

Report No	Date
OE/1702/1057/R2	January 2024
Project	Land at 22, Alexander Road, Frampton Cotteral, South Gloucestershire, BS36 2PZ PHASE I GEOENVIRONMENTAL ASSESSMENT
Client	White Horse Homes Limited

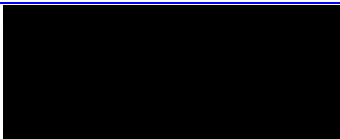


Obsidian Environmental Ltd
The Foundry Business Centre
Marcus Street
Birkenhead
Wirral
CH41 1EU
Tel: 01516457571
www.obsidianenvironmental.co.uk

Report No:	Date:
BC/1702/1057/R2	January 2024

Project:
Land at 22, Alexander Road, Frampton Cotteral, South Gloucestershire, BS36 2PZ PHASE I GEOENVIRONMENTAL ASSESSMENT

Issue Number	Status	Description of Amendments

Report prepared by:	
Signed: 	Leon Stanger BSc CEng MICE MIEEnvSc. FGS. IOSHMS. Director

This report is provided for the benefit only of the party to whom it is addressed. Obsidian Environmental Ltd (part of the Beech Group) and does not extend responsibility to any third party for the whole or any part of the contents. Obsidian Environmental Ltd owes no duty of care in relation to this report to any third party. The investigation and reportage have been undertaken with all reasonable skill, care, and due diligence. Obsidian Environmental Ltd disclaims any responsibility to the client or others in respect of any matter(s) outside this agreed scope of the above works.

© Obsidian Environmental Ltd

CONTENTS

EXECUTIVE SUMMARY	i
1.0 INTRODUCTION	1
1.1 Instruction	1
1.2 Scope of Works	1
1.3 Report Layout.....	1
1.4 Limitations	1
2.0 PHASE I ASSESSMENT	2
2.1 Site Location	2
2.2 Site Description	2
2.3 Geology.....	2
2.4 Hydrology and Hydrogeology.....	4
2.5 Site History	5
2.6 Environmental Database.....	6
2.7 Coal Mining Report	9
3.0 PRELIMINARY CONCEPTUAL MODEL.....	10
4.0 GEOTECHNICAL AND ENVIRONMENTAL CONSIDERATIONS.....	12
4.1 Proposed Development.....	12
4.2 Anticipated Ground Conditions	12
4.3 Geotechnical Considerations	12
4.4 Environmental Considerations	13
5.0 CONCLUSIONS AND RECOMMENDATIONS.....	15
5.1 Conclusions.....	15
5.2 Recommendations	16
FIGURES	17
APPENDICES	18
Appendix A - Site Reconnaissance Photofile.....	19
Appendix B - Copy of Planning Permission	20
Appendix C - Copy of Groundsure Large & Small Historical Maps.....	21
Appendix D - Copy of Groundsure Reports.....	22
Appendix E - Copy of Coal Mining Report	23
Appendix F - Contaminated Land & Waste Legislation	24

EXECUTIVE SUMMARY

Commission	Obsidian Environmental Ltd (OL) was commissioned by White Horse Homes Limited (8, Bath Street, Redcliffe, Bristol, BS1 6HL) to undertake a Phase I Geoenvironmental Assessment on a site known as Land off 22, Alexander Road, Frampton Cotteril, South Gloucestershire, BS36 2PZ.
Existing Site Conditions	The site is irregular/rectangular in shape and covers an area of approximately 0.11ha and accessed via a large sliding gate. The site slopes gently from Alexander Road (gated access on the western boundary) down to the eastern boundary, with residential development beyond, with site levels estimated to from fall circa 0.5m from south to the northern area of the site. The site is currently used siting of two static caravans, trailers, and assorted vehicles. The external surface comprises areas of tarmac surfacing and stone fill, with a grassed area behind one of the static caravans – southern area. The site is bounded to the north by residential development, to the east by residential development, to the south by a public footpath and further residential development. Alexander Road provides the western boundary with residential development beyond.
Planning Permission - Proposed Development	Planning Permission has been granted for five new detached dwellings – houses (Planning Reference: P23/00067/F
Geology & Hydrogeology	Below a veneer of Made Ground (tarmac, rock fill and turf/topsoil) and clayey fill. Superficial deposits are defined as Alluvial soils - one, or all of the following – CLAYS, SILTS, SANDS and GRAVELS. Bedrock is anticipated to be weathered and intact weak MUDSTONE. The Superficial deposits were designated as a non-aquifer. The bedrock was classified as a Secondary A aquifer, presumably due to the type of bedrock - MUDSTONE – and the extensive coal mining activities in the surrounding area.
Flood Risk	There does not appear to be any significant flood risk from local rivers. The site does, however, lie below the adjacent highway, opposite a drop crossing. There is, therefore, a perceived risk of flooding from the highway. There is a high risk of surface water flooding with perched water trapped above possible Superficial CLAY soils.
Geotechnical	Made Ground and Superficial deposits may not provide adequate bearing capacity for traditional foundations. Alternative solutions should be established from an intrusive site investigation as part of the Phase II Geoenvironmental Assessment. The Groundsure report did not detail any significant geotechnical risks associated with on-site soils.
Coal Mining	The local area surrounding the site, has been subject to coal mining activities, with former mine entries and disturbed ground associated with pits, noted on the 1882 to 1992 historical maps. There is further information regarding the coal mining activities off site within a Coal Authority report. Mine working and/mine entries were not directly shown on the site. It is advised there is a risk of unrecorded shallow mining at the site within the coal Authority Report. It recommends that an intrusive shallow mining investigation be completed as part of any Phase II Geoenvironmental Assessment. It is also required to satisfy the Planning Conditions.
Environmental	There does not appear to be any significant environmental considerations. There were no observed invasive weeds on the site. There was no visual significant residual chemical contamination on the site. There does not appear to be any significant off site residual chemical contaminants that could migrate to the site.
Ground Gas & Radon Gas	A single round of ground gas monitoring has been completed, when atmospheric pressure was high (1039mbars), the results showed low levels of gas and low flows. Radon Gas levels were found to be 1% to between 5% and 12% at the site. Consequently, Radon Gas mitigation measures will be required at the ground floor slab level for all new dwellings.
Buried Concrete & Services	During the intrusive site investigation as ample of the strata where the foundations will be constructed through to assess the need for specialist concrete at that location.
Waste Management	There does not appear to be any on or off site waste management issues. It is advised that all existing waste issues at the site will be removed by the former owners of the site prior to the commencement of the housing building works.

Recommendations	<p>Further gas monitoring should be scheduled over the next few months, when at least one round of measurements is at or below 1000mbars.</p> <p>A Phase II Geoenvironmental Assessment, that includes an intrusive site investigation, sampling, chemical and geotechnical testing, and reporting should be completed at the site. A shallow mining investigation should also be completed, using a rotary drilling rig to assess if there are any significant worked coal seams – voids and backfilled stratum - below the site.</p> <p>This Phase I Geoenvironmental Assessment Report should be forwarded to the Planning Department of South Gloucestershire Council for their review and agreement. This will allow part of the planning Conditions to be discharged.</p>
------------------------	---

1.0 INTRODUCTION

1.1 Instruction

Obsidian Environmental Ltd (OL) was commissioned by White Horse Homes Limited (8, Bath Street, Redcliffe, Bristol, BS1 6HL) to undertake a Phase I Geoenvironmental Assessment on a site known as Land off 22, Alexander Road, Frampton Cotteril, South Gloucestershire, BS36 2PZ.

1.2 Scope of Works

The objectives of the investigation were to determine the sub-surface conditions in respect of:

- History of the sites development and its environs
- Preliminary geotechnical advice relating to the anticipated ground conditions
- Existing foundations.
- Preliminary contamination assessment to consider potential significant pollutant linkages arising from the historic site use.
- Potential shallow historical mining beneath the site
- Potential Flood Risk
- Potential Radon Gas levels

1.3 Report Layout

- Section 2.0 - provides a record of the Phase I assessment including the site history, as established from available public record information and summarises information from previous site assessments.
- Section 3.0 - presents a preliminary Conceptual Model for the site.
- Section 4.0 - details the anticipated geotechnical and environmental conditions identified by the desk study.
- Section 5.0 - provides conclusions and recommendations arising from this assessment.

1.4 Limitations

Subsoils are inherently variable and by their very nature are hidden from view such that no investigation can be exhaustive to the extent that all soil conditions are revealed. Conditions may therefore be present beneath the site that were not apparent from the data available for review. Similarly, this assessment has been based to a large extent on third party data acquired from Groundsure. This data has been taken at face value and has not been subjected to any third party validation.

Unless specifically noted to the contrary, it should be assumed that this report has not been submitted to any regulatory authorities for approval. Redevelopment sites in particular may have planning conditions attached in respect of contaminated land assessment. Where we are made aware of such conditions in advance of scoping the works, we can tailor the report to the regulatory authority requirements. Where we are not made aware of any such requirements there can be no certainty that our investigation will meet any or all of the regulatory authority requirements.

2.0 PHASE I ASSESSMENT

2.1 Site Location

The site is located within 1.0km of the centre of the village of Frampton Cotteril, South Gloucestershire, at approximate National Grid Reference 367732E, 181374N. The approximate area of the site is defined as 0.11 hectares. A site location plan is presented as OE/1702/1057/R1/F01.

2.2 Site Description

The site was visited on 19 December 2023 and the following site description completed. The weather at the time was overcast with intermittent rain. A representative of the current site owners accompanied the Obsidian Environmental representative on the site walkover/inspection. Typical photos of the site are included in Appendix A – Site Reconnaissance Photofile.

- The site is regular/rectangular in shape and covers an area of approximately 0.11ha and is accessed via a large sliding gate.
- The site slopes gently from Alexander Road (gated access on the western boundary) down to eastern boundary, with residential development beyond, with site levels estimated to from fall circa 0.5m 3.0m across the site from south to north.
- The site is currently used as the location for two static caravans, trailers, and assorted vehicles. At the time of the site visit the two caravans were occupied.
- The external surfaces of the site comprise areas of tarmac surfacing and stone fill, with a grassed area behind one of the static caravans – southern area.
- The site is bounded to the north and east by residential development, to the south by a public footpath and further residential development. Alexander Road provides the western boundary with residential development beyond.
- Alexander Road gradually moves away from the site, as the road rises and a large verge is noted up to a public footpath.
- There were no streams or water courses immediately adjacent to the site.
- Evidence of significant contamination/spillages was not seen at the site, however, during the site inspection there was evidence of chemicals and fuels/oils stored and part used on the site.
- Japanese Knotweed, or other invasive species were not observed on site.
- Electrical and water services are underground at the site.
- Mains gas is not used at the site, but there is evidence of the use of calor gas for the static caravans.

2.3 Geology

Superficial Geology defined as Alluvium – clay, silt, sand, and gravel.

Bedrock geology at 1:10,000 scale. The main mass of rocks beneath superficial deposits are defined as the Farrington Member And Barren Red Member (undifferentiated) – MUDSTONE - Westphalian D Sub-age. At 23.0m from the site bedrock is defined as SANDSTONE.

Bedrock faults – none defined within 250.0m of the site, with a normal fault defined at 396.0m – see report inset Figure 2.1 below:

At 33.0m from the site coal seams are inferred, and at 83.0m the seam is coincident with the bedrock geology boundary. Historical coal pits were defined near the site – the other side of

Alexanders road (formally Little Lane) at circa 20.0m. Several old coal pits were denoted on the historical maps, within a 250.0m radius. The old coal pits were defined as follows:

- At 20.0m – Adam`s Land Pit – deep and ceased,
- At 71.0 and 96.0m – Watermore Lane pits – deep and ceased,
- At 128.0m - Adam`s Land Pit – deep and ceased,
- At 231.0m – Bryant`s Pit – deep and ceased,
- At 243.0m Jarrett`s Pit – deep and ceased.

There was no presence of artificial Made Ground within 500.0m of the site, and bedrock permeability was defined as low.

- Shrink/swell potential of onsite soils is defined as very low (hence, low plasticity),
- Running Sand potential of onsite soils is defined as very low/negligible,
- Compressible deposits potential of onsite soils is defined as negligible,
- Collapsible soils potential of onsite soils is defined as very low
- Landside/landslip potential is defined as low,
- Ground dissolution/soluble rock is considered negligible.
- The site is not underlain by brine and/or gypsum deposits.
- There are no caves, cavities, or sinkholes defined within 500m of the site.

Radon Gas was denoted as <1.0% on part of the site, but 5 – 10% on the remainder of the site. Radon Gas protection will be required for all new residential properties at the site.

Summary of geological conditions at the site – The general area of the site has seen significant mining activities, within a few metres (20.0m) of the site (Old Coal Pit other side of Little Lane). It is known that shallow, in addition to deep coal deposits, have been mined. Experience has been gained from a site within 200m of the Alexander Road site (Badminton Road, Coalpit Heath, BS36 2SY). Worked, and partially backfilled seams were found during rotary open hole drilling works (to 30.0m bgl) within 10.0m of the surface, together with unworked coal seam.

The general geology was identified as Alluvium – CLAYS – found overlying weathered MUDSTONE – CLAYS, thence intact MUDSTONE and SANDSTONE bedrock. Made Ground/Natural alluvial clays were circa 2.0 to 3.0m in depth.

There was no significant geotechnical characteristics of the Alluvial Superficial deposits overall.

Geological faults are displayed on the Geology 1:10,000 scale - Bedrock map – see below – site outlined in **RED**:

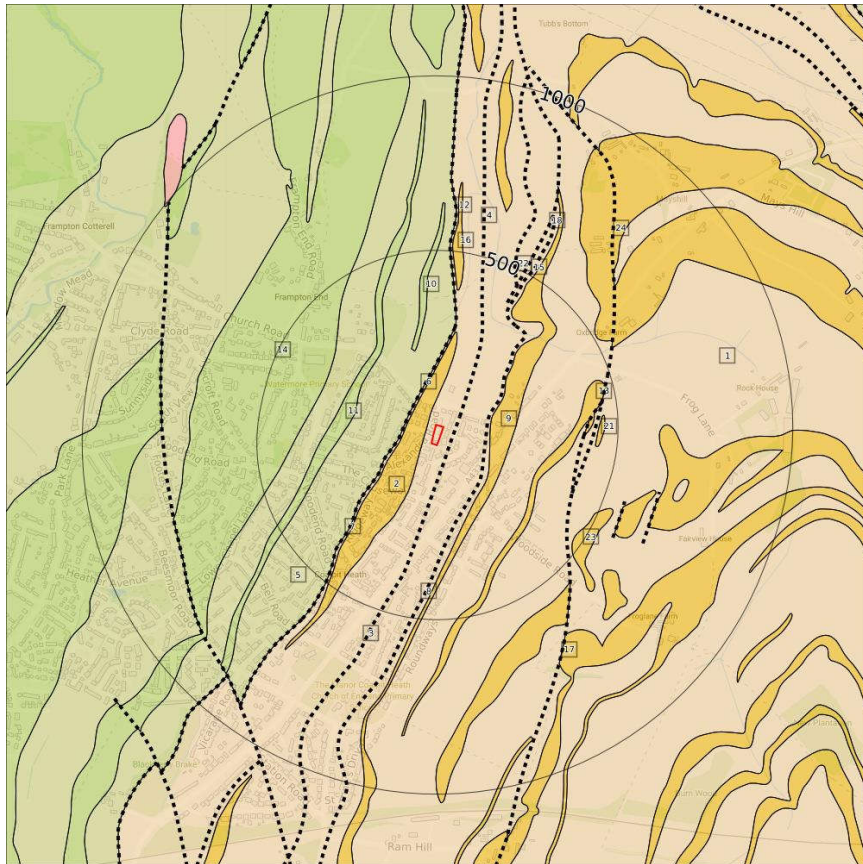


Figure 2.1 – Geological Faulting in the general area of the site

As can be seen above, in Figure 2.1, there are no Bedrock faults and other linear features at the site.

2.4 Hydrology and Hydrogeology

There are no surface water features in the vicinity of the site. Hence, the potential risk to offsite surface water receptors is deemed to be low.

Guidance from the Environment Agency indicates that the Bedrock aquifer is designated as Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. As such the site sensitivity is regarded as medium.

Summary Classification: Secondary bedrock aquifer - Medium Vulnerability, Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer. This designation may locally result in low sensitivity due to the potential presence of former mining activities below the site.

2.5 Site History

Historical maps of the site area have been obtained via Groundsure – large and small historical maps – see Appendix C – Historical Maps. Pertinent information determined from review of these maps is set out in the following table

Review of Historical Maps:

Table 2.1 - Historic Mapping Review

Date	On-site	Off-site
1882	Open field.	Old coal pit denoted on other side of track/lane (later to become Little Lane) to the west of the site. Old coal pit and lime kiln denoted at circa 100m north of the site. Old coal pits denoted at 250m north of the site. Residential development within 100m of the site, and a smithy at 130m. To the south, old coal pits at 230m, plus two public houses. Several wells marked within 250m of the site.
1903	As above – no change	Old coal pit noted other side of Little Lane not present. Only the northern old coal pits marked on the map.
1920	As above – no change	As above but with additional residential development in the south. Allotments shown at 240m south of the site.
1935	As above – no change	No change, apart from allotment removed in the south.
1965	As above – no change	Badminton Road shown to the east. Alexandria Road now defined as former Little Lane. Large residential development to the west. Mine shafts still denoted in the north at 250m. Large works defined at 200m in the southeast.
1971	As above – no change	Property – Echeldene – shown immediately north of the site. Many of the undeveloped plots of land now residential development.
1978	As above – no change	Old coal pits in the north still shown. Large garage shown 230m northeast of the site. Alexander Road extended immediately to the west of the site – replacing the historical lane.
1992	As above – no change	Greater density of residential development surrounding the site. Title – old coal pit – now removed, although the motif remains.
1994	As above – no change	No significant change
2003	As above – no change	No significant change
2023	Two static caravans on the site, and outbuildings – current status.	No significant change

Summary of Historical Development at the Site and its Environs

The site was detailed as an open field between 1882 until recent times. It is now occupied by two static caravans and several vehicles. The surrounding areas to the site were noted to be for coal mining related works, shafts, coal pits, and lime kilns. Residential development expanded from the 1870s, with Alexander Road first noted on the 1965 map. All details of coal mining activities were removed from the maps by the 1992 map.

2.6 Environmental Database

Groundsure reports were commissioned to provide an indication of the site history and surrounding land uses available on the public registers. The reports provide data from a number of service providers including the British Geological Survey, Environment Agency, and English Nature. The report is included in Appendix D.

The location of data point references is provided relative to the National Grid Reference for the site centre. The search radius extends 1km from the site centre.

Table 2.2 below indicates the risk scoring used on the potential pollutant linkages identified from the historic data search. The degree of risk (R) is calculated by multiplying the likelihood (L) with the effect (E):

Table 2.2 - Degree of risk (R) = Likelihood (L) x Effect (E)

Likelihood (L)	Description	Probability	Effect (E)	Description	Increase in cost and time
5	Almost certain	>70%			
4	Probable	50-70%	4	Very high	>10%
3	Likely	30-50%	3	High	4-10%
2	Unlikely	10-30%	2	Low	1-4%
1	Negligible	<10%	1	Very low	<1%
Risk (R)	Risk Level	Action			
1-5	Trivial	None			
6-10	Significant	Undertake appropriate mitigation measures to reduce the risk level by appropriate on-site practice at little additional cost.			
>10	Substantial	Designers should take such risks into account and avoid or reduce risk level to acceptable levels. Additional resources required.			

The following table provides a summary of the data reference points, together with an indication of the hazard, likelihood, severity, and degree of risk.

Table 2.3 - Environmental Data Review

Data Type	Distance from site	Hazard	Likelihood	Effect	Degree of risk	Mitigation measures
Local Authority Pollution Prevention and Controls	>500m	Contamination	1	2	2	None required
Discharge consents	349m	Contamination by discharged sewage	1	2	2	None required
Pollution incidents to controlled waters	>500m	Contamination	1	2	2	None required
Substantiated Pollution Incident Register	>500m	Contamination	1	2	2	None required
Water Abstractions	1802	Spray irrigation – no risk	1	2	2	None required
Groundwater vulnerability	1248m	Pollution of the aquifer from onsite operations	1	2	2	None required
Extreme flooding from rivers or sea without defences.	Site	Surface water and groundwater flooding	2	2	4	None required
Licensed Waste Management Facilities	>500M	Contamination	1	2	2	None required
Registered Landfill sites	>500M	Contamination	1	2	2	None required
Registered Waste Transfer Site	>500M	Contamination	1	2	2	None required
Registered Waste Transfer Site	>500M	Contamination	1	2	2	None required
Shallow Mining Hazard	On site	See Section	3	2	6	Intrusive Site Investigation
Potential for collapsed ground stability hazards	On site	Damage to proposed structures – houses.	2	2	4	Intrusive Site Investigation

Table 2.3 - Environmental Data Review (cont.)

Data Type	Distance from site	Hazard	Likelihood	Effect	Degree of risk	Mitigation measures
Potential for compressible ground stability hazards	Site	Settlement of proposed structures	2	2	4	Intrusive Site Investigation
Potential for ground dissolution stability hazards	Site	Sink holes	1	3	3	Intrusive Site Investigation
Potential for landslip subsidence hazard	Site	Damage to infrastructure and proposed structures	1	3	3	Intrusive Site Investigation
Potential for running sand ground stability hazards	Site	Poor ground conditions	1	3	3	Intrusive Site Investigation
Potential for shrinking or swelling ground stability hazards	Site	Potentially damaging to foundations	2	3	6	Intrusive Site Investigation
Coal Mining Affected Areas	On site	Settlement of new structures	2	3	6	Intrusive Site Investigation
Radon Affected Areas	On site	Radon gas contamination at the site	2	3	6	Gas mitigation required
Contemporary Trade Directory Entries	Within 250m	Migration of contaminants onto the site	2	3	6	Intrusive Site Investigation
Fuel Station Entries	>250m	Migration of contaminants onto the site	1	2	2	None required
Environmentally Sensitive Areas	>2000m	Environmental impacts off site	1	2	2	None required

2.7 Coal Mining Report

A coal mining search was commissioned from the Coal Authority (Ref: 5100334428901, dated 15 March 2023) – see Appendix E – Coal Mining Report. The results of the search established the following:

Past Coal Mining Activity – The property is not within a surface area that could be affected by any past recorded underground coal mining. However, the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk.

Present Coal Mining Activity - The property is not within a surface area that could be affected by present underground mining.

Future Coal Mining Activity - The property is not in an area where the Coal Authority has received an application for and is currently considering whether to grant a licence to remove or work coal by underground methods. The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods. The property is not in an area likely to be affected from any planned future underground coal mining. However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Mine entries - There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

Surface Geology – The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

Subsidence – The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property.

Mine Gas - The Coal Authority has no record of a mine gas emission requiring action.

Hazards relating to coal mining - The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

A copy of the Planning Permission is presented in Appendix B.

3.0 PRELIMINARY CONCEPTUAL MODEL

The site characterisation attempts to identify potential previous and existing site sources of contamination. The conceptual model links the identified sources likely to cause significant possibility of significant harm via pathways to identified critical receptors. The conceptual model is therefore based on a number of identified source-pathway-receptor scenarios. For land to be classified as contaminated a significant pollutant linkage will need to be identified which will include each component of the conceptual model. The absence or removal of a source or interception of a pathway will 'break' the pollutant linkage.

The conceptual model is characterised by identification of the following:

- On-site sources, which may impact on-site receptors via plausible pathways.
- On-site source, which may impact off-site receptors via plausible pathways.
- Off-site sources, which may impact on-site receptors via plausible pathways.

The change of land use will require assessment of the new site development layout within the context of introducing new exposure pathways. The planning regime will require assessment of the site to ensure the new development will not be classed as contaminated land under the definition provided by the Part 2A of the Environment Act 1990 as defined in the Environment Protection Act 1995.

The Contaminated Land Legislative Background is presented in Appendix F.

The preliminary conceptual model is presented in Table 3.1 below. The assessment considers the general scenario of the source, pathway, and receptors.

Table 3.1 Conceptual Model – Risk Assessment

Item	Sources	Potential Contaminates	Potential Risks	Pathways	Receptors	Linkage, without Mitigation	Likelihood of Significant Pollutant Linkage	Mitigation
1	Leaks/spills from parking of vehicles at the site - hydrocarbons	Residual diesel, petrol fuels, lubricants, and oils.	Migration onto the site through soils beneath tarmac surfacing – front gardens to new properties.	Through Made Ground and existing drains.	Groundworkers, Utility companies, & Landscape workers. Construction workers and Residents	Yes	Medium	Intrusive Investigation Site
2	Storage of engine oils & lubricants on site	Hydrocarbon contamination	Impact on MG and Natural soils beneath the site and local groundwater regime, and off site contamination through damaged drains.	Through Made Ground and existing drains.	Groundworkers, Utility companies, & Landscape workers. Construction workers and Residents	Yes	Medium	Intrusive Investigation Site
3	Made Ground soils at the site from historical sources – heavy metals, hydrocarbons etc.	Heavy metals and hydrocarbons	Percolation of contaminants through Made Ground soil and leaching of contaminants to groundwater	Directly through permeable Made Ground and Natural soils. Former drains and services not removed during original site clearance works. New drainage and utility services trenches, foundations, and general excavations.	Groundworkers, Utility companies, & Landscape workers. Construction workers Residents and the general Public	Yes	Very Low	Removal of Made Ground soils from the site.
4	Ground Gas from Made Ground & Natural soil	Carbon monoxide Carbon dioxide, Methane, & depleted Oxygen.	Migration into new dwellings via the ground floor slab	Through ground floor slab and service entries.	Occupants of new dwellings	No	Medium	Intrusive Investigation & gas membrane
5	Mine gas from shallow workings	Carbon monoxide Carbon dioxide, Methane, Hydrogen Sulphide & depleted Oxygen.	Migration into new dwellings via the ground floor slab	Through ground floor slab and service entries.	Occupants of new dwellings	No	Medium	Intrusive Investigation & gas membrane
6	Radon Gas	Radon gas Reported as 1% to 5%-12%	Migration into new dwellings via the ground floor slab	Through ground floor slab and service entries.	Occupants of new dwellings	No	Medium	Radon Gas barrier
7	Leaks/spills from new car parking and hardstanding areas - hydrocarbons	Residual diesel, petrol fuels, lubricants, and oils.	Percolation of contaminants through soil and leaching of contaminants to groundwater	Directly through permeable Natural soils.	Groundworkers, Utility companies, & Landscape workers. Construction workers Residents and the general Public	Yes	Very Low	None required

4.0 GEOTECHNICAL AND ENVIRONMENTAL CONSIDERATIONS

4.1 Proposed Development

It is understood that the current development proposals are for five new detached dwellings – two-storey houses.

4.2 Anticipated Ground Conditions

The anticipated ground conditions for the site are summarised in the Table 4.1 below and are based on the available geological information.

Table 4.1 – Summary of anticipated Ground Conditions

Depth (m)	Brief Description
0.00 to 0.5	MADE GROUND, comprising at various locations – tarmac, rock fill (Type I sub-base), and grass, over possible relic topsoil and gravelly clay fill.
0.5-2.00	Soft to firm CLAY
2.00 to 3.0	Firm to stiff weathered grey Mudstone - Clay
3.0 to depth	MUDSTONE, with possible interbedded SANDSTONE, and the possibility of unworked and worked discrete shallow Coal seams.

Groundwater is likely to be encountered above the weathered MUDSTONE.

4.3 Geotechnical Considerations

The following geotechnical aspects should be considered:

- Made Ground is present beneath the site and will not provide an adequate bearing stratum for conventional shallow foundations. Alluvial stratum may also not provide adequate bearing capacity.
- The weathered and/or Mudstone bedrock should be suitable for conventional strip or pad foundations. An intrusive site investigation should be completed to confirm the soil profile across the site.
- Ground bearing floor slabs may not be appropriate due to the possible nature of the weak shallow soils.
- Soakaway drainage may not be possible in the probably Made Ground/CLAY and or weathered Mudstone. If considered, soakaway testing should be completed in line with BRE Digest 365: *Soakaway Design*, 2007.
- There are no semi-mature to mature trees observed on-site, giving the potential for localised soil desiccation. However, natural moisture content and soil plasticity profiles should be defined at critical locations.
- Special measures for the protection of buried concrete may be required. Chemical analysis of the Drift should be completed, and the grade of concrete assessed in line with BRE Special Digest 1, *Concrete in Aggressive Ground*, 2005, 3rd Edition.

The Groundsure report did not detail any significant geotechnical risks associated with on site soils.

4.4 Environmental Considerations

The desk study completed to date highlights the following sources of contamination on site:

Existing Made Ground – The site is underlain by at least 0.5m of Made Ground, the chemical composition of which is not known.

Invasive Species – Japanese Knotweed was **not** observed on site. Similarly, other types of invasive weed were also absent from the site.

Car Parking – There is the potential of hydrocarbon impact from fuel oils/lubricant leakage from the existing car parking areas.

Asbestos – Cement bonded asbestos was not observed on the site or asbestos containing materials.

Fly tipping – There was no evidence of burning and fly tipping observed on-site. The analysis of key marker contaminants should be included within the site investigation as a simple check. However, there was storage of some discrete chemical and gas canisters on the site. All such containers should be carefully removed off site as part of the proposed site clearance works – prior to any construction.

Ground Gases - Precautions due to the presence of Made Ground at the site there is potential for ground gases and possible mine gases if shallow mining is present below the site (Carbon Dioxide, Carbon Monoxide, Methane and Hydrogen Sulphide) to be a consideration at the site. Installation of gas monitoring standpipes and an appropriate gas-monitoring regime should be completed as part of any future site investigations.

Radon Gas – The environmental database showed that <1% and between 5 and 10% of homes in the site vicinity were above the action level. Therefore, basic radon protection measures should be used in the construction of new dwellings or extensions.

Flood Risk – There does not appear to be any significant flood risk from local rivers/water courses. The site does, however, lie below the adjacent highway, opposite a drop crossing. There is, therefore, a perceived risk of flooding from the highway. There is a high risk of surface water flooding with perched water trapped above possible Superficial CLAY soils.

Environmental Designation – As detailed below:

The Sensitive Land Uses Map of the Groundsure Report (Appendix C) indicates that the environs to the site are occupied by small areas of designated ancient woodland, and greenbelt at 80m. All other sensitive land uses as listed below are not defined on the site or within 1000m or greater:

- Conserved wetland >2000m
- Special Area of Conservation >2000m
- Special Protected Areas >2000m
- National Nature Reserves >2000m
- Local Nature Reserves >2000m
- Bioreserves >2000m
- Forest Parks >2000m
- Marine Conservation >2000m Areas
- Greenbelt 80m
- Proposed Ramsar Sites >2000m
- Possible Special Areas of Conservation (pSAC) >2000m
- Potential Special Areas of Conservation >2000m

- Nitrate Sensitive Areas >2000m
- Nitrate Vulnerable Zones at 1418m (surface waters)
- World Heritage Sites >250m
- Areas of Outstanding Natural Beauty >250m
- National Parks >250m
- Listed Buildings >250m.
- Conservation Areas >250m

The general risk of significant contamination is considered to be low to medium. The potential impact to the groundwater and local environment should be assessed by appropriate analysis of the soils and groundwater together with a risk assessment based on the site-specific criteria.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

- C1.** The site is currently occupied by two static caravans, together with several vehicle (cars/vans), and trailers. Plus, associated equipment (including calor gas bottles) used for mobile food retail outlets. All of the above, however, it is advised will all be removed by the previous owners prior to the commencement of the proposed construction works on the five new dwellings.
- C2.** Below a veneer of Made Ground (tarmac, rock fill and turf/topsoil), Superficial deposits may be Alluvial soils - one, or all of the following – CLAYS, SILYS, SANDS and GRAVELS.
- C3.** Bedrock is anticipated to be weathered and intact weak MUDSTONE.
- C4.** Based on the Groundsure information the local area surrounding the site has been subject to coal mining activities, with former mine entries and disturbed ground associated with pits, noted on the 1882 to 1992 historical maps.
- C5.** Historical mine working and/mine entries were not directly shown on the site.
- C6.** It is advised there is a risk of unrecorded shallow mining at the site within the Coal Authority Report. It recommends that an intrusive shallow mining intrusive drilling works be completed as part of any Phase II Geoenvironmental Assessment. It is also required to satisfy the Planning Conditions.
- C7.** There are no geological faults noted on the site but are shown on the geological map within 396.0m of the site.
- C8.** There are no significant surface water features within 250m of the site.
- C9.** The Superficial deposits were designated as a non-aquifer. The bedrock was classified as a Secondary A aquifer, presumably due to the type of – MUDSTONE – and the extensive coal mining activities in the surrounding area.
- C10.** Superficial deposits will not be suitable for traditional foundations due to the possible soft nature of the Alluvial CLAY stratum if present, Strip footing will have sufficient bearing capacity if constructed directly over the weathered and intact weak MUDSTONE bedrock.
- C11.** Radon Gas levels were found to be 1% to between 5% and 12%. Consequently, Radon Gas mitigation measures will be required at the ground floor slab level for all new dwellings.
- C12.** Due to Item C.11 all ground floor slabs should be of suspended construction, vented (air bricks) and a minimum 0.3m void directly below the slab.
- C13.** There was no visual evidence of invasive weeds at the site, during the site reconnaissance and site investigation works.
- C14.** There are no semi-mature or mature trees on the site.
- C15.** There was no significant visual residual chemical contamination on the site.
- C16.** There does not appear to be any significant flood risk from local rivers. The site does, however, lie below the adjacent highway, opposite a drop crossing. There is, therefore, a perceived risk of flooding from the highway. There is a high risk of surface water flooding with perched water trapped above possible Superficial CLAY soils.
- C17.** The risk of chemical contamination migrating from off-site sources appears low.

C18. A single round of ground gas monitoring has been completed, when atmospheric pressure was high (1039mbars), the results showed low levels of gas and low flows.

5.2 Recommendations

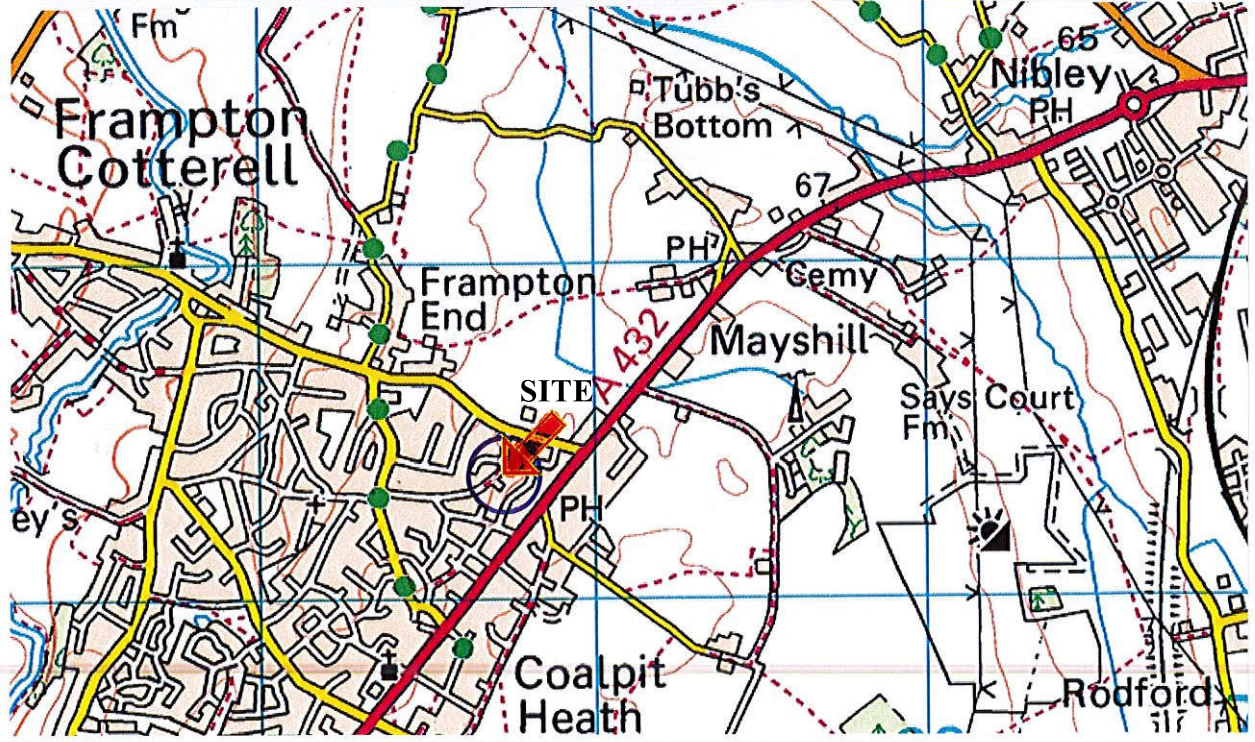
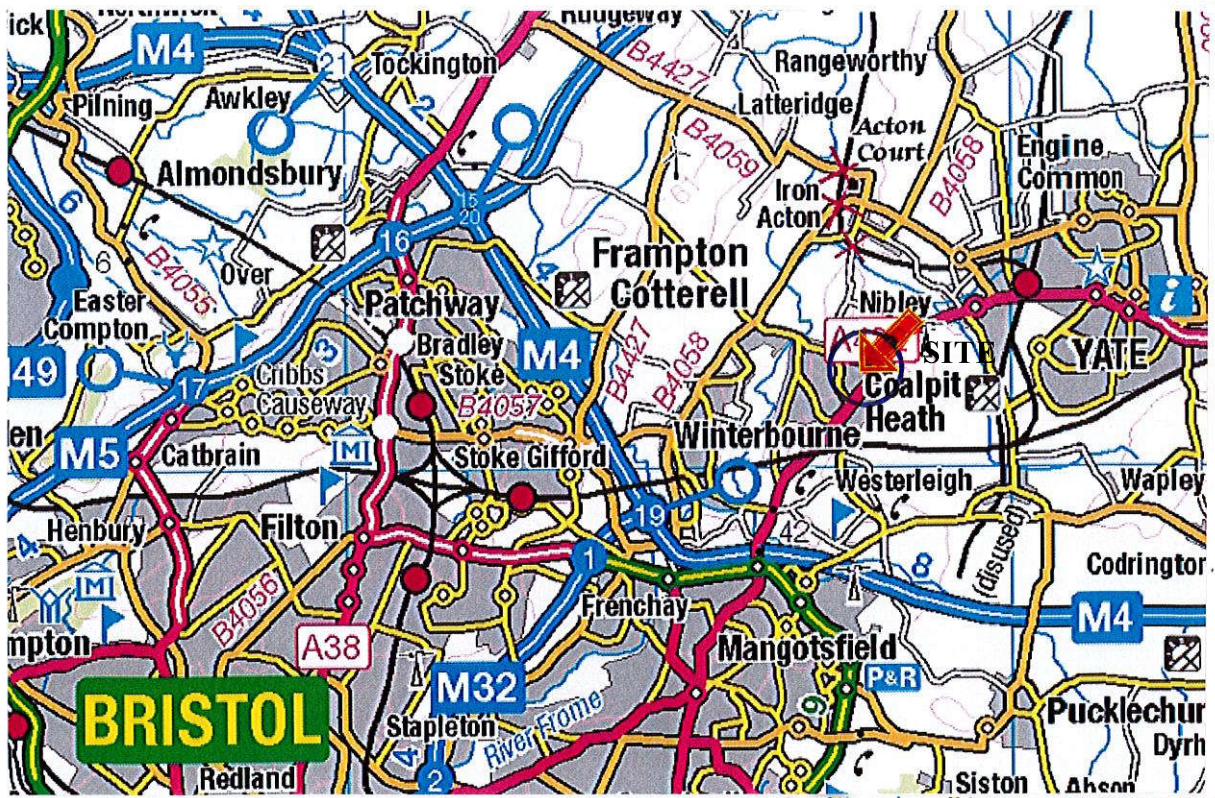
R1. Further gas monitoring is scheduled over the next few months, when at least one round of measurements should be at or below 1000mbars.

R2. A Phase II Geoenvironmental Assessment, that includes an intrusive site investigation, sampling, chemical and geotechnical testing, and reporting, should be completed at the site. A shallow mining investigation should also be completed, using a rotary drilling rig to assess if there are any significant worked coal seams – voids and backfilled stratum directly beneath the site.

R3. This Phase I Geoenvironmental Assessment Report should be forwarded to the Planning Department of South Gloucestershire Council for their review and agreement. This will allow part of the planning Conditions to be discharged.

FIGURES

- OE/1702/1057/R1/F01 - Site Location Plan**
- OE/1702/1057/R1/F02 - Site Layout Plan**
- OE/1702/1057/R1/F03 - Proposed Development Plan**





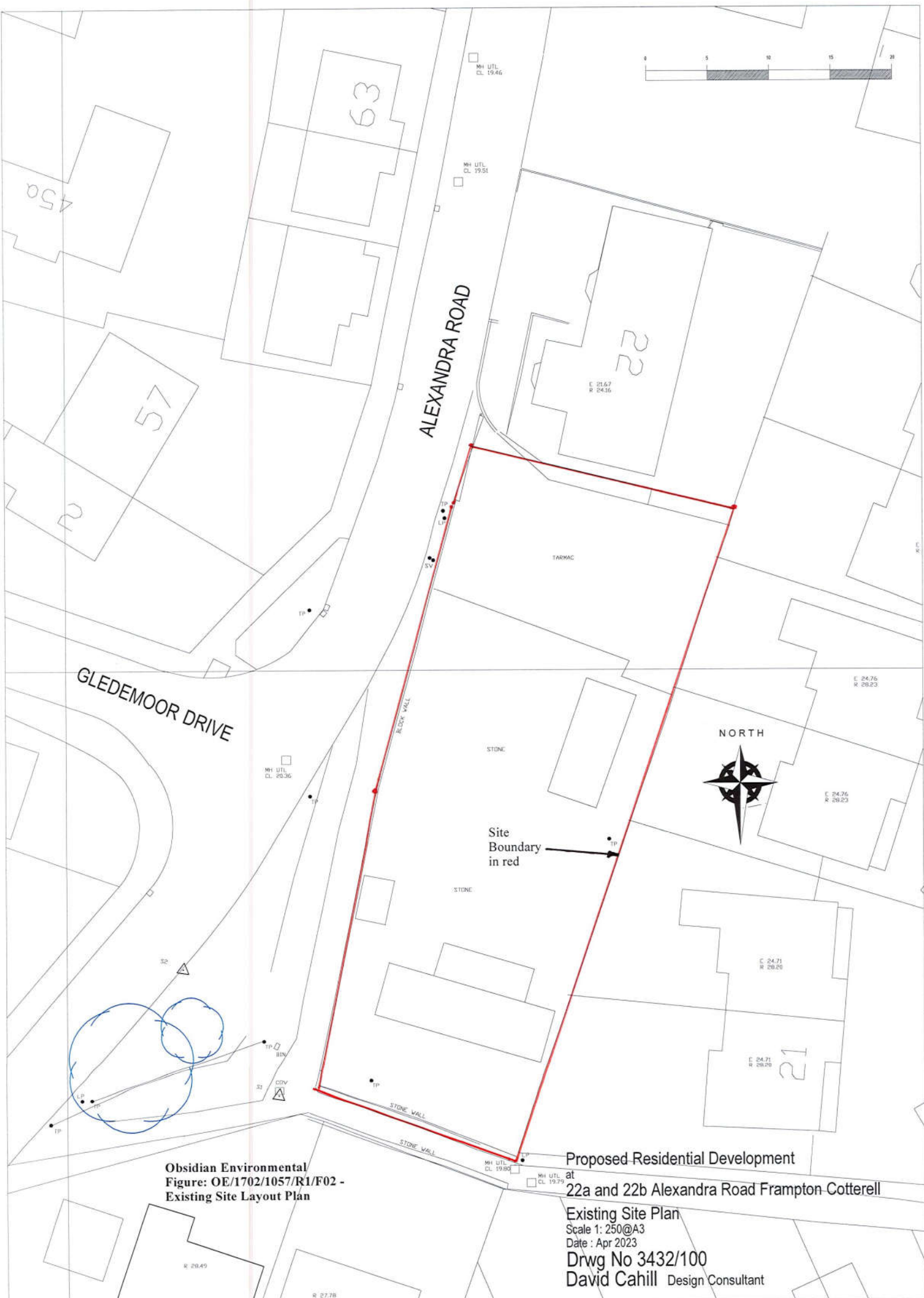
OBSIDIAN

 ENVIRONMENTAL

Obsidian Environmental Ltd
 The Foundry Business Centre
 Marcus Street
 Birkenhead
 Wirral
 CH41 1EU
 Te: 01516457571

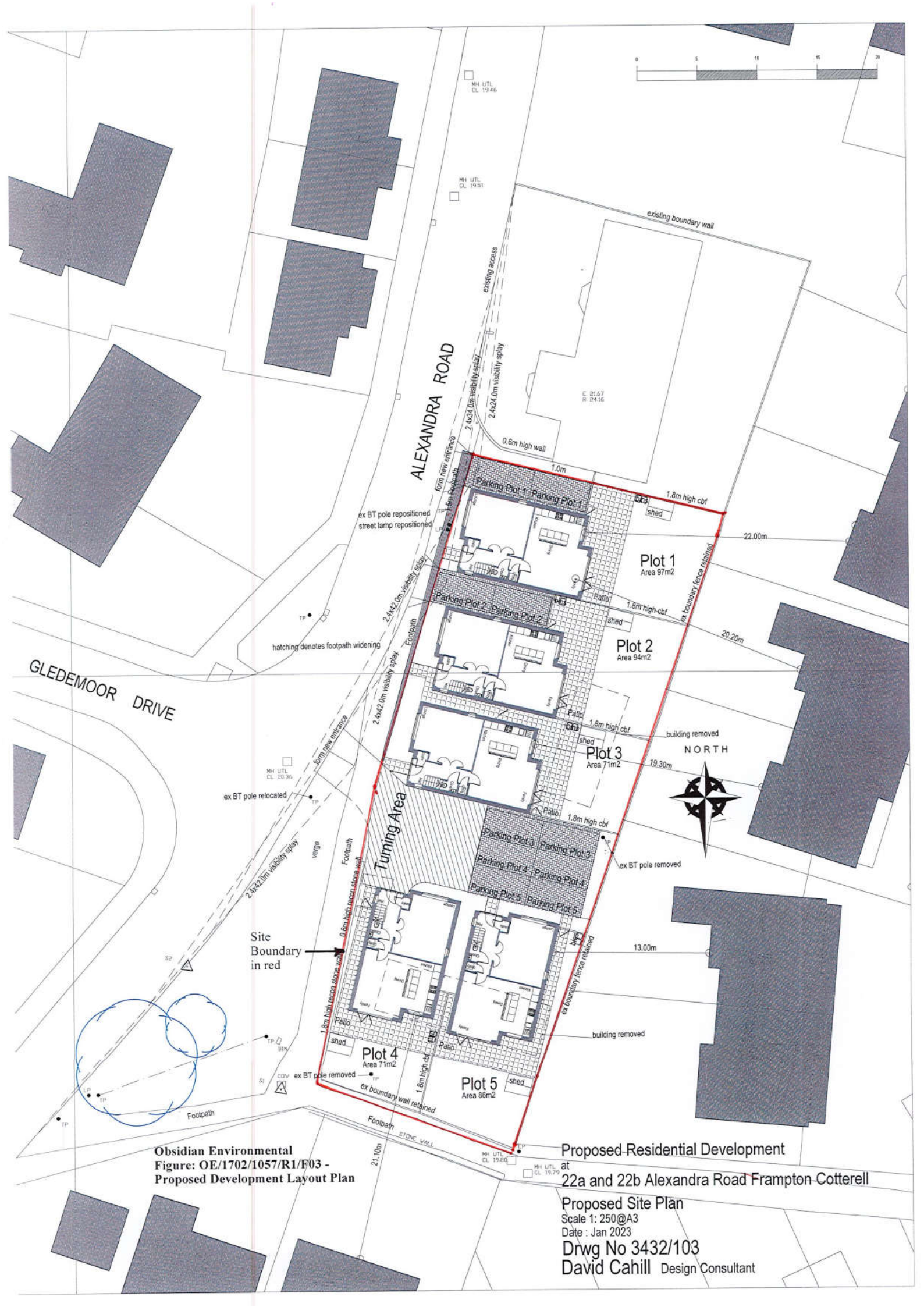
www.obsidianenvironmental.co.uk

Project:	Land at 22 Alexander Road, Frampton, BS36 2PZ	Drawn:	LS	Scale:	Not to Scale
Title:	Site Location Plan	Checked:	LS	Date:	28/06/2023
		Client:	White Horse Homes		
		Drawing No.:	OE/1792/1057/R1/F01		



Obsidian Environmental
 Figure: OE/1702/1057/R1/F02 -
 Existing Site Layout Plan

Proposed Residential Development
 at
 22a and 22b Alexandra Road Frampton Cotterell
 Existing Site Plan
 Scale 1: 250@A3
 Date : Apr 2023
 Drwg No 3432/100
 David Cahill Design Consultant



Obsidian Environmental
Figure: OE/1702/1057/R1/F03 -
Proposed Development Layout Plan

Proposed Residential Development
at
22a and 22b Alexandra Road Frampton-Cotterell
Proposed Site Plan
Scale 1: 250@A3
Date: Jan 2023
Drwg No 3432/103
David Cahill Design Consultant

APPENDICES

- Appendix A - Site Reconnaissance Photofile**
- Appendix B - Copy of Planning Permission**
- Appendix C - Copy of Groundsure Large & Small Historical Maps**
- Appendix D - Copy of Groundsure Reports**
- Appendix E - Copy of Coal Mining Report**
- Appendix F - Contaminated Land & Waste Legislation**

Appendix A - Site Reconnaissance Photofile



Photo OE/1702/1057/R2/P01 – Looking north on Alexander Road from opposite the site entrance.



Photo OE/1702/1057/R2/P02 – Bungalow adjacent to the northern boundary of the site.



Photo OE/1702/1057/R2/P03 – View into the site and the gated access from Alexander Road looking east.



Photo OE/1702/1057/R2/P04 – Looking south on Alexander Road from opposite the site entrance.



Photo OE/1702/1057/R2/P05 – View into the site from gated access from Alexander Road looking east, and residential housing beyond.



Photo OE/1702/1057/R2/P06 – Look south down the site from gated access.



Photo OE/1702/1057/R2/P07 – Northeast corner of the site and residential housing beyond .



Photo OE/1702/1057/R2/P08 – Looking back towards the gated access from northeast corner of the site.



Photo OE/1702/1057/R2/P09 – View of eastern boundary from the north, and 22a static caravan



Photo OE/1702/1057/R2/P10 – Looking down the length of the site – north to South.



Photo OE/1702/1057/R2/P11 – Equipment stored against western boundary blockwork wall.



Photo OE/1702/1057/R2/P12 – View of 22a static caravan and transition from tarmac to rock fill surface dressing.



Photo OE/1702/1057/R2/P13 – View of western area of the site progressing south – at circa the centre of the site.



Photo OE/1702/1057/R2/P14 – Mobile burger van and associated stored equipment, including calor gas bottles.



Photo OE/1702/1057/R2/P15 – View of western area of the site looking north – at circa of the centre of the site.



Photo OE/1702/1057/R2/P16 – View of southwest corner of the site (hedge), western boundary wall, and 22b static caravan.



Photo OE/1702/1057/R2/P17 – Electrical box for supply to the site at southwest corner of the site.



Photo OE/1702/1057/R2/P18 – Southern boundary with public footpath beyond hedge.



Photo OE/1702/1057/R2/P19 – Looking west to east, with southern boundary, grassed area, on the right-hand site (RHS), and 22b static caravan on the LHS.



Photo OE/1702/1057/R2/P20 – Northern side of 22b static caravan looking towards the east.



Photo OE/1702/1057/R2/P21 – View along the eastern boundary – south to north – and rear of 22a static caravan.



Photo OE/1702/1057/R2/P22 – View along the eastern boundary – south to north – and 22a static caravan.



Photo OE/1702/1057/R2/P23 – Calor gas bottles stored at side of 22a static caravan, looking south to north, at eastern boundary.



Photo OE/1702/1057/R2/P24 – View south to north of outside of blockwork boundary wall.



Photo OE/1702/1057/R2/P25 – View north to south of outside of blockwork boundary wall, with grass verge on RHS.



Photo OE/1702/1057/R2/P26 – View north to south of outside of blockwork boundary wall, near to southwest corner, with grass verge on RHS.



Photo OE/1702/1057/R2/F27 – Public footpath just beyond southern boundary of the site.



Photo OE/1702/1057/R2/P28 – Looking north from southwest external corner of the site, with verge on the LHS.



Photo OE/1702/1057/R2/P29 – View of southern section of western external brickwork boundary wall.



Photo OE/1702/1057/R2/P30 – View of northern section of western external brickwork boundary wall.

Appendix B - Copy of Planning Permission



David Cahill Design Consultants Ltd
Unit 2, Office 4
Tower Lane Business Park
Tower Lane
Warmley
South Gloucestershire
BS30 8XT

APP REF: P23/00067/F
DATE VALID: 17th April 2023
DECISION DATE: 1st December 2023
PARISH: Frampton Cotterell
Parish Council

NOTICE OF DECISION TOWN AND COUNTRY PLANNING ACT 1990

South Gloucestershire Council in pursuance of powers under the above mentioned Act hereby PERMIT:

APPLICATION NO: P23/00067/F

DESCRIPTION OF DEVELOPMENT: Demolition of existing dwellings. Erection of 5 no. detached dwelling with associated access and parking

APPLICANT: Whitehorse Homes Ltd

LOCATION: Land At The Depot 22 Alexandra Road Coalpit Heath South Gloucestershire BS36 2PZ

In accordance with the application and accompanying plans, subject to the conditions specified below:

1. The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

Reason

To comply with the requirements of Section 91 of the Town & Country Planning Act 1990 (as amended).

Strategic Planning, South Gloucestershire Council, Department For Place, PO Box 1954, Bristol, BS37 0DD
Telephone: 01454 868004 Email: planningapplications@southglos.gov.uk

2. No development shall commence until;
 - a) a scheme of intrusive investigations has been carried out on site to establish the risks posed to the development by past shallow coal mining activity; and
 - b) any remediation works and/or mitigation measures to address land instability arising from coal mining legacy, as may be necessary, have been implemented on site in full in order to ensure that the site is made safe and stable for the development proposed.

The intrusive site investigations and remedial works shall be carried out in accordance with authoritative UK guidance.

Reason

The undertaking of intrusive site investigations, prior to the commencement of development, is necessary to ensure that adequate information pertaining to ground conditions and coal mining legacy is available to enable appropriate remedial and mitigatory measures to be identified and carried out before building works commence on site. This is in order to ensure the safety and stability of the development, in accordance with paragraphs 183 and 184 of the National Planning Policy Framework.

3. No development shall commence until surface water drainage details including SUDS (Sustainable Drainage Systems e.g. soakaways if ground conditions are satisfactory), for flood prevention; pollution control and environmental protection have been submitted and approved by the Local Planning Authority. Development shall be carried out in accordance with the agreed details.

Full planning application - A detailed development layout showing the location of surface water proposals is required along with results of percolation tests and infiltration calculations to demonstrate that the proposal is suitable for this site.

Reason

To comply with South Gloucestershire Local Plan: Policies, Sites and Plans Plan (Adopted) November 2017 Policy PSP20; South Gloucestershire Local Plan: South Gloucestershire Local Plan: Core Strategy (Adopted) December 2013 Policy CS1 and Policy CS9; and National Planning Policy Framework.

This condition is pre-commencement to avoid unnecessary remedial works.

4. A site-specific Construction Environmental Management Plan (CEMP), shall be agreed in writing with the Local Planning Authority prior to commencement of work. The CEMP as approved by the Council shall be fully complied with at all times.

Strategic Planning, South Gloucestershire Council, Department For Place, PO Box 1954, Bristol, BS37 0DD
Telephone: 01454 868004 Email: planningapplications@southglos.gov.uk

The CEMP shall include but not necessarily be limited to:

- (i) Measures to control the tracking of mud off-site from vehicles.
- (ii) Measures to control dust from the demolition and construction works approved.
- (iii) Adequate provision for the delivery and storage of materials.
- (iv) Adequate provision for contractor parking.
- (v) A lorry routing schedule, to include access from Church Road and Alexandra Road only. Measures to coordinate the arrival and departure of construction and delivery vehicles to avoid conflict.
- (vi) Highway condition surveys of Alexandra Road including photographs carried prior to commencement of the development and after completion. The condition surveys are to be carried out jointly with a representative from the Local Highway Authority (LHA) Streetcare Team. Any damage to the highway caused as a result of the construction works will need to be repaired to the satisfaction of the LHA representative.
- (vii) Temporary access arrangements for construction traffic.
- (viii) Details of Main Contractor including membership of Considerate Constructors scheme or similar.
- (ix) Site Manager contact details.
- (x) Processes for keeping local residents and businesses informed of works being carried out and dealing with complaints.

Reason

In the interests highway safety and to accord with Policies PSP11 of the South Gloucestershire Local Plan: Policies, Sites and Places Plan (Adopted) November 2017.

This condition is pre-commencement to avoid unnecessary remedial works.

5. Prior to the commencement of development a programme of archaeological investigation and recording for the site shall be submitted to and approved by the Local Planning Authority. Thereafter, the approved programme shall be implemented in all respects, unless the Local Planning Authority agrees in writing to any variation.

Reason

In the interest of archaeological investigation or recording, and to accord with Policy CS9 of the South Gloucestershire Local Plan: Core Strategy (Adopted) December 2013 and the National Planning Policy Framework.

6. Prior to the commencement of the relevant part of the development details/samples of the roofing and external facing materials proposed to be used shall be submitted to and approved in writing by the Local Planning Authority. Development shall be carried out in accordance with the approved details.

Reason

To ensure a satisfactory standard of external appearance and to accord with Policy CS1 of the South Gloucestershire Local Plan: Core Strategy (Adopted) December 2013; and the National Planning Policy Framework.

7. Prior to occupation of any dwelling, a hard and soft landscape plan shall be submitted to the local planning authority for approval. Said plan shall include full details of all hard surface finishes and boundary treatments, and all proposed planting (to include species, location and stock size). Hard landscaping shall be implemented as approved prior to occupation of any dwelling, and soft landscaping in the first available planting season following occupation of each dwelling.

Reason

To ensure a satisfactory standard of external appearance and to accord with Policy CS1 of the South Gloucestershire Local Plan: Core Strategy (Adopted) December 2013; and the National Planning Policy Framework.

8. Prior to the occupation of the development, or it being taken into beneficial use, a signed statement or declaration prepared by a suitably competent person confirming that the site is, or has been made, safe and stable for the approved development shall be submitted to the Local Planning Authority for approval in writing. This document shall confirm the methods and findings of the intrusive site investigations and the completion of any remedial works and/or mitigation necessary to address the risks posed by past coal mining activity.

Reason

To ensure that the site is safe for its intended use and remains so, in conjunction with condition 2.

9. Development shall proceed at all times in accordance with the submitted arboricultural report (Silverback, July 2023).

Reason

Strategic Planning, South Gloucestershire Council, Department For Place, PO Box 1954, Bristol, BS37 0DD
Telephone: 01454 868004 Email: planningapplications@southglos.gov.uk

To ensure that retained trees are protected appropriately and to accord with PSP3 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

10. The rear first floor windows shall be obscured as described on plan 3432/103 (plot 2 and 3 plans and elevations - as received 13th April 2023) to a level 3 standard or above. Notwithstanding the submitted plan, this shall apply to both plots 1 and 3.

Reason

To preserve the amenity of neighbouring occupiers and to accord with PSP8 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

11. Prior to the use or occupation of the dwelling on plot 5 hereby permitted, and at all times thereafter, the first floor East facing part of the bay window to plot 5 and the first floor East side elevation window (plot 5) shall be glazed with obscure glass to level 3 standard or above with any opening part of the window being above 1.7m above the floor of the room in which it is installed'.

Reason

To preserve the amenity of neighbouring occupiers and to accord with PSP8 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

12. No windows other than those shown on the plans hereby approved shall be inserted at any time in the elevations of the dwellings.

Reason

To preserve the amenity of neighbouring occupiers and to accord with PSP8 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

13. Notwithstanding the provisions of Schedule 2 of the Town & Country Planning (General Permitted Development) (England) Order 2015 (or any Order revoking and re-enacting that Order with or without modification) no development as specified in Part 1 (Classes A, AA, B, and C), other than such development or operations indicated on the plans hereby approved, shall be carried out without the prior written consent of the Local Planning Authority.

Reason

Strategic Planning, South Gloucestershire Council, Department For Place, PO Box 1954, Bristol, BS37 0DD
Telephone: 01454 868004 Email: planningapplications@southglos.gov.uk

In view of the plot size and constrained nature of the site, this condition is necessary to allow the LPA to retain control over future additions in the interest of preserving the amenities of neighbouring occupiers.

14. The dwellings shall not be occupied until the footway improvement works and accesses have been completed in accordance with the submitted details drawing no. 3432/102 Rev B (proposed site plan, as received 8th June 2023).

Reason

In the interest of highway safety and to accord with Policy PSP11 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

15. The dwellings shall not be occupied until the car and cycle parking arrangements have been provided in accordance with the submitted details plus a cycle store for plot 5. Parking facilities shall be retained thereafter.

Reason

In the interest of highway safety, to promote sustainable travel and to accord with Policies PSP11 and 16 of the South Gloucestershire Local Plan: Policies Sites and Places Plan (Adopted) November 2017.

16. Development shall be implemented in accordance with the following plans:

3432/100 - existing site plan
3432/102 - plot 1: plans and elevations
3432/103 - plot 2 and 3: plans and elevations
3432/106 - location plan
As received 13th April 2023

3432/104 B - plot 5 plans and elevations
3432/107 B - proposed site drainage plan
3432/102 B - proposed site plan
3432/105 A - proposed site sections
As received 8th June 2023

Reason

To define the exact terms of the permission.

IN ACCORDANCE WITH ARTICLE 35 OF THE TOWN AND COUNTRY PLANNING
(DEVELOPMENT MANAGEMENT PROCEDURE) ORDER 2015.
POSITIVE AND PROACTIVE STATEMENT:

In dealing with this planning application the Local Planning Authority have worked with the applicant in a positive and proactive manner on seeking solutions to problems arising in the following ways: revised plans have been accepted and the application has been determined within an agreed extension of time.

ADDITIONAL INFORMATION

1. This permission shall not be construed as granting rights to carry out works on, or over, land not within the ownership, or control, of the applicant.
2. You must obtain the prior written consent of the owner and occupier of any land upon which it is necessary for you to enter in order to construct, externally finish, decorate or in any other way carry out any works in connection with this development including future repairs/maintenance, or to obtain support from adjoining property. This permission does not authorise you to take such action without first obtaining this consent. Your attention is also drawn to the Access of Neighbouring Land Act 1992 and Party Wall Act 1996.
3. This Decision Notice grants planning permission. You are advised that it does not imply compliance with Building Regulations and it is essential that you contact the Council's Building Control Manager with regard to your proposals before proceeding.
4. Ground Investigations and groundworks

Under the Coal Industry Act 1994 any intrusive activities which disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits) require the prior written permission of the Coal Authority since these activities can have serious public health and safety implications. Such activities could include site investigation boreholes, excavations for foundations, piling activities, other ground works and any subsequent treatment of coal mine workings and coal mine entries for ground stability purposes. Failure to obtain permission to enter or disturb our property will result in the potential for court action. Application forms for Coal Authority permission and further guidance can be obtained from The Coal Authority's website at: www.gov.uk/get-a-permit-to-deal-with-a-coal-mine-on-your-property.

Strategic Planning, South Gloucestershire Council, Department For Place, PO Box 1954, Bristol, BS37 0DD
Telephone: 01454 868004 Email: planningapplications@southglos.gov.uk

Shallow coal seams

In areas where shallow coal seams are present caution should be taken when carrying out any on site burning or heat focused activities.

5. For the avoidance of doubt we would expect to see the following details when discharging the drainage conditions:

A clearly labelled drainage layout plan showing the exact location of any soakaways.

Evidence is required to confirm that the ground is suitable for soakaways. Percolation / Soakage test results in accordance with BRE Digest 365 and as described in Building Regs H - Drainage and Waste Disposal.

The submitted infiltration rate/s must be expressed in m/s (meters per second).

Evidence that the soakaway is appropriately sized in accordance with BRE Digest 365 Soakaway Design.

Sp. Note; - Soakaways must be located 5 Metres from any structure including the Public Highway

Sp. Note: - No surface water discharge will be permitted to an existing foul sewer without the expressed approval of the sewage undertaker.

Ownership and/or responsibility, along with details of the maintenance regime in relation to the Surface Water Network and any components such as Attenuation/Infiltration/Conveyance features, Flow Control Devices, and Pumping Stations where applicable, for the lifetime of the development, must also be provided.

This should clearly outline which elements/components will be offered for adoption and those which are to remain privately maintained and by whom (in this context this refers to the wider scheme infrastructure such as ponds, basins, swales, ditches, soakaways, and permeable paving which may form part of the surface water network).

If privately maintained, the document should also consider any future sale scenarios and how tentative purchasers will also be made aware of their jointly vested highway and drainage assets.



PLEASE NOTE: The development hereby permitted must be implemented in accordance with plans hereby approved and any conditions specified above. The conditions may specify that works are to be carried out or details are required to be submitted for further approval, before all or part of the development is otherwise commenced. For further information regarding the discharge of Planning Conditions and the relevant forms please view “compliance with conditions” on our website, www.southglos.gov.uk If the permission is commenced without these requirements being fully met, or in any other manner, the development may be unauthorised and the permission invalidated. The council holds a definitive copy of this planning decision notice. You should be aware of the risk that subsequent copies of the decision notice may be subject to unauthorised alteration and if necessary you are advised to refer to the council for verification. The definitive copy can be viewed via the council’s planning website.

A handwritten signature in black ink, appearing to read 'M. B. B.', is positioned below the main text block.

DEVELOPMENT MANAGER

DATE: 1st December 2023

PLANNING PERMISSION THE NEXT STEPS

Your Decision could be subject to conditions. It is essential that you comply with these conditions in order to protect your planning permission. If you have conditions requiring details to be submitted prior to the commencement of development then failure to discharge these conditions could invalidate your planning permission and result in enforcement action being taken against the development.

HOW TO APPLY TO DISCHARGE CONDITIONS ON YOUR PLANNING PERMISSION

If the condition requires you to agree something in writing with the Authority before development commences then you will need to consider submitting these details at least 8 weeks prior to starting work. In order to submit your application, you can do so by one of the following options:

- Submit an online application using the Planning Portal online application service www.planningportal.gov.uk/
- Complete an application form online via the Planning Portal online Application service, www.planningportal.gov.uk/ printing it off and enclosing it with the correct plans, fee and details before sending it to Development Services.
- Download a copy of the application form from the South Gloucestershire website on www.southglos.gov.uk/planning.
- Request a paper copy from our PT&SE Customer Contact Centre by calling 01454 868004.
- Visit one of the Council One Stop Shop receptions to collect a paper copy of the application form.

The fee amount is £34 per request relating to 'householder' applications and £116 for any other full planning applications.

The fee is payable for each submission (a single submission may be for more than one condition to be discharged).

COMMUNITY INFRASTRUCTURE LEVY (CIL)

If this application has been identified as being liable to CIL you should not commence development until the requirements and obligations under CIL have been established. If we require further information we will write to you requesting this. Where we already have clear information about the proposal and assumed liability we will issue a liability notice shortly. Further information can be found on our website at www.southglos.gov.uk/environment-and-planning/planning/community-infrastructure-levy

BUILDING REGULATIONS

You might require separate Building Control approval and you can also secure this through the Council. For advice on development requiring Building Regulations approval please visit the Planning Portal or contact our Team on 01454 863451

ACTING AS AN AGENT?

Please forward the full copy of this decision to your client and advise them of any conditions. The Council continues to be involved with enforcement action taken against applicants who claim not to have been passed the decision by their Agent.

APPEALS AGAINST THE DECISION OF THE LOCAL PLANNING AUTHORITY (LPA)

If the applicant is aggrieved by the decision to refuse this proposal – or to grant subject to conditions – they may appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990 or section 20 of the Planning (Listed Buildings and Conservation Areas) Act 1990. Appeals can be made online at: <https://www.gov.uk/planning-inspectorate>. If they are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on 0303 444 5000.

Appeals must be made to the Planning Inspectorate in accordance with the provisions below:

- (a) for a **householder application**, an appeal must be made within 12 weeks of the date of this notice;
- (b) for a **minor commercial application**, an appeal must be made within 12 weeks of the date of this notice;
- (c) for the **display of an advertisement**, an appeal must be made within 8 weeks of the date of receipt of this notice;
- (d) for **works to trees** subject to a Tree Preservation Order or part of a woodland, an appeal must be made within 28 days of the date of this notice;
- (e) if this planning application relates to the same, or substantially the same, land and development as is **already the subject of an enforcement notice**, an appeal must be made within 28 days of the date of this notice;
- (f) if an **enforcement notice is served** relating to the same or substantially the same land and development as in this application an appeal must be made within: 28 days of the date of service of the enforcement notice, or within 6 months [12 weeks in the case of a householder appeal] of the date of this notice, whichever period expires earlier;
- (g) in **all other cases**, an appeal must be made within 6 months of the date of this notice.

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal. The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission/listed building consent for the proposed development/works or could not have granted it without the conditions imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

If you intend to submit an appeal that you would like examined by inquiry then you must notify the Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) and local planning authority (registrationteam@southglos.gov.uk) at least 10 days before submitting the appeal. Further details are available on [GOV.UK](https://www.gov.uk) website.

When submitting an appeal, it is a requirement that an identical set of documents be submitted to the local planning authority. A copy of all appeal documents (and any subsequent documents required to validate the appeal) should be sent to registrationteam@southglos.gov.uk when the appeal is made. Please ensure this instruction is complied with in order to avoid any unnecessary delay.

Appendix C - Copy of Groundsure Large & Small Historical Maps

Appendix D - Copy of Groundsure Reports

Appendix E - Copy of Coal Mining Report



The Coal
Authority

CON29M

coal mining report

THE BUNGALOW, HARRIS YARD, 22 ALEXANDRA ROAD, COALPIT HEATH,
SOUTH GLOUCESTERSHIRE, BS36 2PZ



Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit
www.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see **page 3** for further details on **Future development**.

Your reference:

Our reference: **51003344289001**

Date: **15 March 2023**

Client name:

Dean Iles

If you require any further assistance please contact our experts on:

0345 762 6848

groundstability@coal.gov.uk



The Law
Society

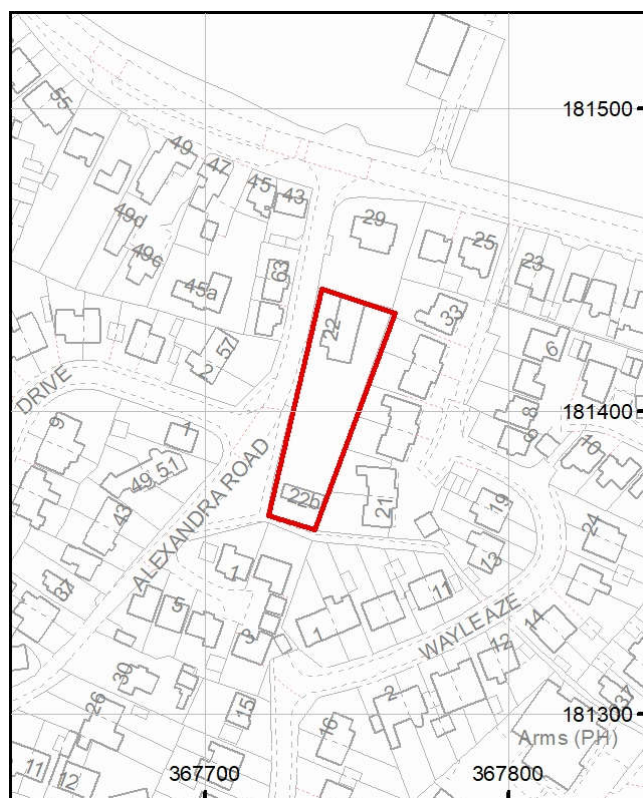
Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2018. All rights reserved.
Ordnance Survey Licence number: 100020315.

This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.



Accessibility

If you would like this information in an alternative format, please contact our communications team on **0345 762 6848** or email communications@coal.gov.uk.

Your reference:
Our reference: **51003344289001**
Date: **15 March 2023**

Client name:
Dean Iles

If you require any further assistance please contact our experts on:
0345 762 6848
groundstability@coal.gov.uk

Professional opinion



Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email **cmra@coal.gov.uk**.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

The Coal Authority owns the copyright in this report and the information used to produce this report is protected by our database rights. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

1 Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

However the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Your reference:

Our reference: **51003344289001**

Date: **15 March 2023**

Client name:

Dean Iles

If you require any further assistance please contact our experts on:

0345 762 6848

groundstability@coal.gov.uk

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call **0800 288 4242**. Further information can be found on our website: www.gov.uk/coalauthority.

Your reference:

Our reference: **51003344289001**

Date: **15 March 2023**

Client name:

Dean Iles

If you require any further assistance please contact our experts on:

0345 762 6848

groundstability@coal.gov.uk

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

mine gas - reports of alleged mine gas emissions received by the Coal Authority within the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

Your reference:

Our reference: **51003344289001**

Date: **15 March 2023**

Client name:

Dean Iles

If you require any further assistance please contact our experts on:

0345 762 6848

groundstability@coal.gov.uk

Appendix F - Contaminated Land & Waste Legislation

Contaminated Land Regime

Review of Part IIA Requirements

Statutory Framework

Part IIA was inserted into the Environmental Protection Act 1990 (The Act) by section 57 of the Environmental Act 1995. The purpose of The Act is to remove unacceptable risks to human health and the environment due to contaminated land and to bring this land back into beneficial use.

Statutory guidance (DETR Circular 02/2000 Ref 2) was issued to ensure a consistent and logical approach to the identification and remediation of contaminated land across England.

Definition of Contaminated Land

Land will be designated as contaminated if it is in such a condition that significant harm is being caused or there is a significant possibility of such harm being caused to a series of receptors defined in the statutory guidance. The land will also be designated as contaminated if the pollution of controlled waters is being or is likely to be caused.

The assessment of whether significant harm is or is likely to be caused is based on the concept of a pollutant linkage – that is a linkage between a contaminant on the land in question and a receptor, by means of a pathway. In assessing the likelihood of a pollution linkage being present the principles of risk assessment will apply. This will involve the consideration of the likelihood that harm or pollution will occur and what magnitude it will be. If a piece of land is to be designated as contaminated it must be proven that both a pollution linkage exists and that the linkage will result in significant harm or the pollution of controlled waters.

Receptors

The Statutory Guidance defined the receptors that need to be addressed when considering if significant harm or pollution is being caused, these are summarised below:

- Human Health.
- Any ecological system or organism forming part of such a system. The guidance provides a definition of such systems and includes Special Sites of Scientific Interest, National Nature Reserves, Special Protection Areas and Special Areas of Conservation, Ramsar Sites among others.
- Property including crops timber and livestock.
- Property in the form of buildings.

The Local Authority should not consider harm to any receptors that are not included on the list in the Statutory Guidance. For example, harm to ecological systems outside of the designations in the table should be disregarded. Only the receptors, which are likely to be present on and near the site given its current use should be considered. Current use is defined as any use, which is currently being made or is likely to be made that is consistent with the lands existing planning permission.

Pollution of controlled waters is defined as “*the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter*”. The term controlled waters covers

virtually all fresh and saline natural waters up to the UK offshore territorial limit, including rivers, streams, lochs, estuaries, coastal waters and groundwater. Groundwater is defined as any water below the surface of the ground and it therefore includes waters in both the saturated and unsaturated zones.

However, land should not be designated as contaminated land if the substance in question is already present in controlled waters or if its entry has now ceased and it is unlikely that further entry will take place. The above comments refer to legal powers under The Act, however, it should be noted that the site owner has wider responsibilities in common law and statutory nuisance for any adverse effects caused by the contaminated land on a third parties property.

Inspection Strategy

Under section 78B (1) of the Act, the Local Authority has a responsibility to develop an inspection strategy to identify land that merits detailed individual inspection. It is stated that this should be proportionate to the seriousness of the risk and should include some form of prioritisation. The strategy should therefore concentrate on existing evidence that a contaminant is likely to be present on a site and the extent to which receptors, as defined in the guidance, are likely to be exposed to a contaminant as a result of the use of the land or of the geological and hydrogeological features of the area.

This initial phase of inspection will result in the identification of land, which is likely to be contaminated and where a possible pollution linkage exists. The Local Authority must then undertake a detailed inspection of such sites, which could vary from collection of documentary information to an intrusive investigation. However, the land can only be designated as contaminated when a *“scientific and technical assessment of the risks arising from the pollution linkage, according to relevant, appropriate, authoritative and scientifically based guidance on such risk assessment”* has been completed and this assessment indicates that harm, the potential for such harm or pollution is being caused.

Human Health Risk Assessment

The UK Department for Environment, Food and Rural Affairs (DEFRA) and the Environment Agency (EA) have recently published guidance on the assessment of contaminated land from a human health perspective, including “The Contaminated Land Exposure Assessment Model” (CLEA) and “Soil Guideline Values” (SGVs) for selected heavy metals / metalloids. Soil Guideline Values are quoted in a “suitable for use” context, with four guideline values provided for four separate Standard Land Uses.

- Residential with plant uptake.
- Residential without plant uptake.
- Allotments.
- Commercial / Industrial.
- Public Open Space – Residential
- Public Open Space

Soil Guideline Values (SGV) and supporting technical guidance are intended to assist professionals in the assessment of long-term risk to health from human exposure to chemical contamination in soil. There are different SGVs according to land-use (residential, allotments, commercial) because people use land differently and this affects who and how people may be exposed to soil contamination. SGV are 'trigger values' for screening-out low

risk areas of land contamination. They give an indication of representative average levels of chemicals in soil below which the long-term health risks are likely to be minimal. Exceeding an SGV does not mean that remediation is always necessary, although in many cases some further investigation and evaluation of the risk will be carried out.

SGV should not be used where they are not representative of the site under investigation. They do not assess other types of risk to human health such as fire, suffocation, explosion, or short-term and acute exposures. They also cannot be used to assess risks to controlled waters, property, pets and livestock, or ecological receptors.

SGV are available only for a limited number of chemical substances. Reference should be made to the explanatory notes for each element provided in the DEFRA / EA Soil Guideline Value Reports SGV1 – 10 Soil Guideline Values for contamination in soils for specific substances. Phenol Values are subject to soil organic matter content (SOM) as noted above and outlined by the DEFRA / EA Soil Guideline Value Report SGV1 – 8.

In addition to the published SGVs use is made of widely adopted Land Quality Management generic assessment criteria (GACs) for chemical compounds not covered by the published SGVs. The following document and the proposed GAC have been adopted for heavy metals compared either against the LQM/CIEH/S4ULs Human Health Risk Assessment. (NATHANIAL, C.P, M^CCAFFREY, C. ASHMORE, M. CHENG, Y. GILLET, A. HOOKER, and P. OGDEN, R.C., 2015. Generic Assessment Criteria for Human Health Risk Assessment. Land Quality Press. Nottingham) - (ISBN 0-9547474-3-7), where available and Category 4 screening values.

Waste Management Legislation

Hazardous Waste Regulations – off-site disposal

In order to evaluate the various on-site soils for potential offsite disposal, soils are classified in accordance with the Hazardous Waste Directive (HWD) that enables the provision of a European Waste Catalogue (EWC) Code for use during offsite disposal and a Hazardous or Non-Hazardous Classification. Non-Hazardous material is suitable for disposal in a Non-Hazardous landfill; however disposal to an Inert Landfill requires further Waste Acceptance Criteria (WAC) testing in accordance with BS EN 12457–3. Material classed as Hazardous also requires WAC testing to assign a suitable hazardous classification.

It should be noted that WAC testing has not been undertaken at this time. Should offsite disposal of soils that are Hazardous or possibly Inert be required WAC testing should be undertaken by suitably qualified personnel. Further information on sampling and analysis of soils destined for offsite disposal can be provided by It is also recommended that prior to offsite disposal of the soils; the receiving landfill facility should be sent copies of all relevant chemical analysis and written confirmation of acceptance of soils provided.

The Landfill Directive requires that all Hazardous and Non-Hazardous solid waste must be treated prior to offsite disposal to landfill. Treatment can be defined by using the following 'three-point test'. All three criteria must be satisfied for all of the waste to qualify as being treated:

- 1. It must be a physical, thermal, chemical or biological process including sorting.**
- 2. It must change the characteristics of the waste.**
- 3. It must do so in order to:**
 - a. Reduce its volume; or**
 - b. Reduce its hazardous nature; or**
 - c. Facilitate its handling; or**
 - d. Enhance recovery.**

It is recommended that the Made Ground and underlying natural ground should be carefully segregated and stockpiled separately during earthworks and piling operations in order to prevent mixing of the waste streams. Careful segregation at the earliest stage may allow costs saving in offsite disposal costs to be realised. It is recommended that a qualified geoenvironmental/waste engineer undertakes the organisation of the removal of soils from the site in order to ensure that the relevant legislation is adhered to at all stages of the process. Improper management of the process or improper disposal may lead to prosecution by the Environment Agency.