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PHASE 3 REMEDIATION STATEMENT

SITE 1

THE STRAND PHASE 2

ROCHDALE

OL11 2JG



19-B-12322

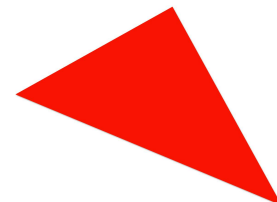
OCTOBER 2020

Principal: **D.J. Middleton BEng(Hons) CEng MStructE**

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Report Title:	Site 1, The Strand Phase 2
Report Reference:	19-B-12322
Client:	Rochdale Borough Housing
Issue Date:	12th October 2020
Authorised By:	D.J. Middleton

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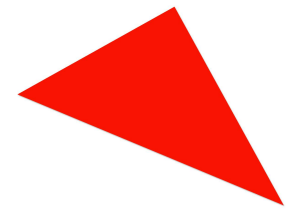
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1.0 INTRODUCTION

This report has been prepared in response to a request from Messrs Rochdale Borough Housing to facilitate the remediation management during site works. This is in support of Planning submission Application reference 20/00293/FUL 'Land at Kirkway. Aldwych and the Strand Kirkholt, Rochdale OL11 2JG'.

The site is located off Daventry Road in Rochdale, at approximate National Grid Reference NGR 389650,410800 and at post code OL11 2JG.

2.0 PROPOSED DEVELOPMENT

The proposed development comprises of 32 new houses with associated drives and gardens and an adopted access road.

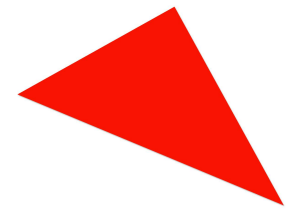
3.0 PHASE 1 / 2 SITE INVESTIGATIONS

Separate Phase 1 & Phase 2 investigations have been undertaken by Messrs Carley Daines and Partners and Terraconsult as below. This report is strictly in accordance with the findings of these reports. Appendix 2 shows which reports relate to which areas.

- Carley Daines Phase 1 PRA dated May 2014
- Carley Daines Phase 2 report dated April 2016
- Terraconsult Phase 2 report 4375/01 dated May 2019
- Terraconsult Supplementary Phase 2 report 4794/R001 dated December 2019
- Terraconsult Phase 2 report 4794/02 dated March 2020

The subject site is irregular in shape and covers an area of approximately 8000m² (0.80 hectares). The site is at a mean elevation of 170m AOD.

The site currently previously comprised significant development, comprising mixed usage of a Community Centre, residential units, shops, highways, and hard & soft landscaping. After demolition the site is now clear.



The surrounding area is generally similar in nature, forming a large residential housing estate constructed in the 1950s.

The risk of mining is low.

The Phase 2 Ground Investigations from 2016 comprised of 10 window samples to a maximum depth of 6.0m, as well as 2 trial pits. The 2019 Phase 2 investigation comprised of a further 14 window samples to a depth of 5.5m.

4.0 REVIEW OF CONTAMINATION RESULTS

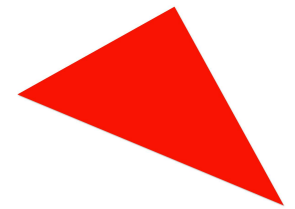
Testing was carried out on soil samples selected from trail pits and window sample holes. Tests were undertaken for the following contaminants:

- Heavy metals/metals
- PAH (USEPA16)
- Asbestos
- TPH

The various report indicated that there are slightly elevated concentrations of contaminants present on the site, but generally these are shown to be below the depth of human influence. This is aside from zone 2 (See Appendix 2) where the report indicated that there are slightly elevated concentrations of benzo(a)pyrene. However, this elevated level (2.8mg/kg) was predicated on a threshold at the time (2016) of 0.83mg/kg – legislation has now changed and the threshold is 5.0mg/kg. This level of contamination can therefore be considered as not a potential risk to human health.

5.0 REMEDIATION STRATEGY

Following a review of the Phase 2 Site Investigations, and comparison with published sources, it is our opinion that the identified levels of soil contamination are not sufficient to pose a threat to future health.



Generally, it is also widely accepted that there is a significant factor of safety built into maximum soil contamination levels, and therefore the recorded levels are typically well below safe levels, rather than being close to the actual threshold.

However, it is important that a “watching brief” is maintained during the course of the groundworks. This is to identify and investigate any unexpected/unforeseen contamination that might arise or be identified.

The watching brief should be undertaken by a suitably qualified equivalent professional firm. In the event that contamination is identified or suspected, notification should be by the contractor’s on-site personnel as soon as possible. If elevated levels of contamination are encountered, then we would recommend that in soft landscaping in such areas are constructed as follows:-

- An upper layer of 150mm of clean inert topsoil
- A lower layer of 450mm of clean inert subsoil

Also reference to section 7.0 (below) should be made but in this scenario we would concur with the findings of the Phase 2 Investigations that contaminated material may be safely left on site, providing the end user is protected by a suitable clean capping layer in the areas stipulated.

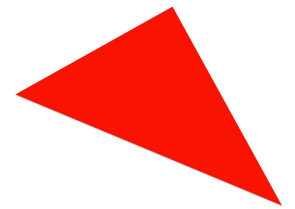
6.0 GROUND GASES

Ground gas monitoring confirmed that mitigation and protection measures are required to Zone 3 only (see attached Appendix 2), with a classification of CS2/Amber 1. In all other areas the site is given a classification of CS-1/Green.

Also, a ventilated sub-floor void below a beam and block concrete floor sealed with a screed would be prudent.

7.0 VALIDATION (REQUIRED ONLY IF SITE WORKS UNCOVER GROUND CONDITIONS PREVIOUSLY UNIDENTIFIED IN PHASE 2 SITE INVESTIGATIONS)

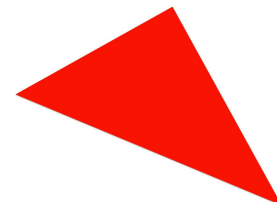
Validation may be required on completion. In order to ensure that all elements of this Remediation Statement are properly implemented, a final Validation Report will be prepared by Carley Daines



and Partners Limited or an alternative appropriately qualified consultant, confirming that the remedial works have been completed.

The validation report will confirm the following:

- Confirmation that the proposed clean cover materials are suitable for the proposed end use. This will be undertaken by recovery of representative soil samples after importation for testing.
- A testing regime on imported material will be carried out, including testing one sample per 50m³ of imported material (from a brownfield source) and one sample per 200m³ of imported material (from a greenfield source). A minimum of 3 such samples will be carried out for materials from differing types and from different sources.
- Depths of imported material will be verified by photographs on a plot by plot basis.
- Any material removed from site must have appropriate waste transfer documentation to confirm appropriate removal and disposal.



A summary of actions is listed in the table hereunder:

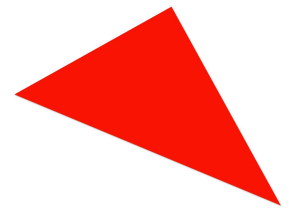
Summary of Action	
Action	Person Responsible
Site Management procedures to protect site neighbours, environment and amenity during works, including a) Health & Safety plans and procedures b) Dust, noise & odour suppression/controls, including monitoring protocols c) Control of surface water runoff d) Site Waste Management Plan (SWMP)	Main Contractor
Assessment of ground conditions if unanticipated or obviously very high levels of contamination are uncovered, plus appropriate additional testing of such material.	Main Contractor CD&P Ltd. NHBC Building Control
Method Statement indicating the procedure for removal of potentially contaminated material, and placement of clean cover throughout all areas of soft landscaping within the development	Main Contractor
Provide suitable protection to site utilities in accordance with the requirements of the service provider	Main Contractor/Engineering consultant
Witness/verify the placement of correct thickness of clean cover materials in accordance with the methodology	CD&P Ltd.
Laboratory testing to confirm the suitability of the clean cover materials post placement	CD&P Ltd
Completion of post-site works Final Validation Report	CD&P Ltd

SIGNED

DAVID MIDDLETON

CARLEY DAINES AND PARTNERS LIMITED

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APPENDIX 1

SITE LAYOUT



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■TRIANGLE ARCHITECTS LIMITED ASSERTS ITS RIGHTS TO BE IDENTIFIED AS THE AUTHOR OF THIS DESIGN.

■DRAWING NOT TO BE SCALED. FIGURED DIMENSIONS TO BE WORKED TO IN ALL CASES.

■THE CONTRACTOR IS RESPONSIBLE FOR CHECKING DIMENSIONS, TOLERANCES & REFERENCES.

■ANY DISCREPANCY TO BE VERIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH THE WORKS.

■REPORT ERRORS & OMISSIONS TO ARCHITECT.

■WHERE AN ITEM IS COVERED BY DRAWINGS OF DIFFERENT SCALES, THE LARGER SCALE DRAWING TO BE WORKED TO. DO NOT SCALE FROM THE DRAWING. FIGURED DIMENSIONS TO BE WORKED TO IN ALL CASES.

■CHECK ALL DIMENSIONS ON SITE.

■DRAWING TO BE READ IN CONJUNCTION WITH THE HEALTH & SAFETY PLAN, AND ALL RELEVANT RISK ASSESSMENTS AND THE FOLLOWING DRAWINGS:

Schedule of Accommodation

Phase 2 Site

Type	Description	Total
A4	2 Bed	6
A4.1	2 Bed	1
A4.2	2 Bed	1
A4.3	2 Bed	1
A4.4	2 Bed	1
B2	3 Bed	1
B2.1	3 Bed	4
B2.2	3 Bed	1
B2.3	3 Bed	1
B2.4	3 Bed	1
B2.5	3 Bed	1
B2.6	3 Bed	2
B2.7	3 Bed	2
B6	4 Bed	1
B6.1	4 Bed	1
B7	3 Bed	3
B7.1	3 Bed	1
B8	3 Bed	1
C2	4 Bed	1
C2.1	4 Bed	1
Total		32
Car parking : 50 No. 156%		

Boundary Treatments

- 900mm high railings with a conservation kerb at back of footpath
- 1100mm high railings
- 1500mm high concrete post & timber panel fence with 300mm trellis (generally used between rear gardens)
- 1800mm high concrete post & timber panel fence (generally used between rear gardens)
- 1800mm high timber close boarded fence

Landscape Key

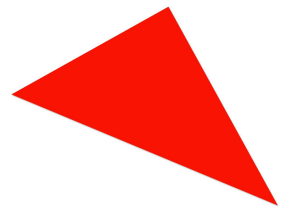
- Car Parking Space
- Grass
- Planting/ Grass
- New Tree
- Existing Tree Retained
- Existing Tree Removed
- Bin Location
- Buff Paving (450x450 Paving)
- Black Tarmac
- Shared Surface

Rev	Date	By	Remarks
Client: Rochdale Boroughwide Housing			
Project Name: The Strand Phase 2, Rochdale			
Drawing Name: Proposed Site Plan			
Drawing Purpose: Planning Application			
Project no.	18-001	Drawing Number:	03
Project	Origin	Vol/Sys	Level
Type	Role	Number	
Status:	Scale @ A2:	Drawn:	Checked:
1:500	AD	AJD	Jan 2020

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APPENDIX 2

ZONING PLAN



Terraconsult Phase 2 report 4375/01 dated May 2019

Carley Daines Phase 2 report dated April 2016

Terraconsult Phase 2 report 4794/02 dated March 2020