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**Job name:** KMCPRP-139-010-049 A629 Halifax Road – Area C Prince Royd

**Job No:** S12427

**Report No:** S12427-JNP-XX-XX-RP-G-0004 P01 RMS Area C

**Date:** 07/03/2025

**Prepared by:** LK

**Approved by:** SLL

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## 1. Introduction

- 1.1 JNP Group were instructed by Kirklees Council to produce a remediation statement to address the remediation requirements at Area C – Prince Royd. This statement is subject to the limitations presented in Appendix A.
- 1.2 The proposed redevelopment layout is shown on drawing TF5/Area C/GA-1, produced by Kirklees Council, dated 21/06/2021, which is included in Appendix B. This comprises the development of the area for a car park with drainage and small areas of landscaping around the periphery. Development will require removal of a culvert which passes beneath the site with the void infilled with engineered fill, and raising levels generally for construction.
- 1.3 Any comments given are based on the understanding that the proposed redevelopment will be as detailed above.
- 1.4 Should there be any deviation from the agreed remediation approach outlined in this statement, then it may affect whether final discharge of any planning conditions pertaining to the site is granted by the Local Authority.
- 1.5 This report should be read in conjunction with the following JNP Group reports:
  - S12427-JNP-XX-XX-TN-G-1002 – Summary of Existing Ground Conditions and Ground Investigation – Area C (Prince Royd), dated 27/06/2024;
  - S12427-JNP-XX-XX-TN-G-1005 – Area C – Prince Royd – Culvert Sludge Sampling, dated 24/10/2024.
  - S12427-JNP-XX-XX-TN-G-1007 – Updated Conceptual Site Model – Area C (Prince Royd), dated 11/11/2024.

## 2. Remediation Requirements

- 2.1 Findings of the ground investigation summarised in the conceptual site model technical note (reference: S12427-JNP-XX-XX-TN-G-1007 CSM) concluded that the concentrations of contaminants within the soil do not pose a significant risk to human health. Although no elevated concentrations of contaminants have been identified as a risk to human health and controlled waters, where deleterious material is encountered it should be screened out of the soils.

# REMEDIATION STATEMENT

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- 2.2 The sludge within the culvert was sampled by JNP (S12427-JNP-XX-XX-TN-G-1005) and it was concluded that the concentration of contaminants do not pose a risk to human health or controlled waters.

#### Hazardous Waste Assessment

- 2.3 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). The concentrations of waste, taken from the sludge remaining in the culvert, are considered to be non-hazardous. A copy of this is included in Appendix C. However, from a disposal perspective the high TOC result and “sludge” nature of the material may affect this and therefore discussion with the intended waste receiver is required to ensure that this material is managed and disposed of appropriately.

### **3. Implementation Plan**

- 3.1 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.
- 3.2 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).

#### Programme of Works

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

- Surface strip / concrete breaking out;
- Removal of existing culvert as described in drawing TF5/Area C/EW-1 dated, 03/05/2024;
- Removal of material associated with the existing culvert to a designated waste receiver;
- Infill of the culvert void with suitable and inert engineered fill;
- Importation of topsoil / subsoil;
- Earthworks monitoring;
- Construction phase.

#### Material Requiring Excavation

- 3.4 The area of ground requiring excavation, in relation with the removal of the culvert is shown on drawing TF5/Area C/GA-1, produced by Kirklees Council, dated 21/06/2021 (included in Appendix B). 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. Material from site can be disposed of as non-hazardous waste at a suitable waste receiver.
- 3.5 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 D, detailing the waste codes, haulier and waste receiver details should be completed by the Contractor for each

# REMEDIATION STATEMENT

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waste material generated requiring removal. In addition, all material removed off-site shall be logged on the Waste Disposal Log form given in Appendix E. The completed waste management form, duty of care and consignment notes shall be provided to JNP Group for inclusion in the Verification Report.

## Specifics for Growing Medium Layer

- 3.6 In the landscaping areas as previously described, the growing medium layer thickness is to be 300 mm and no deleterious material should be present.

## Imported Fill

- 3.7 Any imported 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 for 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.
- 3.8 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 4.1 and 4.2.
- 3.9 The reader is referred to Section 4 for chemical testing requirements.
- 3.10 Records of imported fill bought onto site should be documented using the form given in Appendix F.

## Dealing with Unexpected Contamination

- 3.11 There is the potential for areas of previously unidentified and unexpected contamination to be present at the site, such as ashy soils, brightly coloured soils, oily or odorous material, asbestos impacted soils and underground tanks.
- 3.12 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.
- 3.13 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. Validation Plan**

- 4.1 JNP Group shall attend site in the event of encountering any unexpected possible contamination. As the concentrations of contaminants present on site do not pose a risk to human health, validation is not required unless unexpected contamination is encountered.

### Validation Excavation Level Testing

- 4.2 Following the excavation of any unexpected contamination, soil samples shall be taken by JNP Group and tested for an appropriate testing suite. The results shall be compared to the criteria given in Tables 4.2 and 4.3 provided they are acceptable the area can be backfilled.
- 4.3 Should the chemical results fail then further material shall be excavated (it is suggested by 200 mm)

and the new excavation level sampled and tested as above.

- 4.4 All chemical testing shall be undertaken by a UKAS and MCERTS accredited testing laboratory using standard turnaround times.

Validation Chemical Testing – Imported Fill

- 4.5 Chemical testing certificates should be available for any imported subsoil or topsoil, however, based on the NHBC guidance, each imported material used must have a minimum of three tests. This sampling shall be undertaken by JNP Group.
- 4.6 All chemical testing shall be undertaken by a UKAS and MCERTS accredited testing laboratory.
- 4.7 Any chemical testing results shall be compared to the screening values given in Table 4.1. As the final end use of the site is a residential apartment building without private gardens, current UK residential without plant uptake guideline values have been selected for use.
- 4.8 In addition, as copper, nickel and zinc are considered phytotoxic in nature the criteria given in Table 4.3 should be used (these values are less than the published UK screening values and hence are considered protective of human health).

**Table 4.1: Comparison of Soil Chemical Test Results with Residential without plant uptake Guideline Values**

Determinant	LQM/CIEH S4UL: Residential without plant uptake Value (mg/kg)		
	1%	2.5%	6%
Arsenic	40		
Beryllium	1.7		
Boron	11000		
Cadmium	85		
Chromium (total or trivalent)*	910		
Chromium (hexavalent)	6		
Copper	7100		
Lead	310**		
Mercury (elemental)	1.2		
Mercury (inorganic)	56		
Mercury (methyl)	15		
Nickel	180		
Selenium	430		
Vanadium	1200		
Zinc	40000		
	1%	2.5%	6%
Benzene	0.38	0.7	1.4
Toluene	880	1900	3900
Ethylbenzene	83	190	440
p-xylene	79	180	430
o-xylene	88	210	480
Phenol	750	1300	2300
Naphthalene	2.3	5.6	13
Acenaphthylene	2900	4600	6000
Acenaphthene	3000	4700	6000
Fluorene	2800	3800	4500
Phenanthrene	1300	1500	1500

# REMEDIATION STATEMENT

Determinant	LQM/CIEH S4UL: Residential without plant uptake Value (mg/kg)		
Anthracene	31000	35000	37000
Fluoranthene	1500	1600	1600
Pyrene	3700	3800	3800
Benzo(a)anthracene	11	14	15
Chrysene	30	31	32
Benzo(b)fluoranthene	3.9	4.0	4.0
Benzo(k)fluoranthene	110	110	110
Benzo(a)pyrene	3.2	3.2	3.2
Indeno(1,2,3-c,d)pyrene	45	46	46
Dibenzo(a,h)anthracene	0.31	0.32	0.32
Benzo(g,h,i)perylene	360	360	360
TPH Aliphatic C <sub>5</sub> – C <sub>6</sub>	42	78	160
TPH Aliphatic C <sub>6</sub> – C <sub>8</sub>	100	230	530
TPH Aliphatic C <sub>8</sub> – C <sub>10</sub>	27	65	150
TPH Aliphatic C <sub>10</sub> – C <sub>12</sub>	130	330	770
TPH Aliphatic C <sub>12</sub> – C <sub>16</sub>	1100	2400	4400
TPH Aliphatic C <sub>16</sub> – C <sub>35</sub>	65000	92000	110000
TPH Aromatic C <sub>5</sub> – C <sub>7</sub>	370	690	1400
TPH Aromatic C <sub>7</sub> – C <sub>8</sub>	860	1800	3900
TPH Aromatic C <sub>8</sub> – C <sub>10</sub>	47	110	270
TPH Aromatic C <sub>10</sub> – C <sub>12</sub>	250	590	1200
TPH Aromatic C <sub>12</sub> – C <sub>16</sub>	1800	2300	2500
TPH Aromatic C <sub>16</sub> – C <sub>21</sub>	1900	1900	1900
TPH Aromatic C <sub>21</sub> – C <sub>35</sub>			
TPH C <sub>6</sub> -C <sub>10</sub> (TPH aliphatic C <sub>8</sub> -C <sub>10</sub> ***)	27	65	150
TPH C <sub>10</sub> -C <sub>25</sub> (TPH aliphatic C <sub>10</sub> -C <sub>12</sub> ***)	130	330	770
TPH C <sub>25</sub> -C <sub>40</sub> (TPH aromatic C <sub>21</sub> -C <sub>35</sub> ***)	1900	1900	1900
Asbestos			

5. \*assumes all chromium on site is in trivalent form
6. \*\*provisional C4SL
7. \*\*\*most sensitive fraction within wider TPH band (specified)

**Table 4.2: Imported Fill Screening Values**

Determinant	Screening Criteria (mg/kg)	Source	Determinant	Screening Criteria (mg/kg)	Source
TPH Aliphatic C <sub>5</sub> – C <sub>6</sub>	42	LQM S4UL	Acenaphthylene	5.3	Professional judgement <sup>6</sup>
TPH Aliphatic C <sub>6</sub> – C <sub>8</sub>	100	LQM S4UL	Acenaphthene	5.3	Professional judgement <sup>6</sup>
TPH Aliphatic C <sub>8</sub> – C <sub>10</sub>	27	LQM S4UL	Anthracene	5.3	Professional judgement <sup>6</sup>
TPH Aliphatic C <sub>10</sub> – C <sub>12</sub>	130	LQM S4UL	Benzo(a)anthracene	5.3	Professional judgement <sup>6</sup>
TPH Aliphatic C <sub>12</sub> – C <sub>16</sub>	250	Professional judgement <sup>1</sup>	Benzo(a)pyrene	5.3	Defra C4SL <sup>4</sup>
TPH Aliphatic C <sub>16</sub> – C <sub>21</sub>	250	Professional judgement <sup>1</sup>	Benzo(b)fluoranthene	5.3	Professional judgement <sup>6</sup>
TPH Aliphatic C <sub>21</sub> – C <sub>35</sub>	250	Professional judgement <sup>1</sup>	Benzo(k)fluoranthene	5.3	Professional judgement <sup>6</sup>
TPH Aromatic C <sub>5</sub> – C <sub>7</sub>	3.3	Professional judgement <sup>6</sup>	Benzo(g,h,i)perylene	5.3	Professional judgement <sup>6</sup>

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Determinant	Screening Criteria (mg/kg)	Source	Determinant	Screening Criteria (mg/kg)	Source
TPH Aromatic C <sub>7</sub> – C <sub>8</sub>	250	Professional judgement <sup>1</sup>	Chrysene	5.3	Professional judgement <sup>6</sup>
TPH Aromatic C <sub>8</sub> – C <sub>10</sub>	47	LQM S4UL	Dibenzo(a,h)anthracene	0.31	LQM S4UL
TPH Aromatic C <sub>10</sub> – C <sub>12</sub>	250	LQM S4UL	Fluoranthene	5.3	Professional judgement <sup>6</sup>
TPH Aromatic C <sub>12</sub> – C <sub>16</sub>	250	Professional judgement <sup>1</sup>	Fluorene	5.3	Professional judgement <sup>6</sup>
TPH Aromatic C <sub>16</sub> – C <sub>21</sub>	250	Professional judgement <sup>1</sup>	Indeno(1,2,3,c-d)pyrene	5.3	Professional judgement <sup>6</sup>
TPH Aromatic C <sub>21</sub> – C <sub>35</sub>		Professional judgement <sup>1</sup>	Naphthalene	2.3	LQM S4UL
			Pyrene	5.3	Professional judgement <sup>6</sup>
Arsenic	40	Defra C4SL <sup>4</sup>	Phenanthrene	5.3	Professional judgement <sup>6</sup>
Cadmium	149	Defra C4SL <sup>4</sup>			
Chromium	910 <sup>2</sup>	LQM S4UL	Nickel	pH dependent	Refer to Table 5.2
Mercury	56 <sup>3</sup>	LQM S4UL	Selenium	430	LQM S4UL
Lead	310	Defra C4SL <sup>4</sup>	Benzene	3.3	Defra C4SL <sup>4</sup>
Copper	pH dependent	Refer to Table 5.2	Toluene	250	Professional judgement <sup>1</sup>
Zinc	pH dependent	Refer to Table 5.2	Ethylbenzene	83	LQM S4UL
asbestos	None present	CIRIA C733	Xylene	79 <sup>5</sup>	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 4.3: 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

## Verification Reporting

- 7.1 Following the completion of the remediation works a Verification Report shall be produced by JNP Group that details the remediation work undertaken, any validation testing undertaken, and the details of any material removed from or bought to the site.

## Recommendations

# REMEDICATION STATEMENT

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- 7.2 It is recommended that a copy of this report is submitted to the regulatory authorities for their approval prior to any remediation work being undertaken.

# REMEDIATION STATEMENT

## Document Issue Record

Required changes	Rev	Date	Prepared	Reviewed	Approved
~	P01	07/03/2025	LK	HI	SLL

## List of Appendices

<i>Appendix A</i>	<i>Limitations</i>
<i>Appendix B</i>	<i>Drawings</i>
<i>Appendix C</i>	<i>Hazardous Waste Assessment</i>
<i>Appendix D</i>	<i>Waste License and Permit Register</i>
<i>Appendix E</i>	<i>Waste Disposal Records</i>
<i>Appendix F</i>	<i>Imported Soil Documentation</i>

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*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. The information referred to and provided by others and will be assumed to be correct and will not have been checked by JNP Group, JNP Group will not accept any liability or responsibility for any inaccuracy in such information.*

*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.*

## **Appendix A**

### **Limitations**

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## INTRODUCTION

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.

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.

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.

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.

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 Group' belief, JNP Group cannot guarantee the accuracy or completeness of any information provided by third parties.

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

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; groundwater monitoring and sampling; geotechnical requirements etc.

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.

### Objectives

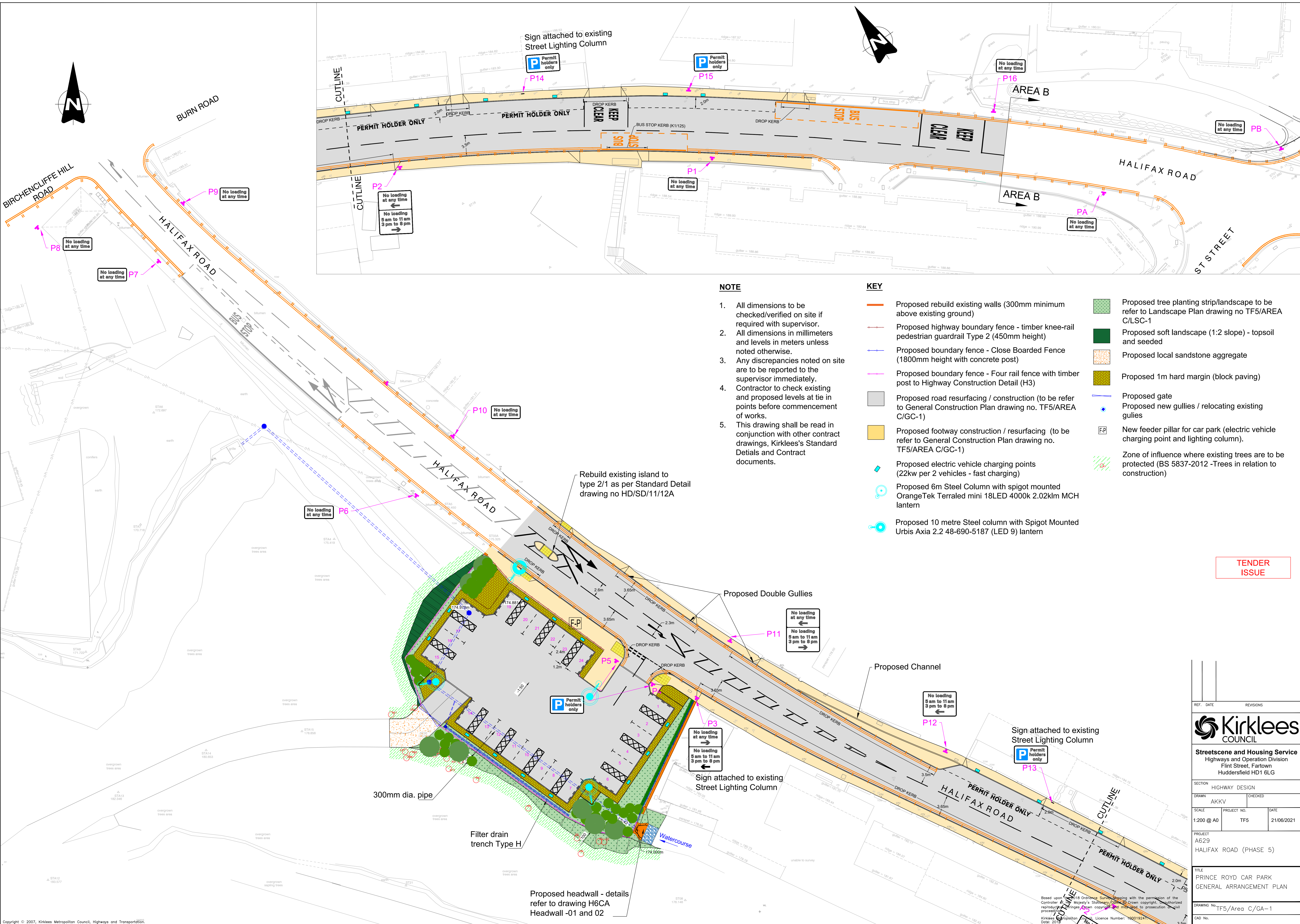
The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site. The opinions given in this report have been dictated by the finite 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.

## **Appendix B**

### **Drawings**

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**NOTE**

1. All dimensions to be checked/verified on site if required with supervisor.
2. All dimensions in millimeters and levels in meters unless noted otherwise.
3. Any discrepancies noted on site are to be reported to the supervisor immediately. Contractor to check existing and proposed levels at tie in points before commencement of works.
4. This drawing shall be read in conjunction with other contract drawings, Kirklees's Standard Details and Contract documents.

**KEY**

- Proposed rebuild existing walls (300mm minimum above existing ground)
- Proposed highway boundary fence - timber knee-rail pedestrian guardrail Type 2 (450mm height)
- Proposed boundary fence - Close Boarded Fence (1800mm height with concrete post)
- Proposed boundary fence - Four rail fence with timber post to Highway Construction Detail (H3)
- Proposed road resurfacing / construction (to be refer to General Construction Plan drawing no. TF5/AREA C/GC-1)
- Proposed footway construction / resurfacing (to be refer to General Construction Plan drawing no. TF5/AREA C/GC-1)
- Proposed electric vehicle charging points (22kw per 2 vehicles - fast charging)
- Proposed 6m Steel Column with spigot mounted OrangeTek TerraLED mini 18LED 4000k 2.02klm MCH lantern
- Proposed 10 metre Steel column with Spigot Mounted Urbis Axia 2.2 48-690-5187 (LED 9) lantern
- Proposed tree planting strip/landscape to be refer to Landscape Plan drawing no TF5/AREA C/LSC-1
- Proposed soft landscape (1:2 slope) - topsoil and seeded
- Proposed local sandstone aggregate
- Proposed 1m hard margin (block paving)
- Proposed gate
- Proposed new gullies / relocating existing gullies
- New feeder pillar for car park (electric vehicle charging point and lighting column).
- Zone of influence where existing trees are to be protected (BS 5837-2012 -Trees in relation to construction)

**TENDER ISSUE**

Rebuild existing island to type 2/1 as per Standard Detail drawing no HD/SD/11/12A

Proposed Double Gullies

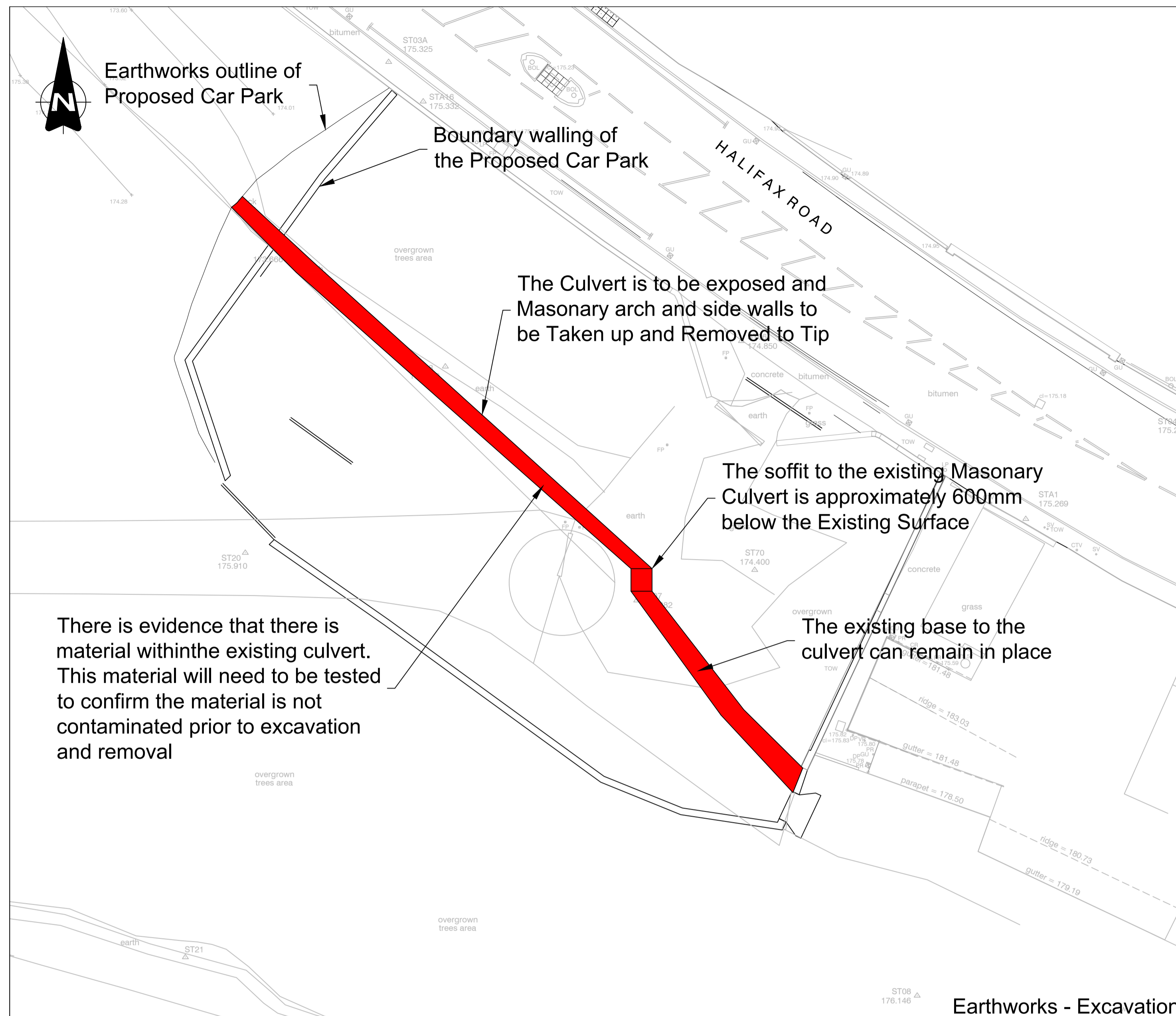
Proposed Channel

300mm dia. pipe

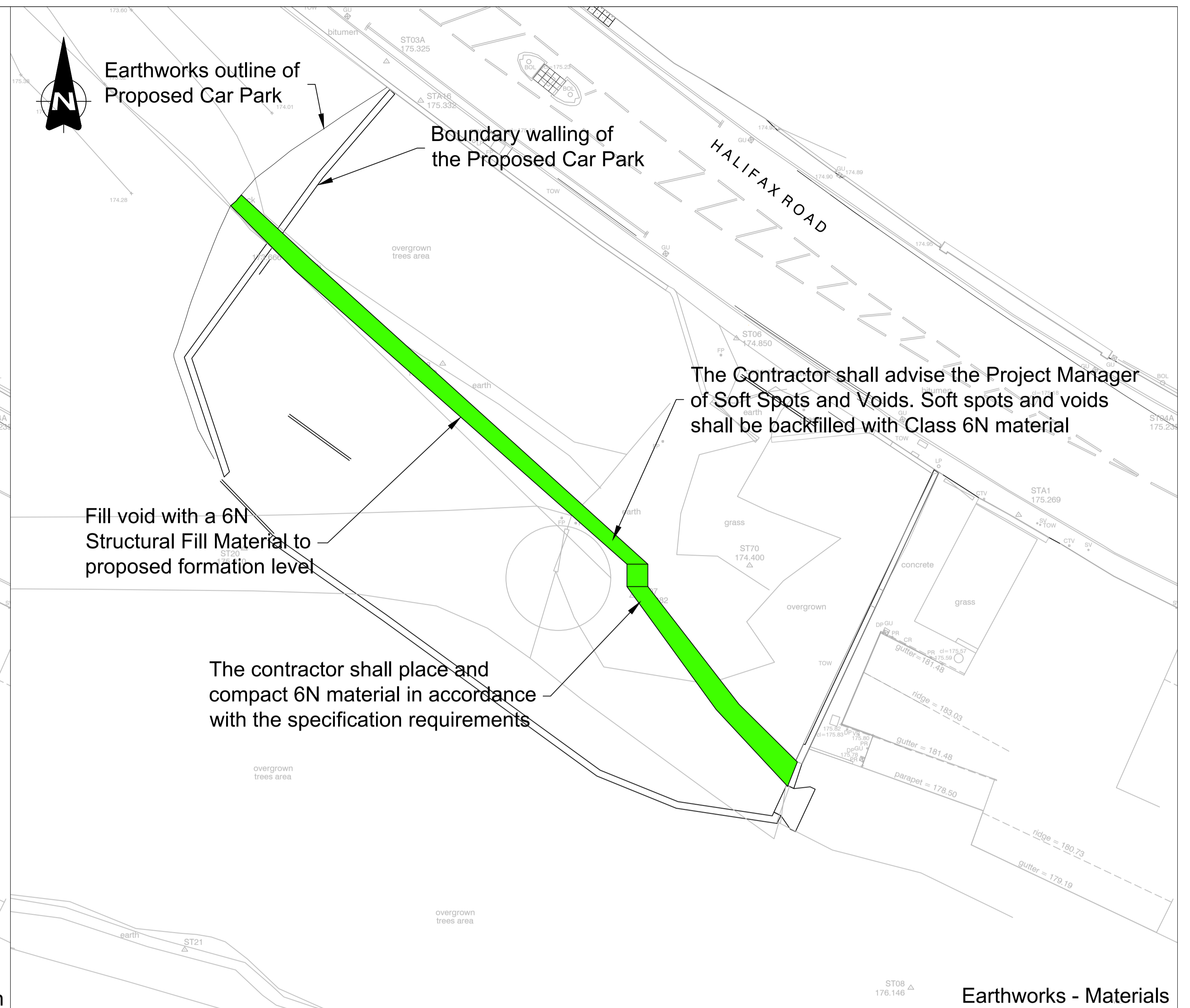
Filter drain trench Type H

Proposed headwall - details refer to drawing H6CA Headwall -01 and 02

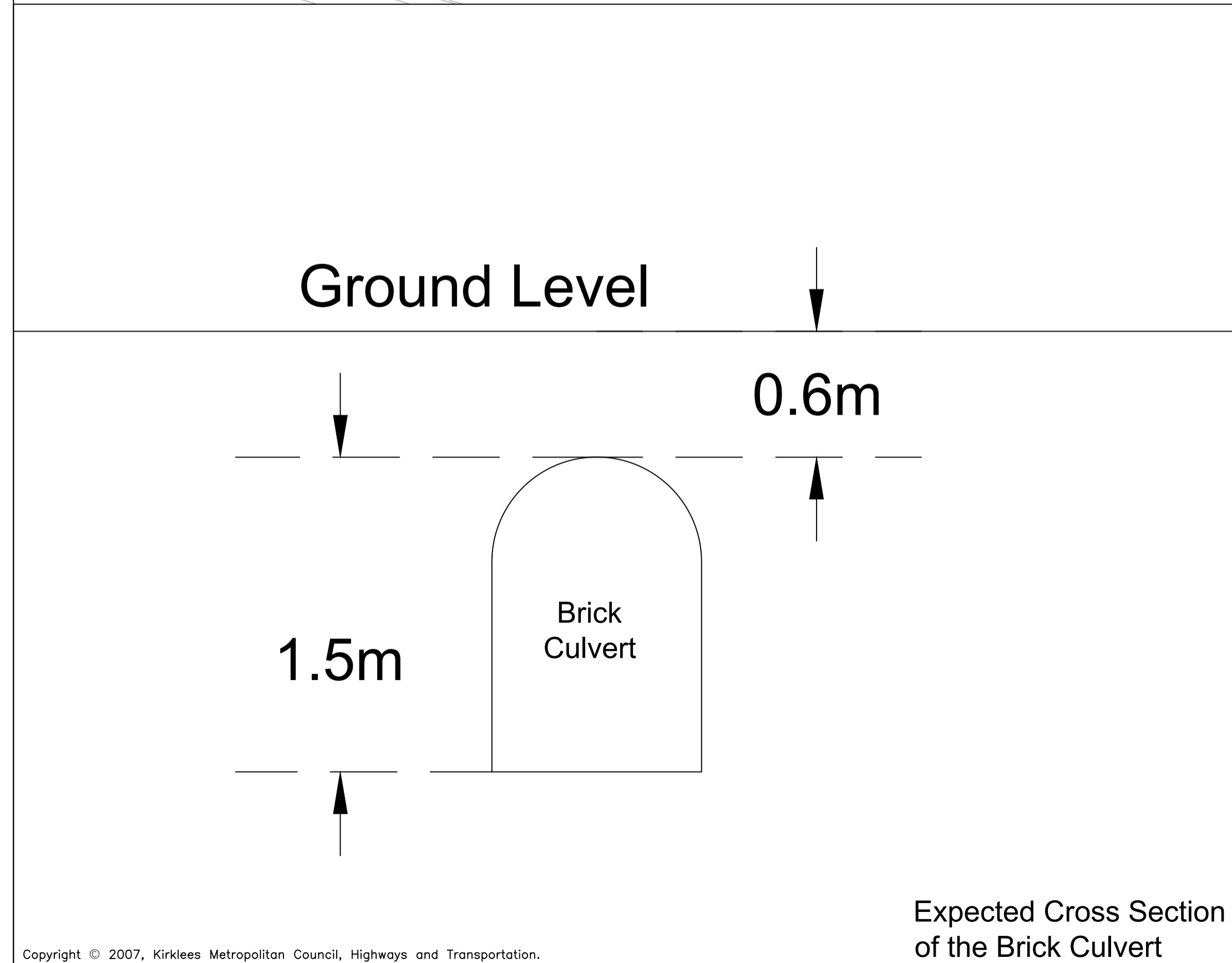
REF.	DATE	REVISIONS
 <b>Kirklees COUNCIL</b>		
<b>Streetscene and Housing Service</b> Highways and Operation Division Flint Street, Fartown Huddersfield HD1 6LG		
SECTION	HIGHWAY DESIGN	
DRAWN	AKKV	CHECKED
SCALE	PROJECT NO.	DATE
1:200 @ A0	TF5	21/06/2021
PROJECT	A629	
HALIFAX ROAD (PHASE 5)		
TITLE	PRINCE ROYD CAR PARK GENERAL ARRANGEMENT PLAN	
DRAWING No.	TF5/Area C/GA-1	
CAD No.		



Earthworks - Excavation



Earthworks - Materials



**NOTES**

1. ALL DIMENSIONS TO BE CHECKED/VERIFIED ON SITE IF REQUIRED WITH SUPERVISOR.
2. ALL DIMENSIONS IN MILLIMETERS AND LEVELS IN METRES UNLESS NOTED OTHERWISE.
3. ANY DISCREPANCIES NOTED ON THE SITE ARE TO BE REPORTED TO THE SUPERVISOR IMMEDIATELY.
4. THE ALIGNMENT INDICATED IS APPROXIMATE, AND THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF THE CULVERT.
5. CONTRACTOR TO CHECK EXISTING AND PROPOSED LEVELS AT TIE IN POINTS BEFORE COMMENCEMENT OF WORKS.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS AND DRAWINGS.
7. MATERIAL SHALL BE TESTED PRIOR TO DISPOSAL TO CONFIRM NO CONTAMINATION.
8. GROUNDWATER MAY BE PRESENT WITHIN THE EXCAVATION.
9. THE CONTRACTOR SHALL ADVISE THE PROJECT MANAGER OF ANY EXISTING CONNECTIONS TO THE EXISTING CULVERT.

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Date: 2018

<b>TENDER ISSUE</b>	
A	28.03.24 Drawing Updated to Tender Issue
REF.	DATE
REVISIONS	
<b>Highways Service</b> Highway Design & S278 Environment and Climate Change PO Box 1720 Huddersfield HD1 9LE	
SECTION	HIGHWAY DESIGN
DRAWN	BD
CHECKED	
SCALE	PROJECT NO.
NTS	TF5
DATE	03/05/2024
PROJECT	A629
HALIFAX ROAD (PHASE 5)	
TITLE	AREA C
EARTHWORKS TO REDUNDANT BRICK CULVERT	
DRAWING No.	TF5/AREA C/EW-1
CAD No.	

## **Appendix C**

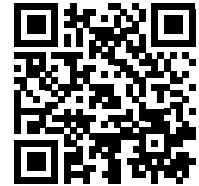
# **Hazardous Waste Assessment**

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## 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:

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



7SSZO-6NZAC-EUEO4

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

### Job name

KMCPRP-139-010-049 A629 Halifax Road

### Description/Comments

Disposal of sludge from historic culvert.

### Project

S12427

### Site

A629 Halifax Road

### Classified by

Name:	Company:
<b>Hilary Ilsley</b>	<b>JNP Group</b>
Date:	<b>Mitaka House</b>
<b>21 Oct 2024 15:16 GMT</b>	<b>4-12 Morton Street</b>
Telephone:	<b>Leamington Spa</b>
<b>01926 889955</b>	<b>CV32 5SY</b>

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**

Hazardous Waste Classification

**Date**

-

### Purpose of classification

7 - Disposal of Waste

### Address of the waste

A629 Halifax Road

Post Code HD3 3NQ

### SIC for the process giving rise to the waste

43110 Demolition

### Description of industry/producer giving rise to the waste

Kirklees Council

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

Removal of sludge from historical culvert during construction of new car park.

### Description of the waste

Sludge

### Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP1 1.0m	1.0	Non Hazardous		3

### Related documents

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

### Report

Created by: Hilary Ilesley

Created date: 21 Oct 2024 15:16 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	5
Appendix B: Rationale for selection of metal species	6
Appendix C: Version	7

Classification of sample: TP1 1.0m

✔ **Non Hazardous Waste**  
Classified as **17 05 04**  
in the List of Waste

**Sample details**

Sample name:	LoW Code:	
<b>TP1 1.0m</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>1.0 m</b>		

**Hazard properties**

None identified

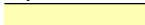


**Determinands**

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 }				51	mg/kg	1.534	78.228	mg/kg	0.00782 %		
	033-004-00-6	215-116-9	1303-28-2									
2	barium { barium sulphide }				350	mg/kg	1.233	431.723	mg/kg	0.0432 %		
	016-002-00-X	244-214-4	21109-95-5									
3	beryllium { beryllium oxide }				1.7	mg/kg	2.775	4.718	mg/kg	0.000472 %		
	004-003-00-8	215-133-1	1304-56-9									
4	boron { diboron trioxide }				3.6	mg/kg	3.22	11.592	mg/kg	0.00116 %		
	005-008-00-8	215-125-8	1303-86-2									
5	cadmium { cadmium sulfate }				1.1	mg/kg	1.855	2.04	mg/kg	0.000204 %		
	048-009-00-9	233-331-6	10124-36-4									
6	chromium in chromium(III) compounds { chromium(III) oxide }				60	mg/kg	1.462	87.693	mg/kg	0.00877 %		
		215-160-9	1308-38-9									
7	copper { copper(II) oxide }				260	mg/kg	1.252	325.462	mg/kg	0.0325 %		
	029-016-00-6	215-269-1	1317-38-0									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	140	mg/kg		140	mg/kg	0.014 %		
	082-001-00-6											
9	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }			1	0.26	mg/kg		0.26	mg/kg	0.000026 %		
	080-002-00-6											
10	nickel { nickel sulfate }				87	mg/kg	2.637	229.392	mg/kg	0.0229 %		
	028-009-00-5	232-104-9	7786-81-4									
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1	mg/kg	1.405	1.405	mg/kg	0.000141 %		
	034-002-00-8											
12	vanadium { divanadium pentaoxide; vanadium pentoxide }				69	mg/kg	1.785	123.178	mg/kg	0.0123 %		
	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] }				400	mg/kg	4.398	1759.17	mg/kg	0.176 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
14	naphthalene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
	601-052-00-2	202-049-5	91-20-3									

#	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							
15	acenaphthylene	205-917-1	208-96-8		0.1 mg/kg		0.1 mg/kg	0.00001 %		
16	acenaphthene	201-469-6	83-32-9		0.2 mg/kg		0.2 mg/kg	0.00002 %		
17	fluorene	201-695-5	86-73-7		0.1 mg/kg		0.1 mg/kg	0.00001 %		
18	phenanthrene	201-581-5	85-01-8		0.3 mg/kg		0.3 mg/kg	0.00003 %		
19	anthracene	204-371-1	120-12-7		0.1 mg/kg		0.1 mg/kg	0.00001 %		
20	fluoranthene	205-912-4	206-44-0		0.4 mg/kg		0.4 mg/kg	0.00004 %		
21	pyrene	204-927-3	129-00-0		0.5 mg/kg		0.5 mg/kg	0.00005 %		
22	benz[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.1 mg/kg		0.1 mg/kg	0.00001 %		
23	chrysene	601-048-00-0	205-923-4	218-01-9	0.1 mg/kg		0.1 mg/kg	0.00001 %		
24	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.1 mg/kg		0.1 mg/kg	0.00001 %		
25	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.1 mg/kg		0.1 mg/kg	0.00001 %		
26	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.1 mg/kg		0.1 mg/kg	0.00001 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.1 mg/kg		0.1 mg/kg	0.00001 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		0.1 mg/kg		0.1 mg/kg	0.00001 %		
29	indeno[123-cd]pyrene	205-893-2	193-39-5		0.1 mg/kg		0.1 mg/kg	0.00001 %		
30	confirm TPH has NOT arisen from diesel or petrol				<input checked="" type="checkbox"/>					
Total:								0.32 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - 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

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## Appendix A: Classifier defined and non GB MCL determinands

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- **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

- **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](http://www.reach-lead.eu/substanceinformation.html) (worst case lead compounds). Review date 29/09/2015

- **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

▪ **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.

**Appendix B: Rationale for selection of metal species**

**arsenic {arsenic pentoxide}**

Worst case most likely species to be present

**barium {barium sulphide}**

Chromate less likely 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 sulfate}**

Worst case species (edit as required)

**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

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

Chromate unlikely to be found 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 pentoxide; vanadium pentoxide}**

Only choice available

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

Chromate unlikely to be on site

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## Appendix C: Version

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HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**  
HazWasteOnline Classification Engine Version: 2024.289.6294.11540 (15 Oct 2024)  
HazWasteOnline Database: 2024.289.6294.11540 (15 Oct 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

**GB MCL List v3.0** - version 3.0 of 11th January 2024

**GB MCL List v4.0** - version 4.0 of 2nd March 2024

**GB MCL List v5.0** - version 5.0 of 26th June 2024

## **Appendix D**

# **Waste License and Permit Register**

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## **Appendix E**

# **Waste Disposal Records**

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## **Appendix F**

# **Imported Soil Documentation**

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**IMPORTED SOIL DOCUMENTATION FORM**

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

**Signed**.....

**Position**.....

**Date**.....