



EXECUTIVE SUMMARY REPORT

**STONEHOUSE FARM
PLUMMERS PLAIN
LOWER BEEDING
WEST SUSSEX**

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1. INTRODUCTION

Development works are proposed within three areas of the wider Stonehouse Farm site, located at Plummers Plain, Lower Beeding, West Sussex.

A copy of a site plan showing the existing layout of the entire Stonehouse Farm area is presented in Appendix A.

The three areas are referred to as Lot 8, Jacksons Farm and Stonehouse Business Park. The proposed works in the three areas are to include:

- Stonehouse Business Park: Rationalisation and enhancement of existing commercial facilities (Use Classes E(g), B2 and B8 at Stonehouse Business Park including demolition of two buildings and their replacement with new Class E(g), B2 and B8 facilities. Extension of existing building to form a new office and wardens' accommodation. Existing mobile home removed.
- Lot 8: Decommissioning of the Anaerobic Digester and re-use of the existing 2no buildings for storage and office uses (Class E (g) and B8) and the diversion of a public footpath.
- Jacksons Farm: Residential redevelopment of the Jacksons Farm site including the demolition of existing barns to provide 3no. dwellings with access, parking and landscaping.

Ashdown Site Investigation Ltd. has been commissioned to undertake a number of phases of ground contamination risk assessments for the three areas. This report provides an executive summary of the findings of the assessments and must be read in conjunction with the individual reports referenced below.

2. STONEHOUSE BUSINESS PARK

The Stonehouse Business Park site is located in the south-east of the wider Stonehouse Farm area.

A preliminary ground contamination risk assessment¹ has been prepared. At the time of the walkover survey, the site comprised a small industrial estate containing a number of units with associated access roadways and areas of parking.

At the time of the earliest inspected historical map, dated 1874, the site housed a single small agricultural building. Further buildings were constructed during the early to mid 1900s, with some additional development having taken place since 2012.

Reference to geological datasets indicates that the site is expected to be underlain by the Upper Tunbridge Wells Sand Formation – mudstone in the southern extent of the site and Upper Tunbridge Wells Sand Formation - sandstone and siltstone interbedded in the northern extent.

The mudstone variation of the Upper Tunbridge Wells Sand Formation is classed as an Unproductive Stratum, whilst the interbedded sandstone and siltstone is classed as a Secondary A Aquifer. Whilst the level of vulnerability associated with the Secondary A aquifer is considered to be high, the site does not lie within an Groundwater Source Protection Zone (SPZ) and no groundwater abstractions, whether potable or otherwise, are present within 2km of the site.

The following potential sources of contamination have been identified by the preliminary contamination risk assessment:

¹ Project Ref: P17029, Report Ref: R16575, Issue 2, dated 28th February 2025

- Historical and ongoing use of the site for agricultural and light industrial purposes.
- Made ground in the vicinity of Commercial Buildings 3 and 5 from historical redevelopment works.

The proposed development works will result in the removal of buildings 3 and 5 and the portacabins to the north-east of building 4, followed by the construction of a new commercial unit in the area of building 3 and the extension of the management office block in the east of the site. Some small areas of new soft landscaping will be created around building 4 and the office block.

Pathways associated with gas and vapour intrusion into the new building and extension are considered to be valid. Those pathways associated with direct contact and dust generation are valid, but only in the area around building 4 where new soft landscaping is to be provided.

Whilst the site is expected to be underlain by the Upper Tunbridge Wells Sand which is classed as a Secondary A/Unproductive Stratum (depending on the stratum variation), no potable drinking water abstraction points are noted within 2km of the site and the site is not located within a SPZ. As such, there are not considered to be viable pathways linking potential contamination on the site with sensitive groundwater.

A copy of the preliminary conceptual model for this site is presented in Appendix B.

A potential pollutant linkage has been identified, but this is considered to be limited to the small areas of proposed soft landscaping that will be created around building 4. Given the limited size of these areas and the ongoing use of the site for commercial/light industrial purposes, the overall level of risk posed to end users of the site is considered to be **very low**.

As such, an intrusive investigation and quantitative risk assessment **is not considered to be warranted**.

Attention is drawn to the discovery strategy presented within the preliminary risk assessment which sets out what steps should be taken in the event than any materials that are suspected of being 'contaminants' are encountered during the course of the site clearance and development works.

3. LOT 8

The Lot 8 site is located in the south-west of the wider Stonehouse Farm area.

A preliminary ground contamination risk assessment² has been prepared. The assessment included a review of the findings from previous phases of intrusive investigation undertaken at the site by others.

At the time of the walkover survey, the site comprised a large storage barn in the north-east, a small building to its south containing a disused anaerobic digestor and areas of open space and hardstanding.

The site has comprised of open agricultural land from the earliest OS Map dating back to the mid-1870s. It is only in recent years that the building containing the anaerobic digestor was constructed, circa 2018, followed by the large barn, circa 2021.

² Project Ref: P17027, Report Ref: R16577, Issue 2, dated 28th February 2025

Reference to geological datasets indicates that the site is expected to be underlain by the Upper Tunbridge Wells Sand Formation. The previous investigations confirmed the underlying soils to comprise a variable significant thickness of made ground, due to deposited granular fill, overlying the [Upper] Tunbridge Wells Sand Formation deposits.

The Upper Tunbridge Wells Sand Formation is classed as a Secondary A Aquifer. Limited groundwater seepages were encountered within the trial pits from the previous investigation works, though most were dry.

Whilst the underlying Upper Tunbridge Wells Sand is classed as a Secondary A aquifer, no potable drinking water abstraction points are noted within 2km of the site and the site is not located within a SPZ. As such, there are not considered to be viable pathways linking potential contamination on the site with sensitive groundwater.

The only potential source identified by the risk assessment is the presence of made ground beneath various parts of the site from its recent development, which has evidently included the placement of granular fill material to quite significant depths in places.

However, several phases of investigation works were carried out in 2024 to assess the made ground and these have found that the made ground does not contain concentrations of contaminants that would pose an unacceptable risk to end users of a commercial/light industrial development, or to controlled waters. As such, no potential sources of contamination are considered to be present at the site.

A copy of the preliminary conceptual model for this site is presented in Appendix C.

In the absence of any potential sources of contamination being identified, no potential pollutant linkages are considered to be present and as such, further intrusive investigation and quantitative risk assessment **is not considered to be warranted**.

Attention is drawn to the discovery strategy presented within the preliminary risk assessment which sets out what steps should be taken in the event than any materials that are suspected of being 'contaminants' are encountered during the course of the site clearance and development works.

4. JACKSONS FARM

The Jacksons Farm site is located in the north of the wider Stonehouse Farm area.

A preliminary contamination risk assessment³, ground contamination risk assessment⁴, and a remediation strategy⁵ have been prepared for the proposed development.

4.1 Preliminary Risk Assessment

At the time of the walkover survey the site contained a former dairy barn and associated milking parlour, feed silos and other derelict agricultural outbuildings, as well as a large barn used for scaffolding storage. A slurry pit was present to the south of the dairy barn along with a large cutting that was excavated with the intention of constructing a house that was never completed.

³ Project Ref: P17028, Report Ref: R16576, Issue 2, dated 28th February 2025

⁴ Project Ref: P17132, Report Ref: R16640, Issue 1, dated 8th May 2025

⁵ Project Ref: C17195, Report Ref: R16689, Issue 1, dated 16th May 2025

The site appears to have comprised farmland at the time of the earliest map referenced in 1874. Agricultural buildings were first shown from the mid-1950s, with the dairy barn then constructed by the mid-1980s. The barn in the north-east used to store scaffolding was constructed circa 2012.

Reference to geological datasets indicates that the site is expected to be underlain by the sandstone and mudstone variants of the Upper Tunbridge Wells Sand Formation, which are classed as a Secondary A Aquifer and Unproductive Stratum, respectively.

The development is to comprise three new houses with areas of private garden. Pathways associated with gas and vapour intrusion into new buildings are considered to be valid, along with direct contact and dust related pathways, and pathways associated with the consumption of home grown produce.

Whilst the sandstone variant of the anticipated underlying Upper Tunbridge Wells Sand is classed as a Secondary A aquifer, no potable drinking water abstraction points are noted within 2km of the site and the site is not located within a SPZ. As such, there are not considered to be viable pathways linking potential contamination on the site with sensitive groundwater.

The following potential sources of contamination have been identified by the preliminary contamination risk assessment:

- Historical and ongoing use of the site for agricultural and light industrial purposes.
- Potential leakages from the slurry pit with the potential for deep made ground in the immediate vicinity.
- Made ground and waste materials visible in parts of the site.

A copy of the preliminary conceptual model is presented in Appendix D. As potential pollutant linkages were identified, an intrusive investigation was recommended.

4.2 Ground Contamination Risk Assessment

A series of boreholes were drilled across the site, including within a stockpile of waste materials, with samples obtained and tested for the contaminants of concern. Ground gas monitoring standpipes were installed in three boreholes, located in close proximity to the slurry pit and monitored on three subsequent occasions at weekly intervals.

Made ground, generally comprising either clay, with varying proportions of gravel and sand, or clayey/sandy gravel, was recorded to depths of between 0.20m and 1.70m below ground level. The deepest made ground was generally recorded in close proximity to the slurry pit. Underlying the made ground, where penetrated, the investigation progressed into undisturbed slightly gravelly/gravelly clay deposits with varying sand and silt content, considered to represent the Upper Tunbridge Wells Sand indicated to underlie the site.

The results of the testing were compared to soil screening values (SSV) for the generic residential land use. Testing of the made ground identified concentrations of PAH compounds above their respective SSV, in addition to concentrations of petroleum hydrocarbons in excess of the threshold value for the use of PE water supply pipework. Localised petroleum hydrocarbon contamination was recorded within the spoil heap in the south-east of the site.

On the basis of the gas monitoring carried out, the site was categorised as Characteristic Situation 1. An assessment of the adequacy of monitoring did not believe that further monitoring at this stage was justified, provided that the material within the slurry pit (the potential source of ground gases) is removed as part of the development and the pit backfilled with suitable non-putrescible materials. It is recommended that some further monitoring is carried out at this time to confirm that the gas concentrations have reduced.

A copy of the quantitative conceptual model is included as Appendix E.

4.3 Remediation Strategy

The proposed remedial works for the site comprise the following:

- Removal of the spoil heap in the south east of the site.
- Removal of all slurry from the pit and backfilling with non-putrescible material.
- Either the removal of all made ground from garden/soft landscaping areas, or the placement of a 600mm cover system comprising "clean" soils overlying a high visibility geotextile marker.

The post remediation conceptual model presented in the remediation strategy is reproduced below.

Table 1. Post Remediation Conceptual Model for End Users

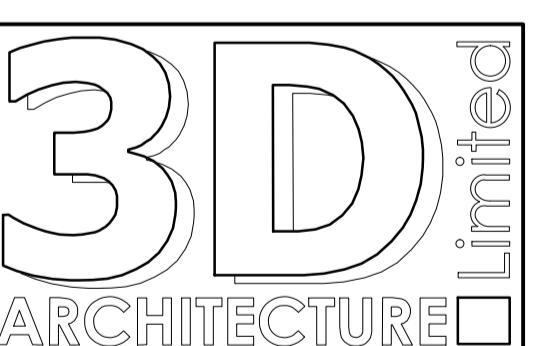
Contaminant Source	Remedial Measures	Potential Pathway(s)	Assessment of Risk to Human Health
Spoil Heap	Removal of spoil heap	N/A – Source Removed	
Slurry Pit	Removal of slurry from pit and backfilling within non-putrescible material.	N/A – Source Removed	
Made ground soils containing elevated concentrations of PAH compounds and concentrations of petroleum hydrocarbons above the threshold value for the use of PE water supply pipework.	Soft Landscape Areas: Removal of all made ground soils OR Placement of 600mm of verified "clean" cover soils over a high visibility geotextile marker.	N/A Source Removal OR Pathways severed by remedial measures	No significant pollutant linkages identified.
	Services: Provision of barrier pipe or other pipework acceptable to the local water supply company	Pathways severed by remedial measures and construction works.	
	Building cover, driveways, patios and other permanent access ways comprising hard cover.	Pathways severed by construction works	

APPENDIX A

Existing Stonehouse Farm Boundary Plan



PLANNING



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DRAWING TITLE

Site Layout Plan
 As Existing

SCALE

1:2500 January 2024

DRAWN BY

DRAWING NO.

2024/PL1

REVISON

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APPENDIX B

Preliminary Conceptual Model – Stonehouse Business Park

Site: Stonehenge Business Park, Plummers Plain, Lower Beeding

Project Ref: P17029

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
Historical and ongoing use of the site for agricultural and light industrial purposes.	End Users	Heavy Metals, PAH Compounds and Petroleum Hydrocarbons	Dermal contact with soil and dust (indoor & outdoor)	Yes	P1: Very Low	C2: Minor	Very Low
			Ingestion of soil and indoor dust	Yes	P1: Very Low	C2: Minor	Very Low
			Consumption of home-grown produce and attached soil	No private gardens proposed			N/A
			Inhalation of soil dust (indoor and outdoor)	Yes	P1: Very Low	C2: Minor	Very Low
			Inhalation of soil vapours	Yes	P1: Very Low	C2: Minor	Very Low
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	No potential contaminants identified			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A
Made ground in the vicinity of Commercial Buildings 3 and 5 from historical redevelopment works	End Users	Heavy Metals and PAH Compounds	Dermal contact with soil and dust (indoor & outdoor)	Pathway not present in this area			N/A
			Ingestion of soil and indoor dust	Pathway not present in this area			N/A
			Consumption of home-grown produce and attached soil	No private gardens proposed			N/A
			Inhalation of soil dust (indoor and outdoor)	Pathway not present in this area			N/A
			Inhalation of soil vapours	Identified contaminant(s) do not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	Identified contaminant(s) do not pose a risk via this pathway			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A

APPENDIX C

Preliminary Conceptual Model – Lot 8

Site: Lot 8, Stonehouse Farm, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17027

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
No significant sources of contamination identified	End Users		Dermal contact with soil and dust (indoor & outdoor)	No potential contaminants identified			N/A
			Ingestion of soil and indoor dust	No potential contaminants identified			N/A
			Consumption of home-grown produce and attached soil	No private gardens proposed			N/A
			Inhalation of soil dust (indoor and outdoor)	No potential contaminants identified			N/A
			Inhalation of soil vapours	No potential contaminants identified			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	No potential contaminants identified			N/A
	Groundwater		Migration to groundwater	No contaminants likely to impact groundwater identified			N/A

APPENDIX D

Preliminary Conceptual Model – Jacksons Farm

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17028

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Historical and ongoing use of the site for agricultural and light industrial purposes.	End Users	Asbestos, Heavy Metals, PAH Compounds and Petroleum Hydrocarbons	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A
• Potential leakages from the slurry lagoon with the potential for deep made ground in the immediate vicinity.	End Users	Heavy Metals, PAH Compounds and Land Gases	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Identified contaminant(s) do not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Yes	P2: Low	C3: Moderate	Low/Moderate
	End Users (via Water Supply Pipework)		Contamination of incoming services	Identified contaminant(s) do not pose a risk via this pathway			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17028

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Made ground and waste materials visible in parts of the site.	End Users	Asbestos, Heavy Metals and PAH Compounds	Dermal contact with soil and dust (indoor & outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Ingestion of soil and indoor dust	Yes	P3: Moderate	C3: Moderate	Moderate
			Consumption of home-grown produce and attached soil	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P3: Moderate	C3: Moderate	Moderate
			Inhalation of soil vapours	Identified contaminant(s) do not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	Identified contaminant(s) do not pose a risk via this pathway			N/A
	Groundwater		Migration to groundwater	No significant pathway to groundwater exists			N/A

APPENDIX E

Quantitative Conceptual Model – Jacksons Farm

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17132

Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Made ground soils containing elevated concentrations of PAH compounds and concentrations of petroleum hydrocarbons above the threshold value for the use of PE water supply pipework.	End Users	PAH Compounds	Dermal contact with soil and dust (indoor & outdoor)	Yes	P2: Low	C3: Moderate	Low/Moderate
			Ingestion of soil and indoor dust	Yes	P2: Low	C3: Moderate	Low/Moderate
			Consumption of home-grown produce and attached soil	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil dust (indoor and outdoor)	Yes	P2: Low	C3: Moderate	Low/Moderate
			Inhalation of soil vapours	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Identified contaminant does not pose a risk via this pathway			N/A
	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A
	End Users	Petroleum Hydrocarbons	Dermal contact with soil and dust (indoor & outdoor)	Yes	P2: Low	C2: Minor	Low
			Ingestion of soil and indoor dust	Yes	P2: Low	C2: Minor	Low
			Consumption of home-grown produce and attached soil	Yes	P2: Low	C2: Minor	Low
			Inhalation of soil dust (indoor and outdoor)	Yes	P2: Low	C2: Minor	Low
			Inhalation of soil vapours	Yes	P1: Very Low	C2: Minor	Very Low
			Inhalation of soil gases/ Risk of explosion	Identified contaminant does not pose a risk via this pathway			N/A
• Localised petroleum hydrocarbon contamination within spoil heap in the south east of the site.	End Users (via Water Supply Pipework)	Petroleum Hydrocarbons	Contamination of incoming services	Yes	P2: Low	C3: Moderate	Low/Moderate
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A

Site: Jacksons Farm, Hammerpond Road, Plummers Plain, Lower Beeding, West Sussex

Project Ref: P17132

Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
• Ground gases from the slurry pit	End Users	Ground Gases	Dermal contact with soil and dust (indoor & outdoor)	Identified contaminant does not pose a risk via this pathway			N/A
			Ingestion of soil and indoor dust	Identified contaminant does not pose a risk via this pathway			N/A
			Consumption of home-grown produce and attached soil	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil dust (indoor and outdoor)	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil vapours	Identified contaminant does not pose a risk via this pathway			N/A
			Inhalation of soil gases/ Risk of explosion	Yes	P1: Very Low	C2: Minor	Very Low
	End Users (via Water Supply Pipework)		Contamination of incoming services	N/A			N/A
	Groundwater		Migration to groundwater	N/A			N/A