | GRAVEL<br>- with rootmat                       |                  |                |             |                         |                               |
| 1.0                |             |  |                  |                |             |                         |                               |
| 1.5                |             |  |                  |                |             |                         |                               |
| 2.0                |             | Dark brown SILTY SAND                          | 0.60             | 1              | AS          | FOCs, METALS, PAHs      | 5                             |
| 2.5                |             |  |                  |                |             |                         |                               |
| 3.0                |             |  |                  |                |             |                         |                               |
| 3.5                |             |  |                  |                |             |                         |                               |
| 4.0                |             |  |                  |                |             |                         |                               |
| 4.5                |             |  |                  |                |             |                         |                               |
| 5.0                |             |  |                  |                |             |                         |                               |
| 5.5                |             |  |                  | 2              | AS          |                         | 60                            |
| 6.0                |             | SILTY SAND and GRAVEL<br>- wet below 2.8 m BGS | 1.80             |                |             |                         |                               |
| 6.5                |             |  |                  | 3              | GS          | CCME/PHCs, PAHs, METALS | 10                            |
| 7.0                |             |  |                  |                |             |                         |                               |
| 7.5                |             |  |                  |                |             |                         |                               |
| 8.0                |             |  |                  |                |             |                         |                               |
| 8.5                |             |  |                  |                |             |                         |                               |
| 9.0                |             |  |                  | 4              | GS          |                         | 5                             |
| 9.5                |             |  |                  |                |             |                         |                               |
| 10.0               |             | End of Borehole                                | 3.00             |                |             |                         |                               |
| 10.5               |             |  |                  |                |             |                         |                               |
| 11.0               |             |  |                  |                |             |                         |                               |
| 11.5               |             |  |                  |                |             |                         |                               |
| 12.0               |             |  |                  |                |             |                         |                               |
| 12.5               |             |  |                  |                |             |                         |                               |
| 13.0               |             |  |                  |                |             |                         |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
AS - auger sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# BOREHOLE: BH17-05

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452293.195594  
**Northing:** 4947720.54323

| SUBSURFACE PROFILE |             |  |                  | SAMPLE DETAILS |             |              |                               |
|--------------------|-------------|--|------------------|----------------|-------------|--------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description                                 | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface   | 0.00             |                |             |              |                               |
| 0.5                |             | Fine brown SILTY SAND<br>- refusal on inferred bedrock |                  |                |             |              |                               |
| 1.0                |             |  |                  |                |             |              |                               |
| 1.5                |             |  |                  |                |             |              |                               |
| 2.0                |             |  |                  |                |             |              |                               |
| 2.5                |             |  |                  |                |             |              |                               |
| 3.0                |             |  |                  | 1              | AS          | CCME/PHCs    | 5                             |
| 3.5                |             |  |                  | 2              | SA          |              | 0                             |
| 4.0                |             |  |                  |                |             |              |                               |
| 4.5                |             |  |                  |                |             |              |                               |
| 5.0                |             |  |                  |                |             |              |                               |
| 5.5                |             |  |                  |                |             |              |                               |
| 6.0                |             | End of Borehole  | 1.80             |                |             |              |                               |
| 6.5                |             |  |                  |                |             |              |                               |
| 7.0                |             |  |                  |                |             |              |                               |
| 7.5                |             |  |                  |                |             |              |                               |
| 8.0                |             |  |                  |                |             |              |                               |
| 8.5                |             |  |                  |                |             |              |                               |
| 9.0                |             |  |                  |                |             |              |                               |
| 9.5                |             |  |                  |                |             |              |                               |
| 10.0               |             |  |                  |                |             |              |                               |
| 10.5               |             |  |                  |                |             |              |                               |
| 11.0               |             |  |                  |                |             |              |                               |
| 11.5               |             |  |                  |                |             |              |                               |
| 12.0               |             |  |                  |                |             |              |                               |
| 12.5               |             |  |                  |                |             |              |                               |
| 13.0               |             |  |                  |                |             |              |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
AS - auger sample  
ppm - parts per million by volume  
n/a - not available



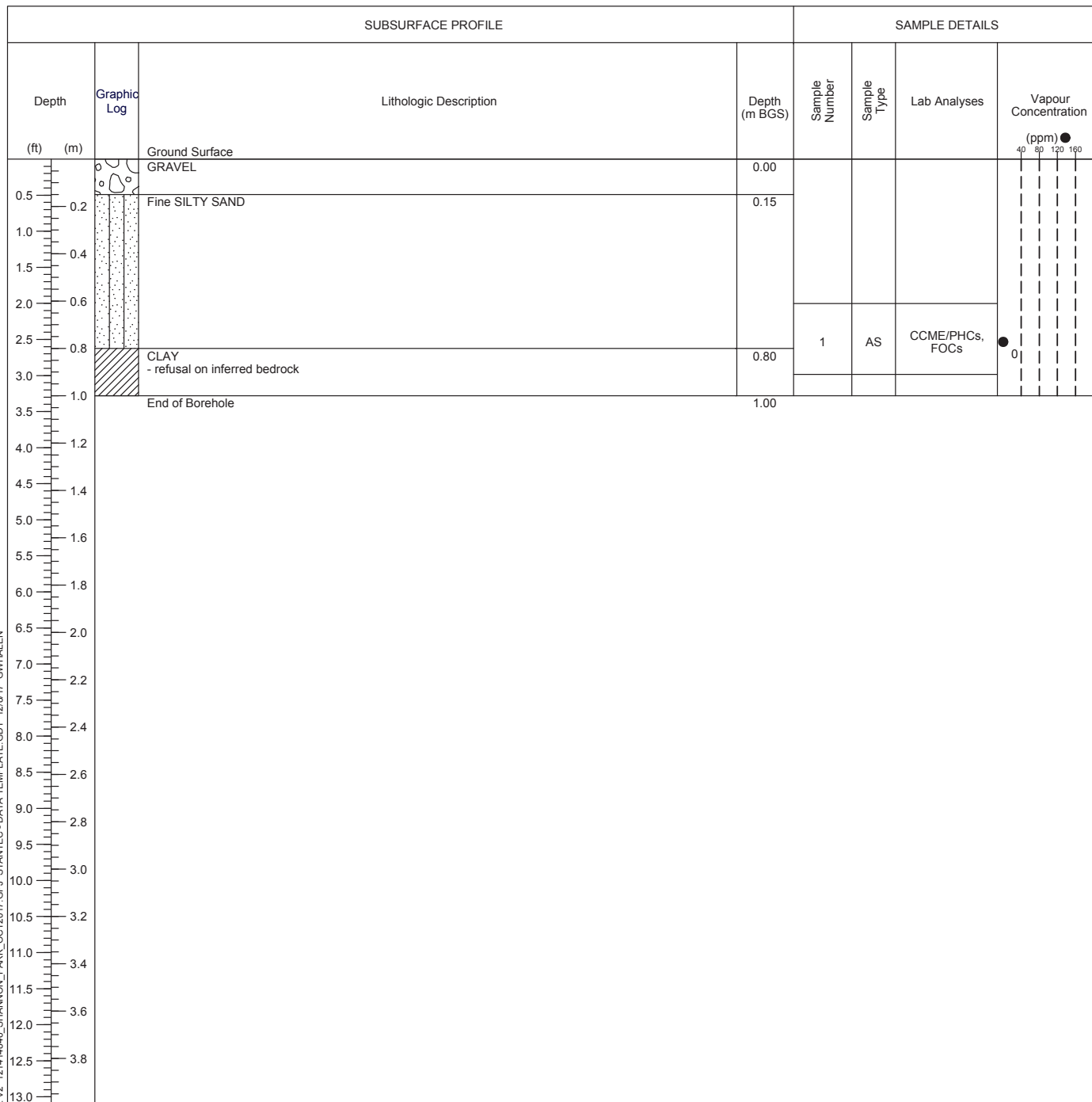
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# BOREHOLE: BH17-06

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452304.047565  
**Northing:** 4947732.42531



Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
AS - auger sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# BOREHOLE: BH17-07

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452332.210526  
**Northing:** 494779.61087

| SUBSURFACE PROFILE |             |                                   |               | SAMPLE DETAILS |             |              |                            |
|--------------------|-------------|-----------------------------------|---------------|----------------|-------------|--------------|----------------------------|
| Depth              | Graphic Log | Lithologic Description            | Depth (m BGS) | Sample Number  | Sample Type | Lab Analyses | Vapour Concentration (ppm) |
| (ft) (m)           |             | Ground Surface                    | 0.00          |                |             |              | 40 80 120 160              |
| 0.5                |             | Brown SAND - refusal at 1.3 m BGS |               | 1              | AS          |              | 10                         |
| 1.0                |             |                                   |               |                |             |              |                            |
| 1.5                |             |                                   |               |                |             |              |                            |
| 2.0                |             |                                   |               | 2              | AS          | METALS       | 5                          |
| 2.5                |             |                                   |               |                |             |              |                            |
| 3.0                |             |                                   |               |                |             |              |                            |
| 3.5                |             |                                   |               | 3              | AS          | CCME/PHCs    | 15                         |
| 4.0                |             |                                   |               |                |             |              |                            |
| 4.5                |             | End of Borehole                   | 1.30          |                |             |              |                            |
| 5.0                |             |                                   |               |                |             |              |                            |
| 5.5                |             |                                   |               |                |             |              |                            |
| 6.0                |             |                                   |               |                |             |              |                            |
| 6.5                |             |                                   |               |                |             |              |                            |
| 7.0                |             |                                   |               |                |             |              |                            |
| 7.5                |             |                                   |               |                |             |              |                            |
| 8.0                |             |                                   |               |                |             |              |                            |
| 8.5                |             |                                   |               |                |             |              |                            |
| 9.0                |             |                                   |               |                |             |              |                            |
| 9.5                |             |                                   |               |                |             |              |                            |
| 10.0               |             |                                   |               |                |             |              |                            |
| 10.5               |             |                                   |               |                |             |              |                            |
| 11.0               |             |                                   |               |                |             |              |                            |
| 11.5               |             |                                   |               |                |             |              |                            |
| 12.0               |             |                                   |               |                |             |              |                            |
| 12.5               |             |                                   |               |                |             |              |                            |
| 13.0               |             |                                   |               |                |             |              |                            |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
AS - auger sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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| <b><i>MONITOR WELL: MW17-01</i></b> |                                      |                                  |               |
|-------------------------------------|--------------------------------------|----------------------------------|---------------|
| <b>Project:</b>                     | SHANNON PARK                         | <b>Drilling method:</b>          | SPLIT SPOON   |
| <b>Client:</b>                      | PSPC                                 | <b>Date started/completed:</b>   | 24-Oct-2017   |
| <b>Location:</b>                    | SHANNON PARK, DARTMOUTH, NOVA SCOTIA | <b>Ground surface elevation:</b> | 97.46 m AMSL  |
| <b>Number:</b>                      | 121414846                            | <b>Top of casing elevation:</b>  | 98.23 m AMSL  |
| <b>Field investigator:</b>          | D. COX                               | <b>Easting:</b>                  | 452177.221824 |
| <b>Contractor:</b>                  | NOVA DRILLING                        | <b>Northing:</b>                 | 4947488.57887 |

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| <b><i>MONITOR WELL: MW17-02</i></b> |                                      |                                  |               |
|-------------------------------------|--------------------------------------|----------------------------------|---------------|
| <b>Project:</b>                     | SHANNON PARK                         | <b>Drilling method:</b>          | SPLIT SPOON   |
| <b>Client:</b>                      | PSPC                                 | <b>Date started/completed:</b>   | 24-Oct-2017   |
| <b>Location:</b>                    | SHANNON PARK, DARTMOUTH, NOVA SCOTIA | <b>Ground surface elevation:</b> | 98.11 m AMSL  |
| <b>Number:</b>                      | 121414846                            | <b>Top of casing elevation:</b>  | 98.97 m AMSL  |
| <b>Field investigator:</b>          | D. COX                               | <b>Easting:</b>                  | 452223.446185 |
| <b>Contractor:</b>                  | NOVA DRILLING                        | <b>Northing:</b>                 | 4947540.30516 |

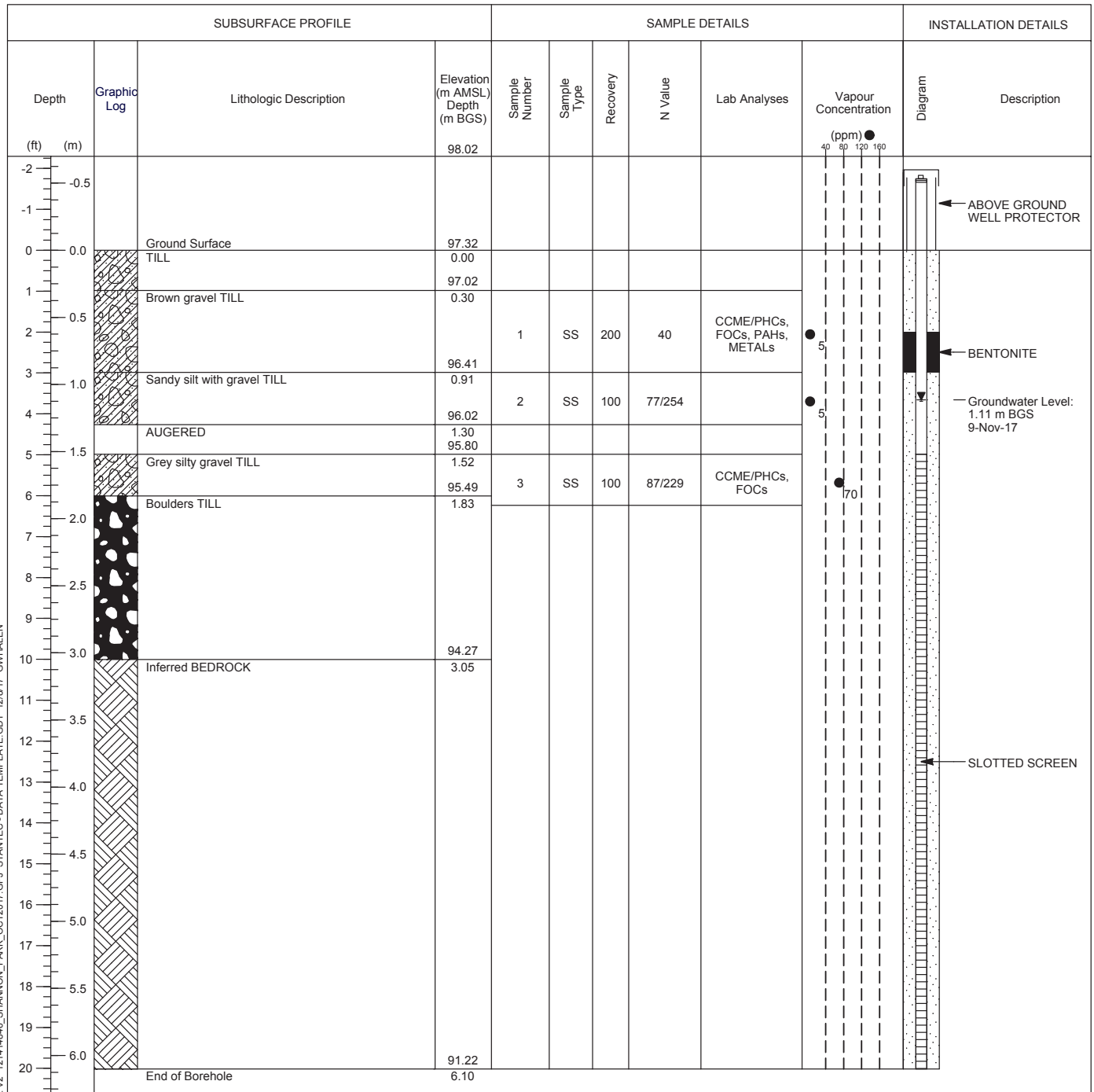
STANTEC BOREHOLE AND WELL V2 121414846\_SHANNON\_PARK\_OCT2017.GPJ STANTEC - DATA TEMPLATE.GDT 12/8/17 GWHALEN

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# MONITOR WELL: MW17-03

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** NOVA DRILLING

**Drilling method:** SPLIT SPOON  
**Date started/completed:** 25-Oct-2017  
**Ground surface elevation:** 97.32 m AMSL  
**Top of casing elevation:** 98.00 m AMSL  
**Easting:** 452239.607183  
**Northing:** 4947588.75665



Screen Interval: 1.52 - 6.10 m BGS  
 Sand Pack Interval: 0.91 - 6.10 m BGS  
 Well Seal Interval: 0.61 - 0.91 m BGS

Notes:  
 m AMSL - metres above mean sea level  
 m BGS - metres below ground surface  
 SS - split-spoon sample  
 ppm - parts per million by volume  
 n/a - not available



Drawn By/Checked By: K. CAMERON

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STANTEC BOREHOLE AND WELL V2 121414846\_SHANNON\_PARK\_OCT2017.GPJ STANTEC - DATA TEMPLATE.GDT 12/8/17 GWHALEN

# TEST PIT: TP17-02

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452243.812925  
**Northing:** 4947649.82168

| SUBSURFACE PROFILE |             |  |                  | SAMPLE DETAILS |             |                         |                               |
|--------------------|-------------|--|------------------|----------------|-------------|-------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description   | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses            | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface   | 0.00             |                |             |                         |                               |
| 0.5                |             | Brown SILTY SAND and gravel  |                  |                |             |                         |                               |
| 1.0                |             |  |                  |                |             |                         |                               |
| 1.5                |             |  |                  |                |             |                         |                               |
| 2.0                |             |  |                  | 1              | GS          | CCME/PHCs, PAHs, METALS | 10                            |
| 2.5                |             |  |                  |                |             |                         |                               |
| 3.0                |             |  |                  |                |             |                         |                               |
| 3.5                |             |  |                  |                |             |                         |                               |
| 4.0                |             |  |                  |                |             |                         |                               |
| 4.5                |             |  |                  | 2              | GS          |                         | 5                             |
| 5.0                |             |  |                  |                |             |                         |                               |
| 5.5                |             |  |                  |                |             |                         |                               |
| 6.0                |             | Grey CLAY<br>- moist<br>- refusal on inferred bedrock at 2.4 m BGS | 1.80             |                |             |                         |                               |
| 6.5                |             |  |                  |                |             |                         |                               |
| 7.0                |             |  |                  | 3              | GS          |                         | 5                             |
| 7.5                |             |  |                  |                |             |                         |                               |
| 8.0                |             | End of TEST PIT  | 2.40             |                |             |                         |                               |
| 8.5                |             |  |                  |                |             |                         |                               |
| 9.0                |             |  |                  |                |             |                         |                               |
| 9.5                |             |  |                  |                |             |                         |                               |
| 10.0               |             |  |                  |                |             |                         |                               |
| 10.5               |             |  |                  |                |             |                         |                               |
| 11.0               |             |  |                  |                |             |                         |                               |
| 11.5               |             |  |                  |                |             |                         |                               |
| 12.0               |             |  |                  |                |             |                         |                               |
| 12.5               |             |  |                  |                |             |                         |                               |
| 13.0               |             |  |                  |                |             |                         |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-03

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452281.776306  
**Northing:** 4947524.09949

| SUBSURFACE PROFILE |             |  |                  | SAMPLE DETAILS |             |                         |                               |
|--------------------|-------------|--|------------------|----------------|-------------|-------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description                         | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses            | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface                                 | 0.00             |                |             |                         |                               |
| 0.5                |             | Dark brown sand TILL<br>- gravel and cobbles   |                  |                |             |                         |                               |
| 1.0                |             |  |                  |                |             |                         |                               |
| 1.5                |             |  |                  | 1              | GS          | CCME/PHCs,<br>PAHs, FOC | 10                            |
| 2.0                |             |  |                  |                |             |                         |                               |
| 2.5                |             |  |                  |                |             |                         |                               |
| 3.0                |             |  |                  |                |             |                         |                               |
| 3.5                |             |  |                  | 2              | GS          |                         | 5                             |
| 4.0                |             | Fine silty sand TILL<br>- cobbles and boulders | 1.20             |                |             |                         |                               |
| 4.5                |             |  |                  |                |             |                         |                               |
| 5.0                |             |  |                  |                |             |                         |                               |
| 5.5                |             |  |                  |                |             |                         |                               |
| 6.0                |             |  |                  | 3              | GS          |                         | 5                             |
| 6.5                |             |  |                  |                |             |                         |                               |
| 7.0                |             | End of TEST PIT                                | 2.00             |                |             |                         |                               |
| 7.5                |             |  |                  |                |             |                         |                               |
| 8.0                |             |  |                  |                |             |                         |                               |
| 8.5                |             |  |                  |                |             |                         |                               |
| 9.0                |             |  |                  |                |             |                         |                               |
| 9.5                |             |  |                  |                |             |                         |                               |
| 10.0               |             |  |                  |                |             |                         |                               |
| 10.5               |             |  |                  |                |             |                         |                               |
| 11.0               |             |  |                  |                |             |                         |                               |
| 11.5               |             |  |                  |                |             |                         |                               |
| 12.0               |             |  |                  |                |             |                         |                               |
| 12.5               |             |  |                  |                |             |                         |                               |
| 13.0               |             |  |                  |                |             |                         |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-04

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452241.62161  
**Northing:** 4947508.19796

| SUBSURFACE PROFILE |             |   |                  | SAMPLE DETAILS |             |                            |                               |
|--------------------|-------------|---|------------------|----------------|-------------|----------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description  | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses               | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface  | 0.00             |                |             |                            |                               |
| 0.5                |             | Dark brown SILTY SAND and gravel<br>- refusal on inferred bedrock |                  |                |             |                            |                               |
| 1.0                |             |   |                  |                |             |                            |                               |
| 1.5                |             |   |                  | 1              | GS          | CCME/PHCs,<br>PAHs, METALS | 15                            |
| 2.0                |             |   |                  |                |             |                            |                               |
| 2.5                |             |   |                  |                |             |                            |                               |
| 3.0                |             |   |                  | 2              | GS          | METALS                     | 5                             |
| 3.5                |             |   |                  |                |             |                            |                               |
| 4.0                |             | End of TEST PIT   | 1.10             |                |             |                            |                               |
| 4.5                |             |   |                  |                |             |                            |                               |
| 5.0                |             |   |                  |                |             |                            |                               |
| 5.5                |             |   |                  |                |             |                            |                               |
| 6.0                |             |   |                  |                |             |                            |                               |
| 6.5                |             |   |                  |                |             |                            |                               |
| 7.0                |             |   |                  |                |             |                            |                               |
| 7.5                |             |   |                  |                |             |                            |                               |
| 8.0                |             |   |                  |                |             |                            |                               |
| 8.5                |             |   |                  |                |             |                            |                               |
| 9.0                |             |   |                  |                |             |                            |                               |
| 9.5                |             |   |                  |                |             |                            |                               |
| 10.0               |             |   |                  |                |             |                            |                               |
| 10.5               |             |   |                  |                |             |                            |                               |
| 11.0               |             |   |                  |                |             |                            |                               |
| 11.5               |             |   |                  |                |             |                            |                               |
| 12.0               |             |   |                  |                |             |                            |                               |
| 12.5               |             |   |                  |                |             |                            |                               |
| 13.0               |             |   |                  |                |             |                            |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-05

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452193.20662  
**Northing:** 4947478.90516

| SUBSURFACE PROFILE |             |   |                  | SAMPLE DETAILS |             |                            |                               |
|--------------------|-------------|---|------------------|----------------|-------------|----------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description  | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses               | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface  | 0.00             |                |             |                            | 40 80 120 160                 |
| 0.5                |             | FILL: Boulders  |                  |                |             |                            |                               |
| 1.0                |             |   |                  |                |             |                            |                               |
| 1.5                |             | Dark brown organics and BOULDERS<br>- refusal on inferred bedrock | 0.30             | 1              | GS          | CCME/PHCs,<br>PAHs, METALS | 10                            |
| 2.0                |             | End of TEST PIT   | 0.60             |                |             |                            |                               |
| 2.5                |             |   |                  |                |             |                            |                               |
| 3.0                |             |   |                  |                |             |                            |                               |
| 3.5                |             |   |                  |                |             |                            |                               |
| 4.0                |             |   |                  |                |             |                            |                               |
| 4.5                |             |   |                  |                |             |                            |                               |
| 5.0                |             |   |                  |                |             |                            |                               |
| 5.5                |             |   |                  |                |             |                            |                               |
| 6.0                |             |   |                  |                |             |                            |                               |
| 6.5                |             |   |                  |                |             |                            |                               |
| 7.0                |             |   |                  |                |             |                            |                               |
| 7.5                |             |   |                  |                |             |                            |                               |
| 8.0                |             |   |                  |                |             |                            |                               |
| 8.5                |             |   |                  |                |             |                            |                               |
| 9.0                |             |   |                  |                |             |                            |                               |
| 9.5                |             |   |                  |                |             |                            |                               |
| 10.0               |             |   |                  |                |             |                            |                               |
| 10.5               |             |   |                  |                |             |                            |                               |
| 11.0               |             |   |                  |                |             |                            |                               |
| 11.5               |             |   |                  |                |             |                            |                               |
| 12.0               |             |   |                  |                |             |                            |                               |
| 12.5               |             |   |                  |                |             |                            |                               |
| 13.0               |             |   |                  |                |             |                            |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-06

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452192.993529  
**Northing:** 4947385.52312

| SUBSURFACE PROFILE |             |                        |                  | SAMPLE DETAILS |             |                         |                               |
|--------------------|-------------|------------------------|------------------|----------------|-------------|-------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses            | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface         | 0.00             |                |             |                         |                               |
| 0.5                |             | Black rootmat TILL     |                  |                |             |                         |                               |
| 1.0                |             |                        |                  |                |             |                         |                               |
| 1.5                |             |                        |                  | 1              | GS          | CCME/PHCs, PAHs, METALS | 10                            |
| 2.0                |             |                        |                  |                |             |                         |                               |
| 2.5                |             |                        |                  | 2              | GS          |                         | 5                             |
| 3.0                |             |                        |                  |                |             |                         |                               |
| 3.5                |             |                        |                  |                |             |                         |                               |
| 4.0                |             |                        |                  |                |             |                         |                               |
| 4.5                |             |                        |                  | 3              | GS          |                         | 5                             |
| 5.0                |             | Gray clay TILL         | 1.40             |                |             |                         |                               |
| 5.5                |             | End of TEST PIT        | 1.50             |                |             |                         |                               |
| 6.0                |             |                        |                  |                |             |                         |                               |
| 6.5                |             |                        |                  |                |             |                         |                               |
| 7.0                |             |                        |                  |                |             |                         |                               |
| 7.5                |             |                        |                  |                |             |                         |                               |
| 8.0                |             |                        |                  |                |             |                         |                               |
| 8.5                |             |                        |                  |                |             |                         |                               |
| 9.0                |             |                        |                  |                |             |                         |                               |
| 9.5                |             |                        |                  |                |             |                         |                               |
| 10.0               |             |                        |                  |                |             |                         |                               |
| 10.5               |             |                        |                  |                |             |                         |                               |
| 11.0               |             |                        |                  |                |             |                         |                               |
| 11.5               |             |                        |                  |                |             |                         |                               |
| 12.0               |             |                        |                  |                |             |                         |                               |
| 12.5               |             |                        |                  |                |             |                         |                               |
| 13.0               |             |                        |                  |                |             |                         |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available




Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-07

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452188.678464  
**Northing:** 4947419.15154

| SUBSURFACE PROFILE |     |  |   |               | SAMPLE DETAILS |             |                        |                            |
|--------------------|-----|--|---|---------------|----------------|-------------|------------------------|----------------------------|
| Depth              |     | Graphic Log  | Lithologic Description                  | Depth (m BGS) | Sample Number  | Sample Type | Lab Analyses           | Vapour Concentration (ppm) |
| (ft)               | (m) |  |   |               |                |             |                        |                            |
|                    |     |  | Ground Surface                          | 0.00          |                |             |                        |                            |
| 0.5                | 0.2 |  | Boulder TILL                            |               |                |             |                        |                            |
| 1.0                | 0.4 |  | Medium brown organic TILL - with gravel | 0.30          | 1              | GS          | CCME/PHC, PAHs, METALS | 10                         |
| 2.0                | 0.6 |  | Gravel with fine grey silty clay TILL   | 0.60          |                |             |                        |                            |
| 2.5                | 0.8 |  |   |               | 2              | GS          |                        | 5                          |
| 3.0                | 1.0 |  |   |               |                |             |                        |                            |
| 3.5                | 1.2 |  |   |               |                |             |                        |                            |
| 4.0                | 1.4 |  | Fine brown sand and gravel TILL         | 1.20          | 3              | GS          |                        | 5                          |
| 4.5                |     |  |   |               |                |             |                        |                            |
| 5.0                | 1.6 |  | End of TEST PIT                         | 1.50          |                |             |                        |                            |
| 5.5                | 1.8 |  |   |               |                |             |                        |                            |
| 6.0                | 2.0 |  |   |               |                |             |                        |                            |
| 6.5                | 2.2 |  |   |               |                |             |                        |                            |
| 7.0                | 2.4 |  |   |               |                |             |                        |                            |
| 7.5                | 2.6 |  |   |               |                |             |                        |                            |
| 8.0                | 2.8 |  |   |               |                |             |                        |                            |
| 8.5                | 3.0 |  |   |               |                |             |                        |                            |
| 9.0                | 3.2 |  |   |               |                |             |                        |                            |
| 9.5                | 3.4 |  |   |               |                |             |                        |                            |
| 10.0               | 3.6 |  |   |               |                |             |                        |                            |
| 10.5               | 3.8 |  |   |               |                |             |                        |                            |
| 11.0               |     |  |   |               |                |             |                        |                            |
| 11.5               |     |  |   |               |                |             |                        |                            |
| 12.0               |     |  |   |               |                |             |                        |                            |
| 12.5               |     |  |   |               |                |             |                        |                            |
| 13.0               |     |  |   |               |                |             |                        |                            |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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# TEST PIT: TP17-08

**Project:** SHANNON PARK  
**Client:** PSPC  
**Location:** SHANNON PARK, DARTMOUTH, NOVA SCOTIA  
**Number:** 121414846  
**Field investigator:** D. COX  
**Contractor:** EAVIS CONSTRUCTION

**Drilling method:** CAT 305 EXCAVATOR  
**Date started/completed:** 27-Oct-2017  
**Ground surface elevation:** n/a  
**Top of casing elevation:** n/a  
**Easting:** 452226.513308  
**Northing:** 4947416.36098

| SUBSURFACE PROFILE |             |                                       |                  | SAMPLE DETAILS |             |                        |                               |
|--------------------|-------------|---------------------------------------|------------------|----------------|-------------|------------------------|-------------------------------|
| Depth<br>(ft) (m)  | Graphic Log | Lithologic Description                | Depth<br>(m BGS) | Sample Number  | Sample Type | Lab Analyses           | Vapour Concentration<br>(ppm) |
| 0.0                |             | Ground Surface                        | 0.00             |                |             |                        |                               |
| 0.5                |             | Brown organic rootmat and gravel TILL |                  |                |             |                        |                               |
| 1.0                |             |                                       |                  |                |             |                        |                               |
| 1.5                |             |                                       |                  | 1              | GS          | CCME/PHC, PAHS, METALS | 5                             |
| 2.0                |             | Silty sand and gravel TILL            | 0.60             |                |             |                        |                               |
| 2.5                |             |                                       |                  | 2              | GS          |                        | 5                             |
| 3.0                |             |                                       |                  |                |             |                        |                               |
| 3.5                |             |                                       |                  |                |             |                        |                               |
| 4.0                |             | End of TEST PIT                       | 1.10             |                |             |                        |                               |
| 4.5                |             |                                       |                  |                |             |                        |                               |
| 5.0                |             |                                       |                  |                |             |                        |                               |
| 5.5                |             |                                       |                  |                |             |                        |                               |
| 6.0                |             |                                       |                  |                |             |                        |                               |
| 6.5                |             |                                       |                  |                |             |                        |                               |
| 7.0                |             |                                       |                  |                |             |                        |                               |
| 7.5                |             |                                       |                  |                |             |                        |                               |
| 8.0                |             |                                       |                  |                |             |                        |                               |
| 8.5                |             |                                       |                  |                |             |                        |                               |
| 9.0                |             |                                       |                  |                |             |                        |                               |
| 9.5                |             |                                       |                  |                |             |                        |                               |
| 10.0               |             |                                       |                  |                |             |                        |                               |
| 10.5               |             |                                       |                  |                |             |                        |                               |
| 11.0               |             |                                       |                  |                |             |                        |                               |
| 11.5               |             |                                       |                  |                |             |                        |                               |
| 12.0               |             |                                       |                  |                |             |                        |                               |
| 12.5               |             |                                       |                  |                |             |                        |                               |
| 13.0               |             |                                       |                  |                |             |                        |                               |

Notes:  
m AMSL - metres above mean sea level  
m BGS - metres below ground surface  
GS - grab sample  
ppm - parts per million by volume  
n/a - not available



Drawn By/Checked By: K. CAMERON

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TABLE 1

**SODIUM ADSORPTION RATIO - ELECTRICAL CONDUCTIVITY**  
Public Service and Procurement Canada  
Shannon Park Remedial Excavation, Dartmouth, Nova Scotia  
Stantec Consulting Ltd. Project No. 121415668

| Parameter               | Units | CCME SQG<br>Commercial<br>non-potable | Sample ID |           |           |           |           |           |
|-------------------------|-------|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                         |       |                                       | SA-A1     | SA-A2     | SA-A3     | SA-A4     | SA-B1     | SA-C1     |
| Date Sampled            |       |                                       | 19-Nov-18 | 19-Nov-18 | 19-Nov-18 | 19-Nov-18 | 19-Nov-18 | 19-Nov-18 |
| Sample Depth (mbg)      |       |                                       | 0.15-1.0  | 1.0-1.6   | 0.15-1.0  | 1.0-1.6   | 0.15-0.3  | 0.15-0.6  |
| Sodium Adsorption Ratio | N/A   | 12                                    | 0.66      | 1.0       | 0.28      | 0.2       | 0.13      | 0.21      |
| Metals                  |       |                                       |           |           |           |           |           |           |
| Dissolved Calcium       | µg/L  | -                                     | 2300      | 4300      | 4000      | 1600      | 22000     | 1400      |
| Dissolved Magnesium     | µg/L  | -                                     | 1300      | 1000      | 450       | 230       | 1000      | 470       |
| Dissolved Sodium        | µg/L  | -                                     | 5100      | 9300      | 2200      | 1000      | 2300      | 1100      |
| Conductivity            | µS/cm | 4000                                  | 35        | 42        | 23        | 9.4       | 97        | 16        |

**Notes:**

1. "-" = no standard available; mbg = meters below grade
2. Lab Dup = laboratory QA/QC duplicate
3. Canadian Council of Ministers of the Environment, Soil Quality Guidelines for Protection of Environmental and Human Health (CCME Online, 2018)

