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# UNIT 10, TANNERS FARM
# MAYES LANE
# WARNHAM

## Discovery Strategy

Client
Mr & Mrs Berwick

Report No. 5851-1

17th September 2024

smas worksafe consultant www.smasltd.com as recognised by SSIP

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# UNIT 10, TANNERS FARM
# MAYES LANE
# WARNHAM

## Discovery Strategy

## Synopsis

A Discovery Strategy has been prepared for this site on the instructions of Mr & Mrs Berwick. A Phase I Environmental Assessment[1], a Phase II Geoenvironmental Assessment[2] and a Supplementary Investigation[3] have been prepared for the site and should be read in conjunction with this report.

The following strategy is based on the findings of the previous reports. Appropriate recommendations with regard to contamination, health and safety and completion of the development are included in this report, with particular emphasis paid to potential contamination.

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1 *Report No. 5551-1; Phase I Environmental Assessment, Tanners Farm, Mayes Lane, Warnham, Horsham ; AP Geotechnics Ltd.; 18 August 2022*

2 *Report No. 5551-1; Phase II Geoenvironmental Assessment, Tanners Farm, Mayes Lane, Warnham, Horsham ; AP Geotechnics Ltd.; 19 August 2022*

3 *Report No. 5851; Supplementary Investigation, Tanners Farm, Mayes Lane, Warnham, Horsham ; AP Geotechnics Ltd.; 12 September 2024*

# 1
# Background information

The area under investigation comprises Unit 10, Tanners Farm, Mayes Lane Warnham. The site comprises the unit and its immediate surrounds. The site was undeveloped until the unit was constructed sometime between 1993 and 2003 whilst the adjacent Tanners Farm outbuildings were constructed in the early 1970s. Prior to this the site comprised undeveloped / agricultural land. The detailed previous history of the site is contained in the Phase I report to which the reader is referred.

The unit is a wooden clad, pitched roof structure with an area of concrete hardstanding to its south.

The current general layout is given at Figure 1 of Appendix A.

It is intended to demolish the existing building and construct a two storey house with private garden to the west and associated infrastructure, as shown on Figure 2 of Appendix A.

Published records of the British Geological Survey (BGS) indicate the site to lie on Weald Clay. No superficial deposits are mapped at the subject site.

# 2
# Environmental recommendations

The following summarises the conclusions of the environmental assessments provided in the published reports.

## 2.1
## Solid phase

The results of laboratory analysis conducted on samples recovered during the two intrusive investigations are contained in the published reports and are discussed below.

Contaminant testing was undertaken on selected soil samples and the results have been compared with the limited number of CLEA[4] Soil Guideline Values (SGVs) for residential land use with plant uptake that have been published to date. Where not available from that source, reference has also been made to the LQM/CIEH S4ULs for Human Health Risk Assessment[5].

Analysis for metals/metalloids revealed all determinands to be below the triggers for residential land use with plant uptake.

No SGV exists for lead (the old SGV of 450 mg/kg having been withdrawn) and LQM have not calculated one. However, provisional Category 4 Screening Levels (C4SLs) have been published by Defra which suggest a maximum concentration of 210 mg/kg lead for residential land use with plant uptake (a number of different concentrations have been published, dependant on differing exposure scenarios). No lead was recorded above this value.

No phenols were recorded above the limit of detection for the test of 1 mg/kg.

Analysis for TPH recorded a maximum total concentration of 1099 mg/kg in WS2 at 0.30 m depth in the first phase of works and 1069 mg/kg in HA-E at 0.15 m depth in the second

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[4] *The Contaminated Land Exposure Assessment Model, Department for Environment, Food and Rural Affairs, The Environment Agency, R & D Publications SGV 1 et al., March 2002*

[5] *The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, 2015*

investigation. However, when compared to the S4ULs, no carbon bands were exceeded for the residential land use with plant uptake scenario, even if the TPH were wholly aromatic or aliphatic. Such concentrations are not therefore considered significant.

Analysis for speciated PAH recorded individual PAHs above the relevant S4ULs in WS2 (first phase) and in HA-A and HA-E from the second phase. However, these locations will be covered by the new driveway and parking area and no remediation is therefore warranted.

No asbestos fibres were detected in any ofthe samples analysed.

Part IIA of the Environmental Protection Act: 1990 stipulates that a source, pathway and receptor must all be present to form a potential pollution linkage. The proposed development includes a gravel drive / parking area which is larger than the current area of concrete / unmade ground. The new gavel driveway / parking area will be laid on a permeable geotextile. The provision of the driveway / parking area will effectively block the pathway for human contact with potentially contaminated soil and thus no remediation is considered warranted.

The location of all exploratory points from both phases are shown on Figure 2 at Appendix A.

## 2.2
## Site personnel

It is recommended that appropriate health and safety precautions, such as detailed in HS(G)66[6] and elsewhere, should be followed by the construction workforce and others who

[6] *Protection of workers and the general public during the development of contaminated land HS(G)66 Health and Safety Executive, 1991*

may come into contact with potentially contaminated soil. They should be agreed with the Health and Safety Executive and are likely to include, but not be restricted to, the following:-

- maintain good standards of personal hygiene.
- wear personal protective clothing that is changed and cleaned frequently to eliminate skin contact.
- prevent ingestion by using washing and changing facilities at all break times.
- not eating, drinking or smoking between break times.
- control the spread of dust and airborne mists to prevent inhalation.

## 2.3
## Water services

It is expected that due to the previous use of the site as detailed within the Phase I Environmental Assessment report and the absence of a significant contaminant source a "standard" water pipe system will possible. However, this should be confirmed with the supplier.

## 2.4
## Validation of imported soils

Any imported soils should be certified clean by the supplying facility, with test certificates supplied.

In addition, on site sampling of any imported soils will be required and should ideally be done when it has been placed, but as a minimum be undertaken on site. The minimum recommended amount of samples should be 2 per source.

All samples should be analysed for the same suite of contaminants as previously undertaken.

# 3
# Discovery strategy and watching brief

During the course of the redevelopment it will be the responsibility of the on-site manager to ensure watching briefs are undertaken and documented.

The watching brief will consist of a record of:

observations of any contamination made during the course of the development by any member of site staff, contractor or visitor; and
the key stages of the development and occurrences including any contamination found during the course of the development, the formation levels of excavations, any reduced level dig/mass excavation, formation of landscaping or garden areas, etc., with supporting photographs.

## 3.1
## Watching brief written statement

Upon completion of the development, a written and signed statement will be prepared by the following parties:

ground works contractor(s) - upon completion of foundations and ground works;

on-site manager - upon completion of groundworks and landscaping work; and

appointed environmental consultant - upon completion of groundworks and landscaping works.

The written statement will clearly state whether or not evidence of contamination was identified during the course of the development along with any remedial action that was taken.

## 3.2
## Staff training

All site staff, contractors and visitors, will be briefed on the potential presence of land, groundwater or airborne contamination before commencing work on the site.

This will include the following information:

relevant health & safety considerations;

the type of land, water or airborne contamination present and potentially present at the site;

any particular areas of the site which are likely to be affected; and

staff responsibilities under the discovery strategy.

The on-site manager will provide written confirmation that site staff were briefed about contaminated land in line with these recommendations.

## 3.3
## Construction workers risk assessments

A detailed health and safety risk assessment will be carried out, in accordance with current guidance, before works commence on-site and appropriate personal protective equipment will be worn by all construction workers.

## 3.4
## Discovery Strategy

If unexpected contamination is found at any time then this will be reported to the Horsham District Council Environmental Protection Officer within seven days and the development will be halted on that part of the site.

The discovery strategy sets out the actions that will be taken if contamination is encountered during the course of a development. Examples of the types of observations that will be considered are detailed in Table 1, following with examples of the general actions that will be taken are set out in Table 2. Examples of any emergency actions required are detailed in Table 3.

**Table 1**: Potentially significant observations (not exhaustive)

| Evidence | Description |
|---|---|
| Visual | • Fuel or oil-like substances mixed in with or smeared on the soil or floating on perched groundwater or surface waters.<br>• Waste materials (refuse, barrels, industrial wastes, ash, tar, etc.) buried at specific location across the site.<br>• Marked variation in colour, e.g. red, green, light or dark blue, etc. may indicate contamination from a variety of contaminants.<br>• Soils containing large amounts of ash and clinker where such contamination of soils wasn't expected.<br>• Evidence of suspected asbestos. |
| Odours | • Fuel, oil and chemical-type odours.<br>• Unusual odours such as sweet or fishy odours. |
| Well-being | • Lightheadedness and/or nausea when in excavations, at the working face of an excavation, when visual or olfactory evidence of contamination exists, etc.<br>• Burning of nasal passages, throat, lungs or skin.<br>• Blistering or reddening of skin due to contact with soil. |

**Table 2:** General actions to be performed

| Person observing contamination | To be reported to | Action to be taken |
|---|---|---|
| Site visitor | Must report observations to the site manager. | Stop work and where possible, make area safe and secure area before reporting to site manager. |
| Contractor | Must report observations to the site manager. | Stop work and where possible, make area safe and secure area before reporting to site manager. |
| On site manager | Must report observations to their direct manager, the appointed Environmental Consultant, the Planning Authority and Environmental Protection Officer at Horsham District Council. | Stop work and, where possible, make area safe and secure area before reporting to others. |
| Environmental Consultant | Must report observations to the site manager, the planning Authority and Environmental Protection Officer at Horsham District Council. | Advise that work stops and where possible, make sure the area is made safe before reporting to others. |

**Table 3**: Emergency actions to be performed

| Occurrence | Description | Contact |
|---|---|---|
| Risk to the public | If at any point residents, the public or others may be at risk as a result of contamination found during the course of investigation, remediation or development works. | • Contact the emergency services if there is a risk to life.<br>• Environmental Protection Officer at Horsham District Council.<br>• Health & Safety Executive. |
| Nuisance to residents/the public | If a nuisance has been or is likely to be caused to nearby residents, the public and others - for example, odours, dust, noise, vibration, etc. | • Environmental Protection Officer at Horsham District Council. |

| | | |
|---|---|---|
| Pollution of controlled waters | If any surface, culverted or groundwater has been polluted, e.g. slurry, contaminated soil/water or a chemical spillage entering a river or canal. | • Environmental Agency.<br>• Planning Authority and Environmental Protection Officer at Horsham District Council. |
| Pollution of adjoining land | If land outside the boundary of the development site is polluted from site activities, e.g. slurry, contaminated soil/water or a chemical spillage. | • The owner of the land.<br>• Planning Authority and Environmental Protection Officer at Horsham District Council. |

In addition to the above, the following should also be noted:

should gross contamination be encountered during groundworks the advice of an environmental consultant will be sought;

any soil arising from areas where visual or olfactory evidence of contamination has been observed will be handled as potentially hazardous waste and temporarily stockpiled appropriately;

stockpiled soils may undergo validation testing to determine whether they can be used elsewhere on site; and

the Environmental Protection Officer at Horsham District Council will be contacted to agree any further remedial works that become necessary during the course of the development.

Copies of all waste transfer notices, must be kept and copies must be provided on request.

The aforementioned declaration from the site manager, groundworks contractor and appointed environmental consultant stating that either no suspected additional contamination was detected, or, that all additional detected contamination has been addressed appropriately should be forwarded to the Environmental Protection Officer at Horsham District Council upon completion of the development.

R G Chapman
AP GEOTECHNICS LTD.
17th September 2024

This report has been prepared for the sole and specific use of Mr & Mrs Berwick for the purpose of the proposed new build house at Tanners Farm, Mayes Lane, Warnham, West Sussex RH12 3SG and should not be relied upon by any third party. Any other persons who use any information contained herein without the written permission of AP GEOTECHNICS LTD. do so at their own risk.
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# PROCEDURAL NOTES
# for
# ENVIRONMENTAL ASSESSMENTS

This report has been prepared generally in accordance with CLR 11: Model Procedures for the Management of Land Contamination (Defra & Environment Agency 2004).

This report reviewed and evaluated information from the client, property owner, local authority, Environment Agency and others. The opinions, conclusions and recommendations are based on this information and observations made during the site reconnaissance.

The recommendations made in this report represent our professional opinions. These opinions were arrived at in accordance with current accepted industry practises and hydrological and engineering practises at this time. As such they are not a guarantee that the site is free of hazardous or potentially hazardous material or conditions.

# APPENDIX

## A Figures

Figure 1: Existing Site Plan
Figure 2: Proposed Development with exploratory hole locations

# APPENDIX A

FIGURES

Unit 10, Tanners Farm,
Mayes Lane, Warnham,
Horsham, RH12 3SG

**Existing Site Plan**

Scale: as shown




Figure 1

Unit 10, Tanners Farm,
Mayes Lane, Warnham,
Horsham, RH12 3SG

**Proposed Development with exploratory hole locations**

Scale: unknown




Figure 2