Preliminary Site Investigation – Part Lot 73

Maitland Hospital Health Campus

Health Infrastructure (NSW Government)

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List of abbreviations

Abbreviation	Definition
ACM	Asbestos containing materials
AHD	Australian Height Datum
AMP	Asbestos Management Plan
BaP	Benzo(a)pyrene
CEMP	Construction Environmental Management Plan
CLM Act	Contaminated Land Management Act 1997
CoPC	Contaminant of potential concern
CSM	Conceptual Site Model
DP	Deposited Plan
EIL	Ecological investigation level
ESA	Environmental Site Assessment
ESL	Ecological screening level
GIL	Groundwater investigation level
ha	Hectare
HI	NSW Health Infrastructure
HSL	Health-based screening level
LTEMP	Long Term Environmental Management Plan
m bgl	Metres below ground level
NMH	New Maitland Hospital
NSW EPA	New South Wales Environment Protection Authority
PAH	Polycyclic Aromatic Hydrocarbon
POEO Act	Protection of the Environment Operations Act 1997
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
SSI	State Significant Infrastructure
TEQ	Toxicity equivalence quotient
TRH	Total Recoverable Hydrocarbons
WHS	Work Health & Safety
UCL_{AV}	Upper confidence limit average

Executive summary

Introduction

GHD Pty Ltd (GHD) was engaged by Health Infrastructure (HI) (NSW Government) c/o Turner and Townsend Pty Ltd (Turner & Townsend, formerly CBRE) to undertake preliminary contamination and geotechnical site investigations to inform planning of future development at the Maitland Hospital Health Campus, formerly the CSR clay extraction and brick manufacturing facility located on Metford Road, Metford NSW.

This report presents the findings of the preliminary site investigation (PSI) for the investigation area shown below – located within Lot 73 DP1256781 – herein referred to as the investigation area (within Lot 73).

Investigation area

Note: The investigation area was modified during the completion of the PSI, extending approximately 40 m further southeast (the original boundary is shown by the dashed line). The reporting herein is based on the original investigation area boundary, however GHD notes that site conditions for the additional area are generally consistent with the south-eastern portion of the original investigation area and the conclusions and recommendations of this PSI are applicable for the revised investigation area.

Background

From the 1950s through to 2006, CSR operated a brick manufacturing facility (Metford Brick Plant), sales business (PGH Bricks & Pavers) and quarry (Metford Clay Mine) in the triangular area bounded by the Northern Railway to the northeast, a power line easement to the south, and Metford Road to the northwest – known as the Metford site.

The investigation area (subject of this PSI) is located in the southern portion of the Metford site, within Lot 73 DP1256781 (formerly Lot 7314 DP1162607) as shown above. This area was predominantly used by CSR as a quarry and for stockpiling of material.

In 2015, GHD was engaged by HI to undertake a Phase 2 Environmental Site Assessment (ESA) (GHD, 2015), and subsequently to prepare a Remedial Action Plan (RAP) / Contamination Management Plan (GHD 2016b, herein referred to as the RAP) for the NMH development comprising the construction of the main hospital building and associated infrastructure. During the ESA, no significant contamination was found within the investigation area, however natural carbonaceous material was present, isolated instances of asbestos-containing material (ACM) were identified, with numerous areas of anthropogenic wastes and the potential for "unexpected finds" of contamination to occur during earth works. The RAP is provided in Appendix C.

Remediation works were generally incidental and limited to the bulk earthworks (predominantly 'cut and fill') completed within the NMH development area. Following the completion of remediation and earthworks for the NMH development, GHD provided a Site Validation report for (former) Lot 7314 (GHD, 2021a). The Site Validation report concluded that the remediation was undertaken in accordance with the RAP and soil remaining on site was suitable for the proposed future land use as a hospital, subject to the preparation and implementation of a Long Term Environmental Management Plan (LTEMP) (GHD, 2021b). The LTEMP is provided in Appendix D.

Objectives

The objectives of the PSI comprised:

– Identification of potential contamination risks to human health and/or the environment resulting from historical land use activities.
– Identification of geotechnical site conditions.
– Recommendations for further investigations, remediation or management of any contamination and geotechnical issues identified.

Scope of work

To achieve the above objectives, the scope of work comprised:

– Review of publicly available records (as referenced in Section 2.1).
– Review of existing site documents pertaining to contamination and geotechnical conditions (as listed in Section 1.4).
– Site inspection by experienced GHD contamination and geotechnical specialists.
– Preparation of this report, documenting the findings of the review and site inspection, and recommendations for further investigation (if required).

Key findings

The following presents the key findings from this investigation:

– The investigation area (the site) is located within the quarried area of the former CSR clay extraction and brick manufacturing facility, and was subject to investigation, remediation and validation associated with the NMH development.
– The site comprised a swampy / low-lying area in the northern portion. An access track ran from east to west through the middle of the low-lying area. The ground surface to the north of the track was extensively disturbed with numerous small stockpiles (hummocks) and ditches. The northern carpark embankment extended into the northern corner of the site. A stormwater bioretention basin was located in the central/western portion of the site, and a level pad (identified as the eastern expansion area) was located in the southern portion. A highwall from the former quarrying activities remained to the south of the site. Site features are shown in Figure 5 of the LTEMP (GHD 2021b) in Appendix A.
– Previous investigations indicated the site contained areas of fill material comprising carbonaceous shale and anthropogenic materials including bricks and brick fragments, domestic waste, rubble, and coal chitter.
– No significant contamination was found within the investigation area during the ESA, except for natural carbonaceous material and anthropogenic wastes, and the potential for "unexpected finds" of contamination to occur during earth works.

– Shallow and deep groundwaters beneath the investigation area naturally contain nickel and zinc above the freshwater groundwater investigation levels (GILs). It was considered that the concentrations were most likely associated with the naturally occurring geology and overall regional groundwater quality. TRH and PAH concentrations were only detected in groundwater sampled from one well (MW404S) in 2015, likely to be associated with naturally occurring hydrocarbons present in coal/shale bands disturbed by the monitoring well installation, which had not settled by the time of sampling.

  As Metford is supplied with potable water, it is considered unlikely that groundwater would be extracted for beneficial uses, particularly as the water is brackish. Therefore, any risk of exposure associated with groundwater use is considered to be low.
– GHD identified three distinct areas within the investigation area known to contain materials subject to site environmental management requirements, as shown in Figure 7 of the LTEMP (GHD, 2021b) provided in Appendix A:
  - The soils remaining from remediation of bonded asbestos containing material (ACM), emplaced approximately 0.3 m below the surface, to the east of the bioretention basin (Area A). Remaining concentrations of ACM in this soil were considered to be less than health-based screening levels (HSLs) and thus would not require remediation for the proposed development, but potential remains for some asbestos to be present which must be managed in accordance with regulatory requirements.
  - The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area. (Not contamination per se, but material which could present a hazard if exposed and subject to ignition such as from a bush fire).
  - ACM-impacted material excavated from Pit 2, which was placed in a containment area in the eastern portion of the northern carpark, at a depth greater than 2 m below the final design level. We assume that this material would not be disturbed by the proposed development.
– There is a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works.
– Previously identified contamination remains within the investigation area that has not been developed/disturbed, including:
  - Aesthetic: Fill materials were present to varying depths with the exception of the low-lying area in the north. However, this area had some small stockpiles and an access road (assumed fill). Fill materials were recorded to a depth of 3.0 m and in some areas contained foreign material (coal chitter, brick fragments, ceramics and domestic waste), including north of the large shale stockpile (TP461, TP459, TP455) and around the north-western corner of Investigation Area 3, adjacent the former CSR site (TP466, TP470). It is noted that all these locations, except for TP455, have been filled over as part of the NMH development earthworks, and the identified fill material may remain (beneath the NMH development fill material). No odours or staining were observed in the identified fill material.
  - Metals: Numerous samples exceeded the EIL for zinc, and one occurrence each of nickel and copper. Zinc concentrations are likely to be associated with the natural mineralogy.
– An LTEMP was prepared which promotes awareness of the contamination issues requiring management at the site and provides procedures to manage potential exposure to contaminated materials during routine use of the site, including foreseeable maintenance activities.

Conclusions and recommendations

In accordance with the objectives outlined above, and based on the scope of work and information contained within this investigation, the following conclusions and recommendations are made:

– GHD undertook an ESA (now known as a detailed site investigation) for the site in 2015. The ESA (GHD, 2015) informed the preparation of an RAP for the NMH development (GHD, 2016b). Remediation works were carried out in accordance with the RAP and validated by GHD in 2021. The Site Validation report concluded that the soil remaining on site was suitable for the proposed future land use as a hospital, subject to the preparation and implementation of an LTEMP (GHD, 2021b).

Based on review of these documents (and site conditions observed during the site inspection carried out on 13 December 2022) contamination within the investigation area is considered to have been sufficiently characterised to enable an assessment of the suitability of the site for the proposed development subject to implementation of appropriate contamination management documents. On this basis, no further detailed site investigation is required to inform suitability of the site in regard to contamination.

– A preliminary conceptual site model (CSM) has been developed for the investigation area and considers that there are no complete or potentially complete source-pathway-receptor linkages for the identified contamination and plausible receptors, on the basis that potential risks will be managed in accordance with a Construction Environmental Management Plan (CEMP) to be prepared for the facility development and/or the LTEMP (current version provided in Appendix D), to be updated upon completion of the facility development).
– The CEMP will need to consider the identified (contamination) management areas and include an asbestos management plan (AMP) and an unexpected finds protocol to identify anthropogenic wastes, remove potential ACM prior to disturbance for appropriate disposal, and separate any wastes that are not acceptable for aesthetic or other reasons, for either management (e.g. emplacement in deeper fill) or disposal. Should unexpected contamination be identified during development works, advice should be sought from a suitably qualified environmental consultant.
– The CEMP should also consider groundwater management (including potential contamination) and include sampling requirements to confirm groundwater quality prior to any dewatering activities.
– The site is considered likely to be suitable (in regard to contamination) for the proposed future land use as part of the Maitland Hospital Health Campus, subject to management of any contaminated material (as and if required) undertaken in general accordance with the contamination management principles described in the existing RAP (GHD, 2016b) (provided in Appendix C) and/or the current LTEMP (provided in Appendix D), and subject to an updated LTEMP at completion of the development.
– Regarding State Environmental Planning Policy (Resilience and Hazards) 2021 (herein, the Resilience and Hazards SEPP), GHD has not carried out a detailed planning assessment; however, given the conclusion above, and with reference to the interpretation and assumptions discussed in Section 12.2 of the existing RAP (GHD, 2016b), we consider that should any “remediation works” be required as a result of unexpected finds within the investigation area, they would likely be considered to be Category 2 (work not needing consent).[1]
– Anticipated subsurface conditions comprise engineered and non-engineered fill (up to 7 m thick within the eastern expansion area) overlying natural soil and weathered rock.
– To gather the required geotechnical information listed in Section 4.3 and inform the detailed design, a geotechnical investigation will be necessary and should be scoped by the team who will complete the investigation and assessment. Investigation is likely to include:
    - Project planning and safety management, including engagement of a drilling subcontractor, development of safety documentation and briefing of the site investigation team.
    - Boreholes within the building footprint extending to a suitable depth below the founding level within natural soil or rock material.
    - Test pits or large diameter boreholes in areas of proposed road and carpark pavements to at least 1.5 m depth to assess subgrade conditions, including subgrade design California Bearing Ratio (CBR). Dynamic Cone Penetrometer (DCP) testing should be completed within each test location.
    - Boreholes or test pits to inform other miscellaneous items such as light poles, electrical cabinets, water utilities, earthworks, etc. Such boreholes should be completed to below founding level and into natural soil or rock material.
    - Geotechnical investigations in accordance with AS1726-2017.
    - Insitu testing and sampling of fill, soil and rock material encountered.

[1] GHD notes that the Resilience and Hazards SEPP replaced former State Environmental Planning Policy No 55—Remediation of Land (1998 EPI 520); however; no material changes were made to the legislation which affects this conclusion. Relevant clauses of the Resilience and Hazards SEPP (with respect to the references in Section 12.2 of the existing RAP, GHD 2016b) include: Clause 4.8; 4.11; 4.12; 4.13 and 4.14.

- Laboratory testing of selected samples at a NATA registered facility.
- Provision of a geotechnical report summarising the investigation scope and findings along with a discussion and recommendations.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 7 and the assumptions and qualifications contained throughout the report.

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1. Introduction

GHD Pty Ltd (GHD) was engaged by Health Infrastructure (HI) (NSW Government) c/o Turner and Townsend Pty Ltd (Turner & Townsend, formerly CBRE) to undertake preliminary contamination and geotechnical site investigations to inform planning of future development of the Maitland Hospital Health Campus, formerly the CSR clay extraction and brick manufacturing facility located on Metford Road, Metford NSW.

This report presents the findings of the preliminary site investigation (PSI) of the investigation area as shown in Figure 1.1 – located within Lot 73 DP1256781 – herein referred to as the investigation area (within Lot 73).

Figure 1.1 Investigation areas

Note: The investigation area was modified during the completion of the PSI, extending approximately 40 m further southeast (the original boundary is shown by the dashed line). The reporting herein is based on the original investigation area boundary, however GHD notes that site conditions for the additional area are generally consistent with the south-eastern portion of the original investigation area and the conclusions and recommendations of this PSI are applicable for the revised investigation area.

It is assumed that the facility development works will be approved under a modification to the current State Significant Infrastructure (SSI) approval for the New Maitland Hospital (NMH) development for the main hospital building and car parking on Lot 73 DP1256781 (former Lot 7314 DP1162607) and Lot 41 DP1274253 (former Part Lot 401 DP755237).

Figure 1.2 shows the proposed development footprint. Details regarding the layout are yet to be confirmed, but likely to comprise a main facility building, car parking and access roads.

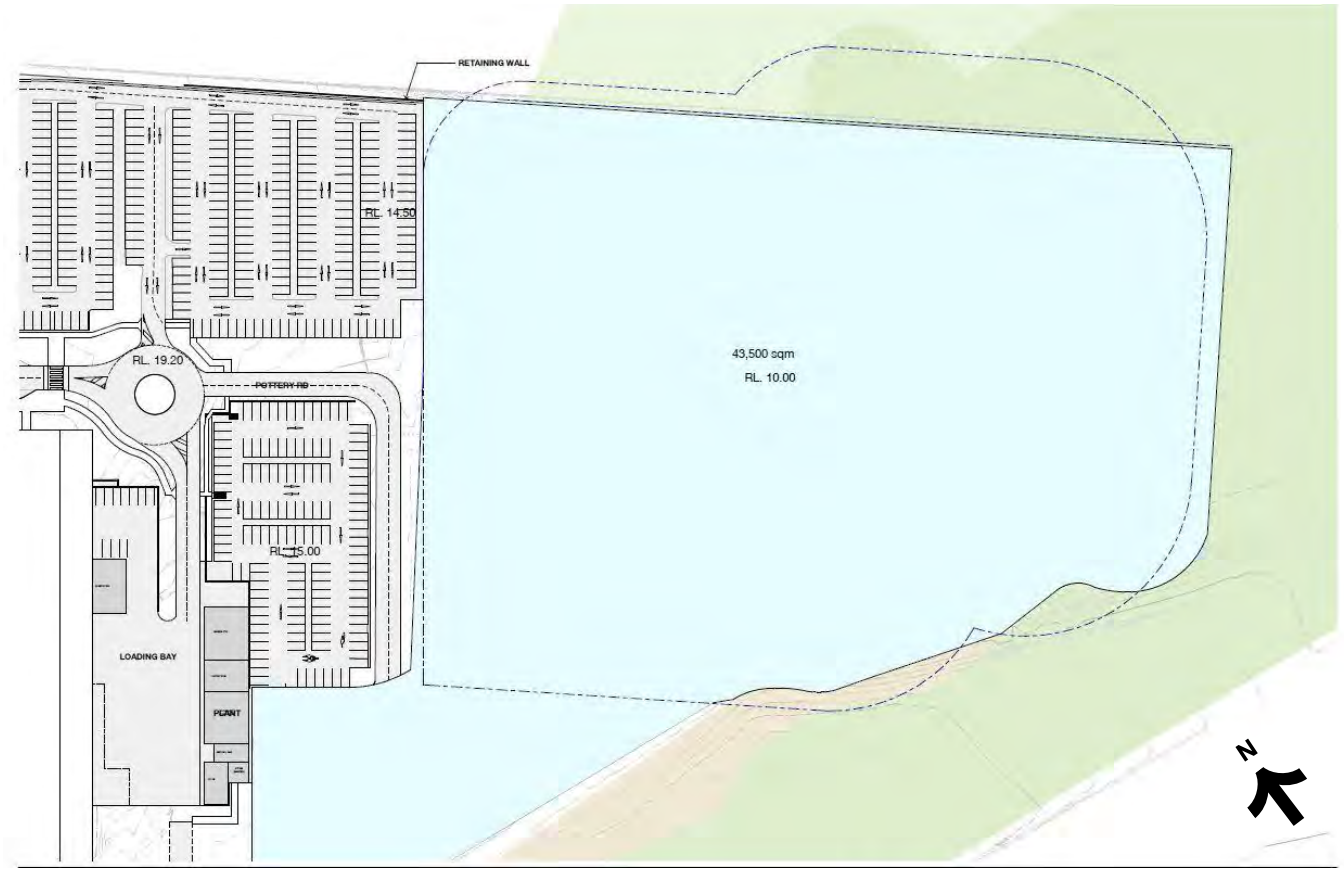

Figure 1.2 Proposed development footprint (note north orientation)

1.1 Background

From the 1950s through to 2006, CSR operated a brick manufacturing facility (Metford Brick Plant), sales business (PGH Bricks & Pavers) and quarry (Metford Clay Mine) in the triangular area bounded by the Northern Railway to the northeast, a power line easement to the south, and Metford Road to the northwest – known as the Metford site. (CSR also operated a large quarry / clay mine to the west of Metford Road, known as the Fieldsend site). During planning for the NMH development, CSR's Metford site was referred to as the Metford Triangle, as shown in Figure 1.1 of the Lot 7314 Site Validation report (see below), provided in Appendix A.

The investigation area (subject of this PSI) is located in the southern portion of the Metford Triangle, within Lot 73 DP1256781 (formerly Lot 7314 DP1162607) as shown in Figure 1.1. This area was predominantly used by CSR as a quarry and for stockpiling of material.

Following the closure of operations in 2006, CSR commissioned several investigations to assess the suitability of the Metford site for commercial/industrial land use. A mine closure plan was also developed.

In 2015, GHD was engaged by HI to undertake a Phase 2 Environmental Site Assessment (ESA) (GHD, 2015), and subsequently (in 2016) to prepare a Remedial Action Plan (RAP) / Contamination Management Plan (GHD 2016b, herein referred to as the RAP) for the NMH development on (former) Lot 7314 (Lot 73) comprising the construction of the main hospital building and associated infrastructure (predominantly in the central/northern portion of Lot 73). The RAP is provided in Appendix C.

During the ESA, no significant contamination was found within the investigation area, however natural carbonaceous material was present, isolated instances of asbestos-containing material (ACM) were identified, with numerous areas of anthropogenic wastes and the potential for "unexpected finds" of contamination to occur during earth works. The ESA concluded that the investigation works undertaken had sufficiently characterised the site to enable an assessment of its suitability for the proposed purpose (hospital), subject to implementation of the RAP.

The RAP provided a summary of identified site contamination issues, and description of the proposed remediation and soil management programs, procedures and standards which were to be followed during the redevelopment – intended to ensure the successful remediation or management of the site and consequently the protection of the environment and human health.

Remediation works were generally incidental and limited to the bulk earthworks (predominantly 'cut and fill') completed within the NMH development area as shown in Figure 5 of the Long Term Environmental Management Plan (GHD, 2021b), provided in Appendix A.

In December 2021, following the completion of remediation and earthworks for the NMH development, GHD provided a Site Validation report for (former) Lot 7314 (GHD, 2021a). The Site Validation report concluded that the remediation was undertaken in accordance with the RAP and soil remaining on site was suitable for the proposed future land use as a hospital, subject to the preparation and implementation of a Long Term Environmental Management Plan (LTEMP) (GHD, 2021b). The LTEMP is provided in Appendix D.

Further detail on these investigations and reports / site documents is provided in Section 2.2.

1.2 Purpose of this report

This report was prepared to support the development of the design and selection of the preferred option (i.e. either the Northern Zone or Eastern Zone), by summarising the review of existing available reports and activities to date pertaining to contamination and geotechnical conditions for the investigation area within Lot 73.

1.3 Objectives

The objectives of the PSI comprised:

– Identification of potential contamination risks to human health and/or the environment resulting from historical land use activities.
– Identification of geotechnical site conditions.
– Recommendations for further investigations, remediation or management of any contamination and geotechnical issues identified.

1.4 Scope of work

To achieve the above objectives, the scope of work comprised:

– Review of publicly available records (as referenced in Section 2.1).
– Review of existing site documents pertaining to contamination and geotechnical conditions, including:
  - *Stage 2 Soil Investigation, CSR/PGH*. LeVert, 5 September 2011.
  - *Closure Mine Operations Plan, Metford Clay Mine, ML 1523, 5848, 4865, and 5090*. VGT/CSR, 12 March 2015.
  - *Report on Geotechnical Investigation, New Maitland Hospital*. Douglas Partners, 15 July 2015.
  - *Phase 2 Environmental Site Assessment, New Maitland Hospital Stage 1 Development Area.* GHD, December 2015.
  - *New Maitland Hospital Contamination and Remediation Advice, Mine subsidence review.* GHD, 3 June 2016.
  - *Remedial Action Plan / Contamination Management Plan, New Maitland Hospital Stage 1 Development Area*. GHD, July 2016.
  - *New Maitland Hospital Lot 7314 Site Condition Inspection*. GHD, 17 October 2017.
  - *New Maitland Hospital Groundwater and Surface Water Monitoring Event July 2017*. GHD, 5 March 2018.
  - *New Maitland Hospital Part Lot 401 Site Inspection and Addendum to Contamination Investigations and Lot 7314 Site Condition Inspection – February 2018*. GHD, 4 April 2018.

- *Report on Geotechnical Investigation, Proposed New Maitland Hospital. Douglas Partners*, 9 May 2018.
- *Future expansion pad – New Maitland Hospital, Preliminary Geotechnical Assessment.* Qualtest, 21 April 2021.
- *Geotechnical Inspection – Coal Seams, Proposed Future Car Parking Area, Maitland Hospital.* Douglas Partners, 7 June 2021.
- *New Maitland Hospital Lot 7314 Site Validation*. GHD, 15 December 2021.
- *New Maitland Hospital Long Term Environmental Management Plan*. GHD, 15 December 2021.
- *Site Audit Statement, 0503-1911, New Maitland Hospital Development, Lot 7314 in DP 1162607.* JBS&G Australia, 17 December 2021.
- *Site Audit Report, 0503-1911, New Maitland Hospital Development, Lot 7314 in DP 1162607.* JBS&G Australia, 17 December 2021.

– Site inspection by experienced GHD contamination and geotechnical specialists.

– Preparation of this report, documenting the findings of the review and site inspection, and recommendations for further investigation (if required).

2. Site information

2.1 Site details and setting

Table 2.1 provides a summary of the investigation area site details and environmental setting. Information was sourced from publicly available records (as referenced in the table) and the existing site documents listed in Section 1.4.

Table 2.1 Eastern Zone site information

Item	Details
Location	East of Maitland Hospital, as shown in Figure 1.1 and Figure 1.2
Coordinates	-3863525, 16876767 (approximate centre of the site)
Street Address	Metford Rd, Metford, NSW
Lot and DP number	Lot 73 DP1256781 (formerly identified as Lot 7314 DP1162607)
Landowner	NSW Government
Site area	Approximately 3.5 ha
Local Government Area	Maitland City Council
Land use zoning	Land use zoning – RU2 Rural Landscape (Maitland Local Environment Plan 2011)
Site use	Former clay extraction (for the CSR brick manufacturing facility) currently vacant and unused
Site description	Former quarried area corresponding to the central and northern portions of (former) Lot 7314 GHD (2015) Investigation Area 3[2], comprising a swampy / low-lying area in the north-eastern portion (base of former quarry), a stormwater bioretention basin for Maitland Hospital in the central/western portion, and a level pad (eastern expansion area) in the southern portion extending across the site from east to west. Further details are presented in Section 2.3.
Surrounding land use	North – CSR site comprising sales and display and manufacturing areas (adjacent); Northern Railway (400 m); East Maitland Cemetery (adjacent the railway); Raymond Terrace Road (500 m); low-lying land (wetlands) and East's Leisure & Golf (golf course) (adjacent Raymond Terrace Road); and Two Mile Creek (800 m). East – Eastern portion of Lot 73 (formerly identified as GHD (2015) Investigation Area 4) comprising former CSR quarry site (natural and disturbed vegetated land); unnamed gully (100 m) which drains north towards Two Mile Creek; Lot 266 DP755237 comprising former CSR site (predominantly unused and vegetated) (100 m); Northern Railway (500 m); East Maitland Cemetery (unused and vegetated), rural residential properties, Raymond Terrace Road and Three Mile Gully (700 m); scale model aircraft flying field and rural property (adjacent Raymond Terrace Road); and Four Mile Creek (1.3 km). South – Quarry highwall and the elevated central-southern portion of Lot 73 (formerly the southern portion of GHD (2015) Investigation Area 3); power line easement (50 m), residential properties (100 m). West – NMH development (Maitland Hospital) comprising the main hospital building and car parking; southwestern portion of Lot 73 (formerly the southern portion of GHD (2015) Investigation Area 1) comprising disturbed (previously cleared) and undisturbed bushland; Metford Road (350 m); Fieldsend Oval (public sporting/football field), Council Depot and industrial properties (adjacent Metford Road); and Two Mile Creek (650 m).

[2] Refer to GHD (2021b) Figure 5 in Appendix A.

Item	Details
Sensitive receptors	Human health receptors: – Future site occupants (patients and workers) – Future site visitors (maintenance workers and members of the public) – Current and future occupants and visitors to surrounding land Ecological receptors: – Flora and fauna within the site and surrounding land – Fresh water ecosystem (ephemeral Two Mile Creek approximately 800-900 m northeast, which flows into Four Mile Creek approximately 1.7 km to the northeast) – Groundwater beneath the site
Topography	The southern (levelled) portion of the site slopes from 14.5 m Australian Height Datum (m AHD) to 14 m AHD to the north, falling to the top of the bioretention basin at approximately 11 m AHD and surrounding low-lying area to the north at approximately 8 m AHD.
Site drainage	There is no formal drainage system for most of the site, with surface water flowing overland to the low-lying area in the northeast (which drains off site into a series of sedimentation ponds within Lot 266 DP755237). The bioretention basin in the central/western portion of the site receives stormwater from the current Maitland Hospital site and discharges via a culvert northeast of the basin in low-flow conditions and via a rock-lined weir to the east when overflowing.
Hydrology	Regional rainfall runoff is ultimately expected to drain into the tributaries of Four Mile Creek (including Two Mile Creek and Three Mile Gully) via overland flow and the town's stormwater system. On-site rainfall is expected to run off into the sedimentation ponds immediately northeast of the site, which drain into Two Mile Creek via an unnamed gully with culverts under the Northern Railway and Raymond Terrace Road and low-lying land (wetlands) present to the northeast of the site (north of Raymond Terrace Road), with limited infiltration into the ground.
Hydrogeology	Based on GHD's (2015) investigation (confirmed by subsequent groundwater monitoring events undertaken by GHD) the inferred groundwater flow direction was generally to the northeast, consistent with local topography. Groundwater standing water levels were near the surface in the northern portion of the site (in the low-lying area) with potential discharge to surface water following prolonged high rainfall resulting in elevated groundwater levels. An online search of the Water NSW database (**https://realtimedata.waternsw.com.au/** accessed 11 January 2023) found six licenced groundwater bores within a 500 m radius of the site, all licenced for monitoring purposes (i.e. no bores were licenced for beneficial use). Given the site is located within a region serviced by a reticulated water supply, it is considered unlikely that the groundwater beneath the site would be utilised for domestic purposes, however it is possible it may be used for irrigation.
Soils	The site is within disturbed terrain, comprising level plain to hummocky terrain extensively disturbed by human activity with highly variable local relief and filling with soil, rock and waste materials. The surrounding area is within the Beresfield Soil Landscape, which comprises undulating low hills and rises on sedimentary rock of the Tomago Coal Measures. Development hazards for the Beresfield Soil Landscape include high foundation hazards, water erosion hazards, seasonal water logging, high run-on, highly acid soils of low fertility.[3]
Geology	The mapped geology underlying the site comprises the Tomago Coal Measures consisting of shale, mudstone, sandstone, clay layers and coal seams[4] dipping around 8° to the west towards the East Maitland Syncline, running parallel to and approximately 80 m west of Metford Road.[5] Outcrop of the Upper Rathluba Coal Seam was mapped within the Northern Zone (Lot 42) and a north-northeast trending fault shown through both zones with approximately 100 m of offset indicated in the coal seam.[3]

[3] Matthei L.E., 1995, *Soil Landscapes of the Newcastle 1:100,000 Sheet* map and report, NSW Department of Land and Water Conservation, Sydney.
[4] Colquhoun G.P., Hughes K.S., Deyssing L., Ballard J.C., Folkes C.B, Phillips G., Troedson A.L. & Fitzherbert J.A. 2021. New South Wales Seamless Geology dataset, version 2.1 [Digital Dataset]. Geological Survey of New South Wales, Department of Regional NSW, Maitland.
[5] T.W.E. David under the direction of C.S. Wilkinson and E.F. Pittman, 1902, Geological Map of part of Maitland Coalfield showing the distribution of Permo-Carboniferous, Tertiary and Recent rocks, Department of Mines and Agriculture, NSW.

Item	Details
Acid Sulfate Soils	There is no mapped risk of acid sulfate soils for the site.[6]
Mine subsidence	The site is not within a declared Mine Subsidence District[7] and uncharted coal mine workings are considered highly unlikely (GHD, 2016a).
Planning development	No relevant applications were located on or within 500 m of the site.[8]
NSW EPA[9]	No notices were reported for the site or within 500 m of the site.
POEO[10]	No active licences were reported for the site or within 500 m of the site. CSR held a licence for solid waste landfilling on their Fieldsend site (west of Metford Road) from 2000 to 2002. Multiplex Constructions held a licence for land-based extractive activity (associated with the NMH development Early Works) in 2019.

2.2 Previous investigations

2.2.1 CSR/PGH operations

Several environmental investigations and site documents were commissioned by CSR, associated with the closure and remediation of the entire Metford site. As summarised in Section 2.2.2.1.1, the ESA (GHD, 2015) provided a detailed review of relevant information for Lot 73 (former Lot 7314), including the following documents:

– *Preliminary Contamination Assessment, PGH Site, Metford NSW*. Environmental Auditors (EA), February 2011.
– *Stage 2 Soil Investigation, CSR/PGH Maitland NSW*. LeVert, September 2011.
– *Phase 2 Detailed Environmental Site Assessment, CSR/PGH Maitland, Metford Road, Metford NSW 2323.* DLA Environmental, January 2014.
– *Remediation Action Plan, CSR/PGH Metford*. DLA Environmental, May 2014.
– *Closure Mine Operation Plan, Metford Clay Mine, ML 1523, 5848, 4865, and 5090*. VGT, March 2015.

2.2.2 NMH development

2.2.2.1 GHD investigations and reports / site documents

The following subsections provide summaries of GHD's previous (contamination) investigations and reports / site documents, relevant to the investigation area, which (as noted previously) predominantly corresponds to the central and northern portions of former Lot 7314 GHD (2015) Investigation Area 3 (and a small portion of the south-eastern corner of Investigation Area 2) as shown in Figure 5 of the LTEMP (provided in Appendix A).

2.2.2.1.1 ESA (GHD, 2015)

The primary objective of the ESA was to provide HI with a high level of confidence that the site contamination characteristics were sufficiently understood to determine the remediation required to make the site suitable for the final land use; and with sufficient confidence and reliance that there would be no foreseeable contamination issues which may affect handing the site over to contractors to undertake redevelopment and construction works on the site.

[6] Naylor, SD, Chapman, GA, Atkinson, G, Murphy CL, Tulau MJ, Flewin TC, Milford HB, Morand DT, 1998, Guidelines for the Use of Acid Sulfate Soil Risk Maps, 2nd ed., Department of Land and Water Conservation, Sydney.
[7] NSW Government Spatial Map Viewer (**https://portal.spatial.nsw.gov.au/portal/apps/sites/#/homepage/pages/map-viewers**) accessed 12 December 2022.
[8] NSW Government Planning Portal (**https://www.planningportal.nsw.gov.au/map**) accessed 11 January 2023.
[9] NSW Environmental Protection Agency (EPA) public register (**https://apps.epa.nsw.gov.au/prclmapp/searchregister.aspx**) accessed 10 January 2023, including contaminated land record of notices issued under the Contaminated Land Management (CLM) Act 1997 , sites notified as contaminated to the NSW EPA, and other EPA contamination issues e.g. former gasworks sties.
[10] Protection of the Environment Operations Act 1997 public register (**https://apps.epa.nsw.gov.au/prpoeoapp/**) accessed 10 January 2023, including Environmental Protection Licences (EPLs).

In order to meet the stated objectives, GHD completed works at the site generally including:

– Data compilation (tables and figures) and gap assessment considering the combined previous investigation reports, and appropriate land use scenarios and investigation levels for the proposed hospital.
– Detailed site inspection of (former) Lot 7314.
– Liaison with geotechnical consultants (Douglas Partners, who undertook concurrent geotechnical investigations on the site) to coordinate activities and take opportunities for collaboration.
– Field investigations comprising eight groundwater wells, 108 testpits, five boreholes, 13 hand auger holes, four sediment samples and three surface water samples.
– Analysis of soil, sediment and water samples.

To facilitate investigations on the site, the site was divided into four main investigation areas based on historic uses and previous disturbance (Areas 1 to 4), as shown on Figure 2 of the ESA (provided in Appendix A).

The site inspection noted the area had been quarried (to a lower elevation than Investigation Area 2) and comprised a swampy / low-lying area in the central and northern portion of Investigation Area 3. An access track ran from east to west through the middle of the low-lying area. The ground surface to the north of the track had been extensively disturbed with numerous small stockpiles (hummocks) and ditches. A large carbonaceous shale stockpile was located in the southern portion, extending across the majority of the area (Investigation Area 3) from east to west. A highwall from former quarrying activities remained to the south of the large carbonaceous stockpile.

With reference to the previous investigation sampling locations shown in Figure 2 of the ESA (provided in Appendix A) and previous results summary tables presented in Appendix B, the results of the investigations (relevant to the investigation area) found that:

– The site has predominantly been used as a quarry and for stockpiling of material. Previous investigations across Lot 73 had identified several exceedences of the current health-based assessment criteria for total recoverable hydrocarbons (TRH) in the $>C_{10}$-C_{16} fraction (F2) and benzo(a)pyrene (BaP), including within the large carbonaceous shale stockpile in the southern portion of Investigation Area 3.
– Investigations indicated that the site contained areas of fill material to depths up to 3.0 m below ground level (bgl). Fill materials generally contained carbonaceous shale with some areas including anthropogenic materials including bricks and brick fragments, domestic waste, rubble, and coal chitter. Excluding bricks and brick fragments, other anthropogenic wastes were generally confined to fill material in smaller stockpiles in the northern portion of Investigation Area 3.
– Contaminants of potential concern (CoPC) were below the adopted health-based assessment criteria for the soil and sediment samples analysed across Lot 73, with the exception of exceedences of the health screening level for residential land use (HSL A/B) for TRH F2 (eight samples) and benzene (one sample), and the health investigation levels for residential (low and high density) and open space (HILs A, B and C, respectively) for BaP toxicity equivalence quotient (TEQ) (one sample). Concentrations of CoPC above the ecological assessment criteria were more wide spread, with 19 samples (excluding quality control duplicate samples) exceeding the ecological screening level (ESL) urban residential for TRH F2 and/or F3 (fraction $>C_{16}$-C_{34}), four samples exceeding the ecological investigation level (EIL) for BaP and numerous samples exceeding the ecological investigation levels (EILs) for zinc and to a much lesser extent nickel and copper.

  Generally, elevated concentrations of TRH F2 and F3 and benzene were associated with soils containing carbonaceous material, predominantly in the southern portion of Investigation Area 3 and the south-eastern end of Investigation Area 2, comprising the carbonaceous shale stockpile and *in-situ* outcroppings of weathered shale.
– Statistical assessment of the data set for soils from the carbonaceous shale stockpile and adjacent outcropping shale indicated the 95% upper confidence limit average (UCL_{av}) concentrations for TRH F2 and F3 exceeded the HSL A/B (for soils at 0-1 m bgl) and the ESL for TRH F2, and exceeded the ESL for TRH F3.
– Asbestos containing material (ACM) was not observed on the surface or in soils encountered during sampling within Investigation Area 3.

– Shallow and deep groundwaters beneath Lot 73 naturally contain nickel and zinc above the freshwater groundwater investigation levels (GILs). It was considered that the concentrations were most likely associated with the naturally occurring geology and overall regional groundwater quality. TRH and PAH concentrations were only detected in groundwater sampled from one well (MW404S), likely to be associated with naturally occurring hydrocarbons present in coal/shale bands. As Metford is supplied with potable water, it was considered unlikely that groundwater would be extracted for beneficial uses, particularly as the water is brackish. Therefore, any risk of exposure associated with groundwater use was considered to be low, except possibly in a construction / dewatering scenario if shallow groundwater with contaminants (as found at MW404S) is encountered.

Based on the scope of works completed, the objective outlined above and subject to the limitations contained within the ESA (GHD 2015), the following conclusions were made:

– Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated.
– On the basis of the investigations undertaken, except for the large shale stockpile (Investigation Area 3) and the adjacent weathered shale outcropping (Investigation Area 3 extending to Investigation Area 2), CoPC concentrations above assessment criteria were relatively minor and isolated, and from a contamination perspective, the fill materials were expected to be acceptable for use in the proposed development.
– ACM was not identified in Investigation Area 3; however, given the nature of vegetation coverage across Lot 73, including the northern portion of Investigation Area 3, there may be other areas that contain ACM.
– Anthropogenic wastes (including ACM in isolated areas) were noted in many areas of fill on Lot 73 but were not generally found to be present in the larger stockpiles in Investigation Area 2 and Investigation Area 3, and were readily visually identifiable.
– Except for shallow groundwater from well MW404S, groundwater and surface water did not generally show evidence of impact from contamination at the site or contaminant migration from adjoining areas that would affect the site, and groundwater is unlikely to be beneficially used.
– GHD (2015) considered that the works sufficiently characterised Lot 73 to enable an assessment of its suitability for the proposed purpose (hospital with open space grounds), subject to implementation of a soil management plan.

GHD (2015) recommended that development works should include a soil management plan containing an asbestos management plan (AMP) and an unexpected find protocol.

2.2.2.1.2 Groundwater and surface water monitoring event (GHD, 2018a)

GHD undertook a groundwater and surface water monitoring event in July 2017. Of particular note, TRH and PAH concentrations in MW404S were reported below the laboratory limit of reporting. It is considered likely that the elevated concentrations reported in 2015 were associated with carbonaceous material disturbed by the monitoring well installation, which had not settled by the time of sampling.

[MW404S was observed to be dry in subsequent monitoring events in March 2019 and January 2020, and had been decommissioned (during NMH construction works) prior to the January 2021 monitoring event].

2.2.2.1.3 Lot 7314 Site Condition Inspection (GHD, 2017)

GHD undertook a site inspection on 12 October 2017, to confirm whether there were any significant changes to the site condition since the previous inspections and fieldwork undertaken in October 2015 (GHD, 2015).

Regarding Lot 73, the site condition was generally similar to that observed in 2015.

2.2.2.1.4 Part Lot 401 Site Inspection and Addendum to Contamination Investigations and Lot 7314 Site Condition Inspection – February 2018 (GHD, 2018b)

GHD undertook a limited site inspection on 12 February 2018, to confirm whether there were any significant changes to the site condition since the previous inspections undertaken in October 2015 (GHD, 2015) and October 2017 (GHD, 2017).

Regarding Lot 73, the site condition was generally similar to that observed in 2017, except the large carbonaceous material stockpile and outcrop had been covered with sandstone fill (presumably sourced from the site, but not confirmed at the time of the inspection).

2.2.2.1.5 Lot 7314 Site Validation (GHD, 2021a)

A Site Validation report was issued at completion of early works in 2019 (29 November 2019), The report was updated to incorporate additional works to complete the development of the NMH site, as summarised below.

The objective was to validate the remediation works by undertaking site inspections as well as reviewing remediation documents and materials handling registers to support decisions regarding the suitability of soil remaining on site (following remediation and earthworks for the site development) for the proposed future land use as a hospital.

GHD's scope of work during the remediation and validation of (former) Lot 7314 (Lot 73) included:

– Review of the RAP and relevant previous investigations.
– Technical guidance provided to the contractor regarding implementing the requirements of the RAP.
– Review of material tracking records (including transport and disposal of waste, and re-use of materials on site).
– Site inspections (fortnightly on average) during and upon completion of key earthworks/remediation works.
– Preparation of the Site Validation report.

Given no significant contamination was identified in the ESA (and subsequent inspections), remediation works were generally incidental and limited to the bulk earthworks (predominantly 'cut and fill') completed within the development area as shown in Figure 4.1 of the Site Validation report (provided in Appendix A) – including the construction of a stormwater bioretention basin (former construction sediment basin) in the central/western portion of Lot 73, and a level pad (over 1 ha area, identified as the eastern expansion area) in the southern portion of Lot 73, intended for future development of the NMH (Maitland Hospital) campus.

Contamination issues within Lot 73 area were limited to the presence of natural carbonaceous material and anthropogenic wastes, and the potential to encounter unexpected contamination during earth works.

The following remediation methods were utilised within Lot 73:

– Visual screening and segregation of unacceptable materials (including aesthetic impacts, ACM, and carbonaceous materials).
– Capping and containment of segregated materials, where contamination is not subject to exposure under normal foreseeable use of the site.
– Mixing of carbonaceous materials (potentially combustible) with uncontaminated materials.
– Re-use of uncontaminated materials (including virgin excavated natural material, screened overburden, and fill) for bulk fill.

Remediation and management of identified contamination carried out during the early works of the development (applicable to Lot 73) comprised:

– Reshaping of the north-western portion of the carbonaceous shale stockpile/outcrop (adjacent the drainage channel) and capping reinstatement, in association with the construction of the sediment basin drainage channel (prior to removal of the stockpile/outcrop, as described below).
– Remediation of additional ACM contamination identified in the western portion of Lot 73 (in the vicinity of the western carpark) including separation and off-site disposal of ACM from impacted soils and on-site re-use of the remediated soils.
– Segregation of materials with aesthetic issues (including brick and concrete fragments) and re-use on site (at least 2 m below design level).

Remediation and management of identified contamination carried out during the main works comprised:

– Removal of the carbonaceous shale stockpile/outcrop. The carbonaceous material was mixed with surplus uncontaminated cut material (from Lot 7314 and Part Lot 401) and predominantly used as fill in the western portion of the northern carpark (extending across Part Lot 401 into Lot 7314).

– Excavation of identified coal seams in the eastern expansion area (beneath the carbonaceous shale stockpile/outcrop) to a depth of 0.8 m below final design level. The coal was mixed with uncontaminated material from within the excavation and from a nearby borrow area, and re-used within the excavation voids and borrow area.

GHD identified two distinct areas within Lot 73 known to contain materials subject to site environmental management requirements (i.e. subject to an LTEMP), as shown in Figure 4.3 of the Site Validation report (provided in Appendix A):

– The soils from the bonded ACM asbestos remediation (remaining ACM concentrations in soil below HSLs, but not “asbestos free”), emplaced approximately 0.3 m below the surface, to the east of the bioretention basin (former construction sediment basin) (Area A).
– The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area.

As noted on Figure 4.3 of the Site Validation report, there is also a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works.

Furthermore (and with reference to Figure 2.2 of the Site Validation report, provided in Appendix A), previously identified contamination remains in the portions of Area 3 (which correspond to Lot 73) that have not been developed/disturbed, including:

– Aesthetic: Fill materials were present to varying depths with the exception of the low-lying area in the north. However, this area had some small stockpiles and an access road (assumed fill). Fill materials were recorded to a depth of 3.0 m and in some areas contained foreign material (coal chitter, brick fragments, ceramics and domestic waste), including north of the large shale stockpile (TP461, TP459, TP455) and around the north-western corner of Investigation Area 3, adjacent the former CSR site (TP466, TP470). It is noted that all these locations, except for TP455, have been filled over as part of the NMH development earthworks, and the identified fill material may remain (beneath the NMH development fill material). No odours or staining were observed in the identified fill material.
– Metals: Numerous samples exceeded the EIL for zinc, and one occurrence each of nickel and copper. Zinc concentrations are likely to be associated with the natural mineralogy.

Hence it was agreed that the entire site will be subject to management requirements if subsurface disturbance is undertaken. An LTEMP (GHD, 2021b) was prepared, which promotes awareness of the contamination issues requiring management at the site, and provides procedures to manage potential exposure to contaminated materials during routine use of the site, including foreseeable maintenance activities.

GHD considered that the remediation works undertaken within the development area were carried out in accordance with the RAP (GHD 2016), and consequently, the validation results and inspections indicated that the site was suitable for the proposed development (hospital with open space grounds), subject to implementation of the LTEMP.

GHD noted that the NMH development included the northern carpark, predominantly located within (former) Lot 401 (north of former Lot 7314). This portion of the development (known as Part Lot 401 at the time) was subject to separate investigation, remediation and validation, which was reported under separate cover.

The separate report for (former) Part Lot 401 includes the development/remediation works associated with the entire northern carpark, which extends into (former) Lot 7314 (north/north-west of the bioretention basin) including a containment area for asbestos contaminated soil (which is subject to site management requirements and extends into Lot 7314). Further information on this is provided in Section 2.2.2.1.6.

Note, all materials represented by the previous sampling remain on site, albeit subject to relocation as per the material tracking records.

2.2.2.1.6 LTEMP (GHD, 2021b)

An LTEMP was first issued at completion of early works in 2019 (29 November 2019). The LTEMP was subsequently updated to incorporate additional works undertaken to complete the development of the NMH site, and to include the northern carpark (former Part Lot 401), as summarised below.

Purpose of the LTEMP

The LTEMP was developed to provide awareness of the areas of identified contamination or natural materials requiring management that remain on the NMH development site (former Lot 7314 and former Part Lot 401), and to document the procedures and responsibilities required to protect users of the site (including patients, visitors, workers, and possible future intrusive maintenance workers) from exposure to such contamination during normal use and maintenance of the site.

The LTEMP is not intended to cover other activities such as large-scale redevelopment or remediation of the NMH site for a change in land use. Such activities would require specific site management plans developed for that particular purpose.

The LTEMP requires maintenance of passive control measures only (i.e. no operation or maintenance of active control systems is required).

Description of materials requiring management

Based on previous investigations and the remediation and validation works carried out as part of earthworks completed at the site, GHD identified three distinct areas within Lot 73 known to contain materials subject to site environmental management requirements, as shown in Figure 7 of the LTEMP (provided in Appendix A):

– The soils remaining from remediation of bonded asbestos containing material (ACM), emplaced approximately 0.3 m below the surface, to the east of the bioretention basin (Area A). Remaining concentrations of ACM in this soil were considered to be less than health-based screening criteria (HSLs), but potential remains for some asbestos to be present.
– The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area. (Not contamination per se, but material which could present a hazard if exposed and subject to ignition such as from a bush fire).
– ACM-impacted material excavated from Pit 2, which was placed in a containment area in the eastern portion of the northern carpark, at a depth greater than 2 m below the final design level.

As noted on Figure 7 of the LTEMP, there is also a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works. Furthermore, previously identified contamination remains in the portions of Area 3 (which correspond to Lot 73) that have not been developed/disturbed, as summarised in Section 2.2.2.1.5. Hence the entire site is subject to management requirements if subsurface disturbance is undertaken.

Actions required by LTEMP

Procedures were provided in Appendix D of the LTEMP to mitigate the potential risks that were identified based on the evaluation of the contamination status of the site, and to manage potential pathways of exposure and linkages to hospital staff and patients, visitors and intrusive maintenance users who may use the site.

In summary, actions comprise the following:

– Providing awareness of the presence of materials requiring management to any persons undertaking intrusive works at the site.
– Procedures to manage identified contamination or unexpected finds if exposed during normal use and maintenance of the site.
– Periodic inspections and maintenance if required to ensure contaminated materials are not subject to uncontrolled exposure.
– Review and maintenance of the LTEMP.

Enforceability and public notification

Implementation of the LTEMP is considered legally enforceable under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), by way of the conditions of consent for the development (SSI 9775), which require a Site Audit Statement and Site Audit Report verifying the site is suitable for the intended land use. The suitability of the site, as determined by the Site Audit, is subject to implementation of this LTEMP, as stated on the Site Audit Statement (JBS&G, 2021a).

Due to the presence of asbestos on the site as discussed above, there is also a legislative requirement for an Asbestos Management Plan (AMP) to be maintained in accordance with the requirements of Part 8.1 of the *Work Health Safety (WHS) Regulation 2017*. The LTEMP is considered to fulfill the minimum requirements of an AMP, and hence is legally enforceable under the WHS Regulation.

There must be appropriate notification on the site's planning certificate issued under Section 10.7 of the EP&A Act of the restrictions applying to the site to ensure that current and future site owners and occupiers are aware of the details of the LTEMP. The Site Audit Statement (JBS&G, 2021a) and the LTEMP should be noted on the site's Section 10.7 Planning Certificate. The LTEMP should also be incorporated in or referenced as part of any overall environmental management documents for operation of the NMH site.

The owner/occupier of the NMH site shall ensure that the current version of the LTEMP is provided to Council. When the LTEMP undergoes amendment, the amended document shall be provided to Council to ensure that the most up to date version is presented on the certificate. The current version of the LTEMP shall also be provided as part of any relevant inductions and for use as part of overall environmental management of the site.

The LTEMP must be implemented until an accredited site auditor or the NSW Environmental Protection Authority (EPA) determines that the LTEMP is no longer required.

2.2.2.2 Geotechnical summary

The following subsections provides a summary of geotechnical site conditions, relevant to Lot 73, based on review of the documents listed in Section 1.4.

General

Lot 73 is highly disturbed by the former CSR quarry and subsequent NMH development. As noted, the site was quarried for clay (and shale) used in the brick manufacturing facility.

It is understood that coal was also extracted from the quarry via open cut methods. As noted in GHD's (2016) mine subsidence review, it appears that the Upper Rathluba Coal Seam was removed in quarried areas of the Metford Triangle (but is present in remaining areas).

The quarry was partially backfilled with waste materials and quarry overburden. A carbonaceous (chitter) stockpile and shale outcropping (further west) was present in the southern portion of Lot 73 (in GHD Investigation Area 3) as seen in the ESA figures provided in Appendix A. These features were both removed as part of the NMH development, as documented in the Site Validation report (and summarised in Section 2.2.2.1.5), and earthworks (including filling) carried out to construct the stormwater bioretention basin and level pad identified as the eastern expansion area.

Existing subsurface investigations

Subsurface conditions encountered at test locations prior to the NMH development comprised fill up to 2.4 m depth, over residual clay and sand, sandstone and siltstone. A large carbonaceous (chitter) stockpile and shale outcropping existed at the site (DP, 2018) and was removed as part of the NMH development (as summarised in Section 2.2.2.1.5) along with removal (boxing out and replacement with engineered fill) of the coal seams exposed in three locations (DP, 2021).

The eastern expansion area / level pad in the southern portion of Lot 73 is understood to be an engineered fill platform (Qualtest, 2021) with up to 7 m thickness of fill (as indicated by TTW's "As built bulk earthwork plan" provided in Appendix A).

2.3 Site inspection

An experienced GHD Senior Environmental Engineer (Jesse Simkus) undertook a site inspection Tuesday 13 December 2022, to confirm whether there were any significant changes to the site condition since the final Site Validation inspection 1 December 2021 (GHD, 2021a).

The site condition was generally similar to that observed in 2021, as illustrated in Plate 1 photos (with reference to site features shown in Figure 5 of the LTEMP, provided in Appendix A), noting additional weed growth on the level pad and deepening of rill erosion on the batters of the pad (including where it meets the bioretention basin in the vicinity of the soils remaining from remediation of bonded ACM, emplaced approximately 0.3 m below the surface, to the east of the bioretention basin).

An experienced GHD Senior Engineering Geologist (Joanna Sylvester) undertook a site inspection Wednesday 21 December 2022 to 'ground-truth' the findings of the document review relating to geotechnical conditions.

The geotechnical site inspection noted:

– The site is heavily disturbed, with minimal vegetation, with large areas of bare or partially grass covered fill, soil and exposed rock on the surface.
– A weathered rock cutting was present along the southern boundary of Lot 73, with rill erosion visible within the more weathered areas.
– The southern portion of the site (identified as the eastern expansion area) is generally flat and appears to consist of fill, including coal and carbonaceous material, with fill batters around the eastern and northern edges of the pad. Cracking of the surficial clay material was evident in some areas of bare or sparse grass covering, and rill erosion up to approximately 0.3 m deep was visible along the fill batters for the pad and the bioretention basin.

Plate 1 ***Current site conditions (13 December 2022)***

Photo 1 ***South-western corner of Lot 73. Eastern carpark in the background (eastern expansion area beyond). View to East €***

Photo 2 ***South-western corner of Lot 73, with drainage channel to the bioretention basin. Quarry highwall in the background. View SE***

Photo 3 *South-western corner of Lot 73, with drainage channel from the hospital development. Note rock outcropping and rill erosion. View W*

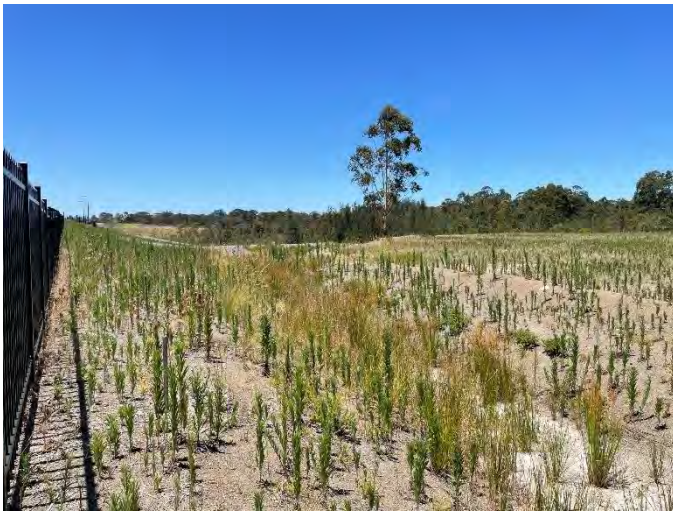

Photo 4 *Drainage channel to the bioretention basin, with the eastern expansion area on the right. View NE*

Photo 5 *Southern boundary of Lot 73 and the eastern expansion area, with quarry highwall in the background. View SE*

Photo 6 *Southern boundary of Lot 73 and the eastern expansion area, with cracking of the surficial clay material. View W*

Photo 7 *Eastern expansion area, with the eastern carpark and Maitland Hospital in the background. View NW*

Photo 8 *Eastern expansion area, with the eastern carpark in the background (northern carpark beyond). View N*

Photo 9 *Eastern portion of the eastern expansion area. View NE*

Photo 10 *Southern boundary of Lot 73 and the eastern expansion area, with cracking of the surficial clay material. View SE*

Photo 11 *Eastern expansion area, with quarry highwall in the background. View SE*

Photo 12 *Eastern expansion area, with quarry highwall in the background. View S*

Photo 13 *Bioretention basin, with rill erosion at the top of the eastern expansion area batter (foreground). Eastern and northern carparks in the background. View N*

Photo 14 *ACM-impacted soils emplaced 0.3 m below the surface, east of the bioretention basin (Area A). View NNE*

Photo 15 *Significant rill erosion at the intersection of the eastern expansion area batter (right) and the bioretention basin batter (foreground). View E*

Photo 16 *Significant rill erosion at the intersection of the eastern expansion area batter (left) and the bioretention basin batter (right). View SW*

Photo 17 *Bioretention basin low-flow outlet pit. Northern carpark in the background. View N*

Photo 18 *Area north of the bioretention basin, with low-flow discharge culvert outlet (centre/right). View N*

Photo 19 *Bioretention basin low-flow discharge culvert outlet. View NNE*

Photo 20 *Ponded water at the bioretention basin low-flow discharge culvert outlet. View NNE*

Photo 21 *Northern carpark embankment, with access road (left) and northern boundary in the background. View NNE*

Photo 22 *Northern carpark embankment – eastern extent of the ACM-impacted material containment area (>2 m below the final design level). View N*

Photo 23 *Northern corner of Lot 73, with northern carpark drainage discharge outlet. View NE*

Photo 24 *Low-lying northern portion of Lot 73. View ESE*

Photo 25 *Eastern portion of the bioretention basin, with the eastern expansion area and quarry highwall in the background. View SSE*

Photo 26 *Western portion of the bioretention basin, with drainage channel from the hospital development in the background. View SW*

Photo 27 *Access track through the low-lying northern portion. Maitland Hospital in the background. View W*

Photo 28 *Access track through the low-lying northern portion, with groundwater monitoring well MW205 (centre/left). View E*

Photo 29 *Hummock with bricks and brick fragments in northern portion of Lot 73.*

Photo 30 *Culvert with sandbag screen on the southern side of access track (midway along the track). View S*

Photo 31 *Swampy area south of the access track (with the eastern expansion area beyond). Quarry highwall in the background. View S*

Photo 32 *Small stockpile with bricks and brick fragments adjacent the access track.*

3. Preliminary Conceptual Site Model

A Conceptual Site Model (CSM) was developed to provide an understanding of the potential for exposure to contaminants and potential impacts to beneficial uses from contamination within the Site. The CSM draws together historical data, specific and regional geological, hydrogeological, hydro-geochemical and contamination information to identify potential contamination sources, migration and exposure pathways and sensitive receptors for the Site, as presented in Table 3.1.

Table 3.1 CSM for future Maitland Hospital Health Campus development within Part Lot 73

Potential Source	Pathway	Receptor	Pathway potentially complete?
Contaminated soils/fill on site (including coal and carbonaceous outcroppings)	Volatilisation to indoor air and subsequent inhalation	Future site occupants (facility patients, workers and visitors)	Unlikely. Semi-volatile soil concentrations exceeding HSLs not present beneath the proposed building area.
	Volatilisation to outdoor air and subsequent inhalation	Intrusive maintenance workers (including construction workers)	No. Volatile soil concentrations below relevant investigation levels.
		Future site occupants (facility patients, workers and visitors)	Unlikely. Semi-volatile soil concentrations exceeding HSLs for vapour intrusion present in some locations, however, would be dispersed in open air.
	Direct contact	Intrusive maintenance workers (including construction workers)	No. Soil concentrations below direct contact criteria.
		Future site occupants (facility patients, workers and visitors)	No. Soil concentrations below direct contact criteria.
	Vertical migration of contaminants	Groundwater (and eventual discharge to Four Mile Creek)	Unlikely. Groundwater concentrations likely to be representative of regional water quality and are not expected to be an environmental risk, surface water samples did not indicate any significant impact.
Potential spontaneous combustion (coal and carbonaceous outcroppings)	Vapours	Intrusive maintenance workers (including construction workers), future site occupants	Unlikely. Material removed and mixed with uncontaminated material, or else capped and/or unlikely to be disturbed/encountered. However, the potential risk and mitigation measures should be included in the facility's construction environmental management plan (CEMP) with reference to the LTEMP (which will require updating upon completion of the facility development).
	Safety hazard (fire, heat)	Intrusive maintenance workers (including construction workers), future site occupants	Unlikely. Material removed and mixed with uncontaminated material, or else capped and/or unlikely to be disturbed/encountered by the facility development. However, the potential risk and mitigation measures should be included in the facility's CEMP with reference to the LTEMP (which will require updating upon completion of the facility development).
Asbestos (bonded and friable)	Inhalation of fibres	Intrusive maintenance workers (including construction workers)	Unlikely. Bonded and friable ACM in soil within the identified emplacement areas considered to be less than health-based screening criteria (HSLs). However, for WHS purposes any disturbance of soils containing asbestos will need to be carried out in accordance with regulatory requirements, and the potential risk and mitigation measures should be included in the facility's CEMP with reference to the LTEMP (which will require updating upon completion of the facility development). There is potential for isolated occurrences of ACM or other contaminants to be present in other areas of the site as "unexpected finds". The risk associated with these isolated occurrences, if present, is considered to be low, and potential exposure will be managed by way of an unexpected finds protocol included in the facility's CEMP, and with reference to the LTEMP (which may require updating to incorporate finds if they are retained on site at completion of the facility development).
		Future site occupants (facility patients, workers and visitors)	Unlikely. Bonded and friable ACM in soil (within the identified emplacement areas) considered to be less than health-based screening criteria (HSLs) and will be monitored and managed in accordance with an updated LTEMP (incorporating the facility development).

Potential Source	Pathway	Receptor	Pathway potentially complete?
Contaminated groundwater beneath the site	Volatilisation to indoor air and subsequent inhalation	Future site occupants (facility patients, workers and visitors)	No. Volatile groundwater concentrations below acceptable criteria.
	Volatilisation to outdoor air and subsequent inhalation	Intrusive maintenance workers (including construction workers)	No. Volatile groundwater concentrations below acceptable criteria.
		Future site occupants (facility patients, workers and visitors)	No. Volatile groundwater concentrations below acceptable criteria.
	Direct Contact (including accidental ingestion)	Intrusive maintenance workers (including construction workers)	Unlikely. Groundwater concentrations below acceptable criteria for incidental ingestion (in the July 2017 monitoring event). However, consideration should be given to groundwater management (including potential contamination) in the facility's CEMP.
		Future site occupants (facility patients, workers and visitors)	Unlikely. Groundwater concentrations above acceptable criteria for beneficial use, however the area is supplied with potable water and groundwater is unlikely to be used for beneficial uses due to the brackish nature of the water.
	Lateral migration in groundwater	Ecological and recreational receptors of Four Mile Creek (approximately 400-500 m north-east)	Unlikely. Groundwater concentrations likely to be representative of regional water quality and are not expected to be an environmental risk. Surface water samples did not indicate any significant impact.
		Volatilisation risk to off-site receptors	No. Volatile groundwater concentrations below investigation levels.
		Groundwater extraction for recreational, irrigation, stock watering or drinking water use	Unlikely. Extraction could potentially occur through unregistered bores and groundwater discharge into low lying areas and waterways, however elevated concentrations of TRH and PAH were only encountered in MW404S during the initial groundwater monitoring event in 2016 (concentrations were below the laboratory limit of reporting in the July 2017 monitoring event) and the brackish nature of water would preclude most beneficial uses.

4. Geotechnical considerations

4.1 Anticipated subsurface conditions

Based on the document review and site inspection, the following subsurface conditions are anticipated:

– Fill overlying natural soil and weathered rock.
– Fill is anticipated to include both engineered and non-engineered fill constructed as part of the NMH development.
– Older fill may also remain.
– Engineered fill within the levelled area is likely to be up to 7 m thick.

4.2 Geotechnical hazards

Geotechnical hazards associated with Lot 73 include:

– Deep fill, including the presence of bricks, carbonaceous and contaminated material
– Uncontrolled / non-engineered fill
– Presence of high strength rock near surface

Noting:

– The excavation and placement of engineered fill which occurred in Lot 73 as part of the NMH development reduces the potential for and likely quantity of non-engineered fill.
– The land within the proposed footprint of the main facility building is currently not levelled and the proposed footprint overlays the existing stormwater bioretention basin.
– The building could be founded on deep (piled) footings into the underlying rock, and it may be possible to elevate the floor level without the need for filling of the entire footprint.

4.3 Required geotechnical information

The following geotechnical information will be required to inform detailed design:

– Revised subsurface model, including anticipated founding and subgrade conditions
– Foundation options for buildings and other structures (e.g. lighting poles)
– Geotechnical parameters for proposed foundation design
– Soil reactivity and aggressivity of soils
– Subgrade preparation
– Pavement design for roads and carparking
– Excavation conditions and excavation support (if relevant)
– Earthworks, including filling of the bioretention basin (if required)
– Erosion and dispersion potential of natural soils and typical mitigation measures

5. Conclusions

5.1 Key findings

The following presents the key findings from this investigation:

– Lot 73 (the site) is located within the quarried area of the former CSR clay extraction and brick manufacturing facility, and was subject to investigation, remediation and validation associated with the NMH development.

– The site comprised a swampy / low-lying area in the northern portion. An access track ran from east to west through the middle of the low-lying area. The ground surface to the north of the track was extensively disturbed with numerous small stockpiles (hummocks) and ditches. The northern carpark embankment extended into the northern corner of the site. A stormwater bioretention basin was located in the central/western portion of the site, and a level pad (identified as the eastern expansion area) was located in the southern portion. A highwall from the former quarrying activities remained to the south of the site.

– Previous investigations indicated the site contained areas of fill material comprising carbonaceous shale and anthropogenic materials including bricks and brick fragments, domestic waste, rubble, and coal chitter.

– No significant contamination was found within Lot 73 during the ESA, except for natural carbonaceous material and anthropogenic wastes, and the potential for “unexpected finds” of contamination to occur during earth works.

– Shallow and deep groundwaters beneath Lot 73 naturally contain nickel and zinc above the freshwater groundwater investigation levels (GILs). It was considered that the concentrations were most likely associated with the naturally occurring geology and overall regional groundwater quality. TRH and PAH concentrations were only detected in groundwater sampled from one well (MW404S) in 2015, likely to be associated with naturally occurring hydrocarbons present in coal/shale bands. TRH and PAH concentrations in MW404S were reported below the laboratory limit of reporting in subsequent monitoring (in July 2017), hence it is considered likely that the elevated concentrations reported in 2015 were associated with carbonaceous material disturbed by the monitoring well installation, which had not settled by the time of sampling. MW404S was observed to be dry in subsequent monitoring events in March 2019 and January 2020, and had been decommissioned (during NMH construction works) prior to the January 2021 monitoring event.

  As Metford is supplied with potable water, it is considered unlikely that groundwater would be extracted for beneficial uses, particularly as the water is brackish. Therefore, any risk of exposure associated with groundwater use is considered to be low.

– Given no significant contamination was identified in the ESA (and subsequent site inspections), remediation works were generally incidental and limited to the bulk earthworks (predominantly ‘cut and fill’) completed within the NMH development area.

– GHD identified three distinct areas within Lot 73 known to contain materials subject to site environmental management requirements, as shown in Figure 7 of the LTEMP (GHD, 2021b) provided in Appendix A:

  - The soils remaining from remediation of bonded asbestos containing material (ACM), emplaced approximately 0.3 m below the surface, to the east of the bioretention basin (Area A). Remaining concentrations of ACM in this soil were considered to be less than health-based screening levels (HSLs) and thus would not require remediation for the proposed development, but potential remains for some asbestos to be present which must be managed in accordance with regulatory requirements.
  - The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area. (Not contamination per se, but material which could present a hazard if exposed and subject to ignition such as from a bush fire).
  - ACM-impacted material excavated from Pit 2, which was placed in a containment area in the eastern portion of the northern carpark, at a depth greater than 2 m below the final design level. We assume that this material would not be disturbed by the proposed development.

– There is a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works.

– Previously identified contamination remains within Lot 73 that has not been developed/disturbed (refer to Figure 2.2 of the Site Validation report, provided in Appendix A), including:
    - Aesthetic: Fill materials were present to varying depths with the exception of the low-lying area in the north. However, this area had some small stockpiles and an access road (assumed fill). Fill materials were recorded to a depth of 3.0 m and in some areas contained foreign material (coal chitter, brick fragments, ceramics and domestic waste), including north of the large shale stockpile (TP461, TP459, TP455) and around the north-western corner of Investigation Area 3, adjacent the former CSR site (TP466, TP470). It is noted that all these locations, except for TP455, have been filled over as part of the NMH development earthworks, and the identified fill material may remain (beneath the NMH development fill material). No odours or staining were observed in the identified fill material.
    - Metals: Numerous samples exceeded the EIL for zinc, and one occurrence each of nickel and copper. Zinc concentrations are likely to be associated with the natural mineralogy.
– An LTEMP was prepared which promotes awareness of the contamination issues requiring management at the site and provides procedures to manage potential exposure to contaminated materials during routine use of the site, including foreseeable maintenance activities.

5.2 Conclusions and recommendations

In accordance with the purpose of this report (Section 1.2) and the objectives detailed in Section 1.3, and based on the scope of work listed in Section 1.4 and information contained within this investigation (subject to the limitations documented throughout this report and in Section 7), the following conclusions and recommendations are made:

– GHD undertook an ESA (now known as a detailed site investigation) for the site in 2015. The ESA (GHD, 2015) informed the preparation of an RAP for the NMH development (GHD, 2016b). Remediation works were carried out in accordance with the RAP and validated by GHD in 2021. The Site Validation report concluded that the soil remaining on site was suitable for the proposed future land use as a hospital, subject to the preparation and implementation of an LTEMP (GHD, 2021b).

  Based on review of these documents (and site conditions observed during the site inspection carried out on 13 December 2022) contamination within Lot 73 is considered to have been sufficiently characterised to enable an assessment of the suitability of the site for the proposed development subject to implementation of appropriate contamination management documents. On this basis, no further detailed site investigation is required to inform suitability of the site in regard to contamination.
– A preliminary CSM has been developed for Lot 73 and considers that there are no complete or potentially complete source-pathway-receptor linkages for the identified contamination and plausible receptors, on the basis that potential risks will be managed in accordance with a CEMP to be prepared for the facility development and/or the LTEMP (current version provided in Appendix D), to be updated upon completion of the facility development).
– The CEMP will need to consider the identified (contamination) management areas and include an asbestos management plan (AMP) and an unexpected finds protocol to identify anthropogenic wastes, remove potential ACM prior to disturbance for appropriate disposal, and separate any wastes that are not acceptable for aesthetic or other reasons, for either management (e.g. emplacement in deeper fill) or disposal. Should unexpected contamination be identified during development works, advice should be sought from a suitably qualified environmental consultant.
– The CEMP should also consider groundwater management (including potential contamination) and include sampling requirements to confirm groundwater quality prior to any dewatering activities.
– The site is considered likely to be suitable (in regard to contamination) for the proposed future land use as part of the Maitland Hospital Health Campus, subject to management of any contaminated material (as and if required) undertaken in general accordance with the contamination management principles described in the existing RAP (provided in Appendix C) and/or the current LTEMP (provided in Appendix D), and subject to an updated LTEMP at completion of the development.

- Regarding State Environmental Planning Policy (Resilience and Hazards) 2021 (herein, the Resilience and Hazards SEPP), GHD has not carried out a detailed planning assessment; however, given the conclusion above, and with reference to the interpretation and assumptions discussed in Section 12.2 of the existing RAP (GHD, 2016b), we consider that should any "remediation works" be required as a result of unexpected finds within the investigation area, they would likely be considered to be Category 2 (work not needing consent).[11]
- Anticipated subsurface conditions comprise engineered and non-engineered fill (up to 7 m thick within the eastern expansion area) overlying natural soil and weathered rock.
- To gather the required geotechnical information listed in Section 4.3 and inform the detailed design, a geotechnical investigation will be necessary and should be scoped by the team who will complete the investigation and assessment. Investigation is likely to include:
  - Project planning and safety management, including engagement of a drilling subcontractor, development of safety documentation and briefing of the site investigation team.
  - Boreholes within the building footprint extending to a suitable depth below the founding level within natural soil or rock material.
  - Test pits or large diameter boreholes in areas of proposed road and carpark pavements to at least 1.5 m depth to assess subgrade conditions, including subgrade design California Bearing Ratio (CBR). Dynamic Cone Penetrometer (DCP) testing should be completed within each test location.
  - Boreholes or test pits to inform other miscellaneous items such as light poles, electrical cabinets, water utilities, earthworks, etc. Such boreholes should be completed to below founding level and into natural soil or rock material.
  - Geotechnical investigations in accordance with AS1726-2017.
  - Insitu testing and sampling of fill, soil and rock material encountered.
  - Laboratory testing of selected samples at a NATA registered facility.
  - Provision of a geotechnical report summarising the investigation scope and findings along with a discussion and recommendations.

[11] GHD notes that the Resilience and Hazards SEPP replaced former State Environmental Planning Policy No 55—Remediation of Land (1998 EPI 520); however; no material changes were made to the legislation which affects this conclusion. Relevant clauses of the Resilience and Hazards SEPP (with respect to the references in Section 12.2 of the existing RAP, GHD 2016b) include: Clause 4.8; 4.11; 4.12; 4.13 and 4.14.

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7. Limitations

This report: has been prepared by GHD for Health Infrastructure (NSW Government) and may only be used and relied on by Health Infrastructure (NSW Government) for the purpose agreed between GHD and Health Infrastructure (NSW Government) as set out in Section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Health Infrastructure (NSW Government) arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described throughout this report. GHD disclaims liability arising from any of the assumptions being incorrect.

This report is based on investigations and findings contained in the reports referenced in Section 6 (Referenced Reports) and on the conditions encountered and information reviewed at the time of each Referenced Report. This report should be read in conjunction with the Referenced Reports. It is also subject to all the limitations and recommendations in the Referenced Reports.

GHD has prepared this report on the basis of information provided by Health Infrastructure (NSW Government) and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

Except as otherwise expressly stated in this report GHD makes no warranty or representation as to the presence or otherwise of asbestos and/or asbestos containing materials (“ACM”) on the site. If fill material has been imported on to the site at any time, or if any buildings constructed prior to 1970 have been demolished on the site or material from such buildings disposed of on the site, the site may contain asbestos or ACM.

Except as otherwise expressly stated in this report, GHD makes no warranty, statement or representation of any kind concerning the suitability of the site for any purpose or the permissibility of any use, development or re-development of the site.

These Disclaimers should be read in conjunction with the entire report. This report must be read in full and no excerpts are taken to be representative of the findings of this report.

Appendices

Appendix A

Existing figures and drawings

LEGEND

- Site boundary
- Metford Triangle
- Cadastre
- Waterbody
- Watercourse (as per topographic mapping for area)
- Railway

Paper Size ISO A4

0 50 100 150 200 250

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

GHD

NSW Health Infrastructure
New Maitland Hospital
Lot 7314 Site Validation

Site location and pre-development features

Project No. **22-19923**
Revision No. **1**
Date **03/12/2021**

FIGURE 1.1

G:\22\19923\GIS\Maps\2219923_Lot7314_SiteValidation_1.aprx
Print date: 03 Dec 2021 - 09:29

Data source: LPI: DCDB/DTDB, 2017. Metromap: Aerial imagery, 2021. Metromap Tile Service: . Created by: tmorton

DRAFT

EAST MAITLAND

FIELDSEND STREET

METFORD ROAD

TENNYSON STREET

FOVEAUX CRESCENT

STRADBROKE AVENUE

DE LISLE CRESCENT

1

2

3

4

LEGEND

- Site boundary
- Investigation sector boundary
- Brick fill to 2m (LeVert, 2011)
- Calcium Fluoride (EA, 2011)
- PACM stockpile
- Pit 2
- Possible foreign materials
- Stockpile 4

© Land and Property Information (a division of the Department of Finance and Services) 2012

Paper Size A3

0 10 20 40 60 80

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Cadastre
- DLA Test pit
- DP / GHD test pit
- DP Soil bore
- Existing monitoring well
- GHD / DP soil bore
- GHD Hand auger
- GHD Monitoring wells
- GHD Sediment sample
- GHD Soil bore
- GHD Surface water sample
- GHD Test pit
- LeVert soil sample
- LeVert test pit
- PACM
- Sewer pit
- Sewer main

Health Infrastructure
New Maitland Hospital, Metford
Stage 1 Development Area
Phase 2 ESA
Sampling Locations

Job Number 22-18003
Revision C
Date 19 Nov 2015

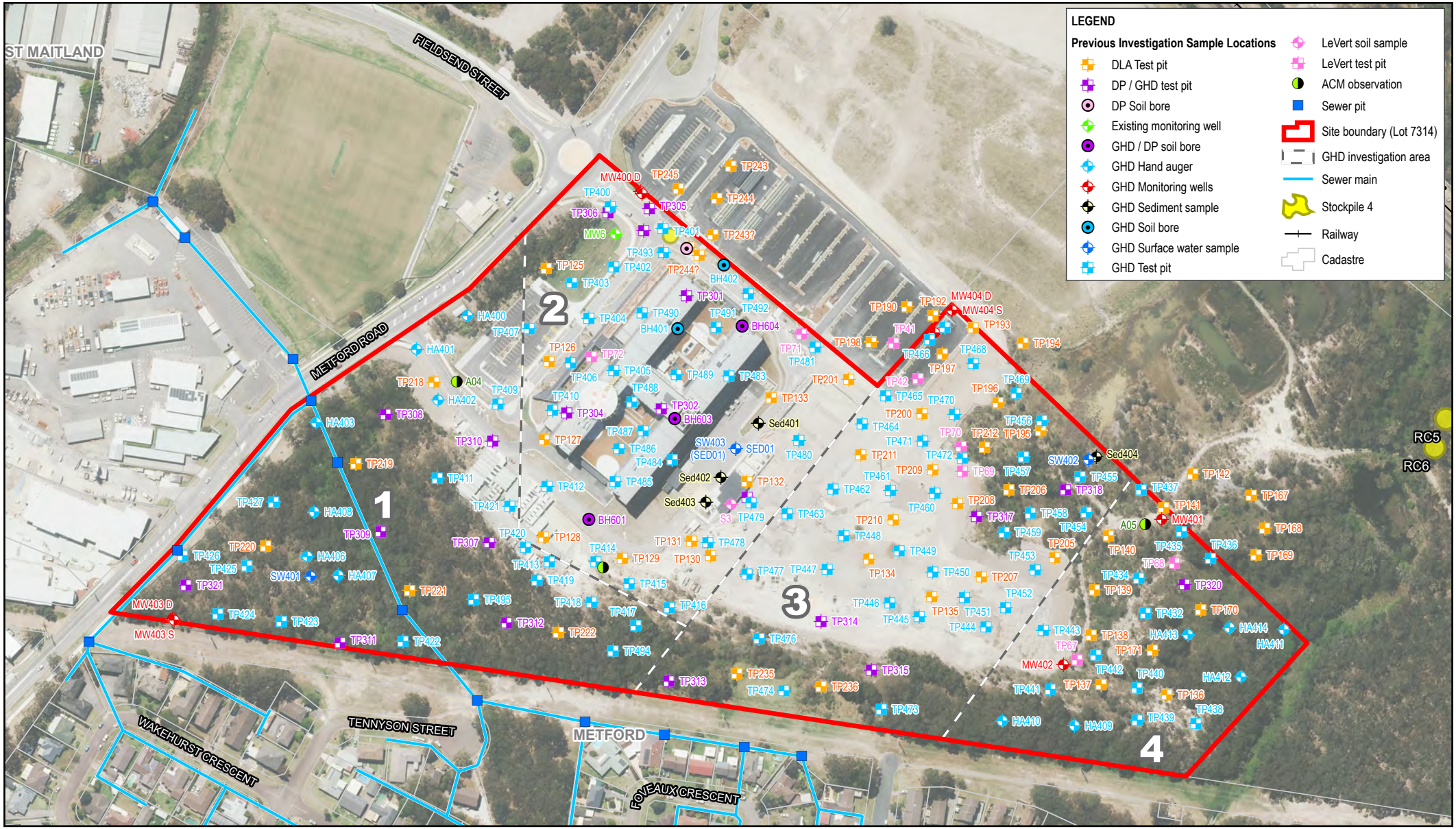
Figure 2

G:\22\18003\GIS\Maps\Deliverables\SiteWorks\2218003_SW001_SampleLocations_C.mxd

© 2015. Whilst every care has been taken to prepare this map, GHD, ADW, HWC and LPI make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: ADW: Survey, 2015; LPI: DTDB / DCDB / Aerial Imagery, 2012. HWC: Dial Before You Dig Sewermain, 2015. Created by: fmackay, tmorton, gmcdiarmid

Level 3, GHD Tower, 24 Honeysuckle Drive, Newcastle NSW 2300 **T** 61 2 4979 9999 **F** 61 2 4979 9988 **E** ntlmail@ghd.com **W** www.ghd.com.au



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Metres

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

N

NSW Health Infrastructure
New Maitland Hospital
Lot 7314 Site Validation

Previous investigations sampling locations

Project No. **22-19923**
Revision No. **1**
Date **03/12/2021**

FIGURE 2.2

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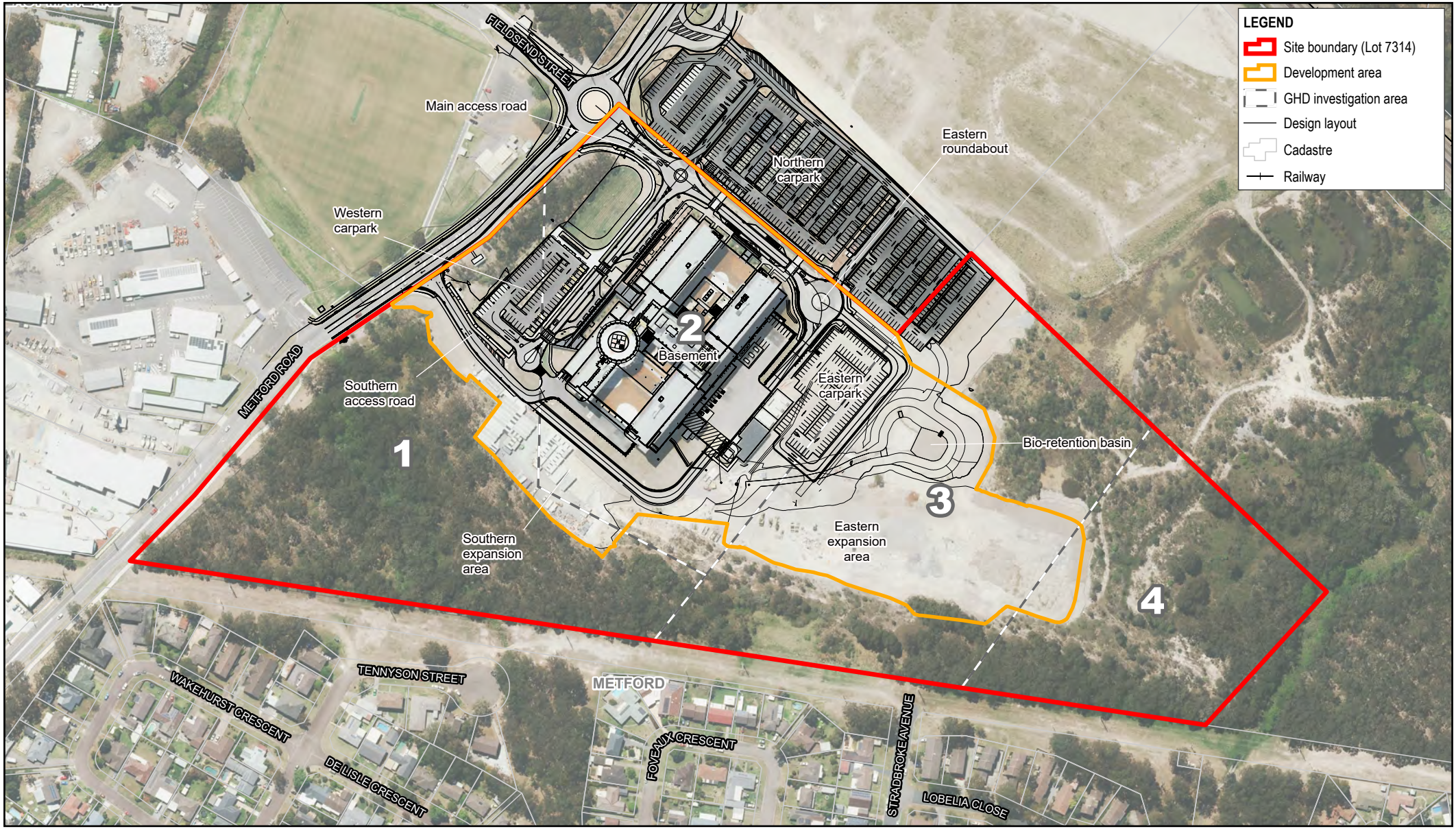

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NSW Health Infrastructure
New Maitland Hospital
Lot 7314 Site Validation

Project No. **22-19923**
Revision No. **1**
Date **03/12/2021**

Development area

FIGURE 4.1

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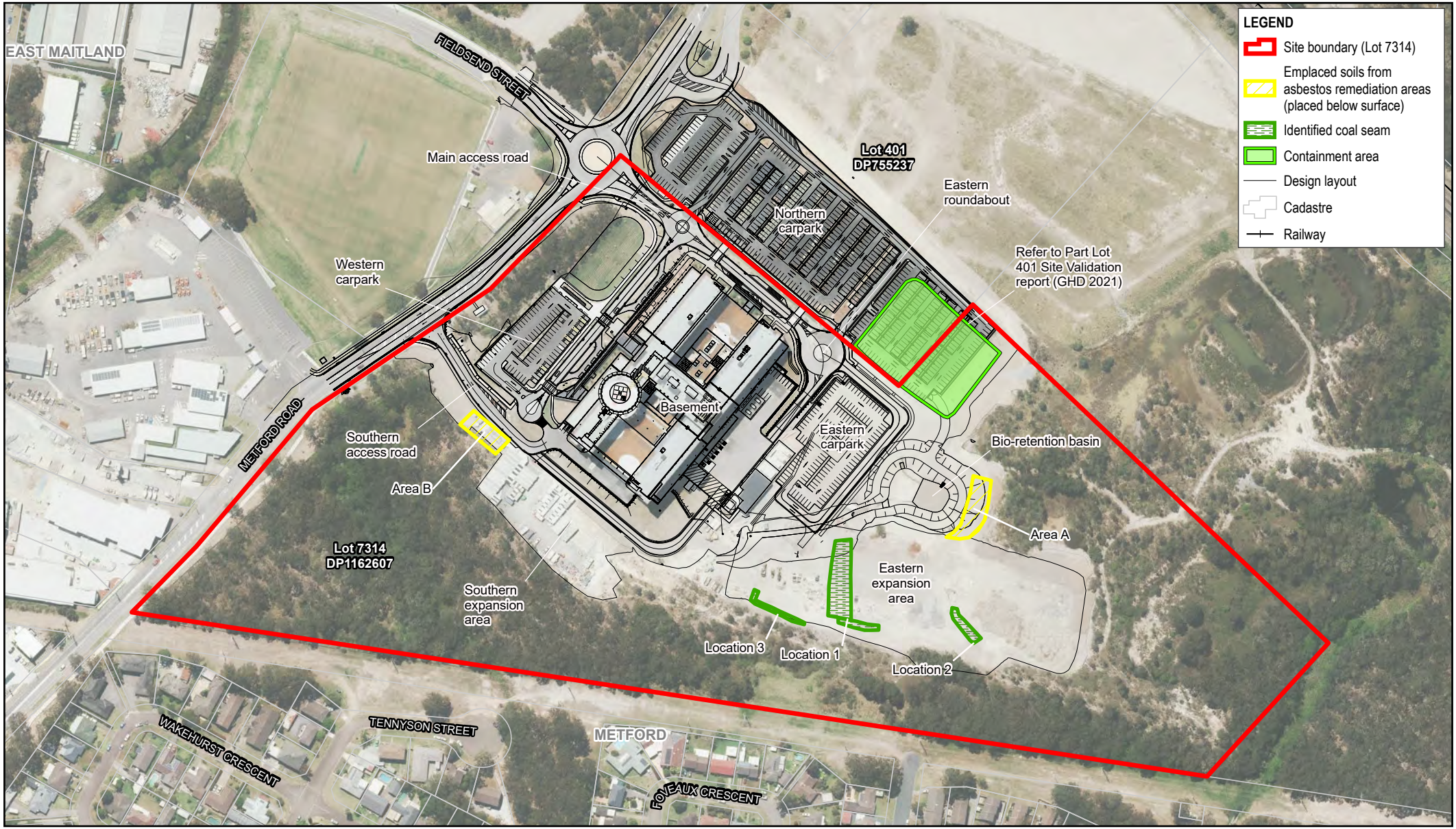

NOTE:
The identified management areas are those known to contain materials subject to site management requirements (refer to the Long Term Site Management Plan). There is a potential for isolated occurrences of contamination to be present in other areas of the site as "unexpected finds", particularly in areas of fill material not disturbed by site development works. Hence the entire site is subject to management requirements if subsurface disturbance is undertaken.

Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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GHD

NSW Health Infrastructure
New Maitland Hospital
Lot 7314 Site Validation

Project No. **22-19923**
Revision No. **1**
Date **14/12/2021**

Identified management areas

FIGURE 4.3

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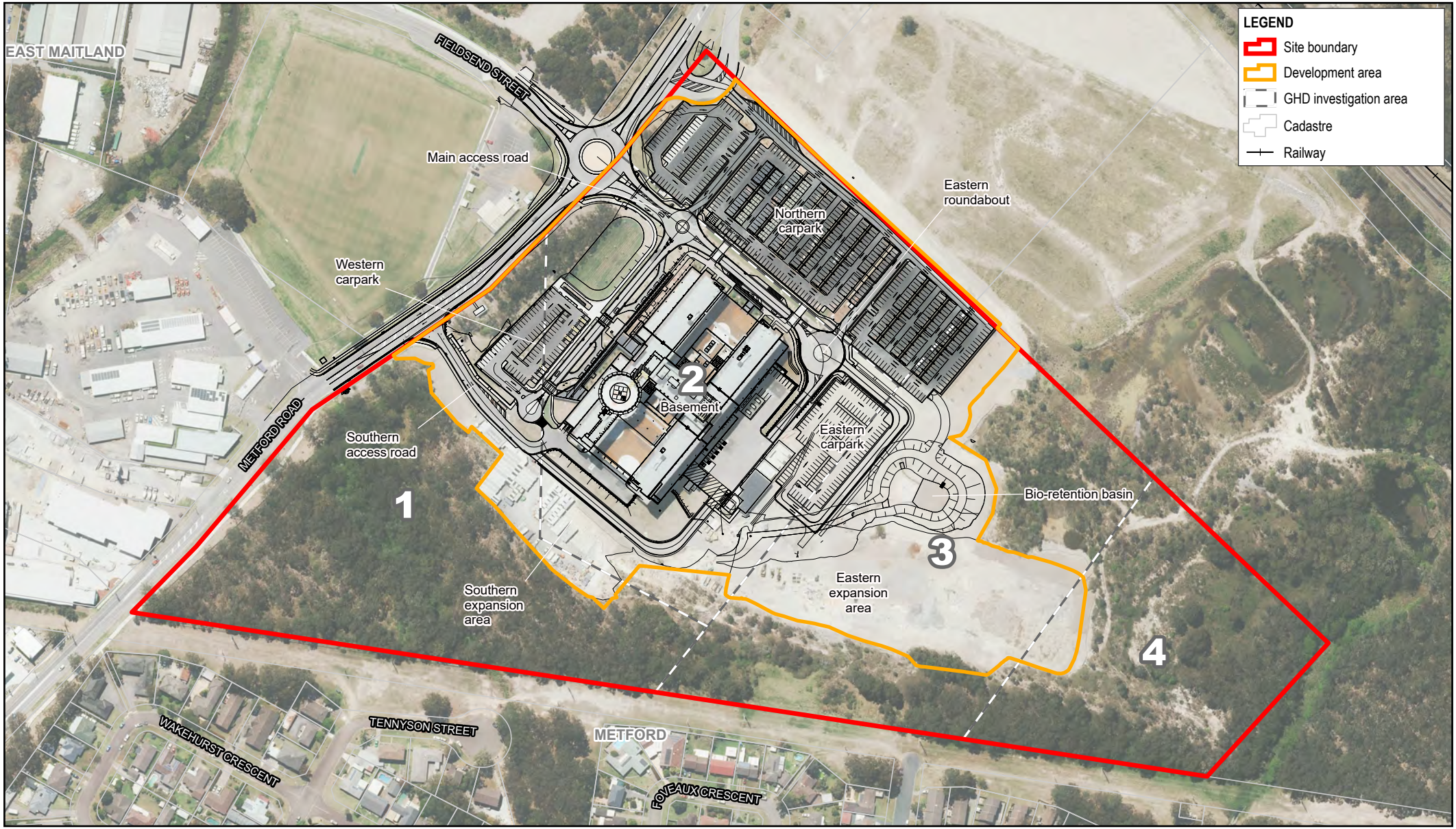

Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

NSW Health Infrastructure
New Maitland Hospital
Long Term Environmental Management Plan

Development area

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

FIGURE 5

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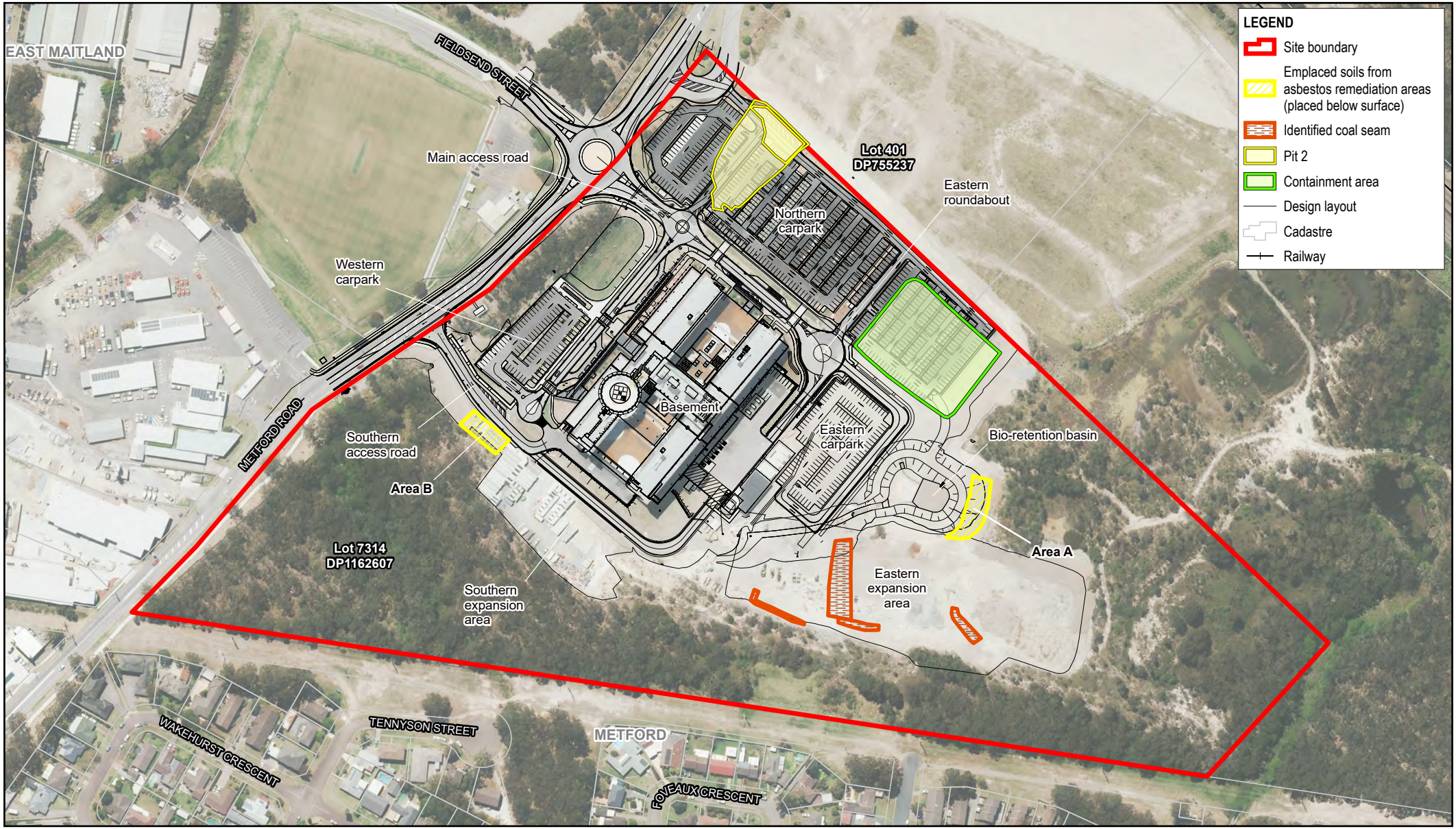

NOTE:
The identified management areas are those known to contain materials subject to site management requirements (refer to the Long Term Site Management Plan). There is a potential for isolated occurrences of contamination to be present in other areas of the site as "unexpected finds", particularly in areas of fill material not disturbed by site development works. Hence the entire site is subject to management requirements if subsurface disturbance is undertaken.

Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

NSW Health Infrastructure
New Maitland Hospital
Long Term Environmental Management Plan

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

Identified management areas

FIGURE 7

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E: 369403.6

PIT #2

* LOCATION OF PIT #2 SCALED FROM DCA ENVIRONMENTAL REPORT (DLH1036 DATED 29/08/2014)

N: 6374693.0
E: 369430.4

REMOVE ALL MATERIAL WITHIN PIT #2 UNDER PROPOSED CAR PARK TO A DEPTH OF 2M BELOW COMPLETED SURFACE LEVEL AND REPLACE WITH CONTROLLED FILL. REMOVED FILL SHALL BE UTILISED AS FILL AS INDICATED IN THE EARTHWORKS OPEARTIONS SCHEDULE ON THIS PAGE

N: 6374696.1
E: 369366.6

N: 6374653.0
E: 369402.9

ALL FILL TO BE USED IN STRUCTURAL WALL BACKFILL ZONE TO BE TESTED BY GEOTECHNICAL ENGINEER TO COMPLY WITH THE REQUIREMENTS OF WALL BACKFILL AND TO BE FREE OF CARBONACEOUS OR DELETERIOUS MATERIAL

N: 6374654.3
E: 369338.8

N: 6374620.2
E: 369336.2

N: 6374620.9
E: 369363.0

SITE B–CONSTRUCTION SPOIL STOCKPILE

FFL 14.80
BEL 14.40

SITE A–CHITTER PILE

METFORD ROAD

FIELDSEND ROAD

EARTHWORKS OPERATIONS SCHEDULE

(TO BE CONFIRMED BY CONTRACTOR ON SITE)

AT ALL TIMES, THE RECOMENDATIONS OF THE GEOTECHNICAL REPORT BY DOUGLASS PARTNERS FOR THE PROJECT, AND FOLLOW UP TESTING/REPORTS BY QUALITEST SHALL BE ADHERED TO. THIS INCLUDES METHODS FOR BLENDING OF SOILS AND LOCATIONS OF POTENTIALLY CONTAMINATED MATERIALS.

TOPSOIL:
ALL TOPSOIL TO BE STRIPPED OVER CARPARK AREA. REMOVE FROM SITE IN ACCORDANCE WITH CLIENT DIRECTIONS AND CONTAMINATION REPORTS. ANY TOPSOIL DEEMED NOT TO BE CONTAMINATED SHALL BE STOCKPILED FOR USE ON BATTERS

PIT #2:
ALL MATERIAL REMOVED FROM PIT 2 IS CONSIDERED CONTAMINATED AND UNCONTROLLED. REMOVE ALL MATERIAL TO A DEPTH OF 2M BELOW FINISHED SURFACE LEVEL AND REPLACE WITH GENERAL FILL FROM SITE WON MATERIAL. MATERIAL REMOVED SHALL BE USED IN BLENDED FILL AT A DEPTH OF GREATER THAN 2M FROM FINISHED SURFACE LEVEL.

CHITTER PILE SITE A:
REMOVE EARTHWORKS CAP AND STOCKPILE FOR LATER REUSE. REMOVE APPROXIMATELY 8,000 CU.M. OF CHITTER FOR USE IN CAR PARK FILL. TRANSPORT TO CAR PARK AND BLEND AT 50% CHITTER TO 50% GENERAL FILL AND PLACE IN LOWER SECTIONS OF FILL PLATFORM IN LAYERS IN ACCORDANCE WITH THE CIVIL SPECIFICATION.

CONSTRUCTION STOCKPILE SITE B:
APPROXIMATE VOLUME OF 9,500CU.M. GENERAL FILL TO BE UTILISED AS FILL WITHIN CAR PARK. REMOVE ALL FILL AND REPLACE IN LAYERS IN ACCORDANCE WITH SPECIFCATION TO SUIT FINAL EARTHWORKS LEVELS

RETAINING WALL BACKFILL:
UNDER GUIDANCE OF THE GEOTECHNICAL ENGINEER, UTILISE SELECT FILL WON FROM SITE EXCAVATIONS, TO PLACE AS STRUCTURAL FILL TO KEYSTONE RETAINING WALL. SOIL TO BE CONFIRMED BY GEOTECHNICAL ENGINEER AND WALL DESIGNER AS SUITABLE FOR STRUCTURAL WALL BACKFILL

BULK EARTHWORKS QUANTITIES

NORTH CAR PARK + EXTENSION PAD

TOP SOIL REMOVED = 3090m³ (ASSUMED 100mm DEPTH)
CUT = –29170m³
FILL = 53750m³
NET = 24580m³ (FILL)

CHITTER PILE

CUT = –32200m³
FILL = 17400m³
NET = –14800m³ (CUT)

NOTE

1. CARPARK SET DOWN IS 380mm, ROAD SET DOWN IS 450mm
2. BULK EARTHWORKS QUANTITIES BASED ON SURVEY DRAWING 180319C–01 DATED 30.05.19

CUT AND FILL DATA

NUMBER	MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR
1	-8.00	-7.00	
2	-7.00	-6.00	
3	-6.00	-5.00	
4	-5.00	-4.00	
5	-4.00	-3.00	
6	-3.00	-2.00	
7	-2.00	-1.00	
8	-1.00	0.00	
9	0.00	1.00	
10	1.00	2.00	
11	2.00	3.00	
12	3.00	4.00	
13	4.00	5.00	
14	5.00	6.00	
15	6.00	7.00	

BULK EARTHWORKS LEGEND

Batter

822.00 — Bulk earthworks contour level

PLAN
SCALE 1: 500

SCALE 1:500 0 5 10 15 20 25
AT ORIGINAL SIZE m

FOR COORDINATION
FOR CONSTRUCTION

TTW Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C101

NOTE
CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS. DO NOT SCALE THIS DRAWING.

ISSUE	DATE	FOR
A	29.01.21	ISSUE FOR CONSTRUCTION
B	03.02.21	ISSUE FOR CONSTRUCTION
C	05.05.21	ISSUE FOR CONSTRUCTION
D	30.08.21	ISSUE FOR CONSTRUCTION

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NSW GOVERNMENT Health Infrastructure

MANAGING CONTRACTOR
MULTIPLEX
Built to outperform.

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GROUPDLA

FIRE ENGINEERING
PETER GARDNER & ASSOCIATES
PGA

PROJECT
NEW MAITLAND HOSPITAL

CORNER OF METFORD RD AND FIELDSEND ST, METFORD, NSW 2323

TTW PROJECT NUMBER
181230

DRAWING KEY

TRUE NORTH / PROJECT NORTH

SCALE
1:500 @A0 DO NOT SCALE

DRAWN BY: WW CHECKED BY: AL
DESIGNED BY: AH APPROVED BY: SB

STATUS
FOR CONSTRUCTION

DRAWING
NORTH CARPARK + EXTENSION + CHITTER PILE BULK EARTHWORKS PLAN

DRAWING NUMBER: TTW-CIV-DWG-GX0-C230 ISSUE: D

Appendix B

Previous investigation results

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP 1.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	18	8	nd	9.6	-	43
TP 1.2	1.0-1.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.3	3.7	12	13	nd	22	-	75
TP 1.3	1.6-1.8	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	1.2	9.8	nd	1.5	-	6.7
TP 2.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	2.5	24	9	nd	6.8	-	16
TP 2.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.6	13	9	nd	4.5	-	21
TP 3.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3.8	15	3	nd	8	-	15
TP 3.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	4.6	4	nd	2.6	-	55
TP 4.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	28	11	nd	14	-	49
TP 5.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.4	210	6	10	nd	3.9	-	21
TP 5.2	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	5	nd	24	11	12	nd	5.6	-	45
TP 6.1	0-0.2	2/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.3	4.2	10	nd	2.8	-	15
TP 7.2	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	9	nd	12	-	36
TP 8.1	0-0.2	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	6.8	9	4	nd	15	-	27
TP 8.2	0.4-0.6	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.9	14	13	nd	0.6	-	7.5
TP 9.1	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	17	7	nd	16	-	23
TP 10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	16	12	nd	18	-	47
TP 10.2	2.3-2.5	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	1.2	6	nd	nd	-	3.7
TP 11.1	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.3	22	29	55	nd	18	-	130
TP 12.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-					-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	nd	5	nd	nd	-	3.3
TP 12.2	1.3-1.5	2/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	4.3	4.6	14	nd	4	-	21
TP 13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	4.8	23	14	nd	3.3	-	17
TP 14.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.5	20	21	nd	4.1	-	37
TP 14.2	1.7-1.8	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	6.9	10	18	nd	4.1	-	32
TP 15.1	0.2-0.4	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	6.3	10	19	nd	10	-	50
TP 16.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	17	16	31	nd	18	-	460
TP 17.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	0.6	620	15	26	1.5	190	-	520
TP 17.2	1.3-1.5	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	16	2.5	12	nd	74	-	33
TP 18.1	0-0.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	nd	9.7	16	13	0.13	19	-	58
TP 18.2	1.0-1.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.5	81	35	29	nd	52	-	300
TP 19.2	3.3-3.5	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	4.5	9	nd	3.4	-	26
TP 20.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	11	14	34	nd	8.7	-	220
TP 21.2	1.7-1.9	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	1.6	nd	52	18	0.27	1000	-	110
TP 21.3	4.8-4.5	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	120	85	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	0.9	620	42	37	0.12	390	-	170
TP 22.1	1.0-1.2	3/05/2011	SGS SE87342	Clay FIll	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	0.8	-	12
TP 23.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	230	25	30	nd	15	-	130
TP 23.3	4.0-4.2	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	23	1200	1600	70	2870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	6.6	4	nd	10	-	53
TP 24.2	1.1-1.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	25	2200	2500	4725	-	-	-	-	-	-	190	274.4	1175	-	-	-	-	-	-	-	-	-	-	nd	0.8	13	36	15	nd	38	-	170
TP 24.3	4.8-5.0	3/05/2011	SGS SE87342	Fill	-	na	na	na	na	-	NA	nd	1100	1600	2700	-	-	-	-	-	-	99	139.8	902.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 25.2	2.5-2.7	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	5	2	0.06	13	-	40
TP 25.3	4.2-4.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.1	0.53	-	-	-	-	-	-	-	-	-	-	nd	nd	1	5.7	7	nd	5.5	-	70
TP 26.1	0.5-0.7	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	14	18	nd	6.9	-	42
TP 27.1	0.2-0.4	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.7	0.96	3	nd	3.4	-	59
TP27.3	3.0-3.2	3/05/2011	SGS SE87342	Shale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	0.5	8	7	nd	16	-	250
TP 28.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	1	1	nd	0.7	-	5.7
TP 29.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	1400	2100	100	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	0.8	19	4	nd	0.9	-	17
TP 29.2	1.5-1.7	3/05/2011	SGS SE87342	Silt	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	0.4	4.6	2	0.09	2.2	-	5.1
TP 29.3	2.6-2.8	3/05/2011	SGS SE87342	Clay	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 30.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	2.8	1	nd	1.2	-	4.7
TP 31.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.9	3	nd	5.8	-	100
TP 32.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	7.9	5	nd	4.7	-	150
TP 33.1	0-0.2	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.7	2	nd	12	-	83
TP 34.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	4.4	3	nd	11	-	76
TP 35.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	8.2	7	nd	6	-	160
TP 36.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.2	11	11	nd	3.8	-	52
TP 37.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	11	16	18	nd	15	-	66
TP 38.1	0.8-1.0	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	5.7	21	24	nd	10	-	180
TP 39.1	0-1.0	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	68	nd	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	8.6	11	11	nd	7	-	38
TP40.1	0.2-0.4	3/05/2011	SGS SE87342	Clacium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.1	2.5	4	5	3.3	-	15
TP41.2	1.6-1.8	3/05/2011	SGS SE87342	Coal	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	25	14	7	0.75	48	-	76
TP 43.1	0-0.2	3/05/2011	SGS SE87342	Ash Brick	-	nd	nd	nd	nd	-	nd	nd	50	nd	50	-	-	-	-	-	-	nd	0.2	1.13	-	-	-	-	-	-	-	-	-	-	4	nd	7.5	11	9	nd	8.4	-	25
TP 43.2	0.4-0.6	3/05/2011	SGS SE87342	Brick Fill	-					-						-	-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	4	nd	2.1	8.2	11	nd	5	-	70
TP 45.1	0-0.12	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.38	-	-	-	-	-	-	-	-	-	-	200	0.3	6	280	300	nd	9.4	-	2000
SB 1.1	0.3-0.4	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.6	9.4	5	nd	1.6	-	16
SB 2.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	17	18	nd	0.9	-	13
SB 3.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.7	13	11	0.06	0.6	-	11
SB 4.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.3	38	40	6	nd	27	-	65
SB 5.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	3.3	12	nd	nd	-	3.3
SB 6.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	9.8	14	15	nd	1.2	-	5.1
SB 7.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-					-						-	-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	nd	nd	7.6	0.8	8	nd	0.6	-	4.2
SB 8.1	0.4-0.5	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.1	11	6	nd	1.7	-	20
SB 9.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.1	0.7	9.9	nd	0.92	-	6.2
SB 10.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	4	nd	2	16	9	nd	16	-	41
SB 10.2	0.8-0.9	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	10	5	nd	7.6	-	31
SB 11.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	1.1	5	11	nd	4.7	-	51
SB 11.2	1.8-2.0	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	5.2	4.1	9.5	nd	1.8	-	9.2
SB 12.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.6	6.1	7	nd	0.7	-	12
SB 13.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.5	6.1	8	nd	2	-	14
SB 15.1	0.1-0.2	3/05/2011	SGS SE87342	Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.5	4	3	nd	1.9	-	15
SB 16.1	0.2-0.4	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	na	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	9	nd	3.2	120	15	nd	5.9	-	23
SB17.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.7	8.7	4	nd	23	-	29
SB18.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	12	2	nd	11	-	16
SB19.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	3.3	16	5	nd	19	-	19
SB20.1	7.8-8.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	370	240	610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.5	21	12	62	nd	8.1	-	76
SB20.2	11.5-11.7	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	9.8	15	15	nd	8.3	-	57
SB20.3	13.3-13.5	5/03/2012	SGS SE106137	Clay/shale	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	18	7	11	nd	43	-	42
SB21.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4	18	7	nd	15	-	31
SB22.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.7	-	-	-	-	-	-	-	-	-	-	nd	nd	5.5	15	12	nd	10	-	41
SB22.2	1.8-2.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5.9	4.6	4	nd	6.5	-	21
SB23.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.3	6.6	9	nd	6.3	-	19
SB24.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.6	4.5	10	12	nd	8.6	-	66
SB25.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	80	nd	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	0.4	6.9	150	270	nd	8.5	-	2300
SB26.1	0.0-0.2	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6.7	6	3	nd	5.6	-	34
SB27.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.6	4.1	3	nd	8.5	-	18
SB28.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	7.2	9.2	5	nd	8.5	-	32
SB28.2	1.2-1.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	4.4	8.9	10	nd	10	-	36
SB29.1	0.4-0.6	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	4.3	7	0.08	5.7	-	21
SB30.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.2	4.3	13	29	nd	4.6	-	1200
SB31.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.7	5.3	12	nd	13	-	110
SB32.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	2.8	5	nd	1.7	-	14
SB33.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	5	6	nd	0.8	-	15
SB34.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	2.9	5	nd	3.2	-	15
SB35.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	54	nd	54	-	-	-	-	-	-	2.6	3.8	37.1	-	-	-	-	-	-	-	-	-	-	5	nd	12	10	25	nd	8.5	-	54
SB36.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	120	68	188	-	-	-	-	-	-	5.8	8.1	71.3	-	-	-	-	-	-	-	-	-	-	5	nd	13	9.5	47	nd	8.9	-	80
SB37.1	4.6-4.8	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	92	nd	92	-	-	-	-	-	-	nd	nd	0.8	-	-	-	-	-	-	-	-	-	-	6	nd	3.3	23	12	nd	22	-	150
SB38.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	5	nd	14	-	28
SB39.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	110	nd	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.9	9.6	8	0.08	4.1	-	12
SB40.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	3.4	6.6	22	nd	6.6	-	53
SB41.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	14	1	nd	10	-	11
TP 46.1	0.2-0.4	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	8.3	7.9	11	nd	6.7	-	83
TP 47.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	140	89	229	-	-	-	-	-	-	0.86	1.8	12.45	nd	nd	nd	nd	nd	nd	nd	nd	-	-	74	0.9	7.5	72	180	0.11	12	-	170
TP 48.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.2	1.35	nd	nd	nd	nd	nd	nd	nd	nd	-	-	12	0.3	10	23	48	0.07	9.4	-	88
TP 49.1	0.8-1.0	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	70	nd	70	-	-	-	-	-	-	nd	0.2	1.03	nd	nd	nd	nd	nd	nd	nd	nd	-	-	10	nd	7.8	25	37	0.2	7.3	-	61
TP 50.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	5	17	18	0.08	6.4	-	37
TP 51.1	0.8-1.0	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.1	4.7	11	50	nd	6.2	-	50
TP 52.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.01	0.49	-	-	-	-	-	-	-	-	-	-	11	nd	8.2	13	25	nd	6.6	-	73
TP 53.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.1	7.9	15	nd	4.9	-	63
TP 54.1	0-0.2	4/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.8	6.8	9	nd	3.3	-	23
TP 55.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	2.4	4	nd	0.91	-	8.8
TP 56.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	5.7	19	54	nd	13	-	160
TP 57.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	14	22	nd	6.7	-	76
TP 58.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	0.44	0.6	4.52	-	-	-	-	-	-	-	-	-	-	5	nd	3.8	14	35	nd	6.9	-	68
TP 59.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	0.52	0.8	6.16	-	-	-	-	-	-	-	-	-	-	7	nd	5.5	15	29	nd	4.2	-	82
TP 60.1	1.0-1.2	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	69	180	249	-	-	-	-	-	-	0.38	0.6	4.89	-	-	-	-	-	-	-	-	-	-	5	0.7	8.6	43	93	nd	6.8	-	240
TP 61.1	0.2-0.4	4/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.1	13	9.9	nd	4.8	-	170
TP 62.1	0-0.2	4/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.3	8.2	11	nd	7.8	-	67
TP 63.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	3.6	1.4	5	nd	1.7	-	9.5
S1	0.0	4/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	1.5	8.5	11	nd	17	-	190
S2	0.0	4/05/2011	SGS SE87342	Calcium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2.3	1.5	3	5.3	2.2	-	22
S3	0.0	4/05/2011	SGS SE87342	Black Shale	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	1.3	18	17	0.06	8.6	-	76
S4	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1.5	4.3	9.7	nd	15	-	56
S5	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	-	-	nd	nd	1.3	7.9	12	nd	5.1	-	80

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S6	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	-	4	nd	3	8.3	10	nd	15	-	110
TP 64.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5.1	nd	8	nd	1.8	-	28
TP 65.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.2	1.27	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	13	12	nd	7.7	-	85
TP 66.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.8	5.2	9.5	nd	5.3	-	55
TP 67.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.6	4.4	11	nd	5.2	-	47
TP 68.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	0.7	4	nd	nd	-	3.6
TP 69.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	9.8	11	nd	11	-	90
TP 70.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.4	6.3	8	nd	14	-	78
TP 71.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	8.7	11	nd	5.3	-	39
TP 72.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.8	31	32	nd	5.3	-	360
TP82.1	0.4-0.6	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.4	7.8	11	nd	2.9	-	57
TP83.1	0.8-1.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	84	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	9.3	17	17	nd	13	-	84
TP83.2	2.8-3.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	86	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	18	30	nd	6.7	-	260
TP83.3	4.2-4.4	17/01/2012	SGS SE104740	Clay	-	-	-	-	-	-	95	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.01	0.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.1	4.2	15	nd	2.7	-	18
TP84.1	1.8-2.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	105	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.26	2.3	-	-	-	-	-	-	-	-	-	-	5	nd	9	8.3	49	nd	6.7	-	61
TP84.2	3.8-4.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	89	nd	50	nd	50	-	-	-	-	-	-	0.2	0.28	2.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.4	5.9	19	nd	2.9	-	43
TP84.3	4.8-5.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	85	150	440	nd	590	-	-	-	-	-	-	0.8	1	7.9	-	-	-	-	-	-	-	-	-	-	5	nd	7	12	14	1.5	8.2	-	50
TP85.1	1.2-1.4	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	10	38	48	nd	7	-	640
TP85.2	2.0-2.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	90	nd	630	650	1280	-	-	-	-	-	-	47	67.1	483.7	-	-	-	-	-	-	-	-	-	-	3	nd	13	8	18	0.13	8.1	-	34
TP85.3	3.8-4.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	140	120	260	-	-	-	-	-	-	0.9	1.3	11.4	-	-	-	-	-	-	-	-	-	-	7	nd	6.3	12	38	nd	10	-	64
TP85.4	4.8-5.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	98	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	4.4	-	-	-	-	-	-	-	-	-	-	35	nd	5.6	8.9	30	nd	4.6	-	62
TP86.1	1.2-1.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	110	140	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	13	44	nd	11	-	91
TP86.2	4.6-4.8	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	32	590	640	1262	-	-	-	-	-	-	1.7	2.5	30.8	-	-	-	-	-	-	-	-	-	-	7	nd	14	12	32	0.27	8.6	-	83
TP87.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	170	160	330	-	-	-	-	-	-	1.8	2.8	27.2	-	-	-	-	-	-	-	-	-	-	3	nd	5	7.8	14	0.12	3.4	-	26
TP87.2	2.8-3.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	5.9	5.7	15	nd	4	-	35
TP 87.3	4.0-4.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	10.5	93.7	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	79	nd	11	-	120
TP88.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.03	1	-	-	-	-	-	-	-	-	-	-	4	nd	3.6	11	17	nd	11	-	75
TP88.2	1.8-2.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	120	nd	120	-	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	8.8	18	nd	10	-	42
TP89.1	0.4-0.6	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	6.6	47	37	0.06	10	-	120
TP90.1	0.2-0.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	3.5	5.9	9	nd	5.4	-	28
TP91.1	0.4-0.6	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	9.3	78.2	-	-	-	-	-	-	-	-	-	-	6	nd	16	10	22	nd	4.4	-	53
TP91.2	4.8-5.0	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	5	0.4	3.2	28	16	nd	22	-	140
SF1	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	11	10	nd	11	-	56
SF2	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	1.2	2.5	6	nd	2.5	-	23
SF3	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.4	2.8	10	11	nd	9	-	100
SF4	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	1.6	7.2	8	nd	3.8	-	55
SF5	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	8.3	8	nd	3.6	-	61
SF6	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	2.9	9.1	9	nd	8.5	-	65
SF7	0.0-0.01	12/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4.6	7.2	10	nd	6.8	-	49
SF8	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	5.1	24	14	nd	7.9	-	58
SF9	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	5.5	16	21	nd	11	-	100
SF10	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	0.5	1.3	4.4	8	nd	9.7	-	120
SF11	0.0-0.01	17/01/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	4.9	14	15	nd	11	-	100
V1	3.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	54	330	72	456	-	-	-	-	-	-	0.1	0.2	6.3	-	-	-	-	-	-	-	-	-	-	6	nd	4.9	9.1	16	nd	12	-	81
V2	4.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	5.2	7	7	nd	6	-	33
V3	6.0	17/01/2012	SGS SE108786	Silty Clay	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	10	0.4	6.3	12	22	0.08	7	-	110
V4	5.0	17/01/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	110	350	110	570	-	-	-	-	-	-	1.2	1.9	11.3	-	-	-	-	-	-	-	-	-	-	5	nd	6	10	14	nd	6.8	-	150
V5	4.0	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	68	nd	68	-	-	-	-	-	-	0.8	1.2	7.2	-	-	-	-	-	-	-	-	-	-	5	nd	13	9	15	0.07	7.5	-	56
V5_1.5	5.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	10	nd	4	8.6	8	nd	2	-	33
V6	2.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	8	0.4	89	35	40	nd	5	-	540
V7	1.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.9	6.8	-	-	-	-	-	-	-	-	-	-	7	nd	21	11	14	nd	10	-	51
V8	1.5	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	4	nd	4.9	6.1	10	nd	5.1	-	39
V9	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	9	nd	35	6.2	11	nd	2.8	-	23
V10	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	140	150	290	-	-	-	-	-	-	0.8	1.2	8.7	-	-	-	-	-	-	-	-	-	-	4	nd	8.2	9	21	nd	6.1	-	45
V11	3.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	130	1100	630	1860	-	-	-	-	-	-	0.1	0.2	10.4	-	-	-	-	-	-	-	-	-	-	17	nd	4.4	17	19	0.31	7.1	-	50
V12	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	410	180	590	-	-	-	-	-	-	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	7	nd	3.8	15	16	nd	8.2	-	110
V13	8.0	30/05/2012	SGS SE108786	Sandy clay	N	-	-	-	-	-	-	nd	240	360	600	-	-	-	-	-	-	8	12.4	69.1	-	-	-	-	-	-	-	-	-	-	8	nd	3.5	17	24	nd	8.5	-	130
V14	5.0	30/05/2012	SGS SE108786	Clay fill	N (4 frag)	-	-	-	-	-	-	nd	180	57	237	-	-	-	-	-	-	0.3	0.4	3.1	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	6.4	10	nd	7	-	29
V15	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	83	-	-	-	-	-	-	-	-	-	5.4	8.4	45.7	-	-	-	-	-	-	-	-	-	-	8	0.6	7.3	16	30	nd	9	-	180
V16	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	120	570	210	863	-	-	-	-	-	-	0.1	0.1	1.8	-	-	-	-	-	-	-	-	-	-	16	0.4	58	17	15	nd	21	-	80
V17	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	49	920	160	1200	-	-	-	-	-	-	0.6	0.8	7.4	-	-	-	-	-	-	-	-	-	-	14	0.4	250	15	17	0.07	150	-	340
V18	2.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	670	170	889	-	-	-	-	-	-	5.5	8.6	49.7	-	-	-	-	-	-	-	-	-	-	11	0.4	22	18	20	nd	14	-	170
V19	3.0	30/05/2012	SGS SE108786	Clay fill	Y (47 Frag)	-	-	-	-	-	-	nd	350	88	438	-	-	-	-	-	-	8.2	12.9	70.3	-	-	-	-	-	-	-	-	-	-	4	nd	9.8	14	17	nd	8.3	-	130
V20	5.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	29	110	80	190	-	-	-	-	-	-	4.1	6.5	42	-	-	-	-	-	-	-	-	-	-	9	0.6	47	67	37	0.22	26	-	550
V21	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	350	200	579	-	-	-	-	-	-	0.2	0.3	2.7	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	14	14	nd	6.3	-	77
V22	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	95	nd	95	-	-	-	-	-	-	nd	0.1	3.2	-	-	-	-	-	-	-	-	-	-	4	nd	4	10	19	nd	10	-	94
V23	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	160	nd	160	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2.7	8	nd	2.7	-	14
V24	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	1.7	-	-	-	-	-	-	-	-	-	-	5	nd	2.7	19	12	nd	12	-	94
V25	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	74	nd	74	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	6.7	10	10	nd	3	-	55
V26	1.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	3.4	12	8	nd	1	-	26
V27	1.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	260	nd	nd	nd	-	-	-	-	-	-	2.6	3.8	21.7	-	-	-	-	-	-	-	-	-	-	12	0.4	32	14	18	nd	16	-	88
V28	0.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	490	58	808	-	-	-	-	-	-	0.9	1.3	7.3	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	9	nd	4	-	29
V29	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.7	1.0	5.4	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	3	7	nd	2	-	18
V30	6.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	22	100	nd	122	-	-	-	-	-	-	2	3.0	17.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.7	12	15	nd	11	-	100
V31	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	3	nd	7.5	6.1	10	nd	2.8	-	32
V32	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.2	1.6	-	-	-	-	-	-	-	-	-	-	22	nd	6.9	30	41	nd	6.3	-	55
V33	4.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.4	7.2	-	-	-	-	-	-	-	-	-	-	nd	nd	4.2	2.8	10	nd	3	-	25
V34	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	3.2	6.7	12	nd	3	-	99
V35	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	8.1	4.4	7	nd	1.4	-	34
S1	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	5.9	10	11	nd	9	-	62
S2	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	1.5	2.3	13.6	-	-	-	-	-	-	-	-	-	-	4	nd	10	9	16	nd	8	-	58
S3	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	110	150	260	-	-	-	-	-	-	4.2	6.3	32.3	-	-	-	-	-	-	-	-	-	-	8	nd	12	19	19	nd	9	-	280
S4	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	110	182	-	-	-	-	-	-	5.9	8.7	44.8	-	-	-	-	-	-	-	-	-	-	9	nd	15	31	27	nd	8.8	-	420
S5	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.6	-	-	-	-	-	-	-	-	-	-	6	nd	7.6	10	15	nd	6.5	-	41
S6	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	99	nd	99	-	-	-	-	-	-	1	1.5	8.2	-	-	-	-	-	-	-	-	-	-	5	nd	17	7.9	13	nd	10	-	68
S7	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	88	450	70	608	-	-	-	-	-	-	1.1	1.6	9.1	-	-	-	-	-	-	-	-	-	-	11	0.4	53	15	20	nd	31	-	160
S8	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	nd	72	-	-	-	-	-	-	1.5	2.3	13.7	-	-	-	-	-	-	-	-	-	-	6	nd	13	9	14	nd	8	-	60
S9	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	1.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.3	7.7	12	nd	5	-	39
S10	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	200	85	285	-	-	-	-	-	-	1.8	2.7	15.2	-	-	-	-	-	-	-	-	-	-	10	nd	34	14	14	nd	14	-	86
S11	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.6	3.6	-	-	-	-	-	-	-	-	-	-	nd	nd	1.4	2	6	nd	0.8	-	17
S12	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	64	66	130	-	-	-	-	-	-	3.2	4.9	25.5	-	-	-	-	-	-	-	-	-	-	6	nd	27	16	20	nd	8.1	-	74
S13	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	69	57	126	-	-	-	-	-	-	1.8	2.7	14.4	-	-	-	-	-	-	-	-	-	-	6	0.3	16	20	27	nd	7.5	-	420
S14	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	100	92	nd	192	-	-	-	-	-	-	0.5	0.7	5.6	-	-	-	-	-	-	-	-	-	-	6	nd	21	13	22	0.08	12	-	120
S15	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.8	-	-	-	-	-	-	-	-	-	-	5	nd	15	8.8	12	nd	6.8	-	51
S16	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	6	-	90
S17	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.1	-	-	-	-	-	-	-	-	-	-	11	nd	8.6	18	27	0.12	5.8	-	47
S18	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.5	12.2	-	-	-	-	-	-	-	-	-	-	4	nd	4.1	6	11	nd	4.2	-	37
S19	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.5	-	-	-	-	-	-	-	-	-	-	4	nd	4.5	7	12	nd	3	-	38
S20	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.1	0.9	-	-	-	-	-	-	-	-	-	-	<6	nd	3.7	4	6	nd	4.8	-	33
S21	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.9	-	-	-	-	-	-	-	-	-	-	4	nd	4.8	9.6	11	nd	5.2	-	69
S22	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.3	-	-	-	-	-	-	-	-	-	-	6	nd	3.8	5.3	14	nd	2.2	-	34
S23	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	9	nd	3.4	-	23
S24	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	7	7.5	11	nd	6.3	-	44
S25	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	4.4	7	13	nd	4	-	52
S26	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	57	54	111	-	-	-	-	-	-	3.7	5.5	29.5	-	-	-	-	-	-	-	-	-	-	5	nd	9.3	12	19	nd	5	-	110
S27	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	3	nd	6.3	4.4	8	nd	3.4	-	28
S28	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	6	9	nd	4	-	32
S29	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	6	10	nd	3	-	19
S30	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.1	7	11	nd	4	-	29
S31	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	290	490	780	-	-	-	-	-	-	18	28.6	153	-	-	-	-	-	-	-	-	-	-	5	0.6	47	14	33	nd	12	-	160
S32	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	27	nd	5.6	34	43	nd	8.5	-	450
S33	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	160	69	229	-	-	-	-	-	-	6.1	9.1	53.5	-	-	-	-	-	-	-	-	-	-	7	0.4	10	21	29	nd	10	-	310
S34	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.1	6.5	-	-	-	-	-	-	-	-	-	-	12	nd	13	15	20	nd	7	-	70
S35	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3	-	-	-	-	-	-	-	-	-	-	5	nd	5.6	14	21	nd	8.1	-	180
S36	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	2.8	4.2	21.6	-	-	-	-	-	-	-	-	-	-	4	nd	6.4	6.3	12	nd	5	-	78
S37	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	5	-	150
S38	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.7	0.9	5.9	-	-	-	-	-	-	-	-	-	-	6	0.4	10	52	59	nd	10	-	840
S39	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	2.6	3.8	20.8	-	-	-	-	-	-	-	-	-	-	5	nd	26	10	17	nd	7.3	-	93
S40	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1.3	2.0	10.3	-	-	-	-	-	-	-	-	-	-	7	0.4	7.9	12	19	nd	8	-	110
S41	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.4	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	6.6	13	nd	4	-	48
S42	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	150	220	370	-	-	-	-	-	-	3.3	4.8	25.4	-	-	-	-	-	-	-	-	-	-	3	0.3	4.7	6.5	12	nd	5.3	-	82
S43	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	58	58	-	-	-	-	-	-	3.8	5.5	28.7	-	-	-	-	-	-	-	-	-	-	5	0.4	15	17	23	nd	12	-	150
S44	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.5	0.7	3.8	-	-	-	-	-	-	-	-	-	-	6	0.3	9.4	11	19	nd	7.9	-	120
S45	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	100	100	200	-	-	-	-	-	-	10	14.8	77.4	-	-	-	-	-	-	-	-	-	-	9	0.4	19	31	27	nd	16	-	120
S46	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	5	nd	4.6	6.8	13	nd	74	-	3
S47	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.2	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	11	18	0.05	70	-	9.4
S48	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	11	12	12	nd	45	-	4.9
S49	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	9.3	14	nd	43	-	7
S50	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	220	180	400	-	-	-	-	-	-	16	25.3	137.6	-	-	-	-	-	-	-	-	-	-	6	nd	29	23	19	nd	77	-	9
S51	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	55	nd	55	-	-	-	-	-	-	0.5	0.7	4.2	-	-	-	-	-	-	-	-	-	-	6	0.3	7.8	13	17	nd	97	-	7.5

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S52	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	73	nd	73	-	-	-	-	-	-	1.1	1.8	11.1	-	-	-	-	-	-	-	-	-	-	5	nd	8.7	12	15	nd	110	-	8
S53	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	60	220	nd	280	-	-	-	-	-	-	1.6	2.5	13.9	-	-	-	-	-	-	-	-	-	-	9	nd	5.2	13	13	nd	74	-	5
S54	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	33	400	nd	433	-	-	-	-	-	-	0.1	0.1	2.5	-	-	-	-	-	-	-	-	-	-	7	nd	5.2	10	13	nd	54	-	4.8
S55	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	420	620	nd	1040	-	-	-	-	-	-	0.2	0.3	4.8	-	-	-	-	-	-	-	-	-	-	5	nd	6.9	12	13	nd	110	-	6
S56	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	220	900	290	1410	-	-	-	-	-	-	1.5	2.5	16.5	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	12	13	nd	56	-	3.2
S57	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	73	170	nd	243	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	8	nd	4.7	13	15	nd	80	-	4.7
S58	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	3	4.7	24.9	-	-	-	-	-	-	-	-	-	-	nd	nd	11	6.2	14	nd	80	-	4.9
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.4	-	-	-	-	-	-	-	-	-	-	nd	nd	0.5	0.9	4	nd	8.7	-	1.1
S57	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	110	170	280	-	-	-	-	-	-	17	27.2	158.1	-	-	-	-	-	-	-	-	-	-	nd	0.4	13	14	21	nd	160	-	14
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1 TP3.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2 TP4.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 TP6.1	0.0-0.2	2/05/2011	SGS SE87342	Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A4 TP10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A5 TP13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay FIll	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A6 TP17.1	0.0-0.2	3/05/2011	SGS SE87342	Fill	Y chrysolite detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP48A	0.2-0.4	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP49A	0.8-1.0	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1-1	0.3-0.6	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	11	nd	27	-	160
BH1-2	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	7	5	10	0.1	4	-	65
BH1-3	1.5	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.36	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	12	18	20	nd	9	-	530
BH3-1	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	3	8	nd	nd	-	8
TP101-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	110	260	nd	nd	nd	nd	260	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	13	0.4	8	40	51	0.9	8	-	450
TP101-2	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	140	120	260	nd	nd	60	60	200	nd	nd	nd	0.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	9	2	8	0.2	3	-	11
TP101-3	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	1.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	29	nd	6	57	55	0.1	10	-	620
TP102-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	32	0.5	17	19	14	0.3	14	-	58
TP102-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	220	nd	220	nd	nd	110	110	210	nd	0.41	1	4.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	9	20	31	0.1	13	-	210
TP103-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd	1.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	36	34	17	0.2	22	-	56
TP103-2	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.11	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	8	25	27	0.9	7	-	150
TP103-3	4.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	4	9	nd	4	-	19
TP104-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	290	nd	290	nd	nd	75	75	310	nd	3.3	5	36	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	19	16	15	0.1	10	-	55
TP104-2	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.1	3	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	6	11	22	nd	6	-	48
TP104-3	4.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	2	nd	nd	390	380	770	nd	nd	nd	nd	660	280	11	16	140	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	13	19	57	0.5	22	-	85
TP105-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.43	1	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	9	11	21	nd	5	-	37
TP106-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	160	310	nd	nd	nd	nd	280	nd	5.5	8	52	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	11	14	40	0.1	12	-	56
TP106-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	nd	nd	nd	nd	nd	170	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	12	20	nd	9	-	45
TP107-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	nd	1.1	2	14	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	10	nd	4	16	23	0.2	11	-	140
TP107-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	140	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	10	2	8	nd	6	-	9
TP107-3	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	240	240	480	nd	nd	nd	nd	390	230	8.6	12	96	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	12	8	15	nd	26	-	49
TP108-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	3	19	11	0.7	3	-	42
TP108-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.1	3	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	12	28	0.1	13	-	150
TP108-2A	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.9	4	30	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	10	42	nd	7	-	70
TP109-1	0.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	7	17	nd	4	-	50
TP110-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	270	nd	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	20	17	nd	11	-	140
TP110-2	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	4	24	20	0.1	15	-	110
TP110-3	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	5	13	13	nd	9	-	87
TP111-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	10	15	13	nd	12	-	64
TP111-2	4.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	140	410	100	650	nd	nd	240	240	390	nd	nd	nd	0.18	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	5	15	14	nd	9	-	88
TP113-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	7	9	0.8	4	-	41
TP114-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	2	12	15	0.1	3	-	34
TP114-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	3	11	12	nd	4	-	48
TP114-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	7	nd	3	-	47
TP115-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	5	25	13	nd	5	-	59
TP116-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	10	nd	1	-	13
TP116-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	15	11	nd	nd	-	9
TP117-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	13	9	nd	nd	-	6
TP118-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	11	2	12	nd	6	-	10
TP118-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.2	2	8.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	23	nd	5	12	14	nd	3	-	21
TP119-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	15	16	nd	1	-	11
TP119-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	15	25	nd	nd	-	8
TP119-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	170	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	50	22	14	nd	3	-	130
TP119-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	860	290	1150	nd	nd	nd	nd	1200	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	47	21	18	nd	5	-	62
TP119-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	2	23	18	nd	6	-	50
TP120-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	410	2600	680	3670	nd	nd	960	960	2600	210	nd	nd	3.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	21	50	59	nd	13	-	350
TP120-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	19	14	nd	nd	-	11
TP120-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	52	nd	3	22	16	nd	2	-	21
TP120-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2	13	16	0.1	2	-	17
TP121-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	6	7	15	nd	6	-	48
TP121-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	14	14	nd	10	-	48
TP121-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	nd	8	nd	2	-	12
TP122-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	280	nd	nd	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	23	16	nd	7	-	49
TP122-2	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	7	nd	4	-	76
TP123-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	nd	11	nd	2	-	10
TP123-1-A	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.06	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	11	nd	2	-	12
TP123-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	3	12	nd	2	-	29
TP124-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	8	nd	1	-	22
TP124-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	9	nd	nd	-	7
TP125	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	190	nd	190	nd	nd	51	51	220	nd	nd	nd	1.2	-	-	-	-	-	-	-	-	-	-	9	0.5	1	42	23	0.1	15	-	250
TP126	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	5	22	21	nd	14	-	120
TP126a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	19	19	nd	12	-	110
TP127	0.2	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	4	8	nd	5	-	68
TP128	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	3	6	nd	8	-	100
TP129	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	210	nd	210	nd	nd	52	52	270	nd	0.05	nd	1.6	-	-	-	-	-	-	-	-	-	-	9	nd	4	24	18	0.1	20	-	150
TP129a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	nd	nd	260	nd	0.05	nd	1.5	-	-	-	-	-	-	-	-	-	-	11	0.4	4	26	19	nd	22	-	160
TP130	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	80	460	210	750	nd	nd	120	120	580	nd	nd	nd	2.3	-	-	-	-	-	-	-	-	-	-	11	nd	2	31	22	0.1	18	-	190
TP131	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	140	nd	140	nd	nd	nd	nd	190	nd	0.06	nd	1.1	-	-	-	-	-	-	-	-	-	-	10	nd	2	31	34	0.2	28	-	160
TP132	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	150	nd	nd	nd	0.64	-	-	-	-	-	-	-	-	-	-	11	nd	1	10	16	0.2	5	-	37
TP133	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	11	12	nd	6	-	48
TP133	0.8	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	140	nd	nd	nd	0.47	-	-	-	-	-	-	-	-	-	-	11	nd	1	21	16	0.1	41	-	210
TP134	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	150	1100	440	1690	nd	nd	250	250	1300	170	0.15	nd	7.7	-	-	-	-	-	-	-	-	-	-	7	nd	4	14	10	nd	24	-	65
TP134	3.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	140	1100	340	1580	nd	nd	260	260	1300	nd	0.05	nd	2	-	-	-	-	-	-	-	-	-	-	8	nd	2	21	10	nd	5	-	53
TP134	5.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	330	110	440	nd	nd	69	69	400	nd	nd	nd	0.77	-	-	-	-	-	-	-	-	-	-	8	nd	4	43	17	nd	15	-	92
TP135	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	8	nd	2	17	17	nd	14	-	150
TP135	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	72	430	160	662	nd	nd	110	110	510	nd	0.1	nd	2	-	-	-	-	-	-	-	-	-	-	22	nd	nd	73	15	0.5	19	-	310
TP135a	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	92	510	210	812	nd	nd	140	140	620	nd	0.11	nd	2.4	-	-	-	-	-	-	-	-	-	-	25	nd	nd	61	19	0.2	20	-	300
TP135	4.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	17	14	nd	16	-	150
TP136	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	17	18	nd	1	-	6
TP137	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	2	4	nd	1	-	20
TP138	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	14	nd	8	68	44	0.1	18	-	110
TP139	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	3	3	9	nd	2	-	24
TP140	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	0.42	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	15	nd	2	-	14
TP142	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	14	nd	20	-	130
Pit2-1	2.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	160	nd	0.06	nd	0.89	-	-	-	-	-	-	-	-	-	-	5	nd	3	13	17	nd	5	-	34
Bund-1	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.91	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	15	nd	13	-	110
Bund-1	2.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	5	nd	2	12	15	nd	10	-	96
Bund-2	-	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	42	nd	3	35	16	nd	14	-	160
TP143	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	6	2	11	nd	2	-	15
TP143a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	2	10	nd	1	-	10
TP144	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.34	-	-	-	-	-	-	-	-	-	-	nd	nd	6	4	20	nd	3	-	28
TP144a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.29	-	-	-	-	-	-	-	-	-	-	nd	nd	7	5	21	nd	3	-	29
TP145	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.16	-	-	-	-	-	-	-	-	-	-	6	nd	4	21	18	nd	7	-	71
TP146	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	13	nd	3	-	24
TP147	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	11	nd	2	-	20
TP147	2.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	3	12	nd	3	-	21
TP148	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	10	nd	6	-	51
TP149	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	8	28	18	nd	18	-	80
TP149	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	10	14	nd	9	-	68
TP150	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	24	18	nd	20	-	79
TP151	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	180	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	nd	2.4	3	7	22	0.1	170	-	520
TP152	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.27	-	-	-	-	-	-	-	-	-	-	7	nd	8	3	19	nd	4	-	40
TP153	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	10	24	nd	8	-	55
TP154	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	nd	nd	2	9	16	nd	12	-	78
Bund-3	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	9	5	16	nd	3	-	20
Bund-3	3.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	4	12	nd	4	-	41
Bund-3	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	3	10	nd	4	-	36
SP1-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	1.2	-	-	-	-	-	-	-	-	-	-	6	nd	2	12	15	nd	7	-	110

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
SP2-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	160	100	260	nd	nd	nd	nd	220	nd	nd	nd	0.59	-	-	-	-	-	-	-	-	-	-	8	nd	3	16	16	nd	11	-	74
SP3-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	77	560	290	927	nd	nd	120	120	720	150	0.08	nd	2.3	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	11	nd	21	-	95
SP4-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	470	2700	1300	4470	nd	nd	740	740	3300	650	0.14	nd	8.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	11	8	nd	17	-	43
SP4-2	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	17	nd	5	-	110
TP155	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	9	15	nd	20	-	89
TP156	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	4	12	nd	14	-	65
TP157	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	1	9	nd	7	-	40
TP158	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	2	8	nd	5	-	27
TP159	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	4	12	nd	3	-	30
TP160	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	6	18	nd	3	-	22
TP161	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	3	9	nd	6	-	28
TP161	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	5	8	nd	2	-	21
TP162	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	10	nd	7	17	12	nd	11	-	46
TP162	3.0	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	3	11	73	nd	6	-	56
TP162	3.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	5	nd	7	nd	nd	-	4
TP163	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	11	nd	6	13	10	nd	9	-	30
TP163	1.2	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	4	10	14	nd	6	-	35
RC-1-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	270	150	420	nd	nd	nd	nd	380	nd	0.11	nd	2.7	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	23	24	nd	6	-	71
RC-2-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	190	150	340	nd	nd	nd	nd	310	nd	0.58	1	8.9	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	42	nd	11	43	89	nd	11	-	100
DAM-2-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	13	17	nd	8	nd	81
DAM-3-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2	9	14	nd	4	nd	67
DAM-4-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	8	16	20	nd	16	nd	98
DAM-5-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	4	nd	6	11	16	nd	12	nd	80
DAM-6-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	13	0.9	29	28	40	0.2	32	nd	490
Exit Dam	0.1	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.47	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	10	0.7	19	30	30	0.2	39	nd	430
Exit Dam	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	6	18	19	nd	13	nd	120
Exit Dam	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1	4	10	nd	6	nd	49
Bund-4	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	11	nd	3	-	33
RC-1-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	300	200	500	nd	nd	64	64	430	110	0.11	nd	2.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	28	25	nd	6	-	61
RC-2-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	280	230	510	nd	nd	58	58	430	120	0.36	1	6	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	50	0.4	12	58	120	0.1	14	-	94
RC-3-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	260	nd	0.08	nd	1.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	0.4	14	23	33	nd	9	-	79
RC-3-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	110	nd	nd	nd	nd	170	nd	0.09	nd	1.5	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	27	31	21	nd	15	-	91
RC-3-3-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	8	nd	8	nd	5	-	30
RC-4-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	140	240	380	nd	nd	nd	nd	320	nd	nd	nd	0.39	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	17	nd	9	19	24	nd	6	-	71
RC5-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	21	nd	3	-	23
RC6-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	6	2	19	nd	3	-	20
SP5-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.2	2	8.1	-	-	-	-	-	-	-	-	-	-	5	nd	6	13	14	nd	6	-	62
SP5-2	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.9	3	14	-	-	-	-	-	-	-	-	-	-	7	nd	23	23	32	nd	14	-	150
SP5-3	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	100	nd	100	nd	nd	nd	nd	170	nd	2.7	4	19	-	-	-	-	-	-	-	-	-	-	9	nd	10	48	50	nd	13	-	760
SP5-4	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	180	850	130	1160	nd	nd	410	410	710	nd	4.4	6	30	-	-	-	-	-	-	-	-	-	-	9	nd	10	20	20	nd	9	-	180
SP6-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	140	490	nd	630	nd	nd	280	280	370	nd	0.26	nd	2.1	-	-	-	-	-	-	-	-	-	-	7	nd	8	17	19	nd	7	-	140
TP164	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	6	10	nd	3	-	29
TP164	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.07	nd	0.76	-	-	-	-	-	-	-	-	-	-	4	nd	2	9	13	nd	5	-	57
TP164	1.4	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	15	nd	2	-	8
TP165	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	150	16	35	nd	7	-	55
TP165	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	160	nd	0.06	nd	0.57	-	-	-	-	-	-	-	-	-	-	8	nd	58	15	85	nd	7	-	65
TP166	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	120	130	250	nd	nd	nd	nd	200	nd	0.1	nd	2.3	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	19	nd	8	-	47
TP166a	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	110	120	230	nd	nd	nd	nd	190	nd	0.06	nd	1.2	-	-	-	-	-	-	-	-	-	-	7	nd	7	15	19	nd	9	-	48
TP166	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	7	nd	6	10	12	nd	7	-	76
TP167	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	190	120	310	nd	nd	53	53	260	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	20	nd	10	-	74
TP168	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.43	-	-	-	-	-	-	-	-	-	-	6	nd	3	29	18	nd	5	-	67
TP169	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.53	-	-	-	-	-	-	-	-	-	-	10	nd	4	18	20	nd	14	-	89
TP170	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.42	-	-	-	-	-	-	-	-	-	-	6	nd	5	16	19	nd	10	-	70
TP171	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	8	19	nd	6	-	28
TP172	0.2	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	4	-	40
TP173	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	17	nd	6	-	40
TP173a	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	19	nd	6	-	54
TP174	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	5	22	nd	4	-	38
TP175	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	21	nd	2	18	34	nd	6	-	150
TP176	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	nd	nd	200	23	20	nd	9	-	48
TP177	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	14	nd	12	-	89
TP178	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	6	nd	5	11	14	nd	6	-	52
TP178	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	14	nd	26	-	130
TP179	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	6	nd	3	19	13	nd	8	-	66
TP179	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	9	nd	4	39	19	0.1	17	-	120
TP180	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	180	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	14	nd	14	-	95
TP180	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	9	14	nd	11	-	93
TP180	3.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	28	16	0.2	26	-	100
TP181	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	nd	100	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	6	nd	3	11	14	0.1	9	-	88
TP181	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	130	nd	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	8	nd	3	26	15	0.2	18	-	120
TP182	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.24	-	-	-	-	-	-	-	-	-	-	6	nd	3	13	13	nd	15	-	110
TP183	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	6	nd	3	23	16	nd	16	-	140
TP183a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.72	-	-	-	-	-	-	-	-	-	-	5	nd	3	20	15	nd	15	-	170
TP184	0.1	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	5	nd	5	11	15	nd	8	-	81
TP184	2.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	28	23	nd	18	-	52
TP184	3.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	8	13	18	nd	11	-	57
TP184	3.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	11	35	15	nd	14	-	62
TP185	0.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	8	11	14	nd	2	-	23
TP185	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	6	14	nd	6	-	77
TP185	4.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	13	nd	2	-	21
TP185	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	20	10	nd	2	-	31
TP186	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	13	nd	11	-	59
TP186	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	13	13	nd	6	-	65
TP187	1.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	6	11	nd	3	-	26
TP187	2.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	71	150	nd	221	nd	nd	90	90	200	nd	nd	nd	0.19	-	-	-	-	-	-	-	-	-	-	8	nd	7	15	21	nd	9	-	69
TP187	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	200	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	15	nd	12	19	18	nd	19	-	280
TP187	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	5	31	30	0.1	4	-	48
TP187a	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	14	nd	1	-	20
TP187	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.29	-	-	-	-	-	-	-	-	-	-	8	nd	11	10	18	nd	5	-	66
TP187	6.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	63	110	nd	173	nd	nd	110	110	nd	nd	nd	nd	0.63	-	-	-	-	-	-	-	-	-	-	8	nd	2	14	12	0.1	6	-	61
TP188	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	15	0.5	8	11	13	nd	10	-	71
TP188	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	15	nd	12	-	86
TP188	4.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	8	0.4	7	25	20	nd	14	-	140
TP188	5.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	5	41	23	nd	41	-	170
TP189	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	9	11	nd	8	-	65
TP189	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	140	220	360	nd	nd	nd	nd	310	110	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	12	14	nd	8	-	62
TP189	3.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	59	59	220	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	7	13	16	nd	12	-	63
TP190	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	nd	2	2	2.9	2	-	3
TP190	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.24	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	12	0.1	8	-	68
TP191	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	9	0.4	2	28	14	0.1	19	-	120
TP191	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	1400	3900	nd	5300	50	50	2900	2900	2300	nd	nd	nd	13	-	-	-	-	-	-	-	-	-	-	17	nd	6	36	26	nd	11	-	250
TP191	4.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	7	nd	3	21	14	nd	11	-	120
TP192	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	10	12	nd	12	-	96
TP193	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	5	nd	6	16	17	0.1	11	-	140
TP193a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	17	nd	10	-	120
TP194	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	15	-	120
TP194a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.39	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	18	-	130
TP195	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	7	nd	2	11	14	nd	10	-	96
TP195a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	14	nd	10	-	98
TP196	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	3	19	14	nd	14	-	120
TP197	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	3	nd	2	-	2
TP198	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	nd	6	nd	1	-	6
TP199	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	9	1	7	nd	2	-	8
TP200	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	12	nd	9	-	59
TP202	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	7	10	nd	6	-	67
TP202a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	7	7	12	nd	6	-	58
TP202	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.48	-	-	-	-	-	-	-	-	-	-	nd	nd	2	7	11	nd	4	-	82
TP202	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	5	nd	nd	-	5
TP203	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	7	nd	2	-	2
TP204	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	2	-	2
TP205	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	5	nd	3	17	13	nd	9	-	9
TP206	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.17	-	-	-	-	-	-	-	-	-	-	6	nd	4	17	14	nd	15	-	15
TP207	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	51	340	140	531	nd	nd	84	84	410	nd	0.08	nd	2.6	-	-	-	-	-	-	-	-	-	-	12	nd	1	31	10	nd	7	-	7
TP208	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	9	nd	3	-	3
TP209	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.15	-	-	-	-	-	-	-	-	-	-	4	nd	6	17	14	nd	12	-	12
TP210	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	73	410	160	643	nd	nd	120	120	490	nd	0.07	nd	3.6	-	-	-	-	-	-	-	-	-	-	8	nd	1	38	14	0.1	9	-	9
TP210a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	66	340	140	546	nd	nd	100	100	400	nd	0.06	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	0.5	1	47	15	0.1	10	-	10
TP211	0.2	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.68	-	-	-	-	-	-	-	-	-	-	nd	nd	6	8	10	nd	5	-	5
TP212	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.83	-	-	-	-	-	-	-	-	-	-	5	nd	2	13	14	nd	12	-	12
TP213	0.3	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	9	nd	3	-	3
TP213	1.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	1.9	-	-	-	-	-	-	-	-	-	-	nd	nd	10	28	12	nd	14	-	14
TP213	2.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	170	nd	170	nd	nd	nd	nd	200	nd	0.11	nd	1.6	-	-	-	-	-	-	-	-	-	-	45	nd	12	79	52	nd	10	-	10
TP213	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	4300	12000	150	16450	nd	nd	9100	9100	7900	nd	<0.5		41	-	-	-	-	-	-	-	-	-	-	8	nd	4	26	25	nd	2	-	2

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides										Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$	Total	$C_6 - C_{10}$	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP213	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	3500	12000	190	15690	nd	nd	7900	7900	7900	nd	<0.5		38	-	-	-	-	-	-	-	-	-	-	26	nd	8	110	120	nd	4	-	4
TP213	5.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	960	3500	nd	4460	nd	nd	2100	2100	2300	nd	0.07	nd	8.1	-	-	-	-	-	-	-	-	-	-	39	nd	5	42	27	nd	7	-	7
TP213	7.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	220	800	nd	1020	nd	nd	500	500	530	nd	nd	nd	3.7	-	-	-	-	-	-	-	-	-	-	10	nd	2	13	12	nd	4	-	4
TP213	8.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	110	370	110	590	nd	nd	220	220	340	nd	nd	nd	2.7	-	-	-	-	-	-	-	-	-	-	5	nd	3	24	19	0.1	10	-	10
TP214	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	7	6	nd	2	-	2
TP215	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	18	14	nd	4	-	4
TP216	0.2	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	14	11	nd	14	-	14
TP216	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	270	nd	0.08	nd	0.56	-	-	-	-	-	-	-	-	-	-	8	0.5	7	27	39	nd	8	-	8
TP216	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	110	200	310	nd	nd	nd	nd	250	nd	2.8	5	38	-	-	-	-	-	-	-	-	-	-	9	nd	8	8	52	0.1	8	-	8
TP216	6.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	140	260	400	nd	nd	nd	nd	330	150	3.9	6	48	-	-	-	-	-	-	-	-	-	-	4	nd	18	10	42	nd	7	-	7
TP216	8.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	240	370	610	nd	nd	nd	nd	500	260	3.6	5	53	-	-	-	-	-	-	-	-	-	-	5	nd	11	12	51	nd	10	-	10
TP217	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.44	-	-	-	-	-	-	-	-	-	-	8	nd	9	7	10	nd	9	-	110
TP217a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	6	nd	5	6	9	nd	8	-	130
TP218	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	110	100	210	nd	nd	nd	nd	170	nd	0.06	nd	1.4	-	-	-	-	-	-	-	-	-	-	7	nd	7	21	26	nd	14	-	160
TP219	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	10	nd	4	13	16	nd	10	-	79
TP220	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.38	1	4.3	-	-	-	-	-	-	-	-	-	-	nd	nd	3	3	17	nd	2	-	16
TP221	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.52	-	-	-	-	-	-	-	-	-	-	7	nd	4	63	20	nd	10	-	61
TP222	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	130	130	nd	nd	nd	nd	140	nd	0.09	nd	0.45	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	25	nd	4	-	25
TP223	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	16	22	17	nd	20	-	70
TP223	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	210	190	400	nd	nd	nd	nd	340	nd	0.32	nd	5.8	-	-	-	-	-	-	-	-	-	-	16	nd	10	31	37	0.1	12	-	85
TP223	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.29	nd	3.2	-	-	-	-	-	-	-	-	-	-	9	nd	13	16	19	nd	11	-	59
TP224	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.5	1	5.4	-	-	-	-	-	-	-	-	-	-	8	nd	11	18	19	nd	15	-	97
TP224	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	260	530	nd	nd	nd	nd	440	170	8.4	12	100	-	-	-	-	-	-	-	-	-	-	11	nd	11	15	51	nd	14	-	110
TP224	2.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	290	560	nd	nd	nd	nd	450	190	5.5	8	66	-	-	-	-	-	-	-	-	-	-	7	nd	13	16	45	nd	12	-	85
TP225	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	190	390	nd	nd	nd	nd	320	120	2.3	3	29	-	-	-	-	-	-	-	-	-	-	10	nd	6	22	26	nd	9	-	80
TP225	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	1200	1100	2300	nd	nd	160	160	1900	630	19	26	170	-	-	-	-	-	-	-	-	-	-	4	nd	15	14	17	nd	53	-	53
TP225	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	120	690	0.24	nd	2.4	-	-	-	-	-	-	-	-	-	-	7	nd	12	3	42	nd	4	-	31
TP225	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	5	6	14	nd	7	-	64
TP226	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	150	nd	150	nd	nd	nd	nd	210	nd	0.24	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	nd	9	15	41	nd	12	-	95
TP226a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	180	180	360	nd	nd	nd	nd	320	nd	0.15	nd	2	-	-	-	-	-	-	-	-	-	-	6	nd	6	14	39	nd	10	-	110
TP227	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	290	490	nd	nd	nd	nd	420	120	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	9	0.2	24	-	16
TP227a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	220	320	540	nd	nd	nd	nd	470	140	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	2	11	7	nd	26	-	15
TP228	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	8	nd	14	-	33
TP228a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	4	13	7	nd	17	-	29
TP228	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	8	nd	2	-	14
TP228	2.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	14	nd	9	nd	2	-	8
TP229	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	2	nd	2	-	8
TP229a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	2	5	nd	3	-	25
TP229	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	10	nd	3	-	33
TP230	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	4	nd	20	-	16
TP230a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	15	4	nd	15	-	15
TP230	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	12	nd	2	-	30
TP230	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	2	11	nd	6	-	39
TP231	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	22	nd	3	16	3	nd	25	-	19
TP231a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	3	17	3	nd	30	-	19
TP231	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	11	6	nd	12	-	33
TP232	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	4	11	nd	3	-	27
TP232a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	8	nd	2	-	22
TP232	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	nd	8	nd	2	-	11
TP233	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	12	nd	5	9	15	0.2	6	-	55
TP233a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	9	nd	5	12	14	0.1	7	-	58
TP234	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	140	nd	0.07	nd	1.1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	16	nd	17	-	190
TP234a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	15	17	nd	16	-	170
TP235	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	190	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	9	18	55	0.4	8	-	94
TP236	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.74	-	-	-	-	-	-	-	-	-	-	5	nd	8	8	16	0.1	6	-	55
TP237	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	nd	nd	5	3	19	nd	3	-	28
TP238	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	0.52	-	-	-	-	-	-	-	-	-	-	5	nd	7	4	31	nd	3	-	28
TP239	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	2	18	nd	4	-	37
TP240	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.36	-	-	-	-	-	-	-	-	-	-	nd	nd	4	2	18	nd	2	-	18
TP241	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	nd	19	nd	2	-	14
TP242	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.29	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	20	nd	3	-	23
TP243	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	33	12	nd	3	-	16
TP243a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	6	37	14	nd	3	-	18
TP243	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	6	37	13	nd	2	-	11
TP244	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	nd	nd	1	-	-	-	-	-	-	-	-	-	-	7	nd	8	16	16	nd	14	-	62
TP245	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	58	380	120	558	nd	nd	110	110	390	nd	0.35	1	7.8	-	-	-	-	-	-	-	-	-	-	8	nd	7	18	15	nd	28	-	130
V29	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	5	7	36	-	-	-	-	-	-	-	-	-	-	6	nd	15	14	19	nd	7	-	170
V29a	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	2.8	4	20	-	-	-	-	-	-	-	-	-	-	7	nd	9	11	15	nd	6	-	98
V29	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	150	550	nd	700	nd	nd	270	270	460	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	7	0.5	6	13	14	nd	8	-	80
V29	3.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	6	18	19	nd	3	-	48
V29	4.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	5	nd	2	9	16	0.1	33	-	180
V16	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	14	nd	58	300	9	nd	22	-	72
V16	1.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	10	14	18	nd	5	-	43
V27	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	500	140	640	nd	nd	120	120	530	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	16	nd	69	14	18	nd	41	-	100
V27	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	250	220	470	nd	nd	nd	nd	420	nd	0.06	nd	0.06	-	-	-	-	-	-	-	-	-	-	28	0.5	170	15	19	nd	70	-	110
V27	2.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	17	15	15	nd	130	-	200
Bund-5	0.8	4/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	160	nd	160	nd	nd	53	53	170	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	8	nd	3	32	14	nd	24	-	140
TPIT2-Spot-3.5	3.5	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.45	1	5.2	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	39	0.1	7	-	55
TPIT2-Spot-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	26	-	-	-	-	-	-	-	-	-	-	4	nd	9	9	14	nd	52	-	42
PIT2-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	250	210	460	nd	nd	nd	nd	400	nd	0.15	nd	2.9	-	-	-	-	-	-	-	-	-	-	17	nd	9	59	45	0.1	10	-	41
PIT2-4.0a	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	260	220	480	nd	nd	nd	nd	410	nd	0.13	nd	3.3	-	-	-	-	-	-	-	-	-	-	15	nd	6	52	37	0.1	9	-	35
PIT2-EWR-2.8	2.8	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.36	nd	3.4	-	-	-	-	-	-	-	-	-	-	7	nd	8	6	12	nd	3	-	31
PIT2-EWR-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	1.3	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	12	nd	3	-	33
PIT2-EWR-4.2	4.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.5	1	5.1	-	-	-	-	-	-	-	-	-	-	4	nd	12	7	16	nd	7	-	31
PIT2-EWR-6.0	6.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	4	4	11	nd	2	-	44
PIT2-RAMP-WW-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	19	nd	4	11	11	nd	1	-	12
PIT2-RAMP-C-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	190	190	380	nd	nd	nd	nd	320	nd	0.09	nd	1.5	-	-	-	-	-	-	-	-	-	-	11	nd	10	30	26	nd	5	-	42
PIT2-SW-RC-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	120	200	320	nd	nd	nd	nd	240	170	2.9	4	41	-	-	-	-	-	-	-	-	-	-	6	nd	9	14	30	nd	19	-	63
Pit2-S-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	310	560	nd	nd	nd	nd	390	290	12	17	110	-	-	-	-	-	-	-	-	-	-	6	nd	10	14	56	nd	11	-	120
Pit2-S-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	190	250	440	nd	nd	nd	nd	260	260	3.9	6	50	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	14	nd	10	-	50
Pit2-6.0-S-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	420	390	810	nd	nd	nd	nd	580	350	15	21	170	-	-	-	-	-	-	-	-	-	-	7	nd	7	7	29	nd	4	-	38
Pit2-6.0-S-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	490	430	920	nd	nd	78	78	690	330	0.81	1	13	-	-	-	-	-	-	-	-	-	-	14	nd	9	48	53	0.5	12	-	280
Pit2-E-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	240	220	460	nd	nd	nd	nd	330	180	0.27	nd	4.4	-	-	-	-	-	-	-	-	-	-	9	nd	10	41	50	nd	10	-	80
Pit2-E-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	330	360	690	nd	nd	nd	nd	500	310	17	26	210	-	-	-	-	-	-	-	-	-	-	5	nd	8	10	49	nd	6	-	90
Pit2-E-6.0-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	120	nd	0.51	1	5.2	-	-	-	-	-	-	-	-	-	-	nd	nd	7	2	27	nd	1	-	41
Pit2-E-6.0-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	5	11	nd	2	-	28
Pit2-6.0-W	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	170	180	350	nd	nd	nd	nd	260	130	0.6	1	5.8	-	-	-	-	-	-	-	-	-	-	5	nd	8	7	12	nd	4	-	21
Pit2-3.0-N	3.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	15	nd	2	-	10
Pit2-4.0-N	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	230	480	nd	nd	nd	nd	350	180	0.11	nd	2	-	-	-	-	-	-	-	-	-	-	19	nd	14	50	38	0.1	16	-	70
Pit2-8.0	8.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	560	650	1210	nd	nd	60	60	820	590	17	26	220	-	-	-	-	-	-	-	-	-	-	nd	nd	13	15	97	nd	7	-	100
Pit2-9.0-1	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	270	320	590	nd	nd	nd	nd	420	290	9.7	14	110	-	-	-	-	-	-	-	-	-	-	8	nd	10	16	87	nd	11	-	170
Pit2-9.0-2	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	170	180	3.5	5	37	-	-	-	-	-	-	-	-	-	-	4	nd	14	17	45	nd	18	-	68
Pit2-10.0	10.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	160	160	nd	nd	nd	nd	160	160	2.3	3	25	-	-	-	-	-	-	-	-	-	-	6	nd	9	11	50	nd	8	-	86
Pit2-11.0-1	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	220	220	nd	nd	nd	nd	160	250	1.9	3	23	-	-	-	-	-	-	-	-	-	-	7	nd	13	9	31	nd	10	-	50
Pit2-11.0-2	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	130	150	280	nd	nd	nd	nd	220	110	3.5	5	44	-	-	-	-	-	-	-	-	-	-	8	nd	10	11	100	nd	9	-	51
Pit2-12.0	12.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	110	160	270	nd	nd	nd	nd	170	160	1.4	2	17	-	-	-	-	-	-	-	-	-	-	8	nd	9	15	26	nd	19	-	84
Pit2-BASE-1	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	10	12	nd	20	-	120
Pit2-BASE-2	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.5	-	-	-	-	-	-	-	-	-	-	nd	nd	3	8	11	nd	14	-	110
Pit2-BASE-3	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	nd	nd	3	9	11	nd	16	-	120
PIT2-N	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	110	130	240	nd	nd	nd	nd	200	nd	2.5	4	28	-	-	-	-	-	-	-	-	-	-	12	nd	10	27	140	0.2	8	-	240
PIT2-W	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	2	nd	nd	120	120	240	nd	nd	nd	nd	210	nd	1.3	2	23	-	-	-	-	-	-	-	-	-	-	6	nd	12	20	39	0.1	13	-	79
PIT2-W	4	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	150	140	290	nd	nd	nd	nd	260	nd	0.32	nd	5.5	-	-	-	-	-	-	-	-	-	-	6	nd	5	17	24	nd	6	-	46
PIT2-W	6	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	0.15	nd	2.8	-	-	-	-	-	-	-	-	-	-	11	nd	5	11	17	nd	4	-	25
PIT2-SP-1	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.61	-	-	-	-	-	-	-	-	-	-	7	nd	10	15	14	nd	11	-	57
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.24	nd	3.2	-	-	-	-	-	-	-	-	-	-	6	nd	10	16	16	nd	12	-	62
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.67	1	11	-	-	-	-	-	-	-	-	-	-	12	nd	8	25	24	nd	9	-	47
TP245	0.3	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.18	-	-	-	-	-	-	-	-	-	-	4	nd	18	16	12	nd	6	-	56
TP246	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	31	26	4	nd	20	-	43
TP246	1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	4	nd	22	-	44
TP247	0.2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.13	nd	1.4	-	-	-	-	-	-	-	-	-	-	6	nd	7	8	23	nd	4	-	21
TP247	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	2	12	nd	2	-	8
TP248	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	2	14	nd	nd	-	7
TP248a	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	8	nd	10	1	12	nd	nd	-	5
SPA-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1	1	7.7	-	-	-	-	-	-	-	-	-	-	6	nd	16	12	13	nd	11	-	82
SPA-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.23	nd	2.2	-	-	-	-	-	-	-	-	-	-	6	nd	27	9	11	nd	9	-	42
SPB-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	15	-	-	-	-	-	-	-	-	-	-	7	nd	8	11	16	nd	7	-	92
SPB-2	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.5	4	19	-	-	-	-	-	-	-	-	-	-	6	nd	8	12	22	nd	8	-	100

ANNEX C
TABULATED LABORATORY ANALYSIS RESULTS

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 1.2	TP 2.1	TP 3.1	TP 4.1	TP 5.1	TP 6.1	TP 7.2	TP 8.1	TP 9.1	TP 10.1	TP 12.2	TP 14.2	TP 21.2	TP 21.3	TP 23.1
Depth m				1.0-1.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.2-0.4	1.3-1.5	1.7-1.8	1.7-1.9	4.8-5.0	0.2-0.4
Geology				Ash fill	Ash fill	Ash fill	Ash fill	Ash fill	Fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Brick/ash fill	Silt	Clay	Brick fill	Brick fill	Clay fill
Date				2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**	SGS Batch No SE87342														
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	20	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	120	<50
C29 - C36 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	85	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***205***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 23.3	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 27.1	TP 28.1	TP 29.1	TP29.2	TP29.3	TP 31.1	TP 38.1	TP 39.1	TP 40.1	TP 41.2
Depth m				4.0-4.2	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	0.2-0.4	0.4-0.6	0.4-0.6	1.5-1.7	2.6-2.8	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	1.6-1.8
Geology				Clay	Fill	Fill	Ash fill	Clay fill	Fill	Clay	Clay	Silt	Clay	Clay fill	Brick fill	Clay fill	Calcium fluoride	Coal
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	23	<20	NA	<20	<20	<20	<20	<20	NA	NA	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	1200	25	<20	<20	<20	<20	<20	1400	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	1600	2200	1,100	<50	<50	<50	<50	2100	<50	<50	<50	<50	68	<50	<50
C29 - C36 Fraction	mg/kg	100	-	70	2500	1,600	<50	<50	<50	<50	100	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***2870***	***4725***	***2700***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***3600***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***68***	***<LOR***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	Na	<0.3	<0.3	<0.3	<0.3	<0.3	Na	Na	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***NA***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 43.1	TP 45.1	SB 2.1	SB 3.1	SB 4.1	SB 8.1	SB 9.1	SB 10.1	SB 11.2	SB 13.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1
Depth m				0-0.2	0.0-0.12	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	1.8-2.0	0.2-0.3	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0
Geology				Ash brick fill	Clay fill	Clay	Clay	Fill	Clay	Clay	Fill	Fill	Clay fill	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	na	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	140	<50	70
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	89	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***50***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***229***	***<LOR***	***70***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 71.1
Depth m				0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4
Geology				Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill
Date				4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11
	Units	**LOR**	**NSW EPA Criteria**													
TOTAL PETROLEUM HYDROCARBONS																
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	<50	<50	<50	<50	69	<50	<50	<50	<50	<50	<50	<50	<50
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	180	<50	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***249***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX																
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

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LEGEND
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ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						TP 1.2	TP 2.1	TP 3.1	TP 7.2	TP 8.1	TP 10.1	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 41.2	TP 43.1	TP 45.1	SB 10.1	SB 11.2	SB 13.1
Depth m						1.0-1.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.2-0.4	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	1.6-1.8	0-0.2	0.0-0.12	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Ash fill	Ash fill	Ash fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Fill	Fill	Ash fill	Clay fill	Coal	Ash brick fill	Clay fill	Fill	Fill	Clay fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	7.1	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.3	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.32	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	15	8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	11	6.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	96	49	0.13	0.17	<0.1	0.44	0.12	0.21	<0.1	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	14	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	199	89	<0.1	0.13	<0.1	0.24	0.14	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	179	80	<0.1	0.12	<0.1	0.16	0.12	0.12	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	249	131	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	131	59	<0.1	0.11	<0.1	0.16	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	306	162	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	190	99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	143	80	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	37	24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	170	95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	0	0	0	0	0	1775.22	802.4	0.13	0.53	0	1.13	0.38	0.33	0	0

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						SB 16.1	TP 47.1	TP 48.1	TP 49.1	TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6
Depth m						0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0
Geology						Ash fill	Gravel fill	Gravel fill	Gravel fill	Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	1	0.25	0.25	<0.1	<0.1	0.36	0.36	0.41	<0.1	<0.1	<0.1	<0.1	0.14	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.26	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	0.18	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	2.4	0.29	0.24	0.12	<0.1	0.66	1.2	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	2.3	0.27	0.22	0.14	<0.1	0.68	1.1	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	1.4	0.17	0.15	<0.1	<0.1	0.37	0.57	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	1.1	0.16	0.17	<0.1	<0.1	0.37	0.47	0.39	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	1.7	0.21	<0.2	<0.2	<0.2	0.86	0.96	0.74	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	0.86	<0.1	<0.1	0.1	<0.1	0.44	0.52	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.51	<0.1	<0.1	<0.1	<0.1	0.33	0.36	0.27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	0.58	<0.1	<0.1	0.13	<0.1	0.45	0.47	0.34	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	12.45	1.35	1.03	0.49	0	4.52	6.16	4.89	0	0	0	0	0.24	0

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS								
Sample						TP 64.1	TP 65.1	TP 71.1
Depth m						0.2-0.4	0.2-0.4	0.2-0.4
Geology						Clay	Clay fill	Clay fill
Date						5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**			
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	0.5	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	0.2	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.24	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.17	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	0.16	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	1.27	0

NOTES
NE = Not Established
na = Not Analysed
LEGEND

Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 1.1	TP 1.2	TP 1.3	TP 2.1	TP 2.2	TP 3.1	TP 3.2	TP 4.1	TP 5.1	TP 5.2	TP 6.1	TP 7.2	TP 8.1	TP 8.2	TP 9.1
Depth m						0.0-0.2	1.0-1.2	1.6-1.8	0.0-0.2	0.7-0.9	0.0-0.2	0.7-0.9	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.4-0.6
Geology						Ash fill	Ash fill	Clay	Ash fill	Brick fill	Ash fill	Brick fill	Ash fill	Ash fill	Brick fill	Fill	Brick/ash fill	Clay/ash fill	Clay fill	Brick/ash fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342														
Arsenic	mg/kg	3	100	200	500	4	4	<3	4	4	<3	<3	<3	<3	5	<3	<3	<3	<3	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium (III)	mg/kg	0.3	12%	24%	60%	2.7	3.7	5.6	2.5	2.6	3.8	2.3	4.6	210	24	4.3	33	6.8	4.9	2.5
Copper	mg/kg	0.5	1000	2000	5000	18	12	1.2	24	13	15	4.6	28	6	11	4.2	29	9	14	17
Lead	mg/kg	1	300	600	1500	8	13	9.8	9	9	3	4	11	10	12	10	9	4	13	7
Nickel	mg/kg	0.5	600	600	3000	9.6	22	1.5	6.8	4.5	8	2.6	14	3.9	5.6	2.8	12	15	0.6	16
Zinc	mg/kg	0.5	7000	14000	35000	43	75	6.7	16	21	15	55	49	21	45	15	36	27	7.5	23
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 10.1	TP 10.2	TP 11.1	TP 12.1	TP 12.2	TP 13.1	TP 14.1	TP 14.2	TP 15.1	TP 16.1	TP 17.1	TP 17.2	TP 18.1	TP 18.2	TP 19.2
Depth m						0.2-0.4	2.3-2.5	0.4-0.6	0.2-0.4	1.3-1.5	0.2-0.4	0.2-0.4	1.7-1.8	0.2-0.4	0.0-0.2	0.0-0.2	1.3-1.5	0.0-0.2	1.0-1.2	3.3-3.5
Geology						Brick/ash fill	Clay	Brick fill	Clay fill	Silt	Clay fill	Clay fill	Clay	Brick fill	Fill	Fill	Silt	Brick fill	Brick fill	Brick fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	6	<3	4	5	5	6	5	5	25	6	14	11	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	0.5	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.8	2.4	22	2.7	4.3	4.8	2.5	6.9	6.3	17	620	16	9.7	81	7.6
Copper	mg/kg	0.5	1000	2000	5000	16	1.2	29	<0.5	4.6	23	20	10	10	16	15	2.5	16	35	4.5
Lead	mg/kg	1	300	600	1500	12	6	55	5	14	14	21	18	19	31	26	12	13	29	9
Nickel	mg/kg	0.5	600	600	3000	18	<0.5	18	<0.5	4	3.3	4.1	4.1	10	18	190	74	19	52	3.4
Zinc	mg/kg	0.5	7000	14000	35000	47	3.7	130	3.3	21	17	37	32	50	460	520	33	58	300	26
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.5	<0.05	0.13	<0.05	<0.05

Sample						TP 20.1	TP 21.2	TP 21.3	TP 22.1	TP 23.1	TP 23.3	TP 24.2	TP 25.2	TP 25.3	TP 26.2	TP 27.1	TP 27.3	TP 28.1	TP 29.1	TP 29.2
Depth m						0.0-0.2	0.7-0.9	4.8-5.0	1.0-1.2	0.2-0.4	4.0-4.2	1.1-1.3	2.5-2.7	4.2-4.4	0.5-0.7	0.2-0.4	3.0-3.2	0.4-0.6	0.4-0.6	1.5-1.7
Geology						Fill	Brick fill	Brick fill	Clay fill	Clay fill	Clay	Fill	Ash fill	Clay fill	Fill	Fill	Shale	Clay	Clay	Silt
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	4	260	39	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3
Cadmium	mg/kg	0.3	20	40	100	<0.3	1.6	0.9	<0.3	0.5	<0.3	0.8	<0.3	<0.3	<0.3	<0.3	0.5	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	11	<0.3	620	<0.3	230	0.4	13	1.1	1	2.3	0.7	0.5	<0.3	0.8	0.4
Copper	mg/kg	0.5	1000	2000	5000	14	52	42	<0.5	25	6.6	36	5	5.7	14	0.96	8	1	19	4.6
Lead	mg/kg	1	300	600	1500	34	18	37	<1	30	4	15	2	7	18	3	7	1	4	2
Nickel	mg/kg	0.5	600	600	3000	8.7	1000	390	0.8	15	10	38	13	5.5	6.9	3.4	16	0.7	0.9	2.2
Zinc	mg/kg	0.5	7000	14000	35000	220	110	170	12	130	53	170	40	70	42	59	250	5.7	17	5.1
Mercury	mg/kg	0.05	15	30	75	<0.05	0.27	0.12	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09

NOTES
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LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 30.1	TP 31.1	TP 32.1	TP 33.1	TP 34.1	TP 35.1	TP 36.1	TP 37.1	TP 38.1	TP 39.1	TP 40.1	TP 41.1	TP 41.2	TP 43.1	TP 43.2
Depth m						0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	0.2-1.0	1.6-1.8	0-0.2	0.4-0.6
Geology						Clay fill	Clay fill	Clay fill	Silt	Clay fill	Clay fill	Clay fill	Clay fill	Brick fill	Clay fill	Calcium fluoride	Calcium fluoride	Coal	Ash brick fill	Brick fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	<3	<3	<3	<3	<3	7	10	5	9	8	7	4	4
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	0.4	<0.3	<0.3	<0.3	<0.3	0.4	2.2	11	5.7	8.6	5.1	3	25	7.5	2.1
Copper	mg/kg	0.5	1000	2000	5000	2.8	3.9	7.9	3.7	4.4	8.2	11	16	21	11	2.5	1.9	14	11	8.2
Lead	mg/kg	1	300	600	1500	1	3	5	2	3	7	11	18	24	11	4	2	7	9	11
Nickel	mg/kg	0.5	600	600	3000	1.2	5.8	4.7	12	11	6	3.8	15	10	7	3.3	2.2	48	8.4	5
Zinc	mg/kg	0.5	7000	14000	35000	4.7	100	150	83	76	160	52	66	180	38	15	6.8	76	25	70
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5	3	0.75	<0.05	<0.05

Sample						TP 45.1	SB 1.1	SB 2.1	SB 3.1	SB 4.1	SB 5.1	SB 6.1	SB 7.1	SB 8.1	SB 9.1	SB 10.1	SB 10.2	SB 11.1	SB 11.2	SB 12.1
Depth m						0.0-0.12	0.3-0.4	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.8-0.9	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Clay fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Clay	Clay	Fill	Fill	Clay fill	Fill	Clay fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	200	<3	<3	10	<3	<3	11	<3	<3	<3	4	<3	4	6	<3
Cadmium	mg/kg	0.3	20	40	100	0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	6	2.6	4.8	1.7	38	1.1	9.8	7.6	2.1	8.1	2	3.6	1.1	5.2	1.6
Copper	mg/kg	0.5	1000	2000	5000	280	9.4	17	13	40	3.3	14	0.8	11	0.7	16	10	5	4.1	6.1
Lead	mg/kg	1	300	600	1500	300	5	18	11	6	12	15	8	6	9.9	9	5	11	9.5	7
Nickel	mg/kg	0.5	600	600	3000	9.4	1.6	0.9	0.6	27	<0.5	1.2	0.6	1.7	0.92	16	7.6	4.7	1.8	0.7
Zinc	mg/kg	0.5	7000	14000	35000	2000	16	13	11	65	3.3	5.1	4.2	20	6.2	41	31	51	9.2	12
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						SB 13.1	SB 15.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1	TP 50.1	TP 51.1	TP 52.1	TP 53.1	TP 54.1	TP 55.1	TP 56.1	TP 57.1
Depth m						0.2-0.3	0.1-0.2	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.8-1.0	0.2-0.4	0.2-0.4	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay fill	Gravel	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill	Fill	Fill	Fill	Fill	Clay fill	Brick fill	Brick fill	Fill
Date						3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	9	3	74	12	10	8	5	11	3	<3	<3	4	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	0.9	0.3	<0.3	<0.3	1.1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.5	3.5	3.2	8.3	7.5	10	7.8	5	4.7	8.2	4.1	2.8	2.7	5.7	5.3
Copper	mg/kg	0.5	1000	2000	5000	6.1	4	120	7.9	72	23	25	17	11	13	7.9	6.8	2.4	19	14
Lead	mg/kg	1	300	600	1500	8	3	15	11	180	48	37	18	50	25	15	9	4	54	22
Nickel	mg/kg	0.5	600	600	3000	2	1.9	5.9	6.7	12	9.4	7.3	6.4	6.2	6.6	4.9	3.3	0.91	13	6.7
Zinc	mg/kg	0.5	7000	14000	35000	14	15	23	83	170	88	61	37	50	73	63	23	8.8	160	76
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	0.11	0.07	0.2	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 58.1	TP 59.1	TP 60.1	TP 61.1	TP 62.1	TP 63.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 65.1	TP 66.1
Depth m						0.0-0.2	0.0-0.2	1.0-1.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4	0.0-0.2
Geology						Brick fill	Brick fill	Fill	Clay fill	Silt	Brick fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill	Clay
Date						4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	5	7	5	<3	3	5	4	7	6	<3	<3	4	<3	5	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.7	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	3.8	5.5	8.6	3.1	1.3	3.6	1.5	2.3	1.3	1.5	1.3	3	5.1	1.4	1.8
Copper	mg/kg	0.5	1000	2000	5000	14	15	43	13	8.2	1.4	8.5	1.5	18	4.3	7.9	8.3	<0.5	13	5.2
Lead	mg/kg	1	300	600	1500	35	29	93	9.9	11	5	11	3	17	9.7	12	10	8	12	9.5
Nickel	mg/kg	0.5	600	600	3000	6.9	4.2	6.8	4.8	7.8	1.7	17	2.2	8.6	15	5.1	15	1.8	7.7	5.3
Zinc	mg/kg	0.5	7000	14000	35000	68	82	240	170	67	9.5	190	22	76	56	80	110	28	85	55
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 67.1	TP 68.1	TP 69.1	TP 70.1	TP 71.1	TP 72.1
Depth m						0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay	Clay	Clay	Clay	Clay fill	Clay
Date						5/05/11	5/05/11	5/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**						
Arsenic	mg/kg	3	100	200	500	3	<3	5	3	<3	10
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	1.6	2.4	2.6	4.4	1.1	1.8
Copper	mg/kg	0.5	1000	2000	5000	4.4	0.7	9.8	6.3	8.7	31
Lead	mg/kg	1	300	600	1500	11	4	11	8	11	32
Nickel	mg/kg	0.5	600	600	3000	5.2	<0.5	11	14	5.3	5.3
Zinc	mg/kg	0.5	7000	14000	35000	47	3.6	90	78	39	360
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS OC/OP PESTICIDES CSR MAITLAND
JOB No: 11495

ORGANOCHLORINE PESTICIDES															
Sample						TP 47.1	TP 48.1	TP 49.1	S1	S2	S3	S4	S5	S6	TP 64.1
Depth															
Geology															
Date															
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342									
HCB	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC (Lindane)	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC						0	0	0.1		0	0	0	0		
ORGANOPHOSPHORUS PESTICIDES															
Dichlorvos	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethoate	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diazinon	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromofos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS INORGANICS ASBESTOS - CSR MAITLAND
JOB No: 11495

Sample						TP 29.1	S1	S2	S3	S4	TP 64.1
Depth m						0.4-0.6	0.0	0.0	0.0	0.0	0.2-0.4
Geology						Clay	Silt	Calcium fluoride	Black shale	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342					
PCBs Total	mg/kg	0.9	10	20	50	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Calcium	mg/kg	5	NE	NE	NE	na	na	260000	na	na	na
Sulphur	mg/kg	5	NE	NE	NE	na	na	7392	na	na	na
Fluoride	mg/kg	5	NE	NE	NE	na	na	7900	na	na	na
pH	mg/kg	0.1	NE	NE	NE	na	na	8	na	na	na

NOTES
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na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

Sample						A1 TP3.1	A2 TP4.1	A3 TP6.1	A4 TP10.1	A5 TP13.1	A6 TP17.1	TP48A	TP49A
Depth m						0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.8-1.0
Geology						Ash fill	Ash fill	Fill	Brick/ash fill	Clay fill	Fill	Gravel fill	Gravel fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	4/05/11	4/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342							
Asbestos	-	-	NE	NE	NE	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected	Chrysotile asbestos detected, organic fibres detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected

QA ANALYTICAL RESULTS - TPH/BTEX CSR MAITLAND
JOB No: 11495

Sample				TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m				0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*
Geology				Brick/ash fill	Brick/ash fill		Fill	Fill	
Date				2/05/11	2/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NSW EPA Criteria**						
TOTAL PETROLEUM HYDROCARBONS									
C6 - C9 Fraction	mg/kg	10	65	<20	<20	*NE*	<20	<20	*NE*
C10 - C14 Fraction	mg/kg	50	-	<20	<20	*NE*	25	<20	*NE*
C15 - C28 Fraction	mg/kg	100	-	<50	<50	*NE*	2200	1300	*51*
C29 - C36 Fraction	mg/kg	100	-	<50	<50	*NE*	2500	1800	*33*
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	*NE*	***4725***	***3100***	*42*
BTEX									
Benzene	mg/kg	0.1	1	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Toluene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	*NE*	***<LOR***	***<LOR***	*NE*

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

QA ANALYTICAL RESULTS - PAHS CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS														
Sample						TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*	TP 65.1	Dup 10	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Brick/ash fill	Brick/ash fill		Fill	Fill		Clay fill	Clay fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	7.1	6.5	*9*	<0.1	<0.1	*NE*
2-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	3.5	2.8	*22*	<0.1	<0.1	*NE*
1-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	2.3	1.9	*19*	<0.1	<0.1	*NE*
Acenaphthyler	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	0.32	0.24	*29*	<0.1	<0.1	*NE*
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	15	11	*31*	<0.1	<0.1	*NE*
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	11	8.4	*27*	<0.1	<0.1	*NE*
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	96	60	*46*	0.5	0.57	*-13*
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	36	23	*44*	<0.1	<0.1	*NE*
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	199	150	*28*	0.2	0.29	*-37*
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	179	137	*27*	0.24	0.35	*-37*
Benzo[a]anthr	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	249	181	*32*	0.17	0.26	*-42*
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	131	102	*25*	0.16	0.27	*-51*
Benzo[b,k]fluo	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	*NE*	306	247	*21*	<0.2	<0.2	*NE*
Benzo[a]pyrer	mg/kg	0.05	1	2	5	<0.1	<0.1	*NE*	190	151	*23*	<0.1	<0.1	*NE*
Indeno[123-cd	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	143	115	*22*	<0.1	<0.1	*NE*
Dibenzo[ah]ar	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	37	30	*21*	<0.1	<0.1	*NE*
Benzo[ghi]per	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	170	139	*20*	<0.1	<0.1	*NE*
Sum reported	mg/kg		20	40	100	0	0	*NE*	1775.22	1400	*24*	1.27	1.74	*-31*

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

QA ANALYTICAL RESULTS - METALS CSR MAITLAND
JOB No: 11495

Sample						TP 10.1	Dup1	*RPD*	TP 18.1	Dup 2	*RPD*	TP 20.1	Dup 3	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.0-0.2	0.0-0.2	*%*	1.1-1.3	1.1-1.3	*%*
Geology						Brick/ash fill	Brick/ash fill		Brick fill	Brick fill		Fill	Fill		Fill	Fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		3/05/11	3/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	<3	*NE*	14	8	*55*	4	3	*29*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	0.8	0.97	*-19*
Chromium	mg/kg	0.3	12%	24%	60%	4.8	4	*18*	9.7	7.6	*24*	11	18	*-48*	13	36	*-94*
Copper	mg/kg	0.5	1000	2000	5000	16	14	*13*	16	11	*37*	14	20	*-35*	36	36	*0*
Lead	mg/kg	1	300	600	1500	12	11	*9*	13	11	*17*	34	39	*-14*	15	25	*-50*
Nickel	mg/kg	0.5	600	600	3000	18	17	*6*	19	17	*11*	8.7	11	*-23*	38	35	*8*
Zinc	mg/kg	0.5	7000	14000	35000	47	41	*14*	58	52	*11*	220	250	*-13*	170	210	*-21*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	0.13	0.1	*26*	<0.05	<0.05	*NE*	<0.05	<0.05	*NE*

Sample						TP 30.1	Dup 5	*RPD*	TP 37.1	Dup 6	*RPD*	TP 50.1	Dup 7	*RPD*	TP 55.1	Dup 8	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*
Geology						Clay fill	Clay fill		Clay fill	Clay fill		Fill	Fill		Brick fill	Brick fill	
Date						3/05/11	3/05/11		3/05/11	3/05/11		4/05/11	4/05/11		4/05/11	4/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	8	*NE*	7	8	*-13*	8	14	*-55*	<3	3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	0.4	4.9	*-170*	11	11	*0*	5	15	*-100*	2.7	2.1	*25*
Copper	mg/kg	0.5	1000	2000	5000	2.8	40	*-174*	16	15	*6*	17	19	*-11*	2.4	4.5	*-61*
Lead	mg/kg	1	300	600	1500	1	17	*-178*	18	17	*6*	18	21	*-15*	4	5	*-22*
Nickel	mg/kg	0.5	600	600	3000	1.2	1.2	*0*	15	12	*22*	6.4	11	*-53*	0.91	0.9	*1*
Zinc	mg/kg	0.5	7000	14000	35000	4.7	7.1	*-41*	66	57	*15*	37	48	*-26*	8.8	9.9	*-12*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	<0.05	0.08	*NE*	0.08	0.11	*-32*	<0.05	<0.05	*NE*

Sample						TP 60.1	Dup 9	*RPD*	TP 65.1	Dup 10	*RPD*	TP 71.1	Dup 11	*RPD*
Depth m						1.0-1.2	1.0-1.2	*%*	0.2-0.4	0.2-0.4	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Fill	Fill		Clay fill	Clay fill		Clay fill	Clay fill	
Date						4/05/11	4/05/11		5/05/11	5/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Arsenic	mg/kg	3	100	200	500	5	8	*-46*	5	6	*-18*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	0.7	4.6	*-147*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	8.6	22	*-88*	1.4	1.2	*15*	1.1	0.9	*20*
Copper	mg/kg	0.5	1000	2000	5000	43	84	*-65*	13	14	*-7*	8.7	6.3	*32*
Lead	mg/kg	1	300	600	1500	93	320	*-110*	12	15	*-22*	11	8	*32*
Nickel	mg/kg	0.5	600	600	3000	6.8	8.9	*-27*	7.7	7.9	*-3*	5.3	3.7	*36*
Zinc	mg/kg	0.5	7000	14000	35000	240	8700	*-189*	85	86	*-1*	39	31	*23*
Mercury	mg/kg	0.05	15	30	75	<0.05	0.19	*NE*	<0.05	0.05	*NE*	<0.05	<0.05	*NE*

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS GROUNDWATER TPH BTEX METALS - CSR MAITLAND
JOB No: 11495

Monitoring Well					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
TOTAL PETROLEUM HYDROCARBONS											
C6 - C9 Fraction	ug/L	40	NE	NE	<40	<40	<40	<40	<40	<40	<40
C10 - C14 Fraction	ug/L	100	NE	NE	<100	<100	270	<100	<100	<100	<100
C15 - C28 Fraction	ug/L	200	NE	NE	<200	<200	593	<200	<200	<200	<200
C29 - C36 Fraction	ug/L	200	NE	NE	<200	<200	<200	<200	<200	<200	<200
Sum C10-C36 Fraction	ug/L	NE	NE	600	***<LOR***	***<LOR***	***863***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX	ug/L										
Benzene	ug/L	0.5	950	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	0.5	NE	1000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	0.5	NE	150	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total-Xylene	ug/L	1.5	350	70	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	ug/L	NE	NE	NE	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
Na = Not Analysed
NE = Not Established

Sample					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
Arsenic	ug/L	1	24	60	<1	2	<1	<1	<1	<1	<1
Cadmium	ug/L	0.1	0.2	6	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Chromium	ug/L	1	NE	30	<1	8	2	<1	<1	<1	<1
Copper	ug/L	1	1.4	75	<1	4	6	2	<1	1	1
Lead	ug/L	1	8	75	<1	2	160	<1	<1	<1	<1
Nickel	ug/L	1	11	75	7	9	2	25	2	2	2
Zinc	ug/L	5	3.4	800	33	16	100	130	73	53	84
Mercury	ug/L	0.1	0.6	0.3	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
NS = Not Specified
NE = Not Established
NA= Not Analysed

Appendix C

RAP (GHD, 2016b)

NSW Health Infrastructure

New Maitland Hospital Stage 1 Development Area

Metford, NSW

Remedial Action Plan / Contamination Management Plan

July 2016

Executive summary

GHD was engaged by Health Infrastructure (HI) to prepare a Remedial Action Plan / Contamination Management Plan (referred to herein as the RAP) for Lot 7314 DP 1162607 (the site), being the proposed Stage 1 Development Area for a health services facility, including hospital (the New Maitland Hospital), at the former CSR/PGH clay mine and brickworks, Metford Road, Metford, NSW.

This RAP provides a summary of identified site contamination issues, and description of the proposed remediation and soil management programs, procedures and standards which are to be followed during the course of the redevelopment, to ensure the successful remediation of the site and consequently the protection of the environment and human health, so that the site can be made suitable for the nominated land uses by implementation of this RAP.

A conceptual development plan for the hospital has been developed by Woods Bagot, as illustrated by the drawings in Appendix B. It is evident that significant earthworks will be required to achieve the landform required for the proposed development. It is understood that bulk excavation is likely to be required to level the site to about RL 18 m AHD. Areas of the site, particularly within the north-western and southern strip, are at levels of up to RL 24 m AHD. Hence excavation of up to 6 m depth may be required. Depending on the final layout of the development, placement of up to 8 m of filling may be required within the former quarry floor.

On the basis of previous investigations carried out at the site, including detailed site investigations carried out by GHD in 2015, “contamination” (this term is used for convenience to indicate any materials presenting a health or environmental risk, including naturally occurring materials) at the site is considered to comprise the following:

- Fill or disturbed materials containing carbonaceous material, as well as in-situ carbonaceous material (associated with elevated concentrations of Total Recoverable Hydrocarbons (TRH) and one instance of benzene exceeding investigation levels)
- A small stockpile of polycyclic aromatic hydrocarbon (PAH) contaminated material at the north end of “Area 2”, which may correspond to stockpile SP4 (identified as contaminated with PAHs by previous investigations)
- Isolated occurrences of bonded asbestos containing materials (ACM) or potential asbestos containing materials (PACM)
- Aesthetic issues including bricks, and to a lesser extent building and domestic wastes
- Potentially combustible materials including coal and carbonaceous materials.

The findings of the investigations to date are based on lines of evidence including historical site use, site observations and sampling and analysis from discrete locations. While the site history indicates previous site use was predominantly quarrying activities, and investigations do not indicate any significant disposal of waste has occurred, smaller areas of incidental disposal are evident, and it is likely that other such areas will be encountered during redevelopment of the site. There is also a possibility that unexpected contamination could be encountered during earthworks for redevelopment of the site.

A review of remediation options has been carried out giving consideration to the nature of contamination identified at the site, and to relevant technical and policy considerations, resulting in the following preferred approach.

As a general principle in redevelopment of the site, HI has committed to using best endeavours to manage contamination on site, where appropriate. The types of contaminants identified at the

Site (primarily TRH, PAH, asbestos-containing materials and aesthetic impacts) cannot readily be destroyed, and soil treatment methods that reduce contaminant concentrations are not considered suitable for the contamination at the site. Therefore, the following remediation methods are considered appropriate for the Site:

- Physical removal and disposal of asbestos-containing materials that may be disturbed by the site works is the preferred initial remediation strategy and is consistent with regulatory requirements for PACM. Further, it is understood that CSR has committed to removal of any identified areas of ACM prior to bulk excavation works commencing. Any further remediation of ACM should be limited to “unexpected finds” as per Section 7 of the RAP.
- Visual screening and segregation of unacceptable materials (foreign inclusions, aesthetic impacts, PACM, hydrocarbon contaminated materials, potentially combustible materials) to address contamination impacts within stockpiles and across the general site area.
- Capping and containment as a conservative soil management option for segregated materials (as above) where contamination will not be subject to exposure under normal foreseeable use of the site (eg. burial at depths greater than 2 m below design structure levels or beneath permanent infrastructure as part of the redevelopment).
- Re-use of uncontaminated materials (VENM, screened overburden and fill) for bulk fill subject to geotechnical requirements or constraints.

The particular methods to be used for each material / source should be agreed with HI and their designers for the development in conjunction with finalisation of design, to account for any particular geotechnical requirements, optimise earthmoving and minimise the potential for future disturbance of contaminated or problematic materials. It is anticipated this will take the form of a material re-use schedule, to be prepared as part of final design and consistent with the principles described in this RAP. A Construction Quality Assurance (CQA) plan will be required as a basis for verifying and documenting the appropriate implementation of this RAP and final design documentation. These documents (including relevant aspects of the final design, specifications, material re-use schedule and CQA plan) shall be reviewed by the Environmental Consultant and Site Auditor prior to the commencement of remediation to confirm that they are consistent with the principles of this RAP.

It is understood that HI is developing a Contamination Finds Protocol as part of commercial negotiations with CSR. This protocol should also be taken into account in implementation of this RAP.

Interim management of the site is required between the date of this RAP and commencement of redevelopment activities, to minimise the potential for additional contamination to occur from activities such as illegal dumping, or for changes to site characteristics to occur from on-site remediation activities in other areas of the CSR property that may affect the site.

A Long Term Site Management Plan (LTSMP) will be required following completion of the development earthworks, to record the placement of any contaminated or combustible material on site, and provide procedures to be used in the event that it should be disturbed.

GHD considers that the site can be made suitable for the proposed use (Health Services Facility, including hospital) subject to implementation of this RAP during earthworks undertaken for development of the site.

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Appendices

Appendix A – Figures

Appendix B – Woods Bagot Conceptual Drawings

Appendix C – Combined Analytical Results Tables

Appendix D – Validation criteria

Appendix E Unexpected Finds Protocol

Appendix F Validation methodology and QA/QC

List of abbreviations

ACM	Asbestos Containing Material
ANZECC	Australia and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
BaP	Benzo(a)pyrene
bgl	Below ground level
BTEXN	Benzene, toluene, ethyl benzene and xylenes plus naphthalene
BTOC	Below top of casing (well casing)
CLM Act	Contaminated Land Management Act 1997(incorporating amendments made by the Contaminated Land Management Amendment Act 2003)
COC	Chain of Custody
CoPC	Contaminant of Potential Concern
CQA	Construction Quality Assurance
DP	Deposited Plan
DQO	Data quality objectives
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
ESL	Ecological Screening Level
<	Less than (laboratory reporting limit or PQL)
GIL	Groundwater Investigation Level
Ha	Hectare
HIL	Health Investigation Level (relating to defined land use scenario)
HI	NSW Health Infrastructure
HSL	Health Screening Level
L	Litre
LOR	Limit of reporting (equivalent to PQL)
µg/L	Micrograms per litre
µS/cm	Micro-Siemens per centimetre
mbgl	Metres below ground level
mg/kg	Milligrams per kilogram
mg/L	Milligrams per litre
NATA	National Association of Testing Authorities of Australia
ND	Not Detected (above laboratory PQL)
NEHF	National Environmental Health Forum
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council

NSW EPA	New South Wales Environmental Protection Authority
NSW DEC	Former New South Wales Department of Environment and Conservation
NSW DECC	Former New South Wales Department of Environment and Climate Change
NSW DECCW	Former New South Wales Department of Environment, Climate Change and Water
OCP	Organochlorine Pesticide
OEH	Office of Environment and Heritage
OPP	Organophosphate Pesticide
PACM	Potential asbestos containing material
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated Biphenyl
PFC	Perfluorinated Compounds
pH	-log[H]
PID	Photo-ionisation detector
ppm	Parts per million
PQL	Practical quantitation limit (equivalent to LOR)
QA/QC	Quality assurance/quality control
PACM	Potential Asbestos Containing Material
RAP	Remedial Action Plan
Redox	Reduction-oxidation potential
RPD	Relative percentage difference
SAC	Site Assessment Criteria
SAQP	Sampling, Analytical and Quality Plan
SPT	Standard Penetrometer Test
SWL	Standing water level
TCLP	Toxicity Characteristics Leaching Procedure
TEQ	Toxicity equivalent quotient (in reference to BaP)
TPH	Total petroleum hydrocarbons
TRH	Total recoverable hydrocarbons
UCL	Upper Confidence Limit
UST	Underground storage tank
VENM	Virgin Excavated Natural Material
VOC	Volatile organic compounds

1. Introduction

1.1 Introduction

GHD Pty Ltd (GHD) was engaged by NSW Health Infrastructure (HI) to prepare a Remedial Action Plan (RAP) / Contamination Management Plan for Lot 7314 DP 1162607, Metford Road, Metford, NSW. Lot 7314 is referred to as the 'site' for convenience in this report, and is the proposed Stage 1 Development Area for a health services facility, including hospital (the New Maitland Hospital). The 'site', as defined for the purpose of this report, forms a portion of the overall development area for the health services facility. The overall area (formerly the CSR/PGH clay mine/brick works) is being investigated in stages that may not necessarily correspond to subsequent development activities. The property identifiers for the overall development area are provided in Section 2.1.

The location of the overall development area (red boundary) and the boundary of Lot 7314 (yellow northern and eastern boundaries) are shown in Figure 1 in Appendix A.

A Phase 2 Environmental Site Assessment (ESA) of the site was prepared by GHD in December 2015, in order to provide HI with confidence that the site contamination characteristics are sufficiently understood to determine the remediation required to make the site suitable for the final land use. No significant contamination was found at the site, however natural carbonaceous material was present, isolated instances of potential asbestos-containing material (PACM) were identified, with numerous areas of anthropogenic wastes and the potential for "unexpected finds" of contamination to occur during earth works. The ESA concluded that the investigation works undertaken have sufficiently characterised the site to enable an assessment of its suitability for the proposed purpose (hospital with open space grounds), subject to implementation of a soil management plan.

This RAP / Contamination Management Plan should be read in conjunction with previous investigations (as described in Section 2) and the limitations described in Section 14.

1.2 Proposed development

Redevelopment of the site is proposed to involve a change of land use to include a health care facility comprising long term care (hospitals, child care, aged facilities, hospices), commercial / industrial land use (training facilities, administration and ancillary buildings) and open spaces (gardens, play areas).

A conceptual development plan for the hospital has been developed by Woods Bagot, as illustrated by the drawings in Appendix B. It is evident that significant earthworks will be required to achieve the landform required for the proposed development.

The geotechnical investigation report for the Stage 1 development area (DP 2015b) states that the earthworks associated with development of the site are expected to include excavation and recompaction of existing fill materials and the placement and compaction of relocated or imported fill materials.

DP (2015b) states that it is understood that bulk excavation is likely to be required to level the site to about RL 18 m AHD. Areas of the site, particularly within the north-western and southern strip, are at levels of up to RL 24 m AHD. Hence excavation of up to 6 m depth may be required. Depending on the final layout of the development, placement of up to 8 m of filling may be required within the former quarry floor.

1.3 Purpose of this RAP / Contamination Management Plan

This document (referred to herein as a RAP for convenience) presents the management and remediation strategies required to ensure unacceptable contamination is not present or subject to exposure during the proposed future use of the site, and to manage any contamination that may be encountered during the redevelopment of the site.

The purpose of this RAP is to provide a description of the proposed contamination management and remediation programs, procedures and standards, which will be followed during the course of the project, to ensure the successful management or remediation of contamination at the site and consequently the protection of the environment and human health, so that the site can be made suitable for the nominated land uses by implementation of this RAP.

1.4 Objectives

The objectives of the RAP are to:

- Set soil management and remediation goals so that the site can be made suitable for the nominated land uses, and will pose no unacceptable risk to human health or the environment under those uses.
- Evaluate the range of management or remediation options available to address the existing site contamination issues, and thereby reduce risks to acceptable levels.
- Establish a framework for interim management of the site prior to the commencement of development.
- Document the preferred contamination management or remediation techniques and procedures.
- Establish the various safeguards required to complete the contamination management or remediation work in a safe and environmentally acceptable manner.
- Identify the necessary approvals and licences required by regulatory authorities in order to enable the remediation works to proceed.
- Enable an independent accredited site auditor to certify that the site can be made suitable for use as a health services facility, including hospital, if the site is remediated and managed in accordance with this RAP.

1.5 Scope of work

The scope of works to meet the stated objectives comprised the following:

- Collate and review existing data.
- Identify the areas of concern within the site requiring management or remediation.
- Document the relevant guidelines.
- Set remediation goals.
- Outline the management or remediation strategy.
- Develop management or remediation procedures to form a basis from which the earthworks / remediation Contractor(s) can develop their own detailed work methods.
- Document a validation process to be followed where required.
- Identify appropriate licence and approvals required to undertake the remediation works.
- Outline contingency and emergency response measures.

1.6 Roles and responsibilities

The roles and responsibilities of the various parties involved in the remediation and validation of the site are outlined below.

HI Project Manager

Responsible for overall direction of civil and environmental work (including any management or remediation) associated with the earthworks contract.

HI Design Team

Responsible for taking the requirements of this RAP into account in preparation of final earthworks design and configuration and relevant design documents and specifications, including consultation with the Environmental Consultant and Site Auditor.

Earthworks / Remediation Contractor (Contractor)

Responsible for:

- Required civil works (i.e. any physical management, remediation or associated works), including all measures required to protect worker and public health and the environment during the works.
- Preparing a detailed work plan for implementing the works.
- Undertaking material inspections and clearances in accordance with this RAP, the approved Construction Quality Assurance (CQA) program, final design and specifications.
- Preparing / obtaining and providing all relevant supporting documentation to the environmental consultant in relation to any remediation works carried out.

Environmental Consultant

Responsible for:

- Providing technical guidance to the earthworks / remediation contractor in appropriately implementing the requirements of the RAP.
- Verifying the Contractor's adherence to the RAP, relevant aspects of the CQA program, final design and specifications.
- Monitoring of work areas for environmental purposes, collection and analysis of validation and characterisation samples, and advising HI of appropriate actions on the basis of observations, sampling and analysis.
- Preparing a Remediation and Validation Report (RVR) at the completion of remediation.

NSW EPA Accredited Site Auditor

Responsible for:

- Reviewing the CQA plan and other relevant documentation to be developed as part of the final design and specifications, for consistency with this RAP.
- Reviewing the work of the Environmental Consultant.
- Providing a Site Audit Statement regarding the suitability of the site at the completion of remediation and validation.

2. Summary of site conditions

2.1 Site location and description

The site is located at the former CSR quarry on Metford Road, Metford, NSW as shown in Figure 1 in Appendix A. The overall development area (as discussed in Section 1.1) comprises Lot 7314 DP 1162607, Lot 266 DP 755237, Lot 3 DP 1091727, and Lot 401 DP 755237.

The site which is the focus of this report (Lot 7314) is about 17 ha in size, and is proposed to be redeveloped for the initial stages of the New Maitland Hospital. The remaining areas of the CSR site will eventually be taken up for future stages of the hospital campus.

The site was divided into 4 main areas (see Figures 1 and 2, Appendix A) as part of GHD 2015 to aid in description of the Site and interpretation of results:

- **Area 1** - Located in the southwest portion of the Site, comprises disturbed (previously cleared) and undisturbed bushland. Historical information indicated no significant use of this Area apart from tree clearing and access roads. Topography was variable with steep banks in the south and west/northwest. Stockpiles of fill and re-worked material were present across Area 1, along the eastern side of the area apparently pushed out from historical quarrying activities in Area 2, and also in the south western portion and central portion. Mixed building waste, including concrete, metal and potential asbestos containing materials (PACM) was observed at isolated locations on the surface in the northwest portion, presumed to be from illegal dumping. A number of small water bodies (ponds in a drainage line) are located towards the south western corner of this area.
- **Area 2** – Located to the north of Area 1, comprises the most disturbed area of the site with approximately 80% un-vegetated and comprising numerous stockpiles and undulations (noise berms and quarry voids) and rock outcrops (high wall) from historical quarrying activities. The northern boundary forms part of a levelled area adjoining the CSR site and high walls remain along the southern and south western perimeters with noise berms along the top. Several small stockpiles were present in the northern portion. A large water filled body (formed by the dip of the geology at the base of the quarry excavation) is located at the eastern side of the area and an outcropping of carbonaceous material (extending into Area 3) is located in the south-eastern corner of the area. A flat low lying area was present in the central western portion (most likely formed from quarrying activities), in between stockpiles and the western high wall. A single piece of PACM was identified on the surface near the top of the high wall along the southern boundary of the area.
- **Area 3** – Located east of Areas 1 and 2, has also been quarried (to a lower elevation than Area 2) and comprises a swampy / low lying area and shallow water bodies in the central and northern portion (base of former quarry). A large carbonaceous shale stockpile is located in the southern portion which extends across the majority of Area 3 from east to west. A high wall remains to the south of the large carbonaceous stockpile. A portion of relatively undisturbed land remains present along the southern boundary above the high wall.
- **Area 4** – Located at the eastern side of the Site, generally comprises natural or disturbed vegetated land. Historical information indicates that most of the area was cleared by 1954 with a large area of exposed soil evident by 1975 and stockpiled materials present in the early 1990's. The north western portion consists of relatively flat, low lying land with some hummocks of fill or excavated natural material (now vegetated with scrub). A small stockpile predominantly comprised excavated natural material, however also contained building waste, including bricks, mortar and PACM (observed on the surface). The central portion is elevated with steep banks on all sides, and densely vegetated. A large gully is located in the

southern portion adjoining the high wall. The southern boundary of the area was elevated and densely vegetated.

2.2 Surrounding land use

The surrounding land uses (and approximate distances) include:

- North – CSR site comprising former PGH Bricks & Pavers (sales and display and manufacturing areas, adjacent); Northern Railway (300 m); East Maitland Cemetery (400 m); Raymond Terrace Road (500 m); East's Leisure & Golf (golf course adjacent Raymond Terrace Road); and Two Mile Creek (700 m).
- South – Residential (adjacent, separated by power line easement).
- East – CSR site comprising former PGH Bricks & Pavers quarry site (predominantly unused and vegetated, adjacent); Northern Railway (400 m); East Maitland Cemetery (unused and vegetated), rural residential properties and Three Mile Creek (400 m); Raymond Terrace Road (600 m); scale model aircraft flying field and rural property (adjacent Raymond Terrace Road); and Four Mile Creek (1.2 km).
- West – Metford Road (adjacent); Fieldsend Oval (public sporting/football field), Council Depot and industrial properties (adjacent Metford Road); and Two Mile Creek (300 m).

2.3 Environmental setting

Table 2-1 summarises the environmental conditions of the site and surrounding area, including geology, soil, topography, hydrology and hydrogeology. The information is based on information from GHD 2015 and previous investigations (italicized), particularly as summarised in the Remediation Action Plan for the CSR / PGH brickworks (DLA, 2014b).

Table 2-1 Summary of site conditions

Aspect	Summary
Geology and Soils	Based on information from previous investigations, *the regional geology comprises the Tomago Coal Measures consisting of shale, mudstone, sandstone, coal seams and clay layers. Carbonaceous layers have been excavated from the natural layers as part of the onsite works. These layers have been stockpiled on the site.* *Geology encountered during investigations generally comprised clay, brick and ash fills to a depth averaging approximately two metres deep. Beneath this were variable clays, silt stones, fine grained sandstones and shales. Most of these were exposed in the excavations associated with clay and shale extraction over the site.* This is generally consistent with the findings of GHD 2015 except that large quantities of clay, brick and ash fills were not generally encountered, and are understood to predominantly be present on the former PGH land north of Area 2.
Topography	Based on the topographic map of NSW (reviewed as GHD 2015), the southern portion of the Site has an elevation of approximately 20 metres Australian Height Datum (mAHD), with variable falling landform to approximately 10 mAHD (excluding pits present in the central portion, predominantly Areas 2 and 3). A gully in the western portion (Area 1) falls towards Two Mile Creek to the northwest. The eastern portion (Area 4) falls to the east, towards Three Mile Creek. The central portion has been disturbed by mining operations, with highly variable landform including mounds, channels and pits. A steep high wall (up to 10 m high) extends along the southern portions of Areas 2, 3 and 4 with mounded fill (presumed to be a noise berm) located

Aspect	Summary
	at the top of the high wall adjoining natural ground levels to the south, and the areas to the north generally at the base of the quarry or with material stockpiled above the base (in Areas 2, 3 and 4). The site topography is shown on Figure 3 in Appendix A.
Hydrology	Area 1 appears to drain to the northwest, toward Two Mile Creek, located approximately 300 metres to the west and 700 metres to the north. Area 4 appears to drain to the east, toward Three Mile Creek, located approximately 400 metres to the east. As noted in Section 2.1 above, Areas 2 and 3 contain water bodies in low-lying areas of the base of the former quarry. The landform in these areas is highly variable and so too is surface water flow. However, it appears that there is low lying land (wetlands) present to the northeast of the site (north of Raymond Terrace Road). It was presumed that surface water from the site would generally flow towards this feature. *Stormwater at the site appears to collect in the upper of five sedimentation ponds at the east site. Water flows progressively through these to discharge from the site at the north eastern boundary into what is known as Three Mile Creek which flows north*. (LeVert, 2011). The above-mentioned sedimentation ponds are located north of Area 3.
Hydrogeology	Groundwater flow direction was generally assumed in GHD 2015 to be toward the northeast. As noted above wetlands are located approximately 500 metres to the northeast, and it is presumed that shallow unconfined groundwater flow would also be to the northeast. *Perched groundwater was encountered in fill at depths of approximately two metres in some of the test pits, mainly along the north eastern part of the site.* [To the north of Area 2]. *Groundwater depths recorded in three groundwater monitoring bores were approximately 6.5 metres below ground level (mbgl).* (LeVert, 2011). An online search of the Department of Primary Industries Office of Water database (GHD 2015) found nine licenced groundwater bores within a 500 metre radius of the site, three of which were within or adjacent to the Site. It is noted that there were no bores within 500 metres of the Site licenced for domestic, stock or irrigation use.

2.4 Previous investigations

Numerous environmental investigations have been undertaken on the Site, with the most recent being a Phase 2 ESA prepared by GHD in December 2015. These studies, along with several other previous reports, were reviewed as part of preparation of the RAP and include the following:

- Closure Mine Operation Plan [Closure MOP] for: Metford Clay Mine ML 1523, 5848, 4865, and 5090. VGT, March 2015.
- Phase 2 Detailed Environmental Site Assessment, CSR/PGH Maitland, Metford Road, Metford NSW 2323. DLA Environmental, January 2014.
- Remediation Action Plan [RAP], CSR/PGH Metford. DLA Environmental, May 2014.
- Stage 2 Soil Investigation, CSR/PGH Maitland NSW. LeVert, September 2011.
- Preliminary Contamination Assessment, PGH Site, Metford NSW. Environmental Auditors (EA), February 2011.
- New Maitland Hospital Stage 1 Development Area. Phase 2 Environmental Site Assessment. Metford Road, Metford, NSW. GHD. December 2015.

It is noted that, with the exception of GHD 2015, these investigations were for the entire CSR operations. GHD 2015 provides a detailed review of relevant information for Stage 1 from the previous investigations. Previous results summary tables are presented in Appendix C and previous investigation locations are shown on Figure 2, Appendix A.

2.5 GHD (2015)

The primary objective of the Phase 2 ESA for Stage 1 was to provide HI with a high level of confidence that the site contamination characteristics were sufficiently understood to determine the remediation required to make the site suitable for the final land use; and with sufficient confidence and reliance that there will be no foreseeable contamination issues which may affect handing the site over to contractors to undertake redevelopment and construction works on the site.

The results of the investigations found that:

- The site has predominantly been used as a quarry and for stockpiling of material, with the exception of perimeter areas towards the west, south and east which appear to be largely undisturbed. The northern boundary lies adjacent to the former CSR / PGH brickworks site, which has been significantly disturbed by historical brickmaking and associated activities. Previous investigations across the Site had identified a number of exceedances of the current health-based assessment criteria for TRH in the fraction >C_{10}-C_{16} (F2) and BaP, predominantly in the northern portion of Area 2 and within the large carbonaceous shale stockpile in the southern portion of Area 3.
- Investigations conducted indicated that the Site contained large areas of fill material to depths up to 3.0 metres below ground level (mbgl). Large stockpiles of quarried material were also present in Area 2 and Area 3. Fill materials generally contained silty sandy clay/clay materials (Area 2) or carbonaceous shale (Area 3) with some areas including anthropogenic materials including bricks and brick fragments, domestic waste, rubble, and coal chitter. Excluding bricks and brick fragments, other anthropogenic wastes were generally confined to fill material pushed up along the top of the high walls to the south or west of the quarry areas, or in smaller stockpiles at the north end of Area 2, the northern portion of Area 3 and western portion of Area 4.
- Contaminants of potential concern (CoPC) were below the adopted health-based assessment criteria for the soil and sediment samples analysed, with the exception of exceedances of the HSL A/B for TRH F2 (eight samples) and benzene (one sample), and the HILs A, B and C for BaP (TEQ) (one sample). Concentrations of CoPC above the ecological assessment criteria were more wide spread, with 19 samples (excluding Quality Control duplicates) exceeding the ecological screening level (ESL) urban residential for TRH F2 and/or F3 (fraction >C16-C34), four samples exceeding the ecological investigation level (EIL) for BaP and numerous samples exceeding the EILs for zinc and to a much lesser extent nickel and copper. Generally, elevated concentrations of TRH F2 and F3 and benzene were associated with soils containing carbonaceous material, predominantly in the southern portion of Area 3 and the south-eastern end of Area 2 comprising the carbonaceous shale stockpile and in-situ outcroppings of weathered shale.
- Statistical assessment of the data set for soils from the carbonaceous shale stockpile and adjacent outcropping shale indicates the 95% UCLav concentrations for TRH F2 and F3 exceed the HSL A/B (for soils at 0-1 mbgs) and the ESL for F2, and exceed the ESL for F3.
- Potential asbestos containing materials (PACM) were observed on the surface in three locations: Area 1- in the vicinity of HA402 and associated with dumped waste building

materials; Area 2 – an isolated fragment on the surface in the vicinity of TP414 on the top of the high wall; and Area 4 – in the vicinity of MW401 and associated with several small stockpiles containing waste building materials and excavated soil. All PACM fragments appeared to be in sound (bonded) condition. All soil samples submitted for asbestos analysis returned negative results for the presence of asbestos, including the two samples of soil collected beneath the identified PACM materials (A04 and A05) and samples from TP414.

- Both shallow and deep groundwater on the site naturally contains nickel and zinc above the freshwater GILs. It is considered that the concentrations are most likely associated with the naturally occurring geology and overall regional groundwater quality. TRH and PAH concentrations were only detected in groundwater sampled from one well (MW404S) and are likely to be associated with naturally occurring hydrocarbons present in coal/shale bands. The persistence and distribution of shallow groundwater contamination by hydrocarbons is unclear from the investigations undertaken. Additional shallow wells and repeat sampling of MW404S would be required to better assess the source of these organics in the groundwater. As Metford is supplied with potable water, it was considered unlikely that groundwater would be extracted for beneficial uses, particularly as the water is brackish. Therefore, any risk of exposure associated with groundwater use is considered to be low, except possibly in a construction / dewatering scenario if shallow groundwater with contaminants (as found at MW404S) is encountered.

Based on the scope of works completed, the objectives outlined above and subject to the limitations contained within GHD 2015, the following conclusions were made:

- Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated.
- On the basis of the investigations undertaken, except for the large shale stockpile (Area 3), the adjacent weathered shale outcropping (Areas 3 extending to Area 2), and the small stockpile potentially identified as SP4 in DLA (Area 2), CoPC concentrations above assessment criteria are relatively minor and isolated, and from a contamination perspective, the fill materials are expected to be acceptable for use in the proposed development.
- PACM was only identified in a few isolated locations and was observed to be bonded, presenting a low risk to human health provided it is not disturbed. However, given the nature of vegetation coverage across the site, there may be other areas that contain PACM.
- Anthropogenic wastes (including PACM in isolated areas) were noted in many areas of fill on Site but were not generally found to be present in the larger stockpiles in Area 2 and Area 3, and are readily visually identifiable.
- Except for shallow groundwater from well MW404S, groundwater and surface water did not generally show evidence of impact from contamination at the Site or contaminant migration from adjoining areas that would affect the Site, and groundwater is unlikely to be beneficially used.
- GHD 2015 considered that the works sufficiently characterised the Site to enable an assessment of its suitability for the proposed purpose (hospital with open space grounds), subject to implementation of a soil management plan.

GHD 2015 recommended:

- Development works should include a soil management plan (SMP) containing an asbestos management plan (AMP) and an unexpected find protocol to identify

anthropogenic wastes, remove PACM prior to disturbance for appropriate disposal, and separate any wastes that are not acceptable for aesthetic or other reasons, for either management (eg. emplacement in deeper fill) or disposal off site. Should unexpected contaminated soils be identified during any future ground works, advice should be sought from a suitably qualified environmental consultant.

- Consideration should be given to a conservative management approach through the burial of the carbonaceous material exceeding the assessment criteria to a depth of at least 2 mbgl. This could be completed in conjunction with development earthworks using stockpiled material that does not have any unacceptable impacts, and material won from suitable areas designated for cut.
- Materials presenting 'aesthetic issues' (bricks, building and domestic waste) might not be acceptable for use at the surface, but could be buried at depth or disposed of off-site to a licenced landfill facility prior to development. Where these materials are to be buried, the location and depth should be documented.
- Further assessment of shallow groundwater should be considered if development (including construction) is likely to encounter or disturb hydrocarbon contaminants such as found in MW404S.

2.6 Site contamination status

The following review of the site contamination status is based on the combined results from previous investigations and GHD 2015. The combined data tables (soil, sediment, surface water and groundwater) are presented in Appendix C. Table 2-2 provides a summary of the contamination status of the Site.

Table 2-2 Soil Contamination status summary by Area

Area	Issue	Description
SOILS		
Area 1	Aesthetic Impacts	Fill materials were identified predominantly around the boundary with Area 2 (where materials have been pushed up from Area 2) and were up to 2.8 m deep with some areas containing foreign material such as domestic and construction waste, bricks, coal chitter and PACM. Shallower fill was also noted along the southern boundary and some smaller stockpiles in the southern portion which did not generally include any foreign material. Anthropogenic wastes (including PACM) were not found to be widespread in Area 1, and are readily visually identifiable. No odours or staining were observed.
	TRH F2 and F3, zinc, nickel impacts	TRH (F2) in soils at one location (TP417) above the HSL A/B associated with disturbed carbonaceous materials in the noise berm in south eastern end of Area 1. Hydrocarbon impacts were identified at depths 1.9-2.0 m and were not vertically delineated in this location. Zinc concentrations were above EILs at several locations TRH F2 and F3 at location TP417 and TRH F3 at HA407 and nickel at one location. Chemical exceedences were isolated and relatively minor. Apart from zinc (likely to be associated with the natural mineralogy of the soils), only one concentration exceeded 250% of the assessment criteria (TRH F3 in TQ069, the inter-laboratory duplicate of sample TP417_1.9-2.0). Further, the primary sample and the intra-laboratory duplicate were less than and slightly more than the ESL respectively. Therefore, from a contamination perspective, it's considered unlikely that a representative statistical assessment of the fill materials in Area

Area	Issue	Description
		1 would restrict their use for the proposed development.
	PACM impacts	PACM was observed in surface materials in the northern part of Area 1 associated with dumped waste building materials. The material was not significantly degraded and the soil sample collected beneath the PACM did not identify the presence of asbestos or asbestos fines. Although the PACM was not tested at the laboratory, from GHD's experience the material is likely to be asbestos and should be treated as such for remediation purposes. The PACM in its' current state presents a low risk to human health provided it is not disturbed.
Area 2	Aesthetic Impacts	Fill materials were present across much of Area 2 (large stockpiles, pushed up materials) and were recorded to a depth of up to 6.0 m. Fill in some areas contained foreign material such as coal chitter, bricks, rubble and domestic waste, predominantly in the vicinity of the boundary with Area 1 and the central north-western portion of the area towards the former CSR site (vicinity of TP404, TP403, TP401 and TP400). A slight sweet / organic odour was noted during excavation of TP306. No other odours or staining were observed in the fill material. There was no evidence of any significant filled voids at the locations investigated.
	TRH F2, F3, BaP (TEQ), BaP, Zinc, copper and nickel impacts	TRH F2 above HSL A/B in a number of samples, predominantly in the north-western corner (TP306 and TP402) and associated with carbonaceous material (TP402, BH601 and TP478). One exceedance for BaP (TEQ) above the HIL A and HIL B was at TP401 on the northern boundary and may correspond with stockpile SP4 (DLA (2014a). Results exceeding ESLs for TRH were also generally associated with carbonaceous materials, including the above samples over residential ESLs for TRH F2 and F3, and TRH F3 only at locations TP405 and TP407 (in the north western portion). BaP concentrations were above EILs at TP401 and also at locations TP303 and MW400 D (northern part of Area 2). Numerous samples were above the zinc EIL, two locations for nickel and one location for copper. As with Area 1, zinc concentrations are likely to be associated with the natural mineralogy. Apart from zinc, two concentrations exceeded 250% of the assessment criteria (TRH F3 in TP402_0.2-0.3 and BaP in TP401_0.5-0.7). On this basis, except for the stockpile of material at TP401, it is unlikely that a representative statistical assessment of any of the fill materials in Area 2 would restrict their use for the proposed development from a contamination perspective.
	PACM impacts	One small fragment of PACM was observed on the surface at TP414. No dumped materials were observed in this vicinity and the fill in this location did not contain any building rubble or domestic waste. The fragment did not appear degraded. As for Area 1, the PACM was not tested at the laboratory, however, from GHD's experience the material is likely to be asbestos and should be treated as such for remediation purposes. The PACM in its' current state presents a low risk to human health provided it is not disturbed (prior to disposal).
Area 3	Aesthetic Impacts	Fill materials were present to varying depths with the exception of the south western corner and the low lying wetland area in the north. However, this wetland had some small stockpiles and an access road (assumed fill). Fill materials were recorded to a depth of 3.0 m deep and in some areas contained foreign material (coal chitter, brick fragments, ceramics and domestic

Area	Issue	Description
		waste), predominantly south of the large shale stockpile and along the southern boundary (TP315, TP473 and TP474), north of the large shale stockpile (TP461, TP459, TP455) and around the north western corner adjacent the former CSR site (TP466, TP470). No odours or staining were observed in the fill material. There was no evidence of any significant filled voids at the locations investigated
	TRH F2 and F3, benzene, zinc, nickel and copper impacts	TRH (F2) above the HSL A/B at TP450 and TP452 and one detection of benzene above the HSL A/B at TP450 all within the large shale stockpile and associated with carbonaceous material underlying the stockpile. Results exceeding ESLs for TRH were also associated with carbonaceous materials, including above samples above ESLs for TRH F2 and F3, and TRH F3 only in six other samples associated with the large shale stockpile (TP445, TP446, TP447, TP448 and TP449) and weathered shale outcrop (TP477). Numerous samples exceeded the EIL for zinc, and one occurrence each of nickel and copper. As with Areas 1 and 2, zinc concentrations are likely to be associated with the natural mineralogy. Apart from zinc, one concentration exceeded 250% of the assessment criteria (benzene in sample TP450_2.3-2.5). As several samples from the shale stockpile and adjacent shale outcropping were above HSLs and ESLs for F2 and/or F3, the 95% UCLav concentrations were calculated (Appendix C) with results indicating the 95% UCLav concentrations for F2 and F3 were above HSL A/B 0-1 m and ESL for F2, and above the ESL for F3. While some samples above the F2 criteria were collected below 1 m, comparison was against the most conservative value as the material may be redistributed during development works, potentially resulting in some of the deeper material being present at the surface. The UCLav results indicate that the material within the large shale stockpile and adjacent outcropping would not be acceptable for the proposed development, and should be buried at depth to at least 2 mbgl.
Area 4	Aesthetic Impacts	Fill materials were present across Area 4, with the exception of the southern and eastern boundaries (HA409, HA410, HA411, HA412, HA414, TP438). Fill was recorded to a depth of 2.8 m deep and contained brick fragments in stockpiled material to the south (TP439 and TP441) and north (TP436). Remaining areas contained shallower fill with some coal chitter and no building rubble or domestic waste. No odours or staining were observed in the fill material. Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated.
	Zinc, nickel and copper impacts.	Zinc concentrations in several samples were above EILs with one occurrence each of nickel and copper. As above, zinc concentrations are likely to be associated with the natural mineralogy.

Area	Issue	Description
	PACM impacts	PACM was observed on the surface at a number of small stockpiles containing waste building materials (also with bricks and mortar) in the north western part of Area 4. The material was bonded and the soil sample collected beneath did not identify the presence of asbestos or asbestos fines. As for other areas, the PACM was not tested at the laboratory, however, from GHD's experience the material is likely to be asbestos and should be treated as such for remediation purposes The PACM in its' current state presents a low risk to human health provided it is not disturbed (prior to disposal).
GROUNDWATER AND SURFACE WATER		
All areas	Heavy metals TRH PAH	The groundwater levels indicate that the inferred groundwater flow in the area is to the northeast which is generally consistent with local topography Cadmium, copper, lead, nickel and zinc concentrations generally above the groundwater investigation levels (GIL) but is considered likely that concentrations are typical of natural groundwater conditions in the area. PAHs (BaP, fluorene and phenanthrene) above GILs in one location plus elevated TRH F2, F3 and F4. Given the observation of shale oil during drilling of most of the wells on site the detection of these analytes is likely to be associated with naturally occurring hydrocarbons. No further assessment of groundwater or surface water proposed.

2.7 Data gaps – level of confidence in findings

Based on the sampling density used in GHD 2015, there was a 95% level of confidence that a hot spot of diameter in the order of 50 m would have been detected. GHD also approached the investigation with a 'lines of evidence' approach, where both the historical site use, review of previous data and the site inspection were considered in conjunction with investigation results. As noted in the GHD 2015 sampling strategy, while the sampling densities investigated were lower than the minimum recommended in EPA (1995) Table A for detection of circular hot spots, the site characteristics were found to be consistent between previous investigations and that of GHD 2015 and no significant variability was encountered in the site materials. GHD considers that the works undertaken at the site to date have sufficiently characterised it for the proposed purpose (health facility with hospital), subject to implementation of a soil management plan.

2.8 Refined site conceptual model

A conceptual site model (CSM) has been refined for the site to identify the contamination sources at the site and provide an understanding of the pathways by which receptors at the site and surrounding areas may be exposed to contaminants.

The potential Source-Pathway-Receptor (SPR) linkages identified for the site, based on site information gathered during this investigation are presented in Table 2-3.

Table 2-3 Potential SPR linkages for the site

Potential Source	Pathway	Receptor	Pathway potentially complete?
Contaminated soils/fill on site	Volatilisation to indoor air and subsequent inhalation	Future residents or site users	Possible. Semi-volatile soil concentrations exceeding HSLs present in some areas. Areas to be developed for buildings not yet understood.
	Volatilisation to outdoor air and subsequent inhalation	Intrusive maintenance worker/ Industrial site workers	No. Volatile soil concentrations below relevant investigation levels.
		Future residents or site users	Unlikely. Semi-volatile soil concentrations present however would be dispersed in open air.
	Direct contact	Intrusive maintenance worker/ Industrial site workers	No. Soil concentrations below direct contact criteria.
		Future residents or site users	Unlikely. Soil concentrations below direct contact criteria except for one instance of BaP (TEQ) at TP401 (vicinity of previously identified SP4).
	Vertical migration of contaminants	Groundwater (and eventual discharge to Four Mile Creek)	Unlikely. Groundwater concentrations likely to be representative of regional water quality and are not expected to be an environmental risk, surface water samples do not indicate any significant impact.
Contaminated groundwater beneath the site	Volatilisation to indoor air and subsequent inhalation	Future residents or site users	No. Volatile groundwater concentrations below acceptable criteria.
	Volatilisation to outdoor air and subsequent inhalation	Intrusive maintenance workers	No. Volatile groundwater concentrations below acceptable criteria.
		Future residents or site users	No. Volatile groundwater concentrations below acceptable criteria.
	Direct Contact	Intrusive maintenance worker/	Possible. Groundwater concentrations from MW404S above

Potential Source	Pathway	Receptor	Pathway potentially complete?
	(including accidental ingestion)	Industrial site workers	acceptable criteria for incidental ingestion. Extent of groundwater impact unclear. Shallow groundwater present in low lying areas (to the north).
		Future residents or site users	Unlikely. Groundwater concentrations above acceptable criteria for beneficial use, however the area is supplied with potable water and groundwater is unlikely to be used for be used for beneficial uses due to the brackish nature of the water.
	Lateral migration in groundwater	Ecological and recreational receptors of Four Mile Creek (approximately 400-500 m north-east)	Unlikely. Groundwater concentrations likely to be representative of regional water quality and are not expected to be an environmental risk. Surface water samples do not indicate any significant impact.
		Volatilisation risk to off-site residents	No. Volatile groundwater concentrations below investigation levels.
		Groundwater extraction for recreational, irrigation, stock watering or drinking water use	Possible (potentially through unregistered bores and groundwater discharge into low lying areas and waterways), although elevated concentrations of CoPC only encountered in MW404S and the brackish nature of water would preclude most beneficial uses.
PFC contaminated soils or water on site (impacted by historical use of fire fighting foams)	Direct Contact (non-volatile)	Intrusive maintenance worker/ Industrial site workers	No. Soil concentrations generally not detected, no concentrations above LOR in water.
Asbestos (bonded and friable)	Inhalation of fibres	Industrial workers on site, future residents or site users	Unlikely. Friable asbestos and/or asbestos fines not detected in soils on the site. Some bonded PACM observed which could release fibres if inappropriately managed.

2.9 Site and material suitability

General site and stockpiled materials

The site has been compared to “Tier 1” investigation or screening levels for land use settings equivalent to both residential development and open space, which is considered a conservative basis to assess the suitability of site materials for a hospital and associated grounds. It is noted that the HSLs and ESLs for hydrocarbons presented in the NEPM are based on petroleum hydrocarbons using a fuel composition typical of fresh petrol and diesel fuels, and may not be directly applicable to the type of hydrocarbons found at the site (considered to be associated with carbonaceous shales and shale oils). Site specific criteria would be complex to calculate and this is not considered warranted if a conservative approach is taken to assessment and management of the materials at the site.

Based on the distribution of soil concentrations of TRH exceeding the residential (HSL A/B for vapour intrusion and ESL) criteria, the “contamination” (this term is used for convenience to indicate any materials presenting a health or environmental risk, including naturally occurring materials at the site) is considered to predominantly result from the presence of fill or disturbed materials containing carbonaceous material, as well as in-situ carbonaceous material - as evidenced by samples from outcroppings of carbonaceous shale at the base of the quarry and beneath the stockpile in Area 3. Other health-based criteria exceedences were limited to one instance of benzene (associated with TRH F2 in the same material noted above) and one instance of BaP (TEQ) in a stockpile at the north end of Area 2, which may correspond to stockpile SP4 which was found to be contaminated in previous investigations.

While there were a greater number of EIL and ESL exceedences (TRH, BaP, metals), these are considered to be associated with the natural mineralogy and the occurrence of carbonaceous materials and shale oils within the strata. Exceedences were relatively minor and sufficiently isolated as to not present an unacceptable risk to human health or the environment.

On the basis of the investigations undertaken as discussed above, with the exception of fill containing the identified surface PACM, the large shale stockpile in Area 3 and the adjacent weathered shale outcropping extending into Area 2, and the small stockpile (potentially SP4) at the northern end of Area 2, other identified contaminant concentrations are considered relatively minor and isolated, and from a contamination perspective, the fill materials are expected to be acceptable for use in the proposed development.

Asbestos

As discussed above, no asbestos has been detected in soil samples from the site, and the PACM identified in its present state (bonded condition with no significant degradation or presence of fibres in soil) presents a low risk to human health provided it is not disturbed. However, no visible asbestos in surface soils should be present for residential and open space land use, and both the NEPM and WHS regulations require removal of visible asbestos prior to any work activities that may disturb it. Any PACM to be disposed off site would require appropriate classification in accordance with the *Waste Classification Guidelines*: Part 1 – Classifying waste (EPA, 2014) prior to disposal to an appropriately licenced facility. A final inspection of the areas by a suitably qualified consultant should be undertaken following removal of the PACM.

Given the nature of vegetation coverage and fill materials across the site, there may be other areas that contain PACM, particularly where stockpiles contain building rubble. Based on the future risk of disturbance to other areas of the site during redevelopment, any exposed PACM should be managed using an AMP containing an unexpected finds protocol.

Aesthetics

It is noted that many areas of fill on the site contain 'aesthetic issues' including bricks, and to a lesser extent building and domestic wastes. These materials may not be acceptable for use at the surface, but could be buried at depth or disposed of off-site to a licenced landfill facility prior to development. Where these materials are to be buried, the location and depth should be documented.

Potentially combustible materials

The geotechnical investigation report for the Stage 1 development area (DP 2015b) identified potentially combustible material at the following locations (see Figure 4 in Appendix A for locations):

- Test pits TP303 and TP305 - black coal filling to depths of up to 0.25 m in the north-western portion of Area 2
- Test pit TP310 - Clayey gravelly filling with some coal and carbonaceous siltstone to 1.2 m depth, within the "fingers" of filling reaching into the south-western area of the site [the sound berm pushed up along the eastern side of Area 1]
- Test pit 314 - Coal and carbonaceous gravel filling to 0.7 m depth over bedrock in the southern strip, adjacent to the former quarry face [Area 3]; and
- Test pit 316 - Exposed coal, as encountered in Pit 316 and also within the floor of the former quarry to the east of the pond, together with the lower sections of the former quarry face.
- Based on the assessment the stockpiled carbonaceous materials within the southern and central part of the site will also require some form of management and remediation to minimise and mitigate future combustibility risks.

Unexpected Finds and Soil Management

The findings of the investigations to date are based on lines of evidence including historical site use, site observations and sampling and analysis from discrete locations. While the site history indicates previous site use was predominantly quarrying activities, and investigations do not indicate any significant disposal of waste has occurred, smaller areas of incidental disposal are evident, and it is likely that other such areas will be encountered during redevelopment of the site. There is also a possibility that unexpected contamination could be encountered during earthworks for redevelopment of the site.

The management requirements for unexpected finds are discussed further in Section 7.

3. Relevant guidelines and legislation

3.1 Guidelines for contamination assessment and management

National Environmental Protection (Assessment of site Contamination) Amendment Measure 2013.

The National Environment Protection (Assessment of Site Contamination) Measure (referred to here as the NEPM) was produced by the federal National Environmental Protection Council (NEPC) in 1999 was revised and updated in 2013 by way of the National Environmental Protection (Assessment of site Contamination) Amendment Measure 2013. The amended NEPM is still referred to as the NEPM 1999. The NEPM provides a national framework for conducting assessments of contaminated sites in Australia.

The purpose of the NEPM is to *"establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry."*

The desired environmental outcome for the NEPM is to *"provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination".*

The NEPM addresses assessment of contamination, and does not provide specific guidance for remediation or management of risk.

The NEPM includes two Schedules: Schedule A comprises a flowchart of the recommended general process for the assessment of site contamination and its relationship to the management of site contamination and Schedule B consists of technical guidelines about site assessment criteria, site investigation procedures, laboratory analyses, human health risk assessment, ecological risk assessment, derivation of investigation levels, groundwater risk assessment, community engagement and risk consultation and competencies and acceptance of environmental auditors and related professionals.

In broad terms, the assessment process can be described as:

- Tier 1 Preliminary investigation, laboratory analysis and interpretation, development of a conceptual site model (CSM) and assessment of results with reference to investigations or screening levels. The need for risk-based remediation assessment to derive response levels and/or the need for remediation is evaluated.
- Where required, Tier 1, Tier 2 or 3 Detailed investigation / Site specific risk assessment, laboratory analysis and interpretation is completed, and the requirement for remediation is evaluated.

Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites" (ANZECC/NHMRC, 1992)

The "Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites" (ANZECC/NHMRC, 1992), provide a risk management approach consistent with the attainment of Environmental Outcomes described in the NEPM.

A contaminated site, as defined by ANZECC/NHMRC (1992), is a site at which hazardous substances occur at concentrations above background levels, and where assessment (with reference to appropriate criteria) indicates it poses, or is likely to pose, an immediate or long term hazard to human health or the environment.

The objectives of contaminated site remediation (ANZECC/NHMRC, 1992) are:

- To render a site acceptable and safe for the long term continuation of its existing/proposed use.
- To minimise environmental and health risks both on and off-site to acceptable levels.
- To maximise to the extent practicable, the potential future uses of the site.

Wherever human health is a risk, either on or off-site, or the off-site environment is at risk, a contaminated site should be remediated to the extent necessary to minimise such risks in both the short and long terms. However, in cases where there is no threat to human health and the environment is not at risk, it may be appropriate to accept a strategy leaving contaminants on the site or using planning controls to manage and minimise risk.

Environmental and Human Health Risk is based on exposure to potential hazards and is defined as:

- Risk = Hazard x Exposure.

The elimination of risk can be achieved by the removal of the hazard and/or the exposure pathway. Remediation commonly involves removal of the hazard, while risk management involves removal of the exposure pathway but the hazard may remain. Exposure pathways to contaminated material can be managed by any physical action and/or management plan which prevents exposure to contaminants, such as planning controls, management controls, and/or site remediation.

A planning control is any means to control future change of end use and associated demolition/construction activities, and could take the form of leasing/selling arrangements to specific planning legislation controls. For example if contaminated soil is buried/capped in a particular zone, that zone may be designated to have a particular land use eg public open space or roadways. This enables the material to be placed in less sensitive land use areas (via under roadways) within land used for more sensitive purposes such as residential.

3.2 State legislation and guidelines

NSW has a comprehensive suite of guidelines relating to assessment and management of contamination, administered by the EPA[1] under the *Contaminated Land Management Act* (CLM Act) 1997 and the *Protection of the Environment Operations Act* (POEO Act) 1997. These include the following:

- NSW EPA (1995), *Contaminated Sites: Sampling Design Guidelines*.
- NSW OEH (2011), *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*.
- NSW DEC (2006), *Contaminated Sites: Guidelines for NSW Site Auditor Scheme*.
- NSW DEC (2007), *Guidelines for the Assessment and Management of Groundwater Contamination*.
- NSW EPA (2015). *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*. New South Wales Environment Protection Authority.
- NSW EPA (2014). *Technical Note: Investigation of Service Station Sites*
- NSW EPA (2014). *Waste Classification Guidelines Part 1: Classification of Waste*.

[1] The NSW Government re-established the EPA as an independent statutory authority in February 2012. Before this, the EPA was part of the Office of Environment and Heritage (OEH) within the Department of Premier and Cabinet.

Guidelines approved under the CLM Act also include:

- Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC/NHMRC, 1992).
- National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended 2013 (NEPC 2013).
- Australian Drinking Water Guidelines (NHMRC/ NRMMC, 2011).
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ ARMCANZ, 2000).

Other guidelines used in the framework for assessment of asbestos contamination include:

- Western Australian Department of Health (WA DoH) Guidelines for Remediation and Management of Asbestos Contaminated Sites in Western Australia (WA DoH 2009).

State Environmental Planning Policy 55

SEPP55 introduces state wide planning controls for the remediation of contaminated land. Under the provisions of SEPP55, "*land must not be developed if it is unsuitable for a proposed use owing to contamination and must be remediated prior to development*".

Under the requirements of the SEPP55, remediation is to be classified as either:

- Category 1– remediation work for which development consent is required; or
- Category 2 – remediation work not requiring development consent.

Protection of the Environment Operations Act

Activities requiring an EPA license under Schedule 1 of the POEO Act include contaminated soil treatment works for on-site or off-site treatment (including in either case incineration or storage of contaminated soil but excluding excavation for treatment at another site) that:

1. Handle more than 1,000 m^3 per year of contaminated soil not originating from the site on which the works are located; or
2. Handle contaminated soil originating exclusively from the site on which the works are located and:
   - Incinerate more than 1,000 m^3 per year of contaminated soil.
   - Treat otherwise than by incineration and store more than 30,000 m^3 of contaminated soil.
   - Disturb more than an aggregate area of 3 hectares (30,000 m^2) of contaminated soil.

It is not anticipated that any of these thresholds will be exceeded by the proposed remediation works, and hence licensing would not be required under the POEO Act.

Work Health and Safety Act

All proposed remediation works for the Site (including asbestos work) should be completed in accordance with the *Work Health and Safety Act and Regulation* 2011. Asbestos works must also follow the guidelines of the *Safe Work Australia Code of Practice - How to Manage and Control Asbestos in the Workplace* (December 2011), and the *Code of Practice – How to Safely Remove Asbestos* (December 2011).

3.3 Commonwealth Legislation

The principal Commonwealth environmental legislation potentially relevant to the site is the Environment Protection and Biodiversity Act 1999 (EPBC Act). The EPBC Act provides that the Commonwealth is to be involved in matters of "National Environmental Significance" (NES). The EPBC Act vests the Commonwealth Environment Minister, in the absence of a referral, with the power to request referral of a proposal.

Under the environmental assessment provisions of the EPBC Act, actions that are likely to have a significant impact on a matter of NES are subject to an assessment and approval process. The EPBC Act identifies seven matters of NES:

- World Heritage properties
- National Heritage places
- Ramsar Wetlands of international significance
- Nationally listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- Nuclear actions (including uranium mining)

When there are habitats or species of national significance (as listed under the schedules of the Environment Protection and Biodiversity Conservation Regulation 2000) within the project remediation area likely to be impacted negatively upon by the proposed remediation works, then preparation and lodgement of an EPBC Act referral to the Commonwealth for the assessment would need to be considered and addressed accordingly.

Such requirements will presumably be addressed in planning and approval documentation for redevelopment of the site, and have not been further considered in this RAP.

4. Assessment criteria

4.1 Relevant guidelines

The framework for the contamination assessment was developed with reference to relevant guidelines relating to assessment and management of contamination as detailed in Section 5.

In the first instance, the most sensitive assessment criteria will be compared with the concentrations of any contamination identified at the site. If these are exceeded, the specific land use and exposure scenarios relevant to the area and depth at which the subject material is located will be examined, and the concentrations compared with the appropriate criteria for those circumstances. If the relevant criteria are exceeded, the material will be managed or remediated in accordance with this RAP. This process of assessment will take place during final design, as discussed in Section 5.4.

4.2 Soil assessment/validation criteria

The NEPM includes a range of ecological investigation and screening levels, health investigation levels and health screening levels for a range of contaminants and for a range of land use and exposure scenarios. The selection of the assessment criteria has been based on the following considerations, some of which are peculiar to the proposed development of the site as a health services facility, including a hospital:

- The site development footprint is currently undetermined; therefore, it is uncertain which soils may or may not be subject to exposure.
- There is a potential for direct contact with contaminated soils.
- There is a potential for vapour intrusion from hydrocarbon contamination for future buildings (this is considered a low potential given the nature of the historical site use, with contaminants of concern unlikely to include volatile hydrocarbons; however carbonaceous materials at the site may be a source of semi-volatile hydrocarbons).
- The HILs developed for the commercial/industrial land use scenario are not applicable to a site used frequently by more sensitive groups such as children (within childcare centres, hospitals and hotels) and the elderly (within hospitals, aged care facilities and hospices), given the following:
  - Potential ‘child care’ exposure is 10-12 hours per day (compared to the workplace 8 hours).
  - The most sensitive receptors are people with generally poor health, in particular those who get sick first i.e. very young, very old and people who have a lowered immune system.
  - The impact to these receptors is chemical specific e.g. BaP is a cancer-causing agent with a mutagenic mode of action, therefore new-borns are the highest risk category (not necessary the elderly).
  - Sections of the hospital may be dedicated to long-term care, providing accessible gardens and open space (potentially used by children as ‘play areas’).

Where investigation levels are not presented in the NEPM, other reference sources (such as the USEPA regional screening levels) will be used, eg. for CoPC associated with brick manufacturing – barium and fluoride, and firefighting perfluorinated compounds (PFCs).

4.2.1 Health investigation and screening criteria

Health investigation levels have been developed for a broad range of metals and organic substances and are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types and apply generally to a depth of 3 m below the surface for residential use. Site specific conditions determine the depth to which HILs apply for land uses other than residential.

Given the considerations outlined above, the following assessment criteria, which are sourced from Schedule B1 of the NEPM, will be adopted:

- HIL A – residential with garden/accessible soils
- HIL B – residential with minimal opportunities for soil access
- HIL C – open space purposes (public open space such as parks, playgrounds, playing fields e.g. ovals, secondary schools and footpaths)
- Health Screening Levels (HSLs) for Vapour Intrusion – HSL A/B and C
- HSLs for Intrusive Maintenance Workers
- Direct Contact for TRH Fractions in Soil – HSL A, B and C

4.2.2 US EPA Regional Screening Levels (RSLs)

The US EPA residential soil guidelines are risk-based screening levels (RSLs) that have been derived from equations combining exposure assumptions with chemical-specific toxicity values.

The RSLs have been used to assess the soil exposure pathway for contaminants in the absence of a HSL or HIL guideline value.

4.2.3 Ecological investigation levels and ecological screening levels

Ecological investigation levels (EILs) have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on land use scenarios and generally apply to the top 2 m of soil. EILs have been developed for three generic land use settings including areas of ecological significance, urban residential areas and public open space and commercial and industrial land uses.

Added contaminant limit (ACL) based EILs have been derived for As, Cu, Cr III, DDT, naphthalene, Ni, Pb and Zn. Application of ACL based EILs is also dependent on site specific soil characteristics including pH and cation exchange capacity (CEC) and clay content. GHD 2015 analysed a selection of samples for pH and CEC and the following assumptions have been made based on the results:

- pH ranged between 4.7 and 7.4. EILs were adopted covering pH 4.5 to 5.5 for the selection of copper and zinc criteria.
- CEC ranged between 0.8 meq/100g and 17.2 meq/100g. A range for the ACL EILs was adopted that covered CEC 5 to 10 for the selection of copper, nickel and zinc criteria.
- For selection of the Cr III criterion, clay content of between 1% and 2.5% was assumed. The selection of Cr III criterion is not CEC or pH dependent.

The NEPM has established generic EILs for aged As, fresh DDT and fresh naphthalene and further, GHD have used EILs derived from the NEPM 1999 for heavy metal criteria not addressed in the NEPM 1999 (Amendment 2013). These include cadmium, chromium (VI) and mercury.

Ecological Screening Levels (ESLs) have been developed for selected petroleum hydrocarbon compounds and TRH fractions and are applicable for assessing risk to terrestrial ecosystems.

ESLs also depend on land use scenarios (identical to EILs) and broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil.

Given the proposed development of the Site, the following assessment criteria will be adopted:

- Soil Specific ACL-based EILs for urban residential and public open space.
- Generic EILs (for arsenic and fresh DDT) for urban residential and public open space.
- ESLs (for TRH and BaP) for urban residential areas and public open space.

4.2.4 Management limits

The NEPM includes “Management Limits” which are considered after application of the HSLs and ESLs, to address a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons:

- Formation of observable light non-aqueous phase liquids (LNAPL)
- Fire and explosive hazards
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons

The management limits have been adopted in the NEPM as interim Tier 1 guidance to avoid or minimise these potential effects. The NEPM states that application of the management limits will require consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine the maximum depth to which the limits should apply, and that the management limits may have less relevance at operating industrial sites (including mine sites) which have no or limited sensitive receptors in the area of potential impact.

As part of GHD 2015, management limits for TPH fractions F1-F4 in soil were considered for residential, parkland and public open space, however none of these criteria were exceeded.

4.2.5 Health screening levels for asbestos contamination in soil

The NEPM provides guidance relating to the assessment of known and suspected asbestos contamination in soil and addresses both friable and non-friable forms of asbestos. The health screening levels for asbestos in soil have been adopted from the Western Australian Department of Health (WA DoH) *Guidelines for Remediation and Management of Asbestos Contaminated Sites in Western Australia* (WA DoH 2009).

The NEPM guidance emphasises that the assessment and management of asbestos contamination should take into account the condition of the asbestos materials and the potential for damage and resulting release of asbestos fibres. Therefore, for the purposes of assessing the significance of asbestos in soil contamination, three terms are used as summarised below:

- Bonded asbestos containing material” (Bonded ACM) – sound condition although possibly broken or fragments and the asbestos is bound in a matrix.
- Fibrous asbestos (FA) – friable asbestos materials such as severely weathered ACM and asbestos in the form of loose fibrous materials such as insulation.
- Asbestos fines (AF) – including free fibres of asbestos, small fibre bundles and also fragmented ACM that passes through a 7 mm x 7 mm sieve.

From a risk to human health perspective, FA and AF are considered to be equivalent to “friable” asbestos in Safe Work Australia (2011), which is defined therein as ‘material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos’.

Bonded ACM in sound condition represents a low human health risk. However, both FA and AF materials have the potential to generate, or be associated with, free asbestos fibres and may represent a significant human health risk if disturbed and fibres are made airborne.

The following health screening levels have been adopted as the most appropriate to the Site:

- Residential A – includes residential with gardens/accessible soils.
- Recreational C – includes public open space such as parks, playgrounds, playing fields (eg. ovals), secondary schools and unpaved footpaths, herein referred to as HSL C.

Table 4-1 Soil assessment criteria – asbestos

	Health Screening Level (w/w)	
Form of Asbestos	Residential A	Recreational C
Bonded ACM	0.01%	0.02%
FA and AF[a] (friable asbestos)	0.001%	
All forms of asbestos	No visible asbestos for surface soil	

a. The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres.

A tiered approach to risk assessment of asbestos contamination is recommended, including the development of an appropriate Conceptual Site Model (CSM) as presented in **Section 7.5**. A weight of evidence approach is recommended with consideration given to factors such as the distribution of different fill types, the heterogeneity of the contamination and the uncertainty associated with the sampling methodology.

The NEPM states that if the Tier 1 screening levels are not exceeded, and an appropriate level of investigation has been carried out, then no contamination management actions are required except for ensuring the surface soil is free of visual asbestos. Final visual inspection of the assessment and remediated areas should not detect any visible asbestos. Further discussion of validation criteria is presented in Appendix F.

4.2.6 Aesthetics

Assessment of aesthetic issues will be undertaken as outlined in Schedule B(1) of the NEPM (1999) which states that 'there are no specific numeric aesthetic guidelines, however site assessment requires balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity'.

General assessment considerations include:

- That chemically discoloured soils or large quantities of various types of inert refuse, particularly if unsightly, may cause ongoing concern to site users.
- The depth of the materials, including chemical residues, in relation to the final surface of the site.
- The need for, and practicality of, any long-term management of foreign material.

The NEPM notes that in some cases, documentation of the nature and distribution of the foreign material may be sufficient to address concerns relating to potential land use restrictions.

4.3 Waste classification criteria

Materials that may require offsite disposal as part of site remediation will be classified using the six-step process and criteria detailed in *Waste Classification Guidelines – Part 1: Classification of Waste* (NSW EPA 2014).

In accordance with the Waste Classification Guidelines, the applicable classification principles include (but are not limited to) the following:

- "If asbestos waste is mixed with any other class of waste, all the waste must be classified as asbestos waste. For example, asbestos waste mixed with building and demolition waste, must be managed as asbestos waste."
- 'Special waste' is a class of waste that has unique regulatory requirements. The potential environmental impacts of special waste need to be managed to minimise the risk of harm to the environment and human health.
- Special wastes are:
  - Clinical and related waste
  - Asbestos waste
  - Waste tyres

Producers of special waste do not need to make any further assessment of their waste if it falls within the definitions of special wastes except as follows:

- Asbestos waste means any waste that contains asbestos. Chemical classification of soil contaminated with asbestos is still required.

4.4 Surface water and groundwater

Further assessment (investigation or remediation) of surface water and groundwater is not proposed at this stage. However, groundwater investigation levels (GILs) from the NEPM (which are based on the *Australian Water Quality Guidelines* (ANZECC 2000), the *Australian Drinking Water Guidelines* (NHMRC 2011) and the *Guidelines for Managing Risk in Recreational Waters* 2008 (GMRRW)) have been adopted as investigation levels in the context of the framework for risk-based assessment of groundwater contamination i.e. levels above which further assessment is required.

The GILs define acceptable water quality for various contaminants at the point of use and provide frequently used values for drinking water and protection of fresh water ecosystems. Further assessment of groundwater or surface water at the site would only be proposed should unexpected contamination be identified during the redevelopment works.

5. Remediation options review

5.1 Overall objectives and remediation goals

The overall goal of the contamination management or remediation is to cost effectively manage or remediate contamination at the site to manage potential impacts during redevelopment of the site and to prevent exposure during the proposed future use as a health services facility including a hospital.

In order to achieve this overall objective, management or remediation works will be required at the site to address contamination issues identified in Section 2, including unexpected contamination that may be encountered during the site redevelopment. The specific remediation goals are as follows:

- Remediate and validate known areas of contamination (currently limited to PACM and the small stockpile (potentially SP4) at the northern end of Area 2)
- Manage the naturally occurring carbonaceous materials so they do not present a risk to the proposed development
- Manage aesthetic impacts so they do not detract from the proposed development
- Appropriately manage or remediate as required any unexpected finds that may be encountered during the site redevelopment.

5.2 Technical and policy considerations

The key principles for remediation and management of contaminated sites presented in the NEPM (NEPC 2013) indicate that the preferred hierarchy of options for site clean-up and management should include (in descending order):

- On-site treatment of the contamination so that it is destroyed or the associated risk is reduced to an acceptable level.
- Off-site treatment of excavated soil, so that the contamination is destroyed or the associated risk is reduced to an acceptable level, after which soil is returned to the site.

If the above are not practicable,

- Consolidation and isolation of the soil on site by containment with a properly designed barrier.
- Removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material.

or

- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

Other options, which are consistent with the philosophy of contamination management described in the NEPM, could include the following:

- Adopting a less sensitive land use to minimise the need for remedial works, which may include partial remediation.
- Leaving contaminated material in-situ providing there is no immediate danger to the environment or community and the site has appropriate management controls in place.

The NEPM also states the following:

When deciding which option to choose, the sustainability (environmental, economic and social) of each option should be considered, in terms of achieving an appropriate balance between the benefits and effects of undertaking the option.

In cases where no readily available or economically feasible method is available for remediation, it may be possible to adopt appropriate regulatory controls or develop other forms of remediation.

It should be emphasised that the appropriateness of any particular option will vary depending on a range of local factors. Acceptance of any specific option or mix of options in any particular set of circumstances is therefore a matter for the responsible participating jurisdiction.

In relation to asbestos, the NEPM (Schedule B1 section 4.11) notes that remediation options which minimise soil disturbance and therefore public risk are preferred; and management of asbestos in situ is encouraged, which may include covering the contamination with uncontaminated fill or other protective or warning layers. However, Section 4.1 of Schedule B1 notes that this guidance is not applicable to asbestos materials which are wastes such as demolition materials present on the surface of the land. Section 4.3 also notes that if visible asbestos is present and it may be disturbed during work activities, it must be removed.

DEC (2006) states that if remediation is likely to cause a greater adverse effect than leaving the site undisturbed, remediation should not proceed; and in cases where it is not viable to remediate large quantities of soil with low levels of contamination, alternative strategies should be considered or developed.

The Waste Avoidance and Resource Recovery Act 2001 establishes the following hierarchy for the management of resources:

- Avoid unnecessary resource consumption
- Recover resources (including reusing, reprocessing, recycling and recovering energy)
- Disposal

5.3 Evaluation of remediation technologies

Presented below is a brief overview of commonly used remediation technologies, and whether they are applicable to the contaminants identified at the site. This is a “screening level” evaluation, from which relevant technologies have been further examined in Sections 5.4 and 5.5.

Table 5-1 Overview of remediation technologies

Remediation Method	Description	Applicability
Health Risk Assessment (HRA)	A site-specific consideration of the toxicology and exposure to contaminants present and may demonstrate that higher concentrations of contaminants (greater than “investigation levels”) can justifiably remain on the site without presenting an unacceptable health risk.	A site specific HRA is not practical at this time given the future use of specific areas of the site have not been confirmed. Further, the extensive earthworks required at the site provide ample opportunity to remove exposure pathways to identified contamination, without HRA being required.
Management of Exposure	Management of exposure risks can involve: - Precluding access to the Site (secure fencing and signage) to prevent or minimise access to affected areas and reduce the potential for exposure. This method requires a Site Management Plan to ensure the site remains secure and no migration of contamination has occurred. - Preventing exposure to contaminants by placing them in an area where they would not be expected to be subject to disturbance under reasonably foreseeable future land use.	Given the objectives of the remediation work is to allow the Site to be redeveloped, the option of precluding access to the site is not considered to be applicable, although it may be appropriate as an interim management measure. The option of selective placement of contaminated materials may be applicable to areas of the site where future disturbance would not be expected to occur. This management option is discussed further under onsite capping and containment, below.
Vertical Mixing	The technique of mixing contaminated surface soil with cleaner soil found at depth (generally developed for use on broad-acre agricultural land).	Vertical mixing (involving agitation of the soils) is not considered appropriate for asbestos or aesthetic contamination, or for the nature of this site.
Bioremediation	Use of microbial organisms to convert contaminants into harmless products often with the use of artificial stimulation. Often referred to as land farming, bioremediation technology is mainly used to destroy organic contaminants.	This is unlikely to be suitable for this site as TRH contamination is associated with natural carbonaceous materials which are unlikely to degrade in a reasonable time frame.
Chemical Remediation Methods	Vitrification/ Acid Leaching/Thermal Oxidation and Catalytic Chemical Oxidation/ Immobilisation	Not applicable due to the nature of the contaminants, generally low concentrations involved and high costs of establishment.

Remediation Method	Description	Applicability
Soil Washing	A physical process that separates the contaminants and then concentrates them into fractions which have much lesser volumes and can be treated	Not applicable due to the nature of contamination involved and high costs and complexity of soil washing systems.
Physical Separation	Physical separation (such as mechanical screening) to separate types or sizes of material enabling removal or concentration of contaminants.	May be applicable to ACM contamination on site. Not applicable to hydrocarbon contaminated soils. Would not remediate all contamination at the site and would have to be used in conjunction with other methods. May be applicable to anthropogenic wastes (eg. bricks) presenting aesthetic impacts.
Excavation and Disposal	Excavation and offsite disposal to a NSW EPA approved landfill disposal site with appropriate environmental safeguards. The resulting excavation is generally backfilled (if required) using clean, validated fill materials. Disposal of contaminated material is permitted by the NSW EPA subject to the provisions of the POEO Act 1997. NSW EPA 2014 sets out the methodology for assessing and classifying solid wastes to be disposed to landfill.	This method is suitable for some contamination at the site where low volumes are expected or where policy prefers off-site disposal (such as ACM contamination). Principles including sustainability and waste minimisation may prefer other methods particularly where large volumes are involved.
On-site capping and containment	Capping involves the installation of a physical barrier to separate contaminated soil from infiltration and to provide a barrier to minimise human exposure. Containment involves the installation of a physical barrier around the contaminated area to prevent contaminants migrating away for the area. Thus, when used in combination, capping and containment essentially isolates the contaminated soil from the surrounding area. The inclusion of an effective low permeability capping system and appropriate surface water controls/management can be used to result in minimisation of groundwater generated within the cell. Capping and containment generally require long term management to prevent future exposure, in the form of a Site Management Plan.	Capping is a commonly used remedial strategy due to its effectiveness, simplicity and low overall cost. Further, significant excavation will be required for the proposed redevelopment which may be used for conservative management of the TRH and PAH affected soils. As noted in Section 5.2, the NEPM advocates in-situ management of asbestos contaminated soils (with some exceptions), and this may be applicable for large volumes of soil with low levels of occurrence (or potential occurrence) of ACM.

5.4 Recommended remediation/soil management options

As a general principle in redevelopment of the site, HI has committed to using best endeavours to manage contamination on site, where appropriate.

The types of contaminants identified at the Site (primarily TRH, PAH, asbestos-containing materials and aesthetic impacts) cannot readily be destroyed, and treatment methods that reduce contaminant concentrations so that soils can be re-used on site are not considered suitable for the contamination at the site.

Physical removal and disposal of asbestos-containing materials that may be disturbed by the site works is the preferred strategy and consistent with regulatory requirements for PACM. It is understood that CSR has committed to removal of any identified areas of ACM, which will then be cleared by a licenced contractor and validated by an environmental consultant. Hence further remediation of ACM should be limited to “unexpected finds”, if present.

Where small quantities of asbestos are present (or potentially present) in large volumes of soil, considerations of sustainability and waste minimisation may result in on-site containment of such material.

Physical separation and removal of unacceptable material may be appropriate to address aesthetic impacts across the general site area, however it may be more effective to simply use such material for bulk fill (subject to geotechnical requirements or constraints) in areas where it is unlikely to be disturbed.

Capping and containment is considered appropriate as a conservative management option for TRH and PAH impacted soils where contamination will not be subject to exposure under normal foreseeable use of the site (eg. burial at depths greater than 2 m below design structure levels or beneath permanent infrastructure as part of the redevelopment). This would also address the issues of combustibility identified by DP (2015b), as discussed in Section 2.9.

Subject to further assessment of leachability where required (see Section 6.6.5), impermeable capping of material is not considered necessary.

A Long Term Site Management Plan (LTSMP) will be required to record the placement of any contaminated material on site, and provide procedures to be used in the event that it should be disturbed.

The particular methods to be used for each material / source should be agreed with HI and their designers for the development in conjunction with finalisation of design, to account for any particular geotechnical requirements, optimise earthmoving and minimise the potential for future disturbance of contaminated or problematic materials. It is anticipated this will take the form of a “material re-use schedule”, to be prepared as part of final design and consistent with the principles described in this RAP. A CQA plan (as discussed in Sections 6.6 and 9.7) will be required as a basis for verifying and documenting the appropriate implementation of this RAP and final design documentation. These documents (including relevant aspects of the final design, specifications, material re-use schedule and CQA plan) shall be reviewed by the Environmental Consultant and Site Auditor prior to the commencement of remediation to confirm that they are consistent with the principles of this RAP.

The principles below should be followed in the finalisation of the earthworks design and specifications.

5.5 Applicability to particular areas

Remediation / contamination management for most areas of the site is relatively straight-forward, and based on the review above, the following methodologies are considered applicable to the identified areas of contamination. Management of “unexpected finds” will apply to all areas of the site.

- **Area 1** – Removal of ACM impacts associated with illegally dumped materials (if not already undertaken by CSR). Segregation and disposal or management of waste materials presenting aesthetic impacts. Management of TRH impacts (including potential combustibility) associated with carbonaceous materials identified in the noise berm through burial or capping under hardstand.
- **Area 2** – Segregation and disposal or management of waste materials presenting aesthetic impacts and selective hot spot removal of ACM identified at one location (if not already undertaken by CSR). Remediation of TRH and BaP impacts in the north west corner and associated with carbonaceous materials (stockpiles and outcrops) and impacts within SP4 through burial or capping under hardstand.
- **Area 3** – Segregation and disposal or management of waste materials presenting aesthetic impacts. Remediation of TRH and benzene impacts in the large shale stockpile, adjoining fill areas and outcrops through burial at depth or capping under hardstand.
- **Area 4** - Removal of ACM impacts associated with several stockpiles (if not already undertaken by CSR) and segregation and disposal or management of waste materials presenting aesthetic impacts.

Although offsite disposal is low on the remediation hierarchy, this option (where required) is considered to be the most appropriate and practical to be used for ACM and other unacceptable materials (aesthetic impacts) where these cannot be incorporated in fill material and managed on site.

6. Remediation works plan

This section provides a description of the steps and procedures required during redevelopment to protect health, safety and the environment. It is expected that these will be supplemented by technical specifications for the earthworks, and that the Contractor will prepare an appropriate detailed work plan based on the requirements of this RAP and the technical specifications.

The “material re-use schedule” and CQA plan mentioned in Section 5.4 may be prepared as part of final design prior to engaging a Contractor, or may be prepared after contract award, in consultation between the Contractor and design team. It is recommended that the Environmental Consultant and Site Auditor be consulted during the preparation of these documents (i.e. prior to final review), to facilitate appropriate interpretation of the contamination remediation or management requirements.

The roles and responsibilities of the HI Project Manager, Site Auditor, Environmental Consultant and Contractor are outlined in Section 1.6.

6.1 Preliminaries

Prior to commencing remedial works, all relevant licences and approvals must be obtained by the Site owner and/or Contractor from the relevant authorities including the Client (refer to Section 12).

Prior to the establishment at the site, the Contractor is required to prepare a Detailed Work Plan incorporating the following documentation:

- Work Health and Safety Plan (WHSP)
- Environmental Management Plan (EMP)
- Asbestos Management Plan (AMP)
- Emergency Response Procedures

It is a requirement for the various plans to be reviewed and accepted by the nominated responsible parties (HI project manager with input from the Environmental Consultant and the Site Auditor) prior to any remediation works commencing. A separate WHSP will be prepared for environmental consulting works.

It is the responsibility of the Contractor to prepare and/or obtain all appropriate documentation prior to the commencement of the works including plans, programmes, licences and certificates and have undertaken any notifications necessary for the commencement of the work. All such documents must be completed and approved by the relevant consent authority (where required). These documents are anticipated to include, but are not limited to, the following:

- Consent from the relevant approving authority to undertaken the remediation works (if not already covered by the project approvals).
- Insurance Certificates.
- WorkCover Authority notifications.

Following provision and approval of these documents, the Contractor will mobilise all necessary plant, equipment and amenities as required to complete the project in accordance with these requirements.

6.2 Site mobilisation

Management of the site mobilisation process is to be included in the Detailed Work Plan including the following:

- Site access and security - The Contractor will be responsible for ensuring the security of all work areas and all plant and equipment maintained on-site during remediation works. This includes signage, control of site access (authorised personnel and vehicles only) and safety inductions and documentation.
- Plant re-fuelling/maintenance/cleaning - The Contractor will be responsible for designating locations/areas for equipment refuelling, maintenance, and cleaning activities undertaken during the site works and to ensure all vehicles leaving the site are free of any contaminated material. No refuelling or maintenance activities shall be undertaken without specific approval from the HI Project Manager.
- Traffic control - The Contractor will be responsible for ensuring adequate traffic control measures are in place to ensure site safety and take into consideration the entry and egress of vehicles from the main site entrance off Metford Road or other approved access points.
- Environmental controls - The Contractor will be responsible for installing and maintaining environmental controls consistent with their EMP.

6.3 Vegetation clearance

Vegetation clearance will be subject to any requirements of the project approvals and design. In relation to site contamination, particular care shall be taken when clearing any thickly vegetated areas to avoid disturbance and spreading of contaminated materials, particularly PACM. An appropriately trained “spotter” shall supervise all vegetation clearance to ensure these requirements are met. The unexpected finds protocol shall be implemented if any contamination is observed during vegetation clearance.

6.4 Asbestos management

As noted in Section 6.1, the Contractor is required to prepare an AMP as part of their site management documentation. The Contractor’s AMP shall be consistent with the following requirements for remediation or management of asbestos encountered at the site, and meet the requirements of the WHS Regulation (2011) and relevant Codes of Practice.

6.4.1 Initial remediation works – Surface ACM removal

In relation to asbestos, the NEPM (Schedule B1 section 4.11) notes that asbestos materials which are present on the land surface and are included in wastes such as demolition materials, must be removed prior to disturbance during proposed site work activities.

As noted in Section 5.4, it is understood that CSR has committed to removal of any identified areas of ACM, which will then be cleared by a licenced contractor and validated by an environmental consultant.

To confirm whether this has taken place, clearance / validation documentation should be reviewed, and inspection for ACM of the surface materials where ACM was previously identified (GHD 2015) should be completed with hand picking of any observed fragments (as required) by a licenced asbestos removal contractor (if it is more than 10m^2) or competent person in consultation with the Environmental Consultant.

Hand picking procedure

- If ACM is identified/collected during hand picking, the location and weights of asbestos should be recorded.
- Hand picking should consist of at least two passes of the picking area made with 90^0 direction change between each and using a grid pattern. If fragments are partially buried, surface raking of the top 100 mm of soil should be undertaken to disturb the subsurface soils and remove any partially buried fragments.
- ACM should not be further damaged or distributed by the process.
- Percent ACM contamination may be calculated using 1 cm as soil depth for hand picking.
- A final visual inspection should not detect surface ACM.
- The affected areas should be validated to confirm the removal of the ACM by visual and mechanical screening.
- Any asbestos materials found and recovered will be handled in accordance with *How to Safely Remove Asbestos – Code of Practice*, Safe Work Australia 2011 (approved under Section 274 of the Work Health and Safety Act 2011), classified in accordance with the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (NSW EPA 2014), and disposed of offsite to a facility licenced to receive asbestos waste.

Excavation procedure

Should extensive surface or buried ACM be identified during excavation of stockpiles or surface materials, that cannot be feasibly removed by handpicking, these materials may be addressed by management of the ACM impacts through excavation and burial or capping under hardstand as per the procedure detailed in Section 6.5 below.

6.5 Development earthworks

One of the major components of the proposed redevelopment of the site is the bulk excavation and re-use of stockpiled overburden materials and sub surface materials that may contain low impact contamination (aesthetic impacts, ACM and carbonaceous materials). Bulk earthworks will generally include the following steps as outlined in Table 6-1. Error! Reference source not found.

Table 6-1 Bulk earthworks – tasks and responsibilities

Activity	Responsibility
Locate the areas designated for bulk earthworks and assess the area as to the risk of disturbance of identified contamination, in accordance with a “material re-use schedule” (based on GHD 2015).	Contractor and Environmental Consultant
Removal of vegetation as appropriate (eg shrubs) for mulching or as otherwise required by specifications. See Section 6.3.	Contractor
Visual assessment of exposed surface for potential PACM and foreign materials.	Contractor and Environmental consultant
Excavation/movement of site soils (stockpiles, surface and subsurface materials) with visual screening for potentially contaminated material (ACM, aesthetic impacts).	Contractor and environmental consultant
Segregation and stockpiling or direct re-use of different waste streams (as required) based on visual assessment (see Section 6.6 for further details).	Contractor
Characterisation of stockpiled material for management on site (burial or	Contractor /

Activity	Responsibility
capping), or for waste classification/disposal off site in accordance with NSW EPA 2014.	Environmental Consultant
Use of suitable material in designated areas as appropriate for the development ensuring burial at depths greater than 2 m below design structure levels, or capping under proposed hard stand (as per Section 6.6).	Contractor
Transport contaminated material by licensed waste transporter, to an appropriately licensed site for disposal or to an approved recycling facility where appropriate. (Section 6.7)	Contractor
Final design surfaces including topsoiling and revegetation as required.	Contractor

All excavation and materials movement shall be conducted in accordance with the Contractor's Detailed Work Plan and EMP. All excavations undertaken within suspected contaminated stockpiles or areas shall be conducted under supervision of the Environmental Consultant to ensure all contamination is addressed and the objectives of this RAP are fulfilled, while minimising the amount of uncontaminated soil that is disturbed.

The Environmental Consultant shall undertake visual inspection and sampling on completion of the excavations to validate the remediation as required. As a general principle, if materials encountered during the site development are consistent with those characterised by the DSA (GHD 2015), validation sampling is not considered necessary (as conservative management measures will be applied). Validation sampling may be required in the event of unexpected finds or for potentially contaminated materials remaining at the site surface, or if materials are imported to the site. Validation procedures are described in Appendix F, and would be used where necessary to determine the extent of follow-up remediation required.

Excavation procedures shall be documented in the Detailed Work Plan as prepared by the Contractor and should include (but not be limited to):

- Definition of the boundaries of the areas to be disturbed (excavated) and expected depths (including liaison with the environmental consultant where required).
- Methods for excavation and stockpiling including selective excavations should different materials be encountered.
- Designated areas and depths for placing (i.e. for immediate re-use) or stockpiling excavated materials
- Plans for surface run-off protection measures around the immediate area in order to prevent surface waters running into or out of the disturbed areas (also to be included in EMP).
- Backfill and compaction requirements
- Material tracking control covering all stages of the works including excavation, stockpiling and backfilling to include:
  - Minimisation of mixing unless specifically required or approved
  - A register of material movements (source area, material characteristics / description, stockpile identification, the volume of material, the destination (including on-site locations for intermediate movement), the date of any movements, authorisation details)
- Material transport control.

Upon completion of the excavation works the Contractor shall ensure that plant and equipment is cleaned and decontaminated as per Section 8.6. Waste generated during the decontamination works is to be disposed of in accordance with NSW EPA 2014.

6.6 On site re-use of materials –burial at depth or capping

6.6.1 Principles of re-use

The discussion presented below is based on the assumption that HI will opt to re-use the majority of the materials from the contaminated stockpiles, noise berms and shale outcrops preferentially at depth in existing voids, or under permanent structures (roads, car parks) following development of the site. Such containment may also apply to fill materials with aesthetic impacts (bricks, coal chitter) or potentially combustible materials from other areas of the site that are not suitable to remain at the surface or in areas of future sensitive land use.

Based on the Conceptual Development Plan a substantial area of the Site may be used for car parks or roadways. Where necessary to accommodate final design levels, excavation of uncontaminated material from under road or parking areas may be undertaken to allow containment of contaminated materials requiring management. As a detailed design has not been completed to date, final surface areas and depths of potential locations for containment are not confirmed. These shall be established by the design team as part of final design.

As noted in Section 6.1, it is anticipated material excavation and re-use would be detailed in a “material re-use schedule” to be developed by the design team and/or Contractor for approval by the HI project manager with input from the Environmental Consultant and Site Auditor. Key principles for re-use include the following:

- Preference should be given to burial of problematic materials (eg. contamination, potentially combustible or aesthetic impacts) at depths greater than 2 m below design structure levels (including basement footings or subsurface infrastructure invert levels) to minimise the disturbance of such materials during redevelopment of the site. Consideration should also be given to avoiding areas that will require deep piles or other excavation extending more than 2 m below the design levels.
- Problematic materials encountered during later stages of the development could be contained in shallower fill beneath areas of pavement provided these areas are unlikely to be disturbed.
- In-situ native soils (to be excavated for design levels) and stockpiles of ripped sandstone material should be reserved for the upper layers of the development.

6.6.2 Visual screening / segregation

Appropriate identification and segregation of the different material types on site will lower the costs associated with on-site management, and potential off-site disposal during the redevelopment works.

Visual screening can be applied to the large scale treatment (segregation) of a stockpile to detect ACM, foreign inclusions (aesthetic impacts) and potentially combustible materials. With regard to ACM, it is most suitable for minor bonded ACM impact, not for fibre generating materials. The general methodology is described below:

- May be preceded by hand picking of visual ACM impacts if appropriate.
- Excavation works should be supervised by a competent person and any indication of building or demolition wastes, aesthetic impacts (coal chitter, rubbish) or combustible materials noted and selected materials segregated as required.

- Visual inspection and validation sampling (if required) will determine the suitability of the materials for re-use, placement under the required capping area or the requirement for disposal off Site.
- Materials should be segregated into specific stockpiles (or directed to agreed fill areas) according to the material re-use schedule and decision process for re-use or disposal.
- Impacted soils should not be mixed with other soils and impacted materials shall not be used for final surface levels in sensitive areas of the development.
- Final visual inspection of the screened materials should not detect ACM or aesthetic impacts.

Should ACM impacts be identified during the screening steps the following procedure should be followed:

- Soils should be pre-wet and the ongoing screening procedure subject to dust/fibre control and monitoring measures as outlined in the AMP.
- If suspect materials are identified, a detailed inspection should be undertaken with a subsample of the materials spread out over a contrasting surface (black plastic) for inspection for ACM.
- The materials should be segregated into stockpiles for burial at depth, capping on site under hardstand or disposal off site.

The selected methodology shall be described in detail by the Contractor in their Work Plan, and will depend on the frequency of occurrence and the nature of potential ACM finds and other foreign materials in the soil, as well as the physical characteristics of the soil itself. The methodology may need to be varied depending on the effectiveness.

6.6.3 Capping/Containment

Materials that are proposed to be contained on site are not considered to be sufficiently contaminated to warrant a containment wall around the emplacement areas. Also, subject to assessment of leachability (as discussed in Section 6.6.5 below), no impermeable capping is considered necessary. Appropriate capping (as described below) is considered sufficient to minimise potential exposure and (where relevant) the potential for leachate formation and impact to the site environment. “Containment” as used herein therefore refers to placing contaminated materials in a particular area of the site either at depth or capped by hard stand or similar surfacing. Capping and containment will only be used in appropriate areas and with methods complying with DEC 2006 and ANZECC 1999 *Guidelines for the Assessment of On-site Containment of Contaminated Soil*. This includes the following considerations:

- Geotechnical requirements appropriate for the future land use of the areas used for containment shall be met so as to maximise the long-term stability of the capping system and any proposed structures above it (from an engineering perspective) and, where applicable, minimises the potential for leachate formation.
- Containment will not be undertaken in any areas where structures would subsequently be built on the containment area that may result in a risk of harm to public health or the environment.
- Notification and enforcement mechanisms will be used to ensure that the containment areas are protected from any unintentional or uncontrolled disturbance that could breach the integrity of the physical barrier, such as placing a covenant on the property title and a notation on the s.149 certificate. The containment areas will be subject to a long-term site management plan as discussed in Section 6.11.

The method of capping and containment works will be undertaken as follows:

- Designated containment or capping areas/voids are to be excavated to the required depth (as per detailed design plans and material re-use schedule to be developed as part of final design).
- Placement of segregated materials to be contained/capped within the designated areas, minimising disturbance to surrounding areas as far as reasonably practicable, in accordance with geotechnical requirements and the principles outlined in Section 6.6.1.
- Placement of uncontaminated capping material (minimum 0.5 m thick, or greater in areas where deep-rooted landscaping or underground services are proposed) to physically separate sensitive receptors from the contained materials. Where capping thickness is less than 2 m (based on final design surface levels), a high visibility marker layer shall be placed over the contaminated material. Concrete slabs or surface paving (asphalt or concrete) over a gravel base may provide an equivalent barrier .
- To minimise the potential for surface water infiltration, the final design and location of the containment areas will need to be either located away from surface water sources or, the redevelopment should be engineered to divert any up gradient surface water sources away from the containment area. Further, the finished levels of the capping layer are to be designed to encourage drainage of surface water away from the containment area. Erosion of the cap surface layer will also require control (potentially through revegetation or sealing of the finished surface).

Final design and specification of the containment and/or capping will be provided to the site auditor for review once the requirement for containment is confirmed and the volumes of materials and nominated areas for containment are known. The design and specification shall comply with the minimum requirements of this RAP.

Both placement of the fill materials within the containment area and the construction of the final capping layer must be supervised by a competent person to ensure construction in accordance with any design specifications and geotechnical suitability for the final design.

In areas subject to management of contamination, any future services shall be installed above the contained materials designated by the marker layer or if installation is required at greater depth, services shall be installed in trenches lined with marker layer and in clean backfill material to facilitate any future repairs and maintenance. Excavation and preparation of trenches shall be subject to material handing requirements for contaminated soil.

Verification of capping construction (where utilised) will include inspection and testing of material characteristics and placement as required by the design and specifications, and validation of the final cap thickness in accordance with specifications by way of a survey prior to cap installation and following completion. Following placement of the cap, a detailed inspection of the cap profile, drainage systems and overall site will be undertaken.

A CQA plan should be prepared as part of final design and specifications, to detail the requirements for verification of capping construction and to provide a basis for verifying and documenting the appropriate implementation of this RAP and final design documentation.

6.6.4 Potentially combustible materials

As noted in Section 2.9, potentially combustible materials (generally carbonaceous fill, stockpiles or outcroppings) have been identified in areas of the site.

DP (2015b) stated that provided that the material is deemed suitable for re-use from a contamination viewpoint, it may be suitable as bulk filling provided the recommendations outlined below are followed.

- Capping – placement and compaction of a non-combustible layer of at least 0.5 m thickness over the identified potentially combustible materials;
- Removal of coal materials – excavation of accessible areas of concentrated combustible materials for disposal and/or reuse as part of blending operations;
- Reshaping works – earthworks in areas of potential combustible materials to reduce slope angles and compact loose materials to minimise the potential for oxygen ingress and subsequent combustion;
- Blending – mixing of highly combustible material with non-combustible material to reduce the overall combustible percentage of the material and minimise the risk of combustion. Blending may be with underlying soil/rock (e.g. ripping of near-surface coal with underlying soil/rock) or mixing with imported materials.
- DP also recommended that a management plan is prepared for future management of combustion risk at the sites.

DP 2015b states that where carbonaceous materials are to be used as controlled fill, the filling should be blended with non-carbonaceous materials and placed in horizontal layers not exceeding 300 mm loose thickness and compacted to a dry density ratio of at least 100% Standard.

6.6.5 Potential leachability

Where contaminated material or fill material not originating from the site (i.e. with potential for naturally occurring compounds not characteristic of the site materials) is proposed to be retained on site, the potential leachability should be assessed by means of Australian Standard Leaching Procedure (ASLP) or equivalent testing, particularly if the material is to be placed below existing or future groundwater levels (i.e. groundwater levels may rise in areas where the site is filled), or in areas where infiltration of surface water or precipitation is likely to occur.

A program for assessment of leachability shall be developed as part of final design and shall be incorporated in the material re-use schedule.

6.7 Transport of material

Transportation of material shall be undertaken in accordance with the Detailed Work Plan and EMP.

- All material movements, including on-site movements, shall be recorded on a material tracking plan documenting material source, type, description, volume, destination, reference to testing results, approval for movement and date(s) of movement. A register setting out this information shall be established as part of the CQA plan.
- Wastes shall only be removed off-site after the material has been classified and written approval has been received for the disposal of the contaminated soil at the nominated treatment or disposal site, or evidence of appropriate recycling (in accordance with regulatory requirements and relevant codes of practice) has been provided.
- All asbestos debris and contaminated PPE should be doubled bagged prior to transportation to an appropriately licensed landfill that can accept asbestos waste. Management of asbestos waste is to be undertaken in accordance with Cl 42 of the POEO (Waste) Regulation 2005.
- Waste tracking shall be undertaken in accordance with EPA requirements (specifically Cl 49 of the POEO (Waste) Regulation 2005) and include evidence of instructions, load registers/records (source, classification, volume, date and time, vehicle details etc), weigh bridge dockets.

- Any vehicles used to transport contaminated materials from the site shall meet NSW OEH licensing requirements for the waste transported.
- All trucks carrying contaminated materials off-site shall have the load covered, the exterior of the vehicle, including wheels, thoroughly cleaned down by the Contractor after it has received its load and prior to the vehicle leaving the site. Only vehicles which have clean exterior bodywork and which will not pollute the off-site transportation corridors shall be permitted to leave the site.

6.8 Site reinstatement

Following the completion of any excavation works, the Contractor shall reinstate the site. Reinstatement should be undertaken by re-contouring the surface to remove any trip hazards, and/or backfilling with suitable site materials and/or imported fill of suitable composition to address the final redevelopment design specifications. Fill of suitable composition shall meet geotechnical and other material property requirements for the area of use, not present hazards to future development from pH, electrical conductivity (EC) or contamination, and should also be compatible with the existing soil characteristics for site drainage purposes.

Compaction requirements will be dependent on final redevelopment design, dimensions of excavations, and the type of soil used in each location. The compaction method proposed for the area must be approved by the HI Project Manager prior to commencing works. *Australian Standard AS 3798-2007 Guidelines on earthworks for commercial and residential developments* should be used as a guideline document for compaction.

The area shall be revegetated or otherwise reinstated to a stable condition as directed by the HI Project Manager.

6.9 Imported fill materials

It is expected that final design will aim to balance cut and fill volumes on the site, and that importation of significant volumes of fill material will not be required, except for construction materials for which specific characteristics are required (eg. road base, structural fill, drainage gravels, landscaping materials etc).

Any imported fill must be Virgin Excavated Natural Material (VENM) or material subject to a Resource Recovery Order that is permitted to be used as a fill material under the conditions of the associated Resource Recovery Exemption, in accordance with the provisions of the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment (Waste) Regulation 2014*.

Any imported construction or landscaping materials must comply with the relevant Australian Standards for that material.

Where there is any question of the suitability of the material from an environmental or health-risk perspective, the Contractor shall advise HI of the material characteristics prior to importation to the site, for assessment by the Environmental Consultant.

All material imported to the site shall be appropriately validated in accordance with the procedures described in Appendix F.

6.10 Interim site management

Management of the site is required between the date of this RAP and commencement of redevelopment activities, to minimise the potential for additional contamination to occur from activities such as illegal dumping, or for changes to site characteristics to occur from on-site remediation activities in other areas of the CSR property that may affect the site.

It is recommended that HI implement a site security program to ensure a secure fence is maintained around the site, that access to the site from within the CSR property is limited to activities approved by HI and that all activities undertaken on the site are documented.

Should illegal dumping or other incidents occur, and assessment should be made as to whether contamination can be adequately managed on site until the commencement of redevelopment, or whether immediate remediation is required to prevent the spread of contamination. The relevant procedures outlined in this RAP should be followed if any remediation is required.

6.11 Long term site management

A Long Term Site Management Plan (LTSMP) will be required to record the placement of any contaminated material on site, and provide procedures to be used in the event that it should be disturbed. The LTSMP will also address any combustion risk management requirements remaining at the site.

The LTSMP would include measures to prevent exposure under normal site use, and specific procedures would need to be developed for any works which would result in potential exposure.

The LTSMP is not likely to require any “active” management measures because contamination will only be left in locations that are not subject to exposure (eg. at depths greater than 2 m below design structure levels or under roads/car parks), but is likely to be a simple “awareness” plan to document the locations, depths and types of contaminated material in case structures that prevent exposure to the contamination are removed in the future, or future development or maintenance works disturb the material.

As per DEC 2006 the LTSMP will succinctly describe the nature and location of contamination remaining on-site and state what the objectives of the plan are, how contaminants will be managed, who will be responsible for the plan’s implementation and over what time frame actions specified in the plan will take place.

As implementation of the LTSMP would involve no “active” requirements until such time as site surfaces are disturbed or site structures are removed, enforcement could be linked to the planning process, and the LTSMP would be registered as a covenant on the title and/or a notation on the planning certificate, subject to discussions with HI and the Auditor.

7. Remediation contingency plan

The site has been investigated for contamination as detailed in previous investigations. However, a degree of uncertainty is inherent in any site contamination investigation and there is a potential for undetected contaminated soils or wastes to be identified in other areas of the Site. In particular, there is a potential for previously unidentified contamination (ACM) to be present at depth in stockpiles, other areas of illegal dumping not yet identified, or concealed beneath site vegetation.

Table 7-1 outlines some of the unexpected situations that may arise during the site works. The unexpected finds protocol and emergency response plans described in Sections 7.1 and 7.2 would apply in the event of any such issues arising.

Table 7-1 Contingency procedures

Issue	Response
A greater volume of soil contamination may be encountered than is presently estimated, or other types of contamination may be encountered.	The presence of previously unidentified types of contaminants may be identified during remedial works by observation of any unusual physical/sensory characteristics of the impacted soil. Indications of potential contamination may include: —Stained or discoloured fill, soils or seepage water. —Odorous fill, soils or seepage waters. —Construction/demolition wastes such as concrete, bricks, timber, tiles, asbestos sheeting, fragments and pipes. —General rubbish such as plastic, glass, packaging. —Imported materials such as ash or slag or coal chitter. If previously unidentified types of contaminants are detected, then validation may be required and validation criteria may have to be revised to incorporate those contaminants. In the event that significant additional contaminants or volumes of contamination are identified work would cease in the area of concern. An assessment of the impact of the additional contaminants would be undertaken by the Environmental Consultant. Any potential contaminated material in addition to the type already identified will be treated in a method considered suitable for the type of contaminant. Additional testing would be undertaken to determine requirements in this respect. EPA requirements for treatment and disposal would be met in accordance with NSW EPA 2014.
Identification of Asbestos Containing Materials (ACM)	In the event that further ACM is identified during remediation works, and the nominated means of removing ACM from soil are not considered to be sufficient to remove the ACM then a surface scrape or excavation of the impacted area may be required, and the material would be disposed offsite in accordance with NSW 2014. This shall only be carried out at the direction of the HI Project Manager and Environmental Consultant, and in accordance with the AMP and unexpected finds protocol. Buried ACM shall be managed in accordance with relevant codes of practice and regulatory requirements.
Unacceptable Environmental Impacts as a result of remediation activities	The RAP has considered the potential environmental impact of side effects of the works such as noise, odour, dust and surface runoff. However, in the event that unacceptable levels of such side effects are detected at the site boundaries during remedial works, the Contractor shall cease work and the Environmental Consultant will

Issue	Response
	assess the situation and direct corrective action, in accordance with the EMP prepared for the remediation works and current EPA regulations and requirements, and in consultation with the HI Project Manager.

7.1 Unexpected finds protocol

A contingency plan incorporating an “Unexpected Finds Protocol” (UFP) to be followed in the event of unexpected situations shall be prepared by the Contractor and form part of the Detailed Work Plan. The Contractor will be required to follow the contingency plan if unexpected situations are encountered.

A preliminary unexpected finds protocol (UFP) has been developed for the Site and is included in Appendix E. The UFP will be integrated with the site specific emergency response plan (ERP) as detailed in Section 7.1 below, however, the ERP would take precedence over the UFP should any unexpected contamination or materials be identified that present an immediate hazard.

It is understood that HI is developing a Contamination Finds Protocol as part of commercial negotiations with CSR. This protocol should be also taken into account in implementation of this RAP.

7.2 Emergency response plan - environmental protection and pollution control

The Contractor shall prepare a Site Specific Emergency Response Plan if unexpected situations are encountered. The following outlines some of the unexpected situations that may arise:

- Spills or leaks.
- Adverse weather conditions.
- Dust, noise, odour levels measured at site boundary may exceed acceptable levels.
- Surface runoff may leave the site.

The Contractor will have available measures, equipment and materials to counter these contingencies, and should ensure all staff are aware of and have had training in appropriate measures.

8. Protection of environment and community

Significant site levelling and earth movement at the site is required to enable development. A major part of the site management will involve the installation and maintenance of environmental protection and pollution control measures. The measures to be implemented are outlined within this section of the RAP. For the purposes of this RAP, these measures are specific to “remediation works”, including movement of potentially contaminated materials, but should also be applied to all development works undertaken at the site, and the Contractors’ safety and environmental management documentation should be developed on that basis.

These measures are designed to achieve the following objectives:

- Protection of the surrounding environment during all phases of remediation works.
- Protection of the local community during all phases of the remediation works.
- The containment of all contaminated and potentially contaminated materials (soils, run-off etc) to the site.

As per Section 6.1, prior to commencing works, the Contractor must possess plans, programmes, licences, certificates and other documents necessary for the commencement of the work, addressing as a minimum the requirements of this RAP. These documents shall be subject to review by the HI Project Manager and the Environmental Consultant.

The remedial program should be undertaken with due regard to legislative requirements and any relevant environment planning instruments that apply to the site.

8.1 Interim controls

Prior to the commencement of site remediation works, the following interim controls should be put in place:

- The Contractor is responsible for the construction of permanent fences around the subject area meeting appropriate specifications to prevent unauthorised entry.
- The Contractor is responsible for the construction of silt and sediment controls around the remediation site, meeting appropriate specifications to prevent erosion and runoff.

8.2 Hours of operation

Unless otherwise permitted by the project approvals, all remediation work, including transport, shall be conducted within the following hours:

- Monday to Friday: 7 am – 6 pm
- Saturday: 8 am – 1 pm

The above meets the requirements of Maitland City Council. No work will be undertaken on Sundays or Public Holidays.

8.3 Contact details during remediation

During remediation works, representatives and on-site supervisors from the Contractor will be available to be contacted at all times. The Contractor’s EMP should detail the incident reporting procedure for reporting environmental incidents during the project.

Additionally, the Site Health & Safety and Environmental Management plans as prepared by the Contractor will detail contact numbers for key project contacts once confirmed, emergency services and utility authorities.

8.4 Heritage and ecology issues

The subject site is highly disturbed. GHD understand that there are no known heritage or ecological constraints to the redevelopment of the site.

8.5 Containing contaminated material

It shall be the responsibility of the Contractor to ensure all potentially contaminated materials are contained on-site, within the confines of the designated work areas. This will be achieved by the control of potential pathways capable of moving contaminated material off-site including surface water runoff, erosion/sediment transport, vehicle/plant movements and dust generation. Specific controls for the site works shall be provided in the Detailed Work Plan and the EMP prepared by the Contractor, as summarised in the following sections.

8.5.1 Soil and water management

All remediation works will be undertaken in accordance with an EMP that will provide the specific details of the soil and water management measures. It is expected that a detailed soil and water management plan will be required by consent conditions for the proposed development. The Contractor shall be responsible for implementation and maintenance of soil and water management measures throughout the remediation works. A summary of relevant measures is presented below:

- Surface runoff control – may include diversion drains, silt fences, sumps and pumping systems to prevent runoff entering or leaving excavation areas and to prevent runoff/suspended solids entering or leaving stockpile areas.
- Stockpiles – are not to be placed on footpaths or roads and shall be placed away from drainage lines, gutters or stormwater pits or inlets. Stockpiles likely to generate dust or odours shall be covered and stockpiles of contaminated soil shall be stored in a secure area. Preference will be given to storing segregated contaminated material in skip bins prior to disposal, where volumes are small enough for this to be feasible. This particularly applies to segregated foreign materials or ACM.
- Vehicle access - Movement of excavation equipment and trucks to and from the site will be strictly controlled, restricted to a minimum and will only take place during the designated working hours. Controls must be in place to prevent any material being tracked onto offsite roads including wheel washing and sediment barriers. Soil, earth, mud and other similar materials must be removed from the roadway preferably by dry methods (sweeping, shovelling)
- Excavation pump-out - If ponding occurs and it is not feasible for it to be re-used onsite (dust suppression, irrigated), or if time constraints restrict leaving water to evaporate or infiltrate, then offsite disposal will be required. Pump-out and transportation of ponded water within excavations for appropriate treatment/disposal may be required. Disposal (if required) should be undertaken by a liquid waste transporter. It is noted that discharge to stormwater would require consultation with HI, NSW EPA and local Council, if considered. No surface runoff and/or water from excavations/pits/trenches from the working area of the site is permitted to be discharged to the surrounding environment, except as may be required for dust suppression with the express approval of the Project Manager and Environmental Consultant.

- Subject to approval from HI and compliance with relevant consent conditions and regulatory requirements, sediment dams may be constructed and/or existing voids and ponds on the site or adjoining areas of the overall development area may be utilised for detention of stormwater runoff. Details shall be prepared and approved as part of the detailed soil and water management plan, including design flows, sampling and discharge requirements.
- Landscaping - Due care shall be taken to protect any existing vegetation unless removal is required to undertake the remedial works. Any vegetation designated for protection shall be fenced to prevent disturbance during the works.

8.5.2 Noise

It shall be the responsibility of the Contractor to minimise noise generated from the remediation operations in accordance with NSW EPA and local council standards. Noise controls will be specified in the Detailed Work Plan and EMP.

The remediation works shall comply with the NSW Department if Environment and Climate Change (DECC) *Interim Construction Noise Guideline,* July 2009 (ICNG).

8.5.3 Vibration

The use of any plant and/or machinery shall not cause vibrations that can be felt or are capable of being measured at any off-site premises.

8.5.4 Air quality

Dust and particulate control

Dust emissions shall be confined within the site boundary. Dust control procedures may be employed to comply with this requirement including erection of perimeter dust screens, covering of stockpiles, dust suppression (water) and covering of truck loads. Dust control measures shall be specified in the Contractors' Detailed Work Plan and EMP.

Odour control

It is noted that based on the nature of the contamination identified on the site odours are unlikely, however no odours should be detectable at any boundary of the property relying purely on a sense of smell. Dust control measures shall be specified in the Detailed Work Plan and EMP. Controls may include covering stockpiles, use of fine mist sprays, odour mitigating agents and minimising exhaust emissions.

Air quality monitoring

Consideration should be given to air quality monitoring during bulk earth works in accordance with the NSW Department of Environment and Conservation (DEC) *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (2005).

Airborne fibre monitoring for asbestos should be conducted in accordance with the site AMP and NSW Work Safe Code of Practice How to Safely Remove Asbestos and the WHS legislation (NSW) during disturbance of materials potentially contaminated with asbestos, where emission of fibres is likely to occur or as otherwise required by the WHS Regulation (2011) or relevant Codes of Practice. The monitoring should be conducted in accordance with NOHSC Guidance Note on the Membrane Filter Method for Estimating Method Airborne Asbestos Fibres 2nd Edition [NOHSC:3003 (2005)]. Asbestos air monitoring requirements and action levels will be specified in the AMP and HESP.

8.6 Traffic movements and management

Management of traffic movements will form part of the Detailed Work Plan as provided by the Contractor.

9. Data quality objectives

The Data Quality Objective (DQO) process will be applied to the bulk earth works and validation sampling (as and if required) as described below, to ensure that data collection activities are appropriate and achieve the stated objectives.

A process for establishing data quality objectives for an investigation site has been defined by Australian Standard AS4482.1 (1997) Guide to the Sampling and Investigation of Potentially Contaminated Soil - Parts 1 and 2 and DEC 2006. The DQO process involves seven steps as follows:

- Step 1: State the problem.
- Step 2: Identify the decision.
- Step 3: Identify inputs to the decision.
- Step 4: Define the study boundaries.
- Step 5: Develop a decision rule.
- Step 6: Specify limits on decision errors.
- Step 7: Optimise the design for obtaining data.

The DQO steps defined above have been addressed as follows.

9.1 Step 1: The "Problem"

Historically the Site has been used for quarrying, storage of stockpiles and illegal dumping. The Site is no longer operational and is being considered for redevelopment as a health facility (including a hospital).

Contamination has been identified at the site that may adversely impact the site's suitability for various uses and/or may have adverse impacts upon environmental receptors (eg. soil and groundwater). Sources of contamination at the Site have been identified to include:

- Filling at various locations across the Site containing demolition wastes and ACM.
- Naturally occurring carbonaceous soils and shale oils (source of TRH and PAH contamination).
- Illegal dumping on site (general rubbish and PACM).

In its current state the Site is not suitable for the proposed development without management of ACM and contaminated soils.

9.2 Step 2: Identification of the decision(s)

The decisions are those required to document the contamination management and remediation programs, procedures and standards, which will be followed during the course of the project, to ensure the successful management or remediation of contamination at the site and consequently the protection of the environment and human health.

9.3 Step 3: Inputs to the decision

Data input to the decision making process includes:

- Information gained via the review of previous investigations (desk based studies).
- Quantitative data gained via intrusive soil, surface water and groundwater sampling and analytical works (GHD 2015 DSI).
- Current assessment criteria as discussed in Section 4 and presented in Appendix D.
- Consideration of future land use option as discussed in Section 1.
- Monitoring the Contractor's work and the Contractor's implementation of the CQA plan.
- Review of relevant documentation to be provided by the Contractor.
- Observations and analyses to be undertaken during the site development earthworks.

9.4 Step 4: Boundaries of the study

The lateral boundaries of the study area are the boundaries of the Stage 1 area, as illustrated in Figure 1 in Appendix A.

The vertical boundaries of the study area are the vertical extent of proposed earthworks (to be developed as part of final design), and contamination identified in site materials including:

- Area 1 – Fill materials impacts up to 2.8 m deep. TRH impacts in stockpiles up to 2.0 m deep.
- Area 2 – Fill materials in large stockpiles and pushed up materials were recorded to a depth of up to 6.0 m. TRH and BaP impacts in disturbed carbonaceous materials to 0.7 m deep.
- Area 3 - Fill materials were recorded to a depth of 3.0 m deep. TRH and benzene impacts at the base of a carbonaceous materials stockpile at 2.5 m deep.
- Area 4 - Fill was recorded to a depth of 2.8 m.

9.5 Step 5: Site decision rule

Review of previous site investigations has been used to identify the main contaminants of concern and areas requiring remediation or management prior to site redevelopment.

Although specific validation sampling and analysis is not proposed (except for imported fill), it may be required should unexpected contamination be identified during site works. Concentrations of contaminants for validation (where required) will be compared with the criteria discussed in Section 4 and presented in Appendix D, giving consideration to the redevelopment land uses relevant to the particular areas of the site, to assess the success of the remediation and/or screening processes and/or to assess waste disposal requirements.

9.6 Step 6: Specify limits on decision errors

The guidelines as listed in Section 3 will be used to assess the contamination status of the soils within the subject areas selected for this assessment. DQIs as described in Section 9.8 will be used to evaluate the acceptability of the data.

Where quantitative data is used as a basis for decisions, data will be evaluated on a statistical basis as described in the NEPM (NEPC 2013), to a 95% confidence level.

9.7 Step 7: Optimising the design for obtaining data

As detailed above, no specific validation sampling and analysis has been proposed for the bulk earthworks, except for imported fill (if required). If required, validation sampling will be undertaken as per the Validation Methodology and Quality Assurance (QA) procedures presented in Appendix F.

A CQA program will be developed as part of final design and specifications, which will include appropriate inspection and test plans and documentation requirements including material tracking to verify that site works are undertaken in accordance with this RAP. The Contractor will be responsible for implementing the CQA plan, which will be monitored and reviewed by the Environmental Consultant. Where necessary to verify appropriate implementation of the CQA plan, the Environmental Consultant will undertake independent inspections and/or testing as required.

9.8 Data quality indicators

The following Data Quality Indicators (DQIs) have been selected to ensure that the data is of a quality from which to draw conclusions:

- **Data representativeness** - expresses the degree which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples in an appropriate pattern across the Site, and by using an adequate number of sample locations to characterise the Site. Consistent and repeatable sampling techniques and methods are utilised throughout the sampling. These principles will also be applied to visual observations during the site works.
- **Completeness** - defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study. If there is insufficient valid data, then additional data are required to be collected. Completeness will also be applied to visual observations and inspection records undertaken during implementation and review of the CQA plan.
- **Comparability** - is a qualitative parameter expressing the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples and ensuring analysing laboratories use consistent analysis techniques and reporting methods. In relation to qualitative observations, comparability will be maintained by using appropriately experienced and qualified environmental staff to undertake inspections, and comparison of observations with conditions documented in the DSI report (GHD 2015).
- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the data is assessed by calculating the Relative Percent Difference (RPD) between duplicate sample pairs.

$$RPD(\%) = \frac{|C_o - C_d|}{C_o + C_d} \times 200$$

Where Co = Analyte concentration of the original sample

Cd = Analyte concentration of the duplicate sample

The adopted the nominal acceptance criteria of 30% RPD for inorganics and 50% RPD for organics; however it is noted that this will not always be achieved, particularly in heterogeneous soil or fill materials, or at low analyte concentrations (concentrations less

than 10 times the laboratory PQL will not be assessed against the acceptance criteria). Precision criteria will only apply to analytical data.

- **Accuracy** - measures the bias in a measurement system. Accuracy can be undermined by such factors as field contamination of samples, poor preservation of samples, poor sample preparation techniques and poor selection of analysis techniques by the analysing laboratory. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes, laboratory blanks and analyses against reference standards. The nominal “acceptance limits” on laboratory control samples are defined as follows:

  1. * Laboratory spikes – 70-130 % for metals/inorganics, 60-140 % for organics.
  2. * Laboratory duplicates - <30 % for metals/inorganics, <50 % for organics.
  3. * Laboratory blanks - <practical quantitation limit.

  Accuracy of field works is assessed by examining the level of contamination detected in field and equipment blanks. Blanks should return concentrations of all organic analytes as being less than the practical quantitation limit of the testing laboratory.

  The individual testing laboratories will conduct an assessment of the laboratory QC program, internally; however the results will also be independently reviewed and assessed by the Environmental Consultant.

  Accuracy criteria will only apply to analytical data.

10. Health and safety

10.1 Workplace health and safety

Workplace Health and Safety (WH&S) is a necessity on all remediation projects to ensure the health and safety of all personnel working/visiting the site. Therefore work shall be carried out in accordance with a site-specific Work Health and Safety Plan (WH&S Plan). The Contractor shall prepare a site specific WH&S Plan for the remediation works, addressing as a minimum the requirements of this RAP, and shall appoint a Site Safety Officer for the duration of the works. .

It is the responsibility of the Contractor to take all necessary practicable actions to safeguard the safety and health of all employees and subcontractors while they are on the site. The aim of the WH&S Plan shall be to provide and maintain safety standards and practices, which offer the highest practical degree of personal protection, based on current knowledge.

All work undertaken shall be performed in accordance with the provisions of the NSW Occupational Health and Safety Act (2000), OH&S Regulation (2001), Occupational Health and Safety (Safety Standards) Regulation 1994, Occupational Health and Safety (Commonwealth Employment) Act 1991, Occupational Health and Safety Code of Practice 2008, NOHSC 1016 (2005) National Standard for Construction Work, and any other relevant regulations or directions issued by regulatory authorities.

The site-specific WH&S Plan shall cover, but not be limited to the following aspects:

- Induction of personnel
- Amenities
- Hazard locations and identification, including:
  - Asbestos
  - Biological
  - Construction contractors and workplace visitors
  - Confined spaces (if required)
  - Dangerous goods
  - Dust
  - Driving and Travel
  - Excavations
  - First aid
  - Hazardous substances
  - Lead
  - Fitness for work
  - Manual handling
  - Noise
  - Occupational hygiene, health surveillance and housekeeping
  - Personal protective equipment (PPE)
  - Slips, trips and falling objects
  - Traffic management (vehicular or pedestrian)
  - Vehicles and mobile plant
  - Working at heights (if required)
- Description of exposure pathways and personnel protection requirements

- Location of all underground/aboveground services
- Work practice procedures, within the designated contaminated zones
- Monitoring protocols to identify a potentially hazardous practice
- Training and licensing
- Emergency response information and procedures
- Incident reporting

A number of exposure pathways exist, which could potentially result in on-site workers/visitors to the site or surrounding residences being exposed to the contamination. These potential exposure pathways include:

- Inhalation of contaminants (including asbestos fibres) in the form of dust or vapours
- Ingestion of contaminated soil
- Dermal absorption of contaminants through skin contact

The Site Safety Officer shall ensure that these and any other potential exposure pathways are controlled.

10.2 Community health and safety

To ensure the protection of the local community, the Contractor shall control the exposure pathways identified in this section.

Control mechanisms will include the following:

- Site security measures to control direct contact with the contamination
- Dust suppression measures to control inhalation exposure
- Cleaning and tarping trucks to control direct contact from migration of contaminated soils

These measures are described in Section 8 - Protection of the Environment and Community, and shall be documented in detail in the Contractor's EMP.

11. Community consultation

Any Community Consultation or consultation with other stakeholders will be conducted by the HI Project Manager or nominated representative.

Any enquires made by members of the public to worker on site during remediation should be directed to a HI representative.

12. Regulatory requirements

12.1 Preparation of the RAP

This RAP has been prepared with consideration of relevant guidelines and policy, as listed in Section 3. Brief discussions of particularly relevant aspects of these guidelines, Acts and regulations are provided in the following sections.

The Contractor shall be responsible for ensuring the remediation works are carried out in accordance with regulatory requirements such as those arising under the EPBC Act 1999 and the POEO Act 1997 as detailed in Section 5.3.

12.2 Remediation notification or consent

SEPP55 introduces state wide planning controls for the remediation of contaminated land. Under the provisions of SEPP55, "*land must not be developed if it is unsuitable for a proposed use owing to contamination and must be remediated prior to development*".

Under the requirements of the SEPP55, remediation is to be classified as either:

- Category 1– remediation work for which development consent is required; or
- Category 2 – remediation work not requiring development consent.

Clause 9 of SEPP 55 defines a category 1 remediation work as a remediation work to which clause 14 (b) does not apply, and that is:

(a) designated development, or

(b) carried out or to be carried out on land declared to be a critical habitat, or

(c) likely to have a significant effect on a critical habitat or a threatened species, population or ecological community, or

(d) development for which another State environmental planning policy or a regional environmental plan requires development consent, or

(e) carried out or to be carried out in an area or zone to which any classifications to the following effect apply under an environmental planning instrument:

- *(i) coastal protection,*
- *(ii) conservation or heritage conservation,*
- *(iii) habitat area, habitat protection area, habitat or wildlife corridor,*
- *(iv) environment protection,*
- *(v) escarpment, escarpment protection or escarpment preservation,*
- *(vi) floodway,*
- *(vii) littoral rainforest,*
- *(viii) nature reserve,*
- *(ix) scenic area or scenic protection,*
- *(x) wetland, or*

(f) carried out or to be carried out on any land in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Western Lands Commissioner).

GHD has not carried out a detailed planning assessment, however as far as the "remediation work" is concerned, to the best of our knowledge none of the above apply to the site. On this basis the remediation work is considered to be Category 2.

GHD considers the remediation work is ancillary to the proposed development of the site for a health services facility. On this basis clause 15 (1) is considered applicable, which states in relation to category 2 remediation:

> *(1) A remediation work that would of itself be a category 2 remediation work but which is ancillary to designated development that requires development consent may, as an applicant chooses:*
>
> *(a) be made part of the subject of the development application for the designated development instead of being made the subject of a separate development application, or*
>
> *(b) be treated as a category 2 remediation work.*

As the proposed redevelopment works will require development consent with associated conditions, it is considered unlikely that any separate approvals would be required for the remediation/soil management. It is understood that HI will determine (in consultation with their planners and the approving authority) how they wish to treat the remediation work in relation to clause 15 of SEPP 55.

If the remediation work is treated as category 2 remediation work, notice must be given to Maitland City Council at least 30 days prior to the commencement of the work, in accordance with clause 16 of SEPP 55. Regardless of category, a notice of completion of the remediation work must be given to Council within 30 days after completion of the work, in accordance with clauses 17 and 18 of SEPP 55.

12.3 Maitland City Council requirements

MCC does not have a specific policy related to contaminated land. The requirements of SEPP55 would apply in relation to notification of remediation works.

It is considered that MCC will address any particular concerns relating to site contamination as part of the development approval process.

12.4 Asbestos removal regulations and code of practice

HI has a legal obligation under the Work Health and Safety (National Uniform Legislation) Act 2011, (the WHS Act) and prescribed in the Work Health and Safety (National Uniform Legislation) Regulations 2012, to ensure the work health and safety of its workers, subcontractors and visitors.

In 2003 the National Occupational Health and Safety Commission (NOHSC), declared a prohibition on all uses of asbestos. However, the prohibition does not extend to the removal of asbestos containing materials and these must be appropriately managed to ensure that the risks of exposure to airborne asbestos are minimised.

Primary legislative requirements detailing BSC's obligations regarding the presence of asbestos on the Site are listed as follows:

- Work Health and Safety Act 2011(NSW)
- Work Health and Safety Regulations 2011 (NSW)
- How to Manage and Control Asbestos in the Workplace, 2011. Safe Work Australia (approved under Section 274 of the Work Health and Safety Act 2011 NSW)

- How to Safely Remove Asbestos, 2011. Safe Work Australia (approved under Section 274 of the Work Health and Safety Act 2011)

It is recommended that the remediation of the asbestos impacted materials on site be undertaken by an asbestos removalist contractor with a current friable asbestos removal licence (Class A) in case friable asbestos is identified.

WorkCover NSW must be notified five days before licensed asbestos removal work is commenced.

12.5 Protection of the Environment Operations Act 1997

The proposed remediation/management activities are not required to be licensed under the Protection of the Environment Operation Act 1997 since the works do not involve: treatment otherwise than by incineration and store more than 30,000 cubic metres of contaminated soil originating exclusively from the site, or disturb more than an aggregate area of 3 hectares of contaminated soil originating exclusively from the site.

The provisions of the POEO Act and Regulations will apply to offsite transport and disposal of soils, including immobilisation approval, if required. There are not expected to be any licences required for on-site treatment if required.

As discussed in Section 6.7, the regulatory provisions governing the management of waste generally apply to transport, treatment, disposal or receipt of waste, and hence only come into effect if the waste is removed from the site and/or received from another site. The requirements of the POEO Act and associated regulations relating to handling, disposal and/or licensing of waste do not apply to contaminated soils (including chemical or asbestos contamination) that remain on site.

13. Conclusion

GHD was engaged by HI to prepare a Remedial Action Plan / Contamination Management Plan (referred to herein as the RAP) for Lot 7314 DP 1162607 (the site), being the proposed Stage 1 Development Area for a health services facility, including hospital (the New Maitland Hospital), at the former CSR/PGH clay mine and brickworks, Metford Road, Metford, NSW.

Redevelopment of the site is proposed to involve a change of land use to include a health care facility comprising long term care (hospitals, child care, aged facilities, hospices), commercial/industrial land use (training facilities, administration and ancillary buildings) and open spaces (gardens, play areas).

This RAP provides a summary of identified site contamination issues, and description of the proposed remediation and soil management programs, procedures and standards which are to be followed during the course of the redevelopment, to ensure the successful remediation of the site and consequently the protection of the environment and human health.

As a general principle in redevelopment of the site, HI has committed to using best endeavours to manage contamination on site, where appropriate. The types of contaminants identified at the Site (primarily TRH, PAH, asbestos-containing materials and aesthetic impacts) cannot readily be destroyed, and soil treatment methods that reduce contaminant concentrations are not considered suitable for the contamination at the site. Therefore, the following remediation methods are considered appropriate for the Site:

- Physical removal and disposal of asbestos-containing materials that may be disturbed by the site works is the preferred initial remediation strategy and is consistent with regulatory requirements for PACM. Further, it is understood that CSR has committed to removal of any identified areas of ACM prior to bulk excavation works commencing. Any further remediation of ACM should be limited to “unexpected finds” as per Section 7.
- Visual screening and segregation of unacceptable materials (foreign inclusions, aesthetic impacts, PACM, hydrocarbon contaminated materials, potentially combustible materials) to address contamination impacts within stockpiles and across the general site area.
- Capping and containment as a conservative soil management option for segregated materials (as above) where contamination will not be subject to exposure under normal foreseeable use of the site (eg. burial at depths greater than 2 m below design structure levels or beneath permanent infrastructure as part of the redevelopment).
- Re-use of uncontaminated materials (VENM, screened overburden and fill) for bulk fill subject to geotechnical requirements or constraints.

The particular methods to be used for each material / source should be agreed with HI and their designers for the development in conjunction with finalisation of design, to account for any particular geotechnical requirements, optimise earthmoving and minimise the potential for future disturbance of contaminated or problematic materials. It is anticipated this will take the form of a material re-use schedule, to be prepared as part of final design and consistent with the principles described in this RAP. A CQA plan will be required as a basis for verifying and documenting the appropriate implementation of this RAP and final design documentation. These documents (including relevant aspects of the final design, specifications, material re-use schedule and CQA plan) shall be reviewed by the Environmental Consultant and Site Auditor prior to the commencement of remediation to confirm that they are consistent with the principles of this RAP.

It is understood that HI is developing a Contamination Finds Protocol as part of commercial negotiations with CSR. This protocol should also be taken into account in implementation of this RAP.

Interim management of the site is required between the date of this RAP and commencement of redevelopment activities, to minimise the potential for additional contamination to occur from activities such as illegal dumping, or for changes to site characteristics to occur from on-site remediation activities in other areas of the CSR property that may affect the site

A Long Term Site Management Plan (LTSMP) will be required following completion of the development earthworks, to record the placement of any contaminated or combustible material on site, and provide procedures to be used in the event that it should be disturbed.

GHD considers that the site can be made suitable for the proposed use (Health Services Facility, including hospital) subject to implementation of this RAP during earthworks undertaken for development of the site.

14. Limitations

This Remedial Action Plan (RAP) for the New Maitland Hospital Stage 1 Development Area Metford Road, Metford (the Site), (the "Report"):

- has been prepared by GHD Pty Ltd ("GHD") for NSW Health Infrastructure (HI).
- may be used and relied on by HI.
- may be used by and provided to the Site Auditor acting as an agent of HI in this respect.
- may be used by and provided to the NSW EPA and the relevant planning authority for the purpose of meeting statutory obligations in accordance with the relevant sections of the CLM Act 1997 or the Environment Planning and Assessment (EP&A) Act 1979.
- may only be used for the purpose as stated in Section1 of the Report (and must not be used for any other purpose).

GHD and its servants, employees and officers otherwise expressly disclaim responsibility to any person other than HI arising from or in connection with this RAP.

To the maximum extent permitted by law, all implied warranties and conditions in relation to the services provided by GHD and the RAP are excluded unless they are expressly stated to apply in this RAP.

The services undertaken by GHD in connection with preparing this Report:

- were limited to those specifically detailed in Section 1.5 of this Report and GHD proposal emailed on 25 May 2016 .
- were undertaken in accordance with current professional practice and by reference to relevant environmental regulatory authority and industry standards, guidelines and assessment criteria in existence as at the date of this RAP and any previous site investigation and assessment reports referred to in the RAP

The opinions, conclusions and any recommendations in this RAP are based on assumptions made by GHD when undertaking the services mentioned above and preparing the RAP ("Assumptions"), as specified throughout this RAP.

GHD expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with any of the Assumptions being incorrect.

Subject to the paragraphs in this section of the RAP, the opinions, conclusions and any recommendations in this RAP are based on conditions encountered and information reviewed at the time of preparation of this RAP and are relevant until such times as the site conditions or relevant legislations changes, at which time, GHD expressly disclaims responsibility for any error in, or omission from, this RAP arising from or in connection with those opinions, conclusions and any recommendations.

This RAP is based solely on the investigations and findings contained in the reports referenced in the RAP (Section 15) and on the conditions encountered and information reviewed at the time of each referenced report. This RAP should be read in conjunction with the referenced reports. It is also subject to all the limitations and recommendations in the referenced reports.

GHD has prepared this Report on the basis of information provided by HI and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked ("Unverified Information") beyond the agreed scope of work.

GHD expressly disclaims responsibility in connection with the Unverified Information, including (but not limited to) errors in, or omissions from, the RAP, which were caused or contributed to by errors in, or omissions from, the Unverified Information.

The opinions, conclusions and any recommendations in this RAP are based on information obtained from, and testing undertaken at or in connection with, specific sampling points and may not fully represent the conditions that may be encountered across the site at other than these locations. Site conditions at other parts of the site may be different from the site conditions found at the specific sampling points.

Investigations undertaken in respect of this RAP were constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this RAP.

GHD has considered and/or tested for only those chemicals specifically referred to in this RAP and makes no statement or representation as to the existence (or otherwise) of any other chemicals.

Site conditions (including any the presence of hazardous substances and/or site contamination) may change after the date of this RAP. GHD expressly disclaims responsibility:

- Arising from, or in connection with, any change to the site conditions.
- To update this RAP if the site conditions change.

Except as otherwise expressly stated in this RAP GHD makes no warranty or representation as to the presence or otherwise of asbestos and/or asbestos containing materials (“ACM”) on the site. If fill material has been imported on to the site at any time, or if any buildings constructed prior to 1970 have been demolished on the site or material from such buildings disposed of on the site, the site may contain asbestos or ACM.

Subsurface conditions can vary across a particular site and cannot be exhaustively defined by the investigations carried out prior to this RAP. As a result, it is unlikely that the results and estimations expressed or used to compile this RAP will represent conditions at any location other than the specific points of sampling. A site that appears to be unaffected by contamination at the time of the RAP may later, due to natural causes or human intervention, become contaminated.

Except as otherwise expressly stated in this RAP, GHD makes no warranty, statement or representation of any kind concerning the suitability of the site for any purpose or the permissibility of any use, development or re-development of the site.

These Disclaimers should be read in conjunction with the entire RAP and no excerpts are taken to be representative of the findings of this RAP.

15. References

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Appendices

Appendix A – Figures

Paper Size A4

0 100 200

Metres

N

LEGEND

Site Boundary

Area No.

GHD

Health Infrastructure
New Maitland Hospital, Metford

Stage 1 Development Area
Phase 2 ESA
Site Location

Job Number	22-18003
Revision	C
Date	19 Nov 2015

Figure 1

Level 3, GHD Tower, 24 Honeysuckle Drive, Newcastle NSW 2300 Australia **T** 61 2 4979 9999 **F** 61 2 4979 9988 **E** ntlmail@ghd.com **W** www.ghd.com

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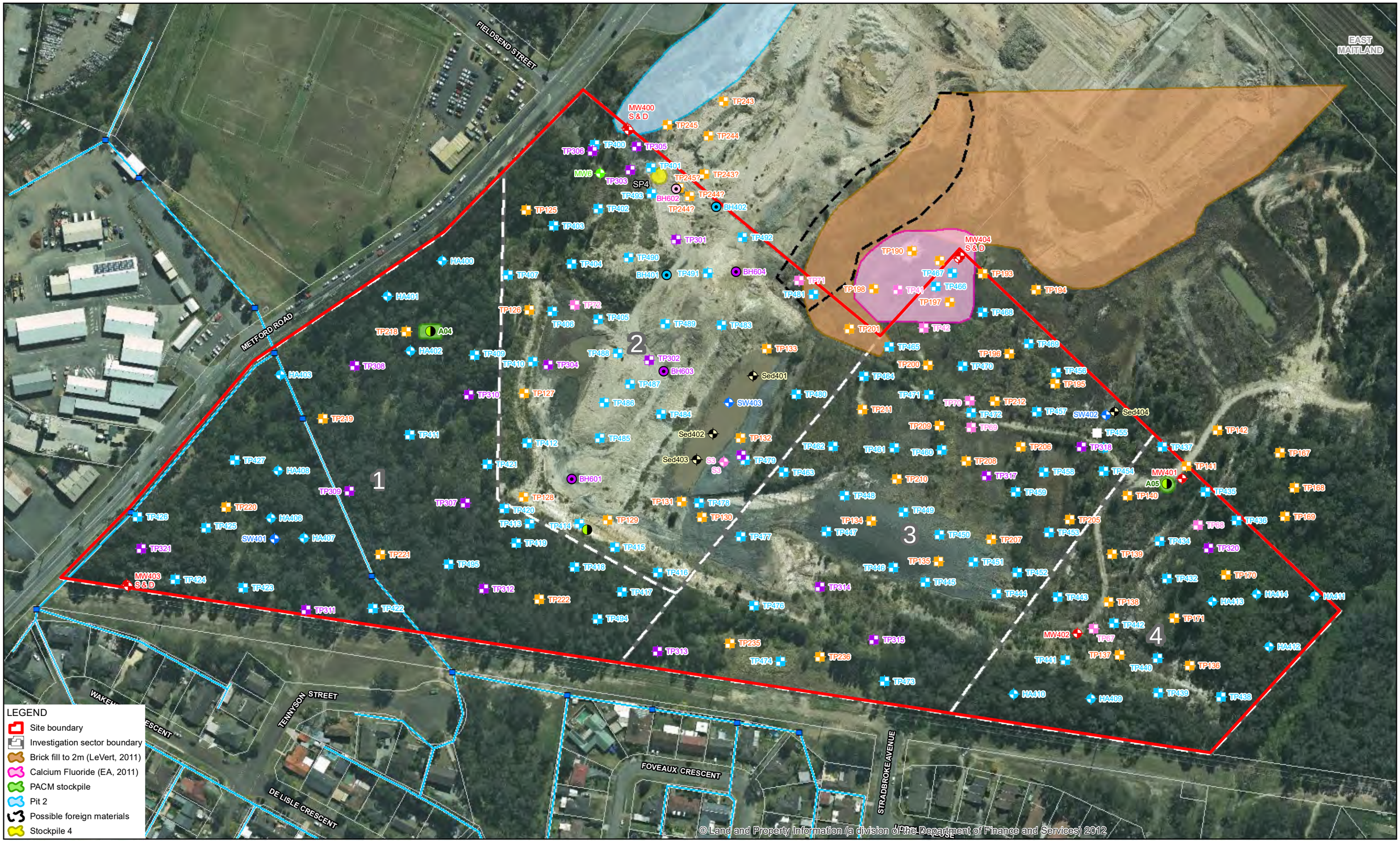

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Cadastre
- DLA Test pit
- DP / GHD test pit
- DP Soil bore
- Existing monitoring well
- GHD / DP soil bore
- GHD Hand auger
- GHD Monitoring wells
- GHD Sediment sample
- GHD Soil bore
- GHD Surface water sample
- GHD Test pit
- LeVert soil sample
- LeVert test pit
- PACM
- Sewer pit
- Sewer main

Health Infrastructure
New Maitland Hospital, Metford
Stage 1 Development Area
Phase 2 ESA
Sampling Locations

Job Number 22-18003
Revision C
Date 19 Nov 2015

Figure 2

G:\22\18003\GIS\Maps\Deliverables\SiteWorks\2218003_SW001_SampleLocations_C.mxd

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Paper Size A3

0 10 20 40 60 80

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Cadastre
- Site boundary
- Waterbody
- Waterbody approx. location
- Survey
- Contours
- Brick fill to 2m
- Calcium Fluoride (EA, 2011)
- Pit 2
- Possible foreign materials
- Investigation sector boundary

Health Infrastructure
New Maitland Hospital, Metford

Stage 1 Development Area Phase 2 ESA Topography

Job Number 22-18003
Revision A
Date 19 Nov 2015

Figure 3

G:\22\18003\GIS\Maps\Deliverables\SiteWorks\2218003_SW002_Topography_A.mxd

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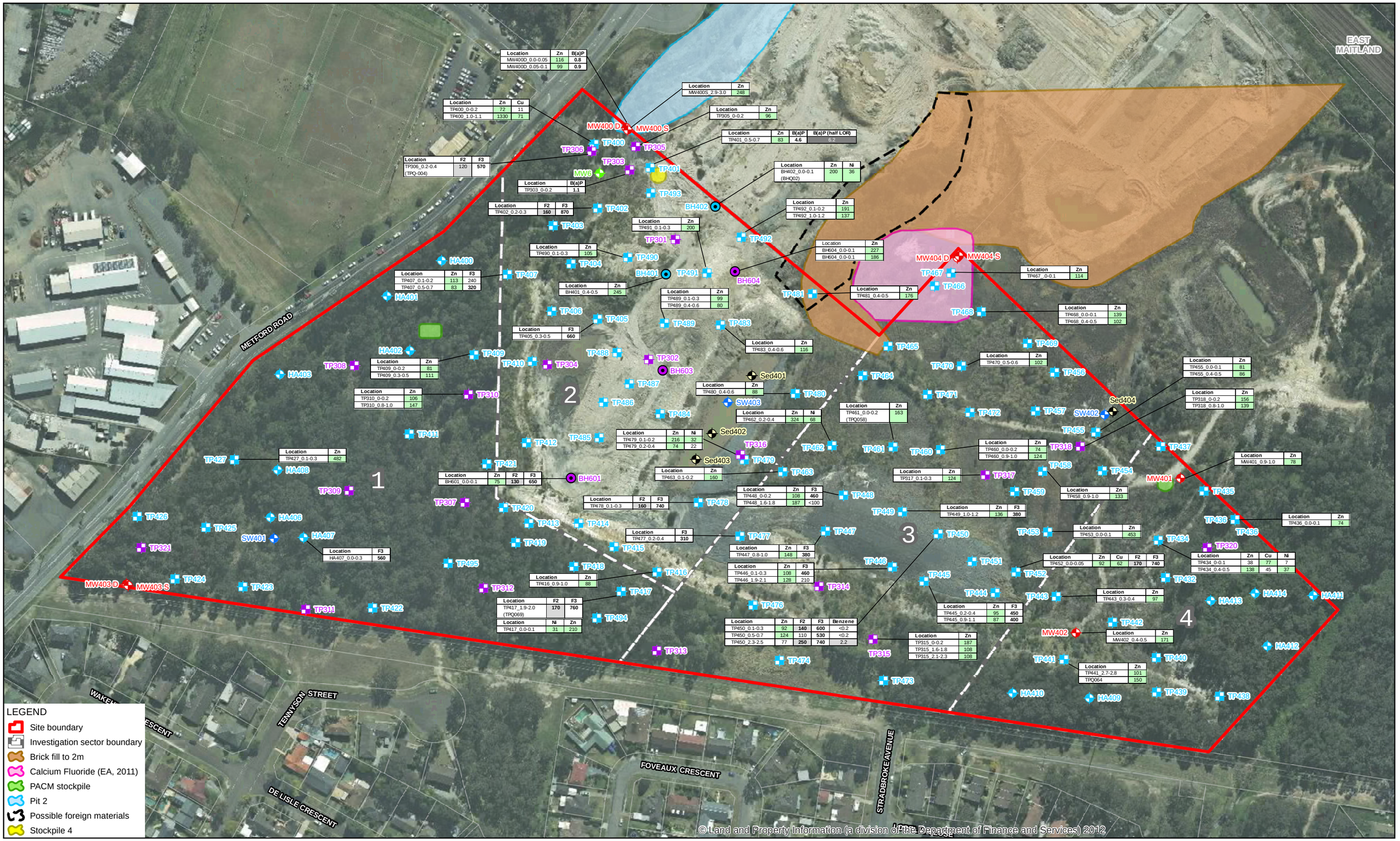
Data source: ADW: Survey/Contours/Topo, 2015; HWC: Dial Before You Dig Sewermains, 2015. LPI: DTDB / DCDB / Aerial Imagery, 2012. Created by: fmackay, tmorton, gmcdiarmid



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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Cadastre
- DP / GHD test pit
- Existing monitoring well
- GHD / DP soil bore
- GHD Hand auger
- GHD Monitoring wells
- GHD Sediment sample
- GHD Soil bore
- GHD Surface water sample
- GHD Test pit

NEPM 2013 Site Specific EIL-Urban Residential
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]
NEPM 2013 Table 1A(1) HILs Res B Soil[4]
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]
All results in mg/kg

Health Infrastructure
New Maitland Hospital, Metford
Stage 1 Development Area
Phase 2 ESA
Soil Exceedances

Job Number 22-18003
Revision A
Date 19 Nov 2015

Figure 4

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Data source: ADW: Survey, 2015; LPI: DTDB / DCDB / Aerial Imagery, 2012. HWC: Dial Before You Dig Sewermain, 2015. Created by: fmackay, tmorton, gmcdiarmid

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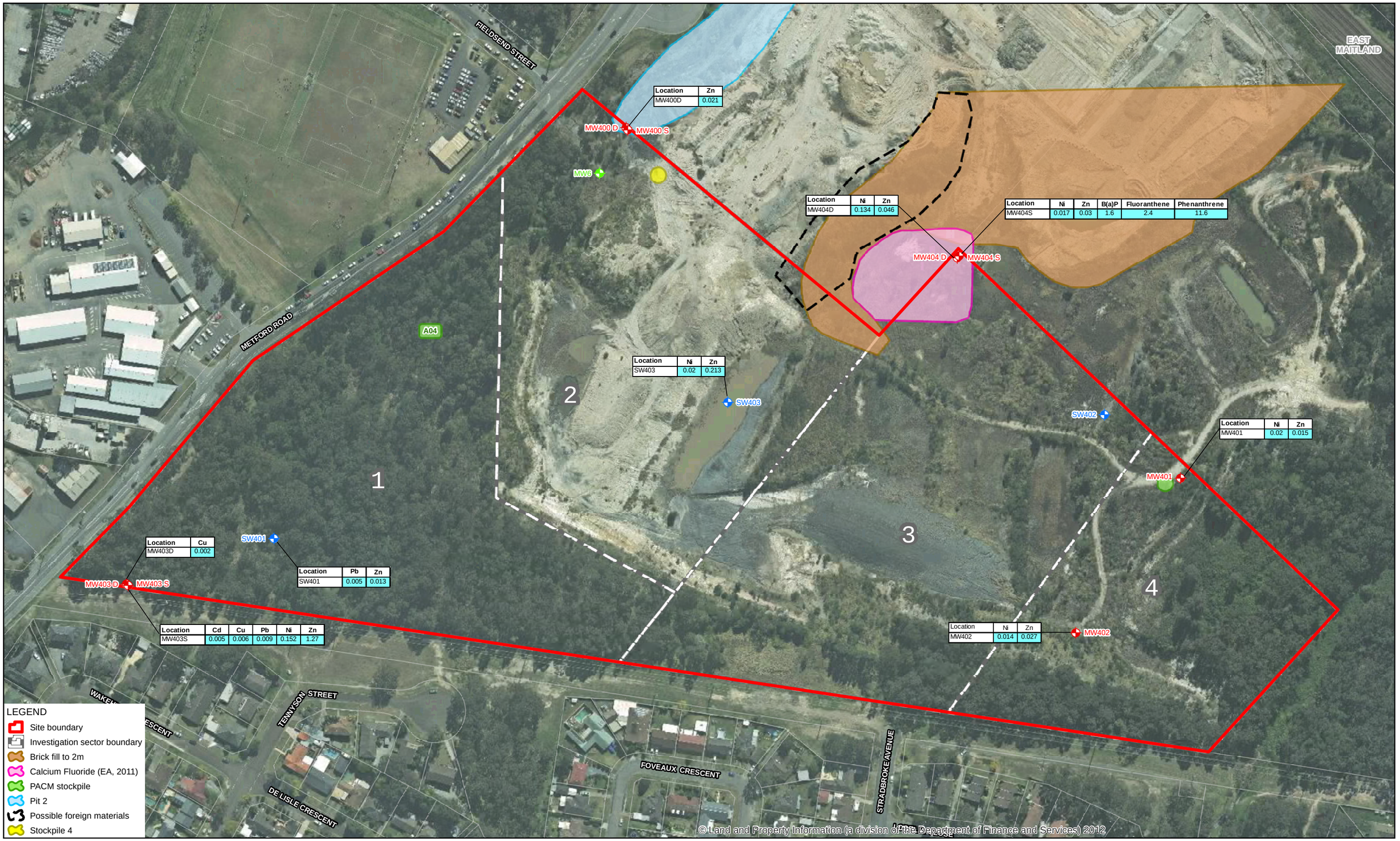

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Cadastre
- Existing monitoring well
- GHD Monitoring wells
- GHD Surface water sample

ANZECC 2000 FW Med-Low Reliability[1]
NEPM 2013 Table 1C GILs, Fresh Waters[3]
All metal results in mg/L, all PAH results in ug/L

Health Infrastructure
New Maitland Hospital, Metford
Stage 1 Development Area Phase 2 ESA Water Exceedances

Job Number	22-18003
Revision	A
Date	19 Nov 2015

Figure 5

G:\22\18003\GIS\Maps\Deliverables\SiteWorks\2218003_SW004_WaterExceedances_A.mxd

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Data source: ADW: Survey, 2015; LPI: DTDB / DCDB / Aerial Imagery, 2012. HWC: Dial Before You Dig Sewermain, 2015. Created by: fmackay, tmorton, gmcdiarmid

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Paper Size A3

0 10 20 40 60 80

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Site boundary
- Investigation sector boundary
- Cadastre
- Existing monitoring well
- GHD Monitoring well (actual SWL x.xx mAHD)
- Inferred groundwater contour (m AHD)
- Inferred groundwater flow direction

Health Infrastructure
New Maitland Hospital, Metford

Stage 1 Development Area
Phase 2 ESA
Groundwater Contours - Deep Wells Figure 6

Job Number	22-18003
Revision	A
Date	04 Dec 2015

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Appendix B – Woods Bagot Conceptual Drawings

WOODS BAGOT™

Client
HEALTH INFRASTRUCTURE NSW

Project
THE NEW MAITLAND HOSPITAL

Sheet title
SITE PLAN

Project number
120287

Scale
1 : 1000

Sheet size
A1

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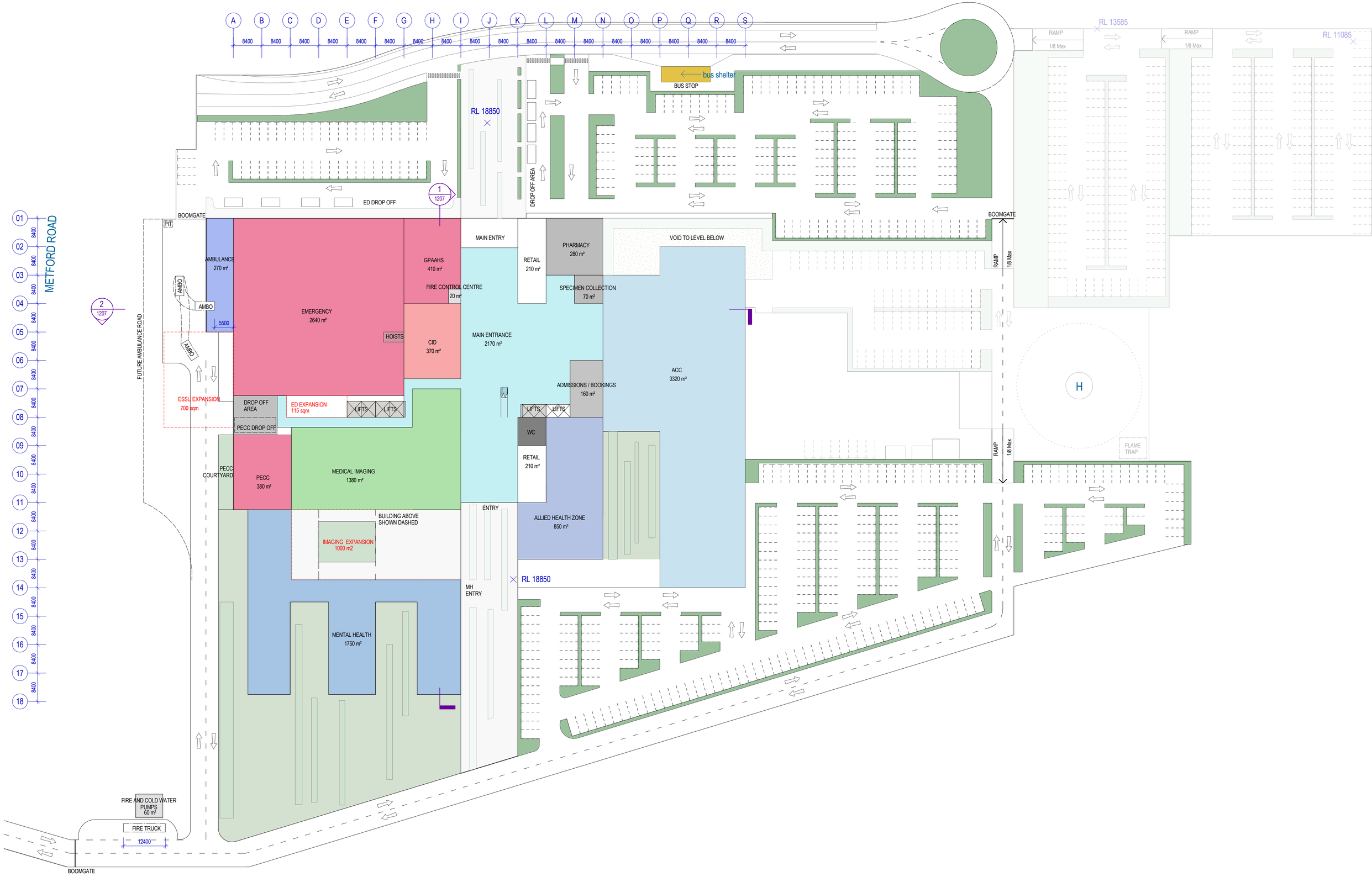
Sheet number
WB-AR-1001

Revision
C

Date
19/11/2015



WOODS BAGOT™

Client
HEALTH INFRASTRUCTURE NSW

Project
THE NEW MAITLAND HOSPITAL

Sheet title
GROUND LEVEL

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Sheet number	Revision	Date	
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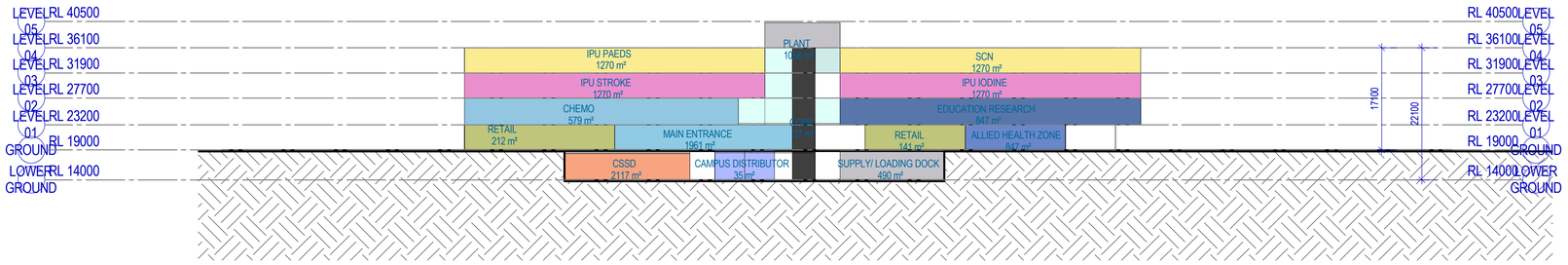

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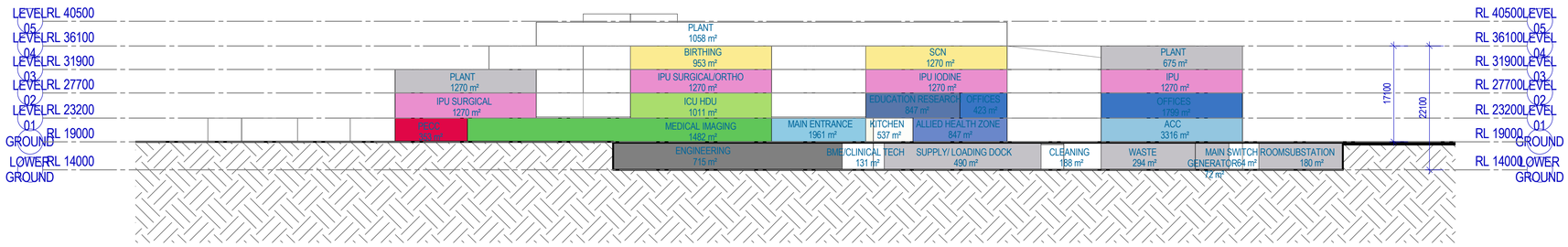

2 LONG SECTION 1

WOODS BAGOT™

Client
HEALTH INFRASTRUCTURE NSW

Project
THE NEW MAITLAND HOSPITAL

Sheet title
SECTIONS

Project number **120287**
Sheet number **1207**
Scale **1 : 500**
Revision **A**
Sheet size **A1**
Date **30/10/2015**

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Appendix C – Combined Analytical Results Tables

Appendix C
Table 2
Analytical Results - Soil and Sediment

Field_ID	Location_Code	Sampled_Date_Time	Sample_Depth_Range	Sample_Type	Lab_Report_Number	Area	Material Type[11]	weight of sample	Asbestos (Presence/Absence)	Weight Used for % Calculation	Asbestos Containing Material	Friable Asbestos (as Asbestos in Soil)	Fluoride	PFOA	PFOS	CEC	Moisture	pH (Lab)
									Asbestos				Anion	PFC		Inorganics		
								g	-	kg	g	%	mg/kg	mg/kg	mg/kg	meq/100g	%	pH Uits
LOR								0.01		0.0001	0.0004	0.001	40	0.0005	0.0005	0.1	1	0.1
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]														16	6			
US EPA Residential Soil Screening Level[2]													3100					
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]																		
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3																		
NEPM 2013 Table 1A(1) HILs Res A Soil[4]																		
NEPM 2013 Table 1A(1) HILs Res B Soil[4]																		
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																		
0-2m																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																		
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]																		
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]																		
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]																		
CRCCare Soil Direct Contact Intrusive Works[9]																		
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]																		
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]																		
A04	A04	19/10/2015	0-0.1	Normal	ES1534055			434	0	0.434	-	-	-	-	-	-	-	-
A05	A05	19/10/2015	0-0.1	Normal	ES1534055			494	0	0.494	-	-	-	-	-	-	-	-
HA400_0.5-0.7	HA400	14/10/2015	0.5-0.7	Normal	ES1533607	1	U	-	-	-	-	-	260	-	-	-	21.7	-
HA401_0.0-0.1	HA401	16/10/2015	0-0.1	Normal	ES1533824	1	D	440	0	0.44	-	-	140	-	-	-	15.9	-
HAQ01	HA401	16/10/2015	0-0.1	Field_D	ES1533824	1	D	-	-	-	-	-	160	-	-	-	13.3	-
HA402_0.0-0.1	HA402	16/10/2015	0-0.1	Normal	ES1533824	1	U	-	-	-	-	-	140	-	-	-	10.7	-
HA403_0.4-0.5	HA403	16/10/2015	0.4-0.5	Normal	ES1533824	1	U	-	-	-	-	-	70	-	-	-	10	-
HA406_0.0-0.1	HA406	16/10/2015	0-0.1	Normal	ES1533824	1	U	-	-	-	-	-	170	-	-	-	29.4	-
HA407_0.0-0.3	HA407	16/10/2015	0-0.3	Normal	ES1533824	1	U	-	-	-	-	-	120	-	-	-	7	-
HA408_0.0-0.1	HA408	16/10/2015	0-0.1	Normal	ES1533824	1	U	-	-	-	-	-	140	-	-	-	17.1	-
MW403D_0.0-0.1	MW403D	14/10/2015	0-0.1	Normal	ES1533607	1	U	-	-	-	-	-	70	-	-	0.8	7.4	4.7
MWQ07	MW403D	14/10/2015	0-0.1	Field_D	ES1533607	1	U	-	-	-	-	-	70	-	-	-	6.4	-
MW403D_0.4-0.5	MW403D	14/10/2015	0.4-0.5	Normal	ES1533607	1	U	-	-	-	-	-	220	-	-	-	22.6	-
TP307_0.4-0.6	TP307	13/10/2015	0.4-0.6	Normal	ES1533492	1	U	-	-	-	-	-	190	-	-	-	14.8	-
TP308_0-0.2	TP308	13/10/2015	0-0.2	Normal	ES1533492	1	U	-	-	-	-	-	290	-	-	-	14.8	-
TP309_0-0.1	TP309	13/10/2015	0-0.1	Normal	ES1533492	1	U	-	-	-	-	-	110	-	-	-	9	-
TP310_0-0.2	TP310	13/10/2015	0-0.2	Normal	ES1533492	1	DC	585	0	0.585	-	-	270	-	-	-	12.8	-
TP310_0.8-1.0	TP310	13/10/2015	0.8-1	Normal	ES1533492	1	DC	-	-	-	-	-	270	-	-	-	12.6	-
TPQ-007	TP310	13/10/2015	0.8-1	Field_D	ES1533492	1	DC	-	-	-	-	-	260	-	-	-	10.5	-
TPQ-008	TP310	13/10/2015	0.8-1	Interlab_D	SE144776-1	1	DC	-	-	-	-	-	200	-	-	-	13	-
TP311_0.2-0.3	TP311	14/10/2015	0.2-0.3	Normal	ES1533607	1	U	-	-	-	-	-	60	-	-	-	12	-
TP312_0-0.2	TP312	13/10/2015	0-0.2	Normal	ES1533492	1	U	-	-	-	-	-	60	-	-	-	4.5	-
TP321_0.1-0.3	TP321	14/10/2015	0.1-0.3	Normal	ES1533607	1	U	602	0	-	-	-	80	-	-	-	7.6	-
TP321_0.4-0.6	TP321	14/10/2015	0.4-0.6	Normal	ES1533607	1	U	-	-	-	-	-	190	-	-	-	20.6	-
TP409_0-0.2	TP409	16/10/2015	0-0.2	Normal	ES1533824	1	DC	596	0	0.596	-	-	230	-	-	-	10.4	-
TP409_0.3-0.5	TP409	16/10/2015	0.3-0.5	Normal	ES1533824	1	DC	-	-	-	-	-	270	-	-	-	12.2	-
TP411_0-0.2	TP411	16/10/2015	0-0.2	Normal	ES1533824	1	U	-	-	-	-	-	200	-	-	8.1	14.7	5.8
TP413_0.1-0.3	TP413	16/10/2015	0.1-0.3	Normal	ES1533824	1	DC	710	0	0.71	-	-	250	-	-	-	10.5	-
TP413_1.7-1.9	TP413	16/10/2015	1.7-1.9	Normal	ES1533824	1	DC	-	-	-	-	-	160	-	-	-	10	-
TPQ_030	TP413	16/10/2015	1.7-1.9	Field_D	ES1533824	1	DC	-	-	-	-	-	170	-	-	-	8.3	-
TPQ-031	TP413	16/10/2015	1.7-1.9	Interlab_D	SE145053-1	1	DC	-	-	-	-	-	150	-	-	-	8.6	-
TP417_0.0-0.1	TP417	23/10/2015	0-0.1	Normal	ES1534383	1	DC	-	-	-	-	-	360	-	-	-	19.3	-
TP417_1.9-2.0	TP417	23/10/2015	1.9-2	Normal	ES1534383	1	DC	-	-	-	-	-	260	-	-	-	14.9	-
TPQ068	TP417	23/10/2015	1.9-2	Field_D	ES1534383	1	DC	-	-	-	-	-	270	-	-	-	19.9	-
TPQ069	TP417	23/10/2015	1.9-2	Interlab_D	SE145313-1	1	DC	-	-	-	-	-	200	-	-	-	14	-
TP418_0-0.2	TP418	16/10/2015	0-0.2	Normal	ES1533824	1	U	-	-	-	-	-	90	-	-	-	9.1	-
TP419_0.1-0.3	TP419	16/10/2015	0.1-0.3	Normal	ES1533824	1	U	-	-	-	-	-	250	-	-	-	14.6	-
TP420_0.1-0.3	TP420	16/10/2015	0.1-0.3	Normal	ES1533824	1	D	706	0	0.706	-	-	120	-	-	-	8.8	-
TP420_2.0-2.2	TP420	16/10/2015	2-2.2	Normal	ES1533824	1	U	732	0	0.732	-	-	130	-	-	-	9.8	-
TP421_0.1-0.3	TP421	20/10/2015	0.1-0.3	Normal	ES1534055	1	DC	652	0	0.652	-	-	280	-	-	-	12.2	-
TP421_1.0-1.2	TP421	20/10/2015	1-1.2	Normal	ES1534055	1	DC	-	-	-	-	-	290	-	-	-	11.2	-
TP422_0.1-0.2	TP422	20/10/2015	0.1-0.2	Normal	ES1534055	1	U	-	-	-	-	-	120	-	-	-	17.8	-
TP422_0.3-0.5	TP422	20/10/2015	0.3-0.5	Normal	ES1534055	1	U	471	0	0.471	-	-	230	-	-	-	19.8	-
TPQ-048	TP422	20/10/2015	0.3-0.5	Field_D	ES1534055	1	U	-	-	-	-	-	200	-	-	-	20.5	-
TPQ-049	TP422	20/10/2015	0.3-0.5	Interlab_D	SE145175-1	1	U	-	-	-	-	-	190	-	-	-	20	-
TP423_0.2-0.4	TP423	20/10/2015	0.2-0.4	Normal	ES1534055	1	U	-	-	-	-	-	110	-	-	4.1	11.9	5.8
TP424_0-0.2	TP424	20/10/2015	0-0.2	Normal	ES1534055	1	U	-	-	-	-	-	220	-	-	-	19.8	-
TP425_0.6-0.8	TP425	20/10/2015	0.6-0.8	Normal	ES1534055	1	D	753	0	0.753	-	-	80	-	-	-	7.4	-
TP426_0.1-0.2	TP426	20/10/2015	0.1-0.2	Normal	ES1534055	1	U	-	-	-	-	-	90	-	-	-	7.1	-
TP427_0.1-0.3	TP427	20/10/2015	0.1-0.3	Normal	ES1534055	1	D	552	0	0.552	-	-	180	-	-	-	9.5	-
TP494_0.0-0.2	TP494	16/10/2015	0-0.2	Normal	ES1533824	1	U	570	0	0.57	-	-	170	-	-	-	6.2	-
TP495_0.1-0.2	TP495	20/10/2015	0.1-0.2	Normal	ES1534055	1	U	-	-	-	-	-	170	-	-	-	12.4	-
BH401_0.4-0.5	BH401	14/10/2015	0.4-0.5	Normal	ES1533607	2	D	-	-	-	-	-	260	-	-	-	10.6	-
BH401_2.9-3.0	BH401	14/10/2015	2.9-3	Normal	ES1533607	2	D	-	-	-	-	-	260	-	-	-	15.3	-
BH402_0.0-0.1	BH402	14/10/2015	0-0.1	Normal	ES1533607	2	DC	499	0	-	-	-	170	-	-	-	7	-
BHQ01	BH402	14/10/2015	0-0.1	Field_D	ES1533607	2	DC	-	-	-	-	-	260	-	-	-	6.8	-
BHQ02	BH402	14/10/2015	0-0.1	Interlab_D	SE145051-1	2	DC	-	-	-	-	-	260	-	-	-	7.4	-
BH402_0.9-1.0	BH402	14/10/2015	0.9-1	Normal	ES1533607	2	U	-	-	-	-	-	150	-	-	-	7	-
BH601_0.0-0.1	BH601	16/10/2015	0-0.1	Normal	ES1533824	2	DC	593	0	0.593	-	-	140	-	-	-	24.9	-
BH603_2.0-2.5	BH603	16/10/2015	2-2.5	Normal	ES1533824	2	U	-	-	-	-	-	190	-	-	-	10	-
BH604_0.0-0.1	BH604	21/10/2015	0-0.1	Normal	ES1534200	2	U	-	-	-	-	-	210	-	-	-	11.7	-
BH604_0.0-0.1	BH604	27/10/2015	0-0.1	Normal	ES1534594	2	U	483	0	0.483	-	-	200	-	-	-	12.8	-
MW400D_0.0-0.05	MW400D	12/10/2015	0-0.05	Normal	ES1533373	2	D	-	-	-	-	-	170	-	-	-	12.3	-
MW400D_0.05-0.1	MW400D	12/10/2015	0.05-0.1	Normal	ES1533373	2	DC	421	0	0.421	-	-	170	-	-	-	17	-
MWQ03	MW400D	12/10/2015	0.05-0.1	Field_D	ES1533373	2	DC	-	-	-	-	-	160	-	-	-	17.4	-
MW400S_2.9-3.0	MW400S	12/10/2015	2.9-3	Normal	ES1533373	2	UC	-	-	-	-	-	260	-	-	-	17	-
SED401_0.0-0.1	SED401	23/10/2015	0-0.1	Normal	ES1534383	2	U	-	-	-	-	-	180	-	-	-	30.1	-
SED402_0.1-0.2	SED402	23/10/2015	0.1-0.2	Normal	ES1534383	2	U	-	-	-	-	-	240	-	-	-	31.9	-
SED403_0.0-0.1	SED403	23/10/2015	0-0.1	Normal	ES1534383	2	U	-	-	-	-	-	240	-	-	-	33.9	-
TP301_0.5-0.7	TP301	12/10/2015	0.5-0.7	Normal	ES1533373	2	D	-	-	-	-	-	150	-	-	-	10.9	-
TP302_1.5-1.7	TP302	12/10/2015	1.5-1.7	Normal	ES1533373	2	D	-	-	-	-	-	210	-	-	-	9.1	-
TP303_0-0.2	TP303	12/10/2015	0-0.2	Normal	ES1533373	2	D	620	0	0.62	-	-	150	-	-	-	12.1	-
TP303_0.2-0.3	TP303	12/10/2015	0.2-0.3	Normal	ES1533373	2	DC	-	-	-	-	-	80	-	-	-	14.6	-
TP305_0-0.2	TP305	13/10/2015	0-0.2	Normal	ES1533492	2	D	436	0	0.436	-	-	270	-	-	-	15.5	-
TP306_0-0.2	TP306	12/10/2015	0-0.2	Normal	ES1533373	2	U	439	0	0.439	-	-	220	-	-	-	23.5	-
TP306_0.2-0.4	TP306	12/10/2015	0.2-0.4	Normal	ES1533373	2	UC	-	-	-	-	-	80	-	-	-	24.8	-
TPQ-003	TP306	12/10/2015	0.2-0.4	Field_D	ES1533373	2	UC	-	-	-	-	-	90	-	-	-	27	-
TPQ-004	TP306	12/10/2015	0.2-0.4	Interlab_D	SE144838-1	2	UC	-	-	-	-	-	190	-	-	-	26	-
TP400_0-0.2	TP400	15/10/2015	0-0.2	Normal	ES1533724	2	D	688	0	0.688	-	-	200	-	-	6.9	7.3	7
TP400_1.0-1.1	TP400	15/10/2015	1-1.1	Normal	ES1533724	2	D	41.9	0	0.0419	-	-	180	-	-	-	8.2	-
TP401_0.5-0.7	TP401	15/10/2015	0.5-0.7	Normal	ES1533724	2	DC	688	0	0.688	-	-	200	-	-	-	15.5	-
TP401_1.7-1.9	TP401	15/10/2015	1.7-1.9	Normal	ES1533724	2	DC	-	-	-	-	-	220	-	-	-	14.9	-
TP402_0.2-0.3	TP402	15/10/2015	0.2-0.3	Normal	ES1533724	2	D	-	-	-	-	-	260	-	-	4.6	13.1	4.7
TP403_0-0.2	TP403	19/10/2015	0-0.2	Normal	ES1533951	2	DC	543	0	0.543	-	-	180	-	-	-	15.3	-
TP403_1.1-1.3	TP403	19/10/2015	1.1-1.3	Normal	ES1533951	2	DC	468	0	0.468	-	-	70	-	-	-	25.6	-
TP404_0.6-0.8	TP404	15/10/2015	0.6-0.8	Normal	ES1533724	2	D	612	0	0.612	-	-	270	-	-	-	14.3	-
TP405_0.3-0.5	TP405	15/10/2015	0.3-0.5	Normal	ES1533724	2	UC	-	-	-	-	-	220	-	-	-	17.8	-
TP406_0.1-0.2	TP406	15/10/2015	0.1-0.2	Normal	ES1533724	2	D	-	-	-	-	-	170	-	-	-	12	-
TP407_0.1-0.2	TP407	19/10/2015	0.1-0.2	Normal	ES1533951	2	D	568	0	0.568	-	-	240	-	-	-	13	-
TP407_0.5-0.7	TP407	19/10/2015	0.5-0.7	Normal	ES1533951	2	D	-	-	-	-	-	230	-	-	-	13.6	-
TP410_0.1-0.2	TP410	15/10/2015	0.1-0.2	Normal	ES1533724	2	D	-	-	-	-	-	200	-	-	-	12	-
TP412_0.0-0.1	TP412	23/10/2015	0-0.1	Normal	ES1534383	2	D	-	-	-	-	-	180	-	-	-	14	-
TP414_0-0.2	TP414	16/10/2015	0-0.2	Normal	ES1533824	2	DC	683	0	0.683	-	-	150	-	-	-	12.2	-
TP414_0.5-0.7	TP414	16/10/2015	0.5-0.7	Normal	ES1533824	2	DC	702	0	0.702	-	-	160	-	-	-	14.4	-
TP414_1.7-1.9	TP414	16/10/2015	1.7-1.9	Normal	ES1533824	2	DC	635	0	0.635	-	-	100	-	-	-	11.3	-
TP415_0.0-0.1	TP415	23/10/2015	0-0.1	Normal	ES1534383	2	D	370	0	0.37	-	-	210	-	-	-	16.2	-
TP416_0.0-0.1	TP416	23/10/2015	0-0.1	Normal	ES1534383	2	DC	-	-	-	-	-	280	-	-	-	10.5	-
TP416_0.9-1.0	TP416	23/10/2015	0.9-1	Normal	ES1534383	2	D	468	0	0.468	-	-	180	-	-	-	7.9	-

Field_ID	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Nickel	Zinc	C6-C10 minus BTEX (F1)	C6 - C10 Fraction	>C10-C16 minus Naphthalene (F2)	>C10 - C16 Fraction	>C16 - C34 Fraction (F3)	>C34 - C40 Fraction (F4)	>C10 - C40 (Sum of Total)
	Metals										TRH - NEPM 2013						
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	5	10	1	2	5	5	5	0.1	2	5	10	10	50	50	100	100	50
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]																	
US EPA Residential Soil Screening Level[2]		15,000															
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]	100			190	60	1100			30	70							
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3	100			250	95	1100			170	180							
NEPM 2013 Table 1A(1) HILs Res A Soil[4]	100		20	100	6000	300	3800	40	400	7400							
NEPM 2013 Table 1A(1) HILs Res B Soil[4]	500		150	500	30000	1200	14000	120	1200	60000							
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]	300		90	300	17000	600	19000	80	1200	30000							
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																	
0-1m											45		110				
1-2m											70		240				
2-4m											110		440				
>4m											200		NL				
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																	
0-1m											NL		NL				
1-2m											NL		NL				
2-4m											NL		NL				
>4m											NL		NL				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																	
0-2m											**180**		**120**		**300**	**2800**	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]												700		1000	2500	10000	
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]												4400		3300	4500	6300	
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]												5600		4200	5800	8100	
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]												5100		3800	5300	7400	
CRCCare Soil Direct Contact Intrusive Works[9]												82000		62000	85000	120000	
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]												NL		NL			
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]												NL		NL			
A04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA400_0.5-0.7	6	360	<1	6	15	42	104	<0.1	12	95	<10	<10	<50	<50	<100	<100	<50
HA401_0.0-0.1	8	70	<1	8	10	25	129	<0.1	4	54	<10	<10	<50	<50	140	<100	140
HAQ01	8	50	<1	7	8	15	121	<0.1	<2	35	<10	<10	<50	<50	<100	<100	<50
HA402_0.0-0.1	5	40	<1	3	6	17	125	<0.1	10	68	<10	<10	<50	<50	<100	<100	<50
HA403_0.4-0.5	<5	60	<1	4	<5	9	9	<0.1	<2	14	<10	<10	<50	<50	<100	<100	<50
HA406_0.0-0.1	<5	90	<1	10	6	29	8	<0.1	<2	18	<10	<10	<50	<50	<100	<100	<50
HA407_0.0-0.3	6	160	<1	8	5	20	58	<0.1	3	40	<10	<10	110	110	**560**	280	950
HA408_0.0-0.1	6	70	<1	9	8	65	106	<0.1	4	88	<10	<10	<50	<50	190	120	310
MW403D_0.0-0.1	7	40	<1	11	7	29	22	<0.1	2	19	<10	<10	<50	<50	<100	<100	<50
MWQ07	12	40	<1	15	8	31	22	<0.1	2	22	<10	<10	<50	<50	100	<100	100
MW403D_0.4-0.5	8	20	<1	26	<5	14	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP307_0.4-0.6	<5	1480	<1	4	<5	11	<5	<0.1	<2	9	<10	<10	<50	<50	<100	<100	<50
TP308_0-0.2	<5	60	<1	6	19	17	69	<0.1	8	58	<10	<10	<50	<50	<100	<100	<50
TP309_0-0.1	<5	60	<1	3	<5	18	14	<0.1	3	22	<10	<10	<50	<50	<100	<100	<50
TP310_0-0.2	6	50	<1	2	17	20	44	<0.1	11	106	<10	<10	<50	<50	110	<100	110
TP310_0.8-1.0	6	40	<1	<2	16	25	147	<0.1	14	147	<10	<10	<50	<50	<100	<100	<50
TPQ-007	5	30	<1	<2	16	21	106	<0.1	13	140	<10	<10	<50	<50	<100	<100	<50
TPQ-008	4	24	<0.3	1.4	13	15	87	0.04	14	120	<25	<25	<25	<25	<90	<120	<210
TP311_0.2-0.3	7	40	<1	17	<5	9	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP312_0-0.2	<5	40	<1	4	<5	17	8	<0.1	<2	10	<10	<10	<50	<50	<100	<100	<50
TP321_0.1-0.3	8	50	<1	15	<5	14	11	<0.1	2	6	<10	<10	<50	<50	<100	<100	<50
TP321_0.4-0.6	11	20	<1	34	<5	11	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP409_0-0.2	14	60	<1	3	17	19	45	<0.1	8	81	<10	<10	50	50	250	<100	300
TP409_0.3-0.5	9	40	<1	2	18	22	58	<0.1	12	111	<10	<10	<50	<50	<100	<100	<50
TP411_0-0.2	6	210	<1	9	<5	10	7	<0.1	3	21	<10	<10	<50	<50	<100	<100	<50
TP413_0.1-0.3	7	100	<1	6	17	19	105	<0.1	7	64	<10	<10	<50	<50	<100	<100	<50
TP413_1.7-1.9	7	120	<1	6	12	19	214	<0.1	6	53	<10	<10	<50	<50	<100	<100	<50
TPQ_030	7	110	<1	5	12	19	123	<0.1	7	59	<10	<10	<50	<50	280	<100	280
TPQ-031	6	71	<0.3	6.2	7.9	18	670	0.06	5	40	<25	<25	27	27	130	<120	<210
TP417_0.0-0.1	9	40	<1	4	47	21	182	<0.1	31	210	<10	<10	<50	<50	<100	<100	<50
TP417_1.9-2.0	5	20	<1	<2	13	16	27	<0.1	9	58	<10	<10	<50	<50	260	<100	260
TPQ068	6	20	<1	<2	13	13	21	<0.1	6	44	<10	<10	<50	<50	**310**	<100	310
TPQ069	4	22	<0.3	2.1	13	15	24	0.03	10	58	<25	<25	**170**	170	**760**	<120	940
TP418_0-0.2	<5	120	<1	6	<5	12	8	<0.1	7	30	<10	<10	<50	<50	<100	<100	<50
TP419_0.1-0.3	<5	50	<1	8	<5	11	<5	<0.1	2	11	<10	<10	<50	<50	<100	<100	<50
TP420_0.1-0.3	8	90	<1	8	10	25	66	<0.1	5	69	<10	<10	<50	<50	240	<100	240
TP420_2.0-2.2	6	110	<1	5	7	17	39	<0.1	4	30	<10	<10	<50	<50	220	<100	220
TP421_0.1-0.3	<5	80	<1	3	10	9	24	<0.1	3	26	<10	<10	<50	<50	<100	<100	<50
TP421_1.0-1.2	<5	100	<1	3	7	12	17	<0.1	4	38	<10	<10	<50	<50	<100	<100	<50
TP422_0.1-0.2	<5	20	<1	20	<5	7	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP422_0.3-0.5	<5	20	<1	25	<5	8	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TPQ-048	6	20	<1	22	<5	8	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TPQ-049	6	17	0.3	20	<0.5	10	2	0.01	1	3.4	<25	<25	<25	<25	<90	<120	<210
TP423_0.2-0.4	<5	20	<1	14	<5	8	5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP424_0-0.2	6	30	<1	16	<5	10	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP425_0.6-0.8	6	30	<1	15	<5	9	<5	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50
TP426_0.1-0.2	<5	40	<1	13	<5	13	16	<0.1	2	7	<10	<10	<50	<50	<100	<100	<50
TP427_0.1-0.3	7	100	<1	5	20	76	54	<0.1	7	482	<10	<10	<50	<50	<100	<100	<50
TP494_0.0-0.2	<5	30	<1	4	<5	11	5	<0.1	<2	11	<10	<10	<50	<50	<100	<100	<50
TP495_0.1-0.2	<5	60	<1	4	<5	16	<5	<0.1	<2	9	<10	<10	<50	<50	<100	<100	<50
BH401_0.4-0.5	8	320	<1	5	19	18	459	<0.1	30	245	<10	<10	<50	<50	<100	<100	<50
BH401_2.9-3.0	<5	90	<1	2	8	11	117	<0.1	6	43	<10	<10	<50	<50	<100	<100	<50
BH402_0.0-0.1	10	110	<1	4	19	18	199	<0.1	10	106	<10	<10	<50	<50	<100	<100	<50
BHQ01	8	100	<1	4	27	18	172	<0.1	8	92	<10	<10	<50	<50	<100	<100	<50
BHQ02	7	91	0.4	3.3	32	17	750	0.05	36	200	<25	<25	<25	<25	<90	<120	<210
BH402_0.9-1.0	<5	20	<1	<2	5	9	99	<0.1	26	155	<10	<10	<50	<50	<100	<100	<50
BH601_0.0-0.1	<5	70	<1	3	19	13	269	<0.1	9	75	<10	<10	**130**	130	**650**	100	880
BH603_2.0-2.5	<5	50	<1	2	15	12	234	<0.1	7	58	<10	<10	<50	<50	<100	<100	<50
BH604_0.0-0.1	<5	50	<1	2	6	12	424	<0.1	25	227	<10	<10	<50	<50	<100	<100	<50
BH604_0.0-0.1	6	40	<1	2	6	10	398	<0.1	22	186	<10	<10	<50	<50	<100	<100	<50
MW400D_0.0-0.05	6	140	<1	5	15	15	269	<0.1	18	116	<10	<10	<50	<50	<100	<100	<50
MW400D_0.05-0.1	7	120	<1	5	18	19	130	<0.1	17	99	<10	<10	<50	<50	<100	<100	<50
MWQ03	8	100	<1	4	14	15	71	<0.1	20	67	<10	<10	<50	<50	<100	<100	<50
MW400S_2.9-3.0	<5	20	<1	3	18	19	8	<0.1	19	248	<10	<10	<50	<50	<100	<100	<50
SED401_0.0-0.1	<5	40	<1	2	10	12	392	<0.1	21	169	<10	<10	<50	<50	<100	<100	<50
SED402_0.1-0.2	<5	50	<1	2	20	16	186	<0.1	13	85	<10	<10	<50	<50	<100	<100	<50
SED403_0.0-0.1	<5	50	<1	<2	10	11	184	<0.1	11	102	<10	<10	<50	<50	<100	<100	<50
TP301_0.5-0.7	<5	60	<1	2	<5	10	34	<0.1	4	44	<10	<10	<50	<50	<100	<100	<50
TP302_1.5-1.7	<5	70	<1	<2	14	12	463	<0.1	8	66	<10	<10	<50	<50	<100	<100	<50
TP303_0-0.2	7	70	<1	5	9	13	92	<0.1	9	61	<10	<10	<50	<50	<100	<100	<50
TP303_0.2-0.3	5	70	<1	2	12	6	39	<0.1	13	46	<10	<10	<50	<50	<100	<100	<50
TP305_0-0.2	6	100	<1	5	16	20	93	<0.1	13	96	<10	<10	<50	<50	110	<100	110
TP306_0-0.2	8	100	<1	6	19	20	76	<0.1	20	106	<10	<10	<50	<50	<100	<100	<50
TP306_0.2-0.4	<5	50	<1	2	10	<5	21	<0.1	11	37	<10	<10	<50	<50	<100	<100	<50
TPQ-003	7	70	<1	3	13	10	40	<0.1	16	64	<10	<10	<50	<50	<100	<100	<50
TPQ-004	5	46	<0.3	3.9	8.9	7	28	0.05	17	48	<25	<25	120	120	**570**	<120	720
TP400_0-0.2	6	90	<1	3	11	17	128	<0.1	7	72	<10	<10	<50	<50	<100	<100	<50
TP400_1.0-1.1	9	130	<1	6	71	92	376	<0.1	7	1330	<10	<10	<50	<50	<100	<100	<50
TP401_0.5-0.7	7	110	<1	7	22	31	173	<0.1	10	83	<10	<10	<50	<50	190	<100	190
TP401_1.7-1.9	6	90	<1	5	10	15	39	<0.1	7	67	<10	<10	<50	<50	<100	<100	<50
TP402_0.2-0.3	11	20	<1	2	13	25	37	<0.1	8	58	14	14	**160**	160	**870**	150	1180
TP403_0-0.2	6	90	<1	4	9	14	119	<0.1	5	36	<10	<10	<50	<50	<100	<100	<50
TP403_1.1-1.3	<5	170	<1	5	20	11	256	<0.1	25	66	<10	<10	<50	<50	<100	<100	<50
TP404_0.6-0.8	6	90	<1	3	8	10	26	<0.1	<2	21	<10	<10	<50	<50	<100	<100	<50
TP405_0.3-0.5	7	70	<1	<2	32	14	31	<0.1	8	74	<10	<10	110	110	**660**	<100	770
TP406_0.1-0.2	<5	50	<1	2	5	10	99	<0.1	5	41	<10	<10	<50	<50	<100	<100	<50
TP407_0.1-0.2	8	90	<1	4	15	17	365	<0.1	13	113	<10	<10	<50	<50	240	<100	240
TP407_0.5-0.7	7	80	<1	4	14	16	250	<0.1	10	83	<10	<10	70	70	**320**	<100	390
TP410_0.1-0.2	6	180	<1	8	12	16	27	<0.1	3	17	<10	<10	<50	<50	<100	<100	<50
TP412_0.0-0.1	<5	40	<1	7	<5	14	<5	<0.1	3	8	<10	<10	<50	<50	<100	<100	<50
TP414_0-0.2	5	70	<1	3	5	13	46	<0.1	3	27	<10	<10	<50	<50	<100	<100	<50
TP414_0.5-0.7	<5	120	<1	4	<5	10	20	<0.1	<2	12	<10	<10	<50	<50	<100	<100	<50
TP414_1.7-1.9	<5	70	<1	4	6	22	136	<0.1	4	31	<10	<10	<50	<50	<100	<100	<50
TP415_0.0-0.1	<5	90	<1	4	<5	16	80	<0.1	3	32	<10	<10	<50	<50	<100	<100	<50
TP416_0.0-0.1	5	190	<1	6	<5	13	102	<0.1	4	46	<10	<10	<50	<50	<100	<100	<50
TP416_0.9-1.0	5	70	<1	3	10	21	352	<0.1	7	88	<10	<10	<50	<50	<100	<100	<50

Field_ID	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Pyrene	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene
	BTEX							PAH								
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.2	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]																
US EPA Residential Soil Screening Level[2]																
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]																
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3																
NEPM 2013 Table 1A(1) HILs Res A Soil[4]																
NEPM 2013 Table 1A(1) HILs Res B Soil[4]																
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]																
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																
0-1m	0.5	160	55			40										
1-2m	0.5	220	NL			60										
2-4m	0.5	310	NL			95										
>4m	0.5	540	NL			170										
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																
0-1m	NL	NL	NL			NL										
1-2m	NL	NL	NL			NL										
2-4m	NL	NL	NL			NL										
>4m	NL	NL	NL			NL										
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																
0-2m	**50**	**85**	**70**			**105**						**0.7**				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]	100	14000	4500			12000										
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]	140	21000	5900			17000										
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]	120	18000	5300			15000										
CRCCare Soil Direct Contact Intrusive Works[9]	1100	120000	85000			130000										
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]	77	NL	NL			NL										
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]	160	NL	NL			NL										
A04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA400_0.5-0.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA401_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HAQ01	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA402_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA403_0.4-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA406_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA407_0.0-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA408_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	1.1	<0.5	<0.5	<0.5	0.5	0.7	<0.5	0.5	0.6
MW403D_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MWQ07	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW403D_0.4-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP307_0.4-0.6	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP308_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP309_0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP310_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP310_0.8-1.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-007	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-008	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.2
TP311_0.2-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP312_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP321_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP321_0.4-0.6	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP409_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP409_0.3-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP411_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP413_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP413_1.7-1.9	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ_030	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-031	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	0.2	<0.1	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.2
TP417_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP417_1.9-2.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ068	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ069	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	0.8	<0.2	<0.1	0.8	0.2	0.2	0.1	<0.1	0.6
TP418_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP419_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP420_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP420_2.0-2.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP421_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP421_1.0-1.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP422_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP422_0.3-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-048	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-049	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP423_0.2-0.4	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP424_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP425_0.6-0.8	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP426_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP427_0.1-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP494_0.0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP495_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH401_0.4-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH401_2.9-3.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH402_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	1.4	<0.5	<0.5	0.8	0.7	1	<0.5	<0.5	0.9
BHQ01	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BHQ02	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	0.5	<0.1	<0.1	0.3	0.2	0.3	0.1	<0.1	0.3
BH402_0.9-1.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH601_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH603_2.0-2.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH604_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH604_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW400D_0.0-0.05	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	2.3	<0.5	<0.5	0.9	**0.8**	1	<0.5	0.6	0.9
MW400D_0.05-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	3.4	<0.5	<0.5	1.4	**0.9**	1.8	0.7	0.6	1.5
MWQ03	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	2.8	<0.5	<0.5	1.2	<0.5	0.9	<0.5	<0.5	1.2
MW400S_2.9-3.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SED401_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SED402_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SED403_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP301_0.5-0.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP302_1.5-1.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP303_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	2.8	<0.5	<0.5	1.2	**1.1**	1.6	0.7	0.8	1.3
TP303_0.2-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	1	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.7
TP305_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP306_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP306_0.2-0.4	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-003	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TPQ-004	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6	0.6	<0.1	<0.1	0.6	0.1	0.3	<0.1	<0.1	0.5
TP400_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP400_1.0-1.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP401_0.5-0.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	11.6	0.6	1.6	4.3	**4.6**	5.2	2	2	4.2
TP401_1.7-1.9	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP402_0.2-0.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	1.2	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.7
TP403_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP403_1.1-1.3	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP404_0.6-0.8	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP405_0.3-0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	0.9	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP406_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP407_0.1-0.2	<0.2	<0.5	<0.5	<0.5	0.6	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP407_0.5-0.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP410_0.1-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP412_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP414_0-0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP414_0.5-0.7	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP414_1.7-1.9	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP415_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP416_0.0-0.1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP416_0.9-1.0	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of detections)	Benzo(a)pyrene TEQ (zero) - Lab Calc	Benzo(a)pyrene TEQ (half LOR) - Lab Calc	Benzo(a)pyrene TEQ (LOR) - Lab Calc	Benzo(a)pyrene TEQ (lower boUd) *	Benzo(a)pyrene TEQ (upper boUd) *	Aldrin + Dieldrin	chlordane	4,4 DDT	DDT+DDE+DDD - Lab Calc	Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	PCBs (Total)
	PAH											OC Pesticides									PCBs
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.2	0.1
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]																					
US EPA Residential Soil Screening Level[2]																					
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]				170										180	180						
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3				170										180	180						
NEPM 2013 Table 1A(1) HILs Res A Soil[4]						300	3	3	3			6	50		240	270	10	6	10	300	1
NEPM 2013 Table 1A(1) HILs Res B Soil[4]						400	4	4	4			10	90		600	400	20	10	15	500	1
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]						300	3	3	3			10	70		400	340	20	10	10	400	1
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																					
0-1m				3																	
1-2m				NL																	
2-4m				NL																	
>4m				NL																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																					
0-1m				NL																	
1-2m				NL																	
2-4m				NL																	
>4m				NL																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																					
0-2m																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																					
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]				1400																	
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]				2200																	
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]				1900																	
CRCCare Soil Direct Contact Intrusive Works[9]				29000																	
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]				NL																	
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]				NL																	
A04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA400_0.5-0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA401_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HAQ01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA402_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA403_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA406_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA407_0.0-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA408_0.0-0.1	1.2	<0.5	<0.5	<0.5	<0.5	4.6	-	0.9	-	0.6	1.2	-	-	-	-	-	-	-	-	-	-
MW403D_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MWQ07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW403D_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP307_0.4-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP308_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP309_0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP310_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP310_0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-008	0.1	<0.1	<0.1	<0.1	0.4	1.4	-	<0.2	-	-	<0.3	-	-	-	-	-	-	-	-	-	-
TP311_0.2-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP312_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP321_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP321_0.4-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP409_0-0.2	<0.5	<0.5	<0.5	<0.5	0.7	0.7	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP409_0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP411_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP413_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP413_1.7-1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ_030	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-031	0.3	<0.1	<0.1	<0.1	0.3	1.5	-	<0.2	-	-	<0.3	-	-	-	-	-	-	-	-	-	-
TP417_0.0-0.1	<0.5	<0.5	<0.5	<0.5	0.6	0.6	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP417_1.9-2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ068	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ069	0.8	<0.2	<0.1	<0.1	1.3	5.1	-	0.3	-	-	0.4	-	-	-	-	-	-	-	-	-	-
TP418_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP419_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP420_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP420_2.0-2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP421_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP421_1.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP422_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP422_0.3-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-048	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-049	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	-	<0.2	-	-	<0.3	-	-	-	-	-	-	-	-	-	-
TP423_0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP424_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP425_0.6-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP426_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP427_0.1-0.3	1.8	<0.5	<0.5	<0.5	1.8	5.3	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP494_0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP495_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH401_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH401_2.9-3.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH402_0.0-0.1	1.4	<0.5	<0.5	<0.5	1.1	7.3	-	1.2	-	0.9	1.5	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BHQ01	0.7	<0.5	<0.5	<0.5	1	2.4	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BHQ02	0.6	<0.1	<0.1	<0.1	0.8	3.9	-	0.3	-	-	0.3	-	-	-	-	-	-	-	-	-	-
BH402_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH601_0.0-0.1	<0.5	<0.5	<0.5	<0.5	1.1	1.7	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH603_2.0-2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
BH604_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	-	-	-	-
BH604_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW400D_0.0-0.05	2.4	<0.5	<0.5	<0.5	1.3	10.2	-	1.3	-	1	1.6	-	-	-	-	-	-	-	-	-	-
MW400D_0.05-0.1	4	<0.5	0.6	<0.5	2.1	17	-	1.6	-	1.4	1.9	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
MWQ03	3.4	<0.5	<0.5	<0.5	2.8	12.3	-	0.8	-	<0.5	1.3	-	-	-	-	-	-	-	-	-	-
MW400S_2.9-3.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
SED401_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
SED402_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
SED403_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP301_0.5-0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP302_1.5-1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP303_0-0.2	3	<0.5	0.6	<0.5	1.5	14.6	-	1.8	-	1.5	2	-	-	-	-	-	-	-	-	-	-
TP303_0.2-0.3	1.4	<0.5	<0.5	<0.5	1.9	5.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP305_0-0.2	0.6	<0.5	<0.5	<0.5	0.6	1.7	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP306_0-0.2	<0.5	<0.5	<0.5	<0.5	0.7	0.7	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP306_0.2-0.4	0.8	<0.5	<0.5	<0.5	1.1	2.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-003	0.8	<0.5	<0.5	<0.5	1.2	2.6	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-004	0.9	<0.1	<0.1	<0.1	1.4	5.6	-	0.3	-	-	0.3	-	-	-	-	-	-	-	-	-	-
TP400_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP400_1.0-1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP401_0.5-0.7	12.3	0.8	1.8	<0.5	7	58	-	6.2	-	6	6.5	-	-	-	-	-	-	-	-	-	-
TP401_1.7-1.9	<0.5	<0.5	<0.5	<0.5	0.8	1.3	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP402_0.2-0.3	0.9	<0.5	<0.5	<0.5	2.3	5.7	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP403_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP403_1.1-1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP404_0.6-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	1.14	<0.2	<0.1
TP405_0.3-0.5	0.5	<0.5	<0.5	<0.5	1.2	3.1	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP406_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP407_0.1-0.2	<0.5	<0.5	<0.5	0.9 - 1	<0.5	0.9	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP407_0.5-0.7	<0.5	<0.5	<0.5	1 - 1.3	<0.5	1.3	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP410_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP412_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP414_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP414_0.5-0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP414_1.7-1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP415_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP416_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP416_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-

Appendix C
Table 2
Analytical Results - Soil and Sediment

									Asbestos				Anion	PFC		Inorganics		
Field_ID	Location_Code	Sampled_Date_Time	Sample_Depth_Range	Sample_Type	Lab_Report_Number	Area	Material Type[11]	weight of sample	Asbestos (Presence/Absence)	Weight Used for % Calculation	Asbestos Containing Material	Friable Asbestos (as Asbestos in Soil)	Fluoride	PFOA	PFOS	CEC	Moisture	pH (Lab)
								g	-	kg	g	%	mg/kg	mg/kg	mg/kg	meq/100g	%	pH Uits
LOR								0.01		0.0001	0.0004	0.001	40	0.0005	0.0005	0.1	1	0.1
Toxicity derivation. and Region IX exposure factors (USEPA 2009b)[1]														16	6			
US EPA Residential Soil Screening Level[2]													3100					
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]																		
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3																		
NEPM 2013 Table 1A(1) HILs Res A Soil[4]																		
NEPM 2013 Table 1A(1) HILs Res B Soil[4]																		
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]																		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																		
0-2m																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																		
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]																		
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]																		
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]																		
CRCCare Soil Direct Contact Intrusive Works[9]																		
CRCCare Soil HSL Vap.Int Intrusive Works.0 to <2m.Sand[10]																		
CRCCare Soil HSL Vap.Int Intrusive Works.2 to <4m.Sand[10]																		
TP478_0.1-0.3	TP478	16/10/2015	0.1-0.3	Normal	ES1533824	2	UC	-	-	-	-	-	260	-	-	-	10.1	-
TP479_0.1-0.2	TP479	14/10/2015	0.1-0.2	Normal	ES1533607	2	DC	-	-	-	-	-	260	-	-	-	16.4	-
TP479_0.2-0.4	TP479	14/10/2015	0.2-0.4	Normal	ES1533607	2	DC	-	-	-	-	-	110	<0.0005	<0.0005	-	5	-
TPQ-016	TP479	14/10/2015	0.2-0.4	Field_D	ES1533607	2	DC	-	-	-	-	-	80	-	-	-	6.7	-
TP480_0.4-0.6	TP480	19/10/2015	0.4-0.6	Normal	ES1533951	2	DC	-	-	-	-	-	230	<0.0005	<0.0005	12	18.8	5.2
TP481_0.4-0.5	TP481	23/10/2015	0.4-0.5	Normal	ES1534383	2	DC	332	0	0.332	-	-	220	-	-	-	24.6	-
TP483_0.1-0.3	TP483	15/10/2015	0.1-0.3	Normal	ES1533724	2	DC	685	0	0.685	-	-	260	-	-	-	10.3	-
TP483_0.4-0.6	TP483	15/10/2015	0.4-0.6	Normal	ES1533724	2	DC	-	-	-	-	-	250	-	-	-	16.4	-
TP484_0.0-0.05	TP484	23/10/2015	0-0.05	Normal	ES1534383	2	U	-	-	-	-	-	160	-	-	-	19	-
TP485_0.7-0.9	TP485	16/10/2015	0.7-0.9	Normal	ES1533824	2	D	-	-	-	-	-	200	-	-	-	17.8	-
TP486_0.1-0.3	TP486	15/10/2015	0.1-0.3	Normal	ES1533724	2	D	724	0	0.724	-	-	220	-	-	-	9.5	-
TP487_0.7-0.9	TP487	15/10/2015	0.7-0.9	Normal	ES1533724	2	D	-	-	-	-	-	210	-	-	-	13.4	-
TP488_0.3-0.4	TP488	15/10/2015	0.3-0.4	Normal	ES1533724	2	D	-	-	-	-	-	200	-	-	-	14.6	-
TP488_1.2-1.4	TP488	15/10/2015	1.2-1.4	Normal	ES1533724	2	D	29.9	0	0.0299	-	-	200	-	-	-	13.5	-
TPQ-024	TP488	15/10/2015	1.2-1.4	Field_D	ES1533724	2	D	-	-	-	-	-	-	-	-	-	14.1	-
TP489_0.1-0.3	TP489	15/10/2015	0.1-0.3	Normal	ES1533724	2	D	-	-	-	-	-	270	-	-	-	15.7	-
TPQ-021	TP489	15/10/2015	0.1-0.3	Field_D	ES1533724	2	D	-	-	-	-	-	-	-	-	-	16.1	-
TP489_0.4-0.6	TP489	15/10/2015	0.4-0.6	Normal	ES1533724	2	D	583	0	0.583	-	-	310	-	-	-	13.6	-
TP490_0.1-0.3	TP490	15/10/2015	0.1-0.3	Normal	ES1533724	2	D	612	0	0.612	-	-	260	-	-	-	16.4	-
TP491_0.1-0.3	TP491	15/10/2015	0.1-0.3	Normal	ES1533724	2	D	-	-	-	-	-	-	-	-	-	7.2	-
TP492_0.1-0.2	TP492	15/10/2015	0.1-0.2	Normal	ES1533724	2	D	-	-	-	-	-	-	-	-	-	9.9	-
TP492_1.0-1.2	TP492	15/10/2015	1-1.2	Normal	ES1533724	2	D	702	0	0.702	-	-	-	-	-	-	9.8	-
TPQ-019	TP492	15/10/2015	1-1.2	Field_D	ES1533724	2	D	-	-	-	-	-	-	-	-	-	17.8	-
TPQ-020	TP492	15/10/2015	1-1.2	Interlab_D	SE145052-1	2	D	-	-	-	-	-	310	-	-	-	14	-
TP493_0.1-0.3	TP493	16/10/2015	0.1-0.3	Normal	ES1533824	2	D	507	0	0.507	-	-	160	-	-	-	19.2	-
TP493_1.8-2.0	TP493	16/10/2015	1.8-2	Normal	ES1533824	2	D	602	0	0.602	-	-	170	-	-	-	12.4	-
MW404S_0.4-0.5	MW404S	21/10/2015	0.4-0.5	Normal	ES1534200	3	U	-	-	-	-	-	290	-	-	-	23.6	-
MWQ08	MW404S	21/10/2015	0.4-0.5	Field_D	ES1534200	3	U	-	-	-	-	-	240	-	-	-	23.8	-
MWQ09	MW404S	21/10/2015	0.4-0.5	Interlab_D	SE145246-1	3	U	-	-	-	-	-	330	-	-	-	25	-
MW404S_0.9-1.0	MW404S	21/10/2015	0.9-1	Normal	ES1534200	3	U	-	-	-	-	-	310	-	-	-	12.3	-
SED404_0.0-0.1	SED404	26/10/2015	0-0.1	Normal	ES1534541	3	U	-	-	-	-	-	-	-	-	-	48.1	-
TP313_0.1-0.3	TP313	13/10/2015	0.1-0.3	Normal	ES1533492	3	U	-	-	-	-	-	160	-	-	-	11.5	-
TP314_0-0.2	TP314	13/10/2015	0-0.2	Normal	ES1533492	3	DC	39.2	0	0.0392	-	-	230	-	-	-	14.8	-
TP314_0.6-0.8	TP314	13/10/2015	0.6-0.8	Normal	ES1533492	3	DC	-	-	-	-	-	230	-	-	-	13.6	-
TP315_0-0.2	TP315	13/10/2015	0-0.2	Normal	ES1533492	3	D	-	-	-	-	-	260	-	-	-	9.1	-
TPQ-009	TP315	13/10/2015	0-0.2	Field_D	ES1533492	3	D	-	-	-	-	-	240	-	-	-	10.4	-
TP315_1.6-1.8	TP315	13/10/2015	1.6-1.8	Normal	ES1533492	3	D	640	0	0.64	-	-	290	-	-	-	9.3	-
TP315_2.1-2.3	TP315	13/10/2015	2.1-2.3	Normal	ES1533492	3	D	-	-	-	-	-	280	-	-	-	9.2	-
TP317_0.1-0.3	TP317	14/10/2015	0.1-0.3	Normal	ES1533607	3	UC	-	-	-	-	-	200	-	-	-	24.1	-
TP318_0-0.2	TP318	14/10/2015	0-0.2	Normal	ES1533607	3	D	532	0	-	-	-	270	-	-	-	21.7	-
TP318_0.8-1.0	TP318	14/10/2015	0.8-1	Normal	ES1533607	3	DC	-	-	-	-	-	200	-	-	-	12.2	-
TPQ-015	TP318	14/10/2015	0.8-1	Field_D	ES1533607	3	DC	-	-	-	-	-	220	-	-	-	22.1	-
TP444_0.7-0.8	TP444	19/10/2015	0.7-0.8	Normal	ES1533951	3	D	-	-	-	-	-	180	<0.0005	<0.0005	-	17.2	-
TP445_0.2-0.4	TP445	19/10/2015	0.2-0.4	Normal	ES1533951	3	DC	-	-	-	-	-	280	-	-	-	16.2	-
TP445_0.9-1.1	TP445	19/10/2015	0.9-1.1	Normal	ES1533951	3	DC	-	-	-	-	-	270	<0.0005	<0.0005	-	21.4	-
TPQ_42	TP445	19/10/2015	0.9-1.1	Field_D	ES1533951	3	DC	-	-	-	-	-	280	-	-	-	21.2	-
TPQ-43	TP445	19/10/2015	0.9-1.1	Interlab_D	SE145126-1	3	DC	-	-	-	-	-	220	-	-	-	22	-
TP446_0.1-0.3	TP446	19/10/2015	0.1-0.3	Normal	ES1533951	3	DC	500	0	0.5	-	-	310	-	-	-	19.1	-
TP446_1.9-2.1	TP446	19/10/2015	1.9-2.1	Normal	ES1533951	3	DC	-	-	-	-	-	250	-	-	-	19.6	-
TP447_0.8-1.0	TP447	19/10/2015	0.8-1	Normal	ES1533951	3	DC	-	-	-	-	-	220	<0.0005	<0.0005	-	18.4	-
TPQ_38	TP447	19/10/2015	0.8-1	Field_D	ES1533951	3	DC	-	-	-	-	-	240	-	-	-	18.8	-
TP448_0-0.2	TP448	19/10/2015	0-0.2	Normal	ES1533951	3	DC	-	-	-	-	-	290	<0.0005	<0.0005	-	17.3	-
TP448_1.6-1.8	TP448	19/10/2015	1.6-1.8	Normal	ES1533951	3	U	-	-	-	-	-	250	-	-	-	25.6	-
TP449_0.4-0.6	TP449	19/10/2015	0.4-0.6	Normal	ES1533951	3	DC	-	-	-	-	-	-	<0.0005	<0.0005	-	22.3	-
TP449_1.0-1.2	TP449	19/10/2015	1-1.2	Normal	ES1533951	3	DC	-	-	-	-	-	400	-	-	-	22.1	-
TP450_0.1-0.3	TP450	19/10/2015	0.1-0.3	Normal	ES1533951	3	D	525	0	0.525	-	-	120	<0.0005	<0.0005	-	15.7	-
TP450_0.5-0.7	TP450	19/10/2015	0.5-0.7	Normal	ES1533951	3	D	-	-	-	-	-	260	-	-	-	21.4	-
TP450_2.3-2.5	TP450	19/10/2015	2.3-2.5	Normal	ES1533951	3	UC	-	-	-	-	-	200	-	-	-	16.9	-
TP452_0.0-0.05	TP452	21/10/2015	0-0.05	Normal	ES1534200	3	DC	-	-	-	-	-	320	-	-	-	6.4	-
TP453_0.0-0.1	TP453	21/10/2015	0-0.1	Normal	ES1534200	3	U	-	-	-	-	-	280	<0.0005	<0.0005	-	27.2	-
TP454_0.4-0.5	TP454	21/10/2015	0.4-0.5	Normal	ES1534200	3	D	-	-	-	-	-	110	-	-	-	10.9	-
TP455_0.0-0.1	TP455	22/10/2015	0-0.1	Normal	ES1534334	3	D	-	-	-	-	-	190	-	-	-	19.5	-
TP455_0.4-0.5	TP455	22/10/2015	0.4-0.5	Normal	ES1534334	3	D	56.7	0	0.0567	-	-	230	-	-	-	19.9	-
TP456_0.4-0.5	TP456	22/10/2015	0.4-0.5	Normal	ES1534334	3	D	-	-	-	-	-	190	-	-	-	26.2	-
TP457_0.0-0.1	TP457	22/10/2015	0-0.1	Normal	ES1534334	3	U	587	0	0.587	-	-	160	-	-	-	25.5	-
TPQ062	TP457	22/10/2015	0-0.1	Field_D	ES1534334	3	U	-	-	-	-	-	180	-	-	-	26.4	-
TPQ063	TP457	22/10/2015	0-0.1	Interlab_D	SE145454-1	3	U	-	-	-	-	-	170	-	-	-	25	-
TP458_0.9-1.0	TP458	22/10/2015	0.9-1	Normal	ES1534334	3	DC	-	-	-	-	-	200	-	-	-	22.3	-
TP459_0.0-0.1	TP459	21/10/2015	0-0.1	Normal	ES1534200	3	D	-	-	-	-	-	110	<0.0005	0.0016	-	10.7	-
TP459_0.5-0.6	TP459	21/10/2015	0.5-0.6	Normal	ES1534200	3	D	467	0	0.467	<0.0004	<0.001	120	-	-	-	17.3	-
TP460_0.0-0.2	TP460	21/10/2015	0-0.2	Normal	ES1534200	3	DC	-	-	-	-	-	270	-	-	-	20	-
TP460_0.9-1.0	TP460	21/10/2015	0.9-1	Normal	ES1534200	3	DC	-	-	-	-	-	240	-	-	-	22.3	-
TP461_0.0-0.2	TP461	21/10/2015	0-0.2	Normal	ES1534200	3	DC	470	0	0.47	<0.0004	<0.001	330	<0.0005	<0.0005	-	17.2	-
TPQ058	TP461	21/10/2015	0-0.2	Field_D	ES1534200	3	DC	-	-	-	-	-	370	-	-	-	17.4	-
TP461_0.6-0.8	TP461	21/10/2015	0.6-0.8	Normal	ES1534200	3	U	-	-	-	-	-	200	-	-	-	23.4	-
TP462_0.2-0.4	TP462	21/10/2015	0.2-0.4	Normal	ES1534200	3	D	-	-	-	-	-	320	-	-	-	18.2	-
TP463_0.1-0.2	TP463	19/10/2015	0.1-0.2	Normal	ES1533951	3	DC	-	-	-	-	-	310	-	-	-	17.1	-
TP464_0.0-0.2	TP464	21/10/2015	0-0.2	Normal	ES1534200	3	D	446	0	0.446	<0.0004	<0.001	230	-	-	-	9	-
TP464_0.4-0.5	TP464	21/10/2015	0.4-0.5	Normal	ES1534200	3	UC	-	-	-	-	-	200	-	-	-	16.3	-
TPQ057	TP464	21/10/2015	0.4-0.5	Field_D	ES1534200	3	UC	-	-	-	-	-	200	-	-	-	14.3	-
TP465_0.0-0.1	TP465	21/10/2015	0-0.1	Normal	ES1534200	3	D	484	0	0.484	<0.0004	<0.001	120	-	-	-	9.9	-
TP466_0.0-0.1	TP466	21/10/2015	0-0.1	Normal	ES1534200	3	D	-	-	-	-	-	270	-	-	9.3	11.7	5.7
TP466_0.4-0.5	TP466	21/10/2015	0.4-0.5	Normal	ES1534200	3	UC	-	-	-	-	-	270	-	-	-	17.3	-
TP467_.0-0.1	TP467	21/10/2015	0-0.1	Normal	ES1534200	3	D	-	-	-	-	-	350	-	-	-	32.3	-
TP468_0.0-0.1	TP468	22/10/2015	0-0.1	Normal	ES1534334	3	D	-	-	-	-	-	450	-	-	-	25.1	-
TP468_0.4-0.5	TP468	22/10/2015	0.4-0.5	Normal	ES1534334	3	DC	-	-	-	-	-	270	-	-	-	25.3	-
TP469_0.0-0.1	TP469	22/10/2015	0-0.1	Normal	ES1534334	3	D	452	0	0.452	-	-	60	-	-	-	19	-
TP470_0.0-0.1	TP470	22/10/2015	0-0.1	Normal	ES1534334	3	DC	388	0	0.388	-	-	60	-	-	-	21.6	-
TP470_0.5-0.6	TP470	22/10/2015	0.5-0.6	Normal	ES1534334	3	DC	-	-	-	-	-	190	-	-	-	22.7	-
TP471_0.0-0.1	TP471	20/10/2015	0-0.1	Normal	ES1534200	3	D	-	-	-	-	-	130	-	-	-	7.8	-
TP471_0.9-1.0	TP471	20/10/2015	0.9-1	Normal	ES1534200	3	DC	-	-	-	-	-	230	-	-	-	16.8	-
TP472_0.0-0.1	TP472	20/10/2015	0-0.1	Normal	ES1534200	3	UC	-	-	-	-	-	160	-	-	-	13.2	-
TP473_0.0-0.1	TP473	22/10/2015	0-0.1	Normal	ES1534334	3	D	394	0	0.394	-	-	210	-	-	-	12.8	-
TP473_0.4-0.5	TP473	22/10/2015	0.4-0.5	Normal	ES1534334	3	D	-	-	-	-	-	170	-	-	-	10.7	-
TP474_0.1-0.3	TP474	16/10/2015	0.1-0.3	Normal	ES1533824	3	D	400	0	0.4	-	-	330	-	-	17.2	19.8	7.4
TP476_0.5-0.6	TP476	22/10/2015	0.5-0.6	Normal	ES1534334	3	DC	-	-	-	-	-	250	-	-	-	13.2	-
TP477_0.2-0.4	TP477	16/10/2015	0.2-0.4	Normal	ES1533824	3	UC	-	-	-	-	-	130	<0.0005	<0.0005	-	8	-
HA409_0.0-0.1	HA409	19/10/2015	0-0.1	Normal	ES1534055	4	U	-	-	-	-	-	110	-	-	3.8	8.2	5.5

	Metals										TRH - NEPM 2013							BTEX						
Field_ID	Arsenic	Barium	Cadmium	Chromium (III+VI)	Copper	Lead	Manganese	Mercury	Nickel	Zinc	C6-C10 minus BTEX (F1)	C6 - C10 Fraction	>C10-C16 minus Naphthalene (F2)	>C10 - C16 Fraction	>C16 - C34 Fraction (F3)	>C34 - C40 Fraction (F4)	>C10 - C40 (Sum of Total)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	5	10	1	2	5	5	5	0.1	2	5	10	10	50	50	100	100	50	0.2	0.5	0.5	0.5	0.5	0.5	0.2
US EPA Residential Soil Screening Level[2]		15,000																						
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]	100			190	60	1100			30	70														
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3	100			250	95	1100			170	180														
NEPM 2013 Table 1A(1) HILs Res A Soil[4]	100		20	100	6000	300	3800	40	400	7400														
NEPM 2013 Table 1A(1) HILs Res B Soil[4]	500		150	500	30000	1200	14000	120	1200	60000														
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]	300		90	300	17000	600	19000	80	1200	30000														
Res A/B Soil HSL 0-1m											45		110					0.5	160	55			40	
Res A/B Soil HSL 1-2m											70		240					0.5	220	NL			60	
Res A/B Soil HSL 2-4m											110		440					0.5	310	NL			95	
Res A/B Soil HSL >4m											200		NL					0.5	540	NL			170	
Rec C Soil HSL 0-1m											NL		NL					NL	NL	NL			NL	
Rec C Soil HSL 1-2m											NL		NL					NL	NL	NL			NL	
Rec C Soil HSL 2-4m											NL		NL					NL	NL	NL			NL	
Rec C Soil HSL >4m											NL		NL					NL	NL	NL			NL	
ESLs 0-2m											**180**		**120**		**300**	**2800**		**50**	**85**	**70**			**105**	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]												700		1000	2500	10000								
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]												4400		3300	4500	6300		100	14000	4500			12000	
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]												5600		4200	5800	8100		140	21000	5900			17000	
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]												5100		3800	5300	7400		120	18000	5300			15000	
CRCCare Soil Direct Contact Intrusive Works[9]												82000		62000	85000	120000		1100	120000	85000			130000	
CRCCare Soil HSL Vap.Int Intrusive Works.0 to <2m.Sand[10]												NL		NL				77	NL	NL			NL	
CRCCare Soil HSL Vap.Int Intrusive Works.2 to <4m.Sand[10]												NL		NL				160	NL	NL			NL	
TP478_0.1-0.3	15	10	<1	<2	12	27	<5	0.2	4	28	<10	<10	**160**	160	**740**	110	1010	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP479_0.1-0.2	17	10	<1	<2	20	39	<5	0.2	32	216	<10	<10	<50	<50	180	<100	180	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP479_0.2-0.4	<5	<10	<1	<2	<5	<5	<5	<0.1	22	74	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-016	6	<10	<1	<2	<5	<5	<5	<0.1	28	72	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP480_0.4-0.6	5	70	<1	3	35	20	64	<0.1	15	88	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP481_0.4-0.5	21	40	<1	2	52	20	11	0.1	25	176	<10	<10	<50	<50	160	<100	160	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP483_0.1-0.3	<5	60	<1	3	17	15	332	<0.1	8	62	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP483_0.4-0.6	<5	100	<1	3	15	13	1210	<0.1	16	116	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP484_0.0-0.05	<5	30	<1	<2	<5	11	147	<0.1	4	34	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP485_0.7-0.9	<5	40	<1	<2	10	13	130	<0.1	5	41	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP486_0.1-0.3	<5	50	<1	2	12	13	162	<0.1	7	53	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP487_0.7-0.9	<5	40	<1	<2	9	12	165	<0.1	6	48	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP488_0.3-0.4	<5	80	<1	2	10	12	109	<0.1	5	43	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP488_1.2-1.4	<5	60	<1	3	11	13	94	<0.1	7	49	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-024	<5	40	<1	2	11	13	62	<0.1	6	48	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP489_0.1-0.3	<5	140	<1	5	29	24	31	<0.1	15	99	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-021	<5	100	<1	5	23	20	33	<0.1	12	87	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP489_0.4-0.6	5	50	<1	3	25	19	129	<0.1	10	80	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP490_0.1-0.3	6	250	<1	3	12	18	22	<0.1	5	105	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP491_0.1-0.3	<5	130	<1	2	<5	10	498	<0.1	27	200	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP492_0.1-0.2	5	160	<1	4	10	14	415	<0.1	18	191	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP492_1.0-1.2	8	150	<1	5	13	18	430	<0.1	13	137	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-019	5	290	<1	8	10	14	244	<0.1	14	129	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-020	7	68	<0.3	2.7	8.2	11	490	0.02	8.6	94	<25	<25	<25	<25	<90	<120	<210	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6
TP493_0.1-0.3	6	140	<1	<2	5	12	23	<0.1	3	42	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP493_1.8-2.0	11	120	<1	3	17	17	109	<0.1	4	48	<10	<10	<50	<50	160	<100	160	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW404S_0.4-0.5	6	110	<1	4	8	12	138	<0.1	9	79	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MWQ08	13	130	<1	4	8	13	130	<0.1	10	104	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MWQ09	5	98	<0.3	5	9.6	14	150	0.01	9.3	82	<25	<25	<25	<25	<90	<120	<210	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6
MW404S_0.9-1.0	<5	10	<1	<2	21	21	163	<0.1	4	119	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
SED404_0.0-0.1	<5	-	<1	4	11	16	-	<0.1	8	66	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP313_0.1-0.3	<5	60	<1	8	10	30	19	0.3	4	47	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP314_0-0.2	16	80	<1	<2	55	15	12	<0.1	2	33	<10	<10	<50	<50	180	<100	180	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP314_0.6-0.8	12	60	<1	2	38	15	37	<0.1	5	48	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP315_0-0.2	7	70	<1	4	15	14	504	<0.1	30	187	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-009	7	70	<1	3	16	15	500	<0.1	25	162	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP315_1.6-1.8	6	100	<1	3	17	15	220	<0.1	17	108	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP315_2.1-2.3	7	80	<1	3	18	18	209	<0.1	13	108	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP317_0.1-0.3	7	70	<1	3	28	14	90	<0.1	18	124	<10	<10	<50	<50	100	<100	100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP318_0-0.2	7	50	<1	3	16	18	493	<0.1	22	156	<10	<10	<50	<50	100	<100	100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP318_0.8-1.0	<5	50	<1	2	10	15	302	<0.1	16	139	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-015	6	50	<1	3	14	16	325	<0.1	17	130	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP444_0.7-0.8	6	50	<1	<2	16	15	16	<0.1	7	61	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP445_0.2-0.4	9	60	<1	<2	44	18	20	<0.1	6	95	<10	<10	100	100	**450**	<100	550	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP445_0.9-1.1	14	80	<1	<2	38	25	22	<0.1	6	87	<10	<10	90	90	**400**	<100	490	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ_42	8	60	<1	<2	33	18	21	<0.1	5	64	<10	<10	80	80	300	<100	380	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-43	19	57	<0.3	1.2	38	16	61	0.09	6.8	81	<25	<25	65	65	170	<120	220	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6
TP446_0.1-0.3	10	70	<1	<2	57	19	17	<0.1	9	108	<10	<10	90	90	**460**	<100	550	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP446_1.9-2.1	8	90	<1	<2	26	17	20	<0.1	10	128	<10	<10	<50	<50	210	<100	210	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP447_0.8-1.0	<5	20	<1	<2	22	16	<5	<0.1	11	148	26	26	100	100	**380**	<100	480	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ_38	<5	30	<1	<2	27	14	<5	<0.1	14	149	12	12	80	80	**340**	<100	420	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP448_0-0.2	14	70	<1	<2	44	22	6	<0.1	11	108	<10	<10	90	90	**460**	<100	550	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP448_1.6-1.8	7	80	<1	4	56	22	73	<0.1	37	187	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP449_0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP449_1.0-1.2	19	240	<1	<2	34	30	10	<0.1	7	136	<10	<10	60	60	**380**	<100	440	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP450_0.1-0.3	9	80	<1	<2	51	20	71	<0.1	7	92	18	18	**140**	140	**600**	<100	740	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP450_0.5-0.7	10	60	<1	<2	46	20	23	<0.1	19	124	<10	<10	110	110	**530**	<100	640	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP450_2.3-2.5	<5	30	<1	<2	63	14	8	<0.1	4	77	36	54	**250**	250	**740**	<100	990	2.2	4.6	2.1	2.4	7.4	9.8	18.7
TP452_0.0-0.05	12	90	<1	<2	62	16	30	<0.1	8	92	<10	<10	**170**	170	**740**	100	1010	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP453_0.0-0.1	<5	30	<1	3	17	17	372	<0.1	33	453	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP454_0.4-0.5	<5	30	<1	8	<5	7	9	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP455_0.0-0.1	7	90	<1	3	9	15	165	<0.1	7	81	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP455_0.4-0.5	11	40	<1	<2	9	25	79	<0.1	6	86	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP456_0.4-0.5	<5	70	<1	<2	<5	7	21	<0.1	3	40	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP457_0.0-0.1	5	20	<1	<2	8	10	194	<0.1	8	69	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ062	6	20	<1	<2	6	8	108	<0.1	7	72	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ063	5	11	<0.3	1.1	5.3	7	70	<0.01	4.8	56	<25	<25	<25	<25	<90	<120	<210	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.6
TP458_0.9-1.0	11	40	<1	2	20	14	165	<0.1	16	133	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP459_0.0-0.1	<5	50	<1	5	<5	12	33	<0.1	2	13	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP459_0.5-0.6	<5	80	<1	6	<5	20	52	<0.1	4	25	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP460_0.0-0.2	5	60	<1	2	26	17	53	<0.1	10	74	<10	<10	<50	<50	110	<100	110	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP460_0.9-1.0	6	70	<1	3	40	17	119	<0.1	16	124	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP461_0.0-0.2	9	50	<1	4	41	18	595	<0.1	26	148	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ058	9	50	<1	4	34	17	776	<0.1	29	163	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP461_0.6-0.8	6	100	<1	4	14	15	560	<0.1	15	106	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP462_0.2-0.4	<5	50	<1	4	44	17	238	<0.1	68	324	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP463_0.1-0.2	11	40	<1	4	29	15	277	<0.1	16	160	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP464_0.0-0.2	6	80	<1	6	15	18	99	<0.1	8	60	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP464_0.4-0.5	7	40	<1	2	12	15	206	<0.1	12	80	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ057	9	60	<1	5	18	20	154	<0.1	13	86	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP465_0.0-0.1	<5	90	<1	5	<5	11	22	<0.1	2	16	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP466_0.0-0.1	<5	130	<1	5	9	13	121	<0.1	6	42	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP466_0.4-0.5	5	20	<1	4	40	16	271	<0.1	13	107	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP467_.0-0.1	7	180	<1	6	19	19	877	<0.1	16	114	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP468_0.0-0.1	8	270	<1	5	17	19	1170	<0.1	11	139	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP468_0.4-0.5	12	50	<1	3	31	16	112	<0.1	16	102	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP469_0.0-0.1	<5	30	<1	4	<5	11	25	<0.1	<2	<5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP470_0.0-0.1	<5	40	<1	4	<5	5	36	<0.1	3	11	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP470_0.5-0.6	9	120	<1	3	23	19	168	<0.1	14	102	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP471_0.0-0.1	6	60	<1	6	<5	28	67	<0.1	2	18	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP471_0.9-1.0	<5	180	<1	4	<5	8	27	<0.1	<2	29	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP472_0.0-0.1	<5	90	<1	3	11	10	180	<0.1	8	69	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP473_0.0-0.1	7	80	<1	4	12	19	79	<0.1	6	59	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP473_0.4-0.5	<5	90	<1	5	7	11	36	<0.1	4	29	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP474_0.1-0.3	<5	180	<1	8	10	11	<5	<0.1	<2	7	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP476_0.5-0.6	<5	20	<1	<2	10	16	16	<0.1	5	56	<10	<10	<50	<50	120	<100	120	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP477_0.2-0.4	<5	<10	<1	<2	<5	<5	<5	<0.1	<2	24	<10	<10	90	90	**310**	<100	400	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA409_0.0-0.1	10	40	<1	13	<5	25	35	<0.1	<2	17	<10	<10	<50	<50	130	<100	130	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

	PAH																			
Field_ID	Pyrene	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g.h.i)perylene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of detections)	Benzo(a)pyrene TEQ (zero) - Lab Calc	Benzo(a)pyrene TEQ (half LOR) - Lab Calc	Benzo(a)pyrene TEQ (LOR) - Lab Calc	Benzo(a)pyrene TEQ (lower boUd) *	Benzo(a)pyrene TEQ (upper boUd) *
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]													170							
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3													170							
NEPM 2013 Table 1A(1) HILs Res A Soil[4]															300	3	3	3		
NEPM 2013 Table 1A(1) HILs Res B Soil[4]															400	4	4	4		
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]															300	3	3	3		
Res A/B Soil HSL 0-1m													3							
Res A/B Soil HSL 1-2m													NL							
Res A/B Soil HSL 2-4m													NL							
Res A/B Soil HSL >4m													NL							
Rec C Soil HSL 0-1m													NL							
Rec C Soil HSL 1-2m													NL							
Rec C Soil HSL 2-4m													NL							
Rec C Soil HSL >4m													NL							
ESLs 0-2m					**0.7**															
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]													1400							
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]													2200							
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]													1900							
CRCCare Soil Direct Contact Intrusive Works[9]													29000							
CRCCare Soil HSL Vap.Int Intrusive Works.0 to <2m.Sand[10]													NL							
CRCCare Soil HSL Vap.Int Intrusive Works.2 to <4m.Sand[10]													NL							
TP478_0.1-0.3	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	1.5	2.8	-	0.6	-	<0.5	1.2
TP479_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP479_0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP480_0.4-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP481_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP483_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP483_0.4-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP484_0.0-0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP485_0.7-0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP486_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP487_0.7-0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP488_0.3-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP488_1.2-1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP489_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP489_0.4-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	-	0.6	-	<0.5	1.2
TP490_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP491_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP492_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP492_1.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-020	0.3	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	0.1	0.3	<0.1	<0.1	<0.1	0.2	1.4	-	<0.2	-	-	<0.3
TP493_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP493_1.8-2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
MW404S_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
MWQ08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
MWQ09	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	-	<0.2	-	-	<0.3
MW404S_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	0.6	1.2	-	-
SED404_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP313_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP314_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP314_0.6-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP315_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-009	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP315_1.6-1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP315_2.1-2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP317_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	-	0.6	-	<0.5	1.2
TP318_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	1	-	0.6	-	<0.5	1.2
TP318_0.8-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	-	0.6	-	<0.5	1.2
TPQ-015	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.8	-	0.6	-	<0.5	1.2
TP444_0.7-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP445_0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	-	0.6	-	<0.5	1.2
TP445_0.9-1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ_42	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ-43	0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	1	-	<0.2	-	-	<0.3
TP446_0.1-0.3	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	0.6	-	<0.5	1.2
TP446_1.9-2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP447_0.8-1.0	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	1.3	-	0.6	-	<0.5	1.2
TPQ_38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.7	-	0.6	-	<0.5	1.2
TP448_0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.8	-	0.6	-	<0.5	1.2
TP448_1.6-1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP449_0.4-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP449_1.0-1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP450_0.1-0.3	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	1.4	-	0.6	-	<0.5	1.2
TP450_0.5-0.7	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	1.5	-	0.6	-	<0.5	1.2
TP450_2.3-2.5	0.8	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1 - 0.8	0.8	2.9	-	0.6	-	<0.5	1.2
TP452_0.0-0.05	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	1.5	2.8	<0.5	0.6	1.2	-	-
TP453_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP454_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP455_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP455_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP456_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP457_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ062	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TPQ063	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.8	-	<0.2	-	-	<0.3
TP458_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP459_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP459_0.5-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP460_0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP460_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP461_0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TPQ058	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP461_0.6-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP462_0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	0.6	1.2	-	-
TP463_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP464_0.0-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP464_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TPQ057	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP465_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP466_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP466_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP467_.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP468_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP468_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP469_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP470_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP470_0.5-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP471_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP471_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP472_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-
TP473_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP473_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP474_0.1-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP476_0.5-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2
TP477_0.2-0.4	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	2.2	-	0.6	-	<0.5	1.2
HA409_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2

	OC Pesticides									PCBs
Field_ID	Aldrin + Dieldrin	chlordane	4,4 DDT	DDT+DDE+DDD - Lab Calc	Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	PCBs (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.2	0.1
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]			180	180						
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3			180	180						
NEPM 2013 Table 1A(1) HILs Res A Soil[4]	6	50		240	270	10	6	10	300	1
NEPM 2013 Table 1A(1) HILs Res B Soil[4]	10	90		600	400	20	10	15	500	1
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]	10	70		400	340	20	10	10	400	1
TP478_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP479_0.1-0.2	-	-	-	-	-	-	-	-	-	-
TP479_0.2-0.4	-	-	-	-	-	-	-	-	-	-
TPQ-016	-	-	-	-	-	-	-	-	-	-
TP480_0.4-0.6	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP481_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP483_0.1-0.3	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP483_0.4-0.6	-	-	-	-	-	-	-	-	-	-
TP484_0.0-0.05	-	-	-	-	-	-	-	-	-	-
TP485_0.7-0.9	-	-	-	-	-	-	-	-	-	-
TP486_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP487_0.7-0.9	-	-	-	-	-	-	-	-	-	-
TP488_0.3-0.4	-	-	-	-	-	-	-	-	-	-
TP488_1.2-1.4	-	-	-	-	-	-	-	-	-	-
TPQ-024	-	-	-	-	-	-	-	-	-	-
TP489_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TPQ-021	-	-	-	-	-	-	-	-	-	-
TP489_0.4-0.6	-	-	-	-	-	-	-	-	-	-
TP490_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP491_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP492_0.1-0.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP492_1.0-1.2	-	-	-	-	-	-	-	-	-	-
TPQ-019	-	-	-	-	-	-	-	-	-	-
TPQ-020	-	-	-	-	-	-	-	-	-	-
TP493_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP493_1.8-2.0	-	-	-	-	-	-	-	-	-	-
MW404S_0.4-0.5	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
MWQ08	-	-	-	-	-	-	-	-	-	-
MWQ09	-	-	-	-	-	-	-	-	-	-
MW404S_0.9-1.0	-	-	-	-	-	-	-	-	-	-
SED404_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP313_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP314_0-0.2	-	-	-	-	-	-	-	-	-	-
TP314_0.6-0.8	-	-	-	-	-	-	-	-	-	-
TP315_0-0.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TPQ-009	-	-	-	-	-	-	-	-	-	-
TP315_1.6-1.8	-	-	-	-	-	-	-	-	-	-
TP315_2.1-2.3	-	-	-	-	-	-	-	-	-	-
TP317_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP318_0-0.2	-	-	-	-	-	-	-	-	-	-
TP318_0.8-1.0	-	-	-	-	-	-	-	-	-	-
TPQ-015	-	-	-	-	-	-	-	-	-	-
TP444_0.7-0.8	-	-	-	-	-	-	-	-	-	-
TP445_0.2-0.4	-	-	-	-	-	-	-	-	-	-
TP445_0.9-1.1	-	-	-	-	-	-	-	-	-	-
TPQ_42	-	-	-	-	-	-	-	-	-	-
TPQ-43	-	-	-	-	-	-	-	-	-	-
TP446_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP446_1.9-2.1	-	-	-	-	-	-	-	-	-	-
TP447_0.8-1.0	-	-	-	-	-	-	-	-	-	-
TPQ_38	-	-	-	-	-	-	-	-	-	-
TP448_0-0.2	-	-	-	-	-	-	-	-	-	-
TP448_1.6-1.8	-	-	-	-	-	-	-	-	-	-
TP449_0.4-0.6	-	-	-	-	-	-	-	-	-	-
TP449_1.0-1.2	-	-	-	-	-	-	-	-	-	-
TP450_0.1-0.3	-	-	-	-	-	-	-	-	-	-
TP450_0.5-0.7	-	-	-	-	-	-	-	-	-	-
TP450_2.3-2.5	-	-	-	-	-	-	-	-	-	-
TP452_0.0-0.05	-	-	-	-	-	-	-	-	-	-
TP453_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP454_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP455_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP455_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP456_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP457_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TPQ062	-	-	-	-	-	-	-	-	-	-
TPQ063	-	-	-	-	-	-	-	-	-	-
TP458_0.9-1.0	-	-	-	-	-	-	-	-	-	-
TP459_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP459_0.5-0.6	-	-	-	-	-	-	-	-	-	-
TP460_0.0-0.2	-	-	-	-	-	-	-	-	-	-
TP460_0.9-1.0	-	-	-	-	-	-	-	-	-	-
TP461_0.0-0.2	-	-	-	-	-	-	-	-	-	-
TPQ058	-	-	-	-	-	-	-	-	-	-
TP461_0.6-0.8	-	-	-	-	-	-	-	-	-	-
TP462_0.2-0.4	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP463_0.1-0.2	-	-	-	-	-	-	-	-	-	-
TP464_0.0-0.2	-	-	-	-	-	-	-	-	-	-
TP464_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TPQ057	-	-	-	-	-	-	-	-	-	-
TP465_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP466_0.0-0.1	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP466_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP467_.0-0.1	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP468_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP468_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP469_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP470_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP470_0.5-0.6	-	-	-	-	-	-	-	-	-	-
TP471_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP471_0.9-1.0	-	-	-	-	-	-	-	-	-	-
TP472_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP473_0.0-0.1	-	-	-	-	-	-	-	-	-	-
TP473_0.4-0.5	-	-	-	-	-	-	-	-	-	-
TP474_0.1-0.3	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP476_0.5-0.6	-	-	-	-	-	-	-	-	-	-
TP477_0.2-0.4	-	-	-	-	-	-	-	-	-	-
HA409_0.0-0.1	-	-	-	-	-	-	-	-	-	-

Appendix C
Table 2
Analytical Results - Soil and Sediment

Field_ID	Location_Code	Sampled_Date_Time	Sample_Depth_Range	Sample_Type	Lab_Report_Number	Area	Material Type[11]	weight of sample	Asbestos: Asbestos (Presence/Absence)	Asbestos: Weight Used for % Calculation	Asbestos: Asbestos Containing Material	Asbestos: Friable Asbestos (as Asbestos in Soil)	Anion: Fluoride	PFC: PFOA	PFC: PFOS	Inorganics: CEC	Inorganics: Moisture	Inorganics: pH (Lab)	Metals: Arsenic	Metals: Barium	Metals: Cadmium	Metals: Chromium (III+VI)	Metals: Copper	Metals: Lead	Metals: Manganese	Metals: Mercury	Metals: Nickel	Metals: Zinc
								g	-	kg	g	%	mg/kg	mg/kg	mg/kg	meq/100g	%	pH Uits	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR								0.01		0.0001	0.0004	0.001	40	0.0005	0.0005	0.1	1	0.1	5	10	1	2	5	5	5	0.1	2	5
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]														16	6													
US EPA Residential Soil Screening Level[2]													3100							15,000								
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]																			100			190	60	1100			30	70
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3																			100			250	95	1100			170	180
NEPM 2013 Table 1A(1) HILs Res A Soil[4]																			100		20	100	6000	300	3800	40	400	7400
NEPM 2013 Table 1A(1) HILs Res B Soil[4]																			500		150	500	30000	1200	14000	120	1200	60000
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]																			300		90	300	17000	600	19000	80	1200	30000
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																												
0-1m																												
1-2m																												
2-4m																												
>4m																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																												
0-1m																												
1-2m																												
2-4m																												
>4m																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																												
0-2m																												
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																												
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]																												
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]																												
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]																												
CRCCare Soil Direct Contact Intrusive Works[9]																												
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]																												
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]																												
HA410_0.0-0.1	HA410	19/10/2015	0-0.1	Normal	ES1534055	4	U	-	-	-	-	-	90	-	-	-	7.5	-	5	50	<1	8	<5	24	62	<0.1	2	24
HA411_0.0-0.1	HA411	19/10/2015	0-0.1	Normal	ES1534055	4	U	-	-	-	-	-	140	-	-	-	9.9	-	<5	60	<1	4	6	22	52	<0.1	5	31
HA412_0.0-0.1	HA412	19/10/2015	0-0.1	Normal	ES1534055	4	U	-	-	-	-	-	100	-	-	-	7.1	-	<5	40	<1	4	<5	18	76	<0.1	<2	15
HA413_0.0-0.1	HA413	20/10/2015	0-0.1	Normal	ES1534055	4	D	-	-	-	-	-	180	-	-	-	11.5	-	6	80	<1	6	<5	12	28	<0.1	<2	14
HA414_0.0-0.1	HA414	27/10/2015	0-0.1	Normal	ES1534594	4	U	224	0	0.224	-	-	150	-	-	-	12.8	-	<5	60	<1	5	<5	13	51	<0.1	2	25
HA414_0.4-0.5	HA414	27/10/2015	0.4-0.5	Normal	ES1534594	4	U	-	-	-	-	-	190	-	-	-	17	-	<5	30	<1	10	<5	11	7	<0.1	<2	10
MW401_0.4-0.5	MW401	13/10/2015	0.4-0.5	Normal	ES1533492	4	D	27.6	0	0.0276	-	-	240	-	-	-	7.4	-	<5	<10	<1	<2	8	10	21	<0.1	3	34
MWQ04	MW401	13/10/2015	0.4-0.5	Field_D	ES1533492	4	D	-	-	-	-	-	220	-	-	-	7.8	-	<5	<10	<1	<2	10	11	24	<0.1	4	37
MW401_0.9-1.0	MW401	13/10/2015	0.9-1	Normal	ES1533492	4	DC	-	-	-	-	-	230	-	-	-	8.1	-	<5	20	<1	<2	14	14	270	<0.1	9	78
MW402_0.0-0.1	MW402	13/10/2015	0-0.1	Normal	ES1533492	4	DC	-	-	-	-	-	200	-	-	-	9.6	-	6	110	<1	4	13	15	36	<0.1	8	48
MW402_0.4-0.5	MW402	13/10/2015	0.4-0.5	Normal	ES1533824	4	DC	293	0	0.293	-	-	230	-	-	-	13.4	-	6	30	<1	2	16	18	760	<0.1	20	171
TP320_0.1-0.2	TP320	14/10/2015	0.1-0.2	Normal	ES1533607	4	DC	581	0	-	-	-	130	-	-	-	17.8	-	6	320	<1	6	<5	13	47	<0.1	<2	20
TP432_0-0.1	TP432	20/10/2015	0-0.1	Normal	ES1534055	4	DC	-	-	-	-	-	170	-	-	-	13.8	-	7	70	<1	11	<5	30	76	<0.1	3	25
TP432_0.4-0.5	TP432	20/10/2015	0.4-0.5	Normal	ES1534055	4	DC	-	-	-	-	-	110	-	-	4	10.7	5.7	6	70	<1	9	5	21	99	<0.1	4	61
TPQ-051	TP432	20/10/2015	0.4-0.5	Field_D	ES1534055	4	DC	-	-	-	-	-	130	-	-	-	10.1	-	5	60	<1	7	<5	16	34	<0.1	3	17
TP434_0-0.1	TP434	20/10/2015	0-0.1	Normal	ES1534055	4	DC	-	-	-	-	-	330	-	-	-	15.9	-	7	110	<1	6	77	28	<5	<0.1	7	38
TP434_0.4-0.5	TP434	20/10/2015	0.4-0.5	Normal	ES1534055	4	DC	-	-	-	-	-	260	-	-	-	22.7	-	<5	60	<1	6	45	28	5	<0.1	37	138
TP435_0.0-0.1	TP435	20/10/2015	0-0.1	Normal	ES1534200	4	U	-	-	-	-	-	150	-	-	-	9	-	6	110	<1	10	<5	16	23	<0.1	3	19
TP436_0.0-0.1	TP436	21/10/2015	0-0.1	Normal	ES1534200	4	D	-	-	-	-	-	180	-	-	-	12.2	-	6	140	<1	7	8	19	359	<0.1	7	74
TP436_0.9-1.0	TP436	21/10/2015	0.9-1	Normal	ES1534200	4	DC	-	-	-	-	-	180	-	-	-	19	-	6	20	<1	12	<5	11	29	<0.1	2	9
TP437_0.0-0.1	TP437	22/10/2015	0-0.1	Normal	ES1534334	4	D	24.6	0	0.0246	-	-	100	-	-	-	8.9	-	5	70	<1	4	<5	18	36	<0.1	2	14
TP438_0-0.1	TP438	20/10/2015	0-0.1	Normal	ES1534055	4	U	-	-	-	-	-	110	-	-	-	6.2	-	<5	70	<1	6	<5	11	15	<0.1	<2	9
TP439_0.0-0.1	TP439	22/10/2015	0-0.1	Normal	ES1534334	4	DC	517	0	0.517	-	-	220	-	-	-	15.2	-	9	70	<1	3	<5	13	42	<0.1	3	40
TP439_2.7-2.8	TP439	22/10/2015	2.7-2.8	Normal	ES1534334	4	DC	524	0	0.524	-	-	210	-	-	-	11.8	-	<5	20	<1	<2	<5	6	57	<0.1	3	35
TP440_0.4-0.5	TP440	20/10/2015	0.4-0.5	Normal	ES1534055	4	U	-	-	-	-	-	460	-	-	-	19.2	-	<5	10	<1	<2	<5	7	<5	<0.1	<2	41
TP441_0.0-0.1	TP441	22/10/2015	0-0.1	Normal	ES1534334	4	DC	623	0	0.623	-	-	200	-	-	-	11.7	-	5	100	<1	4	14	20	372	<0.1	8	61
TP441_2.7-2.8	TP441	22/10/2015	2.7-2.8	Normal	ES1534334	4	DC	412	0	0.412	-	-	170	-	-	-	13	-	5	100	<1	5	17	12	169	<0.1	14	101
TPQ064	TP441	22/10/2015	2.7-2.8	Field_D	ES1534334	4	DC	-	-	-	-	-	190	-	-	-	12.6	-	6	80	<1	6	16	12	205	<0.1	16	150
TP442_0.2-0.4	TP442	19/10/2015	0.2-0.4	Normal	ES1533951	4	DC	-	-	-	-	-	160	-	-	-	10.9	-	<5	30	<1	2	<5	8	92	<0.1	4	40
TP443_0.0-0.1	TP443	21/10/2015	0-0.1	Normal	ES1534200	4	D	-	-	-	-	-	200	-	-	-	12.5	-	<5	40	<1	<2	<5	9	29	<0.1	3	28
TP443_0.3-0.4	TP443	21/10/2015	0.3-0.4	Normal	ES1534200	4	D	-	-	-	-	-	370	-	-	-	9.3	-	16	140	<1	3	58	27	56	<0.1	11	97

Field_ID	TRH - NEPM 2013: C6-C10 minus BTEX (F1)	C6 - C10 Fraction	>C10-C16 minus Naphthalene (F2)	>C10 - C16 Fraction	>C16 - C34 Fraction (F3)	>C34 - C40 Fraction (F4)	>C10 - C40 (Sum of Total)	BTEX: Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	10	10	50	50	100	100	50	0.2	0.5	0.5	0.5	0.5	0.5	0.2
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]														
US EPA Residential Soil Screening Level[2]														
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]														
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3														
NEPM 2013 Table 1A(1) HILs Res A Soil[4]														
NEPM 2013 Table 1A(1) HILs Res B Soil[4]														
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]														
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]														
0-1m	45		110					0.5	160	55			40	
1-2m	70		240					0.5	220	NL			60	
2-4m	110		440					0.5	310	NL			95	
>4m	200		NL					0.5	540	NL			170	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]														
0-1m	NL		NL					NL	NL	NL			NL	
1-2m	NL		NL					NL	NL	NL			NL	
2-4m	NL		NL					NL	NL	NL			NL	
>4m	NL		NL					NL	NL	NL			NL	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]														
0-2m	**180**		**120**		**300**	**2800**		**50**	**85**	**70**			**105**	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]		700		1000	2500	10000								
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]		4400		3300	4500	6300		100	14000	4500			12000	
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]		5600		4200	5800	8100		140	21000	5900			17000	
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]		5100		3800	5300	7400		120	18000	5300			15000	
CRCCare Soil Direct Contact Intrusive Works[9]		82000		62000	85000	120000		1100	120000	85000			130000	
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]		NL		NL				77	NL	NL			NL	
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]		NL		NL				160	NL	NL			NL	
HA410_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA411_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA412_0.0-0.1	<10	<10	50	50	190	<100	240	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA413_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA414_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
HA414_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW401_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MWQ04	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW401_0.9-1.0	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW402_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW402_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP320_0.1-0.2	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP432_0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP432_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ-051	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP434_0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP434_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP435_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP436_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP436_0.9-1.0	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP437_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP438_0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP439_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP439_2.7-2.8	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP440_0.4-0.5	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP441_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP441_2.7-2.8	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TPQ064	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP442_0.2-0.4	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP443_0.0-0.1	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
TP443_0.3-0.4	<10	<10	<50	<50	130	<100	130	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

Field_ID	PAH: Pyrene	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	PAHs (Sum of detections)	Benzo(a)pyrene TEQ (zero) - Lab Calc	Benzo(a)pyrene TEQ (half LOR) - Lab Calc	Benzo(a)pyrene TEQ (LOR) - Lab Calc	Benzo(a)pyrene TEQ (lower boUd) *	Benzo(a)pyrene TEQ (upper boUd) *	OC Pesticides: Aldrin + Dieldrin	chlordane	4,4 DDT	DDT+DDE+DDD - Lab Calc	Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	PCBs: PCBs (Total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.2	0.1
Toxicity derivation, and Region IX exposure factors (USEPA 2009b)[1]																														
US EPA Residential Soil Screening Level[2]																														
NEPM 2013 Site Specific EIL-Urban Residential (Disturbed)[3]													170										180	180						
NEPM 2013 Site Specific EIL-Urban Residential (Undisturbed)3													170										180	180						
NEPM 2013 Table 1A(1) HILs Res A Soil[4]															300	3	3	3			6	50		240	270	10	6	10	300	1
NEPM 2013 Table 1A(1) HILs Res B Soil[4]															400	4	4	4			10	90		600	400	20	10	15	500	1
NEPM 2013 Table 1A(1) HILs Rec C Soil[4]															300	3	3	3			10	70		400	340	20	10	10	400	1
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand[5]																														
0-1m													3																	
1-2m													NL																	
2-4m													NL																	
>4m													NL																	
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand[5]																														
0-1m													NL																	
1-2m													NL																	
2-4m													NL																	
>4m													NL																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil[6]																														
0-2m					**0.7**																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil[7]																														
CRCCare Soil Direct Contact HSL-A Residential (Low Density)[8]													1400																	
CRCCare Soil Direct Contact HSL-B Residential (High Density)[8]													2200																	
CRCCare Soil Direct Contact HSL-C Recreational / Open Space[8]													1900																	
CRCCare Soil Direct Contact Intrusive Works[9]													29000																	
CRCCare Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand[10]													NL																	
CRCCare Soil HSL Vap.Int Intrusive Works,2 to <4m,Sand[10]													NL																	
HA410_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA411_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA412_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA413_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA414_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
HA414_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW401_0.4-0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MWQ04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW401_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW402_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
MW402_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP320_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP432_0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP432_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ-051	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP434_0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP434_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP435_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP436_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	-	-	-	-
TP436_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP437_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP438_0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP439_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP439_2.7-2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP440_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP441_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP441_2.7-2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TPQ064	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP442_0.2-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	0.6	-	<0.5	1.2	-	-	-	-	-	-	-	-	-	-
TP443_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	-	-	-	-	-	-	-	-	-	-
TP443_0.3-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1

[1] Criteria derived based on USEPA Toxicity derivation, and Region IX exposure factors (USEPA 2009b)
[2] US EPA Residential Soil Regional Screening Level
[3] NEPM 2013 Soil Ecological Investigation Levels for urban residential site specific conditions, including disturbed and undisturbed soil
[4] NEPM 2013 Table 1A91) Health Investigation Levels - HIL A Residential (with soil access), HIL B Residential (without soil access) and HIL C Recreational
[5] NEPM 2013 Soil Health Screening Levels for vapour intrusion - HSL A & HSL B, Low-high density residential and HSL C, Recreational/Open Space - Sand
[6] NEPM 2013 Table 1B(6) Ecological Screening Levels for Urban residential and public open space, Coarse Soil
[7] NEPM 2013 Table 1B(7) Management Limits for Residential/Parkland, Coarse Soil
[8] CRC Care Soil Direct Contact Health Screening Levels A for low density residential, B for high density residential and C for Recreational/Open Space
[9] CRC Care Soil Direct Contact Intrusive Works
[10] CRC Care Soil Health Screening Levels for vapour intrusion for intrusive works - 0 to <2 m and 2 to <4m - Sand
[11] Material type descriptions have been abbreviated as follows: UC = Undisturbed Carbonaceous, DC = Disturbed Carbonaceous, U = Undisturbed, D = Disturbed

Appendix C
Table 4
Analytical Results - Surface Water and Groundwater

Field_ID	Location_Code	Sampled_Date_Time	Sample_Type	Lab_Report_Number	Area	PFOS and PFOA: PFOS	PFOS and PFOA: PFOA	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Metals: Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)
						mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR						0.00001	0.00001	0.1	0.001	0.0001	0.001	0.001	0.001	0.0001	0.001	0.005
ANZECC 2000 FW Med-Low Reliability[1]									0.013[5]	0.0002		0.0014	0.0034		0.011	0.008
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand[2]																
2-4m																
4-8m																
>8m																
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand[2]																
2-4m																
4-8m																
>8m																
NEPM 2013 Table 1C GILs, Fresh Waters[3]										0.0002		0.0014	0.0034	0.00006	0.011	0.008
Federal Environmental Quality Guidelines[4]						**0.006**										
MW403D	MW403D	26/10/2015	Normal	ES1534541	1	-	-	-	0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.006	<0.005
MW403S	MW403S	26/10/2015	Normal	ES1534541	1	-	-	-	0.002	0.0054	<0.001	0.006	0.009	<0.0001	0.152	1.27
SW401	SW401	26/10/2015	Normal	ES1534541	1	-	-	-	0.002	<0.0001	<0.001	0.001	0.005	<0.0001	0.01	0.013
MW400D	MW400D	26/10/2015	Normal	ES1534541	2	-	-	-	0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	0.021
SW403	SW403	27/10/2015	Normal	ES1534594	2	<0.00001	<0.00001	<0.1	<0.001	0.0002	<0.001	<0.001	<0.001	<0.0001	0.02	0.213
SWQ	SW403	27/10/2015	Field_D	ES1535751	2	-	-	-	<0.001	0.0002	<0.001	0.001	<0.001	<0.0001	0.022	0.216
MW404D	MW404D	26/10/2015	Normal	ES1534541	3	-	-	-	<0.001	<0.0001	<0.001	0.001	<0.001	<0.0001	0.134	0.046
MW404S	MW404S	26/10/2015	Normal	ES1534541	3	-	-	-	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.017	0.03
SW402	SW402	26/10/2015	Normal	ES1534541	3	<0.00001	<0.00001	<0.1	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
MW401	MW401	26/10/2015	Normal	ES1534541	4	-	-	-	0.012	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.02	0.015
MW402	MW402	26/10/2015	Normal	ES1534541	4	-	-	-	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.014	0.027

Field_ID	TRH - NEPM 2013: C6-C10 minus BTEX (F1)	C6 - C10 Fraction	>C10-C16 minus Naphthalene (F2)	>C10 - C16 Fraction	>C16 - C34 Fraction (F3)	>C34 - C40 Fraction (F4)	>C10 - C40 (Sum of Total)	BTEX: Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
LOR	20	20	100	100	100	100	100	1	2	2	2	2	2	1
ANZECC 2000 FW Med-Low Reliability[1]								950	180	80	350			
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand[2]														
2-4m	1000		1000					800	NL	NL			NL	
4-8m	1000		1000					800	NL	NL			NL	
>8m	1000		1000					900	NL	NL			NL	
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand[2]														
2-4m	NL		NL					NL	NL	NL			NL	
4-8m	NL		NL					NL	NL	NL			NL	
>8m	NL		NL					NL	NL	NL			NL	
NEPM 2013 Table 1C GILs, Fresh Waters[3]								950			350			
Federal Environmental Quality Guidelines[4]														
MW403D	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
MW403S	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
SW401	<20	<20	<100	<100	220	<100	220	<1	<2	<2	<2	<2	<2	<1
MW400D	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
SW403	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
SWQ	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
MW404D	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
MW404S	<20	<20	130	130	5060	3080	8270	<1	<2	<2	<2	<2	<2	<1
SW402	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
MW401	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1
MW402	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2	<1

Field_ID	PAH: PAHs (sum of detections)	Pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Benzo(a)pyrene TEQ (zero) - Lab Calc	Benzo(a)pyrene TEQ (lower bound) *
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
LOR	0.5	1	1	1	1	1	0.5	1	1	1	1	1	1	1	1	1	1	0.5	0.5
ANZECC 2000 FW Med-Low Reliability[1]					0.01		0.1						1			16	0.6		
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand[2]																			
2-4m																NL			
4-8m																NL			
>8m																NL			
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand[2]																			
2-4m																NL			
4-8m																NL			
>8m																NL			
NEPM 2013 Table 1C GILs, Fresh Waters[3]																16			
Federal Environmental Quality Guidelines[4]																			
MW403D	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
MW403S	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
SW401	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
MW400D	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
SW403	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5
SWQ	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.5
MW404D	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
MW404S	31.1	3.1	<1	<1	<1	1.8	1.6	1.8	<1	2.3	2.7	<1	2.4	1.6	<1	<5 - 2.2	11.6	2	-
SW402	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
MW401	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-
MW402	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-

[1] ANZECC 2000 Medium to Low Reliability Guidelines for Freshwater
[2] NEPM 2013 Groundwater levels for vapour intruction for residential health screening level A & B and recreational health screening level C in sand
[3] NEPM 2013 Groundwater Investigation Levels for fresh water
[4] Federal Environment Quality Guidelines (Environment Canada 2013)
[5] As V

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$	Total	$C_6 - C_{10}$	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP 1.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	18	8	nd	9.6	-	43
TP 1.2	1.0-1.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.3	3.7	12	13	nd	22	-	75
TP 1.3	1.6-1.8	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	1.2	9.8	nd	1.5	-	6.7
TP 2.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	2.5	24	9	nd	6.8	-	16
TP 2.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.6	13	9	nd	4.5	-	21
TP 3.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3.8	15	3	nd	8	-	15
TP 3.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	4.6	4	nd	2.6	-	55
TP 4.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	28	11	nd	14	-	49
TP 5.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.4	210	6	10	nd	3.9	-	21
TP 5.2	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	5	nd	24	11	12	nd	5.6	-	45
TP 6.1	0-0.2	2/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.3	4.2	10	nd	2.8	-	15
TP 7.2	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	9	nd	12	-	36
TP 8.1	0-0.2	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	6.8	9	4	nd	15	-	27
TP 8.2	0.4-0.6	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.9	14	13	nd	0.6	-	7.5
TP 9.1	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	17	7	nd	16	-	23
TP 10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	16	12	nd	18	-	47
TP 10.2	2.3-2.5	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	1.2	6	nd	nd	-	3.7
TP 11.1	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.3	22	29	55	nd	18	-	130
TP 12.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-					-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	nd	5	nd	nd	-	3.3
TP 12.2	1.3-1.5	2/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	4.3	4.6	14	nd	4	-	21
TP 13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	4.8	23	14	nd	3.3	-	17
TP 14.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.5	20	21	nd	4.1	-	37
TP 14.2	1.7-1.8	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	6.9	10	18	nd	4.1	-	32
TP 15.1	0.2-0.4	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	6.3	10	19	nd	10	-	50
TP 16.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	17	16	31	nd	18	-	460
TP 17.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	0.6	620	15	26	1.5	190	-	520
TP 17.2	1.3-1.5	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	16	2.5	12	nd	74	-	33
TP 18.1	0-0.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	nd	9.7	16	13	0.13	19	-	58
TP 18.2	1.0-1.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.5	81	35	29	nd	52	-	300
TP 19.2	3.3-3.5	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	4.5	9	nd	3.4	-	26
TP 20.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	11	14	34	nd	8.7	-	220
TP 21.2	1.7-1.9	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	1.6	nd	52	18	0.27	1000	-	110
TP 21.3	4.8-4.5	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	120	85	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	0.9	620	42	37	0.12	390	-	170
TP 22.1	1.0-1.2	3/05/2011	SGS SE87342	Clay FIll	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	0.8	-	12
TP 23.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	230	25	30	nd	15	-	130
TP 23.3	4.0-4.2	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	23	1200	1600	70	2870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	6.6	4	nd	10	-	53
TP 24.2	1.1-1.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	25	2200	2500	4725	-	-	-	-	-	-	190	274.4	1175	-	-	-	-	-	-	-	-	-	-	nd	0.8	13	36	15	nd	38	-	170
TP 24.3	4.8-5.0	3/05/2011	SGS SE87342	Fill	-	na	na	na	na	-	NA	nd	1100	1600	2700	-	-	-	-	-	-	99	139.8	902.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 25.2	2.5-2.7	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	5	2	0.06	13	-	40
TP 25.3	4.2-4.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.1	0.53	-	-	-	-	-	-	-	-	-	-	nd	nd	1	5.7	7	nd	5.5	-	70
TP 26.1	0.5-0.7	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	14	18	nd	6.9	-	42
TP 27.1	0.2-0.4	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.7	0.96	3	nd	3.4	-	59
TP27.3	3.0-3.2	3/05/2011	SGS SE87342	Shale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	0.5	8	7	nd	16	-	250
TP 28.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	1	1	nd	0.7	-	5.7
TP 29.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	1400	2100	100	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	0.8	19	4	nd	0.9	-	17
TP 29.2	1.5-1.7	3/05/2011	SGS SE87342	Silt	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	0.4	4.6	2	0.09	2.2	-	5.1
TP 29.3	2.6-2.8	3/05/2011	SGS SE87342	Clay	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 30.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	2.8	1	nd	1.2	-	4.7
TP 31.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.9	3	nd	5.8	-	100
TP 32.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	7.9	5	nd	4.7	-	150
TP 33.1	0-0.2	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.7	2	nd	12	-	83
TP 34.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	4.4	3	nd	11	-	76
TP 35.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	8.2	7	nd	6	-	160
TP 36.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.2	11	11	nd	3.8	-	52
TP 37.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	11	16	18	nd	15	-	66
TP 38.1	0.8-1.0	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	5.7	21	24	nd	10	-	180
TP 39.1	0-1.0	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	68	nd	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	8.6	11	11	nd	7	-	38
TP40.1	0.2-0.4	3/05/2011	SGS SE87342	Clacium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.1	2.5	4	5	3.3	-	15
TP41.2	1.6-1.8	3/05/2011	SGS SE87342	Coal	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	25	14	7	0.75	48	-	76
TP 43.1	0-0.2	3/05/2011	SGS SE87342	Ash Brick	-	nd	nd	nd	nd	-	nd	nd	50	nd	50	-	-	-	-	-	-	nd	0.2	1.13	-	-	-	-	-	-	-	-	-	-	4	nd	7.5	11	9	nd	8.4	-	25
TP 43.2	0.4-0.6	3/05/2011	SGS SE87342	Brick Fill	-					-						-	-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	4	nd	2.1	8.2	11	nd	5	-	70
TP 45.1	0-0.12	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.38	-	-	-	-	-	-	-	-	-	-	200	0.3	6	280	300	nd	9.4	-	2000
SB 1.1	0.3-0.4	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.6	9.4	5	nd	1.6	-	16
SB 2.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	17	18	nd	0.9	-	13
SB 3.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.7	13	11	0.06	0.6	-	11
SB 4.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.3	38	40	6	nd	27	-	65
SB 5.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	3.3	12	nd	nd	-	3.3
SB 6.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	9.8	14	15	nd	1.2	-	5.1
SB 7.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-					-						-	-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	nd	nd	7.6	0.8	8	nd	0.6	-	4.2
SB 8.1	0.4-0.5	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.1	11	6	nd	1.7	-	20
SB 9.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.1	0.7	9.9	nd	0.92	-	6.2
SB 10.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	4	nd	2	16	9	nd	16	-	41
SB 10.2	0.8-0.9	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	10	5	nd	7.6	-	31
SB 11.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	1.1	5	11	nd	4.7	-	51
SB 11.2	1.8-2.0	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	5.2	4.1	9.5	nd	1.8	-	9.2
SB 12.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.6	6.1	7	nd	0.7	-	12
SB 13.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.5	6.1	8	nd	2	-	14
SB 15.1	0.1-0.2	3/05/2011	SGS SE87342	Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.5	4	3	nd	1.9	-	15
SB 16.1	0.2-0.4	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	na	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	9	nd	3.2	120	15	nd	5.9	-	23
SB17.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.7	8.7	4	nd	23	-	29
SB18.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	12	2	nd	11	-	16
SB19.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	3.3	16	5	nd	19	-	19
SB20.1	7.8-8.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	370	240	610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.5	21	12	62	nd	8.1	-	76
SB20.2	11.5-11.7	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	9.8	15	15	nd	8.3	-	57
SB20.3	13.3-13.5	5/03/2012	SGS SE106137	Clay/shale	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	18	7	11	nd	43	-	42
SB21.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4	18	7	nd	15	-	31
SB22.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.7	-	-	-	-	-	-	-	-	-	-	nd	nd	5.5	15	12	nd	10	-	41
SB22.2	1.8-2.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5.9	4.6	4	nd	6.5	-	21
SB23.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.3	6.6	9	nd	6.3	-	19
SB24.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.6	4.5	10	12	nd	8.6	-	66
SB25.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	80	nd	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	0.4	6.9	150	270	nd	8.5	-	2300
SB26.1	0.0-0.2	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6.7	6	3	nd	5.6	-	34
SB27.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.6	4.1	3	nd	8.5	-	18
SB28.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	7.2	9.2	5	nd	8.5	-	32
SB28.2	1.2-1.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	4.4	8.9	10	nd	10	-	36
SB29.1	0.4-0.6	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	4.3	7	0.08	5.7	-	21
SB30.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.2	4.3	13	29	nd	4.6	-	1200
SB31.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.7	5.3	12	nd	13	-	110
SB32.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	2.8	5	nd	1.7	-	14
SB33.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	5	6	nd	0.8	-	15
SB34.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	2.9	5	nd	3.2	-	15
SB35.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	54	nd	54	-	-	-	-	-	-	2.6	3.8	37.1	-	-	-	-	-	-	-	-	-	-	5	nd	12	10	25	nd	8.5	-	54
SB36.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	120	68	188	-	-	-	-	-	-	5.8	8.1	71.3	-	-	-	-	-	-	-	-	-	-	5	nd	13	9.5	47	nd	8.9	-	80
SB37.1	4.6-4.8	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	92	nd	92	-	-	-	-	-	-	nd	nd	0.8	-	-	-	-	-	-	-	-	-	-	6	nd	3.3	23	12	nd	22	-	150
SB38.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	5	nd	14	-	28
SB39.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	110	nd	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.9	9.6	8	0.08	4.1	-	12
SB40.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	3.4	6.6	22	nd	6.6	-	53
SB41.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	14	1	nd	10	-	11
TP 46.1	0.2-0.4	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	8.3	7.9	11	nd	6.7	-	83
TP 47.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	140	89	229	-	-	-	-	-	-	0.86	1.8	12.45	nd	nd	nd	nd	nd	nd	nd	nd	-	-	74	0.9	7.5	72	180	0.11	12	-	170
TP 48.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.2	1.35	nd	nd	nd	nd	nd	nd	nd	nd	-	-	12	0.3	10	23	48	0.07	9.4	-	88
TP 49.1	0.8-1.0	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	70	nd	70	-	-	-	-	-	-	nd	0.2	1.03	nd	nd	nd	nd	nd	nd	nd	nd	-	-	10	nd	7.8	25	37	0.2	7.3	-	61
TP 50.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	5	17	18	0.08	6.4	-	37
TP 51.1	0.8-1.0	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.1	4.7	11	50	nd	6.2	-	50
TP 52.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.01	0.49	-	-	-	-	-	-	-	-	-	-	11	nd	8.2	13	25	nd	6.6	-	73
TP 53.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.1	7.9	15	nd	4.9	-	63
TP 54.1	0-0.2	4/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.8	6.8	9	nd	3.3	-	23
TP 55.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	2.4	4	nd	0.91	-	8.8
TP 56.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	5.7	19	54	nd	13	-	160
TP 57.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	14	22	nd	6.7	-	76
TP 58.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	0.44	0.6	4.52	-	-	-	-	-	-	-	-	-	-	5	nd	3.8	14	35	nd	6.9	-	68
TP 59.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	0.52	0.8	6.16	-	-	-	-	-	-	-	-	-	-	7	nd	5.5	15	29	nd	4.2	-	82
TP 60.1	1.0-1.2	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	69	180	249	-	-	-	-	-	-	0.38	0.6	4.89	-	-	-	-	-	-	-	-	-	-	5	0.7	8.6	43	93	nd	6.8	-	240
TP 61.1	0.2-0.4	4/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.1	13	9.9	nd	4.8	-	170
TP 62.1	0-0.2	4/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.3	8.2	11	nd	7.8	-	67
TP 63.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	3.6	1.4	5	nd	1.7	-	9.5
S1	0.0	4/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	1.5	8.5	11	nd	17	-	190
S2	0.0	4/05/2011	SGS SE87342	Calcium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2.3	1.5	3	5.3	2.2	-	22
S3	0.0	4/05/2011	SGS SE87342	Black Shale	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	1.3	18	17	0.06	8.6	-	76
S4	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1.5	4.3	9.7	nd	15	-	56
S5	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	-	-	nd	nd	1.3	7.9	12	nd	5.1	-	80

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$	Total	$C_6 - C_{10}$	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S6	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	-	4	nd	3	8.3	10	nd	15	-	110
TP 64.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5.1	nd	8	nd	1.8	-	28
TP 65.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.2	1.27	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	13	12	nd	7.7	-	85
TP 66.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.8	5.2	9.5	nd	5.3	-	55
TP 67.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.6	4.4	11	nd	5.2	-	47
TP 68.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	0.7	4	nd	nd	-	3.6
TP 69.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	9.8	11	nd	11	-	90
TP 70.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.4	6.3	8	nd	14	-	78
TP 71.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	8.7	11	nd	5.3	-	39
TP 72.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.8	31	32	nd	5.3	-	360
TP82.1	0.4-0.6	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.4	7.8	11	nd	2.9	-	57
TP83.1	0.8-1.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	84	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	9.3	17	17	nd	13	-	84
TP83.2	2.8-3.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	86	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	18	30	nd	6.7	-	260
TP83.3	4.2-4.4	17/01/2012	SGS SE104740	Clay	-	-	-	-	-	-	95	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.01	0.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.1	4.2	15	nd	2.7	-	18
TP84.1	1.8-2.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	105	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.26	2.3	-	-	-	-	-	-	-	-	-	-	5	nd	9	8.3	49	nd	6.7	-	61
TP84.2	3.8-4.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	89	nd	50	nd	50	-	-	-	-	-	-	0.2	0.28	2.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.4	5.9	19	nd	2.9	-	43
TP84.3	4.8-5.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	85	150	440	nd	590	-	-	-	-	-	-	0.8	1	7.9	-	-	-	-	-	-	-	-	-	-	5	nd	7	12	14	1.5	8.2	-	50
TP85.1	1.2-1.4	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	10	38	48	nd	7	-	640
TP85.2	2.0-2.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	90	nd	630	650	1280	-	-	-	-	-	-	47	67.1	483.7	-	-	-	-	-	-	-	-	-	-	3	nd	13	8	18	0.13	8.1	-	34
TP85.3	3.8-4.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	140	120	260	-	-	-	-	-	-	0.9	1.3	11.4	-	-	-	-	-	-	-	-	-	-	7	nd	6.3	12	38	nd	10	-	64
TP85.4	4.8-5.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	98	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	4.4	-	-	-	-	-	-	-	-	-	-	35	nd	5.6	8.9	30	nd	4.6	-	62
TP86.1	1.2-1.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	110	140	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	13	44	nd	11	-	91
TP86.2	4.6-4.8	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	32	590	640	1262	-	-	-	-	-	-	1.7	2.5	30.8	-	-	-	-	-	-	-	-	-	-	7	nd	14	12	32	0.27	8.6	-	83
TP87.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	170	160	330	-	-	-	-	-	-	1.8	2.8	27.2	-	-	-	-	-	-	-	-	-	-	3	nd	5	7.8	14	0.12	3.4	-	26
TP87.2	2.8-3.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	5.9	5.7	15	nd	4	-	35
TP 87.3	4.0-4.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	10.5	93.7	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	79	nd	11	-	120
TP88.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.03	1	-	-	-	-	-	-	-	-	-	-	4	nd	3.6	11	17	nd	11	-	75
TP88.2	1.8-2.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	120	nd	120	-	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	8.8	18	nd	10	-	42
TP89.1	0.4-0.6	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	6.6	47	37	0.06	10	-	120
TP90.1	0.2-0.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	3.5	5.9	9	nd	5.4	-	28
TP91.1	0.4-0.6	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	9.3	78.2	-	-	-	-	-	-	-	-	-	-	6	nd	16	10	22	nd	4.4	-	53
TP91.2	4.8-5.0	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	5	0.4	3.2	28	16	nd	22	-	140
SF1	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	11	10	nd	11	-	56
SF2	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	1.2	2.5	6	nd	2.5	-	23
SF3	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.4	2.8	10	11	nd	9	-	100
SF4	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	1.6	7.2	8	nd	3.8	-	55
SF5	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	8.3	8	nd	3.6	-	61
SF6	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	2.9	9.1	9	nd	8.5	-	65
SF7	0.0-0.01	12/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4.6	7.2	10	nd	6.8	-	49
SF8	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	5.1	24	14	nd	7.9	-	58
SF9	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	5.5	16	21	nd	11	-	100
SF10	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	0.5	1.3	4.4	8	nd	9.7	-	120
SF11	0.0-0.01	17/01/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	4.9	14	15	nd	11	-	100
V1	3.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	54	330	72	456	-	-	-	-	-	-	0.1	0.2	6.3	-	-	-	-	-	-	-	-	-	-	6	nd	4.9	9.1	16	nd	12	-	81
V2	4.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	5.2	7	7	nd	6	-	33
V3	6.0	17/01/2012	SGS SE108786	Silty Clay	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	10	0.4	6.3	12	22	0.08	7	-	110
V4	5.0	17/01/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	110	350	110	570	-	-	-	-	-	-	1.2	1.9	11.3	-	-	-	-	-	-	-	-	-	-	5	nd	6	10	14	nd	6.8	-	150
V5	4.0	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	68	nd	68	-	-	-	-	-	-	0.8	1.2	7.2	-	-	-	-	-	-	-	-	-	-	5	nd	13	9	15	0.07	7.5	-	56
V5_1.5	5.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	10	nd	4	8.6	8	nd	2	-	33
V6	2.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	8	0.4	89	35	40	nd	5	-	540
V7	1.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.9	6.8	-	-	-	-	-	-	-	-	-	-	7	nd	21	11	14	nd	10	-	51
V8	1.5	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	4	nd	4.9	6.1	10	nd	5.1	-	39
V9	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	9	nd	35	6.2	11	nd	2.8	-	23
V10	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	140	150	290	-	-	-	-	-	-	0.8	1.2	8.7	-	-	-	-	-	-	-	-	-	-	4	nd	8.2	9	21	nd	6.1	-	45
V11	3.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	130	1100	630	1860	-	-	-	-	-	-	0.1	0.2	10.4	-	-	-	-	-	-	-	-	-	-	17	nd	4.4	17	19	0.31	7.1	-	50
V12	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	410	180	590	-	-	-	-	-	-	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	7	nd	3.8	15	16	nd	8.2	-	110
V13	8.0	30/05/2012	SGS SE108786	Sandy clay	N	-	-	-	-	-	-	nd	240	360	600	-	-	-	-	-	-	8	12.4	69.1	-	-	-	-	-	-	-	-	-	-	8	nd	3.5	17	24	nd	8.5	-	130
V14	5.0	30/05/2012	SGS SE108786	Clay fill	N (4 frag)	-	-	-	-	-	-	nd	180	57	237	-	-	-	-	-	-	0.3	0.4	3.1	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	6.4	10	nd	7	-	29
V15	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	83	-	-	-	-	-	-	-	-	-	5.4	8.4	45.7	-	-	-	-	-	-	-	-	-	-	8	0.6	7.3	16	30	nd	9	-	180
V16	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	120	570	210	863	-	-	-	-	-	-	0.1	0.1	1.8	-	-	-	-	-	-	-	-	-	-	16	0.4	58	17	15	nd	21	-	80
V17	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	49	920	160	1200	-	-	-	-	-	-	0.6	0.8	7.4	-	-	-	-	-	-	-	-	-	-	14	0.4	250	15	17	0.07	150	-	340
V18	2.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	670	170	889	-	-	-	-	-	-	5.5	8.6	49.7	-	-	-	-	-	-	-	-	-	-	11	0.4	22	18	20	nd	14	-	170
V19	3.0	30/05/2012	SGS SE108786	Clay fill	Y (47 Frag)	-	-	-	-	-	-	nd	350	88	438	-	-	-	-	-	-	8.2	12.9	70.3	-	-	-	-	-	-	-	-	-	-	4	nd	9.8	14	17	nd	8.3	-	130
V20	5.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	29	110	80	190	-	-	-	-	-	-	4.1	6.5	42	-	-	-	-	-	-	-	-	-	-	9	0.6	47	67	37	0.22	26	-	550
V21	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	350	200	579	-	-	-	-	-	-	0.2	0.3	2.7	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	14	14	nd	6.3	-	77
V22	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	95	nd	95	-	-	-	-	-	-	nd	0.1	3.2	-	-	-	-	-	-	-	-	-	-	4	nd	4	10	19	nd	10	-	94
V23	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	160	nd	160	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2.7	8	nd	2.7	-	14
V24	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	1.7	-	-	-	-	-	-	-	-	-	-	5	nd	2.7	19	12	nd	12	-	94
V25	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	74	nd	74	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	6.7	10	10	nd	3	-	55
V26	1.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	3.4	12	8	nd	1	-	26
V27	1.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	260	nd	nd	nd	-	-	-	-	-	-	2.6	3.8	21.7	-	-	-	-	-	-	-	-	-	-	12	0.4	32	14	18	nd	16	-	88
V28	0.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	490	58	808	-	-	-	-	-	-	0.9	1.3	7.3	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	9	nd	4	-	29
V29	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.7	1.0	5.4	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	3	7	nd	2	-	18
V30	6.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	22	100	nd	122	-	-	-	-	-	-	2	3.0	17.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.7	12	15	nd	11	-	100
V31	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	3	nd	7.5	6.1	10	nd	2.8	-	32
V32	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.2	1.6	-	-	-	-	-	-	-	-	-	-	22	nd	6.9	30	41	nd	6.3	-	55
V33	4.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.4	7.2	-	-	-	-	-	-	-	-	-	-	nd	nd	4.2	2.8	10	nd	3	-	25
V34	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	3.2	6.7	12	nd	3	-	99
V35	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	8.1	4.4	7	nd	1.4	-	34
S1	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	5.9	10	11	nd	9	-	62
S2	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	1.5	2.3	13.6	-	-	-	-	-	-	-	-	-	-	4	nd	10	9	16	nd	8	-	58
S3	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	110	150	260	-	-	-	-	-	-	4.2	6.3	32.3	-	-	-	-	-	-	-	-	-	-	8	nd	12	19	19	nd	9	-	280
S4	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	110	182	-	-	-	-	-	-	5.9	8.7	44.8	-	-	-	-	-	-	-	-	-	-	9	nd	15	31	27	nd	8.8	-	420
S5	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.6	-	-	-	-	-	-	-	-	-	-	6	nd	7.6	10	15	nd	6.5	-	41
S6	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	99	nd	99	-	-	-	-	-	-	1	1.5	8.2	-	-	-	-	-	-	-	-	-	-	5	nd	17	7.9	13	nd	10	-	68
S7	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	88	450	70	608	-	-	-	-	-	-	1.1	1.6	9.1	-	-	-	-	-	-	-	-	-	-	11	0.4	53	15	20	nd	31	-	160
S8	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	nd	72	-	-	-	-	-	-	1.5	2.3	13.7	-	-	-	-	-	-	-	-	-	-	6	nd	13	9	14	nd	8	-	60
S9	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	1.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.3	7.7	12	nd	5	-	39
S10	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	200	85	285	-	-	-	-	-	-	1.8	2.7	15.2	-	-	-	-	-	-	-	-	-	-	10	nd	34	14	14	nd	14	-	86
S11	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.6	3.6	-	-	-	-	-	-	-	-	-	-	nd	nd	1.4	2	6	nd	0.8	-	17
S12	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	64	66	130	-	-	-	-	-	-	3.2	4.9	25.5	-	-	-	-	-	-	-	-	-	-	6	nd	27	16	20	nd	8.1	-	74
S13	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	69	57	126	-	-	-	-	-	-	1.8	2.7	14.4	-	-	-	-	-	-	-	-	-	-	6	0.3	16	20	27	nd	7.5	-	420
S14	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	100	92	nd	192	-	-	-	-	-	-	0.5	0.7	5.6	-	-	-	-	-	-	-	-	-	-	6	nd	21	13	22	0.08	12	-	120
S15	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.8	-	-	-	-	-	-	-	-	-	-	5	nd	15	8.8	12	nd	6.8	-	51
S16	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	6	-	90
S17	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.1	-	-	-	-	-	-	-	-	-	-	11	nd	8.6	18	27	0.12	5.8	-	47
S18	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.5	12.2	-	-	-	-	-	-	-	-	-	-	4	nd	4.1	6	11	nd	4.2	-	37
S19	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.5	-	-	-	-	-	-	-	-	-	-	4	nd	4.5	7	12	nd	3	-	38
S20	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.1	0.9	-	-	-	-	-	-	-	-	-	-	<6	nd	3.7	4	6	nd	4.8	-	33
S21	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.9	-	-	-	-	-	-	-	-	-	-	4	nd	4.8	9.6	11	nd	5.2	-	69
S22	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.3	-	-	-	-	-	-	-	-	-	-	6	nd	3.8	5.3	14	nd	2.2	-	34
S23	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	9	nd	3.4	-	23
S24	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	7	7.5	11	nd	6.3	-	44
S25	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	4.4	7	13	nd	4	-	52
S26	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	57	54	111	-	-	-	-	-	-	3.7	5.5	29.5	-	-	-	-	-	-	-	-	-	-	5	nd	9.3	12	19	nd	5	-	110
S27	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	3	nd	6.3	4.4	8	nd	3.4	-	28
S28	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	6	9	nd	4	-	32
S29	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	6	10	nd	3	-	19
S30	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.1	7	11	nd	4	-	29
S31	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	290	490	780	-	-	-	-	-	-	18	28.6	153	-	-	-	-	-	-	-	-	-	-	5	0.6	47	14	33	nd	12	-	160
S32	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	27	nd	5.6	34	43	nd	8.5	-	450
S33	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	160	69	229	-	-	-	-	-	-	6.1	9.1	53.5	-	-	-	-	-	-	-	-	-	-	7	0.4	10	21	29	nd	10	-	310
S34	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.1	6.5	-	-	-	-	-	-	-	-	-	-	12	nd	13	15	20	nd	7	-	70
S35	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3	-	-	-	-	-	-	-	-	-	-	5	nd	5.6	14	21	nd	8.1	-	180
S36	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	2.8	4.2	21.6	-	-	-	-	-	-	-	-	-	-	4	nd	6.4	6.3	12	nd	5	-	78
S37	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	5	-	150
S38	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.7	0.9	5.9	-	-	-	-	-	-	-	-	-	-	6	0.4	10	52	59	nd	10	-	840
S39	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	2.6	3.8	20.8	-	-	-	-	-	-	-	-	-	-	5	nd	26	10	17	nd	7.3	-	93
S40	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1.3	2.0	10.3	-	-	-	-	-	-	-	-	-	-	7	0.4	7.9	12	19	nd	8	-	110
S41	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.4	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	6.6	13	nd	4	-	48
S42	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	150	220	370	-	-	-	-	-	-	3.3	4.8	25.4	-	-	-	-	-	-	-	-	-	-	3	0.3	4.7	6.5	12	nd	5.3	-	82
S43	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	58	58	-	-	-	-	-	-	3.8	5.5	28.7	-	-	-	-	-	-	-	-	-	-	5	0.4	15	17	23	nd	12	-	150
S44	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.5	0.7	3.8	-	-	-	-	-	-	-	-	-	-	6	0.3	9.4	11	19	nd	7.9	-	120
S45	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	100	100	200	-	-	-	-	-	-	10	14.8	77.4	-	-	-	-	-	-	-	-	-	-	9	0.4	19	31	27	nd	16	-	120
S46	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	5	nd	4.6	6.8	13	nd	74	-	3
S47	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.2	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	11	18	0.05	70	-	9.4
S48	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	11	12	12	nd	45	-	4.9
S49	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	9.3	14	nd	43	-	7
S50	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	220	180	400	-	-	-	-	-	-	16	25.3	137.6	-	-	-	-	-	-	-	-	-	-	6	nd	29	23	19	nd	77	-	9
S51	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	55	nd	55	-	-	-	-	-	-	0.5	0.7	4.2	-	-	-	-	-	-	-	-	-	-	6	0.3	7.8	13	17	nd	97	-	7.5

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides										Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S52	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	73	nd	73	-	-	-	-	-	-	1.1	1.8	11.1	-	-	-	-	-	-	-	-	-	-	5	nd	8.7	12	15	nd	110	-	8
S53	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	60	220	nd	280	-	-	-	-	-	-	1.6	2.5	13.9	-	-	-	-	-	-	-	-	-	-	9	nd	5.2	13	13	nd	74	-	5
S54	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	33	400	nd	433	-	-	-	-	-	-	0.1	0.1	2.5	-	-	-	-	-	-	-	-	-	-	7	nd	5.2	10	13	nd	54	-	4.8
S55	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	420	620	nd	1040	-	-	-	-	-	-	0.2	0.3	4.8	-	-	-	-	-	-	-	-	-	-	5	nd	6.9	12	13	nd	110	-	6
S56	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	220	900	290	1410	-	-	-	-	-	-	1.5	2.5	16.5	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	12	13	nd	56	-	3.2
S57	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	73	170	nd	243	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	8	nd	4.7	13	15	nd	80	-	4.7
S58	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	3	4.7	24.9	-	-	-	-	-	-	-	-	-	-	nd	nd	11	6.2	14	nd	80	-	4.9
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.4	-	-	-	-	-	-	-	-	-	-	nd	nd	0.5	0.9	4	nd	8.7	-	1.1
S57	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	110	170	280	-	-	-	-	-	-	17	27.2	158.1	-	-	-	-	-	-	-	-	-	-	nd	0.4	13	14	21	nd	160	-	14
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1 TP3.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2 TP4.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 TP6.1	0.0-0.2	2/05/2011	SGS SE87342	Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A4 TP10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A5 TP13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay FIll	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A6 TP17.1	0.0-0.2	3/05/2011	SGS SE87342	Fill	Y chrysolite detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP48A	0.2-0.4	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP49A	0.8-1.0	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1-1	0.3-0.6	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	11	nd	27	-	160
BH1-2	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	7	5	10	0.1	4	-	65
BH1-3	1.5	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.36	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	12	18	20	nd	9	-	530
BH3-1	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	3	8	nd	nd	-	8
TP101-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	110	260	nd	nd	nd	nd	260	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	13	0.4	8	40	51	0.9	8	-	450
TP101-2	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	140	120	260	nd	nd	60	60	200	nd	nd	nd	0.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	9	2	8	0.2	3	-	11
TP101-3	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	1.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	29	nd	6	57	55	0.1	10	-	620
TP102-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	32	0.5	17	19	14	0.3	14	-	58
TP102-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	220	nd	220	nd	nd	110	110	210	nd	0.41	1	4.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	9	20	31	0.1	13	-	210
TP103-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd	1.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	36	34	17	0.2	22	-	56
TP103-2	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.11	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	8	25	27	0.9	7	-	150
TP103-3	4.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	4	9	nd	4	-	19
TP104-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	290	nd	290	nd	nd	75	75	310	nd	3.3	5	36	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	19	16	15	0.1	10	-	55
TP104-2	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.1	3	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	6	11	22	nd	6	-	48
TP104-3	4.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	2	nd	nd	390	380	770	nd	nd	nd	nd	660	280	11	16	140	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	13	19	57	0.5	22	-	85
TP105-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.43	1	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	9	11	21	nd	5	-	37
TP106-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	160	310	nd	nd	nd	nd	280	nd	5.5	8	52	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	11	14	40	0.1	12	-	56
TP106-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	nd	nd	nd	nd	nd	170	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	12	20	nd	9	-	45
TP107-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	nd	1.1	2	14	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	10	nd	4	16	23	0.2	11	-	140
TP107-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	140	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	10	2	8	nd	6	-	9
TP107-3	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	240	240	480	nd	nd	nd	nd	390	230	8.6	12	96	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	12	8	15	nd	26	-	49
TP108-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	3	19	11	0.7	3	-	42
TP108-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.1	3	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	12	28	0.1	13	-	150
TP108-2A	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.9	4	30	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	10	42	nd	7	-	70
TP109-1	0.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	7	17	nd	4	-	50
TP110-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	270	nd	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	20	17	nd	11	-	140
TP110-2	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	4	24	20	0.1	15	-	110
TP110-3	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	5	13	13	nd	9	-	87
TP111-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	10	15	13	nd	12	-	64
TP111-2	4.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	140	410	100	650	nd	nd	240	240	390	nd	nd	nd	0.18	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	5	15	14	nd	9	-	88
TP113-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	7	9	0.8	4	-	41
TP114-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	2	12	15	0.1	3	-	34
TP114-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	3	11	12	nd	4	-	48
TP114-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	7	nd	3	-	47
TP115-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	5	25	13	nd	5	-	59
TP116-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	10	nd	1	-	13
TP116-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	15	11	nd	nd	-	9
TP117-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	13	9	nd	nd	-	6
TP118-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	11	2	12	nd	6	-	10
TP118-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.2	2	8.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	23	nd	5	12	14	nd	3	-	21
TP119-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	15	16	nd	1	-	11
TP119-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	15	25	nd	nd	-	8
TP119-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	170	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	50	22	14	nd	3	-	130
TP119-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	860	290	1150	nd	nd	nd	nd	1200	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	47	21	18	nd	5	-	62
TP119-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	2	23	18	nd	6	-	50
TP120-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	410	2600	680	3670	nd	nd	960	960	2600	210	nd	nd	3.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	21	50	59	nd	13	-	350
TP120-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	19	14	nd	nd	-	11
TP120-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	52	nd	3	22	16	nd	2	-	21
TP120-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2	13	16	0.1	2	-	17
TP121-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	6	7	15	nd	6	-	48
TP121-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	14	14	nd	10	-	48
TP121-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	nd	8	nd	2	-	12
TP122-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	280	nd	nd	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	23	16	nd	7	-	49
TP122-2	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	7	nd	4	-	76
TP123-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	nd	11	nd	2	-	10
TP123-1-A	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.06	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	11	nd	2	-	12
TP123-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	3	12	nd	2	-	29
TP124-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	8	nd	1	-	22
TP124-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	9	nd	nd	-	7
TP125	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	190	nd	190	nd	nd	51	51	220	nd	nd	nd	1.2	-	-	-	-	-	-	-	-	-	-	9	0.5	1	42	23	0.1	15	-	250
TP126	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	5	22	21	nd	14	-	120
TP126a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	19	19	nd	12	-	110
TP127	0.2	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	4	8	nd	5	-	68
TP128	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	3	6	nd	8	-	100
TP129	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	210	nd	210	nd	nd	52	52	270	nd	0.05	nd	1.6	-	-	-	-	-	-	-	-	-	-	9	nd	4	24	18	0.1	20	-	150
TP129a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	nd	nd	260	nd	0.05	nd	1.5	-	-	-	-	-	-	-	-	-	-	11	0.4	4	26	19	nd	22	-	160
TP130	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	80	460	210	750	nd	nd	120	120	580	nd	nd	nd	2.3	-	-	-	-	-	-	-	-	-	-	11	nd	2	31	22	0.1	18	-	190
TP131	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	140	nd	140	nd	nd	nd	nd	190	nd	0.06	nd	1.1	-	-	-	-	-	-	-	-	-	-	10	nd	2	31	34	0.2	28	-	160
TP132	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	150	nd	nd	nd	0.64	-	-	-	-	-	-	-	-	-	-	11	nd	1	10	16	0.2	5	-	37
TP133	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	11	12	nd	6	-	48
TP133	0.8	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	140	nd	nd	nd	0.47	-	-	-	-	-	-	-	-	-	-	11	nd	1	21	16	0.1	41	-	210
TP134	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	150	1100	440	1690	nd	nd	250	250	1300	170	0.15	nd	7.7	-	-	-	-	-	-	-	-	-	-	7	nd	4	14	10	nd	24	-	65
TP134	3.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	140	1100	340	1580	nd	nd	260	260	1300	nd	0.05	nd	2	-	-	-	-	-	-	-	-	-	-	8	nd	2	21	10	nd	5	-	53
TP134	5.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	330	110	440	nd	nd	69	69	400	nd	nd	nd	0.77	-	-	-	-	-	-	-	-	-	-	8	nd	4	43	17	nd	15	-	92
TP135	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	8	nd	2	17	17	nd	14	-	150
TP135	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	72	430	160	662	nd	nd	110	110	510	nd	0.1	nd	2	-	-	-	-	-	-	-	-	-	-	22	nd	nd	73	15	0.5	19	-	310
TP135a	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	92	510	210	812	nd	nd	140	140	620	nd	0.11	nd	2.4	-	-	-	-	-	-	-	-	-	-	25	nd	nd	61	19	0.2	20	-	300
TP135	4.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	17	14	nd	16	-	150
TP136	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	17	18	nd	1	-	6
TP137	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	2	4	nd	1	-	20
TP138	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	14	nd	8	68	44	0.1	18	-	110
TP139	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	3	3	9	nd	2	-	24
TP140	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	0.42	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	15	nd	2	-	14
TP142	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	14	nd	20	-	130
Pit2-1	2.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	160	nd	0.06	nd	0.89	-	-	-	-	-	-	-	-	-	-	5	nd	3	13	17	nd	5	-	34
Bund-1	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.91	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	15	nd	13	-	110
Bund-1	2.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	5	nd	2	12	15	nd	10	-	96
Bund-2	-	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	42	nd	3	35	16	nd	14	-	160
TP143	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	6	2	11	nd	2	-	15
TP143a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	2	10	nd	1	-	10
TP144	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.34	-	-	-	-	-	-	-	-	-	-	nd	nd	6	4	20	nd	3	-	28
TP144a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.29	-	-	-	-	-	-	-	-	-	-	nd	nd	7	5	21	nd	3	-	29
TP145	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.16	-	-	-	-	-	-	-	-	-	-	6	nd	4	21	18	nd	7	-	71
TP146	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	13	nd	3	-	24
TP147	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	11	nd	2	-	20
TP147	2.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	3	12	nd	3	-	21
TP148	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	10	nd	6	-	51
TP149	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	8	28	18	nd	18	-	80
TP149	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	10	14	nd	9	-	68
TP150	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	24	18	nd	20	-	79
TP151	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	180	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	nd	2.4	3	7	22	0.1	170	-	520
TP152	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.27	-	-	-	-	-	-	-	-	-	-	7	nd	8	3	19	nd	4	-	40
TP153	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	10	24	nd	8	-	55
TP154	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	nd	nd	2	9	16	nd	12	-	78
Bund-3	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	9	5	16	nd	3	-	20
Bund-3	3.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	4	12	nd	4	-	41
Bund-3	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	1	3	10	nd	4	-	36
SP1-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	1.2	-	-	-	-	-	-	-	-	-	-	6	nd	2	12	15	nd	7	-	110

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$	Total	$C_6 - C_{10}$	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
SP2-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	160	100	260	nd	nd	nd	nd	220	nd	nd	nd	0.59	-	-	-	-	-	-	-	-	-	-	8	nd	3	16	16	nd	11	-	74
SP3-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	77	560	290	927	nd	nd	120	120	720	150	0.08	nd	2.3	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	11	nd	21	-	95
SP4-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	470	2700	1300	4470	nd	nd	740	740	3300	650	0.14	nd	8.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	11	8	nd	17	-	43
SP4-2	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	17	nd	5	-	110
TP 155	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	9	15	nd	20	-	89
TP 156	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	4	12	nd	14	-	65
TP 157	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	1	9	nd	7	-	40
TP 158	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	2	8	nd	5	-	27
TP 159	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	4	12	nd	3	-	30
TP 160	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	6	18	nd	3	-	22
TP 161	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	3	9	nd	6	-	28
TP 161	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	5	8	nd	2	-	21
TP 162	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	10	nd	7	17	12	nd	11	-	46
TP 162	3.0	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	3	11	73	nd	6	-	56
TP 162	3.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	5	nd	7	nd	nd	-	4
TP 163	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	11	nd	6	13	10	nd	9	-	30
TP 163	1.2	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	4	10	14	nd	6	-	35
RC-1-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	270	150	420	nd	nd	nd	nd	380	nd	0.11	nd	2.7	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	23	24	nd	6	-	71
RC-2-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	190	150	340	nd	nd	nd	nd	310	nd	0.58	1	8.9	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	42	nd	11	43	89	nd	11	-	100
DAM-2-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	13	17	nd	8	nd	81
DAM-3-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2	9	14	nd	4	nd	67
DAM-4-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	8	16	20	nd	16	nd	98
DAM-5-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	4	nd	6	11	16	nd	12	nd	80
DAM-6-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	13	0.9	29	28	40	0.2	32	nd	490
Exit Dam	0.1	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.47	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	10	0.7	19	30	30	0.2	39	nd	430
Exit Dam	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	6	18	19	nd	13	nd	120
Exit Dam	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1	4	10	nd	6	nd	49
Bund-4	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	11	nd	3	-	33
RC-1-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	300	200	500	nd	nd	64	64	430	110	0.11	nd	2.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	28	25	nd	6	-	61
RC-2-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	280	230	510	nd	nd	58	58	430	120	0.36	1	6	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	50	0.4	12	58	120	0.1	14	-	94
RC-3-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	260	nd	0.08	nd	1.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	0.4	14	23	33	nd	9	-	79
RC-3-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	110	nd	nd	nd	nd	170	nd	0.09	nd	1.5	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	27	31	21	nd	15	-	91
RC-3-3-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	8	nd	8	nd	5	-	30
RC-4-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	140	240	380	nd	nd	nd	nd	320	nd	nd	nd	0.39	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	17	nd	9	19	24	nd	6	-	71
RC5-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	21	nd	3	-	23
RC6-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	6	2	19	nd	3	-	20
SP5-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.2	2	8.1	-	-	-	-	-	-	-	-	-	-	5	nd	6	13	14	nd	6	-	62
SP5-2	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.9	3	14	-	-	-	-	-	-	-	-	-	-	7	nd	23	23	32	nd	14	-	150
SP5-3	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	100	nd	100	nd	nd	nd	nd	170	nd	2.7	4	19	-	-	-	-	-	-	-	-	-	-	9	nd	10	48	50	nd	13	-	760
SP5-4	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	180	850	130	1160	nd	nd	410	410	710	nd	4.4	6	30	-	-	-	-	-	-	-	-	-	-	9	nd	10	20	20	nd	9	-	180
SP6-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	140	490	nd	630	nd	nd	280	280	370	nd	0.26	nd	2.1	-	-	-	-	-	-	-	-	-	-	7	nd	8	17	19	nd	7	-	140
TP 164	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	6	10	nd	3	-	29
TP 164	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.07	nd	0.76	-	-	-	-	-	-	-	-	-	-	4	nd	2	9	13	nd	5	-	57
TP 164	1.4	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	15	nd	2	-	8
TP 165	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	150	16	35	nd	7	-	55
TP 165	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	160	nd	0.06	nd	0.57	-	-	-	-	-	-	-	-	-	-	8	nd	58	15	85	nd	7	-	65
TP 166	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	120	130	250	nd	nd	nd	nd	200	nd	0.1	nd	2.3	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	19	nd	8	-	47
TP 166a	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	110	120	230	nd	nd	nd	nd	190	nd	0.06	nd	1.2	-	-	-	-	-	-	-	-	-	-	7	nd	7	15	19	nd	9	-	48
TP 166	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	7	nd	6	10	12	nd	7	-	76
TP 167	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	190	120	310	nd	nd	53	53	260	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	20	nd	10	-	74
TP 168	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.43	-	-	-	-	-	-	-	-	-	-	6	nd	3	29	18	nd	5	-	67
TP 169	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.53	-	-	-	-	-	-	-	-	-	-	10	nd	4	18	20	nd	14	-	89
TP 170	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.42	-	-	-	-	-	-	-	-	-	-	6	nd	5	16	19	nd	10	-	70
TP 171	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	8	19	nd	6	-	28
TP 172	0.2	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	4	-	40
TP 173	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	17	nd	6	-	40
TP 173a	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	19	nd	6	-	54
TP 174	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	5	22	nd	4	-	38
TP 175	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	21	nd	2	18	34	nd	6	-	150
TP 176	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	nd	nd	200	23	20	nd	9	-	48
TP 177	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	14	nd	12	-	89
TP 178	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	6	nd	5	11	14	nd	6	-	52
TP 178	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	14	nd	26	-	130
TP 179	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	6	nd	3	19	13	nd	8	-	66
TP 179	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	9	nd	4	39	19	0.1	17	-	120
TP 180	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	180	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	14	nd	14	-	95
TP 180	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	9	14	nd	11	-	93
TP 180	3.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	28	16	0.2	26	-	100
TP 181	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	nd	100	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	6	nd	3	11	14	0.1	9	-	88
TP 181	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	130	nd	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	8	nd	3	26	15	0.2	18	-	120
TP 182	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.24	-	-	-	-	-	-	-	-	-	-	6	nd	3	13	13	nd	15	-	110
TP 183	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	6	nd	3	23	16	nd	16	-	140
TP 183a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.72	-	-	-	-	-	-	-	-	-	-	5	nd	3	20	15	nd	15	-	170
TP 184	0.1	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	5	nd	5	11	15	nd	8	-	81
TP 184	2.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	28	23	nd	18	-	52
TP 184	3.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	8	13	18	nd	11	-	57
TP 184	3.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	11	35	15	nd	14	-	62
TP 185	0.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	8	11	14	nd	2	-	23
TP 185	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	6	14	nd	6	-	77
TP 185	4.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	13	nd	2	-	21
TP 185	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	20	10	nd	2	-	31
TP 186	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	13	nd	11	-	59
TP 186	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	13	13	nd	6	-	65
TP 187	1.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	6	11	nd	3	-	26
TP 187	2.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	71	150	nd	221	nd	nd	90	90	200	nd	nd	nd	0.19	-	-	-	-	-	-	-	-	-	-	8	nd	7	15	21	nd	9	-	69
TP 187	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	200	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	15	nd	12	19	18	nd	19	-	280
TP 187	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	5	31	30	0.1	4	-	48
TP 187a	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	14	nd	1	-	20
TP 187	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.29	-	-	-	-	-	-	-	-	-	-	8	nd	11	10	18	nd	5	-	66
TP 187	6.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	63	110	nd	173	nd	nd	110	110	nd	nd	nd	nd	0.63	-	-	-	-	-	-	-	-	-	-	8	nd	2	14	12	0.1	6	-	61
TP 188	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	15	0.5	8	11	13	nd	10	-	71
TP 188	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	15	nd	12	-	86
TP 188	4.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	8	0.4	7	25	20	nd	14	-	140
TP 188	5.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	5	41	23	nd	41	-	170
TP 189	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	9	11	nd	8	-	65
TP 189	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	140	220	360	nd	nd	nd	nd	310	110	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	12	14	nd	8	-	62
TP 189	3.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	59	59	220	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	7	13	16	nd	12	-	63
TP 190	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	nd	2	2	2.9	2	-	3
TP 190	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.24	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	12	0.1	8	-	68
TP 191	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	9	0.4	2	28	14	0.1	19	-	120
TP 191	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	1400	3900	nd	5300	50	50	2900	2900	2300	nd	nd	nd	13	-	-	-	-	-	-	-	-	-	-	17	nd	6	36	26	nd	11	-	250
TP 191	4.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	7	nd	3	21	14	nd	11	-	120
TP 192	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	10	12	nd	12	-	96
TP 193	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	5	nd	6	16	17	0.1	11	-	140
TP 193a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	17	nd	10	-	120
TP 194	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	15	-	120
TP 194a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.39	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	18	-	130
TP 195	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	7	nd	2	11	14	nd	10	-	96
TP 195a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	14	nd	10	-	98
TP 196	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	3	19	14	nd	14	-	120
TP 197	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	3	nd	2	-	2
TP 198	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	nd	6	nd	1	-	6
TP 199	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	9	1	7	nd	2	-	8
TP 200	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	12	nd	9	-	59
TP 202	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	7	10	nd	6	-	67
TP 202a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	7	7	12	nd	6	-	58
TP 202	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.48	-	-	-	-	-	-	-	-	-	-	nd	nd	2	7	11	nd	4	-	82
TP 202	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	5	nd	nd	-	5
TP 203	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	7	nd	2	-	2
TP 204	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	2	-	2
TP 205	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	5	nd	3	17	13	nd	9	-	9
TP 206	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.17	-	-	-	-	-	-	-	-	-	-	6	nd	4	17	14	nd	15	-	15
TP 207	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	51	340	140	531	nd	nd	84	84	410	nd	0.08	nd	2.6	-	-	-	-	-	-	-	-	-	-	12	nd	1	31	10	nd	7	-	7
TP 208	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	9	nd	3	-	3
TP 209	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.15	-	-	-	-	-	-	-	-	-	-	4	nd	6	17	14	nd	12	-	12
TP 210	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	73	410	160	643	nd	nd	120	120	490	nd	0.07	nd	3.6	-	-	-	-	-	-	-	-	-	-	8	nd	1	38	14	0.1	9	-	9
TP 210a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	66	340	140	546	nd	nd	100	100	400	nd	0.06	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	0.5	1	47	15	0.1	10	-	10
TP 211	0.2	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.68	-	-	-	-	-	-	-	-	-	-	nd	nd	6	8	10	nd	5	-	5
TP 212	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.83	-	-	-	-	-	-	-	-	-	-	5	nd	2	13	14	nd	12	-	12
TP 213	0.3	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	9	nd	3	-	3
TP 213	1.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	1.9	-	-	-	-	-	-	-	-	-	-	nd	nd	10	28	12	nd	14	-	14
TP 213	2.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	170	nd	170	nd	nd	nd	nd	200	nd	0.11	nd	1.6	-	-	-	-	-	-	-	-	-	-	45	nd	12	79	52	nd	10	-	10
TP 213	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	4300	12000	150	16450	nd	nd	9100	9100	7900	nd	<0.5		41	-	-	-	-	-	-	-	-	-	-	8	nd	4	26	25	nd	2	-	2

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$	Total	$C_6 - C_{10}$	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP213	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	3500	12000	190	15690	nd	nd	7900	7900	7900	nd	<0.5		38	-	-	-	-	-	-	-	-	-	-	26	nd	8	110	120	nd	4	-	4
TP213	5.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	960	3500	nd	4460	nd	nd	2100	2100	2300	nd	0.07	nd	8.1	-	-	-	-	-	-	-	-	-	-	39	nd	5	42	27	nd	7	-	7
TP213	7.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	220	800	nd	1020	nd	nd	500	500	530	nd	nd	nd	3.7	-	-	-	-	-	-	-	-	-	-	10	nd	2	13	12	nd	4	-	4
TP213	8.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	110	370	110	590	nd	nd	220	220	340	nd	nd	nd	2.7	-	-	-	-	-	-	-	-	-	-	5	nd	3	24	19	0.1	10	-	10
TP214	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	7	6	nd	2	-	2
TP215	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	18	14	nd	4	-	4
TP216	0.2	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	14	11	nd	14	-	14
TP216	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	270	nd	0.08	nd	0.56	-	-	-	-	-	-	-	-	-	-	8	0.5	7	27	39	nd	8	-	8
TP216	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	110	200	310	nd	nd	nd	nd	250	nd	2.8	5	38	-	-	-	-	-	-	-	-	-	-	9	nd	8	8	52	0.1	8	-	8
TP216	6.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	140	260	400	nd	nd	nd	nd	330	150	3.9	6	48	-	-	-	-	-	-	-	-	-	-	4	nd	18	10	42	nd	7	-	7
TP216	8.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	240	370	610	nd	nd	nd	nd	500	260	3.6	5	53	-	-	-	-	-	-	-	-	-	-	5	nd	11	12	51	nd	10	-	10
TP217	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.44	-	-	-	-	-	-	-	-	-	-	8	nd	9	7	10	nd	9	-	110
TP217a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	6	nd	5	6	9	nd	8	-	130
TP218	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	110	100	210	nd	nd	nd	nd	170	nd	0.06	nd	1.4	-	-	-	-	-	-	-	-	-	-	7	nd	7	21	26	nd	14	-	160
TP219	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	10	nd	4	13	16	nd	10	-	79
TP220	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.38	1	4.3	-	-	-	-	-	-	-	-	-	-	nd	nd	3	3	17	nd	2	-	16
TP221	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.52	-	-	-	-	-	-	-	-	-	-	7	nd	4	63	20	nd	10	-	61
TP222	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	130	130	nd	nd	nd	nd	140	nd	0.09	nd	0.45	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	25	nd	4	-	25
TP223	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	16	22	17	nd	20	-	70
TP223	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	210	190	400	nd	nd	nd	nd	340	nd	0.32	nd	5.8	-	-	-	-	-	-	-	-	-	-	16	nd	10	31	37	0.1	12	-	85
TP223	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.29	nd	3.2	-	-	-	-	-	-	-	-	-	-	9	nd	13	16	19	nd	11	-	59
TP224	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.5	1	5.4	-	-	-	-	-	-	-	-	-	-	8	nd	11	18	19	nd	15	-	97
TP224	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	260	530	nd	nd	nd	nd	440	170	8.4	12	100	-	-	-	-	-	-	-	-	-	-	11	nd	11	15	51	nd	14	-	110
TP224	2.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	290	560	nd	nd	nd	nd	450	190	5.5	8	66	-	-	-	-	-	-	-	-	-	-	7	nd	13	16	45	nd	12	-	85
TP225	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	190	390	nd	nd	nd	nd	320	120	2.3	3	29	-	-	-	-	-	-	-	-	-	-	10	nd	6	22	26	nd	9	-	80
TP225	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	1200	1100	2300	nd	nd	160	160	1900	630	19	26	170	-	-	-	-	-	-	-	-	-	-	4	nd	15	14	17	nd	53	-	53
TP225	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	120	690	0.24	nd	2.4	-	-	-	-	-	-	-	-	-	-	7	nd	12	3	42	nd	4	-	31
TP225	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	5	6	14	nd	7	-	64
TP226	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	150	nd	150	nd	nd	nd	nd	210	nd	0.24	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	nd	9	15	41	nd	12	-	95
TP226a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	180	180	360	nd	nd	nd	nd	320	nd	0.15	nd	2	-	-	-	-	-	-	-	-	-	-	6	nd	6	14	39	nd	10	-	110
TP227	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	290	490	nd	nd	nd	nd	420	120	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	9	0.2	24	-	16
TP227a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	220	320	540	nd	nd	nd	nd	470	140	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	2	11	7	nd	26	-	15
TP228	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	8	nd	14	-	33
TP228a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	4	13	7	nd	17	-	29
TP228	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	8	nd	2	-	14
TP228	2.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	14	nd	9	nd	2	-	8
TP229	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	2	nd	2	-	8
TP229a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	2	5	nd	3	-	25
TP229	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	10	nd	3	-	33
TP230	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	4	nd	20	-	16
TP230a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	15	4	nd	15	-	15
TP230	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	12	nd	2	-	30
TP230	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	2	11	nd	6	-	39
TP231	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	22	nd	3	16	3	nd	25	-	19
TP231a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	3	17	3	nd	30	-	19
TP231	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	11	6	nd	12	-	33
TP232	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	4	11	nd	3	-	27
TP232a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	8	nd	2	-	22
TP232	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	nd	8	nd	2	-	11
TP233	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	12	nd	5	9	15	0.2	6	-	55
TP233a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	9	nd	5	12	14	0.1	7	-	58
TP234	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	140	nd	0.07	nd	1.1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	16	nd	17	-	190
TP234a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	15	17	nd	16	-	170
TP235	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	190	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	9	18	55	0.4	8	-	94
TP236	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.74	-	-	-	-	-	-	-	-	-	-	5	nd	8	8	16	0.1	6	-	55
TP237	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	nd	nd	5	3	19	nd	3	-	28
TP238	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	0.52	-	-	-	-	-	-	-	-	-	-	5	nd	7	4	31	nd	3	-	28
TP239	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	2	18	nd	4	-	37
TP240	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.36	-	-	-	-	-	-	-	-	-	-	nd	nd	4	2	18	nd	2	-	18
TP241	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	nd	19	nd	2	-	14
TP242	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.29	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	20	nd	3	-	23
TP243	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	33	12	nd	3	-	16
TP243a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	6	37	14	nd	3	-	18
TP243	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	6	37	13	nd	2	-	11
TP244	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	nd	nd	1	-	-	-	-	-	-	-	-	-	-	7	nd	8	16	16	nd	14	-	62
TP245	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	58	380	120	558	nd	nd	110	110	390	nd	0.35	1	7.8	-	-	-	-	-	-	-	-	-	-	8	nd	7	18	15	nd	28	-	130
V29	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	5	7	36	-	-	-	-	-	-	-	-	-	-	6	nd	15	14	19	nd	7	-	170
V29a	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	2.8	4	20	-	-	-	-	-	-	-	-	-	-	7	nd	9	11	15	nd	6	-	98
V29	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	150	550	nd	700	nd	nd	270	270	460	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	7	0.5	6	13	14	nd	8	-	80
V29	3.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	6	18	19	nd	3	-	48
V29	4.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	5	nd	2	9	16	0.1	33	-	180
V16	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	14	nd	58	300	9	nd	22	-	72
V16	1.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	10	14	18	nd	5	-	43
V27	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	500	140	640	nd	nd	120	120	530	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	16	nd	69	14	18	nd	41	-	100
V27	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	250	220	470	nd	nd	nd	nd	420	nd	0.06	nd	0.06	-	-	-	-	-	-	-	-	-	-	28	0.5	170	15	19	nd	70	-	110
V27	2.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	17	15	15	nd	130	-	200
Bund-5	0.8	4/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	160	nd	160	nd	nd	53	53	170	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	8	nd	3	32	14	nd	24	-	140
TPIT2-Spot-3.5	3.5	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.45	1	5.2	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	39	0.1	7	-	55
TPIT2-Spot-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	26	-	-	-	-	-	-	-	-	-	-	4	nd	9	9	14	nd	52	-	42
PIT2-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	250	210	460	nd	nd	nd	nd	400	nd	0.15	nd	2.9	-	-	-	-	-	-	-	-	-	-	17	nd	9	59	45	0.1	10	-	41
PIT2-4.0a	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	260	220	480	nd	nd	nd	nd	410	nd	0.13	nd	3.3	-	-	-	-	-	-	-	-	-	-	15	nd	6	52	37	0.1	9	-	35
PIT2-EWR-2.8	2.8	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.36	nd	3.4	-	-	-	-	-	-	-	-	-	-	7	nd	8	6	12	nd	3	-	31
PIT2-EWR-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	1.3	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	12	nd	3	-	33
PIT2-EWR-4.2	4.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.5	1	5.1	-	-	-	-	-	-	-	-	-	-	4	nd	12	7	16	nd	7	-	31
PIT2-EWR-6.0	6.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	4	4	11	nd	2	-	44
PIT2-RAMP-WW-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	19	nd	4	11	11	nd	1	-	12
PIT2-RAMP-C-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	190	190	380	nd	nd	nd	nd	320	nd	0.09	nd	1.5	-	-	-	-	-	-	-	-	-	-	11	nd	10	30	26	nd	5	-	42
PIT2-SW-RC-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	120	200	320	nd	nd	nd	nd	240	170	2.9	4	41	-	-	-	-	-	-	-	-	-	-	6	nd	9	14	30	nd	19	-	63
Pit2-S-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	310	560	nd	nd	nd	nd	390	290	12	17	110	-	-	-	-	-	-	-	-	-	-	6	nd	10	14	56	nd	11	-	120
Pit2-S-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	190	250	440	nd	nd	nd	nd	260	260	3.9	6	50	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	14	nd	10	-	50
Pit2-6.0-S-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	420	390	810	nd	nd	nd	nd	580	350	15	21	170	-	-	-	-	-	-	-	-	-	-	7	nd	7	7	29	nd	4	-	38
Pit2-6.0-S-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	490	430	920	nd	nd	78	78	690	330	0.81	1	13	-	-	-	-	-	-	-	-	-	-	14	nd	9	48	53	0.5	12	-	280
Pit2-E-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	240	220	460	nd	nd	nd	nd	330	180	0.27	nd	4.4	-	-	-	-	-	-	-	-	-	-	9	nd	10	41	50	nd	10	-	80
Pit2-E-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	330	360	690	nd	nd	nd	nd	500	310	17	26	210	-	-	-	-	-	-	-	-	-	-	5	nd	8	10	49	nd	6	-	90
Pit2-E-6.0-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	120	nd	0.51	1	5.2	-	-	-	-	-	-	-	-	-	-	nd	nd	7	2	27	nd	1	-	41
Pit2-E-6.0-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	5	11	nd	2	-	28
Pit2-6.0-W	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	170	180	350	nd	nd	nd	nd	260	130	0.6	1	5.8	-	-	-	-	-	-	-	-	-	-	5	nd	8	7	12	nd	4	-	21
Pit2-3.0-N	3.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	15	nd	2	-	10
Pit2-4.0-N	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	230	480	nd	nd	nd	nd	350	180	0.11	nd	2	-	-	-	-	-	-	-	-	-	-	19	nd	14	50	38	0.1	16	-	70
Pit2-8.0	8.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	560	650	1210	nd	nd	60	60	820	590	17	26	220	-	-	-	-	-	-	-	-	-	-	nd	nd	13	15	97	nd	7	-	100
Pit2-9.0-1	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	270	320	590	nd	nd	nd	nd	420	290	9.7	14	110	-	-	-	-	-	-	-	-	-	-	8	nd	10	16	87	nd	11	-	170
Pit2-9.0-2	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	170	180	3.5	5	37	-	-	-	-	-	-	-	-	-	-	4	nd	14	17	45	nd	18	-	68
Pit2-10.0	10.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	160	160	nd	nd	nd	nd	160	160	2.3	3	25	-	-	-	-	-	-	-	-	-	-	6	nd	9	11	50	nd	8	-	86
Pit2-11.0-1	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	220	220	nd	nd	nd	nd	160	250	1.9	3	23	-	-	-	-	-	-	-	-	-	-	7	nd	13	9	31	nd	10	-	50
Pit2-11.0-2	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	130	150	280	nd	nd	nd	nd	220	110	3.5	5	44	-	-	-	-	-	-	-	-	-	-	8	nd	10	11	100	nd	9	-	51
Pit2-12.0	12.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	110	160	270	nd	nd	nd	nd	170	160	1.4	2	17	-	-	-	-	-	-	-	-	-	-	8	nd	9	15	26	nd	19	-	84
Pit2-BASE-1	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	10	12	nd	20	-	120
Pit2-BASE-2	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.5	-	-	-	-	-	-	-	-	-	-	nd	nd	3	8	11	nd	14	-	110
Pit2-BASE-3	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	nd	nd	3	9	11	nd	16	-	120
PIT2-N	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	110	130	240	nd	nd	nd	nd	200	nd	2.5	4	28	-	-	-	-	-	-	-	-	-	-	12	nd	10	27	140	0.2	8	-	240
PIT2-W	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	2	nd	nd	120	120	240	nd	nd	nd	nd	210	nd	1.3	2	23	-	-	-	-	-	-	-	-	-	-	6	nd	12	20	39	0.1	13	-	79
PIT2-W	4	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	150	140	290	nd	nd	nd	nd	260	nd	0.32	nd	5.5	-	-	-	-	-	-	-	-	-	-	6	nd	5	17	24	nd	6	-	46
PIT2-W	6	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	0.15	nd	2.8	-	-	-	-	-	-	-	-	-	-	11	nd	5	11	17	nd	4	-	25
PIT2-SP-1	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.61	-	-	-	-	-	-	-	-	-	-	7	nd	10	15	14	nd	11	-	57
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.24	nd	3.2	-	-	-	-	-	-	-	-	-	-	6	nd	10	16	16	nd	12	-	62
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.67	1	11	-	-	-	-	-	-	-	-	-	-	12	nd	8	25	24	nd	9	-	47
TP245	0.3	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.18	-	-	-	-	-	-	-	-	-	-	4	nd	18	16	12	nd	6	-	56
TP246	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	31	26	4	nd	20	-	43
TP246	1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	4	nd	22	-	44
TP247	0.2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.13	nd	1.4	-	-	-	-	-	-	-	-	-	-	6	nd	7	8	23	nd	4	-	21
TP247	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	2	12	nd	2	-	8
TP248	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	2	14	nd	nd	-	7
TP248a	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	8	nd	10	1	12	nd	nd	-	5
SPA-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1	1	7.7	-	-	-	-	-	-	-	-	-	-	6	nd	16	12	13	nd	11	-	82
SPA-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.23	nd	2.2	-	-	-	-	-	-	-	-	-	-	6	nd	27	9	11	nd	9	-	42
SPB-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	15	-	-	-	-	-	-	-	-	-	-	7	nd	8	11	16	nd	7	-	92
SPB-2	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.5	4	19	-	-	-	-	-	-	-	-	-	-	6	nd	8	12	22	nd	8	-	100

ANNEX C
TABULATED LABORATORY ANALYSIS RESULTS

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 1.2	TP 2.1	TP 3.1	TP 4.1	TP 5.1	TP 6.1	TP 7.2	TP 8.1	TP 9.1	TP 10.1	TP 12.2	TP 14.2	TP 21.2	TP 21.3	TP 23.1
Depth m				1.0-1.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.2-0.4	1.3-1.5	1.7-1.8	1.7-1.9	4.8-5.0	0.2-0.4
Geology				Ash fill	Ash fill	Ash fill	Ash fill	Ash fill	Fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Brick/ash fill	Silt	Clay	Brick fill	Brick fill	Clay fill
Date				2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**	SGS Batch No SE87342														
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	20	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	120	<50
C29 - C36 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	85	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***205***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 23.3	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 27.1	TP 28.1	TP 29.1	TP29.2	TP29.3	TP 31.1	TP 38.1	TP 39.1	TP 40.1	TP 41.2
Depth m				4.0-4.2	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	0.2-0.4	0.4-0.6	0.4-0.6	1.5-1.7	2.6-2.8	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	1.6-1.8
Geology				Clay	Fill	Fill	Ash fill	Clay fill	Fill	Clay	Clay	Silt	Clay	Clay fill	Brick fill	Clay fill	Calcium fluoride	Coal
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	23	<20	NA	<20	<20	<20	<20	<20	NA	NA	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	1200	25	<20	<20	<20	<20	<20	1400	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	1600	2200	1,100	<50	<50	<50	<50	2100	<50	<50	<50	<50	68	<50	<50
C29 - C36 Fraction	mg/kg	100	-	70	2500	1,600	<50	<50	<50	<50	100	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***2870***	***4725***	***2700***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***3600***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***68***	***<LOR***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	Na	<0.3	<0.3	<0.3	<0.3	<0.3	Na	Na	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***NA***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 43.1	TP 45.1	SB 2.1	SB 3.1	SB 4.1	SB 8.1	SB 9.1	SB 10.1	SB 11.2	SB 13.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1
Depth m				0-0.2	0.0-0.12	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	1.8-2.0	0.2-0.3	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0
Geology				Ash brick fill	Clay fill	Clay	Clay	Fill	Clay	Clay	Fill	Fill	Clay fill	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	na	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	140	<50	70
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	89	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***50***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***229***	***<LOR***	***70***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 71.1
Depth m				0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4
Geology				Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill
Date				4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11
	Units	**LOR**	**NSW EPA Criteria**													
TOTAL PETROLEUM HYDROCARBONS																
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	<50	<50	<50	<50	69	<50	<50	<50	<50	<50	<50	<50	<50
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	180	<50	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***249***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX																
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						TP 1.2	TP 2.1	TP 3.1	TP 7.2	TP 8.1	TP 10.1	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 41.2	TP 43.1	TP 45.1	SB 10.1	SB 11.2	SB 13.1
Depth m						1.0-1.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.2-0.4	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	1.6-1.8	0-0.2	0.0-0.12	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Ash fill	Ash fill	Ash fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Fill	Fill	Ash fill	Clay fill	Coal	Ash brick fill	Clay fill	Fill	Fill	Clay fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	7.1	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.3	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.32	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	15	8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	11	6.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	96	49	0.13	0.17	<0.1	0.44	0.12	0.21	<0.1	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	14	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	199	89	<0.1	0.13	<0.1	0.24	0.14	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	179	80	<0.1	0.12	<0.1	0.16	0.12	0.12	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	249	131	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	131	59	<0.1	0.11	<0.1	0.16	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	306	162	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	190	99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	143	80	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	37	24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	170	95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	0	0	0	0	0	1775.22	802.4	0.13	0.53	0	1.13	0.38	0.33	0	0

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						SB 16.1	TP 47.1	TP 48.1	TP 49.1	TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6
Depth m						0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0
Geology						Ash fill	Gravel fill	Gravel fill	Gravel fill	Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	1	0.25	0.25	<0.1	<0.1	0.36	0.36	0.41	<0.1	<0.1	<0.1	<0.1	0.14	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.26	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	0.18	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	2.4	0.29	0.24	0.12	<0.1	0.66	1.2	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	2.3	0.27	0.22	0.14	<0.1	0.68	1.1	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	1.4	0.17	0.15	<0.1	<0.1	0.37	0.57	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	1.1	0.16	0.17	<0.1	<0.1	0.37	0.47	0.39	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	1.7	0.21	<0.2	<0.2	<0.2	0.86	0.96	0.74	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	0.86	<0.1	<0.1	0.1	<0.1	0.44	0.52	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.51	<0.1	<0.1	<0.1	<0.1	0.33	0.36	0.27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	0.58	<0.1	<0.1	0.13	<0.1	0.45	0.47	0.34	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	12.45	1.35	1.03	0.49	0	4.52	6.16	4.89	0	0	0	0	0.24	0

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS								
Sample						TP 64.1	TP 65.1	TP 71.1
Depth m						0.2-0.4	0.2-0.4	0.2-0.4
Geology						Clay	Clay fill	Clay fill
Date						5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**			
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	0.5	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	0.2	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.24	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.17	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	0.16	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	1.27	0

NOTES
NE = Not Established
na = Not Analysed
LEGEND

Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 1.1	TP 1.2	TP 1.3	TP 2.1	TP 2.2	TP 3.1	TP 3.2	TP 4.1	TP 5.1	TP 5.2	TP 6.1	TP 7.2	TP 8.1	TP 8.2	TP 9.1
Depth m						0.0-0.2	1.0-1.2	1.6-1.8	0.0-0.2	0.7-0.9	0.0-0.2	0.7-0.9	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.4-0.6
Geology						Ash fill	Ash fill	Clay	Ash fill	Brick fill	Ash fill	Brick fill	Ash fill	Ash fill	Brick fill	Fill	Brick/ash fill	Clay/ash fill	Clay fill	Brick/ash fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342														
Arsenic	mg/kg	3	100	200	500	4	4	<3	4	4	<3	<3	<3	<3	5	<3	<3	<3	<3	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium (III)	mg/kg	0.3	12%	24%	60%	2.7	3.7	5.6	2.5	2.6	3.8	2.3	4.6	210	24	4.3	33	6.8	4.9	2.5
Copper	mg/kg	0.5	1000	2000	5000	18	12	1.2	24	13	15	4.6	28	6	11	4.2	29	9	14	17
Lead	mg/kg	1	300	600	1500	8	13	9.8	9	9	3	4	11	10	12	10	9	4	13	7
Nickel	mg/kg	0.5	600	600	3000	9.6	22	1.5	6.8	4.5	8	2.6	14	3.9	5.6	2.8	12	15	0.6	16
Zinc	mg/kg	0.5	7000	14000	35000	43	75	6.7	16	21	15	55	49	21	45	15	36	27	7.5	23
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 10.1	TP 10.2	TP 11.1	TP 12.1	TP 12.2	TP 13.1	TP 14.1	TP 14.2	TP 15.1	TP 16.1	TP 17.1	TP 17.2	TP 18.1	TP 18.2	TP 19.2
Depth m						0.2-0.4	2.3-2.5	0.4-0.6	0.2-0.4	1.3-1.5	0.2-0.4	0.2-0.4	1.7-1.8	0.2-0.4	0.0-0.2	0.0-0.2	1.3-1.5	0.0-0.2	1.0-1.2	3.3-3.5
Geology						Brick/ash fill	Clay	Brick fill	Clay fill	Silt	Clay fill	Clay fill	Clay	Brick fill	Fill	Fill	Silt	Brick fill	Brick fill	Brick fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	6	<3	4	5	5	6	5	5	25	6	14	11	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	0.5	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.8	2.4	22	2.7	4.3	4.8	2.5	6.9	6.3	17	620	16	9.7	81	7.6
Copper	mg/kg	0.5	1000	2000	5000	16	1.2	29	<0.5	4.6	23	20	10	10	16	15	2.5	16	35	4.5
Lead	mg/kg	1	300	600	1500	12	6	55	5	14	14	21	18	19	31	26	12	13	29	9
Nickel	mg/kg	0.5	600	600	3000	18	<0.5	18	<0.5	4	3.3	4.1	4.1	10	18	190	74	19	52	3.4
Zinc	mg/kg	0.5	7000	14000	35000	47	3.7	130	3.3	21	17	37	32	50	460	520	33	58	300	26
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.5	<0.05	0.13	<0.05	<0.05

Sample						TP 20.1	TP 21.2	TP 21.3	TP 22.1	TP 23.1	TP 23.3	TP 24.2	TP 25.2	TP 25.3	TP 26.2	TP 27.1	TP 27.3	TP 28.1	TP 29.1	TP 29.2
Depth m						0.0-0.2	0.7-0.9	4.8-5.0	1.0-1.2	0.2-0.4	4.0-4.2	1.1-1.3	2.5-2.7	4.2-4.4	0.5-0.7	0.2-0.4	3.0-3.2	0.4-0.6	0.4-0.6	1.5-1.7
Geology						Fill	Brick fill	Brick fill	Clay fill	Clay fill	Clay	Fill	Ash fill	Clay fill	Fill	Fill	Shale	Clay	Clay	Silt
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	4	260	39	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3
Cadmium	mg/kg	0.3	20	40	100	<0.3	1.6	0.9	<0.3	0.5	<0.3	0.8	<0.3	<0.3	<0.3	<0.3	0.5	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	11	<0.3	620	<0.3	230	0.4	13	1.1	1	2.3	0.7	0.5	<0.3	0.8	0.4
Copper	mg/kg	0.5	1000	2000	5000	14	52	42	<0.5	25	6.6	36	5	5.7	14	0.96	8	1	19	4.6
Lead	mg/kg	1	300	600	1500	34	18	37	<1	30	4	15	2	7	18	3	7	1	4	2
Nickel	mg/kg	0.5	600	600	3000	8.7	1000	390	0.8	15	10	38	13	5.5	6.9	3.4	16	0.7	0.9	2.2
Zinc	mg/kg	0.5	7000	14000	35000	220	110	170	12	130	53	170	40	70	42	59	250	5.7	17	5.1
Mercury	mg/kg	0.05	15	30	75	<0.05	0.27	0.12	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 30.1	TP 31.1	TP 32.1	TP 33.1	TP 34.1	TP 35.1	TP 36.1	TP 37.1	TP 38.1	TP 39.1	TP 40.1	TP 41.1	TP 41.2	TP 43.1	TP 43.2
Depth m						0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	0.2-1.0	1.6-1.8	0-0.2	0.4-0.6
Geology						Clay fill	Clay fill	Clay fill	Silt	Clay fill	Clay fill	Clay fill	Clay fill	Brick fill	Clay fill	Calcium fluoride	Calcium fluoride	Coal	Ash brick fill	Brick fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	<3	<3	<3	<3	<3	7	10	5	9	8	7	4	4
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	0.4	<0.3	<0.3	<0.3	<0.3	0.4	2.2	11	5.7	8.6	5.1	3	25	7.5	2.1
Copper	mg/kg	0.5	1000	2000	5000	2.8	3.9	7.9	3.7	4.4	8.2	11	16	21	11	2.5	1.9	14	11	8.2
Lead	mg/kg	1	300	600	1500	1	3	5	2	3	7	11	18	24	11	4	2	7	9	11
Nickel	mg/kg	0.5	600	600	3000	1.2	5.8	4.7	12	11	6	3.8	15	10	7	3.3	2.2	48	8.4	5
Zinc	mg/kg	0.5	7000	14000	35000	4.7	100	150	83	76	160	52	66	180	38	15	6.8	76	25	70
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5	3	0.75	<0.05	<0.05

Sample						TP 45.1	SB 1.1	SB 2.1	SB 3.1	SB 4.1	SB 5.1	SB 6.1	SB 7.1	SB 8.1	SB 9.1	SB 10.1	SB 10.2	SB 11.1	SB 11.2	SB 12.1
Depth m						0.0-0.12	0.3-0.4	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.8-0.9	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Clay fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Clay	Clay	Fill	Fill	Clay fill	Fill	Clay fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	200	<3	<3	10	<3	<3	11	<3	<3	<3	4	<3	4	6	<3
Cadmium	mg/kg	0.3	20	40	100	0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	6	2.6	4.8	1.7	38	1.1	9.8	7.6	2.1	8.1	2	3.6	1.1	5.2	1.6
Copper	mg/kg	0.5	1000	2000	5000	280	9.4	17	13	40	3.3	14	0.8	11	0.7	16	10	5	4.1	6.1
Lead	mg/kg	1	300	600	1500	300	5	18	11	6	12	15	8	6	9.9	9	5	11	9.5	7
Nickel	mg/kg	0.5	600	600	3000	9.4	1.6	0.9	0.6	27	<0.5	1.2	0.6	1.7	0.92	16	7.6	4.7	1.8	0.7
Zinc	mg/kg	0.5	7000	14000	35000	2000	16	13	11	65	3.3	5.1	4.2	20	6.2	41	31	51	9.2	12
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						SB 13.1	SB 15.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1	TP 50.1	TP 51.1	TP 52.1	TP 53.1	TP 54.1	TP 55.1	TP 56.1	TP 57.1
Depth m						0.2-0.3	0.1-0.2	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.8-1.0	0.2-0.4	0.2-0.4	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay fill	Gravel	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill	Fill	Fill	Fill	Fill	Clay fill	Brick fill	Brick fill	Fill
Date						3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	9	3	74	12	10	8	5	11	3	<3	<3	4	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	0.9	0.3	<0.3	<0.3	1.1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.5	3.5	3.2	8.3	7.5	10	7.8	5	4.7	8.2	4.1	2.8	2.7	5.7	5.3
Copper	mg/kg	0.5	1000	2000	5000	6.1	4	120	7.9	72	23	25	17	11	13	7.9	6.8	2.4	19	14
Lead	mg/kg	1	300	600	1500	8	3	15	11	180	48	37	18	50	25	15	9	4	54	22
Nickel	mg/kg	0.5	600	600	3000	2	1.9	5.9	6.7	12	9.4	7.3	6.4	6.2	6.6	4.9	3.3	0.91	13	6.7
Zinc	mg/kg	0.5	7000	14000	35000	14	15	23	83	170	88	61	37	50	73	63	23	8.8	160	76
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	0.11	0.07	0.2	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 58.1	TP 59.1	TP 60.1	TP 61.1	TP 62.1	TP 63.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 65.1	TP 66.1
Depth m						0.0-0.2	0.0-0.2	1.0-1.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4	0.0-0.2
Geology						Brick fill	Brick fill	Fill	Clay fill	Silt	Brick fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill	Clay
Date						4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	5	7	5	<3	3	5	4	7	6	<3	<3	4	<3	5	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.7	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	3.8	5.5	8.6	3.1	1.3	3.6	1.5	2.3	1.3	1.5	1.3	3	5.1	1.4	1.8
Copper	mg/kg	0.5	1000	2000	5000	14	15	43	13	8.2	1.4	8.5	1.5	18	4.3	7.9	8.3	<0.5	13	5.2
Lead	mg/kg	1	300	600	1500	35	29	93	9.9	11	5	11	3	17	9.7	12	10	8	12	9.5
Nickel	mg/kg	0.5	600	600	3000	6.9	4.2	6.8	4.8	7.8	1.7	17	2.2	8.6	15	5.1	15	1.8	7.7	5.3
Zinc	mg/kg	0.5	7000	14000	35000	68	82	240	170	67	9.5	190	22	76	56	80	110	28	85	55
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 67.1	TP 68.1	TP 69.1	TP 70.1	TP 71.1	TP 72.1
Depth m						0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay	Clay	Clay	Clay	Clay fill	Clay
Date						5/05/11	5/05/11	5/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**						
Arsenic	mg/kg	3	100	200	500	3	<3	5	3	<3	10
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	1.6	2.4	2.6	4.4	1.1	1.8
Copper	mg/kg	0.5	1000	2000	5000	4.4	0.7	9.8	6.3	8.7	31
Lead	mg/kg	1	300	600	1500	11	4	11	8	11	32
Nickel	mg/kg	0.5	600	600	3000	5.2	<0.5	11	14	5.3	5.3
Zinc	mg/kg	0.5	7000	14000	35000	47	3.6	90	78	39	360
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS OC/OP PESTICIDES CSR MAITLAND
JOB No: 11495

ORGANOCHLORINE PESTICIDES															
Sample						TP 47.1	TP 48.1	TP 49.1	S1	S2	S3	S4	S5	S6	TP 64.1
Depth															
Geology															
Date															
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342									
HCB	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC (Lindane)	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC						0	0	0.1		0	0	0	0		
ORGANOPHOSPHORUS PESTICIDES															
Dichlorvos	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethoate	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diazinon	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromofos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS INORGANICS ASBESTOS - CSR MAITLAND
JOB No: 11495

Sample						TP 29.1	S1	S2	S3	S4	TP 64.1
Depth m						0.4-0.6	0.0	0.0	0.0	0.0	0.2-0.4
Geology						Clay	Silt	Calcium fluoride	Black shale	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342					
PCBs Total	mg/kg	0.9	10	20	50	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Calcium	mg/kg	5	NE	NE	NE	na	na	260000	na	na	na
Sulphur	mg/kg	5	NE	NE	NE	na	na	7392	na	na	na
Fluoride	mg/kg	5	NE	NE	NE	na	na	7900	na	na	na
pH	mg/kg	0.1	NE	NE	NE	na	na	8	na	na	na

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

Sample						A1 TP3.1	A2 TP4.1	A3 TP6.1	A4 TP10.1	A5 TP13.1	A6 TP17.1	TP48A	TP49A
Depth m						0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.8-1.0
Geology						Ash fill	Ash fill	Fill	Brick/ash fill	Clay fill	Fill	Gravel fill	Gravel fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	4/05/11	4/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342							
Asbestos	-	-	NE	NE	NE	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected	Chrysotile asbestos detected, organic fibres detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected

QA ANALYTICAL RESULTS - TPH/BTEX CSR MAITLAND
JOB No: 11495

Sample				TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m				0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*
Geology				Brick/ash fill	Brick/ash fill		Fill	Fill	
Date				2/05/11	2/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NSW EPA Criteria**						
TOTAL PETROLEUM HYDROCARBONS									
C6 - C9 Fraction	mg/kg	10	65	<20	<20	*NE*	<20	<20	*NE*
C10 - C14 Fraction	mg/kg	50	-	<20	<20	*NE*	25	<20	*NE*
C15 - C28 Fraction	mg/kg	100	-	<50	<50	*NE*	2200	1300	*51*
C29 - C36 Fraction	mg/kg	100	-	<50	<50	*NE*	2500	1800	*33*
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	*NE*	***4725***	***3100***	*42*
BTEX									
Benzene	mg/kg	0.1	1	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Toluene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	*NE*	***<LOR***	***<LOR***	*NE*

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

QA ANALYTICAL RESULTS - PAHS CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS														
Sample						TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*	TP 65.1	Dup 10	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Brick/ash fill	Brick/ash fill		Fill	Fill		Clay fill	Clay fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	7.1	6.5	*9*	<0.1	<0.1	*NE*
2-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	3.5	2.8	*22*	<0.1	<0.1	*NE*
1-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	2.3	1.9	*19*	<0.1	<0.1	*NE*
Acenaphthyler	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	0.32	0.24	*29*	<0.1	<0.1	*NE*
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	15	11	*31*	<0.1	<0.1	*NE*
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	11	8.4	*27*	<0.1	<0.1	*NE*
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	96	60	*46*	0.5	0.57	*-13*
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	36	23	*44*	<0.1	<0.1	*NE*
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	199	150	*28*	0.2	0.29	*-37*
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	179	137	*27*	0.24	0.35	*-37*
Benzo[a]anthr	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	249	181	*32*	0.17	0.26	*-42*
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	131	102	*25*	0.16	0.27	*-51*
Benzo[b,k]fluo	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	*NE*	306	247	*21*	<0.2	<0.2	*NE*
Benzo[a]pyrer	mg/kg	0.05	1	2	5	<0.1	<0.1	*NE*	190	151	*23*	<0.1	<0.1	*NE*
Indeno[123-cd	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	143	115	*22*	<0.1	<0.1	*NE*
Dibenzo[ah]ar	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	37	30	*21*	<0.1	<0.1	*NE*
Benzo[ghi]per	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	170	139	*20*	<0.1	<0.1	*NE*
Sum reported	mg/kg		20	40	100	0	0	*NE*	1775.22	1400	*24*	1.27	1.74	*-31*

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

QA ANALYTICAL RESULTS - METALS CSR MAITLAND
JOB No: 11495

Sample						TP 10.1	Dup1	*RPD*	TP 18.1	Dup 2	*RPD*	TP 20.1	Dup 3	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.0-0.2	0.0-0.2	*%*	1.1-1.3	1.1-1.3	*%*
Geology						Brick/ash fill	Brick/ash fill		Brick fill	Brick fill		Fill	Fill		Fill	Fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		3/05/11	3/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	<3	*NE*	14	8	*55*	4	3	*29*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	0.8	0.97	*-19*
Chromium	mg/kg	0.3	12%	24%	60%	4.8	4	*18*	9.7	7.6	*24*	11	18	*-48*	13	36	*-94*
Copper	mg/kg	0.5	1000	2000	5000	16	14	*13*	16	11	*37*	14	20	*-35*	36	36	*0*
Lead	mg/kg	1	300	600	1500	12	11	*9*	13	11	*17*	34	39	*-14*	15	25	*-50*
Nickel	mg/kg	0.5	600	600	3000	18	17	*6*	19	17	*11*	8.7	11	*-23*	38	35	*8*
Zinc	mg/kg	0.5	7000	14000	35000	47	41	*14*	58	52	*11*	220	250	*-13*	170	210	*-21*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	0.13	0.1	*26*	<0.05	<0.05	*NE*	<0.05	<0.05	*NE*

Sample						TP 30.1	Dup 5	*RPD*	TP 37.1	Dup 6	*RPD*	TP 50.1	Dup 7	*RPD*	TP 55.1	Dup 8	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*
Geology						Clay fill	Clay fill		Clay fill	Clay fill		Fill	Fill		Brick fill	Brick fill	
Date						3/05/11	3/05/11		3/05/11	3/05/11		4/05/11	4/05/11		4/05/11	4/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	8	*NE*	7	8	*-13*	8	14	*-55*	<3	3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	0.4	4.9	*-170*	11	11	*0*	5	15	*-100*	2.7	2.1	*25*
Copper	mg/kg	0.5	1000	2000	5000	2.8	40	*-174*	16	15	*6*	17	19	*-11*	2.4	4.5	*-61*
Lead	mg/kg	1	300	600	1500	1	17	*-178*	18	17	*6*	18	21	*-15*	4	5	*-22*
Nickel	mg/kg	0.5	600	600	3000	1.2	1.2	*0*	15	12	*22*	6.4	11	*-53*	0.91	0.9	*1*
Zinc	mg/kg	0.5	7000	14000	35000	4.7	7.1	*-41*	66	57	*15*	37	48	*-26*	8.8	9.9	*-12*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	<0.05	0.08	*NE*	0.08	0.11	*-32*	<0.05	<0.05	*NE*

Sample						TP 60.1	Dup 9	*RPD*	TP 65.1	Dup 10	*RPD*	TP 71.1	Dup 11	*RPD*
Depth m						1.0-1.2	1.0-1.2	*%*	0.2-0.4	0.2-0.4	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Fill	Fill		Clay fill	Clay fill		Clay fill	Clay fill	
Date						4/05/11	4/05/11		5/05/11	5/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Arsenic	mg/kg	3	100	200	500	5	8	*-46*	5	6	*-18*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	0.7	4.6	*-147*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	8.6	22	*-88*	1.4	1.2	*15*	1.1	0.9	*20*
Copper	mg/kg	0.5	1000	2000	5000	43	84	*-65*	13	14	*-7*	8.7	6.3	*32*
Lead	mg/kg	1	300	600	1500	93	320	*-110*	12	15	*-22*	11	8	*32*
Nickel	mg/kg	0.5	600	600	3000	6.8	8.9	*-27*	7.7	7.9	*-3*	5.3	3.7	*36*
Zinc	mg/kg	0.5	7000	14000	35000	240	8700	*-189*	85	86	*-1*	39	31	*23*
Mercury	mg/kg	0.05	15	30	75	<0.05	0.19	*NE*	<0.05	0.05	*NE*	<0.05	<0.05	*NE*

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS GROUNDWATER TPH BTEX METALS - CSR MAITLAND
JOB No: 11495

Monitoring Well					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
TOTAL PETROLEUM HYDROCARBONS											
C6 - C9 Fraction	ug/L	40	NE	NE	<40	<40	<40	<40	<40	<40	<40
C10 - C14 Fraction	ug/L	100	NE	NE	<100	<100	270	<100	<100	<100	<100
C15 - C28 Fraction	ug/L	200	NE	NE	<200	<200	593	<200	<200	<200	<200
C29 - C36 Fraction	ug/L	200	NE	NE	<200	<200	<200	<200	<200	<200	<200
Sum C10-C36 Fraction	ug/L	NE	NE	600	***<LOR***	***<LOR***	***863***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX	ug/L										
Benzene	ug/L	0.5	950	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	0.5	NE	1000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	0.5	NE	150	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total-Xylene	ug/L	1.5	350	70	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	ug/L	NE	NE	NE	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
Na = Not Analysed
NE = Not Established

Sample					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
Arsenic	ug/L	1	24	60	<1	2	<1	<1	<1	<1	<1
Cadmium	ug/L	0.1	0.2	6	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Chromium	ug/L	1	NE	30	<1	8	2	<1	<1	<1	<1
Copper	ug/L	1	1.4	75	<1	4	6	2	<1	1	1
Lead	ug/L	1	8	75	<1	2	160	<1	<1	<1	<1
Nickel	ug/L	1	11	75	7	9	2	25	2	2	2
Zinc	ug/L	5	3.4	800	33	16	100	130	73	53	84
Mercury	ug/L	0.1	0.6	0.3	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
NS = Not Specified
NE = Not Established
NA= Not Analysed

Appendix D – Validation criteria

Table D-1 Soil assessment criteria – heavy metals

Parameter	Arsenic [3]	Cadmium	Chromium III	Chromium VI	Copper	Lead [4]	Total Mercury (inorganic) [5]	Nickel	Zinc
Residential A [1] Criteria (HIL A)	100	20	-	100	6000	300	40	400	7400
Residential B [1] Criteria (HIL B)	500	150	-	500	30000	1200	120	1200	60000
Recreational C [1] Criteria (HIL C)	300	90	-	300	17000	600	80	1200	30000
EIL - Soil Specific Added Contaminant Limits [2, 6] Urban residential - disturbed	100	3 [10]	190 [8]	1 [10]	60 [7]	1100	1 [10]	30 [9]	70 [7]
EIL - Soil Specific Added Contaminant Limits [2, 6] Urban Residential – undisturbed	100		250 [8]		95 [7]	1100		170 [9]	180 [7]

Note: All units in mg/kg.

1. National Environment Protection Measure 1999 (Amendment 2013) HIL A Residential with gardens and accessible soil, HIL B residential with minimal opportunities for soil access and HIL C Public open space such as parks, playgrounds and playing fields, secondary schools and footpaths.
2. National Environment Protection Measure 1999 (Amendment 2013) Ecological Investigation Levels
3. HIL assumes 70% oral bioavailability. Site specific bioavailability may be important and should be considered where appropriate
4. HIL is based on blood lead models (IEUBK) for HILS A, B and C and adult lead model for HIL D where 50% oral bioavailability has been considered. Site specific bioavailability may be important and should be considered where appropriate.
5. HIL does not address elemental mercury. Consider a site specific assessment if elemental mercury is present or suspected to be present.
6. The EILs for Cr III, Cu, Pb, Ni and Zn are calculated by summing the Added Contaminant Limit (ACL) and the Ambient Background Concentration (ABC). EILs for other metals are independent of ABC.
7. ACL EIL for zinc and copper based on CEC of 5-10 $cmol_c/kg$ and pH between 4.5 and 5.5
8. ACL EIL for Cr III is based on clay content between 1% to 2.5%.
9. ACL EIL for nickel is based on CEC of 5-10 $cmol_c/kg$.
10. National Environment Protection Measure 1999 EIL (Cd, Cr VI and Hg only). No EILs are detailed for these metals in the NEPM 1999 (Amendment 2013).

Table D-2 Soil assessment criteria – TRH and BTEX

Selected Criteria	Toluene	Ethyl-benzene	Xylene	Naphthalene [5]	Benzene	F1(C_6 - C_{10}) [6]	F2 (>C_{10} - C_{16}) [7]	F3 (>C_{16} - C_{34})	F4 (>C_{34} - C_{40})
Soil HSL [1] for vapour intrusion HSL A & B [2] Sand 0m - <1m	160	55	40	3	0.5	45	110	-	-
Soil HSL [1] for vapour intrusion HSL A & B [2] Sand: 1m - <2m	220	NL	60	NL	0.5	70	240	-	-
Soil HSL [1] for vapour intrusion HSL C [3] Sand 0m - <1m	NL	NL	NL	NL	NL	NL	NL	-	-
Soil HSL[1] for vapour intrusion HSL C [3] Sand: 1m - <2m	NL	NL	NL	NL	NL	NL	NL	-	-
EIL - Areas of Ecological Significance [4]	-	-	-	10	-	-	-	-	-
EIL - Urban Residential/Public Open Space [4]	-	-	-	170	-	-	-	-	-
ESL - Areas of Ecological Significance (coarse/fine) [8]	10/65	1.5/40	10/1.6	-	10	125 [9]	25 [9]	-	-
ESL – Urban residential and public open space (coarse/fine) [8]	85/105	70/125	105/45	-	50/65	180 [9]	120 [9]	300/1300	2800/5600
Management Limits for residential, parkland and public open space (coarse/fine) [10]	-	-	-	-	-	700/800	1000	2500/ 3500	10000

Note: All units in mg/kg. NL = screening criteria exceed the saturated vapour pressure and the vapour pathway is not limiting for these parameters.

1. National Environment Protection Measure 1999 (Amendment 2013) Health Screening Levels (HSL) for vapour intrusion
2. HSL A & B – Low and High Density Residential. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If car parks or commercial properties occupy the ground floor use HSL D.
3. HSL C – Recreational / open space
4. National Environment Protection Measure 1999 (Amendment 2013) Ecological Investigation Levels
5. Insufficient data was available to calculate aged values for naphthalene, consequently the values for fresh contamination should be used.
6. To obtain F1 subtract the sum of BTEX concentrations from C6-C10 fraction, except for Management Limits where BTEX should not be subtracted.
7. To obtain F2 subtract naphthalene from the C10-C16 fraction, except for Management Limits where naphthalene should not be subtracted.
8. National Environment Protection Measure 1999 (Amendment 2013) Ecological Screening Levels (ESLs) for TPH fractions F1-F4 and BTEX.
9. ESLs are of a low reliability except for F1 and F2 which are moderate reliability.
10. National Environment Protection Measure 1999 (Amendment 2013) Management Limits – applied after consideration of relevant ESLs and HSLs

Table D-3 Soil assessment criteria – PAHs

Selected Criteria	Naphthalene [5]	Benzo(a) pyrene	PAHs (total) [8]	Carcinogenic PAHs (as BaP TEQ) [9]
Soil HSL [1] for vapour intrusion HSL A & B [2] Sand 0m - <1m	3	-	-	-
Soil HSL [1] for vapour intrusion HSL A & B [2] Sand: 1m - <2m	NL	-	-	-
Soil HSL [1] for vapour intrusion HSL C [3] Sand 0m - <1m	NL	-	-	-
Soil HSL[1] for vapour intrusion HSL C [3] Sand: 1m - <2m	NL	-	-	-
EIL - Areas of Ecological Significance [4]	10	-	-	-
EIL - Urban Residential/Public Open Space [4]	170	-	-	-
ESL - Areas of Ecological Significance (coarse/fine) [6]	-	0.7	-	-
ESL – Urban residential and public open space (coarse/fine) [6]	-	0.7	-	-
Residential A [7] Criteria (HIL A)	-	-	300	3
Recreational C [7] Criteria (HIL C)	-	-	300	3

Note: All units in mg/kg. NL = screening criteria exceed the saturated vapour pressure and the vapour pathway is not limiting for these parameters.

National Environment Protection Measure 1999 (Amendment 2013) Health Screening Levels (HSL) for vapour intrusion

HSL A & B – Low and High Density Residential. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If car parks or commercial properties occupy the ground floor use HSL D.

HSL C – Recreational / open space

National Environment Protection Measure 1999 (Amendment 2013) Ecological Investigation Levels

Insufficient data was available to calculate aged values for naphthalene, consequently the values for fresh contamination should be used.

National Environment Protection Measure 1999 (Amendment 2013) Ecological Screening Levels (ESLs) for TPH fractions F1-F4 and BTEX.

National Environment Protection Measure 1999 (Amendment 2013) HIL A Residential with gardens and accessible soil and HIL C Public open space such as parks, playgrounds and playing fields, secondary schools and footpaths.

HIL is based on the sum of the 16 PAHs most commonly reported for contaminated sites. Application of total PAHs should consider the presence of carcinogenic PAHs and naphthalene (the most volatile PAH).

HIL based on 8 carcinogenic PAHS and their TEFs and is calculated by multiplying concentrations of each carcinogenic PAH in the sample by its b(a)p TEF– refer schedule B7 of NEPM 1999.

Appendix E Unexpected Finds Protocol

Unexpected Finds Protocol (UFP)

During the remediation works there is a potential for previously undetected contaminated or hazardous soils, materials or wastes to be uncovered.

The objective of this UFP is to provide guidance to workers as to the actions and procedures required should unexpected contaminated soils and/or hazardous materials be identified during the demolition/remediation/redevelopment works.

Indications of potential contamination or hazardous materials that may be present on this Site include:

- Construction/demolition wastes such as concrete, bricks, timber, tiles, fibrous asbestos cement sheeting, fragments.
- Stained or discoloured fill, soils or seepage water, including oily sheens.
- Odorous fill, soils or seepage waters.
- General rubbish such as plastic, glass, packaging
- Imported materials such as ash or slag or coal chitter;

Should unexpected potentially contaminated or hazardous materials be uncovered during the proposed site works, the following procedures should be followed:

- Immediately stop work in the area of concern.
- Contact the Site Manager or their designated authority (Principal Contractor).
- Provide the required controls - may include temporary barricading to prevent access, warning signs, covering of odorous materials, erosion and sediment controls.
- Document (including photographs) the exposed materials, the controls established and report to the Site Manager and the Byron Shire Council Project Manager.
- If required, contact experienced environmental consultant and/or appropriate organisations to provide specialist advice/support.
- No potentially contaminated or hazardous materials are to be disturbed further without approval/confirmation from the experienced environmental consultant and/or appropriate organisation.

The Site Emergency Response Plan (ERP) will take precedence over the UFP should any unexpected contamination or materials be identified that present an immediate hazard.

Contacts

Contact	Name	Contact Details
HI Project Manager		
Principal Remediation Contractor		
Site Manager		
Environmental Consultant		
Emergency		
EPA		

Appendix F Validation methodology and QA/QC

Validation methodology

If validation of materials is required at the site, the procedures described in this appendix will be used, in conjunction with the DQOs described in Section 9 and the criteria presented in Appendix D.

Decision process

Aesthetic issues

The aesthetic criteria and visual observations will be used to guide excavations in the nominated remediation areas of the site as deemed necessary by the Environmental Consultant.

The aesthetic criteria as per Section 4 will also be used to guide the extent of excavations of the areas of aesthetic impact subject to further consultation with HI Project Manager and the Auditor during the remediation works.

Health risk

The health-based assessment criteria for the identified contaminants on the site are discussed in Section 4 and presented in Appendix D. The site will be deemed to be successfully remediated if:

- The 95% UCLAVG concentration for contamination in soils remaining at the surface after remediation is less than the relevant criteria for area being remediated.
- No single sample concentration is greater than 2.5 times the relevant criteria.
- The standard deviation is less than half of the selected criteria.

These criteria will be applied to each remediation area as a whole.

Environmental risk

The environmental based criteria for the identified contaminants on the site are detailed in Section 4 and presented in Appendix D.

Given the disturbed nature of the site, and that the end use for the Site may include a health facility including a hospital and the potential for public outdoor recreation areas, the following assessment criteria have been considered:

- Soil Specific ACLs for urban residential and public open space.
- Ecological Screening Levels for TRH, BTEX and benzo(a)pyrene fractions –urban residential areas and public open space (fine soil textures apply).

Off-site disposal

Excavated material shall be stockpiled in designated areas of the site for characterisation and waste classification if off-site disposal of the material is required. Criteria for classification of material for disposal will be as per the *Waste Classification Guidelines* (EPA 2014).

Following stockpiling, representative samples shall be collected from each “batch” of material destined for disposal. (A batch being defined for the purposes of this RAP as a volume of material of similar physical and chemical characteristics, generally excavated from a particular area of the site). The material will be deemed to be suitable for disposal if the 95% $_{UCLAVG}$ concentration for each contaminant of concern is less than the relevant waste classification criteria.

Imported fill

Imported fill will be as specified in Section 6.9. VENM fill shall be verified by a VENM certificate prepared by an appropriately qualified and experienced consultant, and the source and material as delivered shall be inspected by the Environmental Consultant to verify consistency with the VENM certificate. Where no supporting analytical results are available, a minimum of 3 samples from any particular fill source shall be analysed for the parameters below.

Non-VENM imported materials will be validated for suitability for use as fill material at an equivalent density to the requirements of *The excavated natural material order 2014*, and at least 3 samples from any particular fill source. In order to avoid importation of contamination to the site, fill judged suitable for use will have TPH, BTEX, heavy metals, OCP/PCBs and PAHs concentrations below the criteria in *The excavated natural material order 2014* (or Australian Standard relevant to the material) and shall contain no detectable asbestos. Physical characteristics of imported soil shall be consistent with the surrounding material, or specific to intended end use as approved by the HI project manager.

Validation methodology

Sample identification

Validation and characterisation soil samples will be identified using a “V” prefix for validation, or a “C” prefix for characterisation. A detailed sample register will be kept, recording the sample number, date sampled, location, depth interval and field observations (including soil description). Duplicate samples will be recorded in the register, as will subsequent validation samples where these are needed to re-validate an area that has not met the assessment criteria and has had further remediation.

Validation following asbestos removal

The validation of areas of the site where ACM materials have been removed will be undertaken visually (by a combination of inspection and raking) by a competent person who is experienced in in visual identification of asbestos (occupational hygienist).

In accordance with the NEPM 1999, if a pass across the area results in no asbestos containing materials (ACM) being found, then the soil will be considered effectively free of ACM. Confirmatory sampling of asbestos in soils will be undertaken in accordance with the NEPM 1999 (Amendment 2013) Schedule B2 Section 11 and WA DOH 2009 Section 4.3. Sampling rates for where ACM has been removed from a large area/excavation will be based on a rate of twice the minimum grid sampling guidelines from Table A (NSW EPA 1995).

Validation of excavations

Validation sampling of excavations will only be required where excavated surfaces may be subject to exposure following completion of the development, or where validation of unexpected finds is required.

Validation sampling from excavations will generally involve collecting one sample per 25 m^2 from the base of each excavation, with at least one base sample from any single excavation and one sample per 5 m of wall, with at least one sample for each excavation wall. Samples of surface soils (0.0-0.2 m) will be taken from each side of the excavation to validate the horizontal extent of remediation, with samples also taken from mid-depth (or any visually impacted soil strata) if the excavation depth exceeds 0.5 m. Aesthetic issues (re odours, debris) will be taken into account in the validation.

In the areas of aesthetically impacted soils, validation will be undertaken by visual assessment of the resultant excavations.

Soil samples collected for validation purposes will be analysed for the particular contaminants previously identified as exceeding (or potentially exceeding) assessment criteria in the area of the excavation.

Validation for materials prior to re-use on site

If required, validation sampling for ACM will be undertaken by the Environmental Consultant to demonstrate that materials have been appropriately screened of asbestos contamination and anthropogenic inclusions to a standard that is suitable for proposed placement either at the surface or in sensitive areas of the site. Sampling and analysis for other potential contaminants will also be undertaken if required.

Validation sampling for asbestos from screened stockpile materials or other similar materials will involve a final detailed visual inspection of the screened materials that should not detect ACM. Where ACM is encountered, percentage contamination will be calculated using the weight of ACM found for a particular area or volume. The recommended sampling rate for known volumes of screened materials is one sample per 250 m^3 with a minimum of three samples collected from any one portion of the stockpile (equivalent to the stockpile sampling density from the ENM exemption 2012). Analysis will be for both ACM quantification and asbestos in soils (AF/FA) in accordance with the NEPM 1999. Exceedence of HSL A or HSL C criteria will not necessarily preclude placement of the materials, but may entail more stringent management requirements (including during movement/handling) if significant asbestos is encountered.

Validation of Excavated Material/Stockpiles for waste classification

Waste classification samples will be collected from any soil requiring off-site disposal to landfill at a rate of one sample per 25 m^3 of material with a minimum of three samples per batch. For larger volumes of soil (>100 m^3) sampling frequency may be reduced provided statistically representative classification can be achieved. Samples collected for waste classification purpose will be analysed for heavy metals (arsenic, cadmium, chromium, lead, mercury and nickel), TRH, PAH and asbestos.

If required for classification purposes, representative soil samples will also be submitted for Toxicity Characteristic Leaching Procedure (TCLP) and the resultant leachate analysed for the relevant contaminants governing the waste classification.

In accordance with the NSW EPA 2014 Step 2, any liquids within the excavations during the remediation works that require offsite disposal would be classified as liquid waste, and as such “there is no need to undertake any further assessment”. GHD notes that the liquid waste should be disposed of to a facility licensed to accept / treat the liquid under the POEO Act 1997.

Validation of cap

Verification of capping shall be undertaken in accordance with Section 6.6.3.

Analytical test methods and detection limits

In general, laboratory analysis will be conducted in accordance with the standard test methods outlined in Schedule B(3) of the NEPM (1999) for soils.

Where possible, the project laboratories will be NATA accredited for the analysis and will utilise their own internal procedures and their test methods (for which they are NATA, or equivalent, accredited) in accordance with their own quality assurance system that forms part of their accreditation.

Quality assurance/quality control

Quality assurance/quality control plan

Field and laboratory quality assurance program

QA and QC practices will be applied to all stages of data gathering and subsequent sample handling procedures. These are designed to provide control over both field and laboratory operations. Additionally, the analytical laboratories will complete their own internal QA procedures (as required by NATA registration) during the analysis of samples. Details of the QA/QC program are described below.

Quality assurance

All fieldwork will be conducted in general accordance with the Environmental Consultants Standard Field Operating Procedures. The procedures promote the collection of environmental samples by a set of uniform and systematic methods as required by the QA system.

The Standard Field Operating Procedures shall include the following:

- Decontamination procedures.
- Sample identification procedures.
- Requirements for soil bore logs.
- Chain of custody requirements.
- Sample duplicate frequency.
- Field equipment calibration requirements.

Subsurface characteristics and field observations will be fully documented in accordance with the approved sampling and analysis plan. Chain-of-Custody documentation will be prepared for sample transfer from the site to the laboratory. Quality control checks will be conducted both in the field and the laboratory.

All sampling equipment will be thoroughly decontaminated (in accordance with written procedures) to ensure that no carry-over of contaminants occurs between sampling events, thereby ensuring that an accurate indication of concentrations of contaminants will be obtained. All samples will be labelled in the field with a unique sample identification code (in accordance with the documented system described previously), with a sample label affixed to the side of the container, and all writing on the label in waterproof indelible ink.

Soil sampling methodology

Validation and characterisation samples (where required) will generally be taken directly from the sides and base of excavations (where safe and practical to do so), or by hand auger or from within relatively undisturbed soil recovered by the excavator bucket from the excavation.

Validation samples will be screened using a PID where hydrocarbon contamination is expected.

Field sampling quality control

Field QC samples for this study will comprise duplicate samples and blanks. Duplicate field samples consist of two samples collected at the same place and time and are intended to represent the same entity as closely as possible. Blank samples are artificial samples designed

to monitor for the introduction of artefacts into equipment cleaning and sample handling process.

A combination of the following duplicates and blanks will be utilised:

- Field Split Duplicates: Individual samples are split in two in the field by the sampling crew and are placed in two separate containers. One sample is sent to the project laboratory and one sample is sent to an independent check laboratory. Field split duplicate samples provide an indication of the analytical accuracy of the project laboratory, but may be affected by other factors such as sampling methodology and the inherent heterogeneity of the sample medium.
- Blind duplicates: Both samples are sent anonymously to the project laboratory. Blind duplicates provide an indication of the analytical precision of the laboratory, but may be affected by other factors such as sampling methodology and the inherent heterogeneity of the sample medium.
- Trip blanks: These are samples of organic free water normally prepared by the analytical laboratory which is providing the bottles to be used for sampling. They remain with the sample bottles while in transit to the site, during the sampling and during the return trip to the laboratory. At no time during these procedures are they opened. Upon return to the laboratory, they are analysed for all analytical parameters as if they were a field sample. Trip blanks are a check on sample contamination originating from sample transport, handling, shipping and site conditions.
- Trip spikes: The samples of either soil or water prepared by the analytical laboratory which is providing the bottles to be used for sampling. A known quantity of volatiles (usually BTEX) is added to the samples by the lab. They remain with the sample bottles while in transit to the site, during the sampling and during the return trip to the laboratory. Upon return to the laboratory, they are analysed for all analytical parameters as if they were a field sample. Checks for degradation of analyte during collection, storage and handling.
- Equipment blanks: These are prepared in the field (at the sampling site) using empty bottles and the distilled water used during the final rinse of sampling equipment. After completion of the decontamination process fresh distilled water is poured over the sampling equipment and collected. The distilled water is exposed to the air for approximately the same time the sample would be exposed. The collected water is then transferred to an appropriate sample bottle and the proper preservative added, if required. Equipment blanks are a check on equipment decontamination procedures.
- Field blanks: These are similar to trip blanks except the water is transferred to sample containers on site. Field blanks are a check on sample contamination originating from sample transport, handling, shipping, site conditions or sample containers.

Procedures for duplicate sampling will be identical to those used for routine sampling, and samples will be dispatched for analysis for the same parameters using the same methods as the routine sample. Samples collected for volatile analysis are not mixed or quartered in the field. Separate discrete samples are collected for each of the original and duplicate samples to minimise volatile loss. These samples are collected to match each other as closely as possible and provide a representative sample of the material being sampled.

Field sampling quality control for any validation sampling required will consist of split and blind duplicate samples for all contaminants of concern. Split duplicate samples will be collected and analysed at a rate of not less than 5% of total samples analysed. Blind duplicate samples will be collected and analysed at a rate of not less than 5% of total samples analysed. Trip blanks and trip spikes are not proposed for validation sampling as volatile contaminants are not expected.

Where the results of duplicate samples differ between the primary and duplicate laboratory, the higher of the two values will initially be adopted for all analytes. Further assessment of anomalous results (eg. by re-analysis of samples, or resampling if required) may be undertaken where the results affect the outcome of the assessment.

Laboratory quality control

Laboratory quality control procedures typically include analysis of the following:

- Laboratory duplicate samples: The analytical laboratory collects duplicate subsamples from one sample submitted for analytical testing at a rate equivalent to one in twenty samples per analytical batch, or one sample per batch if less than twenty samples are analysed in a batch. A laboratory duplicate provides data on analytical batch and the analytical precision (repeatability) of the test result.
- Spiked Samples: An authentic field sample is spiked by adding a aliquot of known concentration of the target analyte(s) prior to sample extraction and analysis. A spike documents the effect of the sample matrix on the extraction and analytical techniques.
- Certified Reference Standards: A reference standard of known (certified) concentration is analysed along with a batch of samples. The Certified Reference Standard provides an indication of the analytical accuracy of the test method.
- Surrogate Standard/Spikes: These are organic compounds which are similar to the analyte of interest in terms of chemical composition, extractability, and chromatographic conditions (retention time), but which are not normally found in environmental samples. These surrogate compounds are spiked into blanks, standards and samples submitted for organic analyses by gas-chromatographic techniques prior to sample extraction. They provide a means of checking that no gross errors have occurred during any stage of the test method leading to significant analyte loss.
- Laboratory Blank: Usually an organic or aqueous solution that is as free as possible of analyte of interest to which is added all the reagents, in the same volume, as used in the preparation and subsequent analysis of the samples. The reagent blank is carried through the complete sample preparation procedure and contains the same reagent concentrations in the final solution as in the sample solution used for analysis. The reagent blank is used to correct for possible contamination resulting from the preparation or processing of the sample.

Methodology used to assess quality control results

The results of the field and laboratory quality control samples will be assessed to determine:

- The quality of the data generated.
- If the data meets the objectives of the study.
- If the data is acceptable for the intended use.

Field QC

Assessment of field quality control duplicate samples will be undertaken by calculating the Relative Percent Difference (RPD) of duplicate samples. Table F-4 below presents guidelines for assessment of QC results. These guidelines are the same as those provided in the NEPM as endorsed by the NSW EPA. A result exceeding these guidelines does not necessarily mean the data is invalid, but rather the impact on the data may need to be assessed.

Table F-4 Guidelines for Assessment of Quality Control Results

Test	Acceptable RPD(%)[1]
Inorganics	30
Organics	50
[1] Can be expected to be higher for low concentrations	

Completeness

The completeness of the analytical program may be calculated as follows, using the assessment of data acceptability resulting from the quality assurance program:

$$\text{Completeness}\,(\%) = \frac{\text{Number of samples with acceptable data}}{\text{Number of samples analysed x 100}}$$

Completeness parameters are generally required to exceed 95%.

Laboratory QC

Assessment of laboratory QC is undertaken internally by the individual laboratories. Duplicates are assessed by calculating the Relative Percent Difference (RPD) and blanks should return analyte concentrations as not detected. Percent Recovery (PR) is used to assess spiked samples and surrogate standards. Acceptable values for RPD and PR can vary depending on the type of analyte tested, concentrations of analytes, and sample matrix.

Certified Reference Standards and Materials are analysed by comparing the test result to the certified concentration plus or minus a certified tolerance. Certified tolerances vary depending on the type of analyte tested and the certified concentration of the analyte.

Reporting

On completion of the remediation operations the environmental consultant will prepare a remediation/validation report which will be submitted to HI. The report will summarise the works performed and the validation results, in order to demonstrate compliance with the objectives of the RAP. Relevant data from previous investigations will be included as a basis of the overall assessment of the site, including assessment of the reliability and integrity of the dataset based on comparability with the remediation and validation works.

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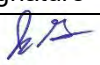
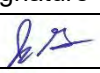
0	E Griffin	I Gregson		I Gregson		04/07/2016

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Appendix D

LTEMP (2021b)

New Maitland Hospital

Long Term Environmental Management Plan

Health Infrastructure

15 December 2021

→ **The Power of Commitment**

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Executive summary

This Long Term Environmental Management Plan (LTEMP) has been prepared for Lot 7314 DP 1162607 and Part Lot 401 DP 755237 (the site). The site was part of the former CSR/PGH clay mine and brickworks and is now part of the New Maitland Hospital (NMH) development.

An LTEMP (formerly Long Term Site Management Plan) was issued at completion of early works in 2019 (29 November 2019). This LTEMP has been updated to incorporate additional works to complete the development of the site, and to include the northern carpark (Part Lot 401), as summarised below.

Purpose of the LTEMP

This LTEMP has been developed to provide awareness of the areas of identified contamination or natural materials requiring management that remain on the site, and to document the procedures and responsibilities required to protect users of the site (including patients, visitors, workers, and possible future intrusive maintenance workers) from exposure to such contamination during normal use and maintenance of the site.

This LTEMP is not intended to cover other activities such as large-scale redevelopment or remediation of the site for a change in land use. Such activities would require specific site management plans developed for that particular purpose.

This LTEMP requires maintenance of passive control measures only (i.e. no operation or maintenance of active control systems is required).

Description of materials requiring management

Based on previous investigations and the remediation and validation works carried out as part of earthworks completed at the site, GHD identified five distinct areas known to contain materials subject to environmental management requirements, as shown in Figure 7 (Appendix A):

– The soils remaining from remediation of bonded asbestos containing material (ACM), emplaced approximately 0.3 m below the surface, to the east of the bio-retention basin (Area A). Remaining concentrations of ACM in soil considered to be less than health-based screening criteria (HSLs), but potential remains for some asbestos to be present.
– The soils from the bonded ACM asbestos remediation, emplaced approximately 0.3 m below the surface, to the south of the southern access road/west of the future expansion area (Area B). Remaining concentrations of ACM in soil considered to be less than HSLs, but potential remains for some asbestos to be present.
– The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area. (Not contamination per se, but material which could present a hazard if exposed and subject to ignition such as from a bush fire).
– The remaining ACM-impacted material within Pit 2, approximately 2 m or greater below the final design level, in the central/western portion of the northern carpark.
– ACM-impacted material excavated from Pit 2, which was placed in a containment area in the eastern portion of the northern carpark, at a depth greater than 2 m below the final design level.

As noted on Figure 7, there is also a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works. Furthermore, previously identified contamination remains in the portions of Areas 1 and 3 that have not been developed/disturbed, and in Area 4 (which has not been developed/disturbed). Hence the entire site is subject to management requirements if subsurface disturbance is undertaken.

Actions required by LTEMP

Procedures are provided in Appendix D of this LTEMP to mitigate the potential risks that have been identified based on the evaluation of the contamination status of the site, and to manage potential pathways of exposure and linkages to hospital staff and patients, visitors and intrusive maintenance users who may use the site.

In summary, actions comprise the following:

– Providing awareness of the presence of materials requiring management to any persons undertaking intrusive works at the site.
– Procedures to manage identified contamination or unexpected finds if exposed during normal use and maintenance of the site.
– Periodic inspections and maintenance if required to ensure contaminated materials are not subject to uncontrolled exposure.
– Review and maintenance of the LTEMP.

Enforceability and public notification

Implementation of this LTEMP is considered legally enforceable under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), by way of the conditions of consent for the development (SSI 9775), which require a Site Audit Statement and Site Audit Report verifying the site is suitable for the intended land use. The suitability of the site, as determined by the Site Audit, is subject to implementation of this LTEMP, as will be stated on the Site Audit Statement.

Due to the presence of asbestos on the site as discussed above, there is also a legislative requirement for an Asbestos Management Plan (AMP) to be maintained in accordance with the requirements of Part 8.1 of the Work Health Safety (WHS) Regulation 2017. This LTEMP is considered to fulfill the minimum requirements of an AMP, and hence is legally enforceable under the WHS Regulation.

There must be appropriate notification on the site's planning certificate issued under *Section 10.7* of the EP&A Act of the restrictions applying to the site to ensure that current and future site owners and occupiers are aware of the details of this LTEMP. The Site Audit Statement and this LTEMP should be noted on the site's Section 10.7 Planning Certificate. The LTEMP should also be incorporated in or referenced as part of any overall environmental management documents for operation of the NMH.

The owner/occupier of the site shall ensure that the current version of this LTEMP is provided to Council. When the LTEMP undergoes amendment, the amended document shall be provided to Council to ensure that the most up to date version is presented on the certificate. The current version of the LTEMP shall also be provided as part of any relevant inductions and for use as part of overall environmental management of the site.

This LTEMP must be implemented until an accredited site auditor or the NSW Environmental Protection Authority (EPA) determines that the LTEMP is no longer required.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 8 and the assumptions and qualifications contained throughout the Report.

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List of abbreviations

Abbreviation	Definition
ACM	Asbestos Containing Material
BaP	Benzo(a)pyrene
EIL	Ecological investigation level
EPA	Environment Protection Authority
ESL	Ecological screening level
ha	Hectare
HI	NSW Health Infrastructure
HSL	Health-based screening level
LAA	Licensed asbestos assessor
LTEMP	Long term environmental management plan
mbgl	Metres below ground level (mbgs – metres below ground surface)
NEPC	National Environment Protection Council
NMH	New Maitland Hospital
OSD	On-site Detention
PAH	Polycyclic Aromatic Hydrocarbon
RAP	Remedial Action Plan
TRH	Total Recoverable Hydrocarbons
VENM	Virgin Excavated Natural Material
WHS	Work Health & Safety

1. Introduction

1.1 Introduction

GHD Pty Ltd (GHD) was engaged by NSW Health Infrastructure (HI) to prepare a Long Term Environmental Management Plan (LTEMP) for Lot 7314 DP 1162607 and Part Lot 401 DP 755237 (the site). The site was part of the former CSR/PGH clay mine and brickworks, located on Metford Road, Metford, NSW (as shown in Figure 1 in Appendix A), now part of the New Maitland Hospital (NMH) development (design layout shown in Figure 2 in Appendix A).

An LTEMP (formerly Long Term Site Management Plan) was issued at completion of early works in 2019 (29 November 2019). This LTEMP has been updated to incorporate additional works to complete the development of the site, and to include the northern carpark (Part Lot 401), as summarised in Section 3.

All bulk earthworks, surface finishing and landscaping have been completed for the current development (including installation of the main sewer and stormwater services).

1.2 Background

In 2015, GHD was engaged by HI to undertake a Phase 2 Environmental Site Assessment (ESA)[1] for Lot 7314. During the ESA, no significant contamination was found at the site, however natural carbonaceous material was present, isolated instances of asbestos-containing material (ACM) were identified, with numerous areas of anthropogenic wastes and the potential for "unexpected finds" of contamination to occur during earth works. The ESA concluded that the investigation works undertaken had sufficiently characterised the site to enable an assessment of its suitability for the proposed hospital development, subject to implementation of the RAP.

In 2016, GHD prepared a Remedial Action Plan (RAP)/Contamination Management Plan[2] for Lot 7314. The RAP provided a summary of identified site contamination issues, and description of the proposed remediation and soil management programs, procedures and standards to be followed during the course of the redevelopment – intended to ensure the successful remediation of Lot 7314 and consequently the protection of the environment and human health.

Remediation works were generally incidental and limited to the bulk earthworks (predominantly 'cut and fill') completed within the design development area for Lot 7314. Additional ACM contamination was identified in the western portion of the site in the vicinity of the On Site Detention (OSD) tank, including friable ACM-impacted soils (removed and disposed off site) and bonded ACM-impacted soils (remediated and contained on site, with disposal of removed ACM off site).

In 2021, GHD prepared a Site Validation report[3] for Lot 7314 to assess the remediation undertaken in accordance with the Lot 7314 RAP (GHD 2016). The Site Validation report concluded that Lot 7314 was suitable for the proposed hospital development, subject to implementation of this LTEMP.

In preparation for the development of the northern carpark, GHD undertook an Additional Site Investigation[4] for Part Lot 401 DP 755237 in September 2019. Potential sources of contamination were identified as:

– "Pit 2" former quarry void fill material including waste building materials (including ACM) and hydrocarbon-contaminated soils.
– Existing natural embankment in the eastern portion of the site, subjected to fill material originally including waste building materials (including ACM) and a disused underground fuel storage tank (UST).
– Remaining surface soils.

[1] GHD (2015). *New Maitland Hospital, Stage 1 Development Area, Phase 2 Environmental Site Assessment*. GHD Pty Ltd, December 2015.
[2] GHD (2016). *New Maitland Hospital, Stage 1 Development Area, Metford, Remedial Action Plan/Contamination Management Plan*. GHD Pty Ltd, July 2016.
[3] GHD (2021a). *New Maitland Hospital, Lot 7314 Site Validation*. GHD Pty Ltd, December 2021.
[4] GHD (2019a). *New Maitland Hospital, Part Lot 401 Additional Site Investigation*. GHD Pty Ltd, November 2019.

In 2019, GHD was engaged by Multiplex to prepare a RAP/Contamination Management Plan[5] for the development of the northern carpark in Part Lot 401.

The Part Lot 401 RAP provided a summary of identified site contamination issues, and description of the proposed remediation and soil management programs, procedures and standards which were to be followed during the course of the northern carpark development – intended to ensure the successful remediation or management of Part Lot 401 and consequently the protection of the environment and human health.

In 2021, GHD prepared a Site Validation report[6] for Part Lot 401 to assess the remediation undertaken in accordance with the Part Lot 401 RAP (GHD 2019). The Site Validation report concluded that Part Lot 401 was suitable for the proposed development (hospital carpark), subject to implementation of the LTEMP.

1.3 Purpose of the LTEMP

This LTEMP has been developed to provide awareness of the areas of identified contamination or natural materials requiring management that remain on the site, and to document the procedures and responsibilities required to protect users of the site (including patients, visitors, workers, and possible future intrusive maintenance workers) from exposure to such contamination during normal use and maintenance of the site.

This LTEMP is not intended to cover other activities such as large-scale redevelopment or remediation of the site for a change in land use. Such activities would require specific site management plans developed for that particular purpose.

This LTEMP requires maintenance of passive control measures only (i.e. no operation or maintenance of active control systems is required).

1.4 Responsibilities

Responsibility for the implementation of this LTEMP is with the current owner/occupier. Should potential future divestment occur then the new owner/occupier will assume responsibility for the ongoing implementation and maintenance of this LTEMP.

A full list of roles and responsibilities is provided in Section 5.3.

1.5 Enforceability

1.5.1 Regulatory requirements

Management of contamination at the site is subject to the regulatory requirements of the *Protection of the Environment Operations (POEO) Act 1997* and associated regulations, and the *Work Health and Safety (WHS) Act 2011*, *WHS Regulation 2017* and relevant codes of practice.

Implementation of this LTEMP is considered legally enforceable under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), by way of the conditions of consent for the development described below.

The preparation of this LTEMP is integral to satisfying Schedule 2 Condition D27 of the State Significant Infrastructure (SSI 9775) Approval (dated 6 December 2019) (under *Section 5.19* of the *Environmental Planning and Assessment Act 1979*), which states that "*Prior to the commencement of operation, the Proponent must submit to the satisfaction of the Certifying Authority a Site Audit Report and Section A Site Audit Statement for the relevant part of the site prepared by a NSW EPA accredited Site Auditor. The Site Audit Report and Section A Site Audit Statement must verify the relevant part of the site is suitable for the intended land use and be provided for the information of the Planning Secretary and the Certifier*." The suitability of the site, as determined by the Site Audit, is subject to implementation of this LTEMP, as will be stated on the Site Audit Statement.

[5] GHD (2019b). *New Maitland Hospital, Part Lot 401 Remedial Action Plan/Contamination Management Plan*. GHD Pty Ltd, November 2019.
[6] GHD (2021b). *New Maitland Hospital, Part Lot 401 Site Validation,* GHD Pty Ltd, December 2021.

Due to the presence of asbestos on the site as discussed above, there is also a legislative requirement for an Asbestos Management Plan (AMP) to be maintained in accordance with the requirements of Part 8.1 of the Work Health Safety (WHS) Regulation 2017. This LTEMP is considered to fulfill the minimum requirements of an AMP, including information about the following:

– The identification of asbestos or ACM
– Decisions, and reasons for decisions, about the management of asbestos at the workplace
– Procedures for detailing incidents or emergencies involving asbestos or ACM at the workplace
– Workers carrying out work involving asbestos

Hence this LTEMP is legally enforceable under the WHS Regulation.

An asbestos register must also be maintained documenting the present of asbestos at the site, in accordance with Part 8.1 Clause 425 to Clause 428 of the WHS Regulation 2017.

This LTEMP must be implemented until an accredited site auditor or the EPA determines that the LTEMP is no longer required.

1.5.2 Public notification

During any property transactions, the site owner should comply with *Section 52(A)* of the *Conveyancing Act 1919*, by disclosing all relevant and available information regarding contamination at the site.

There must be appropriate notification on the site's planning certificate issued under *Section 10.7* of the EP&A Act of the restrictions applying to the site to ensure that current and future site owners and occupiers are aware of the details of this LTEMP. As a statutory site audit of the site is being undertaken, under *Section 53B (3)* of the *CLM Act* the site auditor must provide a copy of the site audit statement (which will append a copy of the LTEMP) to the local council. Further, under *Section 59 (2)* of the *CLM Act*, for the purposes of *Section 10.7* of the *EP&A Act*, a copy of the site audit statement is prescribed to be specified in the *Section 10.7* certificate..

The LTEMP should also be incorporated in or referenced as part of any overall environmental management documents for operation of the NMH.

The owner/occupier of the site shall ensure that the current version of this LTEMP is provided to Council. When the LTEMP undergoes amendment, the amended document shall be provided to Council to ensure that the most up to date version is presented on the certificate.

The current version of the LTEMP shall also be provided as part of any relevant inductions and for use as part of overall environmental management of the site.

1.6 Limitations

This LTEMP is not intended to replace or supersede health and safety plans for the site, or environmental management plans for operation of the hospital facility and grounds. This LTEMP should be considered as a supplement to these documents and is intended to mitigate risks associated with contaminated media. This LTEMP should form part of any site discussions completed prior to site owners, workers or contractors conducting any maintenance works or intrusive earthworks at the site. Previous investigation reports, particularly the Site Validation reports (GHD 2021a and 2021b), should also be reviewed where the site owner and contractors or other parties undertaking intrusive works at the site require a greater understanding of the nature and extent of contamination at the site.

GHD's general limitations in relation to this LTEMP are provided in Section 8.

2. Site information

The site (Lot 7314 DP 1162607 and Part Lot 401 DP) is located on Metford Road, Metford, NSW, and has an area of approximately 19 hectares (ha).

For the purpose of the ESA (GHD 2015) the site was broken into four investigation areas to aid in description of the site and interpretation of results (refer to Figure 3, Appendix A). The northern carpark (predominantly in Part Lot 401) is located to the north of the four investigation areas.

An overview of the environmental setting of the site (obtained from the Lot 7314 ESA and Part Lot 401 Additional Site Investigation, prior to redevelopment) is provided in Appendix B, along with a summary of the site contamination status for the areas not affected by the development. Previous results summary tables are presented in Appendix C, with corresponding sampling locations shown in Figure 4 (Appendix A). Note, all materials represented by the previous sampling remain on site (except for ACM impacted surface soils removed from the surface of Part Lot 401, as discussed in Section 3.2.2.1), albeit subject to relocation as per the material tracking discussed in Section 3.3.

In summary:

Lot 7314

– Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated.
– Except for the large shale stockpile in Area 3 and the adjacent weathered shale outcropping extending into Area 2, the exceedances of assessment criteria were relatively minor and isolated, and the fill materials expected to be acceptable for use in the proposed development, from a contamination perspective.
– ACM was only identified in a few isolated locations and was generally in sound condition. The identified ACM was subsequently removed, with the exception of that observed in Area 4. However, given the nature of vegetation coverage across the site, there may be other areas that contain ACM.
– Anthropogenic wastes (including ACM) were noted in many areas of fill, but were readily visually identifiable.
– Except for shallow groundwater from well MW404S, groundwater and surface water did not generally show evidence of impact from contamination at the site or contaminant migration from adjoining areas that would affect the site, and groundwater is unlikely to be beneficially used.
– GHD considered that the works undertaken sufficiently characterised the site to enable an assessment of its suitability for the proposed purpose (hospital with open space grounds), subject to implementation of a soil management plan.

Part Lot 401

– The extent of former “Pit 2” was generally delineated by the intrusive soil investigations, as was the filled/regraded embankment in the eastern portion of the site.
– ACM was observed and collected from surface soils at numerous locations across the central/western portion of the site (in the vicinity of Pit 2 and the former large stockpile adjacent to the east), generally on or adjacent the bare tracks (areas trafficked by CSR during their remediation works, where no vegetation was present). The observed ACM comprised fragments of cement-sheeting, some of which were described as low-density fibre board. The low-density fibre board was highly weathered and easily broken by hand, therefore considered to be friable as defined by Safe Work Australia (2011). ACM (bonded and friable) was also identified in several test pits during the soil sampling.
– Overall, soil exceedances by chemical contaminants were considered relatively minor, and suitability of the soils for the proposed carpark proposed development would be governed by the identified asbestos contamination.
– The groundwater conditions were comparable to previous investigations undertaken on Lot 7314 (GHD 2018), including the elevated groundwater metals concentrations, most likely associated with the naturally occurring geology and overall regional groundwater quality. Therefore the groundwater beneath the site does not pose a risk to the receiving environment.

3. Remediation and validation works

Remediation and validation works were undertaken as documented in the Site Validation reports for Lot 7314 and Part Lot 401 (GHD 2021a and 2021b, respectively). The sections below provide a summary of the works.

3.1 Lot 7314

3.1.1 General

Given no significant contamination was identified in the ESA (and subsequent inspections), remediation works were generally incidental and limited to the bulk earthworks (predominantly 'cut and fill') completed within the development area (as shown in Figure 5 and Figure 6A, Appendix A).

Note, the development area (subject of the Site Validation report) was predominantly within Area 2, with the exception of the western carpark and southern access road extending through the northern portion of Area 1 and the construction sediment basin (now the bio-retention basin) in the central-northern portion of Area 3. As such, previously identified contamination remains in the portions of Areas 1 and 3 that have not been developed/disturbed, and in Area 4 (which has not been developed/disturbed).

Of particular note:

– A portion of the carbonaceous shale stockpile/outcrop was remediated (regraded and capped) in association with the construction of the sediment basin drainage channel, as summarised in Section 3.1.2.1.
– Additional ACM contamination was identified in the western portion of the site (in the vicinity of the western carpark) including friable ACM-impacted soils and bonded ACM-impacted soils. Remediation of these soils was undertaken and documented by ESP (and reviewed by GHD) as summarised in Section 3.1.2.2.

3.1.2 Early works

3.1.2.1 Carbonaceous shale stockpile/outcrop modification

During the early works stage of the development, the large (carbonaceous) shale stockpile was reshaped and capped as described in GHD (2021a). As this stockpile was subsequent removed (as described in Section 3.1.3.1 below), the early works are not re-iterated here.

3.1.2.2 Asbestos remediation

ACM was encountered during earthworks in the western portion of the site, near the on-site detention (OSD) tank, located within the western carpark, as shown in Figure 6A (Appendix A). The contamination encountered included friable ACM-impacted soils and bonded ACM-impacted soils. Remediation of these soils was undertaken by Enviropacific Services and Daracon (respectively), as supervised and directed by an appropriately qualified licensed asbestos assessor (LAA)/supervisor from ESP.

ESP undertook validation/clearance sampling and documented the remediation in the following reports:

– Visual & analytical clearance inspection of friable soil removal – New Maitland Hospital, Metford Road, Metford NSW, 2323. ESP. 13 September 2019
– Visual & analytical clearance inspection of bonded soil remediation – New Maitland Hospital, Metford Road, Metford NSW, 2323. ESP. 11 October 2019

3.1.2.2.1 Friable asbestos remediation works (ESP 2019a)

The friable asbestos was identified during 'hen-pecking' remediation works for bonded asbestos and comprised significant amounts of broken pieces of wall sheeting which were in poor condition and were able to be crumbled under hand pressure. The area of friable ACM-impacted soils was located in the western portion of the site as shown in Figure 6A (Appendix A).

All asbestos contaminated soils were loaded directly into a truck and disposed off site at a waste facility licensed to accept asbestos waste.

Analytical clearance soil sampling was conducted on the remaining *in-situ* soils (subsequent to remediation) to confirm that the soils did not contain ACM fragments, fibres or debris. No visual remains of ACM fragments or debris were identified (by ESP or GHD) within the final remediation area at the completion of the removal works.

3.1.2.2.2 Bonded asbestos remediation works (ESP 2019b)

The identified asbestos included minor to moderate amounts of 'super six' roof sheeting and asbestos-cement wall sheeting fragments which were generally in good condition and were not able to be crumbled by hand pressure. The area of bonded ACM-impacted soils was located in the western portion of the site as shown in Figure 6A (Appendix A). Approximately 1,452 m^3 of soil was excavated.

All ACM picked from the impacted soils was disposed off site at a waste facility licenced to accept asbestos waste.

The sieved soil 'fines' were predominantly stockpiled on top of the large shale stockpile (also known as the 'chitter pile'), while the aggregate was predominantly stockpiled adjacent to the east of the construction sediment basin (Area A on Figure 6A in Appendix A). Some 'fines' and aggregate were stockpiled to the west of the future expansion area, south of the southern access road (Area B on Figure 6A in Appendix A).

The aggregate east of the construction sediment basin was subsequently levelled and rolled *in-situ*, and 'fines' stockpiled on the chitter pile were loaded into trucks and transported to the area east of the construction sediment basin (Area A on Figure 6A in Appendix A), where they were placed on top of the aggregate and rolled, prior to capping with approximately 0.3 m of uncontaminated soil.

The aggregate south of the southern access road (Area B on Figure 6A in Appendix A) was also levelled and rolled, and 'fines' placed on top of the aggregate and rolled, prior to capping with approximately 0.3 m of uncontaminated soil.

Survey drawings showing the location of the emplacement areas and the volume of the capping layer for each area are included in Appendix A.

GHD notes that a marker layer was not incorporated in the capping of the two areas described above, as the remaining concentrations of ACM in the soil that was capped were below the health-based screening levels (HSLs), and the capping was primarily to ensure that the criterion of "no visible asbestos in surface soils" was met. As the thickness of capping was well in excess of the nominal 100 mm considered "surface soils", the capping thickness was not surveyed.

Visual inspection (by ESP and GHD) of the remaining *in-situ* soils was undertaken following remediation. No ACM fragments or debris were visually identified within the remediation area.

3.1.3 Main works

3.1.3.1 Carbonaceous shale stockpile/outcrop remediation

The carbonaceous shale stockpile/outcrop was removed, by way of bulk excavation, to form the eastern expansion area. The excavated carbonaceous material was mixed with uncontaminated material, at a one-to-one ratio (based on technical advice from DP and GHD), and predominantly used as backfill material in the northern carpark (as reported in the Part Lot 401 Site Validation report) and to a much lesser extent in the eastern expansion area.

3.1.3.2 Coal seam remediation

Three coal seams were identified during bulk excavation of the eastern expansion area (beneath the former large carbonaceous shale stockpile/outcrop) as shown in Figure 6A (Appendix A). DP undertook investigations as documented in a memorandum dated 7 June 2021 and summarised below.

DP reported that the coal seams posed a low risk for spontaneous combustion, however, may pose a risk of combustion from external sources (such as surface fires).

DP (2021) recommended:

– Removal of the coal where it is present within 0.8 m of the design finished surface level for the pavement and replacement with approved select subgrade material.
– Where there is greater than 0.8 m between the design finished surface level of the pavement and the top of the coal layer, it may be suitable to remain in place. It should be noted, however, that the presence of the coal seam may act as a conduit for water. Increases in water within the coal seam and surrounding material may decrease the strength of the subgrade material. Hence, pavement thickness design would need to consider the presence of coal. Furthermore, careful design of drainage will be required to ensure that the coal seam is not allowed to become wet during the life of the pavement.
– Within Location 2, it is understood that the design subgrade level is below the base of the exposed coal seam. Hence the coal seam will be removed during bulk earthworks in this area.
– Where coal is to be exposed in any final batters (such as may be the case near Location 3), it should be covered with either a hard surfacing or suitable measures to minimise the risk of oxidation.
– Suitable formation and protection of batter slopes to prevent scouring, erosion and instability and to help control air (oxygen) flow.

GHD understands that excavation of the identified coal seams to 0.8 m below final design level was undertaken by Daracon (survey drawings of the excavations are included in Appendix A). The coal was mixed with uncontaminated material from within the excavations and from a nearby borrow area, and re-used within the excavation voids and borrow area. No records were provided to GHD confirming removal of “Location 2” or any of the other identified coal seams. As such, we conservatively assumed that coal may remain in these areas beyond 0.8 m depth (from final design level).

3.2 Part Lot 401

3.2.1 General

The remediation works within Part Lot 401 comprised removal of identified ACM-impacted surface soils and relocation of ACM-impacted soils (fill material) from within Pit 2 to a depth of two metres below design level to allow for bulk earthworks to level the site, including cutting in the western and central portions of the site (requiring the construction of a piled retaining wall) and significant filling in the western portion (requiring the construction of a keystone retaining wall), The Development area is shown in Figure 5 (Appendix A). Figure 6B (Appendix A) shows the asbestos remediation areas.

3.2.2 Asbestos remediation and validation

3.2.2.1 Surface soil removal

ACM-impacted surface soils identified within Part Lot 401 were removed to a designated stockpile area further north in Lot 401, with CSR responsible for subsequent treatment/management.

ESP was engaged by Daracon as occupational hygienist (undertaking boundary air monitoring, validation sampling and a visual inspection of asbestos removal work). The ACM removal work was carried out by a Class A licenced removal contractor, Enviropacific Services (Enviropacific).

The area of ACM-impacted surface soils was approximately 150 m x 80 m (full width of the site), located in the central/western portion of the site, as indicated by the confirmed asbestos observations shown in Figure 6B (Appendix A). However topsoil from the entire Part Lot 401 site was removed.

Analytical clearance soil sampling to 0.15 metres below ground level (mbgl) was conducted on the remaining *in-situ* soils (subsequent to the remediation works) to confirm that the soils did not contain ACM fragments, fibres or debris. No visual ACM fragments or debris were identified (by ESP or GHD) within the final remediation area at the completion of the removal works. GHD also carried out a systematic visual inspection of the central and western portions of the Part Lot 401 site following removal of the surface soils. The inspection comprised a two-person walkover, with consecutive passes spaced approximately 5 m apart. No ACM was observed on the surface.

3.2.2.2 Pit 2

The ACM-impacted soils identified within Pit 2 were removed to a depth of 2 m below design level (representing excavation depths up to 5 mbgl).

ESP was engaged by Daracon as occupational hygienist (undertaking boundary air monitoring, validation sampling and a visual inspection of asbestos removal work). The ACM removal work was carried out by a Class A licenced removal contractor, Enviropacific.

The dimensions of the ACM-impacted soils removed from Pit 2 were approximately 75 m long by 70 m wide (half an ellipse, with the widest point at the northern boundary of the site) by 3-5 m deep, located in the western portion of the site as shown in Figure 6B (Appendix A). A survey was undertaken of the final excavation and is provided in Appendix A (depths relative to the design final surface level). A thin layer of uncontaminated material (approximately 100 mm thick) was placed on top of the excavated surface, followed by a geofabric marker layer, prior to backfilling with uncontaminated material to the design level.

The excavated soils from Pit 2 were transported to the eastern portion of Part Lot 401 extending into the adjacent portion of Lot 7314, designated as the containment area, where the ACM-impacted soils were placed at a depth greater than 2 m below final design level (the majority of which is beneath the sealed carpark pavement, as shown in Figure 7 in Appendix A). A thin layer of uncontaminated material (approximately 100 mm thick) was placed on top of the placed material, followed by a geofabric marker layer. A survey was undertaken of the final placed materials (excavated from Pit 2) and is provided in Appendix A.

Longitudinal cross sections are also provided in Appendix A.

3.2.2.3 Piling for retaining wall and for solar array (within Pit 2)

Piling within Pit 2 was required for the construction of the post and panel retaining wall in the central/western portion of the site on the northern boundary (known as the piling works exclusion zone). The drilling spoil was disposed off site at a waste facility licensed to accept asbestos waste.

ESP was engaged by Daracon as occupational hygienist (undertaking boundary air monitoring, validation sampling and a visual inspection of asbestos removal work). The ACM removal work was carried out by a Class A licenced removal contractor, Enviropacific.

Analytical clearance soil sampling was conducted on the remaining *in-situ* soils in the piling works exclusion zone to confirm that the soils did not contain ACM fragments, fibres or debris. No visual ACM fragments or debris were identified (by ESP or GHD) within the final remediation area at the completion of the removal works.

3.2.2.4 Piling for solar array (within Pit 2)

Piling was undertaken in backfilled (uncontaminated) material within Pit 2 (i.e. within 2 m of the design level) for the solar array. The drilling spoil was disposed off site at a waste facility licensed to accept asbestos waste.

As a conservative measure ESP was engaged by Daracon to undertake validation sampling and a visual inspection of the work area after drilling and spoil removal.

Analytical clearance soil sampling was conducted on the remaining *in-situ* soils in the piling works exclusion zone to confirm that the soils did not contain ACM fragments, fibres or debris. No visual ACM fragments or debris were identified (by ESP or GHD) within the final remediation area at the completion of the removal works.

3.2.3 Carbonaceous shale stockpile/outcrop material reuse

As noted in Section 3.1.3.1, carbonaceous shale material from the large stockpile (chitter pile) on Lot 7314 was excavated and transported to the Part Lot 401 fill area, where it was mixed with clean sandstone material won from Lot 7314 and Part Lot 401. The material was blended at a one-to-one ratio (based on technical advice from DP and GHD).

3.3 Materials tracking

As part of the remediation works, civil contractors were required to record material handling and activities (tracking). The material tracking records (MTRs) were reviewed as part of the Site Validation reports (GHD 2021a and GHD 2021b) and confirmed:

- Excavation of carbonaceous material (sourced from the large shale stockpile, which was ultimately removed) and mixing with uncontaminated soils, for use across the site (with a significant proportion used in backfilling beneath the eastern portion of the northern carpark).
- Placement of material with aesthetic issues (primarily brick and concrete fragments) at depths below 2 mbgl in several locations beneath the development footprint.
- Removal of the friable ACM-impacted soils from the western portion of the site.
- Removal of ACM from the bonded ACM-impacted soils in the western portion of the site, subsequent transport of the remediated material to other areas on site, and final placement east of the bio-retention basin (former construction sediment basin) and south of the southern access road.
- Removal of the ACM-impacted surface soils from Part Lot 401.
- Removal of the ACM-impacted soils from Pit 2 (to 2 m below design level) and placement in the eastern portion of Part Lot 401 extending into the adjacent portion of Lot 7314 (within a 'containment cell' 2 m below design level).
- Importation of VENM for structural fill (e.g. for roads and slabs) and service trench/pit backfilling.
- Importation of commercial landscape products (mulch and topsoil).

3.4 Site inspections

A total of 29 site inspections were undertaken by GHD throughout the duration of the development/remediation works. The development earthworks were completed at the time of GHD's final inspection (1 December 2021).

The inspections confirmed:

- Previously observed ACM had been removed from the site, including from Area 4.
- Soil management was carried out in general accordance with the RAPs (GHD 2016 and GHD 2019a).
- Blending of the carbonaceous shale material with uncontaminated material was undertaken in general accordance with the RAPs (GHD 2016 and GHD 2019a) and technical advice provided by GHD and DP.
- MTRs were generally adequate in documenting material handling and activities, and were consistent with GHD's observations of material movement as evident at the time of site inspections.
- Remediation of the (additional) identified ACM-impacted soils in the western portion of the site was undertaken in general accordance with the RAP (GHD 2016), with remaining *in-situ* soils validated as being free of ACM contamination.

  ACM appeared to be below the HSLs within the remediated material, however several fragments (subsequently removed) were observed on the surface of the stockpiles (prior to placement) and on the surface of material placed south of the southern access road.
- Removal of the identified ACM-impacted surface soils in the western and central portions of the site was undertaken in general accordance with the RAP (GHD 2019a), with remaining in situ soils validated as being free of ACM contamination (with the exception of within Pit 2, as noted below).
- Remediation (removal and containment) of the identified ACM-impacted soils from within Pit 2 (to 2 m below design level) was undertaken in general accordance with the RAP (GHD 2019a).
- Removal of the large carbonaceous shale stockpile/outcrop.
- Removal of coal (seams) from the surface of the eastern expansion area.
- No evidence of contamination or visible ACM observed during the final inspection (1 December 2021).
- Levels of aesthetic impact observed during the final inspection (1 December 2021) were not present to a degree that is likely to cause concern to site users. Minor quantities of foreign materials noted in Section 4 should be removed (to extent practicable) during the maintenance period, to minimise the remaining aesthetic impacts.

3.5 Long term environmental management requirements

Based on the remediation and validation works described above, GHD identified five distinct areas known to contain materials subject to environmental management requirements (i.e. subject to this LTEMP), as shown in Figure 7 (Appendix A):

– The soils remaining from remediation of bonded ACM (remaining ACM concentrations in soil below HSLs, but not “asbestos free”), emplaced approximately 0.3 m below the surface, to the east of the bio-retention basin (former construction sediment basin) (Area A).
– The soils from the bonded ACM asbestos remediation (remaining ACM concentrations in soil below HSLs, but not “asbestos free”), emplaced approximately 0.3 m below the surface, to the south of the southern access road and to the west of the southern expansion area (Area B).
– The three identified coal seams remaining approximately 0.8 m or more below the surface in the eastern expansion area. (Not contamination per se, but material which could present a hazard if exposed and subject to ignition such as from a bush fire).
– ACM-impacted soils within Pit 2, remaining in situ at depths greater than 2m below the surface, in the central/western portion of the northern carpark.
– The ACM-impacted soils from the remediation of Pit 2, emplaced in the containment area approximately 2 m below the surface, beneath the eastern portion of the northern carpark.

As noted on Figure 7 (Appendix A), there is also a potential for isolated occurrences of contamination to be present in other areas of the site as “unexpected finds”, particularly in areas of fill material that have not been disturbed by the site development works. Furthermore, previously identified contamination remains in the portions of Areas 1 and 3 that have not been developed/disturbed, and in Area 4 (which has not been developed/disturbed). Hence the entire site will be subject to management requirements if subsurface disturbance is undertaken.

4. Current site conditions

The current site conditions (and example photographs) as observed during the final inspection 1 December 2021, are summarised in Table 4.1. Further details are provided in GHD 2021a and GHD 2021b.

Table 4.1 Current site conditions (1 December 2021)

Current site conditions (1 December 2021)
Photograph 4-1 Vicinity of Area B emplaced soils (at least 0.3 m below the surface) from asbestos remediation, located south of the southern access road and west of the southern expansion area (in the background). View E.

Current site conditions (1 December 2021)

Photograph 4-2 Eastern expansion area (former carbonaceous shale stockpile and vicinity of identified coal seams) with topsoil and hydromulch. View SE.

Photograph 4-3 Eastern expansion area (former carbonaceous shale stockpile and vicinity of identified coal seams) with topsoil and hydromulch. Southern expansion area (left), hospital and eastern carpark (right) in the background. View W.

Current site conditions (1 December 2021)

Photograph 4-4 Vicinity of Area A emplaced soils from asbestos remediation, located to the east of the bio-retention basin. Batter of northern carpark (eastern portion of the containment area) in background. View N.

Photograph 4-5 Vicinity of Pit 2 in the northern portion of the site (central/western portion of the northern carpark). Post and panel retaining wall in the background (Lot 401 beyond). Solar array installation doubling as shaded parking. View NE.

Current site conditions (1 December 2021)

Photograph 4-6 Vicinity of Pit 2 in the northern portion of the site (western portion of the northern carpark). View N (from top of hospital building).

Photograph 4-7 Eastern portion of the northern carpark. Western portion of the containment area. View N.

5. Environmental management procedure

5.1 Hazard assessment

The current site development is the New Maitland Hospital, with the hospital building plus associated footpaths, concreted carparks and open space. The design layout is presented in Figure 2 Appendix A. The current site development is understood to comprise construction of the New Maitland Hospital, with the hospital building to consist of seven floors including lower ground floor for back of house and services plant, two level podium (Ground and Level 01) and two wing towers above (Levels 2 to 5) linked with a central lift core plus associated footpaths, concreted carparks and open space. The design layout is presented in Figure 2 (Appendix A).

Following completion of the hospital development and the remediation works described above, exposure to hazards associated with identified and potential residual contamination and potentially combustible materials (carbonaceous shale stockpile/outcrop) is not foreseen during routine occupancy of the site under the proposed land uses. However, exposure may occur under the following scenarios:

– Erosion/degradation of the soil fill/separating layers and exposure of underlying potentially contaminated fill or potentially combustible materials.
– Where maintenance works require sub-surface activities that may encounter contamination or potentially combustible materials. As noted in Section 1.3 above, this LTEMP addresses isolated activities and is not intended to manage potential risks associated with further development of the site, which would require a separate environmental management plan (EMP).

Potential exposure pathways associated with this scenario may include:

– Ingestion or dermal contact with residual or excavated contaminated soils.
– Inhalation of asbestos fibres or gases (carbon monoxide) produced by ignition of combustible materials released to the atmosphere during maintenance works.
– Release of contaminated soils, greenhouse gases from ignition of combustible materials or aesthetically unsuitable material, into the environment.
– Direct contact with contamination or safety risks associated with ignition of combustible materials.

Mitigation and controls to minimise the likelihood of exposure are presented below.

5.2 Management procedures

This LTEMP has been developed to outline the procedures to mitigate the potential risks that have been identified based on the evaluation of the contamination status of the site, and to manage potential pathways of exposure and linkages to commercial/industrial and open space receptors and intrusive maintenance users who may use the site.

A number of procedures have been provided to guide the implementation of this LTEMP. The key procedures are listed in Table 5.1 and are provided in Appendix D.

Table 5.1 LTEMP procedure and responsibilities

Procedure Title	Procedure Number
Exposure to soil contamination	01
Unexpected Finds	02
Asbestos management	03
Carbonaceous material management	04
Site inspections	05
Inspection reports	06
Review of LTEMP implementation	07

5.3 Roles and responsibilities

During the redevelopment and operational phase of the site, the owner/occupier is responsible for the implementation of this LTEMP. The owner/occupier may delegate responsibilities for implementing the control measures detailed in the LTEMP to an external site manager or other appropriate body, however, the owner/ occupier cannot transfer their responsibilities without prior update of this LTEMP to list the delegation in this section.

The implementation of the procedures provided in this LTEMP will be the responsibility of those listed in Table 5.2. The responsibilities may include informing other parties of their obligations to comply with the LTEMP. All individuals accessing the site are responsible for complying with the requirements under this LTEMP, as applicable.

Table 5.2 Responsibilities for LTEMP implementation

Position and Company/Entity	Responsibilities
Site owner, supervisor or person-in-charge of the site	Approve and implement the LTEMP. Ensure the LTEMP is referenced in any overall environmental plans for operation of the site. Advise users/visitors/subcontractors to the site who may potentially be exposed to contaminated materials, or who are responsible for maintenance of the site, of the requirements of the LTEMP and ensure they are clearly understood. Ensure that compliance with the LTEMP is a condition of any agreement with these parties. Provide a copy of the current LTEMP to users/visitors/subcontractors who are undertaking any subsurface work (including maintenance) at the site. Ensure that the site is maintained in accordance with the LTEMP. Ensure any maintenance works to be completed on site (that would involve the disturbance of soils) are carried out in compliance with the LTEMP. Carry out regular inspections of the site to identified changes in the site conditions that may affect implementation of the LTEMP. Update the LTEMP when the risk profile of the site changes. Inform site users if conditions are significantly different from those documented in the LTEMP. Ensure all non-conformances regarding implementation of the LTEMP are reported. Review and update the LTEMP as required under WHS legislation for a workplace where asbestos is present. The requirements under *Part 8.3* of the *WHS Regulation 2017* include, but are not limited to the following: – A person with management or control of a workplace must ensure that an asbestos register is prepared and kept at the workplace, and is maintained to ensure the information in the register is up to date. – A person with management or control of a workplace must ensure that the asbestos management plan is maintained to ensure the information in the plan is up to date, and is reviewed and as necessary revised if: • there is a review of the asbestos register or a control measure • asbestos is removed from, or disturbed, sealed or enclosed at, the workplace • the plan is no longer adequate for managing asbestos or ACM at the workplace • a health and safety representative requests a review • at least once every 5 years Maintain an asbestos register documenting the presence of asbestos at the site.
Site occupier/site users (workers, maintenance workers)	Be aware of the contamination conditions at the site and potential risks. Implement the LTEMP. Notify supervisor or person in charge of the site if maintenance works are to be undertaken onsite that would involve the disturbance of soils at the property and ensure all works are carried out in compliance with the LTEMP. Ensure that applicable environmental measures are in-place and are functioning correctly during the works and after completion of the works. Notify supervisor or person in charge of the site if evidence of contaminated materials are observed during works on the site.

Position and Company/Entity	Responsibilities
Environmental consultant	As required undertake inspections and monitoring of the site operations to ensure they are carried out in an environmentally responsible manner. Prepare waste classification reports as required. LTEMP training as required. Assess any unexpected finds for suitability for proposed use. Notify owner/occupier of any significant environmental issues identified during the above tasks.

5.4 Contractor inductions

To maintain compliance with this LTEMP, the owner/occupier is to ensure that any workers at the site undertaking subsurface works are inducted into and understand the requirements of this LTEMP. The induction will include outlining all requirements within this LTEMP and training on the identification of visual and olfactory indications of contamination including (but not limited to) friable and non-friable asbestos and the requirement for asbestos works and monitoring, carbonaceous materials and anthropogenic inclusions such as demolition and building wastes.

6. Reporting

6.1 Inspection reports

Results of site inspections (e.g. detailing the integrity of surface conditions) and performance monitoring are to be recorded and maintained by the site owner/occupier and be made available to Council, NSW EPA and any other regulatory authorities on request, to demonstrate compliance with this LTEMP. Procedure 06 in Appendix D provides further information regarding the requirements of inspection reports.

6.2 Non-conformance and corrective action reports

Non-conformances must be recorded in a Non-Conformance and Corrective Action Report. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the owner/occupier or their delegate.

It is the responsibility of the owner/occupier to ensure corrective actions are immediately initiated by the appropriate party (i.e. contractor/manager associated with works undertaken), if required. Once completed, the appropriate party will provide details of the actions undertaken on the Non-Conformance Report and sign, date and file the report.

6.3 Incident management and complaints reports

Records and a register must be kept of any environmental incidents and observations relevant to the issues highlighted in this LTEMP. The register must also include corrective actions taken.

A suitably qualified environmental consultant must be engaged to investigate the cause of any environmental incident (as above) so that necessary changes in work practices can be made to prevent the incident recurring. A copy of all incident reports and subsequent investigations must be provided to the site owner and custodian for filing.

If a complaint identifies a non-conformance, a Non-Conformance and Corrective Action Report must be initiated as per Section 6.2. A copy of all complaint reports and subsequent investigations must be made available to Council, NSW EPA and other relevant regulatory authorities on request.

6.4 Review and revision of LTEMP

The LTEMP has been prepared to reflect current site conditions and may be amended from time to time as detailed in Procedures 01 to 07. The LTEMP must remain in place and be implemented until such time as a NSW EPA accredited site auditor or EPA determines that the LTEMP is no longer required.

The LTEMP is to be reviewed at least on an annual basis to ensure that it is up-to-date and appropriate to protect site users based on the condition of the site and that protocols in the LTEMP are being implemented at the site. As noted in Section 1.5.1, the WHS Regulation 2017 imposes similar requirements for review and maintenance of an AMP. Further detail on review of the LTEMP is provided in Procedure 07, Appendix D.

If the reviews discussed above identify that amendments are required to be made to the LTEMP, it is to be revised by a suitably qualified environmental consultant and approved by the owner/occupier or their delegate. Any changes to this LTEMP which lessen the management requirements must be approved by a NSW EPA accredited site auditor.

This LTEMP does not address potential changes of land use outside the proposed use as a hospital (with open space areas).

This LTEMP will expire and will require amendment should the site use change at any time, including redevelopment, changes in land use or additional site assessments.

It is the responsibility of the owner/occupier of the site to ensure that all relevant parties are provided with the most current version of the LTEMP.

7. References

Contaminated Land Management Act 1997

Conveyancing Act 1919

Environmental Planning and Assessment Act 1979

GHD (2015). New Maitland Hospital, Stage 1 Development Area, Phase 2 Environmental Site Assessment. GHD Pty Ltd, December 2015

GHD (2016). New Maitland Hospital, Stage 1 Development Area, Metford. Remedial Action Plan/Contamination Management Plan. GHD Pty Ltd, July 2016

GHD (2019a). New Maitland Hospital Part Lot 401 Additional Site Investigation. November 2019

GHD (2019b). New Maitland Hospital Part Lot 401 Remediation Action Plan/Contamination Management Plan. November 2019

GHD (2021a). New Maitland Hospital, Lot 7314 Site Validation. GHD Pty Ltd, December 2021

GHD (2021b). New Maitland Hospital, Part Lot 401 Site Validation. GHD Pty Ltd, December 2021

National Environment Protection Council (NEPC) (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)

NSW Department of Environment and Conservation (DEC) (2007). Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination

NSW Office of Environment & Heritage (OEH) (2011). Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites

State Environmental Planning Policy 55 (Remediation of Land)

8. Limitations

This Long Term Environmental Management Plan (LTEMP) (document) has been prepared by GHD Pty Ltd (GHD) for NSW Health Infrastructure (HI) and may only be used and relied on by HI for the purpose agreed between GHD and HI as set out in Section 1.3 of this document.

GHD otherwise disclaims responsibility to any person other than HI arising in connection with this document. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this document were limited to those specifically detailed in this document and are subject to the scope limitations set out in the document.

The opinions, conclusions and any recommendations in this document are based on conditions encountered and information reviewed at the date of preparation of the document. GHD has no responsibility or obligation to update this document to account for events or changes occurring subsequent to the date that the document was prepared.

The opinions, conclusions and any recommendations in this document are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this document on the basis of information provided by HI and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the document which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this document are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this document are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this document.

Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this document. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this document if the site conditions change.

Appendices

Appendix A

Figures

LEGEND

- Site boundary
- Metford Triangle
- Cadastre
- Waterbody
- Watercourse (as per topographic mapping for area)
- Railway

Paper Size ISO A4

0 50 100 150 200 250

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

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New Maitland Hospital
Long Term Environmental Management Plan

Site location and pre-development features

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

FIGURE 1

G:\22\19923\GIS\Maps\2219924_LTEMP_1.aprx
Print date: 03 Dec 2021 - 10:35

Data source: LPI: DCDB/DTDB, 2017. Metromap: Aerial imagery, 2021. Metromap Tile Service: . Created by: tmorton

Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Long Term Environmental Management Plan

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

Design layout

FIGURE 2

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New Maitland Hospital
Long Term Environmental Management Plan

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

Investigation Areas

FIGURE 3

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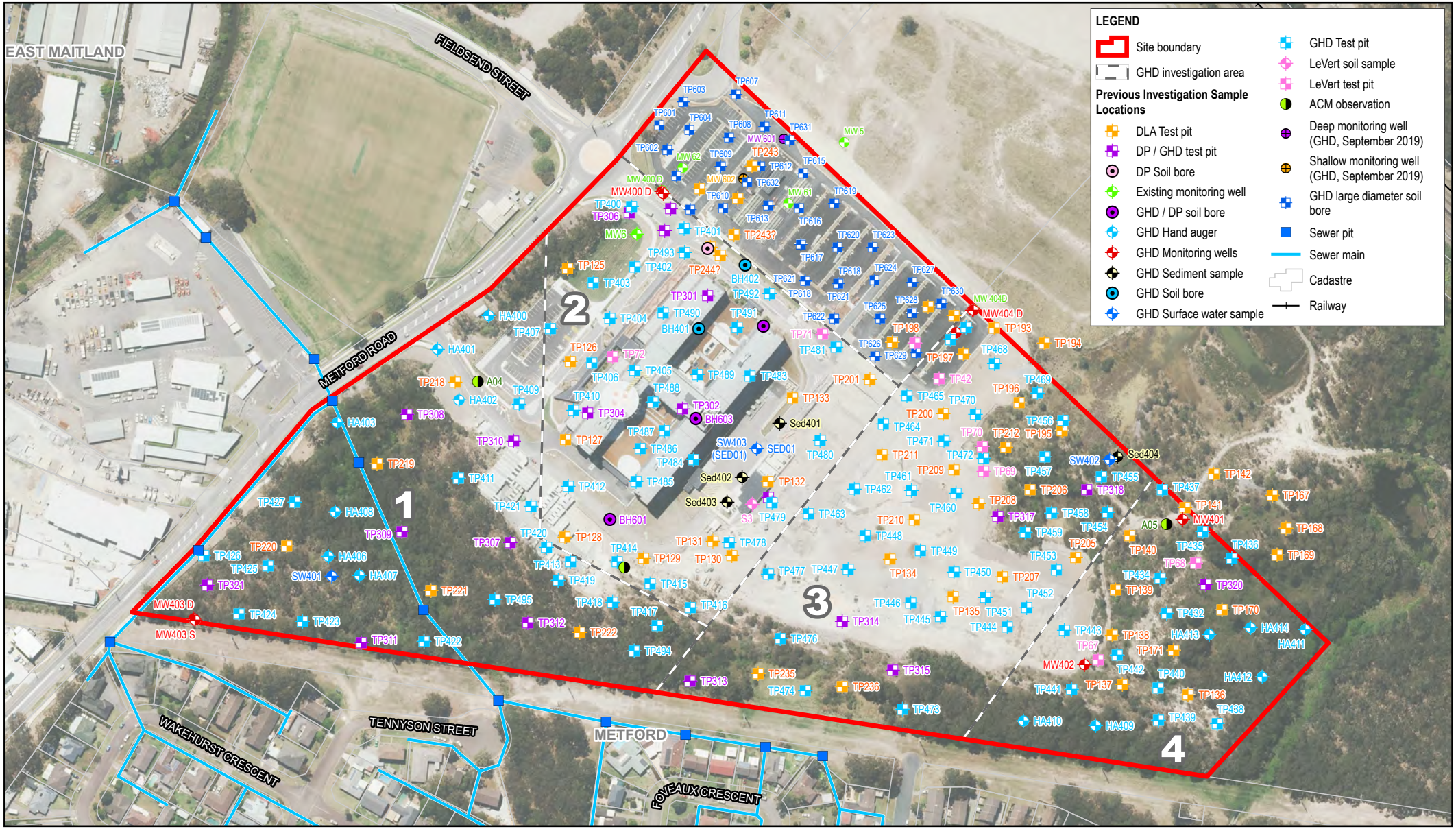

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New Maitland Hospital
Long Term Environmental Management Plan

Previous investigations sampling locations

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

FIGURE 4

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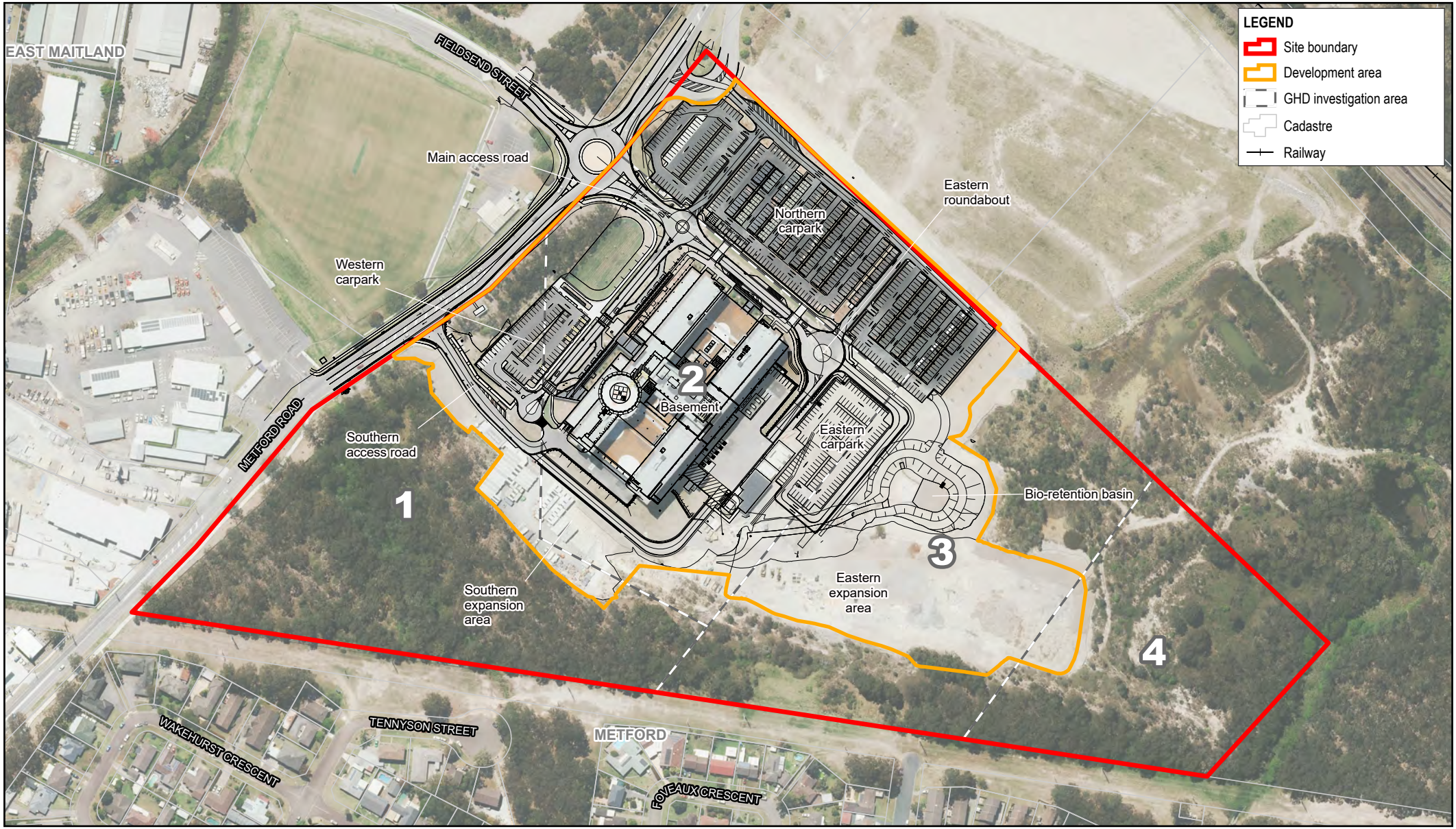

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Metres

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New Maitland Hospital
Long Term Environmental Management Plan

Development area

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

FIGURE 5

G:\22\19923\GIS\Maps\2219924_LTEMP_1.aprx
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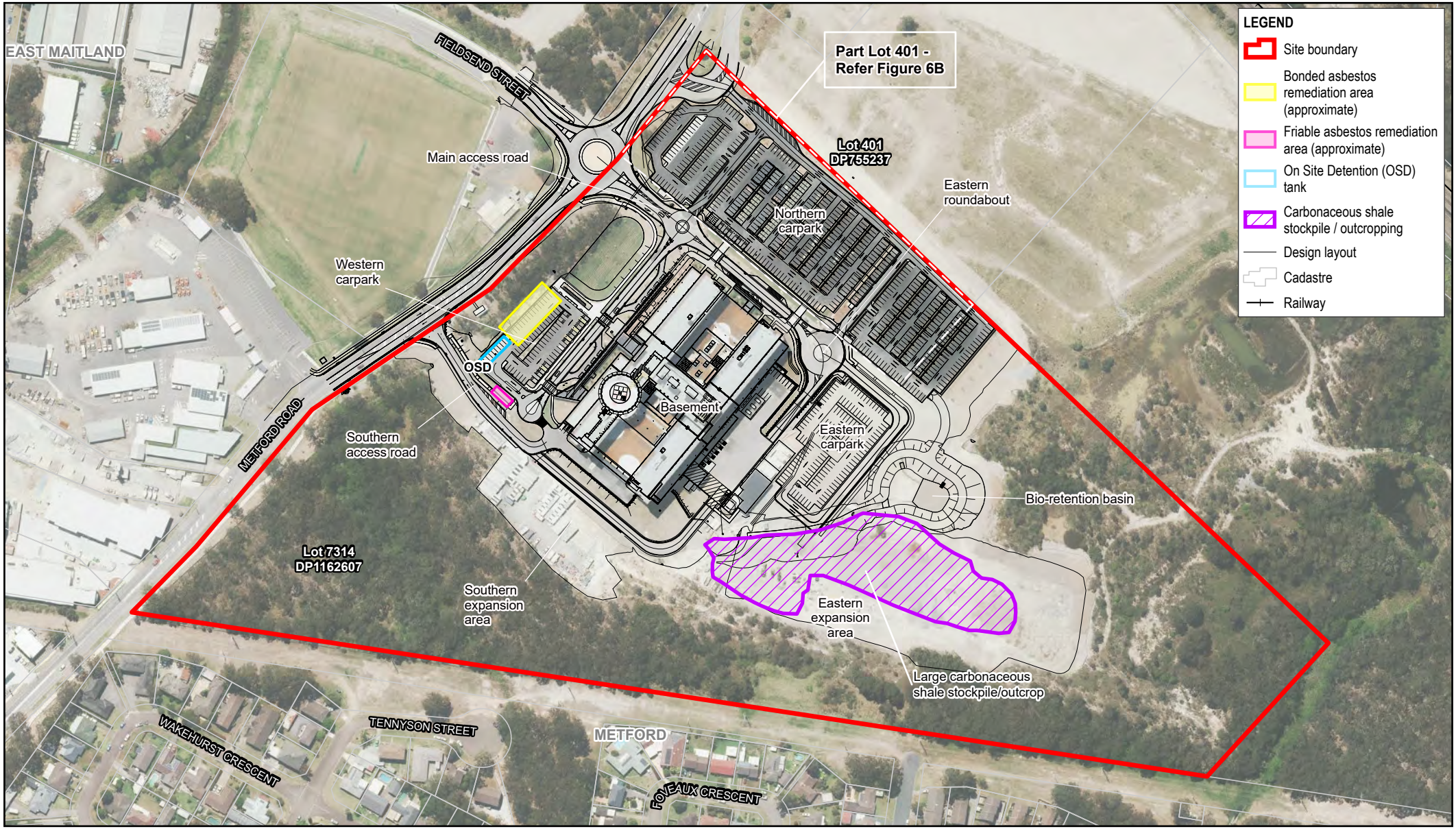

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Metres

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New Maitland Hospital
Long Term Environmental Management Plan

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Revision No. **1**
Date **02/12/2021**

Remediation areas

FIGURE 6A

G:\22\19923\GIS\Maps\2219924_LTEMP_1.aprx
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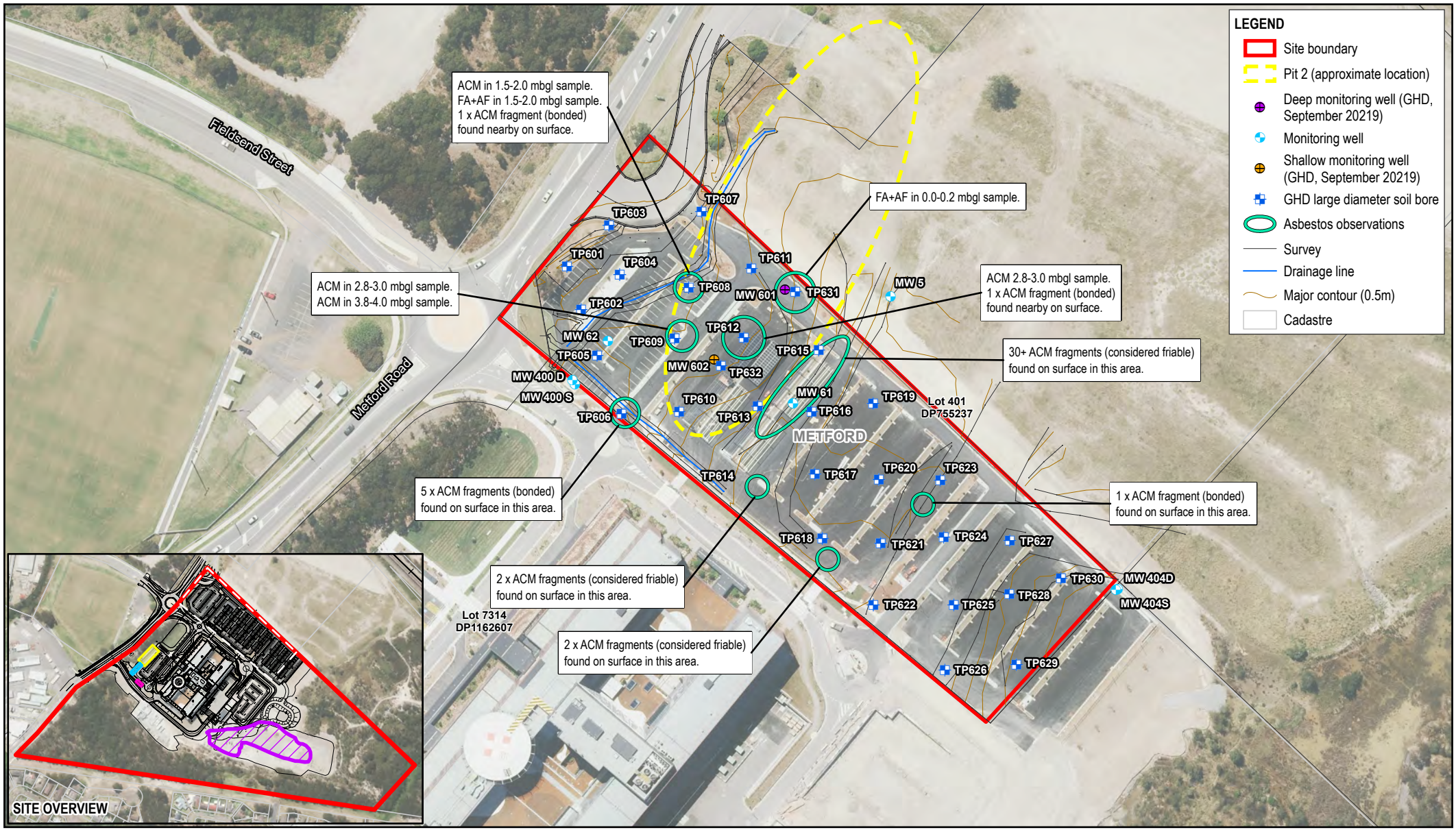

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Paper Size ISO A4

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Metres

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Remediation areas Part Lot 401

Project No. **22-19923**
Revision No. **A**
Date **03/12/2021**

FIGURE 6B

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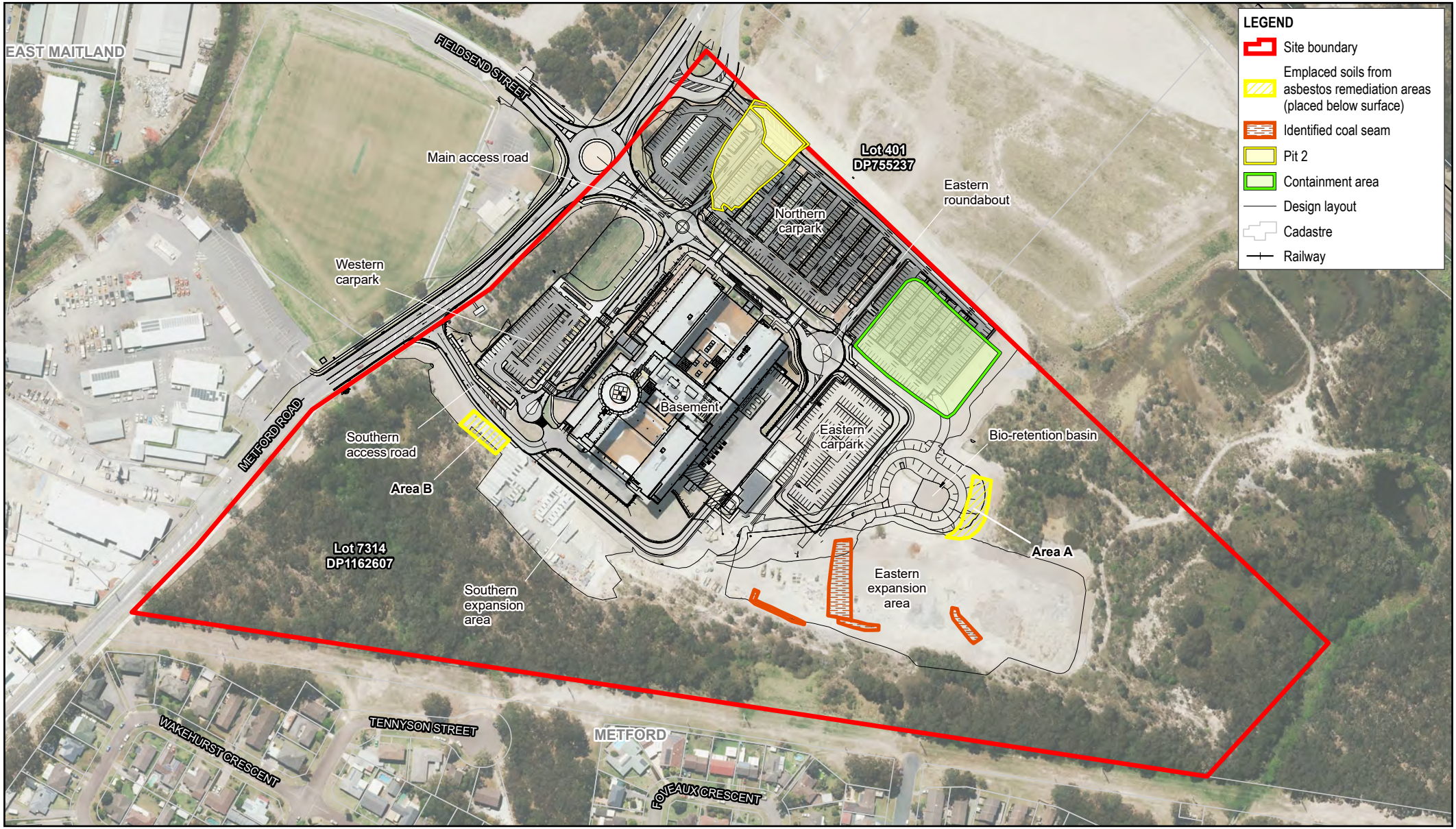

NOTE:
The identified management areas are those known to contain materials subject to site management requirements (refer to the Long Term Site Management Plan). There is a potential for isolated occurrences of contamination to be present in other areas of the site as "unexpected finds", particularly in areas of fill material not disturbed by site development works. Hence the entire site is subject to management requirements if subsurface disturbance is undertaken.

Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

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New Maitland Hospital
Long Term Environmental Management Plan

Project No. **22-19924**
Revision No. **1**
Date **03/12/2021**

Identified management areas

FIGURE 7

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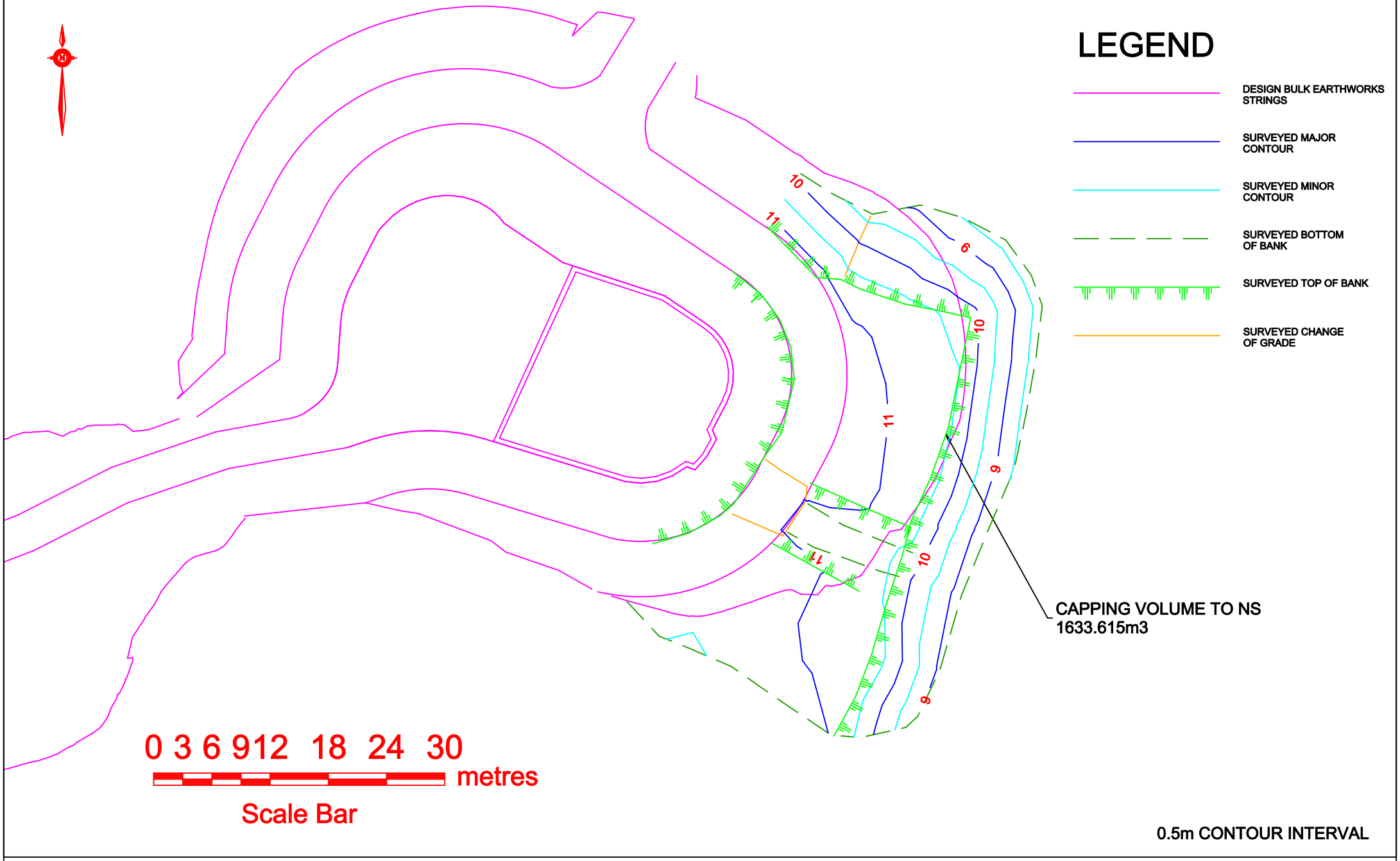

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LOCATION OF ABESTOS

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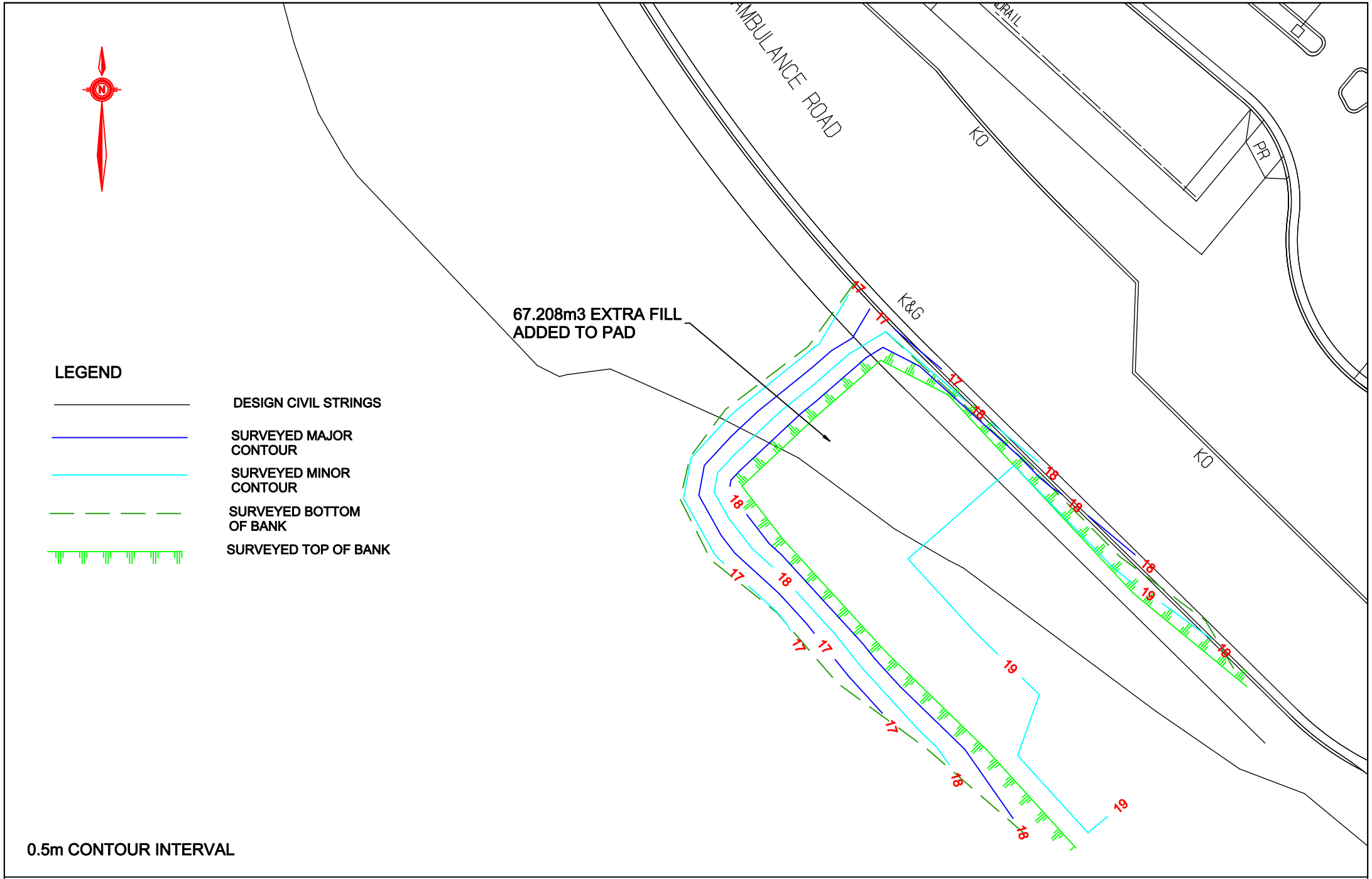

1607 NEW MAITLAND HOSPITAL
PAD EXTENSION

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REV.	DATE	DESCRIPTION

de Witt Consulting
planning surveying
project management

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TITLE: **CHITTA BOXOUT PLAN RED LINE IS ORIGINAL SURVEY GREEN LINE IS BOXOUT SURVEY MIN BOXOUT DEPTH 0.8M**	COORDINATE SYSTEM: **MGA 94 PLANE**	SURVEY DONE BY: **CM,SM,AF**	SURVEY DATE: **VARIOUS**
	HEIGHT DATUM: **AHD**	CHECKED: **AF**	SHEET No.: **SHEET 1**
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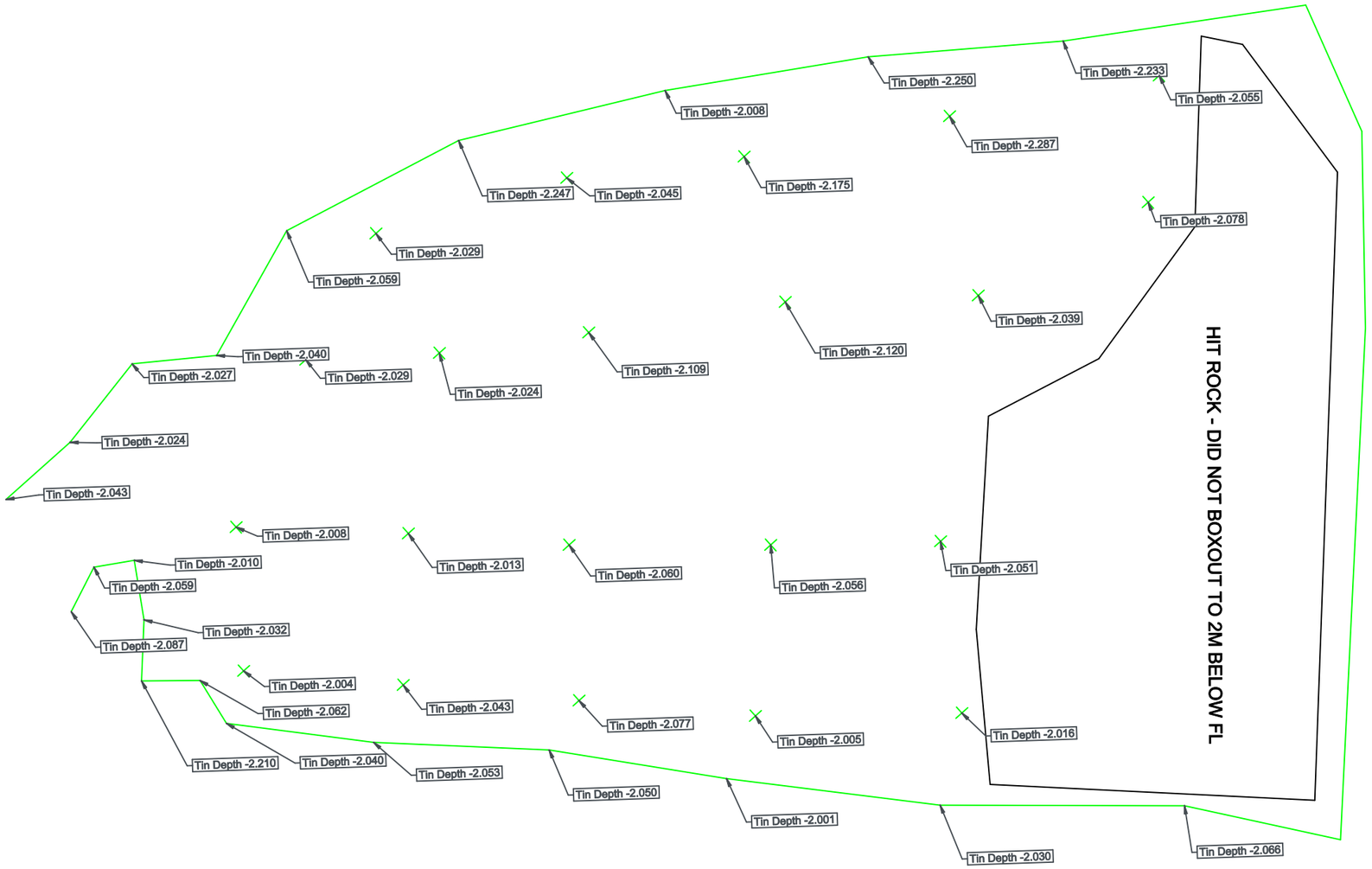
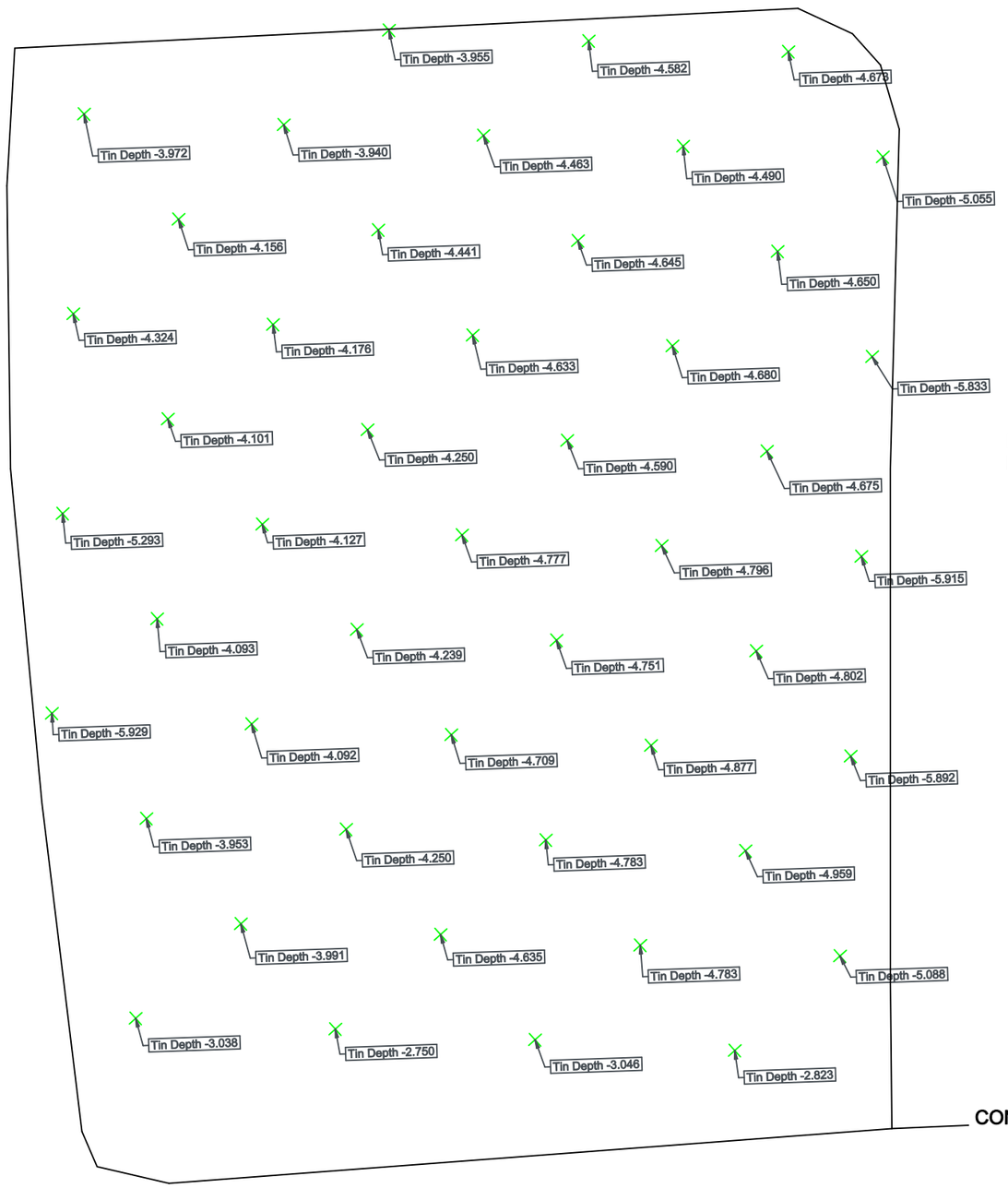


REV.	DATE	DESCRIPTION

de Witt Consulting
planning surveying
project management

PROJECT: NEW MAITLAND HOSPITAL	SURVEY REF.: 11340	PROJECT No.: 1694	SCALE: 1 : 300 @ A3
TITLE: PIT 2 BOXOUT DEPTH FROM FL	COORDINATE SYSTEM:	SURVEY DONE BY: CM	SURVEY DATE: 210311
	HEIGHT DATUM:	CHECKED: AF	SHEET No.: SHEET 1
	CLIENT: DARACON	DRAWING No.:	REV. No.: 0

12D - PROJECT NAME: 11340 NMH Carpark 210504



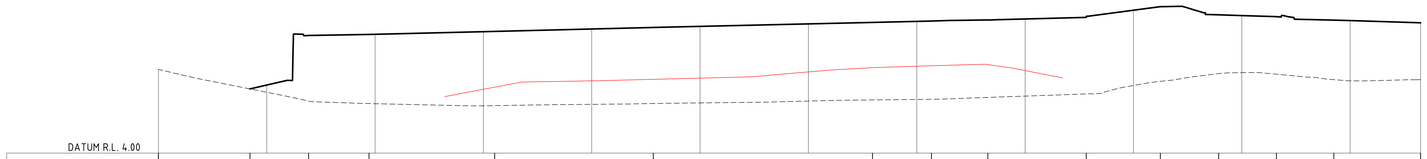
DEPTHS SHOWN ARE FROM PAVEMENT FINISHED LEVEL TO THE TOP OF CONTAINMENT CELL

REV.	DATE	DESCRIPTION

de Witt Consulting
planning surveying
project management

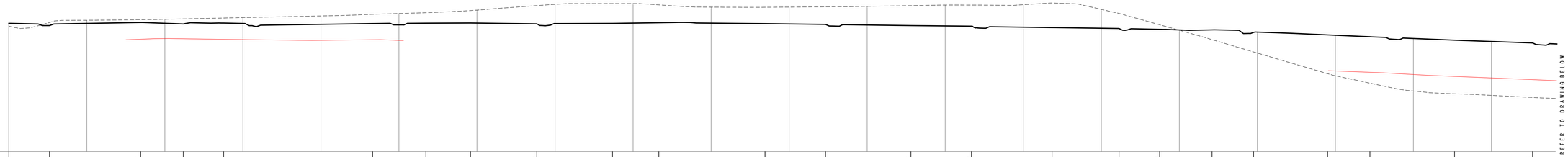
PROJECT: NEW MAITLAND HOSPITAL	SURVEY REF.: 11340	PROJECT No.: 1694	SCALE: 1 : 400 @ A3
TITLE: DEPTHS FROM SUBGRADE LEVEL TOP OF CONTAINMENT CELL	COORDINATE SYSTEM	SURVEY DONE BY: MH	SURVEY DATE
	HEIGHT DATUM	CHECKED: AF	SHEET No.: SHEET 1
	CLIENT: DARACON	DRAWING No.	REV. No.: 0

KEY PLAN
SCALE 1: 500



DATUM R.L. 4.00	
DESIGN LEVEL	9.92 14.86 14.95 15.23 15.60 16.07 16.19 16.29 16.53 17.52 16.76 16.60 16.28 16.03
EXISTING CONTAINMENT CELL LEVEL	8.88 10.67 10.92 11.49 12.02 11.62
EXISTING SURFACE LEVEL	9.62 9.37 8.58 8.56 8.37 8.37 8.48 8.50 8.54 8.63 8.69 8.81 8.87 8.95 8.96 9.26 9.28 9.44 10.24 10.50 11.35 11.43 11.27 10.67 10.67 10.77
CHAINAGE	11.26 19.11 26.39 37.23 43.98 54.77 62.75 70.26 79.97 85.16 91.44 97.94 103.37 109.98 115.36

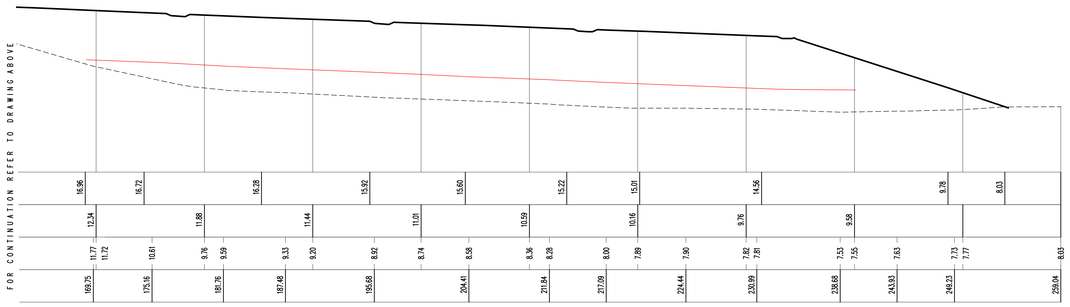
LONGITUDINAL SECTION Section – North to South
SCALE 1:200



DATUM R.L. 2.00	
DESIGN LEVEL	18.15 18.55 18.35 18.47 18.40 18.46 18.48 18.37 18.43 18.51 18.40 18.30 18.15 18.07 17.90 17.78 17.67 17.60 17.28 16.96 16.72 16.28 15.92
EXISTING CONTAINMENT CELL LEVEL	16.49 16.36 16.26 16.25 12.34 11.88 11.44
EXISTING SURFACE LEVEL	18.73 18.83 18.84 18.62 18.96 19.10 19.17 19.39 18.45 19.69 19.82 20.13 20.17 20.81 20.80 20.97 20.97 20.63 20.52 20.53 20.52 20.37 20.61 20.78 20.78 20.74 20.82 21.04 20.33 19.84 17.55 16.91 14.63 13.90 11.77 11.72 10.61 9.76 9.59 9.33 9.20 8.92
CHAINAGE	5.81 11.17 18.78 26.87 43.15 54.38 60.68 69.11 79.37 85.88 91.88 106.47 120.27 128.71 133.72 141.71 152.28 162.46 169.75 175.16 181.76 187.48 195.68

FOR CONTINUATION REFER TO DRAWING BELOW

LONGITUDINAL SECTION Section – West to East
SCALE 1:200



FOR CONTINUATION REFER TO DRAWING ABOVE

DESIGN LEVEL	16.96 16.72 16.28 15.92 15.60 15.22 15.01 14.56 9.78 8.03
EXISTING CONTAINMENT CELL LEVEL	12.34 11.88 11.44 11.01 10.59 10.16 9.76 9.58
EXISTING SURFACE LEVEL	11.77 11.72 10.61 9.76 9.59 9.33 9.20 8.92 8.74 8.58 8.36 8.28 8.00 7.89 7.90 7.92 7.91 7.53 7.55 7.63 7.73 7.77 8.03
CHAINAGE	169.75 175.16 181.76 187.48 195.68 204.41 211.84 217.09 224.44 230.99 238.68 243.53 248.23 259.04

SCALE 1:200 0 2 4 6 8 10
AT ORIGINAL SIZE m

TTW Taylor Thomson Whitting
812 9439 7288 | 48 Chandos Street St Leonards NSW 2065

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ISSUE	DATE	FOR
P1	15.11.21	FOR INFORMATION

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NSW GOVERNMENT Health Infrastructure

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CBRE
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CBRE

ARCHITECTS
SMN

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EMF Griffiths
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emf griffiths

ELECTRICAL / COMMS/VERTICAL TRANSPORT
JHA
(02) 9437 1000
JHA

HYDRAULIC
Warren Smith & Partners
(02) 9299 1312

POA / BCA / DDA
Group DLA
(02) 8090 1493
GROUPDLA

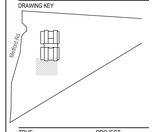
FIRE ENGINEERING
PETER GARDNER & ASSOCIATES
PGA

PROJECT
NEW MAITLAND HOSPITAL

CORNER OF METFORD RD AND FIELDSEND ST,
METFORD, NSW 2323

TTW PROJECT NUMBER
181230

DRAWING KEY



TRUE NORTH
PROJECT NORTH

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DRAWN BY: WW CHECKED BY: AL
DESIGNED BY: AH APPROVED BY: SB
STATUS

DRAWING
CROSS SECTIONS - CONTAINMENT CELL

DRAWING NUMBER: SKC500
ISSUE: P1

Appendix B

Site information

Site description

The site (Lot 7314 DP 1162607 and Part Lot 401 DP 755237) is located on Metford Road, Metford, NSW, and has an area of approximately 19 hectares (ha).

For the purpose of the assessment, the Lot 7314 was broken into four investigation areas to aid in description of the site and interpretation of results (refer to Figure 3, Appendix A). The table below presents a summary of the site description for Lot 7314 (prior to redevelopment) by GHD Investigation Area.

Table B.1 Site description for Lot 7314 by GHD ESA (2015) Investigation Areas

Inv. Area	Site description (GHD 2015)
Area 1	Located in the southwest portion of Lot 7314, comprising disturbed (previously cleared) and undisturbed bushland. Historical information indicated no significant use of this Area apart from tree clearing and access roads. Topography was variable with steep banks in the south and west/northwest. Stockpiles of fill and re-worked material were present across Area 1, along the eastern side of the area apparently pushed out from historical quarrying activities in Area 2, and also in the south western portion and central portion. Mixed building waste (including concrete, metal and ACM) was observed at isolated locations on the surface in the northwest portion, presumed to be from illegal dumping. A number of small water bodies (ponds in a drainage line) were located towards the south western corner of this area.
Area 2	The most disturbed area of Lot 7314, located to the north of Area 1. Approximately 80% un-vegetated, with numerous stockpiles and undulations (noise berms and quarry voids), and rock outcrops (high wall) from historical quarrying activities. The northern boundary adjoined the generally level Part Lot 401, while high walls remained along the southern and south western perimeters, with noise berms along the top of the high walls. Several small stockpiles were present in the northern portion. A large water filled body (formed by the dip of the geology at the base of the quarry excavation) was located at the eastern side of the area and an outcropping of carbonaceous material (extending into Area 3) was located in the south-eastern corner of the area. A flat low lying area was present in the central western portion (most likely formed from quarrying activities), in-between stockpiles and the western high wall. A single fragment of ACM was identified on the surface near the top of the high wall along the southern boundary of the area.
Area 3	Located east of Areas 1 and 2, also quarried (to a lower elevation than Area 2), comprising a swampy/low-lying area with shallow water bodies in the central and northern portion (base of former quarry). A large carbonaceous shale stockpile was located in the southern portion which extended across the majority of Area 3 from east to west. A high wall remained to the south of the large carbonaceous stockpile. A portion of relatively undisturbed land was present along the southern boundary.
Area 4	Located at the eastern side of Lot 7314, generally comprising natural and disturbed vegetated land. Historical information indicated that most of the area was cleared by 1954, with a large area of exposed soil evident by 1975, and stockpiled materials present in the early 1990's. The north western portion consisted of relatively flat, low lying land with some hummocks of fill/excavated natural material (vegetated with scrub). A small stockpile was observed adjacent the unsealed access road, which contained building waste, including bricks, mortar and ACM (observed on the surface). The central portion was elevated with steep banks on all sides, and densely vegetated. A large gully was located in the southern portion adjoining the high wall. The southern boundary of the area was elevated and densely vegetated.

Part Lot 401 is located to the north of Lot 7314 and, prior to redevelopment, generally comprised cleared land with sparse grass coverage. An unlined drain was present in the western portion of the site, west of which were some trees. The central/western portion of the site had clearly been disturbed as a result of previous remediation works associated with a known former quarry pit ("Pit 2") and appeared to have been topsoiled. Numerous bonded cement sheet fragments (confirmed to contain asbestos) were observed on the surface in the central/western portion of Part Lot 401. Building waste including bricks and concrete were observed in the western portion of the site, and also on the eastern embankment (formed by historical quarrying activities), extending in minor quantities to the boundary of Lot 7314. A small area of trees was re-established in this eastern-most (low-lying) portion of Part Lot 401.

Surrounding land use

With reference to Figure 1 (Appendix A), the surrounding land uses (and approximate distances) include:

– North – CSR site comprising former PGH Bricks & Pavers (sales and display and manufacturing areas, adjacent); Northern Railway (300 m); East Maitland Cemetery (400 m); Raymond Terrace Road (500 m); East's Leisure & Golf (golf course adjacent Raymond Terrace Road); and Two Mile Creek (700 m).
– East – CSR site comprising former PGH Bricks & Pavers quarry site (predominantly unused and vegetated, adjacent); Northern Railway (400 m); East Maitland Cemetery (unused and vegetated), rural residential properties and Three Mile Creek (400 m); Raymond Terrace Road (600 m); scale model aircraft flying field and rural property (adjacent Raymond Terrace Road); and Four Mile Creek (1.2 km).
– South – Residential (adjacent, separated by power line easement).
– West – Metford Road (adjacent); Fieldsend Oval (public sporting/football field), Council Depot and industrial properties (adjacent Metford Road); and Two Mile Creek (300 m).

Environmental setting

Table B.2 summarises the environmental conditions of the site and surrounding area, including geology, soil, topography, hydrology and hydrogeology. The information is based on information from the ESA (GHD 2015) and previous investigations (italicized), particularly as summarised in the Remediation Action Plan for the CSR/PGH brickworks (DLA 2014b).

Table B.2 Summary of site conditions

Aspect	Summary
Geology and Soils	Based on information from previous investigations, the regional geology comprises the Tomago Coal Measures consisting of shale, mudstone, sandstone, coal seams and clay layers. Carbonaceous layers have been excavated from the natural layers as part of the onsite works. These layers have been stockpiled on the site. Geology encountered during investigations generally comprised clay, brick and ash fills to a depth averaging approximately two metres deep. Beneath this were variable clays, silt stones, fine grained sandstones and shales. Most of these were exposed in the excavations associated with clay and shale extraction over the site. This is generally consistent with the findings of the ESA (GHD 2015) except that large quantities of clay, brick and ash fills were not generally encountered, and are understood to predominantly be present on the former PGH land north of Area 2.
Topography	The site topography is shown in Figure 3 (Appendix A). Based on the topographic map of NSW (reviewed in the ESA, GHD 2015), the southern portion of the site has an elevation of approximately 20 metres Australian Height Datum (mAHD), with variable falling landform to approximately 10 mAHD (excluding pits present in the central portion, predominantly Areas 2 and 3). A gully in the western portion (Area 1) falls towards Two Mile Creek to the northwest. The eastern portion (Area 4) falls to the east, towards Three Mile Creek. The central portion has been disturbed by mining operations, with highly variable landform including mounds, channels and pits. A steep high wall (up to 10 m high) extends along the southern portions of Areas 2, 3 and 4 with mounded fill (presumed to be a noise berm) located at the top of the high wall adjoining natural ground levels to the south, and the areas to the north generally at the base of the quarry or with material stockpiled above the base (in Areas 2, 3 and 4).

Aspect	Summary
Hydrology	Area 1 appears to drain to the northwest, toward Two Mile Creek, located approximately 300 metres to the west and 700 metres to the north. Area 4 appears to drain to the east, toward Three Mile Creek, located approximately 400 metres to the east. As noted above, Areas 2 and 3 contain water bodies in low-lying areas of the base of the former quarry. The landform in these areas is highly variable and so too is surface water flow. However, it appears that there is low lying land (wetlands) present to the northeast of the site (north of Raymond Terrace Road). It was presumed that surface water from the site would generally flow towards this feature. Stormwater at the site appears to collect in the upper of five sedimentation ponds at the east site. Water flows progressively through these to discharge from the site at the north eastern boundary into what is known as Three Mile Creek which flows north. (LeVert, 2011). The above-mentioned sedimentation ponds are located north of Area 3.
Hydrogeology	Groundwater flow direction was generally assumed in the ESA (GHD 2015) to be toward the northeast. As noted above wetlands are located approximately 500 metres to the northeast, and it is presumed that shallow unconfined groundwater flow would also be to the northeast. Perched groundwater was encountered in fill at depths of approximately two metres in some of the test pits, mainly along the north eastern part of the site. [To the north of Area 2]. Groundwater depths recorded in three groundwater monitoring bores were approximately 6.5 metres below ground level (mbgl). (LeVert, 2011). An online search of the Department of Primary Industries Office of Water database (GHD 2015) found nine licenced groundwater bores within a 500 metre radius of the site, three of which were within or adjacent to the site. It is noted that there were no bores within 500 metres of the site licenced for domestic, stock or irrigation use.

Previous investigations

Numerous environmental investigations have been undertaken on the site, with the most recent being the ESA prepared by GHD in December 2015 (for Lot 7314) and the Additional Site Investigation prepared by GHD in November 2019 (for Part Lot 401). These studies, along with several other previous reports, were reviewed as part of preparation of the RAP and included the following:

– New Maitland Hospital Part Lot 401, Additional Site Investigation. November 2019
– New Maitland Hospital Part Lot 401, Contamination Investigation. September 2019
– New Maitland Hospital Stage 1 Development Area, Phase 2 Environmental Site Assessment, Metford Road, Metford, NSW. GHD, December 2015
– Closure Mine Operation Plan [Closure MOP] for: Metford Clay Mine ML 1523, 5848, 4865, and 5090. VGT, March 2015
– Remediation Action Plan [RAP], CSR/PGH Metford. DLA Environmental, May 2014
– Phase 2 Detailed Environmental Site Assessment, CSR/PGH Maitland, Metford Road, Metford NSW 2323. DLA Environmental, January 2014
– Stage 2 Soil Investigation, CSR/PGH Maitland NSW. LeVert, September 2011
– Preliminary Contamination Assessment, PGH Site, Metford NSW. Environmental Auditors (EA), February 2011

It is noted that, with the exception of the ESA (GHD 2015) and GHD's Part Lot 401 investigations (in 2019), these investigations were for the entire CSR operations site. GHD (2015) provided a detailed review of relevant information for Lot 7314 from the previous investigations. Previous results summary tables are presented in Appendix C, with corresponding sampling locations shown in Figure 4 (Appendix A).

Site contamination status (areas not affected by the development)

A summary of the site contamination status (for areas not affected by the development) is provided in Table B.3. The summary is based on the combined results from inspections and the previous investigations summarised above.

Table B.3 Site contamination status summary

Area	Issue	Description
Soils		
Area 1	Aesthetic	Fill materials were identified predominantly around the boundary with Area 2 (where materials have been pushed up from Area 2) and were up to 2.8 m deep with some areas containing foreign material such as domestic and construction waste, bricks, coal chitter and ACM (subsequently removed). Shallower fill was also noted along the southern boundary and some smaller stockpiles in the southern portion which did not generally include any foreign material. Anthropogenic wastes (including ACM) were not found to be widespread in Area 1, and were readily visually identifiable. No odours or staining were observed.
	TRH F2 and F3, zinc, nickel	TRH (F2) in soils at one location (TP417) above the HSL A/B associated with disturbed carbonaceous materials in the noise berm in south eastern end of Area 1. Hydrocarbon impacts were identified at depths 1.9-2.0 m and were not vertically delineated in this location. Zinc concentrations were above ecological investigation levels (EILs) at several locations TRH F2 and F3 at location TP417 and TRH F3 at HA407 and nickel at one location. Chemical exceedences were isolated and relatively minor. Apart from zinc (likely to be associated with the natural mineralogy of the soils), only one concentration exceeded 250% of the assessment criteria (TRH F3 in TQ069, the inter-laboratory duplicate of sample TP417_1.9-2.0). Further, the primary sample and the intra-laboratory duplicate were less than and slightly more than the ecological screening level (ESL) respectively. Therefore, from a contamination perspective, it was considered unlikely that a representative statistical assessment of the fill materials in Area 1 would restrict their use for the proposed development.
Area 3	Aesthetic	Fill materials were present to varying depths with the exception of the south western corner and the low lying wetland area in the north. However, this wetland had some small stockpiles and an access road (assumed fill). Fill materials were recorded to a depth of 3.0 m deep and in some areas contained foreign material (coal chitter, brick fragments, ceramics and domestic waste), predominantly south of the large shale stockpile and along the southern boundary (TP315, TP473 and TP474). No odours or staining were observed in the fill material. There was no evidence of any significant filled voids at the locations investigated.
	Zinc, nickel and copper	Numerous samples exceeded the EIL for zinc, and one occurrence each of nickel and copper. As with Area 1, zinc concentrations are likely to be associated with the natural mineralogy.
Area 4	Aesthetic	Fill materials were present across Area 4, with the exception of the southern and eastern boundaries (HA409, HA410, HA411, HA412, HA414, TP438). Fill was recorded to a depth of 2.8 m deep and contained brick fragments in stockpiled material to the south (TP439 and TP441) and north (TP436). Remaining areas contained shallower fill with some coal chitter and no building rubble or domestic waste. No odours or staining were observed in the fill material. Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated.
	Zinc, nickel and copper	Zinc concentrations in several samples were above EILs with one occurrence each of nickel and copper. As discussed previously, zinc concentrations were considered likely to be associated with the natural mineralogy.
	ACM	ACM was observed on the surface at a number of small stockpiles containing waste building materials (also with bricks and mortar) in the north western part of Area 4. The material was bonded and the soil sample collected beneath did not identify the presence of asbestos or asbestos fines. Some ACM was removed, however two fragments were observed in the subsequent site inspection (GHD 2017 as documented in GHD 2019). However, the ACM was considered to present a low risk to human health provided it is not disturbed (prior to disposal). (This ACM was subsequently removed, as discussed in Section 3.4).
Groundwater and surface water		
All areas	Metals, TRH and PAH	The groundwater levels indicated that the inferred groundwater flow in the area is to the northeast which is generally consistent with local topography. Cadmium, copper, lead, nickel and zinc concentrations generally above the groundwater investigation levels (GIL) but considered likely to be typical of natural groundwater conditions in the area. PAH (BaP, fluorene and phenanthrene) above GILs in one location, and elevated TRH F2, F3 and F4. Given the observation of shale oil during drilling of most of the wells on site the detection of these analytes was likely to be associated with naturally occurring hydrocarbons.

Appendix C

Previous investigations results

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum										
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}
TP 1.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 1.2	1.0-1.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 1.3	1.6-1.8	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 2.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 2.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 3.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 3.2	0.7-0.9	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 4.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 5.1	0-0.2	2/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 5.2	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 6.1	0-0.2	2/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 7.2	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 8.1	0-0.2	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 8.2	0.4-0.6	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 9.1	0.4-0.6	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 10.2	2.3-2.5	2/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 11.1	0.4-0.6	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 12.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-					-						-	-	-	-	-	-
TP 12.2	1.3-1.5	2/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 14.1	0.2-0.4	2/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 14.2	1.7-1.8	2/05/2011	SGS SE87342	Clay/Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 15.1	0.2-0.4	2/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 16.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 17.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 17.2	1.3-1.5	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 18.1	0-0.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 18.2	1.0-1.2	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 19.2	3.3-3.5	3/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 20.1	0-0.2	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 21.2	1.7-1.9	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 21.3	4.8-4.5	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	120	85	205	-	-	-	-	-	-
TP 22.1	1.0-1.2	3/05/2011	SGS SE87342	Clay FIll	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 23.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 23.3	4.0-4.2	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	23	1200	1600	70	2870	-	-	-	-	-	-
TP 24.2	1.1-1.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	25	2200	2500	4725	-	-	-	-	-	-
TP 24.3	4.8-5.0	3/05/2011	SGS SE87342	Fill	-	na	na	na	na	-	NA	nd	1100	1600	2700	-	-	-	-	-	-
TP 25.2	2.5-2.7	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 25.3	4.2-4.4	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 26.1	0.5-0.7	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 27.1	0.2-0.4	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP27.3	3.0-3.2	3/05/2011	SGS SE87342	Shale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 28.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 29.1	0.4-0.6	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	1400	2100	100	3600	-	-	-	-	-	-
TP 29.2	1.5-1.7	3/05/2011	SGS SE87342	Silt	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-
TP 29.3	2.6-2.8	3/05/2011	SGS SE87342	Clay	-	na	na	na	na	-	na	nd	nd	nd	nd	-	-	-	-	-	-
TP 30.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 31.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 32.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 33.1	0-0.2	3/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 34.1	0.2-0.4	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 35.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 36.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 37.1	0-0.2	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 38.1	0.8-1.0	3/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 39.1	0-1.0	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	68	nd	68	-	-	-	-	-	-
TP40.1	0.2-0.4	3/05/2011	SGS SE87342	Clacium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP41.2	1.6-1.8	3/05/2011	SGS SE87342	Coal	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 43.1	0-0.2	3/05/2011	SGS SE87342	Ash Brick	-	nd	nd	nd	nd	-	nd	nd	50	nd	50	-	-	-	-	-	-
TP 43.2	0.4-0.6	3/05/2011	SGS SE87342	Brick Fill	-					-						-	-	-	-	-	-
TP 45.1	0-0.12	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 1.1	0.3-0.4	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 2.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 3.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 4.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 5.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 6.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 7.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-					-						-	-	-	-	-	-
SB 8.1	0.4-0.5	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 9.1	0.2-0.3	3/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 10.1	0.2-0.3	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 10.2	0.8-0.9	3/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 11.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 11.2	1.8-2.0	3/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 12.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 13.1	0.2-0.3	3/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB 15.1	0.1-0.2	3/05/2011	SGS SE87342	Gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB 16.1	0.2-0.4	3/05/2011	SGS SE87342	Ash Fill	-	nd	nd	nd	nd	-	na	nd	nd	nd	nd	-	-	-	-	-	-
SB17.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB18.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB19.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB20.1	7.8-8.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	370	240	610	-	-	-	-	-	-
SB20.2	11.5-11.7	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB20.3	13.3-13.5	5/03/2012	SGS SE106137	Clay/shale	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB21.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB22.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB22.2	1.8-2.0	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB23.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB24.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB25.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	80	nd	80	-	-	-	-	-	-
SB26.1	0.0-0.2	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB27.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB28.1	0.3-0.5	5/03/2012	SGS SE106137	Fill	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB28.2	1.2-1.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB29.1	0.4-0.6	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB30.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB31.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB32.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB33.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB34.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB35.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	54	nd	54	-	-	-	-	-	-
SB36.1	5.8-6.0	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	120	68	188	-	-	-	-	-	-
SB37.1	4.6-4.8	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	92	nd	92	-	-	-	-	-	-
SB38.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB39.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	110	nd	110	-	-	-	-	-	-
SB40.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
SB41.1	0.2-0.4	5/03/2012	SGS SE106137	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 46.1	0.2-0.4	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 47.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	140	89	229	-	-	-	-	-	-
TP 48.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 49.1	0.8-1.0	4/05/2011	SGS SE87342	Gravel Fill	-	nd	nd	nd	nd	-	nd	nd	70	nd	70	-	-	-	-	-	-
TP 50.1	0.2-0.4	4/05/2011	SGS SE87342	Gravel Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 51.1	0.8-1.0	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 52.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 53.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 54.1	0-0.2	4/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 55.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 56.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 57.1	0.2-0.4	4/05/2011	SGS SE87342	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 58.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 59.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
TP 60.1	1.0-1.2	4/05/2011	SGS SE87342	Fill	-	nd	nd	nd	nd	-	nd	nd	69	180	249	-	-	-	-	-	-
TP 61.1	0.2-0.4	4/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 62.1	0-0.2	4/05/2011	SGS SE87342	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 63.1	0-0.2	4/05/2011	SGS SE87342	Brick Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S1	0.0	4/05/2011	SGS SE87342	Silt	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
S2	0.0	4/05/2011	SGS SE87342	Calcium	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
S3	0.0	4/05/2011	SGS SE87342	Black Shale	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
S4	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-
S5	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-

Sample ID	PAH			Pesticides									Heavy Metals									
	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP 1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	18	8	nd	9.6	-	43
TP 1.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.3	3.7	12	13	nd	22	-	75
TP 1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	1.2	9.8	nd	1.5	-	6.7
TP 2.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	2.5	24	9	nd	6.8	-	16
TP 2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.6	13	9	nd	4.5	-	21
TP 3.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3.8	15	3	nd	8	-	15
TP 3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	4.6	4	nd	2.6	-	55
TP 4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	28	11	nd	14	-	49
TP 5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.4	210	6	10	nd	3.9	-	21
TP 5.2	-	-	-	-	-	-	-	-	-	-		-	-	5	nd	24	11	12	nd	5.6	-	45
TP 6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.3	4.2	10	nd	2.8	-	15
TP 7.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	9	nd	12	-	36
TP 8.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	6.8	9	4	nd	15	-	27
TP 8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.9	14	13	nd	0.6	-	7.5
TP 9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	17	7	nd	16	-	23
TP 10.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	16	12	nd	18	-	47
TP 10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	1.2	6	nd	nd	-	3.7
TP 11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.3	22	29	55	nd	18	-	130
TP 12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	nd	5	nd	nd	-	3.3
TP 12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	4.3	4.6	14	nd	4	-	21
TP 13.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	4.8	23	14	nd	3.3	-	17
TP 14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.5	20	21	nd	4.1	-	37
TP 14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	6.9	10	18	nd	4.1	-	32
TP 15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	6.3	10	19	nd	10	-	50
TP 16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	17	16	31	nd	18	-	460
TP 17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	25	0.6	620	15	26	1.5	190	-	520
TP 17.2	-	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	16	2.5	12	nd	74	-	33
TP 18.1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	nd	9.7	16	13	0.13	19	-	58
TP 18.2	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.5	81	35	29	nd	52	-	300
TP 19.2	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	4.5	9	nd	3.4	-	26
TP 20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	11	14	34	nd	8.7	-	220
TP 21.2	-	-	-	-	-	-	-	-	-	-	-	-	-	260	1.6	nd	52	18	0.27	1000	-	110
TP 21.3	-	-	-	-	-	-	-	-	-	-	-	-	-	39	0.9	620	42	37	0.12	390	-	170
TP 22.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	0.8	-	12
TP 23.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	230	25	30	nd	15	-	130
TP 23.3	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	6.6	4	nd	10	-	53
TP 24.2	190	274.4	1175	-	-	-	-	-	-	-	-	-	-	nd	0.8	13	36	15	nd	38	-	170
TP 24.3	99	139.8	902.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 25.2	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	5	2	0.06	13	-	40
TP 25.3	nd	0.1	0.53	-	-	-	-	-	-	-	-	-	-	nd	nd	1	5.7	7	nd	5.5	-	70
TP 26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	14	18	nd	6.9	-	42
TP 27.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.7	0.96	3	nd	3.4	-	59
TP27.3	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.5	0.5	8	7	nd	16	-	250
TP 28.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	1	1	nd	0.7	-	5.7
TP 29.1	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	0.8	19	4	nd	0.9	-	17
TP 29.2	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	0.4	4.6	2	0.09	2.2	-	5.1
TP 29.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP 30.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	2.8	1	nd	1.2	-	4.7
TP 31.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.9	3	nd	5.8	-	100
TP 32.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	7.9	5	nd	4.7	-	150
TP 33.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	3.7	2	nd	12	-	83
TP 34.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	4.4	3	nd	11	-	76
TP 35.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.4	8.2	7	nd	6	-	160
TP 36.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.2	11	11	nd	3.8	-	52
TP 37.1	-	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	11	16	18	nd	15	-	66
TP 38.1	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	5.7	21	24	nd	10	-	180
TP 39.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	8.6	11	11	nd	7	-	38
TP40.1	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.1	2.5	4	5	3.3	-	15
TP41.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	25	14	7	0.75	48	-	76
TP 43.1	nd	0.2	1.13	-	-	-	-	-	-	-	-	-	-	4	nd	7.5	11	9	nd	8.4	-	25
TP 43.2		-		-	-	-	-	-	-	-	-	-	-	4	nd	2.1	8.2	11	nd	5	-	70
TP 45.1	nd	nd	0.38	-	-	-	-	-	-	-	-	-	-	200	0.3	6	280	300	nd	9.4	-	2000
SB 1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.6	9.4	5	nd	1.6	-	16
SB 2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.8	17	18	nd	0.9	-	13
SB 3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.7	13	11	0.06	0.6	-	11
SB 4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.3	38	40	6	nd	27	-	65
SB 5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	3.3	12	nd	nd	-	3.3
SB 6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	9.8	14	15	nd	1.2	-	5.1
SB 7.1		-		-	-	-	-	-	-	-	-	-	-	nd	nd	7.6	0.8	8	nd	0.6	-	4.2
SB 8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.1	11	6	nd	1.7	-	20
SB 9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.1	0.7	9.9	nd	0.92	-	6.2
SB 10.1	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	4	nd	2	16	9	nd	16	-	41
SB 10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	10	5	nd	7.6	-	31
SB 11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	1.1	5	11	nd	4.7	-	51
SB 11.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	5.2	4.1	9.5	nd	1.8	-	9.2
SB 12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.6	6.1	7	nd	0.7	-	12
SB 13.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	4.5	6.1	8	nd	2	-	14
SB 15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.5	4	3	nd	1.9	-	15
SB 16.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	9	nd	3.2	120	15	nd	5.9	-	23
SB17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.7	8.7	4	nd	23	-	29
SB18.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.3	12	2	nd	11	-	16
SB19.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	3.3	16	5	nd	19	-	19
SB20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.5	21	12	62	nd	8.1	-	76
SB20.2	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	9.8	15	15	nd	8.3	-	57
SB20.3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	18	7	11	nd	43	-	42
SB21.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4	18	7	nd	15	-	31
SB22.1	nd	nd	0.7	-	-	-	-	-	-	-	-	-	-	nd	nd	5.5	15	12	nd	10	-	41
SB22.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5.9	4.6	4	nd	6.5	-	21
SB23.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.3	6.6	9	nd	6.3	-	19
SB24.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.6	4.5	10	12	nd	8.6	-	66
SB25.1	-	-	-	-	-	-	-	-	-	-	-	-	-	16	0.4	6.9	150	270	nd	8.5	-	2300
SB26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6.7	6	3	nd	5.6	-	34
SB27.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	8.6	4.1	3	nd	8.5	-	18
SB28.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	7.2	9.2	5	nd	8.5	-	32
SB28.2	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	4.4	8.9	10	nd	10	-	36
SB29.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	4.3	7	0.08	5.7	-	21
SB30.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.2	4.3	13	29	nd	4.6	-	1200
SB31.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	4.7	5.3	12	nd	13	-	110
SB32.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.5	2.8	5	nd	1.7	-	14
SB33.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.7	5	6	nd	0.8	-	15
SB34.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5.6	2.9	5	nd	3.2	-	15
SB35.1	2.6	3.8	37.1	-	-	-	-	-	-	-	-	-	-	5	nd	12	10	25	nd	8.5	-	54
SB36.1	5.8	8.1	71.3	-	-	-	-	-	-	-	-	-	-	5	nd	13	9.5	47	nd	8.9	-	80
SB37.1	nd	nd	0.8	-	-	-	-	-	-	-	-	-	-	6	nd	3.3	23	12	nd	22	-	150
SB38.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	5	nd	14	-	28
SB39.1	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.9	9.6	8	0.08	4.1	-	12
SB40.1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	3.4	6.6	22	nd	6.6	-	53
SB41.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	14	1	nd	10	-	11
TP 46.1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	8.3	7.9	11	nd	6.7	-	83
TP 47.1	0.86	1.8	12.45	nd	nd	nd	nd	nd	nd	nd	nd	-	-	74	0.9	7.5	72	180	0.11	12	-	170
TP 48.1	nd	0.2	1.35	nd	nd	nd	nd	nd	nd	nd	nd	-	-	12	0.3	10	23	48	0.07	9.4	-	88
TP 49.1	nd	0.2	1.03	nd	nd	nd	nd	nd	nd	nd	nd	-	-	10	nd	7.8	25	37	0.2	7.3	-	61
TP 50.1	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	5	17	18	0.08	6.4	-	37
TP 51.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.1	4.7	11	50	nd	6.2	-	50
TP 52.1	nd	0.01	0.49	-	-	-	-	-	-	-	-	-	-	11	nd	8.2	13	25	nd	6.6	-	73
TP 53.1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.1	7.9	15	nd	4.9	-	63
TP 54.1	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	2.8	6.8	9	nd	3.3	-	23
TP 55.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	2.4	4	nd	0.91	-	8.8
TP 56.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	5.7	19	54	nd	13	-	160
TP 57.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	14	22	nd	6.7	-	76
TP 58.1	0.44	0.6	4.52	-	-	-	-	-	-	-	-	-	-	5	nd	3.8	14	35	nd	6.9	-	68
TP 59.1	0.52	0.8	6.16	-	-	-	-	-	-	-	-	-	-	7	nd	5.5	15	29	nd	4.2	-	82
TP 60.1	0.38	0.6	4.89	-	-	-	-	-	-	-	-	-	-	5	0.7	8.6	43	93	nd	6.8	-	240
TP 61.1	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3.1	13	9.9	nd	4.8	-	170
TP 62.1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.3	8.2	11	nd	7.8	-	67
TP 63.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	3.6	1.4	5	nd	1.7	-	9.5
S1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	1.5	8.5	11	nd	17	-	190
S2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2.3	1.5	3	5.3	2.2	-	22
S3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	1.3	18	17	0.06	8.6	-	76
S4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1.5	4.3	9.7	nd	15	-	56
S5	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	-	-	nd	nd	1.3	7.9	12	nd	5.1	-	80

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides										Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S6	0.0	4/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	-	4	nd	3	8.3	10	nd	15	-	110
TP 64.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5.1	nd	8	nd	1.8	-	28
TP 65.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.2	1.27	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	13	12	nd	7.7	-	85
TP 66.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1.8	5.2	9.5	nd	5.3	-	55
TP 67.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	1.6	4.4	11	nd	5.2	-	47
TP 68.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2.4	0.7	4	nd	nd	-	3.6
TP 69.1	0.2-0.4	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	9.8	11	nd	11	-	90
TP 70.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	nd	4.4	6.3	8	nd	14	-	78
TP 71.1	0.2-0.4	5/05/2011	SGS SE87342	Clay Fill	-	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	1.1	8.7	11	nd	5.3	-	39
TP 72.1	0-0.2	5/05/2011	SGS SE87342	Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	1.8	31	32	nd	5.3	-	360
TP82.1	0.4-0.6	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	2.4	7.8	11	nd	2.9	-	57
TP83.1	0.8-1.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	84	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	6	nd	9.3	17	17	nd	13	-	84
TP83.2	2.8-3.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	86	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	18	30	nd	6.7	-	260
TP83.3	4.2-4.4	17/01/2012	SGS SE104740	Clay	-	-	-	-	-	-	95	nd	nd	nd	nd	-	-	-	-	-	-	nd	0.01	0.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.1	4.2	15	nd	2.7	-	18
TP84.1	1.8-2.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	105	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.26	2.3	-	-	-	-	-	-	-	-	-	-	5	nd	9	8.3	49	nd	6.7	-	61
TP84.2	3.8-4.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	89	nd	50	nd	50	-	-	-	-	-	-	0.2	0.28	2.6	-	-	-	-	-	-	-	-	-	-	5	nd	7.4	5.9	19	nd	2.9	-	43
TP84.3	4.8-5.0	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	85	150	440	nd	590	-	-	-	-	-	-	0.8	1	7.9	-	-	-	-	-	-	-	-	-	-	5	nd	7	12	14	1.5	8.2	-	50
TP85.1	1.2-1.4	17/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	10	38	48	nd	7	-	640
TP85.2	2.0-2.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	90	nd	630	650	1280	-	-	-	-	-	-	47	67.1	483.7	-	-	-	-	-	-	-	-	-	-	3	nd	13	8	18	0.13	8.1	-	34
TP85.3	3.8-4.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	97	nd	140	120	260	-	-	-	-	-	-	0.9	1.3	11.4	-	-	-	-	-	-	-	-	-	-	7	nd	6.3	12	38	nd	10	-	64
TP85.4	4.8-5.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	98	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	4.4	-	-	-	-	-	-	-	-	-	-	35	nd	5.6	8.9	30	nd	4.6	-	62
TP86.1	1.2-1.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	110	140	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	7.6	13	44	nd	11	-	91
TP86.2	4.6-4.8	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	32	590	640	1262	-	-	-	-	-	-	1.7	2.5	30.8	-	-	-	-	-	-	-	-	-	-	7	nd	14	12	32	0.27	8.6	-	83
TP87.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	170	160	330	-	-	-	-	-	-	1.8	2.8	27.2	-	-	-	-	-	-	-	-	-	-	3	nd	5	7.8	14	0.12	3.4	-	26
TP87.2	2.8-3.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	5	nd	5.9	5.7	15	nd	4	-	35
TP 87.3	4.0-4.2	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	10.5	93.7	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	79	nd	11	-	120
TP88.1	0.8-1.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.03	1	-	-	-	-	-	-	-	-	-	-	4	nd	3.6	11	17	nd	11	-	75
TP88.2	1.8-2.0	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	nd	nd	120	nd	120	-	-	-	-	-	-	-	13.7	-	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	8.8	18	nd	10	-	42
TP89.1	0.4-0.6	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	6.6	47	37	0.06	10	-	120
TP90.1	0.2-0.4	18/01/2012	SGS SE104740	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	nd	3.5	5.9	9	nd	5.4	-	28
TP91.1	0.4-0.6	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	9.3	78.2	-	-	-	-	-	-	-	-	-	-	6	nd	16	10	22	nd	4.4	-	53
TP91.2	4.8-5.0	18/01/2012	SGS SE107215	Clay fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	5	0.4	3.2	28	16	nd	22	-	140
SF1	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	7	nd	7.7	11	10	nd	11	-	56
SF2	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	1.2	2.5	6	nd	2.5	-	23
SF3	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	0.4	2.8	10	11	nd	9	-	100
SF4	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	1.6	7.2	8	nd	3.8	-	55
SF5	0.0-0.01	11/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	1.4	8.3	8	nd	3.6	-	61
SF6	0.0-0.01	11/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	2.9	9.1	9	nd	8.5	-	65
SF7	0.0-0.01	12/04/2012	SGS SE107215	Silt	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	4.6	7.2	10	nd	6.8	-	49
SF8	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	nd	5.1	24	14	nd	7.9	-	58
SF9	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	5.5	16	21	nd	11	-	100
SF10	0.0-0.01	12/04/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	5	0.5	1.3	4.4	8	nd	9.7	-	120
SF11	0.0-0.01	17/01/2012	SGS SE107215	Silty Clay	-	-	-	-	-	-	nd	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	<6	nd	4.9	14	15	nd	11	-	100
V1	3.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	54	330	72	456	-	-	-	-	-	-	0.1	0.2	6.3	-	-	-	-	-	-	-	-	-	-	6	nd	4.9	9.1	16	nd	12	-	81
V2	4.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	5.2	7	7	nd	6	-	33
V3	6.0	17/01/2012	SGS SE108786	Silty Clay	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	10	0.4	6.3	12	22	0.08	7	-	110
V4	5.0	17/01/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	110	350	110	570	-	-	-	-	-	-	1.2	1.9	11.3	-	-	-	-	-	-	-	-	-	-	5	nd	6	10	14	nd	6.8	-	150
V5	4.0	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	68	nd	68	-	-	-	-	-	-	0.8	1.2	7.2	-	-	-	-	-	-	-	-	-	-	5	nd	13	9	15	0.07	7.5	-	56
V5_1.5	5.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	10	nd	4	8.6	8	nd	2	-	33
V6	2.5	17/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.1	0.1	1.4	-	-	-	-	-	-	-	-	-	-	8	0.4	89	35	40	nd	5	-	540
V7	1.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.9	6.8	-	-	-	-	-	-	-	-	-	-	7	nd	21	11	14	nd	10	-	51
V8	1.5	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	4	nd	4.9	6.1	10	nd	5.1	-	39
V9	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	9	nd	35	6.2	11	nd	2.8	-	23
V10	3.0	18/01/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	140	150	290	-	-	-	-	-	-	0.8	1.2	8.7	-	-	-	-	-	-	-	-	-	-	4	nd	8.2	9	21	nd	6.1	-	45
V11	3.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	130	1100	630	1860	-	-	-	-	-	-	0.1	0.2	10.4	-	-	-	-	-	-	-	-	-	-	17	nd	4.4	17	19	0.31	7.1	-	50
V12	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	410	180	590	-	-	-	-	-	-	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	7	nd	3.8	15	16	nd	8.2	-	110
V13	8.0	30/05/2012	SGS SE108786	Sandy clay	N	-	-	-	-	-	-	nd	240	360	600	-	-	-	-	-	-	8	12.4	69.1	-	-	-	-	-	-	-	-	-	-	8	nd	3.5	17	24	nd	8.5	-	130
V14	5.0	30/05/2012	SGS SE108786	Clay fill	N (4 frag)	-	-	-	-	-	-	nd	180	57	237	-	-	-	-	-	-	0.3	0.4	3.1	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	6.4	10	nd	7	-	29
V15	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	83	-	-	-	-	-	-	-	-	-	5.4	8.4	45.7	-	-	-	-	-	-	-	-	-	-	8	0.6	7.3	16	30	nd	9	-	180
V16	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	120	570	210	863	-	-	-	-	-	-	0.1	0.1	1.8	-	-	-	-	-	-	-	-	-	-	16	0.4	58	17	15	nd	21	-	80
V17	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	49	920	160	1200	-	-	-	-	-	-	0.6	0.8	7.4	-	-	-	-	-	-	-	-	-	-	14	0.4	250	15	17	0.07	150	-	340
V18	2.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	670	170	889	-	-	-	-	-	-	5.5	8.6	49.7	-	-	-	-	-	-	-	-	-	-	11	0.4	22	18	20	nd	14	-	170
V19	3.0	30/05/2012	SGS SE108786	Clay fill	Y (47 Frag)	-	-	-	-	-	-	nd	350	88	438	-	-	-	-	-	-	8.2	12.9	70.3	-	-	-	-	-	-	-	-	-	-	4	nd	9.8	14	17	nd	8.3	-	130
V20	5.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	29	110	80	190	-	-	-	-	-	-	4.1	6.5	42	-	-	-	-	-	-	-	-	-	-	9	0.6	47	67	37	0.22	26	-	550
V21	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	350	200	579	-	-	-	-	-	-	0.2	0.3	2.7	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	14	14	nd	6.3	-	77
V22	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	95	nd	95	-	-	-	-	-	-	nd	0.1	3.2	-	-	-	-	-	-	-	-	-	-	4	nd	4	10	19	nd	10	-	94
V23	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	160	nd	160	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2.7	8	nd	2.7	-	14
V24	8.0	30/05/2012	SGS SE108786	Sandy clay	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	1.7	-	-	-	-	-	-	-	-	-	-	5	nd	2.7	19	12	nd	12	-	94
V25	3.0	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	74	nd	74	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	6.7	10	10	nd	3	-	55
V26	1.5	30/05/2012	SGS SE108786	Clay fill	N	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	4	nd	3.4	12	8	nd	1	-	26
V27	1.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	260	nd	nd	nd	-	-	-	-	-	-	2.6	3.8	21.7	-	-	-	-	-	-	-	-	-	-	12	0.4	32	14	18	nd	16	-	88
V28	0.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	490	58	808	-	-	-	-	-	-	0.9	1.3	7.3	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	9	nd	4	-	29
V29	1.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	51	nd	51	-	-	-	-	-	-	0.7	1.0	5.4	-	-	-	-	-	-	-	-	-	-	nd	nd	4.6	3	7	nd	2	-	18
V30	6.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	22	100	nd	122	-	-	-	-	-	-	2	3.0	17.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.7	12	15	nd	11	-	100
V31	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	3	nd	7.5	6.1	10	nd	2.8	-	32
V32	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.2	1.6	-	-	-	-	-	-	-	-	-	-	22	nd	6.9	30	41	nd	6.3	-	55
V33	4.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.4	7.2	-	-	-	-	-	-	-	-	-	-	nd	nd	4.2	2.8	10	nd	3	-	25
V34	2.0	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.5	-	-	-	-	-	-	-	-	-	-	4	nd	3.2	6.7	12	nd	3	-	99
V35	2.5	30/05/2012	SGS SE108786	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	3	nd	8.1	4.4	7	nd	1.4	-	34
S1	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	5.9	10	11	nd	9	-	62
S2	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	1.5	2.3	13.6	-	-	-	-	-	-	-	-	-	-	4	nd	10	9	16	nd	8	-	58
S3	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	110	150	260	-	-	-	-	-	-	4.2	6.3	32.3	-	-	-	-	-	-	-	-	-	-	8	nd	12	19	19	nd	9	-	280
S4	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	110	182	-	-	-	-	-	-	5.9	8.7	44.8	-	-	-	-	-	-	-	-	-	-	9	nd	15	31	27	nd	8.8	-	420
S5	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.6	-	-	-	-	-	-	-	-	-	-	6	nd	7.6	10	15	nd	6.5	-	41
S6	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	99	nd	99	-	-	-	-	-	-	1	1.5	8.2	-	-	-	-	-	-	-	-	-	-	5	nd	17	7.9	13	nd	10	-	68
S7	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	88	450	70	608	-	-	-	-	-	-	1.1	1.6	9.1	-	-	-	-	-	-	-	-	-	-	11	0.4	53	15	20	nd	31	-	160
S8	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	72	nd	72	-	-	-	-	-	-	1.5	2.3	13.7	-	-	-	-	-	-	-	-	-	-	6	nd	13	9	14	nd	8	-	60
S9	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.2	0.3	1.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.3	7.7	12	nd	5	-	39
S10	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	200	85	285	-	-	-	-	-	-	1.8	2.7	15.2	-	-	-	-	-	-	-	-	-	-	10	nd	34	14	14	nd	14	-	86
S11	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.6	3.6	-	-	-	-	-	-	-	-	-	-	nd	nd	1.4	2	6	nd	0.8	-	17
S12	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	64	66	130	-	-	-	-	-	-	3.2	4.9	25.5	-	-	-	-	-	-	-	-	-	-	6	nd	27	16	20	nd	8.1	-	74
S13	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	69	57	126	-	-	-	-	-	-	1.8	2.7	14.4	-	-	-	-	-	-	-	-	-	-	6	0.3	16	20	27	nd	7.5	-	420
S14	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	100	92	nd	192	-	-	-	-	-	-	0.5	0.7	5.6	-	-	-	-	-	-	-	-	-	-	6	nd	21	13	22	0.08	12	-	120
S15	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.8	-	-	-	-	-	-	-	-	-	-	5	nd	15	8.8	12	nd	6.8	-	51
S16	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	6	-	90
S17	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.1	-	-	-	-	-	-	-	-	-	-	11	nd	8.6	18	27	0.12	5.8	-	47
S18	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1	1.5	12.2	-	-	-	-	-	-	-	-	-	-	4	nd	4.1	6	11	nd	4.2	-	37
S19	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.5	-	-	-	-	-	-	-	-	-	-	4	nd	4.5	7	12	nd	3	-	38
S20	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.1	0.1	0.9	-	-	-	-	-	-	-	-	-	-	<6	nd	3.7	4	6	nd	4.8	-	33
S21	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.9	-	-	-	-	-	-	-	-	-	-	4	nd	4.8	9.6	11	nd	5.2	-	69
S22	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.3	-	-	-	-	-	-	-	-	-	-	6	nd	3.8	5.3	14	nd	2.2	-	34
S23	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	9	nd	3.4	-	23
S24	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3.4	-	-	-	-	-	-	-	-	-	-	4	nd	7	7.5	11	nd	6.3	-	44
S25	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.1	-	-	-	-	-	-	-	-	-	-	4	nd	4.4	7	13	nd	4	-	52
S26	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	57	54	111	-	-	-	-	-	-	3.7	5.5	29.5	-	-	-	-	-	-	-	-	-	-	5	nd	9.3	12	19	nd	5	-	110
S27	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	3	nd	6.3	4.4	8	nd	3.4	-	28
S28	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	2.7	6	9	nd	4	-	32
S29	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	nd	nd	3.6	6	10	nd	3	-	19
S30	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	3.1	7	11	nd	4	-	29
S31	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	290	490	780	-	-	-	-	-	-	18	28.6	153	-	-	-	-	-	-	-	-	-	-	5	0.6	47	14	33	nd	12	-	160
S32	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	27	nd	5.6	34	43	nd	8.5	-	450
S33	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	160	69	229	-	-	-	-	-	-	6.1	9.1	53.5	-	-	-	-	-	-	-	-	-	-	7	0.4	10	21	29	nd	10	-	310
S34	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.1	6.5	-	-	-	-	-	-	-	-	-	-	12	nd	13	15	20	nd	7	-	70
S35	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.4	0.5	3	-	-	-	-	-	-	-	-	-	-	5	nd	5.6	14	21	nd	8.1	-	180
S36	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	2.8	4.2	21.6	-	-	-	-	-	-	-	-	-	-	4	nd	6.4	6.3	12	nd	5	-	78
S37	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.3	-	-	-	-	-	-	-	-	-	-	8	nd	5.6	13	19	nd	5	-	150
S38	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.7	0.9	5.9	-	-	-	-	-	-	-	-	-	-	6	0.4	10	52	59	nd	10	-	840
S39	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	65	nd	65	-	-	-	-	-	-	2.6	3.8	20.8	-	-	-	-	-	-	-	-	-	-	5	nd	26	10	17	nd	7.3	-	93
S40	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	1.3	2.0	10.3	-	-	-	-	-	-	-	-	-	-	7	0.4	7.9	12	19	nd	8	-	110
S41	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.6	0.8	4.4	-	-	-	-	-	-	-	-	-	-	5	nd	5.3	6.6	13	nd	4	-	48
S42	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	150	220	370	-	-	-	-	-	-	3.3	4.8	25.4	-	-	-	-	-	-	-	-	-	-	3	0.3	4.7	6.5	12	nd	5.3	-	82
S43	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	nd	58	58	-	-	-	-	-	-	3.8	5.5	28.7	-	-	-	-	-	-	-	-	-	-	5	0.4	15	17	23	nd	12	-	150
S44	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.5	0.7	3.8	-	-	-	-	-	-	-	-	-	-	6	0.3	9.4	11	19	nd	7.9	-	120
S45	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	nd	100	100	200	-	-	-	-	-	-	10	14.8	77.4	-	-	-	-	-	-	-	-	-	-	9	0.4	19	31	27	nd	16	-	120
S46	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	5	nd	4.6	6.8	13	nd	74	-	3
S47	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.3	0.4	2.2	-	-	-	-	-	-	-	-	-	-	5	nd	3.7	11	18	0.05	70	-	9.4
S48	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	4	nd	11	12	12	nd	45	-	4.9
S49	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.8	-	-	-	-	-	-	-	-	-	-	6	nd	5.1	9.3	14	nd	43	-	7
S50	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	220	180	400	-	-	-	-	-	-	16	25.3	137.6	-	-	-	-	-	-	-	-	-	-	6	nd	29	23	19	nd	77	-	9
S51	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	55	nd	55	-	-	-	-	-	-	0.5	0.7	4.2	-	-	-	-	-	-	-	-	-	-	6	0.3	7.8	13	17	nd	97	-	7.5

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides												Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC									OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
S52	0-0.2	28/06/2012	SGS SE109743	Clay/brick fill	-	-	-	-	-	-	-	nd	73	nd	73	-	-	-	-	-	-	1.1	1.8	11.1	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	8.7	12	15	nd	110	-	8
S53	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	60	220	nd	280	-	-	-	-	-	-	1.6	2.5	13.9	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	5.2	13	13	nd	74	-	5
S54	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	33	400	nd	433	-	-	-	-	-	-	0.1	0.1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	5.2	10	13	nd	54	-	4.8
S55	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	420	620	nd	1040	-	-	-	-	-	-	0.2	0.3	4.8	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	6.9	12	13	nd	110	-	6
S56	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	220	900	290	1410	-	-	-	-	-	-	1.5	2.5	16.5	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2.6	12	13	nd	56	-	3.2
S57	0-0.2	28/06/2012	SGS SE109743	Clay fill	-	-	-	-	-	-	-	73	170	nd	243	-	-	-	-	-	-	nd	nd	0	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	4.7	13	15	nd	80	-	4.7
S58	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	3	4.7	24.9	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	11	6.2	14	nd	80	-	4.9
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	0.8	1.2	6.4	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	0.5	0.9	4	nd	8.7	-	1.1
S57	na	28/06/2012	SGS SE109743	Fine	-	-	-	-	-	-	-	nd	110	170	280	-	-	-	-	-	-	17	27.2	158.1	-	-	-	-	-	-	-	-	-	-	-	-	nd	0.4	13	14	21	nd	160	-	14
S57	na	28/06/2012	SGS SE109743	Brick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A1 TP3.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2 TP4.1	0.0-0.2	2/05/2011	SGS SE87342	Ash Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A3 TP6.1	0.0-0.2	2/05/2011	SGS SE87342	Fill	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A4 TP10.1	0.2-0.4	2/05/2011	SGS SE87342	Brick/Ash Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A5 TP13.1	0.2-0.4	2/05/2011	SGS SE87342	Clay FIll	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A6 TP17.1	0.0-0.2	3/05/2011	SGS SE87342	Fill	Y chrysolite detected	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP48A	0.2-0.4	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP49A	0.8-1.0	3/05/2011	SGS SE87342	Gravel Fill	N (org fibre detected)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1-1	0.3-0.6	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	11	nd	27	-	160
BH1-2	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	7	5	10	0.1	4	-	65
BH1-3	1.5	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.36	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	12	18	20	nd	9	-	530
BH3-1	1.0	24/08/2013	Envirolab 96324	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	3	8	nd	nd	-	8
TP101-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	110	260	nd	nd	nd	nd	260	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	13	0.4	8	40	51	0.9	8	-	450
TP101-2	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	140	120	260	nd	nd	60	60	200	nd	nd	nd	0.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	9	2	8	0.2	3	-	11
TP101-3	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	1.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	29	nd	6	57	55	0.1	10	-	620
TP102-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	32	0.5	17	19	14	0.3	14	-	58
TP102-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	220	nd	220	nd	nd	110	110	210	nd	0.41	1	4.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	9	20	31	0.1	13	-	210
TP103-1	1.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd	1.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	36	34	17	0.2	22	-	56
TP103-2	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.11	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	8	25	27	0.9	7	-	150
TP103-3	4.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	4	9	nd	4	-	19
TP104-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	290	nd	290	nd	nd	75	75	310	nd	3.3	5	36	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	19	16	15	0.1	10	-	55
TP104-2	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.1	3	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	6	11	22	nd	6	-	48
TP104-3	4.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	2	nd	nd	390	380	770	nd	nd	nd	nd	660	280	11	16	140	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	13	19	57	0.5	22	-	85
TP105-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.43	1	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	9	11	21	nd	5	-	37
TP106-1	1.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	150	160	310	nd	nd	nd	nd	280	nd	5.5	8	52	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	11	14	40	0.1	12	-	56
TP106-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	nd	nd	nd	nd	nd	170	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	12	20	nd	9	-	45
TP107-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	nd	1.1	2	14	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	10	nd	4	16	23	0.2	11	-	140
TP107-2	2.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	140	nd	3.4	5	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	10	2	8	nd	6	-	9
TP107-3	2.8	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	240	240	480	nd	nd	nd	nd	390	230	8.6	12	96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	12	8	15	nd	26	-	49
TP108-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	3	19	11	0.7	3	-	42
TP108-2	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.1	3	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	12	28	0.1	13	-	150
TP108-2A	2.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	130	nd	2.9	4	30	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	4	10	42	nd	7	-	70
TP109-1	0.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	7	17	nd	4	-	50
TP110-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	270	nd	nd	nd	0.24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	7	20	17	nd	11	-	140
TP110-2	2.2	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	4	24	20	0.1	15	-	110
TP110-3	3.0	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	5	13	13	nd	9	-	87
TP111-1	1.5	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	10	15	13	nd	12	-	64
TP111-2	4.7	27/08/2013	Envirolab 96471	-	-	nd	nd	nd	nd	nd	nd	140	410	100	650	nd	nd	240	240	390	nd	nd	nd	0.18	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	5	15	14	nd	9	-	88
TP113-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	7	9	0.8	4	-	41
TP114-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	2	12	15	0.1	3	-	34
TP114-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	3	11	12	nd	4	-	48
TP114-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	7	nd	3	-	47
TP115-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	5	nd	5	25	13	nd	5	-	59
TP116-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	10	nd	1	-	13
TP116-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	15	11	nd	nd	-	9
TP117-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	6	8	nd	nd	-	6
TP117-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	13	9	nd	nd	-	6
TP118-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	11	2	12	nd	6	-	10
TP118-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.2	2	8.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	23	nd	5	12	14	nd	3	-	21
TP119-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	15	16	nd	1	-	11
TP119-1-A	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	15	25	nd	nd	-	8
TP119-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	170	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	4	nd	50	22	14	nd	3	-	130
TP119-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	860	290	1150	nd	nd	nd	nd	1200	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	6	nd	47	21	18	nd	5	-	62
TP119-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	2	23	18	nd	6	-	50
TP120-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	410	2600	680	3670	nd	nd	960	960	2600	210	nd	nd	3.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	21	50	59	nd	13	-	350
TP120-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	19	14	nd	nd	-	11
TP120-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	52	nd	3	22	16	nd	2	-	21
TP120-4	3.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	7	nd	2	13	16	0.1	2	-	17
TP121-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	8	nd	6	7	15	nd	6	-	48
TP121-2	2.3	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	14	14	nd	10	-	48
TP121-3	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	nd	8	nd	2	-	12
TP122-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	280	nd	nd	nd	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	16	nd	2	23	16	nd	7	-	49
TP122-2	2.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	7	nd	4	-	76
TP123-1	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	nd	11	nd	2	-	10
TP123-1-A	1.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.06	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	11	nd	2	-	12
TP123-2	2.0	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	5	3	12	nd	2	-	29
TP124-1	0.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	7	nd	8	nd	1	-	22
TP124-2	1.5	28/08/2013	Envirolab 96472	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	8	9	nd	nd	-	7
TP125	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	190	nd	190	nd	nd	51	51	220	nd	nd	nd	1.2	-	-	-	-	-	-	-	-	-	-	-	-	9	0.5	1	42	23	0.1	15	-	250
TP126	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	5	22	21	nd	14	-	120
TP126a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	4	19	19	nd	12	-	110
TP127	0.2	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2	4	8	nd	5	-	68
TP128	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2	3	6	nd	8	-	100
TP129	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	210	nd	210	nd	nd	52	52	270	nd	0.05	nd	1.6	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	4	24	18	0.1	20	-	150
TP129a	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	nd	nd	260	nd	0.05	nd	1.5	-	-	-	-	-	-	-	-	-	-	-	-	11	0.4	4	26	19	nd	22	-	160
TP130	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	80	460	210	750	nd	nd	120	120	580	nd	nd	nd	2.3	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	2	31	22	0.1	18	-	190
TP131	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	140	nd	140	nd	nd	nd	nd	190	nd	0.06	nd	1.1	-	-	-	-	-	-	-	-	-	-	-	-	10	nd	2	31	34	0.2	28	-	160
TP132	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	150	nd	nd	nd	0.64	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	1	10	16	0.2	5	-	37
TP133	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	4	11	12	nd	6	-	48
TP133	0.8	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	140	nd	nd	nd	0.47	-	-	-	-	-	-	-	-	-	-	-	-	11	nd	1	21	16	0.1	41	-	210
TP134	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	150	1100	440	1690	nd	nd	250	250	1300	170	0.15	nd	7.7	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	4	14	10	nd	24	-	65
TP134	3.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	140	1100	340	1580	nd	nd	260	260	1300	nd	0.05	nd	2	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	2	21	10	nd	5	-	53
TP134	5.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	330	110	440	nd	nd	69	69	400	nd	nd	nd	0.77	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	4	43	17	nd	15	-	92
TP135	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	2	17	17	nd	14	-	150
TP135	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	72	430	160	662	nd	nd	110	110	510	nd	0.1	nd	2	-	-	-	-	-	-	-	-	-	-	-	-	22	nd	nd	73	15	0.5	19	-	310
TP135a	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	92	510	210	812	nd	nd	140	140	620	nd	0.11	nd	2.4	-	-	-	-	-	-	-	-	-	-	-	-	25	nd	nd	61	19	0.2	20	-	300
TP135	4.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	3	17	14	nd	16	-	150
TP136	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	1	17	18	nd	1	-	6
TP137	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	2	4	nd	1	-	20
TP138	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	-	-	14	nd	8	68	44	0.1	18	-	110
TP139	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	3	3	9	nd	2	-	24
TP140	0.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	0.42	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	15	nd	2	-	14
TP142	0.3	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	14	nd	20	-	130
Pit2-1	2.5	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	160	nd	0.06	nd	0.89	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	3	13	17	nd	5	-	34
Bund-1	1.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.91	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	15	nd	13	-	110
Bund-1	2.0	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	2	12	15	nd	10	-	96
Bund-2	-	23/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	42	nd	3	35	16	nd	14	-	160
TP143	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	6	2	11	nd	2	-	15
TP143a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6	2	10	nd	1	-	10
TP144	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.34	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6	4	20	nd	3	-	28
TP144a	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.29	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	7	5	21	nd	3	-	29
TP145	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.16	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	4	21	18	nd	7	-	71
TP146	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	13	nd	3	-	24
TP147	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	11	nd	2	-	20
TP147	2.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	6	3	12	nd	3	-	21
TP148	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	10	nd	6	-	51
TP149	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	9	nd	8	28	18	nd	18	-	80
TP149	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	4	10	14	nd	9	-	68
TP150	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	8	nd	6	24	18	nd	20	-	79
TP151	0.5	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	110	nd	110	nd	nd	nd	nd	180	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	-	-	nd	2.4	3	7	22	0.1	170	-	520
TP152	0.8	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.27	-	-	-	-	-	-	-	-	-	-	-	-	7	nd	8	3	19	nd	4	-	40
TP153	0.2	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2	10	24	nd	8	-	55
TP154	0.3	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	2	9	16	nd	12	-	78
Bund-3	1.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	9	5	16	nd	3	-	20
Bund-3	3.0	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	1	4	12	nd	4	-	41
Bund-3	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	-	-	5	nd	1	3	10	nd	4	-	36
SP1-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	1.2	-	-	-	-	-	-	-	-	-	-	-	-	6	nd	2	12	15	nd	7	-	110

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides										Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16-34}	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
SP2-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	160	100	260	nd	nd	nd	nd	220	nd	nd	nd	0.59	-	-	-	-	-	-	-	-	-	-	8	nd	3	16	16	nd	11	-	74
SP3-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	77	560	290	927	nd	nd	120	120	720	150	0.08	nd	2.3	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	11	nd	21	-	95
SP4-1	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	470	2700	1300	4470	nd	nd	740	740	3300	650	0.14	nd	8.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	11	8	nd	17	-	43
SP4-2	-	24/10/2013	Envirolab 99602	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	3	14	17	nd	5	-	110
TP155	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	9	15	nd	20	-	89
TP156	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	3	4	12	nd	14	-	65
TP157	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	1	9	nd	7	-	40
TP158	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	2	2	8	nd	5	-	27
TP159	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	4	12	nd	3	-	30
TP160	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	6	18	nd	3	-	22
TP161	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	6	3	9	nd	6	-	28
TP161	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	1	5	8	nd	2	-	21
TP162	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.19	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	10	nd	7	17	12	nd	11	-	46
TP162	3.0	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	3	11	73	nd	6	-	56
TP162	3.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	5	nd	7	nd	nd	-	4
TP163	0.3	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	11	nd	6	13	10	nd	9	-	30
TP163	1.2	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	4	10	14	nd	6	-	35
RC-1-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	270	150	420	nd	nd	nd	nd	380	nd	0.11	nd	2.7	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	23	24	nd	6	-	71
RC-2-SP	-	24/10/2013	Envirolab 99674	-	nd	nd	nd	nd	nd	nd	nd	nd	190	150	340	nd	nd	nd	nd	310	nd	0.58	1	8.9	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	42	nd	11	43	89	nd	11	-	100
DAM-2-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	13	17	nd	8	nd	81
DAM-3-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2	9	14	nd	4	nd	67
DAM-4-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	8	16	20	nd	16	nd	98
DAM-5-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	4	nd	6	11	16	nd	12	nd	80
DAM-6-S	-	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	13	0.9	29	28	40	0.2	32	nd	490
Exit Dam	0.1	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.47	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	10	0.7	19	30	30	0.2	39	nd	430
Exit Dam	0.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	6	18	19	nd	13	nd	120
Exit Dam	1.5	24/10/2013	Envirolab 99674	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1	4	10	nd	6	nd	49
Bund-4	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	11	nd	3	-	33
RC-1-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	300	200	500	nd	nd	64	64	430	110	0.11	nd	2.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	18	nd	7	28	25	nd	6	-	61
RC-2-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	280	230	510	nd	nd	58	58	430	120	0.36	1	6	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	50	0.4	12	58	120	0.1	14	-	94
RC-3-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	170	140	310	nd	nd	nd	nd	260	nd	0.08	nd	1.8	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	0.4	14	23	33	nd	9	-	79
RC-3-2-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	110	110	nd	nd	nd	nd	170	nd	0.09	nd	1.5	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	5	nd	27	31	21	nd	15	-	91
RC-3-3-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	8	nd	8	nd	5	-	30
RC-4-1-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	140	240	380	nd	nd	nd	nd	320	nd	nd	nd	0.39	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	17	nd	9	19	24	nd	6	-	71
RC5-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	nd	nd	4	2	21	nd	3	-	23
RC6-SP	-	25/10/2013	Envirolab 99771	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	nd	nc	nd	nd	nd	nd	nd	nd	nd	-	4	nd	6	2	19	nd	3	-	20
SP5-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.2	2	8.1	-	-	-	-	-	-	-	-	-	-	5	nd	6	13	14	nd	6	-	62
SP5-2	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1.9	3	14	-	-	-	-	-	-	-	-	-	-	7	nd	23	23	32	nd	14	-	150
SP5-3	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	100	nd	100	nd	nd	nd	nd	170	nd	2.7	4	19	-	-	-	-	-	-	-	-	-	-	9	nd	10	48	50	nd	13	-	760
SP5-4	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	180	850	130	1160	nd	nd	410	410	710	nd	4.4	6	30	-	-	-	-	-	-	-	-	-	-	9	nd	10	20	20	nd	9	-	180
SP6-1	-	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	140	490	nd	630	nd	nd	280	280	370	nd	0.26	nd	2.1	-	-	-	-	-	-	-	-	-	-	7	nd	8	17	19	nd	7	-	140
TP164	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	6	10	nd	3	-	29
TP164	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.07	nd	0.76	-	-	-	-	-	-	-	-	-	-	4	nd	2	9	13	nd	5	-	57
TP164	1.4	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	15	nd	2	-	8
TP165	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	150	16	35	nd	7	-	55
TP165	1.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	160	nd	0.06	nd	0.57	-	-	-	-	-	-	-	-	-	-	8	nd	58	15	85	nd	7	-	65
TP166	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	120	130	250	nd	nd	nd	nd	200	nd	0.1	nd	2.3	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	19	nd	8	-	47
TP166a	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	110	120	230	nd	nd	nd	nd	190	nd	0.06	nd	1.2	-	-	-	-	-	-	-	-	-	-	7	nd	7	15	19	nd	9	-	48
TP166	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	7	nd	6	10	12	nd	7	-	76
TP167	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	190	120	310	nd	nd	53	53	260	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	7	nd	3	18	20	nd	10	-	74
TP168	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.43	-	-	-	-	-	-	-	-	-	-	6	nd	3	29	18	nd	5	-	67
TP169	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.53	-	-	-	-	-	-	-	-	-	-	10	nd	4	18	20	nd	14	-	89
TP170	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.42	-	-	-	-	-	-	-	-	-	-	6	nd	5	16	19	nd	10	-	70
TP171	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	8	19	nd	6	-	28
TP172	0.2	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	4	-	40
TP173	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	17	nd	6	-	40
TP173a	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	2	19	nd	6	-	54
TP174	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	5	22	nd	4	-	38
TP175	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	21	nd	2	18	34	nd	6	-	150
TP176	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	nd	nd	200	23	20	nd	9	-	48
TP177	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	14	nd	12	-	89
TP178	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.21	-	-	-	-	-	-	-	-	-	-	6	nd	5	11	14	nd	6	-	52
TP178	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	14	nd	26	-	130
TP179	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	6	nd	3	19	13	nd	8	-	66
TP179	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.13	-	-	-	-	-	-	-	-	-	-	9	nd	4	39	19	0.1	17	-	120
TP180	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	180	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	14	nd	14	-	95
TP180	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	4	9	14	nd	11	-	93
TP180	3.0	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	28	16	0.2	26	-	100
TP181	0.3	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	nd	100	nd	nd	0.51	-	-	-	-	-	-	-	-	-	-	6	nd	3	11	14	0.1	9	-	88
TP181	1.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	130	nd	nd	nd	1.3	-	-	-	-	-	-	-	-	-	-	8	nd	3	26	15	0.2	18	-	120
TP182	0.5	25/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.24	-	-	-	-	-	-	-	-	-	-	6	nd	3	13	13	nd	15	-	110
TP183	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.33	-	-	-	-	-	-	-	-	-	-	6	nd	3	23	16	nd	16	-	140
TP183a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	nd	0.72	-	-	-	-	-	-	-	-	-	-	5	nd	3	20	15	nd	15	-	170
TP184	0.1	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	5	nd	5	11	15	nd	8	-	81
TP184	2.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	28	23	nd	18	-	52
TP184	3.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	8	13	18	nd	11	-	57
TP184	3.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	11	35	15	nd	14	-	62
TP185	0.2	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	8	11	14	nd	2	-	23
TP185	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	6	14	nd	6	-	77
TP185	4.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	6	4	13	nd	2	-	21
TP185	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	20	10	nd	2	-	31
TP186	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	13	nd	11	-	59
TP186	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	13	13	nd	6	-	65
TP187	1.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	6	11	nd	3	-	26
TP187	2.0	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	71	150	nd	221	nd	nd	90	90	200	nd	nd	nd	0.19	-	-	-	-	-	-	-	-	-	-	8	nd	7	15	21	nd	9	-	69
TP187	2.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	200	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	15	nd	12	19	18	nd	19	-	280
TP187	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	5	31	30	0.1	4	-	48
TP187a	3.7	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	14	14	nd	1	-	20
TP187	4.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.29	-	-	-	-	-	-	-	-	-	-	8	nd	11	10	18	nd	5	-	66
TP187	6.5	28/10/2013	Envirolab 99771	-	-	nd	nd	nd	nd	nd	nd	63	110	nd	173	nd	nd	110	110	nd	nd	nd	nd	0.63	-	-	-	-	-	-	-	-	-	-	8	nd	2	14	12	0.1	6	-	61
TP188	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	15	0.5	8	11	13	nd	10	-	71
TP188	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	15	nd	12	-	86
TP188	4.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	8	0.4	7	25	20	nd	14	-	140
TP188	5.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	5	41	23	nd	41	-	170
TP189	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	7	9	11	nd	8	-	65
TP189	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	140	220	360	nd	nd	nd	nd	310	110	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	5	12	14	nd	8	-	62
TP189	3.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	200	nd	200	nd	nd	59	59	220	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	7	13	16	nd	12	-	63
TP190	0.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	nd	2	2	2.9	2	-	3
TP190	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.24	-	-	-	-	-	-	-	-	-	-	nd	nd	3	14	12	0.1	8	-	68
TP191	1.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	1.1	-	-	-	-	-	-	-	-	-	-	9	0.4	2	28	14	0.1	19	-	120
TP191	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	1400	3900	nd	5300	50	50	2900	2900	2300	nd	nd	nd	13	-	-	-	-	-	-	-	-	-	-	17	nd	6	36	26	nd	11	-	250
TP191	4.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	7	nd	3	21	14	nd	11	-	120
TP192	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	8	10	12	nd	12	-	96
TP193	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	5	nd	6	16	17	0.1	11	-	140
TP193a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	7	15	17	nd	10	-	120
TP194	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.94	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	15	-	120
TP194a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.39	-	-	-	-	-	-	-	-	-	-	8	nd	3	23	18	nd	18	-	130
TP195	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	7	nd	2	11	14	nd	10	-	96
TP195a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	14	nd	10	-	98
TP196	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	3	19	14	nd	14	-	120
TP197	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	3	nd	2	-	2
TP198	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	nd	6	nd	1	-	6
TP199	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	9	1	7	nd	2	-	8
TP200	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	3	16	12	nd	9	-	59
TP202	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	5	7	10	nd	6	-	67
TP202a	0.3	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	7	7	12	nd	6	-	58
TP202	2.0	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.48	-	-	-	-	-	-	-	-	-	-	nd	nd	2	7	11	nd	4	-	82
TP202	3.5	28/10/2013	Envirolab 99821	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	nd	5	nd	nd	-	5
TP203	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	7	nd	2	-	2
TP204	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	6	nd	9	nd	2	-	2
TP205	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	5	nd	3	17	13	nd	9	-	9
TP206	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.17	-	-	-	-	-	-	-	-	-	-	6	nd	4	17	14	nd	15	-	15
TP207	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	51	340	140	531	nd	nd	84	84	410	nd	0.08	nd	2.6	-	-	-	-	-	-	-	-	-	-	12	nd	1	31	10	nd	7	-	7
TP208	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	9	nd	3	-	3
TP209	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.15	-	-	-	-	-	-	-	-	-	-	4	nd	6	17	14	nd	12	-	12
TP210	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	73	410	160	643	nd	nd	120	120	490	nd	0.07	nd	3.6	-	-	-	-	-	-	-	-	-	-	8	nd	1	38	14	0.1	9	-	9
TP210a	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	66	340	140	546	nd	nd	100	100	400	nd	0.06	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	0.5	1	47	15	0.1	10	-	10
TP211	0.2	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.68	-	-	-	-	-	-	-	-	-	-	nd	nd	6	8	10	nd	5	-	5
TP212	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.83	-	-	-	-	-	-	-	-	-	-	5	nd	2	13	14	nd	12	-	12
TP213	0.3	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	2	11	9	nd	3	-	3
TP213	1.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.09	nd	1.9	-	-	-	-	-	-	-	-	-	-	nd	nd	10	28	12	nd	14	-	14
TP213	2.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	170	nd	170	nd	nd	nd	nd	200	nd	0.11	nd	1.6	-	-	-	-	-	-	-	-	-	-	45	nd	12	79	52	nd	10	-	10
TP213	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	4300	12000	150	16450	nd	nd	9100	9100	7900	nd	<0.5		41	-	-	-	-	-	-	-	-	-	-	8	nd	4	26	25	nd	2	-	2

CSR/PGH Metford Data Log - Soil

Sample ID	Depth	Date	Chemical Report	Sample Description		BTEX					Petroleum											PAH			Pesticides									Heavy Metals									
					ASB	Benz	Toluen	EthylBe	Xylene	Naphth	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Total	C_6 - C_{10}	C_6-C_{10} (F1)	C_{10}-C_{16}	C_{10}-C_{16} (F2)	C_{16}-$_{34}$	C_{34}-C_{40}	B(a)P	B(a)P TEQ	Total	OC							OP	PCB	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Sb	Zn
TP213	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	3500	12000	190	15690	nd	nd	7900	7900	7900	nd	<0.5		38	-	-	-	-	-	-	-	-	-	-	26	nd	8	110	120	nd	4	-	4
TP213	5.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	960	3500	nd	4460	nd	nd	2100	2100	2300	nd	0.07	nd	8.1	-	-	-	-	-	-	-	-	-	-	39	nd	5	42	27	nd	7	-	7
TP213	7.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	220	800	nd	1020	nd	nd	500	500	530	nd	nd	nd	3.7	-	-	-	-	-	-	-	-	-	-	10	nd	2	13	12	nd	4	-	4
TP213	8.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	110	370	110	590	nd	nd	220	220	340	nd	nd	nd	2.7	-	-	-	-	-	-	-	-	-	-	5	nd	3	24	19	0.1	10	-	10
TP214	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	7	6	nd	2	-	2
TP215	0.3	29/10/2013	Envirolab 99975	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	18	14	nd	4	-	4
TP216	0.2	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	14	11	nd	14	-	14
TP216	3.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	230	nd	230	nd	nd	nd	nd	270	nd	0.08	nd	0.56	-	-	-	-	-	-	-	-	-	-	8	0.5	7	27	39	nd	8	-	8
TP216	4.5	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	110	200	310	nd	nd	nd	nd	250	nd	2.8	5	38	-	-	-	-	-	-	-	-	-	-	9	nd	8	8	52	0.1	8	-	8
TP216	6.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	140	260	400	nd	nd	nd	nd	330	150	3.9	6	48	-	-	-	-	-	-	-	-	-	-	4	nd	18	10	42	nd	7	-	7
TP216	8.0	29/10/2013	Envirolab 99975	-	nd	nd	nd	nd	nd	nd	nd	nd	240	370	610	nd	nd	nd	nd	500	260	3.6	5	53	-	-	-	-	-	-	-	-	-	-	5	nd	11	12	51	nd	10	-	10
TP217	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.44	-	-	-	-	-	-	-	-	-	-	8	nd	9	7	10	nd	9	-	110
TP217a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	6	nd	5	6	9	nd	8	-	130
TP218	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	110	100	210	nd	nd	nd	nd	170	nd	0.06	nd	1.4	-	-	-	-	-	-	-	-	-	-	7	nd	7	21	26	nd	14	-	160
TP219	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	nd	nd	0.75	-	-	-	-	-	-	-	-	-	-	10	nd	4	13	16	nd	10	-	79
TP220	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.38	1	4.3	-	-	-	-	-	-	-	-	-	-	nd	nd	3	3	17	nd	2	-	16
TP221	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.52	-	-	-	-	-	-	-	-	-	-	7	nd	4	63	20	nd	10	-	61
TP222	0.2	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	130	130	nd	nd	nd	nd	140	nd	0.09	nd	0.45	-	-	-	-	-	-	-	-	-	-	nd	nd	5	2	25	nd	4	-	25
TP223	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	16	22	17	nd	20	-	70
TP223	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	210	190	400	nd	nd	nd	nd	340	nd	0.32	nd	5.8	-	-	-	-	-	-	-	-	-	-	16	nd	10	31	37	0.1	12	-	85
TP223	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.29	nd	3.2	-	-	-	-	-	-	-	-	-	-	9	nd	13	16	19	nd	11	-	59
TP224	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	0.5	1	5.4	-	-	-	-	-	-	-	-	-	-	8	nd	11	18	19	nd	15	-	97
TP224	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	260	530	nd	nd	nd	nd	440	170	8.4	12	100	-	-	-	-	-	-	-	-	-	-	11	nd	11	15	51	nd	14	-	110
TP224	2.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	270	290	560	nd	nd	nd	nd	450	190	5.5	8	66	-	-	-	-	-	-	-	-	-	-	7	nd	13	16	45	nd	12	-	85
TP225	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	190	390	nd	nd	nd	nd	320	120	2.3	3	29	-	-	-	-	-	-	-	-	-	-	10	nd	6	22	26	nd	9	-	80
TP225	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	1200	1100	2300	nd	nd	160	160	1900	630	19	26	170	-	-	-	-	-	-	-	-	-	-	4	nd	15	14	17	nd	53	-	53
TP225	3.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	120	690	0.24	nd	2.4	-	-	-	-	-	-	-	-	-	-	7	nd	12	3	42	nd	4	-	31
TP225	5.0	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	4	nd	5	6	14	nd	7	-	64
TP226	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	150	nd	150	nd	nd	nd	nd	210	nd	0.24	nd	2.7	-	-	-	-	-	-	-	-	-	-	7	nd	9	15	41	nd	12	-	95
TP226a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	180	180	360	nd	nd	nd	nd	320	nd	0.15	nd	2	-	-	-	-	-	-	-	-	-	-	6	nd	6	14	39	nd	10	-	110
TP227	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	200	290	490	nd	nd	nd	nd	420	120	nd	nd	0.1	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	9	0.2	24	-	16
TP227a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	220	320	540	nd	nd	nd	nd	470	140	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	2	11	7	nd	26	-	15
TP228	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.14	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	8	nd	14	-	33
TP228a	0.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.23	-	-	-	-	-	-	-	-	-	-	nd	nd	4	13	7	nd	17	-	29
TP228	1.5	31/10/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	10	2	8	nd	2	-	14
TP228	2.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	14	nd	9	nd	2	-	8
TP229	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	1	1	2	nd	2	-	8
TP229a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	2	5	nd	3	-	25
TP229	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	10	nd	3	-	33
TP230	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	2	13	4	nd	20	-	16
TP230a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	15	4	nd	15	-	15
TP230	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	15	12	nd	2	-	30
TP230	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	2	11	nd	6	-	39
TP231	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	22	nd	3	16	3	nd	25	-	19
TP231a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	3	17	3	nd	30	-	19
TP231	1.2	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	11	6	nd	12	-	33
TP232	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	7	4	11	nd	3	-	27
TP232a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	4	3	8	nd	2	-	22
TP232	0.8	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	10	nd	8	nd	2	-	11
TP233	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.45	-	-	-	-	-	-	-	-	-	-	12	nd	5	9	15	0.2	6	-	55
TP233a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.3	-	-	-	-	-	-	-	-	-	-	9	nd	5	12	14	0.1	7	-	58
TP234	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	140	nd	0.07	nd	1.1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	14	16	nd	17	-	190
TP234a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	nd	130	nd	nd	nd	nd	150	nd	0.05	nd	1	-	-	-	-	-	-	-	-	-	-	nd	nd	4	15	17	nd	16	-	170
TP235	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	130	110	240	nd	nd	nd	nd	190	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	9	18	55	0.4	8	-	94
TP236	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.74	-	-	-	-	-	-	-	-	-	-	5	nd	8	8	16	0.1	6	-	55
TP237	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	nd	nd	5	3	19	nd	3	-	28
TP238	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	0.52	-	-	-	-	-	-	-	-	-	-	5	nd	7	4	31	nd	3	-	28
TP239	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	2	18	nd	4	-	37
TP240	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.36	-	-	-	-	-	-	-	-	-	-	nd	nd	4	2	18	nd	2	-	18
TP241	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	9	nd	19	nd	2	-	14
TP242	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.29	-	-	-	-	-	-	-	-	-	-	4	nd	6	5	20	nd	3	-	23
TP243	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	6	33	12	nd	3	-	16
TP243a	0.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	9	nd	6	37	14	nd	3	-	18
TP243	1.5	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	10	nd	6	37	13	nd	2	-	11
TP244	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	nd	nd	1	-	-	-	-	-	-	-	-	-	-	7	nd	8	16	16	nd	14	-	62
TP245	0.3	1/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	58	380	120	558	nd	nd	110	110	390	nd	0.35	1	7.8	-	-	-	-	-	-	-	-	-	-	8	nd	7	18	15	nd	28	-	130
V29	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	140	nd	5	7	36	-	-	-	-	-	-	-	-	-	-	6	nd	15	14	19	nd	7	-	170
V29a	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	110	nd	2.8	4	20	-	-	-	-	-	-	-	-	-	-	7	nd	9	11	15	nd	6	-	98
V29	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	150	550	nd	700	nd	nd	270	270	460	nd	nd	nd	0.2	-	-	-	-	-	-	-	-	-	-	7	0.5	6	13	14	nd	8	-	80
V29	3.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	5	nd	6	18	19	nd	3	-	48
V29	4.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.32	-	-	-	-	-	-	-	-	-	-	5	nd	2	9	16	0.1	33	-	180
V16	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	120	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	14	nd	58	300	9	nd	22	-	72
V16	1.0	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	10	14	18	nd	5	-	43
V27	0.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	500	140	640	nd	nd	120	120	530	nd	nd	nd	0.4	-	-	-	-	-	-	-	-	-	-	16	nd	69	14	18	nd	41	-	100
V27	1.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	250	220	470	nd	nd	nd	nd	420	nd	0.06	nd	0.06	-	-	-	-	-	-	-	-	-	-	28	0.5	170	15	19	nd	70	-	110
V27	2.5	4/11/2013	Envirolab 100323	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	8	nd	17	15	15	nd	130	-	200
Bund-5	0.8	4/11/2013	Envirolab 100323	-	-	nd	nd	nd	nd	nd	nd	nd	160	nd	160	nd	nd	53	53	170	nd	nd	nd	1.6	-	-	-	-	-	-	-	-	-	-	8	nd	3	32	14	nd	24	-	140
TPIT2-Spot-3.5	3.5	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.45	1	5.2	-	-	-	-	-	-	-	-	-	-	5	nd	12	16	39	0.1	7	-	55
TPIT2-Spot-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	26	-	-	-	-	-	-	-	-	-	-	4	nd	9	9	14	nd	52	-	42
PIT2-4.0	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	250	210	460	nd	nd	nd	nd	400	nd	0.15	nd	2.9	-	-	-	-	-	-	-	-	-	-	17	nd	9	59	45	0.1	10	-	41
PIT2-4.0a	4.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	260	220	480	nd	nd	nd	nd	410	nd	0.13	nd	3.3	-	-	-	-	-	-	-	-	-	-	15	nd	6	52	37	0.1	9	-	35
PIT2-EWR-2.8	2.8	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.36	nd	3.4	-	-	-	-	-	-	-	-	-	-	7	nd	8	6	12	nd	3	-	31
PIT2-EWR-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.11	nd	1.3	-	-	-	-	-	-	-	-	-	-	nd	nd	5	4	12	nd	3	-	33
PIT2-EWR-4.2	4.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.5	1	5.1	-	-	-	-	-	-	-	-	-	-	4	nd	12	7	16	nd	7	-	31
PIT2-EWR-6.0	6.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	4	4	11	nd	2	-	44
PIT2-RAMP-WW-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.11	-	-	-	-	-	-	-	-	-	-	19	nd	4	11	11	nd	1	-	12
PIT2-RAMP-C-1.2	1.2	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	190	190	380	nd	nd	nd	nd	320	nd	0.09	nd	1.5	-	-	-	-	-	-	-	-	-	-	11	nd	10	30	26	nd	5	-	42
PIT2-SW-RC-3.0	3.0	7/11/2013	Envirolab 100445	-	-	nd	nd	nd	nd	nd	nd	nd	120	200	320	nd	nd	nd	nd	240	170	2.9	4	41	-	-	-	-	-	-	-	-	-	-	6	nd	9	14	30	nd	19	-	63
Pit2-S-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	310	560	nd	nd	nd	nd	390	290	12	17	110	-	-	-	-	-	-	-	-	-	-	6	nd	10	14	56	nd	11	-	120
Pit2-S-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	190	250	440	nd	nd	nd	nd	260	260	3.9	6	50	-	-	-	-	-	-	-	-	-	-	6	nd	7	10	14	nd	10	-	50
Pit2-6.0-S-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	420	390	810	nd	nd	nd	nd	580	350	15	21	170	-	-	-	-	-	-	-	-	-	-	7	nd	7	7	29	nd	4	-	38
Pit2-6.0-S-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	490	430	920	nd	nd	78	78	690	330	0.81	1	13	-	-	-	-	-	-	-	-	-	-	14	nd	9	48	53	0.5	12	-	280
Pit2-E-2.0	2.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	240	220	460	nd	nd	nd	nd	330	180	0.27	nd	4.4	-	-	-	-	-	-	-	-	-	-	9	nd	10	41	50	nd	10	-	80
Pit2-E-4.0	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	330	360	690	nd	nd	nd	nd	500	310	17	26	210	-	-	-	-	-	-	-	-	-	-	5	nd	8	10	49	nd	6	-	90
Pit2-E-6.0-L	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	100	100	nd	nd	nd	nd	120	nd	0.51	1	5.2	-	-	-	-	-	-	-	-	-	-	nd	nd	7	2	27	nd	1	-	41
Pit2-E-6.0-R	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	5	5	11	nd	2	-	28
Pit2-6.0-W	6.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	170	180	350	nd	nd	nd	nd	260	130	0.6	1	5.8	-	-	-	-	-	-	-	-	-	-	5	nd	8	7	12	nd	4	-	21
Pit2-3.0-N	3.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	6	nd	4	15	15	nd	2	-	10
Pit2-4.0-N	4.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	250	230	480	nd	nd	nd	nd	350	180	0.11	nd	2	-	-	-	-	-	-	-	-	-	-	19	nd	14	50	38	0.1	16	-	70
Pit2-8.0	8.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	560	650	1210	nd	nd	60	60	820	590	17	26	220	-	-	-	-	-	-	-	-	-	-	nd	nd	13	15	97	nd	7	-	100
Pit2-9.0-1	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	270	320	590	nd	nd	nd	nd	420	290	9.7	14	110	-	-	-	-	-	-	-	-	-	-	8	nd	10	16	87	nd	11	-	170
Pit2-9.0-2	9.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	170	170	nd	nd	nd	nd	170	180	3.5	5	37	-	-	-	-	-	-	-	-	-	-	4	nd	14	17	45	nd	18	-	68
Pit2-10.0	10.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	160	160	nd	nd	nd	nd	160	160	2.3	3	25	-	-	-	-	-	-	-	-	-	-	6	nd	9	11	50	nd	8	-	86
Pit2-11.0-1	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	220	220	nd	nd	nd	nd	160	250	1.9	3	23	-	-	-	-	-	-	-	-	-	-	7	nd	13	9	31	nd	10	-	50
Pit2-11.0-2	11.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	130	150	280	nd	nd	nd	nd	220	110	3.5	5	44	-	-	-	-	-	-	-	-	-	-	8	nd	10	11	100	nd	9	-	51
Pit2-12.0	12.0	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	110	160	270	nd	nd	nd	nd	170	160	1.4	2	17	-	-	-	-	-	-	-	-	-	-	8	nd	9	15	26	nd	19	-	84
Pit2-BASE-1	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	3	10	12	nd	20	-	120
Pit2-BASE-2	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.07	nd	0.5	-	-	-	-	-	-	-	-	-	-	nd	nd	3	8	11	nd	14	-	110
Pit2-BASE-3	14.6	13/11/2013	Envirolab 100706	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	0.12	-	-	-	-	-	-	-	-	-	-	nd	nd	3	9	11	nd	16	-	120
PIT2-N	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	110	130	240	nd	nd	nd	nd	200	nd	2.5	4	28	-	-	-	-	-	-	-	-	-	-	12	nd	10	27	140	0.2	8	-	240
PIT2-W	2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	2	nd	nd	120	120	240	nd	nd	nd	nd	210	nd	1.3	2	23	-	-	-	-	-	-	-	-	-	-	6	nd	12	20	39	0.1	13	-	79
PIT2-W	4	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	150	140	290	nd	nd	nd	nd	260	nd	0.32	nd	5.5	-	-	-	-	-	-	-	-	-	-	6	nd	5	17	24	nd	6	-	46
PIT2-W	6	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	120	120	nd	nd	nd	nd	170	nd	0.15	nd	2.8	-	-	-	-	-	-	-	-	-	-	11	nd	5	11	17	nd	4	-	25
PIT2-SP-1	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.06	nd	0.61	-	-	-	-	-	-	-	-	-	-	7	nd	10	15	14	nd	11	-	57
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.24	nd	3.2	-	-	-	-	-	-	-	-	-	-	6	nd	10	16	16	nd	12	-	62
PIT2-SP-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.67	1	11	-	-	-	-	-	-	-	-	-	-	12	nd	8	25	24	nd	9	-	47
TP245	0.3	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.08	nd	0.18	-	-	-	-	-	-	-	-	-	-	4	nd	18	16	12	nd	6	-	56
TP246	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	31	26	4	nd	20	-	43
TP246	1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	nd	nd	33	29	4	nd	22	-	44
TP247	0.2	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.13	nd	1.4	-	-	-	-	-	-	-	-	-	-	6	nd	7	8	23	nd	4	-	21
TP247	0.5	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	4	nd	10	2	12	nd	2	-	8
TP248	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	nd	nd	NIL (+)VE	-	-	-	-	-	-	-	-	-	-	7	nd	11	2	14	nd	nd	-	7
TP248a	0.1	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.05	nd	0.15	-	-	-	-	-	-	-	-	-	-	8	nd	10	1	12	nd	nd	-	5
SPA-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	1	1	7.7	-	-	-	-	-	-	-	-	-	-	6	nd	16	12	13	nd	11	-	82
SPA-2	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	0.23	nd	2.2	-	-	-	-	-	-	-	-	-	-	6	nd	27	9	11	nd	9	-	42
SPB-1	-	14/11/2013	Envirolab 100858	-	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.1	3	15	-	-	-	-	-	-	-	-	-	-	7	nd	8	11	16	nd	7	-	92
SPB-2	-	14/11/2013	Envirolab 100858	-	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	nd	nd	nd	2.5	4	19	-	-	-	-	-	-	-	-	-	-	6	nd	8	12	22	nd	8	-	100

ANNEX C
TABULATED LABORATORY ANALYSIS RESULTS

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 1.2	TP 2.1	TP 3.1	TP 4.1	TP 5.1	TP 6.1	TP 7.2	TP 8.1	TP 9.1	TP 10.1	TP 12.2	TP 14.2	TP 21.2	TP 21.3	TP 23.1
Depth m				1.0-1.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.2-0.4	1.3-1.5	1.7-1.8	1.7-1.9	4.8-5.0	0.2-0.4
Geology				Ash fill	Ash fill	Ash fill	Ash fill	Ash fill	Fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Brick/ash fill	Silt	Clay	Brick fill	Brick fill	Clay fill
Date				2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**	SGS Batch No SE87342														
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	20	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	120	<50
C29 - C36 Fraction	mg/kg	50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	85	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***205***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 23.3	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 27.1	TP 28.1	TP 29.1	TP29.2	TP29.3	TP 31.1	TP 38.1	TP 39.1	TP 40.1	TP 41.2
Depth m				4.0-4.2	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	0.2-0.4	0.4-0.6	0.4-0.6	1.5-1.7	2.6-2.8	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	1.6-1.8
Geology				Clay	Fill	Fill	Ash fill	Clay fill	Fill	Clay	Clay	Silt	Clay	Clay fill	Brick fill	Clay fill	Calcium fluoride	Coal
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	23	<20	NA	<20	<20	<20	<20	<20	NA	NA	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	1200	25	<20	<20	<20	<20	<20	1400	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	1600	2200	1,100	<50	<50	<50	<50	2100	<50	<50	<50	<50	68	<50	<50
C29 - C36 Fraction	mg/kg	100	-	70	2500	1,600	<50	<50	<50	<50	100	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***2870***	***4725***	***2700***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***3600***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***68***	***<LOR***	***<LOR***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	Na	<0.1	<0.1	<0.1	<0.1	<0.1	Na	Na	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	Na	<0.3	<0.3	<0.3	<0.3	<0.3	Na	Na	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***NA***	***NA***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

ANALYTICAL RESULTS TPH BTEX - CSR MAITLAND
JOB No: 11495

Sample				TP 43.1	TP 45.1	SB 2.1	SB 3.1	SB 4.1	SB 8.1	SB 9.1	SB 10.1	SB 11.2	SB 13.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1
Depth m				0-0.2	0.0-0.12	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	1.8-2.0	0.2-0.3	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0
Geology				Ash brick fill	Clay fill	Clay	Clay	Fill	Clay	Clay	Fill	Fill	Clay fill	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill
Date				3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NSW EPA Criteria**															
TOTAL PETROLEUM HYDROCARBONS																		
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	na	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	140	<50	70
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	89	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***50***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***229***	***<LOR***	***70***
BTEX																		
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

Sample				TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 71.1
Depth m				0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4
Geology				Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill
Date				4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11
	Units	**LOR**	**NSW EPA Criteria**													
TOTAL PETROLEUM HYDROCARBONS																
C6 - C9 Fraction	mg/kg	10	65	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	mg/kg	50	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction	mg/kg	100	-	<50	<50	<50	<50	69	<50	<50	<50	<50	<50	<50	<50	<50
C29 - C36 Fraction	mg/kg	100	-	<50	<50	<50	<50	180	<50	<50	<50	<50	<50	<50	<50	<50
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***249***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX																
Benzene	mg/kg	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						TP 1.2	TP 2.1	TP 3.1	TP 7.2	TP 8.1	TP 10.1	TP 24.2	TP 24.3	TP 25.2	TP 25.3	TP 41.2	TP 43.1	TP 45.1	SB 10.1	SB 11.2	SB 13.1
Depth m						1.0-1.2	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.2-0.4	1.1-1.3	4.8-5.0	2.5-2.7	4.2-4.4	1.6-1.8	0-0.2	0.0-0.12	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Ash fill	Ash fill	Ash fill	Brick/ash fill	Clay/ash fill	Brick/ash fill	Fill	Fill	Ash fill	Clay fill	Coal	Ash brick fill	Clay fill	Fill	Fill	Clay fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	7.1	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.3	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.32	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	15	8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	11	6.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	96	49	0.13	0.17	<0.1	0.44	0.12	0.21	<0.1	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	14	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	199	89	<0.1	0.13	<0.1	0.24	0.14	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	179	80	<0.1	0.12	<0.1	0.16	0.12	0.12	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	249	131	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	131	59	<0.1	0.11	<0.1	0.16	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	306	162	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	190	99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	143	80	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	37	24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	170	95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	0	0	0	0	0	1775.22	802.4	0.13	0.53	0	1.13	0.38	0.33	0	0

POLYNUCLEAR AROMATIC HYDROCARBONS																				
Sample						SB 16.1	TP 47.1	TP 48.1	TP 49.1	TP 52.1	TP 54.1	TP 58.1	TP 59.1	TP 60.1	S1	S2	S3	S4	S5	S6
Depth m						0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	1.0-1.2	0.0	0.0	0.0	0.0	0.0	0.0
Geology						Ash fill	Gravel fill	Gravel fill	Gravel fill	Fill	Clay fill	Brick fill	Brick fill	Fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	1	0.25	0.25	<0.1	<0.1	0.36	0.36	0.41	<0.1	<0.1	<0.1	<0.1	0.14	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.26	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	0.18	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	2.4	0.29	0.24	0.12	<0.1	0.66	1.2	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	2.3	0.27	0.22	0.14	<0.1	0.68	1.1	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	1.4	0.17	0.15	<0.1	<0.1	0.37	0.57	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	1.1	0.16	0.17	<0.1	<0.1	0.37	0.47	0.39	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	1.7	0.21	<0.2	<0.2	<0.2	0.86	0.96	0.74	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	0.86	<0.1	<0.1	0.1	<0.1	0.44	0.52	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.51	<0.1	<0.1	<0.1	<0.1	0.33	0.36	0.27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	0.58	<0.1	<0.1	0.13	<0.1	0.45	0.47	0.34	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	12.45	1.35	1.03	0.49	0	4.52	6.16	4.89	0	0	0	0	0.24	0

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS PAH CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS								
Sample						TP 64.1	TP 65.1	TP 71.1
Depth m						0.2-0.4	0.2-0.4	0.2-0.4
Geology						Clay	Clay fill	Clay fill
Date						5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**			
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
1-Methylnaphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	0.5	<0.1
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	0.2	<0.1
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	0.24	<0.1
Benzo[a]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	0.17	<0.1
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	0.16	<0.1
Benzo[b,k]fluoranthene	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2
Benzo[a]pyrene	mg/kg	0.1	1	2	5	<0.1	<0.1	<0.1
Indeno[123-cd]pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Dibenzo[ah]anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Benzo[ghi]perylene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1
Sum reported PAH	mg/kg		20	40	100	0	1.27	0

NOTES
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na = Not Analysed
LEGEND

Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 1.1	TP 1.2	TP 1.3	TP 2.1	TP 2.2	TP 3.1	TP 3.2	TP 4.1	TP 5.1	TP 5.2	TP 6.1	TP 7.2	TP 8.1	TP 8.2	TP 9.1
Depth m						0.0-0.2	1.0-1.2	1.6-1.8	0.0-0.2	0.7-0.9	0.0-0.2	0.7-0.9	0.0-0.2	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.0-0.2	0.4-0.6	0.4-0.6
Geology						Ash fill	Ash fill	Clay	Ash fill	Brick fill	Ash fill	Brick fill	Ash fill	Ash fill	Brick fill	Fill	Brick/ash fill	Clay/ash fill	Clay fill	Brick/ash fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342														
Arsenic	mg/kg	3	100	200	500	4	4	<3	4	4	<3	<3	<3	<3	5	<3	<3	<3	<3	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium (III)	mg/kg	0.3	12%	24%	60%	2.7	3.7	5.6	2.5	2.6	3.8	2.3	4.6	210	24	4.3	33	6.8	4.9	2.5
Copper	mg/kg	0.5	1000	2000	5000	18	12	1.2	24	13	15	4.6	28	6	11	4.2	29	9	14	17
Lead	mg/kg	1	300	600	1500	8	13	9.8	9	9	3	4	11	10	12	10	9	4	13	7
Nickel	mg/kg	0.5	600	600	3000	9.6	22	1.5	6.8	4.5	8	2.6	14	3.9	5.6	2.8	12	15	0.6	16
Zinc	mg/kg	0.5	7000	14000	35000	43	75	6.7	16	21	15	55	49	21	45	15	36	27	7.5	23
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 10.1	TP 10.2	TP 11.1	TP 12.1	TP 12.2	TP 13.1	TP 14.1	TP 14.2	TP 15.1	TP 16.1	TP 17.1	TP 17.2	TP 18.1	TP 18.2	TP 19.2
Depth m						0.2-0.4	2.3-2.5	0.4-0.6	0.2-0.4	1.3-1.5	0.2-0.4	0.2-0.4	1.7-1.8	0.2-0.4	0.0-0.2	0.0-0.2	1.3-1.5	0.0-0.2	1.0-1.2	3.3-3.5
Geology						Brick/ash fill	Clay	Brick fill	Clay fill	Silt	Clay fill	Clay fill	Clay	Brick fill	Fill	Fill	Silt	Brick fill	Brick fill	Brick fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	6	<3	4	5	5	6	5	5	25	6	14	11	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	0.5	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.8	2.4	22	2.7	4.3	4.8	2.5	6.9	6.3	17	620	16	9.7	81	7.6
Copper	mg/kg	0.5	1000	2000	5000	16	1.2	29	<0.5	4.6	23	20	10	10	16	15	2.5	16	35	4.5
Lead	mg/kg	1	300	600	1500	12	6	55	5	14	14	21	18	19	31	26	12	13	29	9
Nickel	mg/kg	0.5	600	600	3000	18	<0.5	18	<0.5	4	3.3	4.1	4.1	10	18	190	74	19	52	3.4
Zinc	mg/kg	0.5	7000	14000	35000	47	3.7	130	3.3	21	17	37	32	50	460	520	33	58	300	26
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.5	<0.05	0.13	<0.05	<0.05

Sample						TP 20.1	TP 21.2	TP 21.3	TP 22.1	TP 23.1	TP 23.3	TP 24.2	TP 25.2	TP 25.3	TP 26.2	TP 27.1	TP 27.3	TP 28.1	TP 29.1	TP 29.2
Depth m						0.0-0.2	0.7-0.9	4.8-5.0	1.0-1.2	0.2-0.4	4.0-4.2	1.1-1.3	2.5-2.7	4.2-4.4	0.5-0.7	0.2-0.4	3.0-3.2	0.4-0.6	0.4-0.6	1.5-1.7
Geology						Fill	Brick fill	Brick fill	Clay fill	Clay fill	Clay	Fill	Ash fill	Clay fill	Fill	Fill	Shale	Clay	Clay	Silt
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	4	260	39	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3
Cadmium	mg/kg	0.3	20	40	100	<0.3	1.6	0.9	<0.3	0.5	<0.3	0.8	<0.3	<0.3	<0.3	<0.3	0.5	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	11	<0.3	620	<0.3	230	0.4	13	1.1	1	2.3	0.7	0.5	<0.3	0.8	0.4
Copper	mg/kg	0.5	1000	2000	5000	14	52	42	<0.5	25	6.6	36	5	5.7	14	0.96	8	1	19	4.6
Lead	mg/kg	1	300	600	1500	34	18	37	<1	30	4	15	2	7	18	3	7	1	4	2
Nickel	mg/kg	0.5	600	600	3000	8.7	1000	390	0.8	15	10	38	13	5.5	6.9	3.4	16	0.7	0.9	2.2
Zinc	mg/kg	0.5	7000	14000	35000	220	110	170	12	130	53	170	40	70	42	59	250	5.7	17	5.1
Mercury	mg/kg	0.05	15	30	75	<0.05	0.27	0.12	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09

NOTES
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LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 30.1	TP 31.1	TP 32.1	TP 33.1	TP 34.1	TP 35.1	TP 36.1	TP 37.1	TP 38.1	TP 39.1	TP 40.1	TP 41.1	TP 41.2	TP 43.1	TP 43.2
Depth m						0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0-0.2	0.8-1.0	0.0-1.0	0.2-0.4	0.2-1.0	1.6-1.8	0-0.2	0.4-0.6
Geology						Clay fill	Clay fill	Clay fill	Silt	Clay fill	Clay fill	Clay fill	Clay fill	Brick fill	Clay fill	Calcium fluoride	Calcium fluoride	Coal	Ash brick fill	Brick fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	<3	<3	<3	<3	<3	7	10	5	9	8	7	4	4
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	0.4	<0.3	<0.3	<0.3	<0.3	0.4	2.2	11	5.7	8.6	5.1	3	25	7.5	2.1
Copper	mg/kg	0.5	1000	2000	5000	2.8	3.9	7.9	3.7	4.4	8.2	11	16	21	11	2.5	1.9	14	11	8.2
Lead	mg/kg	1	300	600	1500	1	3	5	2	3	7	11	18	24	11	4	2	7	9	11
Nickel	mg/kg	0.5	600	600	3000	1.2	5.8	4.7	12	11	6	3.8	15	10	7	3.3	2.2	48	8.4	5
Zinc	mg/kg	0.5	7000	14000	35000	4.7	100	150	83	76	160	52	66	180	38	15	6.8	76	25	70
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5	3	0.75	<0.05	<0.05

Sample						TP 45.1	SB 1.1	SB 2.1	SB 3.1	SB 4.1	SB 5.1	SB 6.1	SB 7.1	SB 8.1	SB 9.1	SB 10.1	SB 10.2	SB 11.1	SB 11.2	SB 12.1
Depth m						0.0-0.12	0.3-0.4	0.2-0.3	0.2-0.3	0.4-0.5	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.8-0.9	0.2-0.3	1.8-2.0	0.2-0.3
Geology						Clay fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Clay	Clay	Fill	Fill	Clay fill	Fill	Clay fill
Date						3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11	3/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	200	<3	<3	10	<3	<3	11	<3	<3	<3	4	<3	4	6	<3
Cadmium	mg/kg	0.3	20	40	100	0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	6	2.6	4.8	1.7	38	1.1	9.8	7.6	2.1	8.1	2	3.6	1.1	5.2	1.6
Copper	mg/kg	0.5	1000	2000	5000	280	9.4	17	13	40	3.3	14	0.8	11	0.7	16	10	5	4.1	6.1
Lead	mg/kg	1	300	600	1500	300	5	18	11	6	12	15	8	6	9.9	9	5	11	9.5	7
Nickel	mg/kg	0.5	600	600	3000	9.4	1.6	0.9	0.6	27	<0.5	1.2	0.6	1.7	0.92	16	7.6	4.7	1.8	0.7
Zinc	mg/kg	0.5	7000	14000	35000	2000	16	13	11	65	3.3	5.1	4.2	20	6.2	41	31	51	9.2	12
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						SB 13.1	SB 15.1	SB 16.1	TP 46.1	TP 47.1	TP 48.1	TP 49.1	TP 50.1	TP 51.1	TP 52.1	TP 53.1	TP 54.1	TP 55.1	TP 56.1	TP 57.1
Depth m						0.2-0.3	0.1-0.2	0.2-0.4	0.2-0.4	0.2-0.4	0.2-0.4	0.8-1.0	0.2-0.4	0.8-1.0	0.2-0.4	0.2-0.4	0.0-0.2	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay fill	Gravel	Ash fill	Brick fill	Gravel fill	Gravel fill	Gravel fill	Fill	Fill	Fill	Fill	Clay fill	Brick fill	Brick fill	Fill
Date						3/05/11	3/05/11	3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	<3	<3	9	3	74	12	10	8	5	11	3	<3	<3	4	5
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	0.9	0.3	<0.3	<0.3	1.1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	4.5	3.5	3.2	8.3	7.5	10	7.8	5	4.7	8.2	4.1	2.8	2.7	5.7	5.3
Copper	mg/kg	0.5	1000	2000	5000	6.1	4	120	7.9	72	23	25	17	11	13	7.9	6.8	2.4	19	14
Lead	mg/kg	1	300	600	1500	8	3	15	11	180	48	37	18	50	25	15	9	4	54	22
Nickel	mg/kg	0.5	600	600	3000	2	1.9	5.9	6.7	12	9.4	7.3	6.4	6.2	6.6	4.9	3.3	0.91	13	6.7
Zinc	mg/kg	0.5	7000	14000	35000	14	15	23	83	170	88	61	37	50	73	63	23	8.8	160	76
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	0.11	0.07	0.2	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS METALS - CSR MAITLAND
JOB No: 11495

Sample						TP 58.1	TP 59.1	TP 60.1	TP 61.1	TP 62.1	TP 63.1	S1	S2	S3	S4	S5	S6	TP 64.1	TP 65.1	TP 66.1
Depth m						0.0-0.2	0.0-0.2	1.0-1.2	0.2-0.4	0.0-0.2	0.0-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2-0.4	0.2-0.4	0.0-0.2
Geology						Brick fill	Brick fill	Fill	Clay fill	Silt	Brick fill	Silt	Calcium fluoride	Black shale	Clay	Clay	Clay	Clay	Clay fill	Clay
Date						4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**															
Arsenic	mg/kg	3	100	200	500	5	7	5	<3	3	5	4	7	6	<3	<3	4	<3	5	<3
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	0.7	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	3.8	5.5	8.6	3.1	1.3	3.6	1.5	2.3	1.3	1.5	1.3	3	5.1	1.4	1.8
Copper	mg/kg	0.5	1000	2000	5000	14	15	43	13	8.2	1.4	8.5	1.5	18	4.3	7.9	8.3	<0.5	13	5.2
Lead	mg/kg	1	300	600	1500	35	29	93	9.9	11	5	11	3	17	9.7	12	10	8	12	9.5
Nickel	mg/kg	0.5	600	600	3000	6.9	4.2	6.8	4.8	7.8	1.7	17	2.2	8.6	15	5.1	15	1.8	7.7	5.3
Zinc	mg/kg	0.5	7000	14000	35000	68	82	240	170	67	9.5	190	22	76	56	80	110	28	85	55
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample						TP 67.1	TP 68.1	TP 69.1	TP 70.1	TP 71.1	TP 72.1
Depth m						0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.0-0.2
Geology						Clay	Clay	Clay	Clay	Clay fill	Clay
Date						5/05/11	5/05/11	5/05/11	5/05/11	5/05/11	5/05/11
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**						
Arsenic	mg/kg	3	100	200	500	3	<3	5	3	<3	10
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	mg/kg	0.3	12%	24%	60%	1.6	2.4	2.6	4.4	1.1	1.8
Copper	mg/kg	0.5	1000	2000	5000	4.4	0.7	9.8	6.3	8.7	31
Lead	mg/kg	1	300	600	1500	11	4	11	8	11	32
Nickel	mg/kg	0.5	600	600	3000	5.2	<0.5	11	14	5.3	5.3
Zinc	mg/kg	0.5	7000	14000	35000	47	3.6	90	78	39	360
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS OC/OP PESTICIDES CSR MAITLAND
JOB No: 11495

ORGANOCHLORINE PESTICIDES															
Sample						TP 47.1	TP 48.1	TP 49.1	S1	S2	S3	S4	S5	S6	TP 64.1
Depth															
Geology															
Date															
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**	SGS Batch No SE87342									
HCB	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC (Lindane)	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-Chlordane	mg/kg	0.1	50	100	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDE	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.1	10	20	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
beta-Endosulfan	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDD	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p-DDT	mg/kg	0.1	200	400	1000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC						0	0	0.1		0	0	0	0		
ORGANOPHOSPHORUS PESTICIDES															
Dichlorvos	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethoate	mg/kg	1	NE	NE	NE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diazinon	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromofos-ethyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	NE	NE	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS INORGANICS ASBESTOS - CSR MAITLAND
JOB No: 11495

Sample						TP 29.1	S1	S2	S3	S4	TP 64.1
Depth m						0.4-0.6	0.0	0.0	0.0	0.0	0.2-0.4
Geology						Clay	Silt	Calcium fluoride	Black shale	Clay	Clay
Date						3/05/11	4/05/11	4/05/11	4/05/11	4/05/11	5/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342					
PCBs Total	mg/kg	0.9	10	20	50	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Calcium	mg/kg	5	NE	NE	NE	na	na	260000	na	na	na
Sulphur	mg/kg	5	NE	NE	NE	na	na	7392	na	na	na
Fluoride	mg/kg	5	NE	NE	NE	na	na	7900	na	na	na
pH	mg/kg	0.1	NE	NE	NE	na	na	8	na	na	na

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

Sample						A1 TP3.1	A2 TP4.1	A3 TP6.1	A4 TP10.1	A5 TP13.1	A6 TP17.1	TP48A	TP49A
Depth m						0.0-0.2	0.0-0.2	0.0-0.2	0.2-0.4	0.2-0.4	0.0-0.2	0.2-0.4	0.8-1.0
Geology						Ash fill	Ash fill	Fill	Brick/ash fill	Clay fill	Fill	Gravel fill	Gravel fill
Date						2/05/11	2/05/11	2/05/11	2/05/11	2/05/11	3/05/11	4/05/11	4/05/11
	Units	LOR	NEPM HIL-A	NEPM HIL-E	NEPM HIL-F	SGS Batch No SE87342							
Asbestos	-	-	NE	NE	NE	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected	Chrysotile asbestos detected, organic fibres detected	No asbestos detected organic fibres detected	No asbestos detected organic fibres detected

QA ANALYTICAL RESULTS - TPH/BTEX CSR MAITLAND
JOB No: 11495

Sample				TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m				0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*
Geology				Brick/ash fill	Brick/ash fill		Fill	Fill	
Date				2/05/11	2/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NSW EPA Criteria**						
TOTAL PETROLEUM HYDROCARBONS									
C6 - C9 Fraction	mg/kg	10	65	<20	<20	*NE*	<20	<20	*NE*
C10 - C14 Fraction	mg/kg	50	-	<20	<20	*NE*	25	<20	*NE*
C15 - C28 Fraction	mg/kg	100	-	<50	<50	*NE*	2200	1300	*51*
C29 - C36 Fraction	mg/kg	100	-	<50	<50	*NE*	2500	1800	*33*
Sum C10-C36 Fraction	mg/kg		1000	***<LOR***	***<LOR***	*NE*	***4725***	***3100***	*42*
BTEX									
Benzene	mg/kg	0.1	1	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Toluene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Ethylbenzene	mg/kg	0.1	NE	<0.1	<0.1	*NE*	<0.1	<0.1	*NE*
Total-xylene	mg/kg	0.3	NE	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Total BTEX	mg/kg		7	***<LOR***	***<LOR***	*NE*	***<LOR***	***<LOR***	*NE*

NOTES
NE= Not Established
na = Not Analysed
LEGEND
Exceeds NSW EPA Service Station Guidelines

QA ANALYTICAL RESULTS - PAHS CSR MAITLAND
JOB No: 11495

POLYNUCLEAR AROMATIC HYDROCARBONS														
Sample						TP 10.1	Dup 1	*RPD*	TP 24.2	Dup 4	*RPD*	TP 65.1	Dup 10	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	1.1-1.3	1.1-1.3	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Brick/ash fill	Brick/ash fill		Fill	Fill		Clay fill	Clay fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Naphthalene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	7.1	6.5	*9*	<0.1	<0.1	*NE*
2-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	3.5	2.8	*22*	<0.1	<0.1	*NE*
1-Methylnapht	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	2.3	1.9	*19*	<0.1	<0.1	*NE*
Acenaphthyler	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	0.32	0.24	*29*	<0.1	<0.1	*NE*
Acenaphthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	15	11	*31*	<0.1	<0.1	*NE*
Fluorene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	11	8.4	*27*	<0.1	<0.1	*NE*
Phenanthrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	96	60	*46*	0.5	0.57	*-13*
Anthracene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	36	23	*44*	<0.1	<0.1	*NE*
Fluoranthene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	199	150	*28*	0.2	0.29	*-37*
Pyrene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	179	137	*27*	0.24	0.35	*-37*
Benzo[a]anthr	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	249	181	*32*	0.17	0.26	*-42*
Chrysene	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	131	102	*25*	0.16	0.27	*-51*
Benzo[b,k]fluo	mg/kg	0.2	NE	NE	NE	<0.2	<0.2	*NE*	306	247	*21*	<0.2	<0.2	*NE*
Benzo[a]pyrer	mg/kg	0.05	1	2	5	<0.1	<0.1	*NE*	190	151	*23*	<0.1	<0.1	*NE*
Indeno[123-cd	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	143	115	*22*	<0.1	<0.1	*NE*
Dibenzo[ah]ar	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	37	30	*21*	<0.1	<0.1	*NE*
Benzo[ghi]per	mg/kg	0.1	NE	NE	NE	<0.1	<0.1	*NE*	170	139	*20*	<0.1	<0.1	*NE*
Sum reported	mg/kg		20	40	100	0	0	*NE*	1775.22	1400	*24*	1.27	1.74	*-31*

NOTES
NE = Not Established
na = Not Analysed

LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

QA ANALYTICAL RESULTS - METALS CSR MAITLAND
JOB No: 11495

Sample						TP 10.1	Dup1	*RPD*	TP 18.1	Dup 2	*RPD*	TP 20.1	Dup 3	*RPD*	TP 24.2	Dup 4	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.0-0.2	0.0-0.2	*%*	1.1-1.3	1.1-1.3	*%*
Geology						Brick/ash fill	Brick/ash fill		Brick fill	Brick fill		Fill	Fill		Fill	Fill	
Date						2/05/11	2/05/11		3/05/11	3/05/11		3/05/11	3/05/11		3/05/11	3/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	<3	*NE*	14	8	*55*	4	3	*29*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	0.8	0.97	*-19*
Chromium	mg/kg	0.3	12%	24%	60%	4.8	4	*18*	9.7	7.6	*24*	11	18	*-48*	13	36	*-94*
Copper	mg/kg	0.5	1000	2000	5000	16	14	*13*	16	11	*37*	14	20	*-35*	36	36	*0*
Lead	mg/kg	1	300	600	1500	12	11	*9*	13	11	*17*	34	39	*-14*	15	25	*-50*
Nickel	mg/kg	0.5	600	600	3000	18	17	*6*	19	17	*11*	8.7	11	*-23*	38	35	*8*
Zinc	mg/kg	0.5	7000	14000	35000	47	41	*14*	58	52	*11*	220	250	*-13*	170	210	*-21*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	0.13	0.1	*26*	<0.05	<0.05	*NE*	<0.05	<0.05	*NE*

Sample						TP 30.1	Dup 5	*RPD*	TP 37.1	Dup 6	*RPD*	TP 50.1	Dup 7	*RPD*	TP 55.1	Dup 8	*RPD*
Depth m						0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*	0.2-0.4	0.2-0.4	*%*	0.0-0.2	0.0-0.2	*%*
Geology						Clay fill	Clay fill		Clay fill	Clay fill		Fill	Fill		Brick fill	Brick fill	
Date						3/05/11	3/05/11		3/05/11	3/05/11		4/05/11	4/05/11		4/05/11	4/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**												
Arsenic	mg/kg	3	100	200	500	<3	8	*NE*	7	8	*-13*	8	14	*-55*	<3	3	*NE*
Cadmium	mg/kg	0.3	20	40	100	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	0.4	4.9	*-170*	11	11	*0*	5	15	*-100*	2.7	2.1	*25*
Copper	mg/kg	0.5	1000	2000	5000	2.8	40	*-174*	16	15	*6*	17	19	*-11*	2.4	4.5	*-61*
Lead	mg/kg	1	300	600	1500	1	17	*-178*	18	17	*6*	18	21	*-15*	4	5	*-22*
Nickel	mg/kg	0.5	600	600	3000	1.2	1.2	*0*	15	12	*22*	6.4	11	*-53*	0.91	0.9	*1*
Zinc	mg/kg	0.5	7000	14000	35000	4.7	7.1	*-41*	66	57	*15*	37	48	*-26*	8.8	9.9	*-12*
Mercury	mg/kg	0.05	15	30	75	<0.05	<0.05	*NE*	<0.05	0.08	*NE*	0.08	0.11	*-32*	<0.05	<0.05	*NE*

Sample						TP 60.1	Dup 9	*RPD*	TP 65.1	Dup 10	*RPD*	TP 71.1	Dup 11	*RPD*
Depth m						1.0-1.2	1.0-1.2	*%*	0.2-0.4	0.2-0.4	*%*	0.2-0.4	0.2-0.4	*%*
Geology						Fill	Fill		Clay fill	Clay fill		Clay fill	Clay fill	
Date						4/05/11	4/05/11		5/05/11	5/05/11		5/05/11	5/05/11	
	Units	**LOR**	**NEPM HIL-A**	**NEPM HIL-E**	**NEPM HIL-F**									
Arsenic	mg/kg	3	100	200	500	5	8	*-46*	5	6	*-18*	<3	<3	*NE*
Cadmium	mg/kg	0.3	20	40	100	0.7	4.6	*-147*	<0.3	<0.3	*NE*	<0.3	<0.3	*NE*
Chromium	mg/kg	0.3	12%	24%	60%	8.6	22	*-88*	1.4	1.2	*15*	1.1	0.9	*20*
Copper	mg/kg	0.5	1000	2000	5000	43	84	*-65*	13	14	*-7*	8.7	6.3	*32*
Lead	mg/kg	1	300	600	1500	93	320	*-110*	12	15	*-22*	11	8	*32*
Nickel	mg/kg	0.5	600	600	3000	6.8	8.9	*-27*	7.7	7.9	*-3*	5.3	3.7	*36*
Zinc	mg/kg	0.5	7000	14000	35000	240	8700	*-189*	85	86	*-1*	39	31	*23*
Mercury	mg/kg	0.05	15	30	75	<0.05	0.19	*NE*	<0.05	0.05	*NE*	<0.05	<0.05	*NE*

NOTES
NE = Not Established
na = Not Analysed
LEGEND
Exceeds NEPM HIL-A
Exceeds NEPM HIL-E
Exceeds NEPM HIL-F

ANALYTICAL RESULTS GROUNDWATER TPH BTEX METALS - CSR MAITLAND
JOB No: 11495

Monitoring Well					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
TOTAL PETROLEUM HYDROCARBONS											
C6 - C9 Fraction	ug/L	40	NE	NE	<40	<40	<40	<40	<40	<40	<40
C10 - C14 Fraction	ug/L	100	NE	NE	<100	<100	270	<100	<100	<100	<100
C15 - C28 Fraction	ug/L	200	NE	NE	<200	<200	593	<200	<200	<200	<200
C29 - C36 Fraction	ug/L	200	NE	NE	<200	<200	<200	<200	<200	<200	<200
Sum C10-C36 Fraction	ug/L	NE	NE	600	***<LOR***	***<LOR***	***863***	***<LOR***	***<LOR***	***<LOR***	***<LOR***
BTEX	ug/L										
Benzene	ug/L	0.5	950	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	0.5	NE	1000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	0.5	NE	150	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total-Xylene	ug/L	1.5	350	70	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	ug/L	NE	NE	NE	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***	***<LOR***

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
Na = Not Analysed
NE = Not Established

Sample					MW-1	MW-2	MW-3	SW1	SW2	SW3	Dup 1
Date					31/05/11	31/05/11	20/05/11	20/05/11	20/05/11	20/05/11	20/05/11
	Units	**LOR**	**ANZECC Prot. of Aquatic Ecosystems Fresh Waters 95%**	**Dutch Intervention**							
Arsenic	ug/L	1	24	60	<1	2	<1	<1	<1	<1	<1
Cadmium	ug/L	0.1	0.2	6	<0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Chromium	ug/L	1	NE	30	<1	8	2	<1	<1	<1	<1
Copper	ug/L	1	1.4	75	<1	4	6	2	<1	1	1
Lead	ug/L	1	8	75	<1	2	160	<1	<1	<1	<1
Nickel	ug/L	1	11	75	7	9	2	25	2	2	2
Zinc	ug/L	5	3.4	800	33	16	100	130	73	53	84
Mercury	ug/L	0.1	0.6	0.3	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

NOTES
Exceeds ANZECC water quality guidelines
Exceeds Dutch Intervention Criteria
NS = Not Specified
NE = Not Established
NA= Not Analysed

Appendix D

LTEMP procedures

Procedure 01	Exposure to soil contamination
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To protect site users (intrusive maintenance workers) from exposure to soil contamination during subsurface work.
Procedure	Confirmation from the site users that this LTEMP has been read and understood. Any subsurface or intrusive work that disturbs soil at the site should be completed in accordance with appropriate health and safety protocols, including (where relevant) NSW WHS Regulation (2011) requirements. The responsible party should ensure that persons undertaking soil disturbance work is aware of the contamination condition of the site and that suitable management measures are in place to minimise possible exposure to potentially contaminated soils. It is the responsibility of the site owner and/or site occupier to ensure that persons undertaking soil disturbance are made aware of the following as a minimum: – All site users should be aware of the potential for contaminated soil to be encountered. – All site users should understand the areas of contamination, hazards and risks associated with exposure to the contamination. – All site users should understand that personal protection standards and mandatory safety practices and procedures need to be in place where there is likely to be disturbance of soils. – All site users need to be aware of what to do if contamination is unexpectedly encountered and the incident reporting requirements (**Procedure 02** and **Procedure 06**). – Should works be proposed within areas with identified asbestos contamination, refer to the "Asbestos management" **Procedure 03**.
Frequency	Upon disturbance of soil.
Mitigation	To minimise the potential risk of exposure to contamination in the soil during subsurface works, the following mitigation measures should be followed: – Avoid direct contact with contamination in soil to exposed skin. – If exposure to contamination in soil is possible, appropriate personal protective equipment (PPE) must be worn during the works, including: • Gloves • Long sleeve shirt • Trousers • Enclosed footwear – Minimise exposure to soil during intrusive works by minimising dust generation, wearing gloves and washing hands and face after handling soil. – Clean and wash shoes and hand tools after completing the work to remove soil and avoid transporting contamination around the site. – Avoid smoking, eating or drinking during work involving direct exposure to potentially contaminated soil, as these activities can increase contact and ingestion of contaminated soil. Workers who carry out intrusive works must complete a job safety risk assessment prior to commencing disturbance of the soils to ensure that appropriate risks have been identified and mitigation measures are in place
Inspection/reporting	Unexpected observations of contamination encountered at the site should be reported to the site manager (**Procedure 06**).

Procedure 02	Unexpected finds
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To protect site users from exposure to previously undetected contaminated or hazardous soils, materials, or wastes, if encountered.
Procedure	Indications of potential contamination or hazardous materials that may be present on this site include: – Construction/demolition wastes such as concrete, bricks, timber, tiles, fibrous asbestos cement sheeting fragments. – Stained or discoloured fill, soils or seepage water, including oily sheens. – Odorous fill, soils or seepage waters. – General rubbish such as plastic, glass, packaging. – Coal chitter. – Imported materials such as ash or slag. – Should unexpected potentially contaminated or hazardous materials be encountered (e.g. incidentally by site users, during routine site inspections, or during subsurface work), the following procedure should be followed: • Immediately stop work in the area of concern. • Contact the site manager or their designated authority. • Provide the required controls - may include temporary barricading to prevent access, warning signs, covering of odorous materials, erosion and sediment controls. • Document (including photographs) the exposed materials, the controls established and report to the site manager. • If required, contact experienced environmental consultant and/or appropriate organisations to provide specialist advice/support. – No potentially contaminated or hazardous materials are to be disturbed further without approval/confirmation from the experienced environmental consultant and/or appropriate organisation. – The proposed strategy to address the characterised material should be discussed with the site owner/occupier, and be undertaken by an appropriate qualified person (such as an Environmental Consultant). – If unexpected contamination is identified, it will be assessed and addressed in accordance with relevant environmental guidelines and regulations.
Frequency	Upon observation of unexpected find.
Inspection / reporting	Unexpected observations of contamination encountered at the site should be reported to the site manager (**Procedure 06**). Copies of all information related to unexpected material finds, assessment of finds, and actions to deal with the finds, should be reported and copies held by the site manager. In the event of an unexpected materials find, this LTEMP shall be updated as required.

Procedure 03	Asbestos management
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To protect site users (intrusive maintenance workers) from exposure to identified or unexpected asbestos containing materials (ACM).
Procedure	Confirmation from the site users that this LTEMP has been read and understood. ACM that may be present on this site include: – Bonded asbestos cement sheeting. – Low density fibre board (considered friable). – ACM be encountered incidentally by site users, during routine site inspections or during subsurface work). All newly identified ACM or ACM debris is to be managed within the works area as such that any risk of fibre inhalation has been reduced. – Should ACM be encountered, the following procedure should be followed: • Cease work immediately. • Advise the site manager. • A qualified consultant or licensed asbestos assessor will inspect the suspect material which may include sampling and analysis to confirm the presence (or absence) of asbestos (and type). • Prepare an asbestos management plan (AMP) for either containment on site or removal off site (as required). • Conduct air monitoring (as required). • Document the quantity and the location of asbestos materials. An asbestos register must be maintained documenting the presence of asbestos at the site, in accordance with the WHS Regulation.
Frequency	Upon observation or disturbance of ACM contaminated soils.
Mitigation	If ACM is identified, it will be assessed and addressed in accordance with the current NSW WHS Act and Regulation, relevant Codes of Practice (currently including Part 8.7 of the Work Health and Safety (WHS) Regulation 2017 and the Code of Practice – How to Safely Remove Asbestos (SafeWork NSW 2016), and the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013) (NEPC 2013). Control measures may include: – Minor quantities of non-friable ACM (<10 m^2) may be removed by a competent person (as defined in Part 1.1.5 of the WHS Regulation 2017), but any disturbance or removal of friable asbestos or >10 m^2 of asbestos must be undertaken by a licensed asbestos contractor. – Staff potentially involved in ACM removal are to be trained in accordance with Clause 445 of the WHS Regulation 2017. – Visible ACM should be collected where feasible in accordance with relevant Codes of Practice for appropriate off-site disposal. – Asbestos contaminated soils may remain on site if encountered during site construction phases where this is feasible. Materials containing ACM may be either buried at depth (> 2m below finished surface level) in existing voids, capped with soil or under permanent structures (roads, car parks) following development of the site. – Asbestos contaminated soils encountered during later stages of the development could be contained in shallower fill beneath areas of pavement provided these areas are unlikely to be disturbed. – Capping less than 2m below finished surface levels should incorporate a marker layer, where asbestos concentrations in soil exceed HSLs. – Asbestos contaminated soils that are not able to be appropriately contained on site shall be chemically classified and disposed off site as asbestos waste.
Inspection / reporting	Observations of ACM at the site should be reported to the site manager (**Procedure 06**).

Procedure 04	Management of combustible materials (coal and carbonaceous materials)
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To protect site users (intrusive maintenance workers) and the environment from the exposure and potential ignition of combustible materials during subsurface work, and to maintain capping to prevent exposure or spontaneous combustion of such materials.
Procedure	Confirmation from the site users that this LTEMP has been read and understood. Any subsurface or intrusive work that disturbs soil at the site should be completed in accordance with appropriate health and safety protocols, including (where relevant) NSW WHS Regulation (2011) requirements. The responsible party should ensure that persons undertaking soil disturbance work is aware of the potential for capped combustible materials at the site and that suitable management measures are in place to minimise possible exposure and ignition of potentially combustible materials. It is the responsibility of the site owner and/or site occupier to ensure that persons undertaking soil disturbance are made aware of the following as a minimum: – All site users should be aware of the potential for encountering potentially combustible materials including coal and carbonaceous materials. – All site users should understand the areas where potentially combustible materials are contained and the hazards and risks associated with exposure to these materials including fire and gases. – All site users should understand that personal protection standards and mandatory safety practices and procedures need to be in place where there is likely to be disturbance of soils. – All site users need to be aware of what to do if potentially combustible materials are unexpectedly encountered and the incident reporting requirements (**Procedure 02** and **Procedure 06**).
Frequency	Upon disturbance of soil.
Mitigation	To minimise the potential exposure of combustible materials and risk of ignition during subsurface works, the following mitigation measures should be followed: – Workers who carry out intrusive works must complete a job safety risk assessment prior to commencing disturbance of the soils to ensure that appropriate risks have been identified and mitigation measures are in place. – Minimise where possible the time that potentially combustible materials are exposed to the atmosphere which may include staged works with the surface area exposed minimised at all times. – Minimise generation of dusts and oxygen ingress by wetting down. – Gas testing during works to monitor hazardous gas levels including carbon monoxide. – Avoid direct contact with potentially combustible materials. – If exposure to combustible materials is possible, appropriate personal protective equipment (PPE) must be worn during the works including gloves, long sleeve shirt, trousers and enclosed footwear. – Re-burial and re-compaction of area to reduce oxygen ingress.
Inspection / reporting	Unexpected observations of combustible materials encountered at the site should be reported to the site manager (**Procedure 06**). Inspections of the integrity of the capping shall be undertaken as per **Procedure 5**.

Procedure 05	Site inspections
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To check the continued integrity of the capping above contaminated/carbonaceous material, and to verify whether any intrusive work is being carried out in accordance with this LTEMP. The inspection should be completed by a person who is recognised as being appropriately competent for this task (the inspection does not need to be completed by an external party or independent assessor).
Procedure	An inspection of the site shall be undertaken by the site occupier (including any nominated site manager) or site owner (including any future landowner) to check the integrity of the ground surfacing above burial areas. If required, an environmental consultant can be contracted to conduct the inspection. The inspection should be completed by a person who is recognised as being appropriately competent. The inspections should include as a minimum: – Inspection of the integrity of ground surfaces (cap condition) located above areas where contaminated materials have been buried (e.g. for disturbance or erosion). – Inspection of any security fencing installed around the site. – Inspection of any areas of apparent subsurface disturbance to assess potential breaching of surfaces or capping layer or exposure to contamination. – Inspection of exposed areas of soil to check for obvious signs of change in conditions that may result in exposure to potential contamination. – Inspection of any sub-surface works (including installation of underground service conduits) being carried out. – Observations of any works being undertaken that are not in accordance with the requirements of the LTEMP. Where an area of potential disturbance of the ground surface or cap is observed (and which is not an area of active intrusive works), the inspector shall consider the requirement for PPE in accordance with the requirements of **Procedure 01** and arrange for the area to be reinstated to minimise future potential exposure to the underlying contamination. The inspector shall consider observations of site conditions and activities occurring at the site and the Site Occupier if it is considered any changes to the LTEMP are required to adequately manage potential exposure to contamination.
Frequency	Minimum annually, and after any works or weather events that could potentially disturb the capping.
Inspection / reporting	Inspections shall be reported in accordance with **Procedure 06**.

Procedure 06	Inspection reports
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To provide results of inspections in a clear and concise format and to allow comparison to environmental management requirements.
Procedure	The site occupier or site owner should ensure that inspection reports are prepared by an appropriately qualified person or an environmental consultant should be engaged. The nominated person shall prepare report(s) summarising each respective inspection event completed under this LTEMP. Each report shall contain details of the following: – Date of inspection. – Site observations during inspection. – Notes of activities undertaken during inspection. – Assessment of burial areas and surfacing. – Observed ground disturbances must be clearly identified in the inspection report. Any breaches rectified, necessitating the inspection and inspection report shall be noted in the report. – Assessment of any exposed soils at the site (as a result of intrusive works). – Assessment of any exposed areas of soil. – Recommendations for any necessary maintenance work or corrective action. – Any relevant recommendations for future monitoring, implementation and/or update of the LTEMP. A copy of each inspection report should be held by the site occupier, site owner and any future landowners. Any breaches in the site sealing or activities non-compliant with this LTEMP must be clearly identified in the inspection report. Any breaches rectified shall be noted in the report.
Frequency	As soon as practicable following the completion of an inspection event and within a period not exceeding 2 weeks.
Inspection / reporting	Copies of all inspection reports should be held by the site occupier, site owner and any future landowners for a period of at least seven years.

Procedure 07	Review of LTEMP implementation
Area affected	Lot 7314 DP 1162607 and Part Lot 401 DP 755237, Metford Road, Metford, NSW.
Responsibility	Site occupier or its nominee (including nominated site manager) and site owner (including any future landowner).
Objective	To ensure that this LTEMP is up-to-date and appropriate to protect site users based on the condition of the site and that protocols in the LTEMP are being implemented at the site.
Procedure	The review shall be undertaken by a suitably qualified consultant, recognised as being appropriately competent in the field of contaminated sites as per the criteria in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013) (NEPC 2013) and approved by the owner/occupier or their delegate. Specific tasks that will be undertaken by the reviewer include: – Review of inspection reports (Procedure 06) generated by site occupier or the site owner to ensure these meet the intended scope of the LTEMP. – Review of work procedures and records related to intrusive works carried out at the site by the site occupier and site owner. – Liaison with site users as required in interpreting the requirements of the LTEMP. – Review of any non-compliance with the LTEMP. – Any changes to the areas of known contamination or to the degree and type of contaminants. – Any changes in state or national environmental protection or occupational legislation or guidelines that impact any part of the LTEMP. – Proposed changes in development or land use of the site or adjoining sites. – Opportunities for improvements are identified. Where review identifies items that require modification/addition to the LTEMP, then a revision of the shall be published and made available.
Frequency	Annually as a minimum or as below, including review in accordance with WHS Regulation requirements for maintenance and review of an AMP. In addition, the LTEMP will be reviewed and updated accordingly upon the completion of any of the following: – Change of land use. – Additional investigations. – Unexpected finds. – An incident occurs where the provisions of the LTEMP are considered inadequate. – Vacation of site. – Change in site occupier representative. – Change in land ownership. – As required to reflect changes in relevant legislation.
Inspection / reporting	All LTEMP reviews shall be retained by site occupier and site owner (including any future site owners) for a period of at least seven years.

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