JNP GROUP

CONSULTING ENGINEERS

Options Appraisal and Remediation Strategy

Land Adjacent to:

67 Chapel Gate,

Scholes,

Holmfirth.

EcoHolmes Community Land Trust

B24367-JNP-XX-XX-RP-G-1003

April 2024

DOCUMENT CONTROL SHEET

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FOR AND ON BEHALF OF JNP GROUP

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1 INTRODUCTION

1.1.1 JNP Group was instructed by the client to produce an Options Appraisal and Remediation Strategy for:

Land Adjacent to 67 Chapel Gate,
Scholes,
Holmfirth,
HD9 1SX

hereinafter referred to as 'the site'. This report is subject to the limitations presented in Appendix A.

1.1.2 It is understood that EcoHolmes are seeking planning permission for ten affordable low-energy residential properties with private gardens, parking and access roads at the site. The proposed redevelopment layout is shown on external drawing reference (462)-GWP-01-01-DR-A-(SK)-0001 revision WIP/S (undated) produced by CWPA.

1.1.3 All comments given are based on the understanding that the proposed redevelopment will be as detailed above.

1.1.4 It should be noted that if there are any changes to the proposed redevelopment it may affect whether the remediation strategy outlined in this report is still appropriate, and hence warrants further consideration.

1.1.5 Should there be any deviation from the agreed remediation strategy, then it may affect whether final discharge of any planning conditions pertaining to the site is granted by the Local Authority.

1.2 Objectives

1.2.1 The purpose of this report is to identify the Best Practicable Techniques(s) (BPT) for the remediation of the site. This has been achieved by undertaking an options appraisal of potential remediation techniques and then designing a sustainable remediation strategy including verification plan.

1.3 Methodology

1.3.1 This report has been compiled in accordance with the on-line Land contamination: risk management (LCRM) guidance produced by the Environment Agency (June 2019). This can be found on the UK government website: https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks.

1.3.2 The LCRM guidance outlines a three-stage process in deriving a remediation strategy:

- Identification of Feasible Remediation Options – this considers the general and technical factors that may affect the remedial option as well as the remediation and managerial objectives and produces a short list of potential BPT;
- Detailed Evaluation of Options – this considers the characterisation of the short listed remedial options and remediation costs. An evaluation of environmental attributes is undertaken to select the BPT most suitable for the site;
- Remediation Strategy Design – this identifies the areas of the site requiring remediation and how the works are to be phased. It outlines the verification process and plan which

ensure that the remediation works are complete in line with the desired remediation and managerial objectives.

1.3.3 This report should be read in conjunction with the following reports:

- JNP Group B24367-JNP-XX-XX-RP-G-1001 Phase I Geo-environmental Report. January 2022;
- JNP Group B25367-JNP-XX-XX-RP-G-1002 P02 Phase II Geo-environmental Report. June 2022.

2 REMEDIATION REQUIREMENTS

2.1 Pollutant Linkages

2.1.1 From the ground investigation and subsequent assessment undertaken within the quarry area, contamination was recorded within the made ground at the site in the following locations:

- WS1 @ 0.05 m below ground level (bgl) PAH, beryllium and hydrocarbons;
- WS2 @ 1.6 m bgl lead and PAH;
- WS3 @ 0.4m bgl PAH;
- WS4 @ 0.05 m bgl PAH (natural ground);
- WS6 @ 1 m bgl PAH.

2.1.2 The made ground consisted of brown to dark brown to black, clay, sand and gravel. The proportion of clay, sand and gravel varied between exploratory holes. The gravel fraction comprised tarmac, brick, pottery, mudstone and glass with rare clinker. Made ground depth varied between 0.1 to 4.00 m bgl.

2.1.3 Ash and deleterious materials comprising fragments of broken glass, pottery, and tarmac were observed in the made ground at WS01, WS02, WS03, WS06, WS07, HP2 and HP4.

2.1.4 Given the proposed layout and the above contamination and deleterious materials, remediation at the site is required in areas of private gardens and soft landscaping areas in order to break the source-pathway-receptor linkages and ensure that the site is suitable for use.

2.1.5 The remediation requirements are shown on the Remediation Plan (B24367-JNP-XX-XX-DR-G-002 P01).

2.1.6 Standard remediation depths of 0.6 m bgl in rear gardens and 0.3 m bgl in front gardens and landscaped areas are considered suitable, however, this will mean some contamination will remain on site at greater depths.

2.1.7 It should be noted that there are cut and fill requirements at the site that may affect the above.

2.2 Remediation Objectives

2.2.1 The overall remediation objective is to ensure that the site is suitable for use and to protect the identified receptors (future site residents).

2.2.2 The following remediation objectives specific to the contaminants apply to the site:

- To remove the risk to receptors from metal and hydrocarbon contaminated made ground in all garden areas and areas of soft landscaping.

2.2.3 The following remediation objectives relating to the remediation option are considered applicable to the site:

- Any amount of material going off site to hazardous landfill must be kept to a minimum.

2.3 Material Volumes

2.3.1 Cut and fill works are required at the site, work is currently ongoing to confirm volumes of materials.

2.3.2 Remediation Plan drawing B24367-JNP-XX-XX-DR-G-002 P01 shows the areas across the site requiring remediation. In areas of private rear gardens, the top 0.6 m of material should be remediated whereas in front gardens and soft landscaping areas this can be reduced to 0.3m. Given that the thickness of made ground in these areas was deeper, potentially contaminated ground will remain below these depths and therefore a geotextile membrane is required prior to provision of fill material.

2.3.3 Based on the above information, the anticipated total area requiring remediation is estimated to be 425 m^2, this equates to approximately 310 m^3 (exclude bulking factors) of soil requiring remediation.

2.3.4 There are also spoil heaps of made ground across the site that will require removal, the volumes of which require quantification. Furthermore, the cut and fil activities may also generate materials requiring removal. Therefore, the total volume of soils requiring remediation and / or removal will be greater than 310 m^3.

2.3.5 The anticipated small volume of material requiring remediation is likely to warrant on-site treatment methods unviable at the site.

2.3.6 A contingency should be allowed for, in the event that unexpected contamination is identified during the redevelopment works.

2.4 Hazardous Waste Assessment

2.4.1 The concentrations of contaminants recorded during the ground investigation have been assessed using the HazWasteOnline classification tool. This classification tool is based on the methodology outlined in the Hazardous Waste Technical Guidance publication WM3 (EA, SEPA, NIA, NRW. May 2015).

2.4.2 The concentrations of waste associated with both WS1 and WS2 are considered hazardous, due concentrations of lead, zinc and petroleum hydrocarbons. The remainder of the soils are considered to be non-hazardous. Soils associated with plots closest to WS1 should be treated as hazardous with the remainder being non-hazardous. The hazardous waste classification associated with WS2 is due to lead concentration at 1. 6 m bgl, whilst not located in a garden or open space area, and below the proposed remediation depth, if this material is removed due the redevelopment requirements then it would be classified as hazardous waste.

2.4.3 A copy of the hazardous waste classification reports is included as Appendix B.

2.4.4 Where soils are classified as hazardous waste, the WAC testing results may be required by the waste receiver to ensure the material is disposed of appropriately.

2.5 Utilities

There are overhead electricity cables that cross the western part of site south-west to north-east. Appropriate working easements would be required in this area.

3 EVALUATION OF REMEDIATION OPTIONS

3.1 Management Objectives Affecting Remediation Options

3.1.1 The following management objectives are considered to be appropriate for the site:

- To reduce the amount of hazardous waste being landfilled in line with current UK waste hierarchy (reduce - re-use – recycle – recover – disposal);
- To achieve a remediation strategy that can be agreed by all key stakeholders (client, regulators);
- To meet all regulatory requirements relevant to the installation or operation of remediation options;
- To avoid unacceptable health and safety, and adverse environmental impacts during remediation;
- To minimise long term liabilities;
- To avoid long term maintenance or monitoring obligations;
- To ensure the scheme takes into account any design requirements of the overall redevelopment;
- To undertake remediation in accordance with good technical practice;
- To achieve successful remediation within a particular timescale and budget.

3.2 Design Requirements Affecting Remediation Options

3.2.1 Cut and fill works are required at the site, work is currently on going to confirm volumes of materials.

3.3 Best Practicable Technique

3.3.1 Given the volumes of contamination and the nature of the contamination (metals and hydrocarbons associated with asphalt and deleterious material), the following are considered to be the best options for the site:

- Excavation and transfer to a soil treatment centre;
- Excavation and disposal to landfill.

4 REMEDIATION STRATEGY – IMPLEMENTATION PLAN

4.1 Introduction

4.1.1 The main works shall be undertaken by a suitably qualified Earthworks Contractor and the works shall be supervised by JNP Group on an "as and when" required basis.

4.1.2 All works on site shall be undertaken following the guidance given in C762 Environmental Good Practice on-site (CIRIA C762) and Construction Site Safety GE700E/18 (CITB 2018).

4.1.3 A Construction Environmental Management Plan (CEMP) and method statements for all aspects of work shall be provided to JNP Group by the Earthworks Contractor, and any specialised subcontractors. These will include any details of proposed toolbox talks. The CEMP and method statements shall require approval prior to commencement of the works on site. The CEMP should cover, as a minimum, the following items: nuisance dust; asbestos fibres release; odours; noise and traffic management.

4.1.4 Should the re-use of materials from onsite or from another site be proposed, it is recommended that the proposed works are undertaken in accordance with the Definition of Waste Code of Practice (DoWCoP); in following this guidance and to ensure materials are managed correctly, a Materials Management Plan will need to be prepared and declared in advance by a Qualified Person, then implemented and documented in a Verification Report. If this process is not undertaken, then following recent changes in landfill tax regulations by HMRC, there is a risk of penalties equating to twice the landfill tax rate being applied to the re-use of material on site. If the proposed works are to be undertaken outside of the DoWCoP, there would need to be some form of Environmental Permitting, the requirements of such are likely to be more onerous and may take longer to be granted.

4.2 Programme of Works

4.2.1 In order to ensure the works are undertaken in a suitable order, the following are proposed:

- Surface strip, vegetation clearance and tree removal;
- Excavation of soils;
- Removal of surplus material to a designated waste receiver;
- Any drainage / services work and foundation construction including removal of any surplus material to a designated waste receiver;
- Construction phase.

4.2.2 Once the works commence, on-going activities will include excavation / fill / compaction,- waste disposal and construction works.

4.3 Surface Strip, Vegetation and Tree Removal

4.3.1 A general surface trip of up to 250 mm is to be undertaken across the whole of the site. Overgrown vegetation and the majority of trees across the site are to be removed. The two trees, denoted as T12 and T14, located in the north-west edge of the site are to be retained. These are shown on Site Plan Option 4 (appended).

4.4 Material Requiring Excavation

4.4.1 The area of ground requiring excavation is shown on drawing B24367-JNP-XX-XX-DR-G-002 P01. In rear private gardens, a depth of 0.6 m bgl is required to be excavated. In front gardens and landscaped areas, a depth of 0.3 m bgl is required to be excavated.

4.4.2 If practicable, the ground requiring excavation shall be directly excavated onto haulage lorries or if this is not achievable, stockpiled in a designated area to await disposal. Any stockpiled material shall be placed on tarpaulin sheets to avoid any cross contamination. The area of hazardous waste material will require WAC testing prior to its disposal therefore this material should be stockpiled separately to await the results of the WAC testing. These results should be made available to the waste receiver.

4.4.3 In addition, there are spoil heaps of made ground across the site that will also warrant off site removal as well as arisings from the cut and fill works.. These heaps will require chemical testing prior to removal to confirm contaminant concentrations and ensure that correct duty of care procedures are followed.

4.4.4 Records shall be kept of any material removed off-site either for treatment and re-use or as a waste destined for landfill. The Waste License and Permit Register form, as given in Appendix C, detailing the waste codes, haulier and waste receiver details should be completed by the Contractor for each waste material generated requiring removal. In addition, all material removed off-site shall be logged on the Waste Disposal Log form given in Appendix D. The completed waste management form, duty of care and consignment notes shall be provided to JNP Group for inclusion in the verification report.

4.5 Specifics for Capping Layer

4.5.1 A capping layer is required in all garden or landscaping areas and should comprise a geotextile membrane (puncture resistant) at the base then 300 mm / 600 mm (or to suite design requirements) of clean subsoil and topsoil. Within the 300 mm / 600 mm there should be no deleterious material (for example wire, brick, glass, plastics, treated wood or textiles).

4.5.2 The requirements of section 4.7 also apply.

4.6 Re-use of Site Won Material

4.6.1 Should material from the cut exercise be re-used on site then this will be subject to a suitable materials management (see section 4.1.4); this may include further testing of material to ensure it is chemically and geotechnically suitable.

4.7 Imported Fill

4.7.1 Any imported fill such as subsoil or topsoil used at the site should be sourced from a suitable provider of such material, who should provide chemical testing certificates of the material destined for the site. These certificates should be issued to JNP Group for approval prior to accepting the material. In addition, the imported fill should be free of any deleterious material such as glass fragments, wire, wood and a visual inspection should be undertaken once the material arrives on site.

4.7.2 Any topsoil and subsoil imported to site shall be classified and characterised in accordance with the requirements of BS3882:2015 [Specification for topsoil and requirements for use] and BS8601:2013 [Specification for subsoil and requirements for use] respectively as well as the chemical testing criteria given in Tables 5.1 and 5.2.

4.7.3 The reader is referred to Section 5 for chemical testing requirements.

4.7.4 Any imported fill used should be documented as per Appendix E.

4.8 Verification Chemical Testing – excavation level

4.8.1 Given that a capping layer including provision of a geotextile is being utilised excavation level testing is not required.

4.9 Dealing with Unexpected Contamination

4.9.1 Whilst investigation works has been undertaken at the site, it remains possible that unexpected soil, groundwater contamination or visible asbestos containing materials may be encountered during the process of any site demolition, clearance, excavation and / or construction.

4.9.2 There is the potential for areas of previously unidentified and unexpected contamination to be present at the site such as ashy soils, brightly coloured soil, significantly oily or odorous material, asbestos impacted soils and underground tanks.

4.9.3 If during the works such material is encountered, then the Earthworks Contractor shall inform JNP Group immediately who shall then advise on the best course of action. Photographic and written records should be kept by the Earthworks Contractor detailing any such material.

4.9.4 A copy of this strategy for dealing with unexpected contamination should be made available on site and ground workers should be made aware of it.

4.10 Environmental Incidents

4.10.1 In the event of an unforeseen environmental incident (pollution occurrence) on-site work should be stopping in the area immediately affected and the Environmental Agency should be contacted via their incident hotline 0800 807 060.

4.10.2 Emergency spill kits shall be kept on-site in strategic locations and a member of staff who is trained to use them shall be present on-site at all times.

5 REMEDIATION STRATEGY – VALIDATION PLAN

5.1 Validation Chemica Testing – Spoil Heaps

5.1.1 The spoil heaps on site require chemical testing to confirm any hazardous concentrations. This testing should include asbestos, heavy metals, speciated PAH and petroleum hydrocarbons. Should this material prove hazardous then WAC testing may also be required.

5.1.2 Any chemical testing required shall be undertaken by a UKAS and MCERTS accredited testing laboratory using standard turnaround times.

5.2 Validation Chemical Testing – Unexpected Contamination

5.2.1 Should unexpected contamination be uncovered during the ground works, JNP Group will advise on the best course of action concerning chemical testing and remediation.

5.2.2 Any chemical testing required shall be undertaken by a UKAS and MCERTS accredited testing laboratory using standard turnaround times.

5.3 Validation WAC Testing – Hazardous Waste

5.3.1 WAC testing is required on material designated as hazardous waste, given the small volume of hazardous waste (assuming one lorry load) one sample should be sufficient.

5.3.2 All chemical testing required shall be undertaken by a UKAS and MCERTS accredited testing laboratory using standard turnaround times. Note that turnaround times for WAC testing are longer than standard contamination testing. The results should be passed to the waste receiver for their use.

5.4 Validation Chemical Testing – Imported Fill

5.4.1 Chemical testing certificates should be available for any imported fill including subsoil or topsoil, however, in line with the requirements of the NHBC guidance as there are ten plots, each imported material used must have a minimum of five tests (per supplier source) with a nominal sampling frequency of one test per two plot. This sampling shall be undertaken by JNP Group. This sampling is required to verify that the imported fill is as specified in the suppliers' certificates.

5.4.2 All chemical testing shall be undertaken by a UKAS and MCERTS accredited testing laboratory.

5.4.3 Any chemical testing results shall be compared to the screening values given in Table 5.1. As the final end use of the site is residential dwellings with private gardens, current UK residential with plant uptake guideline values have been selected for use.

5.4.4 In addition, as copper, nickel and zinc are considered phytotoxic in nature, the criteria given in Table 5.2 should be used (these values are less than the published UK screening values and hence are considered protective of human health).

Table 5-1: Imported Fill Screening Values

Determinant	Screening Criteria (mg/kg)	Source		Determinant	Screening Criteria (mg/kg)	Source
TPH Aliphatic $C_5 – C_6$	42	LQM S4UL		Acenaphthylene	5.0	Professional judgement[6]

Determinant	Screening Criteria (mg/kg)	Source		Determinant	Screening Criteria (mg/kg)	Source
TPH Aliphatic $C_6 – C_8$	100	LQM S4UL		Acenaphthene	5.0	Professional judgement[6]
TPH Aliphatic $C_8 – C_{10}$	27	LQM S4UL		Anthracene	5.0	Professional judgement[6]
TPH Aliphatic $C_{10} – C_{12}$	130	LQM S4UL		Benzo(a)anthracene	5.0	Professional judgement[6]
TPH Aliphatic $C_{12} – C_{16}$	250	Professional judgement[1]		Benzo(a)pyrene	5.0	Defra C4SL[4]
TPH Aliphatic $C_{16} – C_{21}$	250	Professional judgement[1]		Benzo(b)fluoranthene	5.0	Professional judgement[6]
TPH Aliphatic $C_{21} – C_{35}$	250	Professional judgement[1]		Benzo(k)fluoranthene	5.0	Professional judgement[6]
TPH Aromatic $C_5 – C_7$	0.87	Professional judgement[6]		Benzo(g,h,i)perylene	5.0	Professional judgement[6]
TPH Aromatic $C_7 – C_8$	130	LQM S4UL		Chrysene	5.0	Professional judgement[6]
TPH Aromatic $C_8 – C_{10}$	34	LQM S4UL		Dibenzo(a,h)anthracene	0.24	LQM S4UL
TPH Aromatic $C_{10} – C_{12}$	74	LQM S4UL		Fluoranthene	5.0	Professional judgement[6]
TPH Aromatic $C_{12} – C_{16}$	140	Professional judgement[1]		Fluorene	5.0	Professional judgement[6]
TPH Aromatic $C_{16} – C_{21}$	260	Professional judgement[1]		Indeno(1,2,3,c-d)pyrene	5.0	Professional judgement[6]
TPH Aromatic $C_{21} – C_{35}$		Professional judgement[1]		Naphthalene	2.3	LQM S4UL
				Pyrene	5.0	Professional judgement[6]
Arsenic	37	Defra C4SL[4]		Phenanthrene	5.0	Professional judgement[6]
Cadmium	26	Defra C4SL[4]				
Chromium	910[2]	LQM S4UL		Nickel	pH dependent	Refer to Table 5.2
Mercury	40[3]	LQM S4UL		Selenium	250	LQM S4UL
Lead	200	Defra C4SL[4]		Benzene	0.87	Defra C4SL[4]
Copper	pH dependent	Refer to Table 5.2		Toluene	130	LQM S4UL
Zinc	pH dependent	Refer to Table 5.2		Ethylbenzene	47	LQM S4UL
asbestos	None present	CIRIA C733		Xylene	56[5]	LQM S4UL

LQM S4UL selected for organics based on 1% SOM for conservatism

1 Professional judgement – conservative value selected, less than LQM S4UL

2 Based on LQM S4UL for chromium III, assumes no chromium VI is likely to be present

3 Based on LQM S4UL for inorganic mercury, assumes that no elemental or methyl mercury is likely to be present

4 defra category 4 screening value

5 Based on LQM S4UL for p-xylene for conservatism
6 Professional judgment – cannot be classified as contaminated land under Part IIA

Table 5.2: Imported Fill Screening Values- phytotoxic metals

Determinant	Screening Criteria (mg/kg)			Source
	pH <6	pH 6-7	pH >7	
Copper (nitric acid extractable)	<100	<135	<200	BS 3882:2015 and BS 8601:2013
Nickel (nitric acid extractable)	<60	<75	<110	BS 3882:2015 and BS 8601:2013
Zinc (nitric acid extractable)	<200	<200	<300	BS 3882:2015 and BS 8601:2013

5.5 Verification Reporting

5.5.1 Following the completion of the remediation works, all records of works undertaken (including drawings and photographs), duty of care certificates and imported soil chemical testing certificates shall be provided to JNP Group.

5.5.2 Following the completion of the remediation works a verification report shall be produced by JNP Group that details the remediation work undertaken, the validation testing undertaken, and the details of any material removed from or brought to the site.

5.6 Recommendations

5.6.1 It is recommended that a copy of this options appraisal and remediation strategy be submitted to the Regulatory Authorities for their approval.

6 REFERENCES

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2 BS 5930:1999. Code of practice for site investigations. British Standards Institution. London.

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4 BS 8576. 2013. Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOC). British Standards Institution. London.

5 BS 10175: 2001. Investigation of potentially contaminated sites - code of practice. British Standards Institution, London.

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24 TPH Criteria Working Group: 1997: Total Petroleum Hydrocarbon Group Series. Volume 3. Selection of Representative TPH Fractions Based on Fate and Transport Considerations.

25 Wilson S, Card G and Haines S.2008. Ground Gas Handbook. Dunbeath. Whittles Publishing.

26 Yorkshire and Humberside Pollution Advisory Council. Version 3.1 October 2014. Verification Requirements for Cover Systems. Technical Guidance for Developers, Landowners and Consultants.

Figures / Drawings

All drawings and specifications should be read in conjunction with the project health and safety plan, any possible conflicts should be presented to the Planning Coordinator.

All work to be carried out in accordance with current Building Regulations.

Contractors must verify all dimensions at the job before commencing any work or making shop drawings. Do not scale off drawing. Do not take digital dimensions from this drawing. Written dimensions should be taken. Any discrepancies to be reported to the Architect. The design is subject to the following:

- Land Registry Confirmation
- Planning Approval
- Topographical Information
- Review of Easements and Covenants
- Building Regulations Approval / Fire Engineering
- Full Structural Review
- Rights of lights Issues

0 10m 20

Scale - 1:500 @A3

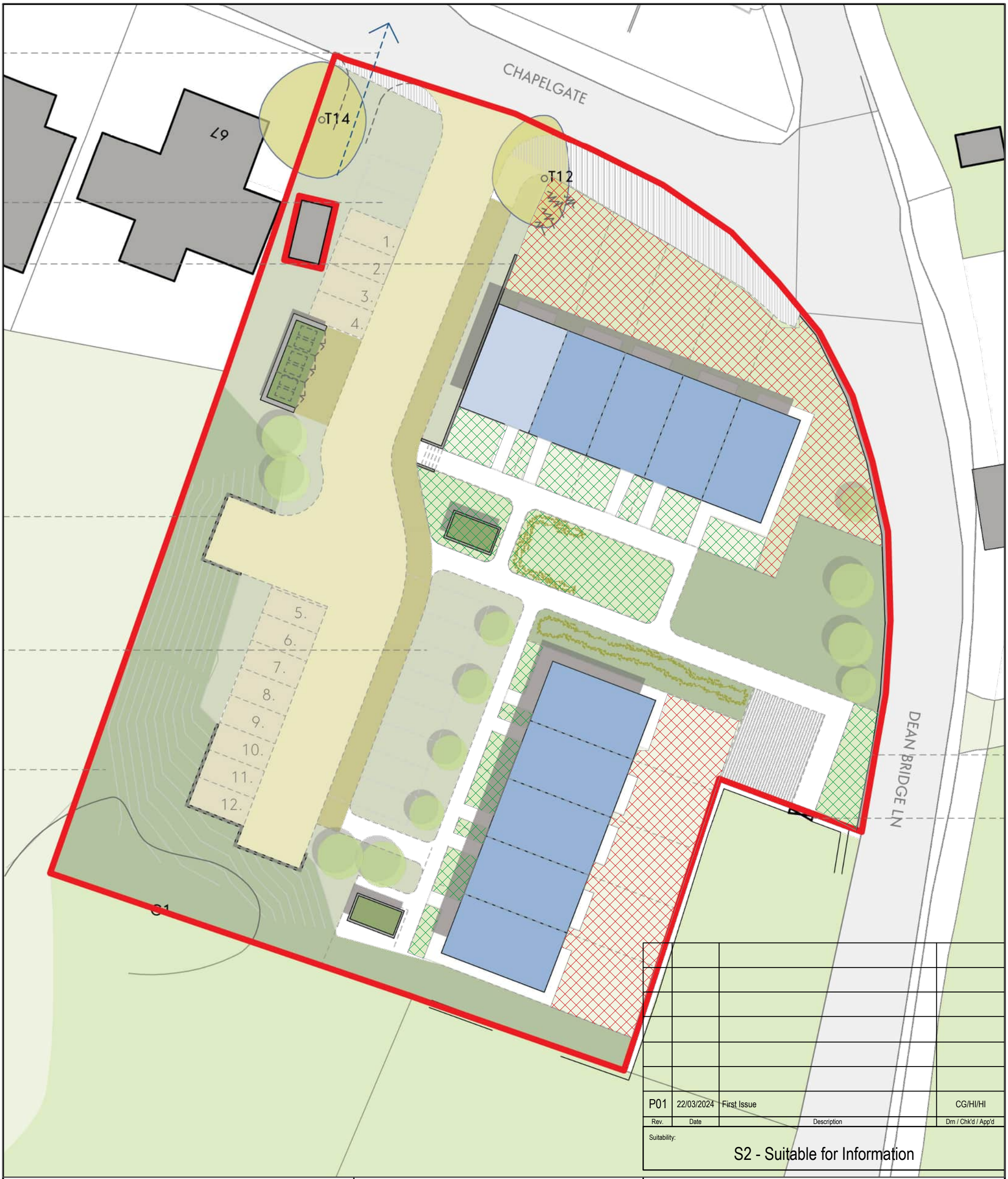
N

Name	(462)-GWP-01-01-DR-A-(SK)-0001		
Scale	1:500@A3	Rev / Status	WIP / S
Dr/Checked	CT / DT	Date of Issue	TBA

BIMcloud: DESKTOP-H2CIOHA - BIMcloud Basic for ARCHICAD 25/Chippings Dump Site - (462)2112-GW@P-01-DR-A-Huddersfield_EcoHomes_P02

Chippings

Site Plan Option 4



Rev.	Date	Description	Drn / Chk'd / App'd
P01	22/03/2024	First Issue	CG/HI/HI

Suitability:

S2 - Suitable for Information

Remediation required to 0.30 m bgl.

Remediation required to 0.60 m bgl.

Client:

EcoHolmes Community Land Trust

Job:

Land Adjacent to 67 Chapel Gate

Title:

Remediation Plan

Classification:

FI_60_20

Scale @ A3:

NTS

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Project - Originator - Volume/System - Level/Location - Type - Discipline - Number

B24367 - JNP - XX - XX - DR - G - 0002

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Revision:

-

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Appendix A Limitations

1 INTRODUCTION

1.1.1 This report is confidential and has been prepared solely for the benefit of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from JNP Group; a charge may be levied against such approval. JNP Group accepts no responsibility or liability for the consequences of this document being used for any purpose or project other than for which it was commissioned, and: this document to any third party with whom and agreement has not been executed.

1.1.2 Any comments given within this report are based on the understanding that the proposed works to be undertaken will be as described in the introduction and the information referred to and provided by others and will be assumed to be correct and will not have been checked by JNP Group and JNP Group will not accept any liability or responsibility for any inaccuracy in such information.

1.1.3 Any deviation from the recommendations or conclusions contained in this report should be referred to JNP Group in writing for comment and JNP Group reserve the right to reconsider their recommendations and conclusions contained within. JNP Group will not accept any liability or responsibility for any changes or deviations from the recommendations noted in this report without prior consultation and our full approval.

1.1.4 The details contained within this report reflect the site conditions prevailing at the time of investigation. JNP Group warrants the accuracy of this report up to and including that date. Additional information, improved practice or changes in legislation may necessitate this report having to be reviewed in whole or in part after that date. If necessary, this report should be referred back to JNP Group for re-assessment and, if necessary, re-appraisal.

1.1.5 This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report. Whilst this report and the opinion made herein are correct to the best of JNP Groups' belief, JNP Group cannot guarantee the accuracy or completeness of any information provided by third parties.

1.1.6 The report represents the finding and opinions of experience geotechnical and geoenvironmental engineers. JNP Group does not provide legal advice and the advice of lawyers may also be required.

1.1.7 It should be noted that the following were not included as part of the agreed scope of works with the client: detailed ecological surveys and assessment.

1.1.8 JNP Group has provided advice and made recommendations based on the findings of the work undertaken, however this is subject to the approval / acceptance by the relevant regulatory authorities.

1.2 Objectives

1.2.1 The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be

considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JNP Group reserves the right to review such information and, if warranted, to modify the opinions accordingly. It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

1.3 Phase II Intrusive Investigations

1.3.1 The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made.

1.3.2 Where intrusive investigations have been undertaken they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature sampling, no investigation technique is capable of identifying all conditions present in all areas. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered. The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

1.3.3 The objectives of the investigation have been linked to establishing the risks associated with potential human targets, building materials, the environment (including adjacent land), and to surface and ground water. The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to areas unoccupied by the building(s) on the site and by buried services.

1.3.4 Gas and groundwater levels may vary from those reported due to seasonal, or other effects.

1.4 Gas Membranes

1.4.1 Where JNP Group are commissioned to undertake the inspection and validation of a gas membrane, we, at the time of inspection, will ensure that the membrane is laid in accordance with the relevant arrangements and sections. At that time we will ensure that the venting media is laid correctly in preparation of the membrane and we will ensure that any tears in the membrane or bad workmanship is reported and instructions given to be rectified. Thereafter it is the duty of the Principal Contractor to ensure that tears and defects are rectified.

1.5 Remediation and Verification Reports Limitations

1.5.1 The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

1.5.2 Where intrusive investigations have been undertaken they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature sampling, no investigation technique is capable of identifying all conditions present in all areas. The number of sampling points and the methods of sampling and testing do not preclude the

existence of localised “hotspots” of contamination where concentrations may be significantly higher than those actually encountered.

1.5.3 If costs have been included in relation to the site remediation these must be confirmed by a qualified quantity surveyor. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed from Third Party should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JNP Group reserves the right to review such information and, if warranted, to modify the opinions accordingly.

1.5.4 Whilst this report and the opinion made herein are correct to the best of JNP Groups’ belief, JNP Group cannot guarantee the accuracy or completeness of any information provided by third parties.

1.5.5 Gas and groundwater levels may vary from those reported due to seasonal, or other effects.

Appendix B Hazardous Waste Assessment

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

BZ0FG-G89WC-6YBZ0

Job name

Chapel Gate

Description/Comments

Made ground assessment with maximums

Project

B24367

Site

Chapel Gate

Classified by

Name:
Hilary Ilsley
Date:
20 Mar 2024 14:41 GMT
Telephone:
01926 889955

Company:
JNP Group
Mitaka House
4-12 Morton Street
Leamington Spa
CV32 5SY

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Chapel Gate, Scholes, Holmfirth **Post Code** HD91SX

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Residential development

Description of the specific process, sub-process and/or activity that created the waste

Waste created from remediation of contaminated soils

Description of the waste

Made ground consisted of brown to dark brown to black, clay, sand and gravel. The proportion of clay, sand and gravel varied between exploratory holes. The gravel fraction comprised tarmac, brick, pottery, mudstone and glass with rare clinker

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	Site max		Hazardous	HP 3(i), HP 7, HP 11, HP 14	3
2	WS2 lead		Hazardous	HP 7	6

Related documents

#	Name	Description
1	JNP Updated 2023 Standard	waste stream template used to create this Job

Report

Created by: Hilary Ilsley

Created date: 20 Mar 2024 14:41 GMT

Classification of sample: Site max

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
Site max	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.16%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.16%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]: (compound conc.: 0.396%)

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.16%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic pentoxide }				19 mg/kg	1.534	29.144 mg/kg	0.00291 %		
		033-004-00-6	215-116-9	1303-28-2							

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		1 mg/kg	1.233	1.233 mg/kg	0.000123 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		4.4 mg/kg	2.775	12.212 mg/kg	0.00122 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		2.2 mg/kg	3.22	7.084 mg/kg	0.000708 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.914 mg/kg	0.0000914 %		
6	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		670 mg/kg	1.462	979.242 mg/kg	0.0979 %		
7	copper { copper(II) oxide }	029-016-00-6	215-269-1	1317-38-0		110 mg/kg	1.252	137.695 mg/kg	0.0138 %		
8	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	0.3 mg/kg		0.3 mg/kg	0.00003 %		
9	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		24 mg/kg	2.637	63.28 mg/kg	0.00633 %		
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		
11	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		120 mg/kg	1.785	214.222 mg/kg	0.0214 %		
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		900 mg/kg	4.398	3958.133 mg/kg	0.396 %		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		0.99 mg/kg		0.99 mg/kg	0.000099 %		
14	acenaphthylene		205-917-1	208-96-8		0.79 mg/kg		0.79 mg/kg	0.000079 %		
15	acenaphthene		201-469-6	83-32-9		15 mg/kg		15 mg/kg	0.0015 %		
16	fluorene		201-695-5	86-73-7		8.5 mg/kg		8.5 mg/kg	0.00085 %		
17	phenanthrene		201-581-5	85-01-8		95 mg/kg		95 mg/kg	0.0095 %		
18	anthracene		204-371-1	120-12-7		25 mg/kg		25 mg/kg	0.0025 %		
19	fluoranthene		205-912-4	206-44-0		160 mg/kg		160 mg/kg	0.016 %		
20	pyrene		204-927-3	129-00-0		140 mg/kg		140 mg/kg	0.014 %		
21	benz[a]anthracene	601-033-00-9	200-280-6	56-55-3		90 mg/kg		90 mg/kg	0.009 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9		75 mg/kg		75 mg/kg	0.0075 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		87 mg/kg		87 mg/kg	0.0087 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		35 mg/kg		35 mg/kg	0.0035 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		79 mg/kg		79 mg/kg	0.0079 %		
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		10 mg/kg		10 mg/kg	0.001 %		
27	benzo[ghi]perylene		205-883-8	191-24-2		33 mg/kg		33 mg/kg	0.0033 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
28		indeno[123-cd]pyrene				31	mg/kg		31	mg/kg	0.0031 %		
			205-893-2	193-39-5									
29		TPH (C6 to C40) petroleum group				1600	mg/kg		1600	mg/kg	0.16 %		
				TPH									
30		confirm TPH has NOT arisen from diesel or petrol				☑							
										Total:	0.789 %		

Key

	User supplied data
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS2 lead

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
WS2 lead

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.14%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2		14 mg/kg	1.534	21.474 mg/kg	0.00215 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		220 mg/kg	1.233	271.369 mg/kg	0.0271 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.96 mg/kg	2.775	2.664 mg/kg	0.000266 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.8 mg/kg	3.22	5.796 mg/kg	0.00058 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.228 mg/kg	0.0000228 %		
6	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		21 mg/kg	1.462	30.693 mg/kg	0.00307 %		
7	copper { copper(II) oxide }	029-016-00-6	215-269-1	1317-38-0		48 mg/kg	1.252	60.085 mg/kg	0.00601 %		
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	1400 mg/kg		1400 mg/kg	0.14 %		
9	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }	080-002-00-6			1	0.3 mg/kg		0.3 mg/kg	0.00003 %		
10	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		15 mg/kg	2.637	39.55 mg/kg	0.00396 %		
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
12		vanadium { divanadium pentaoxide; vanadium pentoxide }				24	mg/kg	1.785	42.844	mg/kg	0.00428 %		
		023-001-00-8	215-239-8	1314-62-1									
13		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				120	mg/kg	4.398	527.751	mg/kg	0.0528 %		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
14		naphthalene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
		601-052-00-2	202-049-5	91-20-3									
15		acenaphthylene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
			205-917-1	208-96-8									
16		acenaphthene				0.21	mg/kg		0.21	mg/kg	0.000021 %		
			201-469-6	83-32-9									
17		fluorene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
			201-695-5	86-73-7									
18		phenanthrene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
			201-581-5	85-01-8									
19		anthracene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
			204-371-1	120-12-7									
20		fluoranthene				3.5	mg/kg		3.5	mg/kg	0.00035 %		
			205-912-4	206-44-0									
21		pyrene				3.3	mg/kg		3.3	mg/kg	0.00033 %		
			204-927-3	129-00-0									
22		benz[a]anthracene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				2.6	mg/kg		2.6	mg/kg	0.00026 %		
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.94	mg/kg		0.94	mg/kg	0.000094 %		
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				2.7	mg/kg		2.7	mg/kg	0.00027 %		
		601-032-00-3	200-028-5	50-32-8									
27		dibenz[a,h]anthracene				0.44	mg/kg		0.44	mg/kg	0.000044 %		
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
			205-883-8	191-24-2									
29		indeno[123-cd]pyrene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
			205-893-2	193-39-5									
30		confirm TPH has NOT arisen from diesel or petrol				☑							
										Total:	0.243 %		

Key

	User supplied data
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

- **barium sulphide** (EC Number: 244-214-4, CAS Number: 21109-95-5)

GB MCL index number: 016-002-00-X
Description/Comments:
Additional Hazard Statement(s): EUH031 >= 0.8 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH031 >= 0.8 % hazard statement sourced from: WM3, Table C12.2

- **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from ECHA's C&L inventory database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 30 Apr 2020
Hazard Statements: Acute Tox. 4; H302 , Skin Sens. 1; H317 , Eye Irrit. 2; H319

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

confirm TPH has NOT arisen from diesel or petrol

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

Appendix B: Rationale for selection of metal species

arsenic {arsenic pentoxide}

Worst case most likely species to be present

barium {barium sulphide}

Chromate less likley to be found on site

beryllium {beryllium oxide}

most likely species to be present on site

boron {diboron trioxide}

most likely species to be on site

cadmium {cadmium oxide}

most likely species present on site

chromium in chromium(III) compounds {chromium(III) oxide}

most likely species to be present on site

copper {copper(II) oxide}

most likely species to be present on site

mercury {inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex}

most likely species to be present on site

nickel {nickel sulfate}

worst case most likely species to be present on site

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

most likely species to be present on site

vanadium {divanadium pentaoxide; vanadium pentoxide}

Only choice available

zinc {zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]}

Chromate unlikley to be on site

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Chromate unlikley to be found on site

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2024.73.5982.11058 (13 Mar 2024)
HazWasteOnline Database: 2024.68.5980.11054 (09 Mar 2024)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021
GB MCL List v2.0 - version 2.0 of 20th October 2023

Appendix C Waste License and Environmental Permit

JNP GROUP
CONSULTING ENGINEERS

Environmental License and Permit Register

Material Description	EWC	Origin	Material carrier			Disposal site/Treatment works	
			Name	License Number	Expiry Date	Name	License No: Exemption Ref.

Appendix D Waste Disposal Records

Waste Disposal Log

Waste Disposal Records

Date Removed	Waste Type	Identifying of the person removing the waste	Site the waste of being taken to and whether licensed or exempt	Waste carrier and registration number	Confirmation of delivery*

*Evidence of waste carrier registration and waste transfer or hazardous waste consignment notes for each removal of waste should be provided either as part of the plan, or filed and cross references

Appendix E Imported Soil Documentation

IMPORTED SOIL DOCUMENTATION FORM

Stockpile Identification Reference	
Material Type	
Source Site	
Consignment Note Reference Numbers	
Volume of Stockpile (Or number of loads)	
Plots Material to be Used In	

Signed……..

Position……

Date…….....

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