



## Contaminated Land Internal Memorandum of Technical Advice

To:	Development Management	From:	Head of Public Protection & Prevention
Planning Officer:	Vivienne Pearson	EP Officer:	James Warren-King
Flare Ref:	249483	Date:	14 June 2023
Planning Ref:	2023/00339/DISCON	Doc Ref:	23-06-14-T265-M02-JWK-WBCDC

**SUBJECT: CONTAMINATED LAND DOCUMENT REVIEW:**

DISCHARGE OF CONDITION 3 (ROOFING MATERIALS), 4 (FACING MATERIALS), 5 (LANDSCAPING SCHEME), 7 (BOUNDARY TREATMENT), 8 (CONTAMINATED LAND ASSESSMENT), 9 (CONTAMINATED LAND COMPLETION) AND 17 (PARKING LAYOUT) ATTACHED TO PLANNING PERMISSION 2019/36287.

8 HILL CLIFFE ROAD, WALTON, WARRINGTON, WA4 6NX.

The following has been submitted in support of the above planning application:

- **DEL (2023<sup>2</sup>) – Demeter Environmental Limited Remediation Strategy (Ref: 23-05-06\_Revision\_0): Phase IIIA Implementation Plan; Site for 8 Hill Cliffe Road, Walton, Warrington, WA4 6NX, dated May 2023, Demeter Environmental Limited, Liverpool**

The above document(s) and development proposals have been considered and the following comments can now be made with respect to the Contaminated Land Planning Conditions on the 2019/36287 planning application under the 2023/00339/DISCON Discharge Application:

### **A Preliminary Risk Assessment (PRA) & Conceptual Site Model (CSM):**

The Preliminary Risk Assessment (DEL, 2022<sup>1</sup>) was reviewed and approved on 18 April 2023 under separate correspondence to WBC Development Control (WBC, 2023<sup>1</sup>).

The Preliminary Risk Assessment is deemed **satisfactory** and appropriate for a site of this nature and the proposed development works.

### **B Site Investigation & Generic Quantitative Risk Assessment (GQRA):**

A review of site investigation and risk assessment (DEL, 2023<sup>1</sup>) carried out at the site can be summarised as follows:

- *The site investigation comprised 5x Trial Pits (TP101-TP105) to a maximum depth of 1.80mbgl. Exploratory holes appear to have achieved representative spatial coverage of the site, although no hole was formed within the footprint of the existing (or recently demolished) building on the site.*

- *Ground conditions were found to be top-soil (0.40mbgl) underlain with brown silty Sand (0.40-0.65mbgl) and red weathered Sandstone (0.65-1.80mbgl). Groundwater strikes were noted in exploratory holes WS01 and WS02 at a depth of 2.20mbgl. Made Ground (reworked top-soil) was encountered in exploratory holes TP101, TP102, TP103 and TP105. No visual/olfactory evidence of contamination was identified during the course of investigative works.*
- *6x soil samples were tested for a range of potential contaminants including Metals & Metalloids, speciated PAHs and TPHCWG. Testing for Asbestos appears not to have been included as part of chemical testing suites. Testing results were then screened against GACs derived from the LQM/CIEH 'Suitable for Use Screening Levels (LQM/CIEH, 2015) and CL:AIRE (2014) 'Category 4 Screening Levels' for a Residential end use. No groundwater or leachate sampling was carried out as part of the site investigation.*
- *Soil samples returned contaminant concentrations in excess of GACs for a Residential end use for Lead (TP101-TP104), Arsenic (TP104), Beryllium (TP104) and Dibenz(ah)anthracene (TP103).*
- *On the basis of the site investigation and GQRA, a Moderate potential risk was found to be posed to human health receptors (Site End Users and Construction Workers) and a no potential risk was found to be posed to controlled water receptors.*

The site investigation and risk assessment are deemed **satisfactory** and appropriate for a site of this nature and the proposed development works.

#### **C Controlled Waters Risk Assessment:**

The controlled waters risk assessment and consultation (DEL, 2023<sup>1</sup>) was reviewed and approved on 18 April 2023 under separate correspondence to WBC Development Control (WBC, 2023<sup>1</sup>).

The controlled waters risk assessment is deemed **satisfactory** and appropriate for a site of this nature and the proposed development works.

The following advice can also be provided:

- *If significant mobile or leachable contamination is identified on-site during the course of construction works, the approval of the controlled waters risk assessment will be rescinded until such time as Environment agency consultation can be carried out with respect to the potential risk posed to sensitive receptors.*

#### **D Ground Gas Risk Assessment:**

The ground gas risk assessment (DEL, 2023<sup>1</sup>) was reviewed and approved on 18 April 2023 under separate correspondence to WBC Development Control (WBC, 2023<sup>1</sup>).

The ground gas risk assessment is deemed **satisfactory** and appropriate for a site of this nature and the

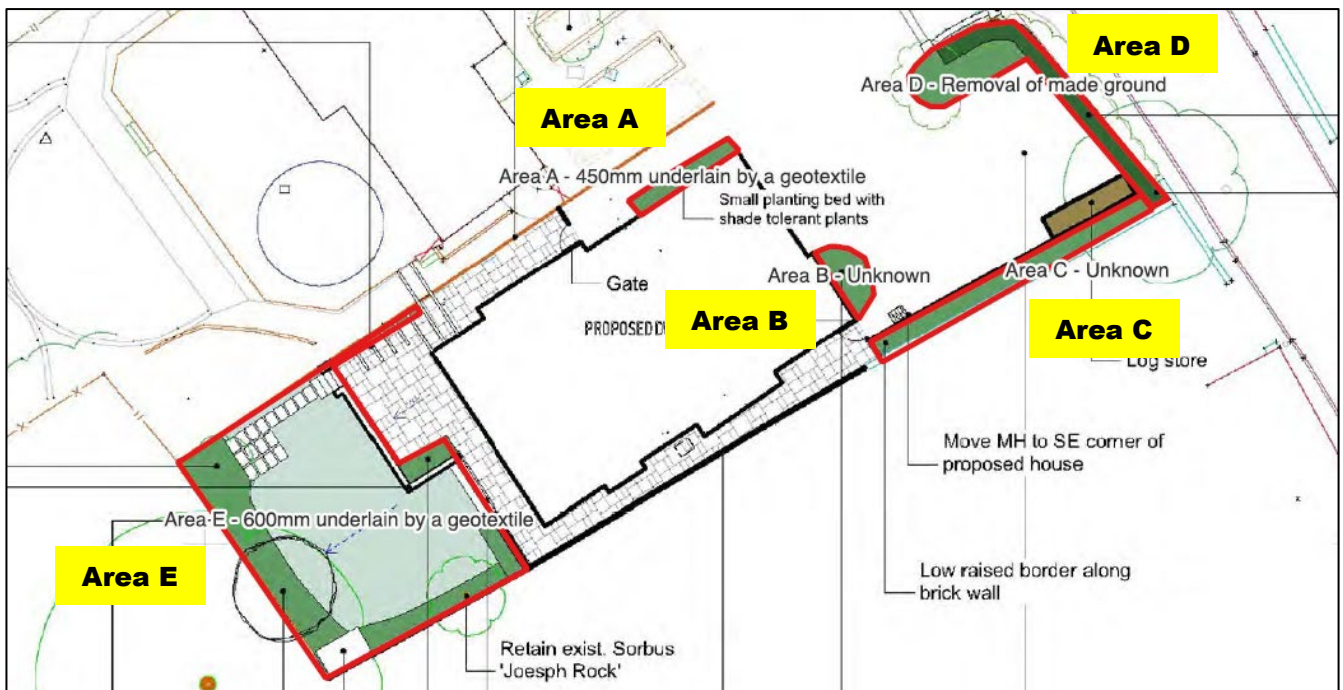
The following advice can also be provided:

- *If gas/vapour generation sources are identified on-site during the course of construction works (eg: organic soils, below-ground petroleum storage), then the approval of the ground gas risk assessment will be rescinded until such time as ground gas conditions at the site have been characterised and suitable remedial measures (if required) are agreed.*

## E Remediation Strategy:

Based on the site investigation and GQRA (DEL, 2023<sup>1</sup>), the proposed Remediation Strategy (DEL, 2023<sup>2</sup>) for the site/development includes the following remedial measures:

- **Source-removal of Contamination:** Reporting (DEL, 2023<sup>2</sup>) confirms that up to 500mm of Made Ground will be excavated and removed from Area D and potentially Areas B and C as well. These areas are proposed for soft-landscaping as shown on the plan below:



- **Cover Systems for Gardens & Soft-landscaping:** Reporting (DEL, 2023<sup>2</sup>) confirms that all areas proposed for gardens (Area E) will receive a 600mm cover system formed of site-won/imported fill materials. All areas proposed for Soft-landscaping (Areas A, B and C) will receive a 450mm cover system formed of site-won/imported fill materials. A Geotextile separator is to be placed at the base of the cover system. Area D is not to receive a cover system after the source-removal of Made Ground.
- **Other Remediation:** No other remediation is proposed for the site or the development scheme.

The Remediation Strategy is deemed **satisfactory** and appropriate for a site of this nature and the proposed development works.

## F Validation Strategy:

Based on the site investigation and GQRA (DEL, 2023<sup>1</sup>), the proposed Validation Strategy (DEL, 2023<sup>2</sup>) for the site/development includes the following verification measures:

- **Source-removal of Contamination:** Reporting (DEL, 2023<sup>2</sup>) confirms that upon completion of the removal of the Made Ground from each location, the faces and the base of excavations will be inspected and any residual Made Ground identified will be removed. Samples of the exposed faces and base will be taken to verify that all contamination has been removed. Documentation demonstrating the completion of these works will be provided in a Validation Report.
- **Cover System Depth:** Reporting (DEL, 2023<sup>2</sup>) confirms that validation of cover system depth will be completed once the cover system is installed and in-situ. Hand Pits will be excavated (minimum one per garden) to the Geotextile layer, in order to verify depth and obtain samples of the cover material for chemical analysis.
- **Imported Fill Materials:** Reporting (DEL, 2023<sup>2</sup>) confirms that imported top-soil will be compliant with BS3882 (BSI, 2015) and be chemically tested prior to import to confirm suitability for use. Section 6.3.1 (Table 3) and Section 9.1.1 (Table 8) also suggest that the cover system material in each garden and soft-landscaped area will be sampled and chemically-tested after installation. Validation testing will include as a minimum, Metals & Metalloids, speciated PAHs, TPHCWG and Asbestos. Results will be screened against GAC's (CL:AIRE, 2014; LQM/CIEH, 2015) for a **Residential** end use. The testing frequencies proposed in reporting are broadly compliant with internal standards adopted by the Authority (WBC, 2013):

Material:	Min No. of Tests:	Frequency:	Testing Suite:
Top-soil (Cover Systems)	3	1:50m <sup>3</sup>	Metals & Metalloids, speciated PAHs, speciated TPHs, Asbestos
Sub-soil (Cover Systems)	3	1:50m <sup>3</sup>	Metals & Metalloids, speciated PAHs, speciated TPHs, Asbestos
Virgin Quarried Fill Materials	-	1:125m <sup>3</sup>	Metals & Metalloids, speciated PAHs, speciated TPHs, Asbestos
Top-soil/Sub-soil (Greenfield Source)	3	1:63m <sup>3</sup>	Metals & Metalloids, speciated PAHs, speciated TPHs, Asbestos
Top-soil/Sub-soil (Other Source)	3	1:31m <sup>3</sup>	Metals & Metalloids, speciated PAHs, speciated TPHs, Asbestos

- **Exported Fill Materials:** Reporting (DEL, 2023<sup>1</sup>) presents a range of potential actions to deal with exported fill materials and waste, but does not present a proposed strategy. Subsequent reporting (DEL, 2023<sup>2</sup>) confirms that materials impacted by contamination (see below) will be exported from site for disposal at a suitably-licensed facility.
- **Unexpected Contamination:** Reporting (DEL, 2023<sup>2</sup>) confirms that a Watching Brief for contamination should be maintained during the course of the scheme. If unexpected or previously-unidentified contamination is identified or suspected during the site works, materials will either be removed from site for disposal at a suitably-licensed facility or, impacted materials will be stockpiled and subjected to chemical testing for potential contamination.

- **Validation Report:** Reporting (DEL, 2023<sup>2</sup>) confirms that documentation demonstrating the completion of the removal of Made Ground will be provided in a Validation Report. No further information is provided.

The Validation Strategy is deemed **satisfactory** and appropriate for a site of this nature and the proposed development works.

The following advice can also be provided:

- *While reporting provides details of how imported fill materials will be managed, it is stated that validation sampling to confirm suitability for use will be carried out prior to import. Internal standards adopted by the Authority require imported fill materials to be tested **after** import to site. If the Applicant wishes to carry out testing prior to import as well, that is entirely their prerogative. It is acknowledged that validation testing of all cover systems is also proposed after placement, which in this case will provide the necessary confirmation of suitability for use irrespective of the fill materials used.*
- *Reporting provides little detail concerning the management of waste materials and what information will be submitted upon completion. Details of any fill/waste materials exported from site for disposal or re-use should be included in the Validation Report upon completion of the scheme. Copies of waste transfer documentation, export volumes and destinations should also be included in the report.*
- *While Section 6.2.3 of the Remediation Strategy confirms that a Validation Report will be submitted in relation to source-removal works, no undertaking has been provided confirming that any other information will be included. The Validation Report should comprise all information agreed in the Validation Strategy and will be required in order to secure discharge of the Contaminated Land Completion Condition [09] on the existing consent.*

## **G Validation/Completion Advice for Condition [09]:**

In order to secure discharge of the Contaminated Land Completion Condition [09], the following areas of validation/verification will be required to be detailed in a **Validation Report** to be submitted for review upon completion of site works:

- **Source-removal Validation:** *Validation of the source-removal of contamination, whether in the form of 'hot-spots/outliers' or larger-scale stripping of fill materials, is required upon completion of remediation works. Localised contamination should be delineated by means of chemical testing and then source removal works carried out by means of excavation. Resulting arisings should be validated and either treated or exported from site for disposal at a suitable facility. Resulting excavations should be suitably-validated in accordance with guidance to ensure complete removal of contaminated materials. The use of photographic evidence to catalogue source-removal works is encouraged. Relevant data should be included within a Validation Report for submission to the Authority upon completion of proposed site works.*
- **Cover Validation:** *Validation of depth/specification of the proposed cover system to be installed in Gardens and areas of Soft-landscaping. This should conform to the agreed specification, as well as those internal standards adopted by the Authority. Further details can be found in the Environmental*

Protection Supplementary Planning Document (WBC, 2013). Relevant data should be included within a Validation Report for submission to the Authority upon completion of proposed site works.

- **Imported/Site-won Fill Materials:** All imported and site-won materials proposed for re-use at the site (especially where said materials are to be used in cover system or capping layers) are required to be validated as suitable for use. This is achieved through validation sampling at a prescribed frequency. As described in the Environmental Protection Supplementary Planning Document (WBC, 2013), these sampling frequencies apply to both site-won and imported materials and are based on both the intended end use of the material and the nature of its place of origin. This information should be included within a Validation Report for submission to the Authority upon completion of remedial works or proposed site works. If no fill materials were imported to site, then this should also be confirmed in writing upon completion of proposed works.
- **Exported Fill Materials:** Confirmation is required as to whether any fill materials were exported off-site for disposal or re-use. Any pertinent information regarding the eventual fate of the material, together with any waste transfer documentation should be included within a Validation Report for submission to the Authority upon completion of export or proposed site works. If no fill materials were exported from site for disposal or re-use, then this should also be confirmed in writing upon completion of proposed works.
- **Reporting of Unexpected Contamination:** Confirmation is required as to whether any unexpected or previously-unidentified contamination was encountered on-site during site works. If contamination was encountered, then the affected area will have been investigated, risk-assessed, remediated and validated as required and the matter reported to the Authority. If no unexpected or previously-unidentified contamination was encountered, confirmation of this is required in writing upon completion of proposed site works.

**Please Note:** The above information will be required in a **Validation Report** upon completion of the proposed scheme and **prior** to occupation of new buildings.

#### **H Contaminated Land Condition Discharge Recommendations:**

The following recommendations can now be made with respect to the Contaminated Land Planning Conditions on the 2019/36287 planning application under the 2023/00339/DISCON Discharge Application:

- **PREPARATORY WORKS CONDITION (08) STATUS: ALL SECTIONS RECOMMENDED FOR DISCHARGE. NO SECTIONS REMAIN IN FORCE.**
- **COMPLETION CONDITION (09) STATUS: NO SECTIONS RECOMMENDED FOR DISCHARGE. ALL SECTIONS REMAIN IN FORCE.**

**Please note:** If the above referenced Planning Application(s) are subject to comment for other Environmental Protection considerations, there may be further comments forthcoming from the Environmental Protection Team with respect to Planning Conditions other than contaminated land. However, in the interest of expediting the consultation, comments in relation to contaminated land are being forwarded separately.

**James Warren-King**  
Environmental Protection Officer (Land)

## OTHER REFERENCES:

- BSI (2015) – British Standards Institution Guidance Document (Ref: BS3882:2015): *Specification for Topsoil*, British Standards Institution Press, London
- CL:AIRE (2014) – CL:AIRE Guidance Document (Ref: SP1010): *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*, dated September 2014, Contaminated Land: Applications in Real Environments, London
- DEL (2023<sup>1</sup>) – Demeter Environmental Limited GQRA Report (Ref: 23-01-03\_Revision\_0): *Phase II Site Investigation Report for 8 Hill Cliffe Road, Walton, Warrington, WA4 6NX*, dated February 2023, Demeter Environmental Limited, Liverpool
- DEL (2022<sup>1</sup>) – Demeter Environmental Limited PRA Report (Ref: 22-12-01\_Revision\_0): *Phase I Desk Study Report for 8 Hill Cliffe Road, Walton, Warrington, WA4 6NX*, dated December 2022, Demeter Environmental Limited, Liverpool
- LQM / CIEH (2015) - Land Quality Management Limited and Chartered Institute of Environmental (Ref: TBC): *The LQM/CIEH S4ULs for Human Health Risk Assessment*, dated January 2015, Land Quality Press, Nottingham
- WBC (2023<sup>1</sup>) – Warrington Borough Council Memo Correspondence (Ref: 23-04-18-T265-M01-JWK-WBCDC): *Contaminated Land Document Review: Discharge of Condition 3 (Roofing Materials), 4 (Facing Materials), 5 Landscaping Scheme), 7 (Boundary Treatment), 8 (Contaminated Land Assessment), 9 (Contaminated Land Completion) and 17 (Parking Layout) Attached to Planning Permission 2019/36287. 8 Hill Cliffe Road, Walton, Warrington, WA4 6NX*, dated 18 April 2023, Warrington Borough Council Public Protection, Warrington
- WBC (2013) – Warrington Borough Council SPD (Ref: N/A): *Environmental Protection: Supplementary Planning Document*, dated May 2013, Warrington Borough Council Public Protection, Warrington  
[https://www.warrington.gov.uk/sites/default/files/2019-11/supplementary\\_planning\\_document\\_2013.pdf](https://www.warrington.gov.uk/sites/default/files/2019-11/supplementary_planning_document_2013.pdf)