

at
47 South Way,
Bognor Regis,
West Sussex,
PO21 5EY

Report Reference: LP2684/DC/1

Report Date: 20 August 2021

TABLE OF CONTENTS

A	INTRODUCTION.....	I
1	Introduction.....	I
2	Previous Reports.....	I
3	Scope of Works.....	I
B	SITE BACKGROUND	2
4	Site Location, Description and Environmental Setting.....	2
5	Preliminary Conceptual Site Model.....	3
C	DISCOVERY STRATEGY	4
6	Site-Specific Contamination	4
7	Discovery Strategy	4

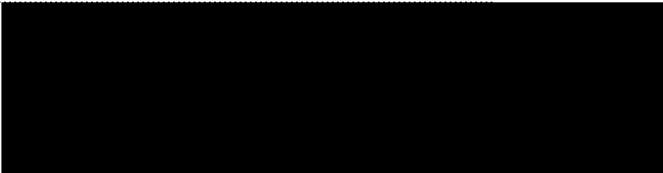
LIMITATIONS

This report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted, and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

This report is confidential to the Client and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk.

Signed:	 Lauren Stillwell MSci FGS
Countersigned:	 Sarah Cook MSci FGS CGeol
Date:	20 August 2021

A INTRODUCTION

1 Introduction

LEAP Environmental Ltd (hereafter 'LEAP') has been appointed by Mr Paul Nicol to produce a Discovery Strategy for potential contamination that may be encountered during works on the site located at 47 South Way in Bognor Regis, West Sussex. The instruction was given in an email dated 6th August 2021 and signed by Mr Paul Nicol.

LEAP understands that it is proposed to demolish the current dwelling and construct two semi-detached bungalows with private gardens, a single-storey garage and associated parking, in line with the planning application BE/43/20/PL.

2 Previous Reports

A Phase I desk study has previously been produced for the site by LEAP, which the reader is directed to read in conjunction with this document:

- LEAP 'Phase I Desk Study and Site Reconnaissance at 47 South Way, Bognor Regis, West Sussex, PO21 5EY' dated 7th October 2020 (ref: LP2331/DS/I).

Additional site investigation reports are available for the site adjacent to the subject site which has recently been redeveloped, and details of the reports can be found in the desk study detailed above.

3 Scope of Works

Planning condition 11 for the proposed development required a scheme of investigations to deal with the risks associated with contamination at the site. The desk study was submitted to discharge condition 11.1, and although no significant potential contamination risks were identified the contaminated land officer (CLO) for Arun District Council requested a discovery strategy for the groundworks phase be produced to ensure any previously unidentified contamination discovered is correctly managed.

This discovery strategy should be submitted alongside the previous desk study to fully discharge planning condition 11.1.



B SITE BACKGROUND

4 Site Location, Description and Environmental Setting

Table I below provides a summary of the site layout and usage, its history and environmental setting.

Table I: Summary of Site Description and Environmental Setting

Subject	Details
Site Layout and Usage	The site is located in a residential area of Bognor Regis and comprises a brick-built bungalow, a concrete driveway and front garden in the northwest of the site, and a large dominantly grassed back garden in the centre and southeast of the site. At the time of the desk study the bungalow was being rented out for residential use.
Topography	The site sits at an estimated elevation of 7.5m AOD and is flat lying.
Surrounding Area	- Northwest – South Way, with residential housing and a social club beyond; - Northeast and southeast – Residential housing; - South and southwest – New residential houses with leisure/school complex beyond.
Site History	Earliest historical maps indicated that the site was dominantly undeveloped open land with a possible land drain along the southern boundary until the current bungalow was constructed in the mid to late 1930s. No changes have occurred since. The surrounding area was open greenfield until residential housing began to be constructed around 1900. Three schools were constructed on land directly south and east of the site between 1930 and 1980, however were demolished in the early 2000's with new schools and a housing estate constructed.
Geology and Hydrogeology	The site is mapped by the British Geological Society as underlain by River Terrace Deposits over the Lambeth Group. Intrusive boreholes carried out during an investigation on land adjacent to the south encountered topsoil and/or made ground underlain by multi-coloured sandy to very sandy clays, sandy gravelly clays, silty very clayey sands and clays with gravel horizons to a maximum depth of 24m bgl. Based on local boreholes and the previous investigations groundwater is anticipated to be between 3m and 6m bgl, with groundwater flow in a general easterly direction. According to the Environment Agency both the River Terrace Deposits and the Lambeth Group are classified as Secondary A Aquifers. The site is not located within a Groundwater Source Protection Zone (SPZ).
Surface Water	There are no surface water features on site or within 250m of the site. The site is not located within a flood zone.

5 Preliminary Conceptual Site Model

The main sources of potential contamination on-site identified within the Phase I desk study (ref LP2331/DS/1) were made ground beneath the buildings and driveway, and potential leaks from vehicles on site. The main source of contamination off-site was an electrical substation adjacent to the southern corner of the site, which was constructed around the 1970s. Though the former school site directly south of the site had previously been considered a potential source of contamination by the CLO for the Arun District Council, the low concentrations of contaminants encountered during previous intrusive investigations, the fact the site had been redeveloped and remediated and that the subject site is upstream of the former school meant LEAP discounted the former school site as a potential source of contamination.

The overall risk to human health receptors was assessed as low to moderate, given that the volume of made ground was likely to be small and the overall concentration of contaminants from potential sources were likely to be low. The risk to controlled waters, specifically the Secondary A aquifers underlying the site, was also considered to be low.

C DISCOVERY STRATEGY

6 Site-Specific Contamination

Whilst the risk of contamination present on site was low, there does remain a small risk of potential contamination from the sources identified in the preliminary Conceptual Site Model (CSM). Based on the site layout, any potential contamination is most likely to be present beneath the current bungalow and beneath the concrete driveway in the northwest of the site, where made ground is anticipated to be present. Contamination is unlikely to be present in the back garden in the centre and southeast of the site. Based on the contaminants of concern identified in the CSM, groundworkers should be on the lookout for the following visual and olfactory evidence of contamination:

- Dark coloured staining within soils and/or oily pockets;
- Soils exhibiting hydrocarbon odours, possibly associated with the staining;
- Black ashy materials;
- Brightly coloured soils;
- Fibrous materials (which may contain asbestos).

This list is not exhaustive and any soils that look suspect should be considered as potential contamination.

7 Discovery Strategy

If any additional unexpected suspect soils such as those details above are encountered during the groundworks and construction phases of work, the following course of action should be followed:

1. Any suspect materials encountered should be reported to the site supervisor immediately. Works in that area will cease and access to the area of potential contamination will be restricted.
2. The supervisor will contact the client's Environmental/Remediation Consultant to report the contamination and to request a visit to access the potential and extent of the 'contamination'.
3. The Environmental/Remediation Consultant will make records of the inspection visit and take appropriate samples of the 'contamination' for chemical analysis and characterisation of the nature of the material encountered.
4. The chemical results will be quantitatively assessed and depending on the assessment either:
 - a. No further assessment will be required and works in the area can continue;
 - b. A further detailed risk assessment will be required;

- c. Localised specific remedial measures will be necessary;
5. The results and assessments will be sent to Arun District Council if considered appropriate. If additional remediation is required, a remediation method statement (RMS) will be produced and submitted to Arun District Council for review and approval.
 6. Remedial works will be undertaken in accordance with the approved method statement. The works will be supervised by the Environmental/Remediation Consultant who will provide a verification report with evidence to support the removal of the 'contamination' from the site.

A copy of this discovery strategy should be retained on site and provisions should be made to ensure all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter during their work.