

Uskmouth BESS

784-B055188

Materials Management Plan - Verification Report



V1

Jones Brothers Limited

June 2025

**Document prepared by Tetra Tech Limited. Registered in England number:
01959704**



Tetra Tech Group Limited. Registered in England number: 6595608

Tetra Tech Cardiff, 1st Floor, Hodge House, 114-116 St Mary Street,
Cardiff, CF10 1DY

Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United
Kingdom, LS1 4ER

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Acronyms/Abbreviations

Acronyms/Abbreviations	Definition
AOD	above Ordnance Datum
bgl	below ground level
BGS	British Geological Survey
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
C4SL	Category 4 Screening Levels
CIEH	Chartered Institute of Environmental Health
CLEA	Contaminated Land Exposure Assessment
CoC	Constituent of Concern
CSM	Conceptual Site Model
DEFRA	Department of Environment, food and Rural Affairs
DQRA	Detailed Quantitative Risk Assessment
DTS	Desktop Study
DRO	Diesel Range Organics
DWS	Drinking Water Standard
EA	Environment Agency (England)
EPH	Extractable Petroleum Hydrocarbons
EQS	Environmental Quality Standards
FOC	Fraction Organic Carbon
GPR	Ground Penetrating Radar
LOD	Limit of detection
LQM	Land Quality Management
NRW	Natural Resources Wales
OS	Ordnance Survey
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PPE	Personal Protection Equipment
ppm	parts per million
PRO	Petroleum Range Organics
SGV	Soil Guideline Values
SOM	Soil Organic Matter
SVOC	Semi-volatile organic compounds

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TPH	Total Petroleum Hydrocarbon
TSV	Tier 1 Screening Values
VOC	Volatile Organic Carbon
VPH	Volatile Petroleum Hydrocarbons

1.0 Introduction

1.1 Instruction

Tetra Tech Limited (Tetra Tech) was commissioned by Jones Brothers Limited (the client) to prepare a Materials Management Plan Verification Report to support the development for a Battery Energy Storage System (BESS) at a site known as Uskmouth BESS, within Uskmouth Power Station (known hereafter as “the site”).

The location of the site is shown on Figure 1.

1.2 Summary of Development

The development on site consists of the construction of a raised plateau to accommodate a Battery Energy Storage System (BESS) consisting of a series of batteries along with ancillary plant and cable runs.

Site levels were raised circa 2-3m above existing ground levels to create an engineered platform to mitigate potential risks associated with surface water flooding.

1.3 Previous Reports

To date, a number of phases of ground investigation and assessments have been undertaken on the site by RPS and Tetra Tech presented in the following reports:

1. RPS. 2022. Uskmouth Battery Energy Storage System (BESS), Ground Investigation Factual and Interpretative Report. Simec Uskmouth Power Ltd. August 2022.
2. Tetra Tech. 2023a. Uskmouth BESS. Ground Investigation Factual Report V2. Private Energy Partners. April 2023. 784-B043721.
3. Tetra Tech. 2023b. Uskmouth BESS – Additional Ground Gas Monitoring Letter Report. Private Energy Partners. October 2023. 784-B043721.
4. Tetra Tech. 2023c. Uskmouth BESS. Additional Ground Gas Report. Private Energy Partners. December 2023. 784-B043721.
5. Tetra Tech. 2024a. Uskmouth Battery Energy Storage System (BESS). Updated Ground Investigation Factual and Interpretative Report. Version 2. Private Energy Partners. January 2024. 784-B043721.

6. Tetra Tech. 2024b. Uskmouth Battery Energy Storage System (BESS). Controlled waters Detailed Quantitative Risk Assessment (CW-DQRA). Private Energy Partners. January 2024.
7. Tetra Tech. 2024c. Uskmouth Battery Energy Storage System (BESS). Reactive Remediation Strategy. Jones Brothers Limited. February 2024.
8. Tetra Tech. 2024d. Uskmouth Battery Energy Storage System (BESS). Materials Management Plan. Jones Brothers Limited. February 2024.

The results of the ground investigations did not identify any significant contamination associated with the onsite materials and as such a focused Remediation Options Appraisal and Strategy was not considered necessary, however given the industrial nature of the site, a Reactive Remediation Strategy was developed to establish a framework whereby any previously unencountered contamination could be identified, tested and managed appropriately within the context of the proposed development.

To manage the re-use of soils on site and document the importation of soils, a Materials Management Plan (MMP) was developed for the site in line with the CL:AIRE Definition of Waste: Development Industry Code of Practice (DoWCoP).

1.4 Planning Context

Planning permission for the BESS scheme was granted by Newport City Council on 8th December 2022 (reference 22/0823) and subsequently amended by Section 73 permission ref: 23/0835 on 23rd November 2023, subject to a series of Planning Conditions including the following conditions which relate to the management and assessment of contamination on the site:

Condition 2 - No development of land known to be/suspected of contamination shall commence until the following components of a scheme to deal with the risks associated with contamination at the site, has been submitted to and approved in writing by the Local Planning Authority.

- 2a – A Preliminary Risk Assessment (PRA).
- 2b – A Site Investigation Scheme based on the findings of the PRA.
- 2c – Remediation Options Appraisal and Strategy.
- 2d – Verification Plan

Condition 4 - Prior to the occupation or operation of the development a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include a long-term monitoring and maintenance plan for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency actions, as identified in the verification plan (Condition 2d). The long-term monitoring and maintenance plan shall be carried out in accordance with the approved details.

Condition 5 - Prior to the occupation or operation of the development, a long-term monitoring plan for land contamination shall be submitted and approved in writing by the Local Planning Authority. The long-term monitoring plan should include:

- Details of the methods and triggers for action to be undertaken.
- Timescales for the long-term monitoring and curtailment mechanisms e.g., a scheme of monitoring for 3 years unless the monitoring reports indicate that subsequent monitoring is or is not required.
- Timescales for submission of monitoring reports to the Local Planning Authority e.g., annually.
- Details of any necessary contingency and remedial actions and timescales for actions.
- Details confirming that the contingency and remedial actions have been carried out. The monitoring plan shall be carried out in accordance with the approved details, within the agreed timescales.

Condition 15 – If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this unsuspected contamination shall be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be carried out as approved.

The requirements of Condition 2 (2a to 2d) were covered by the reports (1) – (7) listed in Section 1.4 above.

The Reactive Remediation Strategy report (Tetra Tech, 2024c) includes a framework for the identification, sampling and assessment of any unforeseen contamination encountered during the earthworks phase as outlined in Condition 15.

This report is intended to support the discharge of Condition 4, with commentary regarding Condition 5 presented in Section 6.3.

1.5 Scope

This Verification Report aims to summarise the works associated with the discharge of planning Condition 4 with regards to unforeseen contamination. In addition, this report provides an audit trail to demonstrate that the Materials Management Plan (MMP), has been carried out in full. The verification report includes the following key elements:

- Summary of the site history, environmental setting and project description;
- Validation testing and results;
- Record of material tracking including importation of materials and off-site disposal of wastes; and,
- Record of any variations from the Design Statement/ Materials Management Plan.

1.6 Project Team

Role	Company	Key Contact
Site Owners	Private Energy Partners	Darren Archer
Principal Contractor	Jones Brothers Limited	Rhys Roberts
Geoenvironmental Consultant	Tetra Tech	Sarah Roberts
Regulatory Body	Newport City Council	TBC
Regulatory Body	Natural Resources Wales	TBC

1.7 Limitations

The recommendations and opinions expressed in this report are based on information provided by the client and or provided by others. This information is taken in good faith and Tetra Tech cannot guarantee its accuracy.

This report is subject to the report conditions presented in Appendix A.

The information contained in this report is intended for the use of the Jones Brothers Limited and Tetra Tech can take no responsibility for the use of this information by any third party or for uses other than that described in this report or detailed within the terms of our engagement.

2.0 Site Information

2.1 Introduction

This section of the report provides a brief summary of the environmental setting of the site. Further detailed information is available within the reports referenced above which should be read in conjunction with this Verification Report.

2.2 Location

The site is located on the former coal storage yard within Uskmouth Power Station. The main part of the site is approximately 4.85ha in area and is centered on National Grid Reference (NGR) ST 32967 83534.

The site address is: Simec Uskmouth Power, West Nash Road, Nash, Newport, NP18 2BZ.

A site location plan is presented in Figure 1.

2.3 Site Description

The site is situated within the land associated with the Uskmouth Power Station, located on the bank of the River Usk, approximately 4km south of Newport, South Wales. The site is situated within the former coal stockyard to the centre south and consists of largely open lightly vegetated landscape with a series of stockpiles of material consisting of general Made Ground.

Prior to the development, the site investigation was noted to be sparsely vegetated with gentle undulations and numerous areas of standing water, particularly in the centre of the site where a large body of water was identified.

Unvegetated areas were noted to have a surface covering of coal and gravel hardcore with a strip of concrete slabs to the north of the site. Much of the site, particularly within the west, southern and eastern boundary was often soft and uneven underfoot.

The RPS ground investigation report states that there has been a previous topographic survey undertaken within 2019 prior to the initial Ground Investigation. The survey indicates that the northern parts of the site are located at c. 8.0m AOD compared to the southern section which is c 7.0m AOD. The stockpiles located on the main part of the site were surveyed to be approximately 3.5m in height.

2.4 Geology, Hydrogeology and Hydrology

Ground investigations confirmed ground conditions on site comprising localised Made Ground to a maximum proven depth of 3.80m which is anticipated to be present across the entity of the site. The Made Ground is predominantly granular in nature and is generally described as dark grey to black granular deposits with bands of gravelly clay/silt. The strata are described as both sand and gravel, with occasional cobbles of Pulverised Fuel Ash (PFA). Other anthropogenic sources are also present including ash, coal, clinker and bricks, along with other detritus such as metal wire.

Underlying the Made Ground are superficial strata associated with the Tidal Flat Deposits, including a desiccated crust layer noted in some areas, described as grey slightly silty fine to medium sand. The Tidal Flat Deposits are generally described as light grey, slightly silty sandy clay or grey sandy clay.

The superficial deposits are, in turn, underlain by strata associated with the Mercia Mudstone Group. The Mercia Mudstone Group bedrock is designated as a Secondary B Aquifer. The Superficial Deposits of Tidal Flat Deposits are designated as Unproductive Strata. These are predominantly rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

The site is located approximately 500m from the River Usk at its closest point and is bounded on the eastern and southern boundaries by drainage ditches which drain into the River Usk, which is tidal at this point. A pond is located to the east of the site.

2.5 Summary of Site History

It is understood that historically the site has been occupied and used for coal storage which overtime has built up and lead to significant thickness of Made Ground.

The site history is detailed within the Tetra Tech Updated Ground Investigation Factual and Interpretative Report (Tetra Tech, 2024a). Historical maps indicate prior to development the land was occupied by low lying agricultural land and salt marsh typical of the Gwent and Caldicot Levels. Industrial development occurred to the north of the site with the construction of the Uskmouth A and B units between the 1940s and 1960s. Mapping dating between 1964-1977 shows the coal storage area at the site of the proposed BESS in use.

3.0 Summary of Previous Works

3.1 Previous Ground Investigations

The intrusive works undertaken in 2022 and 2023 recovered soils to a maximum depth of 10 m bgl.

Made Ground was encountered at surface in all exploratory hole positions to a maximum thickness of 3.80m bgl. Generally Made Ground was observed to comprise dark grey to black granular deposits with bands of gravelly clay/silt. Inclusions of ash, coal, clinker and blockwork are frequently encountered and are indicative of the former site use. The onsite observations indicate the bulk of Made Ground materials comprise coal, ash and clay.

Tidal Flat Deposits (TFD) were encountered underlying Made Ground in all positions. The stratum was encountered at depths ranging from approximately 2.20 m to 3.80 m bgl. The base of the stratum was not proved during this phase of intrusive works. Where encountered the TFD were relatively consistent in nature across each of the five boreholes and featured an upper desiccated layer.

With regard to the screening criteria for commercial end use, there were no exceedances identified in collected soil samples from Made Ground and natural strata. There was also no asbestos identified in any of the samples analysed.

Additional soil sampling of stockpiled material conducted by Tetra Tech in the 2023 supplementary ground investigation concurred with the initial RPS assessment, with no exceedances of General Acceptance Criteria (GAC) for a commercial end use and no asbestos was detected within stockpiled materials.

The CW-DQRA confirmed that recorded contaminants within the groundwater below the site are not adversely impacting key off site receptors.

3.2 Outline Remediation Strategy

Significant ground contamination was not identified on the site during the ground investigation, however due to the nature of the historical development recorded on the site, a Reactive Approach was recommended to provide a framework whereby previously unidentified contamination could be identified and assessed if encountered during the earthworks phase.

3.3 Summary of Materials Management Plan

A MMP was prepared by Tetra Tech in February 2024 (Tetra Tech, 2024d) detailing the steps to be employed during the handling, storing, placing and disposal of any soil materials generated during the development works.

The Materials Management Plan outlined the reuse of the following materials from the site

1. Existing stockpiles (Made Ground)
2. Arisings from SuDS basin (Made Ground)
3. Topsoil from general site area.

(1) and (2) above, were scheduled for placement within the main development plateau. Topsoil was identified for the placement in areas of soft landscaping and within the construction of the SuDS basin feature.

To facilitate the construction of the main development platform, imported aggregate was also required from a local quarry, imported to the site by rail.

The only materials scheduled for offsite disposal were reinforced concrete from areas of hardstanding.

4.0 Outline Specification & Mitigation Measures

4.1 Outline Specification

The Tetra Tech Reactive Remediation Strategy (Tetra Tech, 2024c) called for the following specification/ mitigation measures to be undertaken:

- Excavated Topsoil and Made Ground materials to be stockpiled separately prior to re-use;
- Materials found to be unsuitable for re-use to be removed from site as a waste to an appropriately licensed facility;
- Site won materials to be tested at a frequency of one sample per 1000m³ and test results screened against generic assessment criteria for a commercial end use scenario with respect to risks to human health;
- Site won materials at a frequency of one sample per 1,000m³ will be scheduled for single state batch leachate analysis at 10:1 ratio (BS EN 12457-2) and screened against water quality standards which are protective of controlled waters. The findings of these test results should be used to update the controlled waters risk assessment;
- Imported materials will be sampled at a rate of one sample per 1,000m³ at source and test results screened against generic assessment criteria for a commercial end use scenario with respect to risks to human health;
- Imported soils and aggregates to be tested at a frequency of one sample per 1,000m³ for the presence of asbestos unless virgin soils/ aggregates from an appropriately licensed quarry.
- In addition, imported soils shall not contain foreign materials such as plastics, glass, metals, tarmac, etc. The imported materials should be demonstrated to be suitable for use within the context of the proposed development; and,
- Provision of a Discovery Strategy in the event of the identification, delineation and management of previously unidentified ground contamination which may be encountered during the development phase.

5.0 Verification Information

5.1 Introduction

This Verification Report has been prepared in order to demonstrate compliance with the requirements of the MMP and to discharge relevant planning conditions associated with the construction of the BESS at Uskmouth.

The following information has been summarised from the report prepared by Jones Brothers (included as Appendix B) following the completion of the earthworks phase and includes the following information.

- Excavated materials
 - o Excavation of concrete as part of enabling works, scheduled for offsite disposal.
 - o Removal of topsoil for re-use.
 - o Materials excavated from SuDS balancing pond for re-use on site.
- Imported Materials
 - o Imported Aggregates
 - o Other Imported Materials

5.2 Reactive Remediation Strategy

The Reactive Remediation Strategy document outlined the requirement for a proactive approach to be adopted during the earthworks phase whereby a watching brief was maintained to identify areas of potential contamination.

Tetra Tech was not made aware of any potential contamination being identified during the works that required any further assessment.

5.3 Material Movements

Excavated Materials

Concrete

Concrete hardstanding was removed from the northern extent of the site and area of the SuDS basin and stockpiled prior to off-site disposal.

The locations of the excavated materials are shown in the Jones summary report in Appendix B. Waste Transfer Notes are also presented for the disposal of 21 loads of 'dirty hardcore', EWC Code 17 01 07. A total tonnage of 361 tonnes (361760 kg) were removed from the site.

The material was transported from site by Neal Soil Suppliers Limited to the Neal Soil Waste Incoming Facility, Rumney, Cardiff.

Topsoil

Prior to the commencement of the earthworks phase, topsoil was stripped from the site and stored in two stockpiles prior to re-use.

The locations of the excavated materials are shown in Appendix B.

Following the completion of the development, this material was used to provide a growing medium around the batters of the development platform.

Made Ground

Made Ground materials were excavated from the location of the SuDS balancing pond and stockpiled prior to re-use on site. Materials were placed within the development platform and also used to provide the final grading of the SuDS basin.

Laboratory test results were presented within the Jones Brothers report. The following table summarised the chemical analysis of this material, screened against a commercial end use as required in the Reactive Remediation Strategy and MMP documents.

Table 5-1 – Summary of Laboratory Testing

Determinant	Unit	Maximum	Minimum	Screening Value
Asbestos	-	Not detected	Not detected	Visual screen
pH	pH	9.49	7.89	<5, >9
Cyanide (free)	mg/kg	<1	<1	40
Phenol	mg/kg	<0.2	<0.2	440
Arsenic	mg/kg	25	11	640
Beryllium	mg/kg	6.1	1.5	12
Boron (water soluble)	mg/kg	33	5.9	240,000
Cadmium	mg/kg	18.5	<0.5	410
Chromium (hexavalent)	mg/kg	<1	<1	49
Chromium (trivalent)	mg/kg	18	8	8,600
Lead	mg/kg	52	17	2,300
Mercury	mg/kg	<0.34	<0.17	5,100

Determinant	Unit	Maximum	Minimum	Screening Value
Nickel	mg/kg	44	26	980
Selenium	mg/kg	<1	4	12000
Acenaphthene	mg/kg	<0.1	0.24	84,000
Acenaphthylene	mg/kg	<0.10	<0.01	83,000
Anthracene	mg/kg	<0.20	<0.02	520,000
Benzo(a)anthracene	mg/kg	<0.40	<0.04	170
Benzo(a)pyrene	mg/kg	<0.40	<0.04	44
Benzo(b)fluoranthene	mg/kg	<0.50	<0.05	1,200
Benzo(ghi)perylene	mg/kg	<0.50	<0.05	3,900
Benzo(k)fluoranthene	mg/kg	<0.70	<0.07	77
Chrysene	mg/kg	0.11	<0.60	350
Dibenzo(ah)anthracene	mg/kg	<0.40	<0.04	3.5
Fluoranthene	mg/kg	<0.80	<0.08	23,000
Fluorene	mg/kg	0.03	<0.10	63,000
Indeno(123-cd) pyrene	mg/kg	<0.30	<0.03	500
Naphthalene	mg/kg	0.1	<0.30	1,600
Phenanthrene	mg/kg	0.21	<0.30	22,000
Pyrene	mg/kg	<0.70	<0.70	54,000
Total PAH-16	mg/kg	0.48	<0.48	-
Aliphatics (Ali)				
>C5-C6	mg/kg	<0.05	<0.05	3,200
>C6-C8	mg/kg	<0.05	<0.05	7,800
>C8-C10	mg/kg	2	<1	2,000
>C10-C12	mg/kg	2	<1	9,700l
>C12-C16	mg/kg	3	<1	59,000
>C16-C21	mg/kg	5	<1	1,000,000
>C21-C35	mg/kg	18	2	1,000,000
Total Aliphatics	mg/kg	26	2	-
Aromatics (Aro)				
>C5-C7	mg/kg	<0.05	<0.05	27
>C7-C8	mg/kg	<0.05	<0.05	56,000
>C8-C10	mg/kg	2	<1	3,500
>C10-C12	mg/kg	2	<1	16,000
>C12-C16	mg/kg	8	2	36,000
>C16-C21	mg/kg	14	2	28,000

Determinant	Unit	Maximum	Minimum	Screening Value
>C21-C35	mg/kg	21	2	28,000
Total Aromatics	mg/kg	47	7	-
Benzene	mg/kg	<0.05	<0.05	27
Toluene	mg/kg	<0.05	<0.05	56,000
Ethyl Benzene	mg/kg	<0.05	<0.05	5,700
Xylene	mg/kg	<0.05	<0.05	6,600

Only one exceedance of pH is noted within the laboratory data, however this exceedance is noted to be marginal and based on the history of the site it is anticipated that this exceedance is associated with the presence of concrete within the Made Ground. The material is therefore considered to be suitable re-use on the site within the context of the proposed development.

It is noted that the data summarised above is based on three samples obtained from the Made Ground which does not meet the testing frequency outlined within the Remediation Strategy and MMP, however the Made Ground soils have been derived from areas of the site which have been subjected to testing within the previous ground investigations which have confirmed the suitability of the material for re-use on the site. It is also noted that the Made Ground Strata were not placed at the surface of the development platform, and as such the potential risk posed by this material is mitigated by:

- Placement below imported aggregates to remove any direct linkage between Made Ground soils and site users (human health).
- Rainfall on the development platform reduces the potential for contaminants to be mobilised into groundwater and surface water bodies.

Imported Materials

To facilitate the construction of the main development plateau, clean natural aggregates were imported to the site as summarised in the table below.

The Jones summary report confirms that material import tickets are held by the ultimate client (PEP). Aggregate was imported to the site via the adjacent rail head from the Heidelberg Materials quarry in Machen, Caerphilly consisting of graded limestone aggregate.

Material Movement Summary

A summary of the material movements at the site are summarised in the table below.

Table 5-2 – Summary of Material Movements

Material	Material Cut (m ³).	Reused / Imported (m ³).	Disposed off site (m ³).
Concrete	197	-	197
Topsoil	2,436 (stockpile 1) 982 (stockpile 2) TOTAL Volume: 3,418	3,418	-
Made Ground (from SuDS Balancing Pond)	4,922	4,922 • 2,580 placed within development plateau, • 2,342 within SuDS Pond)	-
Imported Aggregate • Class 1a • Type 3 • Type 1 • Type B Drainage Media • 0/4mm Gritstone	-	• 54,648 • 14,109 • 2,111 • 1,178 (tonnes) • 3,909 (tonnes)	-

6.0 Completion Statement

6.1 Verification Statement

Tetra Tech did not undertake any on site inspections during the earthworks phase and the report is therefore based on information provided by the contractor and included in Appendix B.

In summary:

- A watching brief was maintained by the contractor during the earthworks phase, Tetra Tech was not made aware of any areas of potential contamination being encountered during the works and as such no further assessment or risk management was deemed necessary.
- Materials imported to the site consisted of graded quarry aggregates and as such these were excluded from the testing requirements for imported materials.
- Materials originating from the former concrete access roads were removed from the site and disposed of at a licenced facility.
- Materials excavated from the site for re-use are deemed suitable for re-use within the development.

6.2 Residual Risk Assessment

The development is considered to have had the following impact on the contamination risk assessment for the site.

- The construction of a raised platform, predominantly consisting of imported quarry aggregate will reduce the risk potential posed by the site including:
 - o Removal of direct access to Made Ground soils due to the placement of imported aggregate across the majority of the site area.
 - o Construction of a managed SuDS system reduces the infiltration across the site, reducing the mobilisation of contaminants into the shallow groundwater and surface water bodies.

6.3 Long Term Monitoring

Based on the results of the ground investigation and observations from the development phase, long term monitoring of ground contamination is not considered necessary.

Figures

Figure 1 – Site Location Plan

Appendix A: Report Conditions

APPENDIX A – REPORT CONDITIONS

This report is produced solely for the benefit of Jones Brothers Limited and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a visual site inspection, reference to accessible referenced historical records, information supplied by those parties referenced in the text and preliminary discussions with local and Statutory Authorities. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive research. Where ground contamination is suspected but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample. The possibility of the presence of contaminants, perhaps in higher concentrations, elsewhere on the site cannot be discounted.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categoric assurances that they will be accepted by Authorities or Funds etc. without question as such bodies often have unpublished, more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Tetra Tech. In time improved practices or amended legislation may necessitate a re-assessment.

The assessment of ground conditions within this report is based upon the findings of the study undertaken. We have interpreted the ground conditions in between locations on the assumption that conditions do not vary significantly. However, no investigation can inspect each and every part of the site and therefore changes or variances in the physical and chemical site conditions as described in this report cannot be discounted.

The report is limited to those aspects of land contamination specifically reported on and is necessarily restricted and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites. If migrating pollution or contamination (past or present) exists further extensive research will be required before the effects can be better determined.

Appendix B: Information from Client

Uskmouth Verification Report

Earth Movements

1 - Concrete Removed from BESS
and Balancing Pond Area

A - Volume
B - Drawing

2 - Topsoil Stripped from BESS Area

A - Volume
B - Drawing

3 - Balancing Pond Excavation
Movement 1

A - Volume
B - Drawing

Movement 2

A - Volume
B - Drawing
C - Testing Results on Site won fill material

Imported Materials

1 - Imported Aggregate for Building Plateau

A - Volume
B - Drawings
C- Testing Results

2 - Other imported material

A - Volume
B - Example of invoice/import ticket

Materials taken off-site

1 - Concrete Removed from BESS
and Balancing Pond Area

A - Volume
B - Waste Transfer note

Appendicies

A - Chemical testing results
B - Grading Results
C - SRD Results
D - Aggregate Tracker
E - Grading Results
F - SRD Results
G - Waste Transfer notes
H - Soil Strip Photos
I - Photos : Concrete Removal
J - Photos : Balancing Pond Excavation
K - Photos : Plateau Construction (aggregate import)
L - Photos : Site won material used in Plateau

Earth Movements

Earth Movements

1 - Concrete removed from BESS and Balancing Pond Area

A - Volume

Area of concrete removed - 985m²

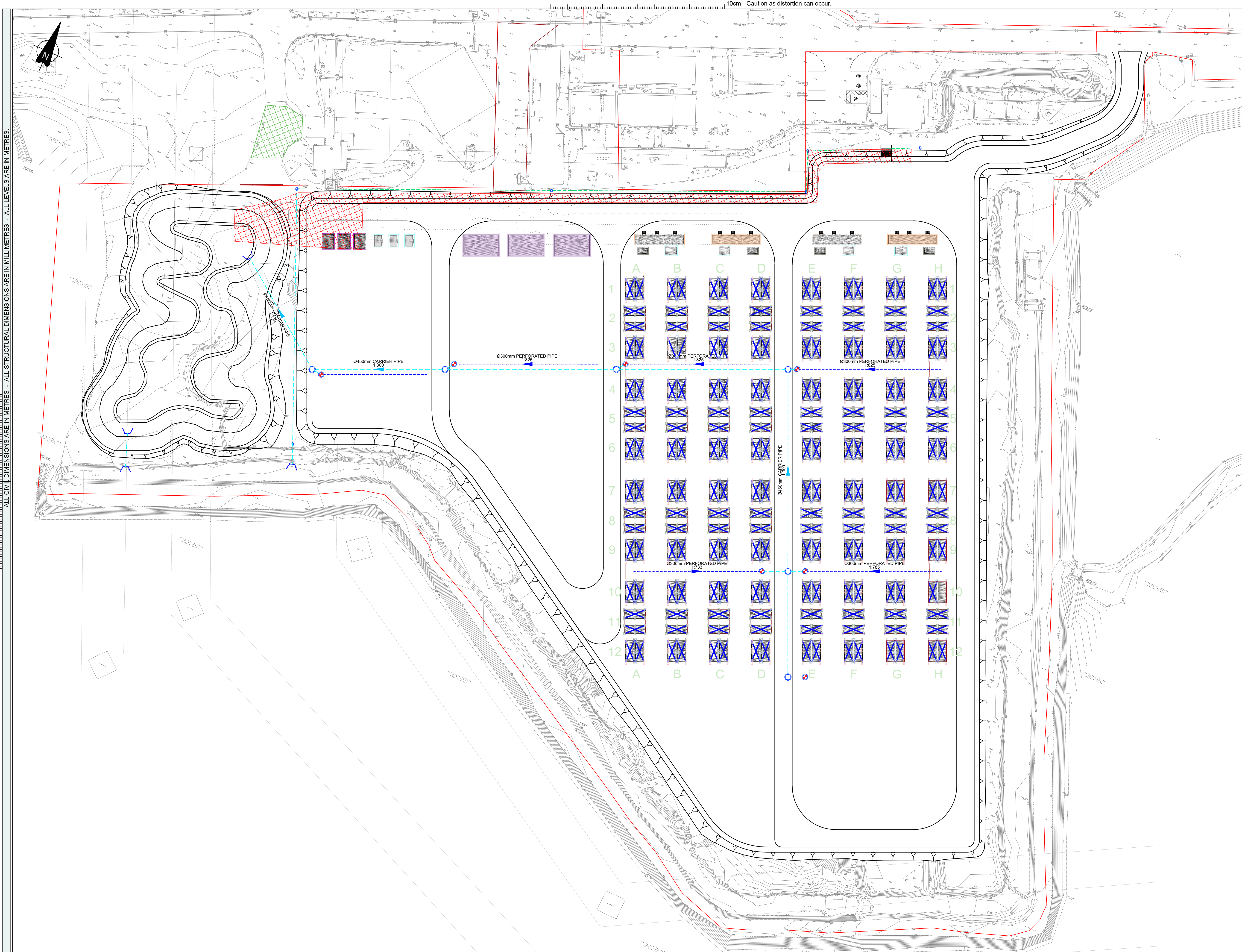
Average thickness - 200mm

Volume of concrete removed - 197m³

B - Drawing

See below drawing indicating area of concrete removed and location of stockpiled material before removal off site at later date.

10 cm - Caution as distortion can occur.
ALL CIVIL DIMENSIONS ARE IN METRES - ALL STRUCTURAL DIMENSIONS ARE IN MILLIMETRES - ALL LEVELS ARE IN METRES.





Client: 

Project: **USKMOUTH ENERGY STORAGE PROJECT**

Material Moved

From - 

To - 

SAP13					RD	LM	ISMD	
REV	DESCRIPTION				DATE	DRW	CHK	APP
Drawing Title:								

Material Movements

Burroughs Project No.: 50468-00		Scale: 1:500	Original Paper Size: A1
Drawing Number:		001	
Status:	Status Description:		
S4	FOR STAGE APPROVAL		
Revision:	Revision Description:		
P 1	First Draft		

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2 - Topsoil stripped from BESS Area

A - Volume

The BESS area was stripped of all topsoil and the material was placed in 2no stockpiles. See below volume report for both stockpiles.

Stripped Material in Stockpile

SW

Sion Williams

To: Rhys Roberts

Cc: Mark Evans; Steffan Parry

You replied to this message on 06/03/2024 17:47.

STRIPPED MATERIAL IN STOCKPILE.TXT

7 KB

Reply

Reply All

Forward

Wed 06/03/2024 16:33

Hi,

See attached volume report for the stripped material in stockpile... 2400M3 of material.

Thanks,
Sion

...

Sion Williams
Project Civil Engineer
E-mail - sionw@jones-bros.com
Mobile - 07787 100781 - 07469199196

Jones Bros. Ruthin (Civil Engineering) Co. Ltd. - Regd. in Wales No. 983459
Jones Bros. Ruthin Co. Ltd. - Regd. in Wales No. 983339
Regd. Office - Ty Glyn, Canol Y Dre, Ruthin, Denbighshire LL15 1QW
Telephone 01824 703661 - Fax 01824 703666
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CIVIL ENGINEERING UK

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Ricoh added

REMAINING POND DIG 20.03.24

STRIPPED MATERIAL IN STOCKPILE

File

Edit

View

McCarthy Taylor Systems Ltd.

Jones Bros (Civil Engineering) Co. Ltd

Page : 001

LSS v10.01.24 / 717.30

2024.03.06 16:28

UNSUITABLE FOR RE-USE - STRIPPED MATERIAL STOCKPILEDDBB

UNSUITABLE FOR RE-USE - STRIPPED MATERIA

AREA AND VOLUME CALCULATION

Volume between current survey : UNSUITABLE FOR RE-USE - STRIPPED MATERIAL STOCKPILEDDBB

and other survey : UNSUITABLE FOR RE-USE - STRIPPED MATERIAL STOCKPILED

Volumes by surface feature in the current survey :

Surface	Description	Cut area (m²)	Cut volume (m³)	Fill area (m²)	Fill volume (m³)	Total area (m²)	Net volume (m³)
None		12.550	-7.704	1457.685	2443.701	1470.235	2435.997
Grand total :		12.550	-7.704	1457.685	2443.701	1470.235	2435.997

Note : "FILL" when the OTHER survey is above the CURRENT. All areas are plan areas.

*** WARNING *** no volume determined for the following areas :

Other survey outside current : 7963.274

RE: Stripped Material in Stockpile


Sion Williams
 To:  Rhys Roberts
 Cc:  Mark Evans;  Steffan Parry


 SECOND STOCKPILE VOLUME.TXT
 2 KB

Hi,

Another 1000M3 in the stockpile nearer the coal chute.

Thanks,
Sion

Sion Williams
 Project Civil Engineer
 E-mail - sionw@jones-bros.com
 Mobile - 07787 100781 - 07469199196

Jones Bros. Ruthin (Civil Engineering) Co. Ltd. - Regd. in Wales No. 983459
 Jones Bros. Ruthin Co. Ltd. - Regd. in Wales No. 983339
 Regd. Office - Ty Glyn, Canol Y Dre, Ruthin, Denbighshire LL15 1QW
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Sion Williams
 Project Civil Engineer
sionw@jones-bros.com

Ricoh added		REMAINING POND DIG 20.03.24	STRIPPED MATERIAL IN STOCKPILE.TXT	SECOND STOCKPILE VOLUME.TXT		
File	Edit	View				
McCarthy Taylor Systems Ltd. LSS v10.01.24 / 717.30		Jones Bros (Civil Engineering) Co. Ltd		Page : 001 2024.03.06 17:45		
		SECOND STOCKPILE BB - SECOND STOCKPILE BB				
		AREA AND VOLUME CALCULATION				
		Volume between current survey : SECOND STOCKPILE BB - SECOND STOCKPILE BB				
		and other survey : SECOND STOCKPILE - SECOND STOCKPILE				
		Volumes by surface feature in the current survey :				
Surface	Description	Cut area (m ²)	Cut volume (m ³)	Fill area (m ²)	Fill volume (m ³)	Net volume (m ³)
None		0.000	0.000	611.238	981.726	611.238 981.726
Grand total :		0.000	0.000	611.238	981.726	611.238 981.726
Note : "FILL" when the OTHER survey is above the CURRENT. All areas are plan areas.						
Ln 1, Col 1		1,428 characters		100%	Windows (CRLF)	ANSI

B - Drawing

See below drawings indicating the movements of the stripped soils from the plateau area. The soil was stripped and stockpiled in the green area shown in the first drawing. Once the platform has been constructed, the soil was used to topsoil the plateau batters as shown in the second drawing.

USKMOUTH ENERGY
STORAGE PROJECT

Material Moved

From -

To - 

S4-P1.0			IQ	LM	SMDS
REV.	DESCRIPTION	DATE	DRW.	CHK.	APP.
Drawing Title:					

Material Movements

Burroughs Project No.:	Scale:	Original Paper Size:
50468-00	1:500	A1

Drawing Number:

Status: S4 - Status Description: FOR STAGE APPROVAL

Revision:	Revision Description:
P 1 -	First Draft

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