

MARK AND JO ROBINSON

MILL FARM, MILL LANE, ITCHINGFIELD, HORSHAM,
WEST SUSSEX RH13 0NP

Preliminary Contamination Risk Assessment

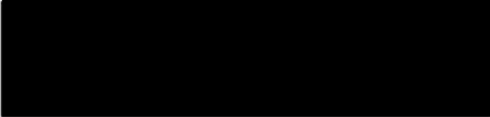
February 2026



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Environmental Assessment Services Ltd

REPORT DATA SHEET

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1. CAUTION

- 1.1 This investigation relies largely on a superficial examination of the site plus a review of information from Horsham District Council Planning Department and Environmental Health, plus the Environment Agency (EA). Even where no previous contaminating activity has been identified, it is possible that the site could be contaminated due to fly tipping or other unrecorded events. The age of a building may indicate probability but cannot be treated as proof of the absence or presence of asbestos. This report does not attempt to comment on the commercial value or viability of the site.

2. THE SITE & PROPOSED DEVELOPMENT

- 2.1 The proposed development site comprises part of Mill Farm, a site developed for mixed residential and former agricultural, now storage use. The site is located to the east of Mill Lane, between Broadbridge Heath and Itchingfield in West Sussex. The Ordnance Survey (OS) map reference for the site is TQ 14291 30004. The site elevation is approximately + 30 m OD.
- 2.2 The proposed development area includes the existing site access and two storage barns, together with part of the adjacent field to the south of the buildings.
- 2.3 It is proposed to demolish the existing buildings and erect two residential dwellings with associated access, parking and garden areas, together with soft landscaping for Biodiversity Net Gain (outside the residential curtilage). See Appendix A for the existing and proposed site plans.

3. GEOLOGY & HYDROGEOLOGICAL CONSIDERATIONS

- 3.1 According to the British Geological Survey (available online), the site lies within an area of Horsham Stone Member (sandstone) which extends to the west and Weald Clay Formation (mudstone) which extends to the east. There are no recorded superficial deposits overlying (either of the recorded) bedrock types within the vicinity of the site.
- 3.2 The Department for Environment, Food and Rural Affairs (Defra) online mapping (MAGIC) shows the site to lie near the boundary of a Secondary A

Aquifer (associated with the Horsham Stone Member) and Unproductive Strata (associated with the Weald Clay Formation). The site does not lie within a groundwater Source Protection Zone (SPZ). The groundwater vulnerability associated with the Horsham Stone Member is considered high.

- 3.3 The site lies approximately 150 m west of the River Arun. According to the EA's online Flood map for planning, the site does not lie within an area at risk of flooding from rivers and/or the sea.

4. SITE DEVELOPMENT HISTORY

- 4.1 The site development history is derived from a review of historic maps and other references. Historic maps centred on the site are provided in Appendix A, and a summary of the relevant information provided in these maps for the residential plot is given in Table 4.1 below.

TABLE 4.1
SITE DEVELOPMENT HISTORY

Map date	Features on site	Features within surrounding area (<250 m)
1875-1893 and 1880	The site is developed as Baystone Farm including four (presumably agricultural) buildings and the existing access road.	- Surrounding land use comprises irregular shaped fields with some woodland including Baystone Copse to the west. - Mill Lane is identified to the west. - The River Arun lies ~175 m to the east (and flows in a north-northwesterly direction). - A railway line lies ~500 m to the southwest. - Stammerham Quarry lies ~700 m south-southeast.
1897 and 1898	Generally, as previously shown, with the addition of a building within the northeast corner of the yard (thought to be a dairy) and possibly a pond.	Dwelling built (Baystone House) on Mill Lane at the western end of the original access to Baystone Farm (the site) and building developed at Upper Grove Barn on the opposite (west) side of Mill Lane.
1911 and 1912-1913	Generally, as previously shown, with the addition of two buildings to the south of the farmyard (no longer present) and alteration / replacement of the dairy building within the northeast corner of the yard.	- Barn shown within a field to the southwest of the site (now the historic Council tip). - Christ's Hospital Sewage Works including a tank and windpump are shown ~600 m south.

1933 and 1938	• Generally, as previously seen.	• No significant change.
1961	• Building/s shown to the south of the access yard, west of the site. These may be the current storage buildings.	• No significant change.
1975-1977	• Two buildings south of the access road, to the west of the yard. • Single garage and second small square building to the east shown to the south of the yard. • Brick dwelling shown. • Two bay concrete block stable shown. • Dairy building to the northeast of the yard shown. • Cattle shelter within the field to the north of the site. • Haybarn and tin shed not shown.	• Refuse tip shown on land between 250 m from the site up to the railway line. • Landing strip shown in fields to the west of Mill Lane.
1982 and 1981-1982	• Shows four buildings and the concrete yard.	• Refuse tip – boundaries not shown, possibly expanded.
1993	• Two buildings south of the access road, to the west of the yard. • Single garage and second small square building to the east shown to the south of the yard. • Brick dwelling shown. • Two bay concrete block stable shown. • Dairy building to the northeast of the yard shown. • Cattle shelter within the field to the north of the site. • Haybarn and tin shed not shown.	• As above
1999-2000	• Three small adjoining buildings shown in the location of the current brick dwelling. • Haybarn shown. • Tin shed and cattle shelter shown to the north of the access road. • Dairy building located within the northeast corner of the yard. • Western row of buildings not shown. • Two bay concrete stable not shown.	• Refuse tip identified as disused workings.

2006	Shows the site generally as existing with: • Brick dwelling. • Two bay, concrete block stable. • Haybarn. • Tin shed to the north of the access road. • Cattle shelter within the field to the north. • Western row of buildings (part shown).	• As above
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4.2 Recent aerial photographs have also been assessed. Aerial photographs centered on the site are provided in Appendix C, and a summary of the relevant information provided in these photographs for the residential plot is given in Table 4.2 below.

TABLE 4.2
SITE DEVELOPMENT HISTORY

Photo date	Features on site	Features within surrounding area (<100 m)
29/08/1999	• The development area comprises a single garage and haybarn to the east, and row of buildings to the west, with the pasture to the south.	• The surrounding yard comprises a single storey brick building (previously used as a dwelling), concrete yard to the north, two bay concrete stable to the northwest and a building thought to be the dairy, the tin shed and cattle shelter. • Surrounding fields appear left to pasture (green).
17/07/2005	• Buildings as above, the field to the south appears to be cut with tractor lines apparent.	• As above – more clearly showing the former dairy building within the northeast corner of the concrete yard to the north of the former dwelling. • Cropping lines can be seen in the surrounding fields.
31/08/2012	• As above, field appears to be left to pasture.	• Dairy building removed. • Surrounding fields appear left to pasture.
30/06/2015	• As above, with field to the south cropped for hay.	• Surrounding fields appear left to pasture.
14/05/2018	• As above, with field to the south left to pasture.	• Surrounding fields appear left to pasture.

4.3 The post war development history may also be traced from the planning history of the site. Whilst there have been no applications specifically relating to the existing buildings (to be removed), there are applications relating to the wider

farm which give an indication of development and use of the farm in general. The significant applications relating to the farm are summarised in Table 4.3 below.

TABLE 4.3
A SUMMARY OF RECENT PLANNING APPLICATIONS

Ref. Nos.	Description	Decision & Date
DC/17/2665	Erection of a single storey side extension to existing dwelling (certificate of lawful development - proposed).	Permitted 10/01/2018
DC/17/1270	The creation of a single dwelling house and the use of land and other buildings for purposes incidental to the enjoyment of the dwelling house, to which planning permission 1/18/01 (granted on 1 Aug 2001) does not apply in any respect.	Permitted 02/08/2017
1/18/01	Conversion and extension to buildings to provide 1 dwelling and double garage, workshop and store (and demolition of building within the northeast corner of the concrete yard).	Permitted 01/08/2001
1/39/00	Conversion and extension to buildings to provide 1 dwelling with double garage.	Withdrawn

- 4.4 Other notable application includes application No. 1/8/03 re-profiling with inparted (imported?) soils for restoration purposes permitted in December 2003. Unfortunately, the related documents are not available on the public access portal.

5. THE EXISTING SITE

- 5.1 The site comprises a former dairy farm located between Broadbridge Heath to the northeast and Itchingfield to the southwest. Notable features within the local landscape include the River Arun and the A24 to the east, the Horsham Water Treatment works to the southeast, Christ's Hospital to the south-southeast, an historic landfill to the south-southwest and a railway line to the southwest.
- 5.2 Mill Farm was first visited on 19 May 2020 in relation to the development of a residential unit to the east of the current proposed development area. The assessment included observations made for all the buildings within the vicinity of the site, which included the buildings which are to be removed as part of the current application, to make way for the current proposed residential units. Photographs taken on the 19 May 2020 are provided in Appendix C.
- 5.3 Since 2020, the wider farmyard has been redeveloped. The majority of farm buildings have been removed and the land redeveloped for residential use,

comprising a single modern dwelling to the east of the current proposed development area, and a second dwelling to the north.

- 5.4 The site was subsequently revisited on 3 February 2026 in relation to the current proposal. A description of the site based on the most recent observations, together with notes from the previous site visit, are provided as follows and photographs taken on 3 February 2026 are also provided in Appendix C.
- 5.5 The site is accessed from Mill Lane to the west of the site via a new access route which cuts across the northwest corner of a field before joining the original shared access from a neighbouring residential property on Mill Lane. The access up to and around the buildings is surfaced with compressed road planings.
- 5.6 The access road leads to:
- i. A concrete block stable with single pitched corrugated metal roof and concrete floor used to store equestrian and miscellaneous items.
 - ii. A brick and wooden clad building with corrugated metal roof and concrete floor used to store household maintenance equipment.
- 5.7 A small, single pitched 'shed' constructed from corrugated metal and used to house chickens overnight in 2020 has been removed. The area now comprising the remains of the concrete floor and disturbed bare ground.
- 5.8 A metal fuel tank was previously recorded adjacent to the western façade of the small, single pitched 'shed' (the western most building, which has been removed) located to the south of the access road. Inspection of the tank in 2020 identified a small quantity of diesel within the tank, which was located directly on the ground adjacent to the building. This tank has since been removed and the area cleared.
- 5.9 To the east of this row of buildings is a small storage area and access gate into the field to the southwest of the farmyard. Two shipping containers are located in this area, to the west of the gate. The field to the south is pasture (grassland used as paddocks), divided from the yard area to the west of the gate by an outgrown hedgerow with trees. Behind the buildings to the west of the gate within the line of the hedge is a water tank together with a component unit in the field to the south. We understand that this was purchased in relation to the existing residential development on site, but has not been needed to date and will be removed.
- 5.10 The eastern section of the site is occupied by an open sided 'haybarn' (or pole barn) constructed from timber and corrugated metal roofing sheets, used for general storage of items including motorised equipment, bikes and trailers.
- 5.11 To the south of the haybarn, east of the field gate, is a large pile of waste material comprising mixed building rubble and soil, believed to be generated from the more recent redevelopment of the site for residential use. Materials observed include concrete, brick, wood, corrugated metal sheets and soil.

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- 5.12 To the east of the haybarn the land has been redeveloped for residential use. There is a small area of grass immediately adjacent to the barn beyond which is a gravel surface access and parking area. Previously (in 2020) there was the remaining concrete base of a single garage. We were advised at the time (2020), that the garage had included asbestos containing materials and was removed from the site.
- 5.13 To the northeast of the site is a Klargestar (domestic sewage treatment plant) which was retained from the previous dwelling for connection to the new dwelling/s.
- 5.14 Prior to the recent residential redevelopment there was a single storey brick building with corrugated metal roofing which was used as dwelling by the site owner prior to its demolition as part of the site's redevelopment. And to the east of this dwelling was a small wooden shed and static caravan, used by the site owners for additional accommodation.
- 5.15 To the north of the caravan was an area of concrete hardstanding and the remains of a building thought to be a dairy. To the east was a wall with the remains of milking bays (from the dairy) and to the west was a concrete block building with corrugated metal roof and concrete floor. This building comprised two bays used for stabling a horse and associated equipment. A metal shipping container (used for household storage) was located within the northeast corner of the concrete 'yard'.
- 5.16 To the west of this stable building, north of the site access road, was a corrugated metal building (tin barn) which had been used for hay and machinery storage. This building had a compressed dirt floor. The final building was a small cattle shelter within the field to the north of the access road. These buildings have all been removed to make way for the two new residential dwellings present on site. It is believed that these buildings may be the source of material now located to the rear (south) of the haybarn (within the proposed development area).

6. RECORD DATA SEARCH RESULTS

- 6.1 An environmental records search (Enviro-Insight Report) has been prepared for the site. The GroundSure EnviroInsight Report is provided in Appendix D and any items of potential contamination significance highlighted below.

6.1.1 *Past Land Use*

There are 17 records of potentially contaminative land uses recorded from standard 1:10,560 and 1:10,000 scale historic mapping within 500 m of the site. These are for the following (records have been combined where they are for the same installation / feature):

Groundworks:

- i. Unspecified ground workings on / adjacent to the banks of the River Arun approximately 140 m east of the site (identified from mapping dated 1981).
- ii. Refuse heap located ~250 m southwest of the site on land extending up to the disused railway line (identified from mapping dated 1981).
- iii. Unspecified heap located approximately 330 m northeast (identified from mapping dated 1956).
- iv. Mill ponds located approximately 350 m and 360 m north (identified from mapping dated 1896, 1956 and 1909-1938).
- v. Filter beds located approximately 480 m northeast (identified from mapping dated 1909-1938).

Tanks:

- vi. Unspecified tank/s located at/near Haystone House approximately 260 m west of the site (identified from mapping dated 1956 and 1933-1938).
- vii. Unspecified tank/s located approximately 410-420 m southwest of the site (identified from mapping dated 1961 and 1933-1938).

Other:

- viii. Isolation hospital approximately 320 m northeast (identified from mapping dated 1909).
- ix. Flour mill / unspecified mill / disused mill or mills located approximately 360 m – 370 m north (identified from mapping dated 1876, 1896 and 1909-1938).
- x. Unspecified mill located approximately 360 m northeast (identified from mapping dated 1956).
- xi. Gas valve compound located approximately 460 m northeast (identified from mapping dated 1979).

There are no records of energy features, petrol stations, garages or military land from 1:1,250 and 1:2,500 scale historic maps within 500 m of the site.

6.1.2 *Waste and Landfill*

There is both Environment Agency recorded historic landfill within (and beyond) 250 m of the site and Local Authority recorded historic landfill between 250 m and 600 m south-southwest of the site.

Depending on the type, age and distance from the site (together with other factors such as local geology and management) of material deposited, historic landfill may pose a risk to the site from the migration of landfill gas and contaminated leachate.

The address of the closest landfill is Baystone Farm, Itchingfield. Mill Farm (the site) formed part of Baystone Farm until it was recently divided/split for sale. The landfill site, operated by Horsham Rural District Council between 1964 and 1981, was licenced to take inert, industrial, commercial, household and liquid sludge. The landfill has been identified a 'serious risk to minor aquifer' according to the BSG records. We understand, from the current site owners, that the site is subject to ongoing monitoring. This landfill site is considered to pose a potential risk to the site and is considered further elsewhere within this report.

A second EA recorded landfill is identified at Weston's Farm, Fulfords Road, Itchingfield, operated by Penfold Verral (of Dial Post), which comprises neighbouring land extending east-southeast from the Baystone Farm landfill. This second landfill was permitted to take inert waste (only) from 1998 until the licence was surrendered in 1999. This landfill is considered unlikely to pose a significant risk of contamination (including landfill gas) to the site.

There are also 12 waste exemptions recorded within 500 m of the site. These are listed below for Lower Baystone Farm (within the immediate vicinity of the site) together with three listings for the storage of non-agricultural sludge at Weston's Farm approximately 450 m south of the site.

Lower Baystone Farm hold / have held waste exemptions for the following activities (which do not require a permit):

- Agricultural Waste including:
 - Deposit of waste from dredging of inland waters.
 - Burning waste in the open.
 - Aerobic composting and associated prior treatment.
 - Spreading waste on agricultural land to confer benefit.
- Agricultural and non-agricultural waste:
 - Use of waste in construction.
 - Use of waste for a specified purpose.

6.1.3 *Current Industrial Land Use*

There are no records for recent industrial land uses within 250 m of the site.

There are no records for current or recent (open, closed, under development and obsolete) petrol stations within 500 m of the site.

There are no records for high voltage underground electricity transmission cables or high pressure underground gas transmission pipelines within 500 m of the site.

6.1.4 *Environmental Permits, Incidents and Registers*

The site has not been determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990, and there are no records of such designation within 500 m of the site.

There are four licensed discharge consents to controlled waters within 500 m of the site, two of which are for current licences for the discharge of final/treated sewage to a tributary of the River Arun and a field ditch at the site (Mill Farm), and at Broadbridge Farm approximately 350 m northeast, respectively. The two historic discharges were for sewage from Christ's Hospital to the river.

There are no records of any Control of Major Accident Hazards (COMAH) sites within 500 m of the site or any regulated explosive sites. There are no records of any hazardous substance storage/use consents or Integrated Pollution Control (IPC) records within 500 m of the site.

There are no licensed industrial activities (Part A(1)) or licensed pollution release (Part A(2)/B) records within 500 m of the site.

There are no radioactive substance authorisations or List 1 or 2 dangerous substances records within 500 m of the site.

There are four records of pollution incidents within 500 m of the site, each having no or minor impact to water, land and air at sites between 400 m and 470 m from the site. These incidents are considered unlikely to have affected the site.

There are no records of any pollution inventory substances, waste transfers or radioactive waste.

6.1.5 *Hydrology and Flood Risk*

The site lies on the boundary of a Secondary A Aquifer (associated with the Horsham Stone Member which extends west of the site) and Unproductive strata (associated with the Weald Clay which extends east of the site). The Weald Clay, which lies between the site and the River Arun to the east, has low permeability and is of negligible significance for water supply or river base flow. However, the Horsham Stone Member is recorded to be of high groundwater vulnerability with well connected fractures. Excavation on site within the proposed footprint of the new dwelling identified clay with Horsham Stone.

There are no groundwater, surface water or potable water abstraction licences within 2000 m of the site.

The site does not lie within 500 m of a groundwater Source Protection Zone.

The site lies approximately 150 m west of the River Arun.

The site lies within Flood Zone 1 (low risk of flooding from rivers and the sea) and is not thought to lie within an area at risk of surface water or groundwater flooding.

6.1.6 *Designated Environmentally Sensitive Sites and Priority Habitats*

There are records of 28 designated sites within 2000 m of the site. These relate to woodland, including ancient and semi-natural woodland and ancient replanted woodlands. The closest being Baystone Copse, which lies to the north of the access road, northwest of the proposed development area. The proposed development is not considered likely to have any significant impact on this habitat.

There are no other designated environmentally sensitive sites within 2000 m of the study site. However, the site does lie within the impact Zone of a Site of Special Scientific Interest (Slinfold Stream and Quarry) but, only infrastructure including airports, helipads and other aviation proposals, quarries, landfill, discharge consents and large-scale commercial development require consultation in this case.

The site lies within a Nitrate Vulnerable Zone. Nitrate Vulnerable Zones are designated as being at risk from agricultural nitrate pollution and were introduced in order to reduce the levels of nitrates in water. The proposed development is not considered likely to increase the risk of nitrate pollution.

7. POTENTIAL SOURCES OF CONTAMINATION

7.1 Land use history at the site has comprised:

- Agricultural use – thought to be a dairy farm.
- Residential use since ca. 2001.

7.2 Potential contamination associated with past land use include the storage and use of fuels, oils and lubricants on site associated with farm machinery and a diesel tank located to the west of the farm buildings, and asbestos containing materials used on past buildings. No evidence of the burning of waste was observed at the site, however, it is considered possible that farm waste has been burnt on the site in the past (Lower Baystone Farm holds an exemption for this activity, but it is not clear where any burning took place). There is also the potential for contaminants to have been brought onto site within fill material which may have been used to provide surfacing and base material for buildings within the site.

7.3 A refurbishment / demolition asbestos survey was undertaken at the site by Pass Consulting in July 2019. Asbestos containing materials identified on site included (chrysotile) asbestos cement sheets on the roof (front and rear) of the single garage (adjacent to the haybarn), together with debris (piping) on the ground behind the garage.

7.4 Based on the findings and recommendations of the asbestos survey, all asbestos containing materials were removed from the site by the current site owner and occupier (Mr M Robinson) prior to the first site survey in 2020. We understand that the asbestos waste was removed from the site and disposed of in the

appropriate area at the Crawley Recycling Centre (previous reporting included a photograph provided by Mr Robinson showing the contained asbestos packaged at the site being disposed of at the recycling center). No remaining asbestos sheets from the garage or any debris on the ground around the garage were observed during the site survey on 19 May 2020, and the area has subsequently been redeveloped to provide a gravel surfaced access and parking area associated with the residential dwelling to the east.

- 7.5 There was an old metal diesel tank located at the western end of the site. There is some potential for fuel contamination of the soil around the diesel tank caused during the dispensing process. The owner of the site has since removed the tank as part of the general tidying of the site. The ground in this area is now disturbed. No evidence of staining could be seen, however, underlying soil could be impacted by fuel contamination.
- 7.6 Baystone Landfill, located approximately 250 m southwest of the proposed new dwelling, is believed to have been opened in the early 1960's and stopped accepting waste in 1981. The landfill was restored in 1986 and is now used for hay cropping. The landfill was licenced to take inert, industrial, commercial, household and liquid sludge. These materials pose a risk of significant contamination to soils and groundwater from a wide range of contaminants. We understand that the site contains a leachate collection system, which discharges to the Horsham sewage works located to the southeast of the site. This system, together with the local topography, is likely to reduce the risk of contamination posed to the site from leachate.
- 7.7 The site may be at risk from landfill gas migration from Baystone Farm Landfill. The principal risk to the site would be from the migration of gas generated within the landfill from the breakdown of putrescible waste. The landfill is located between 250 m and 600 m from the site. The geology between the site and landfill is Horsham Stone Member, which may have well connected fractures allowing the passage of gas. The waste types recorded for the site include those which may generate gas as a result of decomposition. The site has been closed since 1981, however, we understand that the landfill continues to be monitored. Further consultation with West Sussex County Council and Horsham District Council regarding their understanding of the condition of the landfill and resulting landfill gas risk within the area was undertaken in 2020.
- 7.8 West Sussex County Council (WSCC) provided a summary of information and data for the previous 10 years. It was confirmed that, whilst the Council have still been recording concentrations of landfill gas within the waste mass, only occasional significant concentrations are recorded within the monitoring boreholes positioned immediately outside the waste mass.
- 7.9 It was concluded, given the distance from the landfill and the intervening geology, that spot monitoring on the development site was unlikely to show a gas issue at the site, but there remained a residual risk from an extreme event which may not be picked up from monitoring on site. Whilst the likelihood of occurrence is considered low, the severity should an extreme event occur is considered high. It was therefore recommended that gas protection measures be

included within the design and this was agreed with Horsham District Council (HDC).

8. RISK ASSESSMENT

8.1 The risk to future site users can be assessed using the Conceptual Model. This comprises three elements, all of which must be present for there to be a risk. The three elements of the model are; a *source* of a potentially hazardous contaminant, a *pathway* by which the contaminant can be transmitted and a *receptor* on which the contaminant may have a harmful effect. A conceptual model for the site is given in Appendix E.

8.2 Potential contaminant linkages between source, pathway and receptor for the site are shown in Table 8.1 below.

TABLE 8.1
POTENTIAL CONTAMINANT LINKAGES

Source		Pathway	Receptor	Risk
Contaminated soil	Contaminated groundwater			
TPHs from fuels, oils and lubricants, PAHs from waste disposal	TPHs from fuels, oils and lubricants, PAHs from waste disposal	Contact with contaminated soil, groundwater or soil gas	Existing and future site users	?
		Ingestion of or skin contact with contaminated soil, dust or groundwater	Maintenance or construction workers engaged in groundworks on the site	?
		Contact with contaminated soil or ground water	Building & services	?
		Leeching of site contaminants into groundwater	Wider environment	?

Key: ✓ Significant risk ✗ No significant risk ? Uncertain risk

8.3 Source

8.3.1 From a review of available information and site observations, the risk of soil and groundwater contamination at the site appears to be generally low. There is a possibility of petroleum hydrocarbons and polycyclic aromatic hydrocarbons from fuel/oil/lubricant leaks in the vicinity of the former tank within the eastern boundary of the current proposal area and from farm vehicles/machinery used and stored on site and possibly bonfires on site, but no evidence of such was observed.

- 8.3.2 There is some potential for contamination within fill materials used to create hardstanding areas within the site, but observations of the fill within an excavation within the footprint of the now completed dwelling to the east revealed concrete with brick and flint over chalk immediately adjacent to the existing dwelling and natural ground to the south and east.
- 8.3.3 Mixed soil and rubble such as that observed within the field to the south of the haybarn can be a source of contamination, however, it is believed that the source of this material was on site, associated with the residential development of the adjacent land. An asbestos survey was undertaken on the site prior to the redevelopment and the identified asbestos containing materials were removed from the site. It is therefore unlikely that the mixed soil and rubble on site contains asbestos containing materials.
- 8.3.4 No indication of significant contamination has been identified and the site has been used for residential use for (at least) 25 years.
- 8.3.5 The principal risk at the site relates to an historic landfill site which occupies land between 250 m and 600 m south-southwest of the site. The landfill may pose a potential risk to the development from landfill gas. Whilst the likelihood of occurrence is considered low, the severity should an extreme event occur is considered high. It is therefore recommended that gas protection measures be included within the design and as agreed with Horsham District Council (HDC) in relation to the two adjacent residential dwellings.

8.4 *Receptor*

- 8.4.1 It is proposed to redevelop the site for residential use with soft landscaping / garden areas. In this case, potential *receptors* may include site workers (engaged in the redevelopment of the site and future maintenance workers), future site users (considered to include both adults and children), buildings and services (including underground water mains) and the wider environment.
- 8.4.2 The River Arun lies approximately 150 m east of the site. Unproductive Strata lies between the site and the river. The proposed development is not considered likely to affect the river.
- 8.4.3 Environmentally sensitive land within close proximity to the site includes an area of ancient semi-natural woodland which lies to the northwest of the access road, to the west of the site. The proposed development and future site use is not considered likely to have a significant impact on the woodland.

8.5 *Pathway*

- 8.5.1 Site workers (notably demolition and ground workers) may come into contact with contaminated soils/fill during the redevelopment of the site, principally when lifting and removing surfacing from the site and when working within the location of the former diesel tank. An asbestos survey has been undertaken and asbestos containing materials have already been removed from the site.

Appropriate industrial hygiene measures will be required to reduce the risk of exposure to workers during the development phase.

- 8.5.2 Site workers should also implement appropriate safety precautions in relation to potential exposure to landfill gas in and around excavations and enclosed spaces. While the likelihood of an event occurring is considered to be low, the consequences of such an event could be threatening to life (explosion and/or suffocation).
- 8.5.3 Whilst there are other existing residential dwellings within the wider area with no known issues relating to landfill gas, the new dwellings are located closer to the landfill and, as modern buildings, are more likely to be airtight. Therefore, any new underground service inlets into the new building could act as a migration route. Protection/prevention measures will be required in this case.
- 8.5.4 In the absence of remediation, future site users / maintenance workers (e.g. gardeners) may come into contact with contamination within the gardens / soft landscaping areas if fill materials, rubble and/or made ground are not removed as part of the site's redevelopment. Future site users may come into direct contact with contaminated soils in garden areas, and/or may consume produce grown within the garden. Exposure to contamination in this case may be via dermal contact, inhalation and/or ingestion. It is therefore recommended that fill materials, rubble and made ground are removed down to the natural ground (clay) and ground levels restored with clean material from an uncontaminated source.
- 8.5.5 Future site users may be exposed to tainted water supplied via underground mains to the site where any contamination with potential to degrade the pipes (such as hydrocarbon contamination) is present along the line of the water mains (see current UKWIR guidelines). The current route of the existing watermain is not known, but is likely to run along the route of the original site access road from Mill Lane.

9. CONCLUSIONS

- 9.1 The site lies on the boundary of Horsham Stone Member, which extends to the west, and Weald Clay Formation, which extends to the east. The Horsham Stone Member is classified as a Secondary A Aquifer of high leaching potential (may have well connected fractures). The Weald Clay is classified as Unproductive Strata. The site does not lie within a groundwater Source Protection Zone.
- 9.2 Potential sources of contamination at the site are related to the site's long history of agricultural use (cattle farmyard). The site is identified as Baystone Farm with a small cluster of buildings at the site shown on the earliest OS mapping obtained of the site dating from 1875. Planning history suggests that the farmyard was converted for more residential use approximately 25 years ago.

-
- 9.3 The proposal is to demolish the existing agricultural structures and redevelop the area for residential use comprising two dwellings with associate gardens, soft landscaping and access.
- 9.4 Typical contaminants associated with long-term agricultural use include the casual disposal of waste, including the use of bonfires to dispose of waste on site, the storage and use of fuels, oils and lubricants for farm vehicles and machinery on site, the use of asbestos containing materials on buildings, and the use of waste (usually building rubble) and imported materials (often chalk and road planings) for hard surfacing.
- 9.5 No evidence of the burning of waste on site was identified during the current site walkover assessment (or in 2020). An old diesel tank with a small amount of fuel was identified in 2020, located to the west of the farm buildings south of the access road. This tank has since been removed as part of the general tidying of the site by the current owners and occupiers.
- 9.6 A pre-demolition asbestos survey was undertaken by Pass Consulting in July 2019. Asbestos containing materials were identified on and around a single garage located to the east of the haybarn (on site). This material has been removed from the site by the current site owner and occupier. No remaining asbestos containing materials were observed during the site walkover assessment undertaken on 19 May 2020.
- 9.7 As part of the wider site's redevelopment some buildings were removed and surfacing lifted. There is a large pile of mixed building rubble and earth located to the rear (south) of the haybarn (on site). It is believed that the source of this material is from these buildings and surfacing. Whilst the buildings were thought to be free of asbestos, due to the unknown nature of ground conditions beneath the former hard standing areas, it is recommended that the mixed rubble and earth should be disposed of offsite, or tested for suitability if it is intended to be retained on site for use elsewhere, and the underlying ground, which may have been impacted, be excavated back to the natural ground (clay) and the ground levels restored with 'clean' material from an uncontaminated source.
- 9.8 The Baystone Landfill located on land between 250 m and 600 m south-southwest of the site is a potential source of leachate and landfill gas. Due to the topography of the area and the use of a leachate catchment system at the landfill, the site is considered to be at generally low risk of contamination from leachate. The site is monitored for landfill gas by West Sussex County Council. Whilst the likelihood of landfill gas occurrence at the site is considered low, the severity should an extreme event occur is considered high. It is therefore recommended that gas protection measures be included within the design and agreed with Horsham District Council (HDC).
- 9.9 The overall environmental risk for the site is rated according to the risk assessment matrix in Table 9.1 below:
-

TABLE 9.1
RISK ASSESSMENT MATRIX

PROBABILITY OF IMPACT	CONTAMINATION POTENTIAL		
	SEVERE	MODERATE OR UNCERTAIN	MINIMAL
High	4	3	2
Medium	3	2	1
Low	2	1	1

1 = low risk, 2 = low to moderate risk, 3 = moderate to high risk, 4 = high risk.

9.10 In this case, it is proposed to redevelop the site for residential use. Where contamination is present, the probability of impact for residential use with soft landscaping / garden areas would be high. The risk of significant contamination of soil and/or groundwater at the site appears generally low, however, there remains some uncertainty regarding soil conditions beneath the existing hardstanding and within the vicinity of the former tank. This may be addressed with the implementation of basic protection measures during redevelopment and the removal of any fill and/or impacted soil down to the natural ground (clay). Therefore, the overall risk rating for the site posed by soil and/or groundwater contamination is 2, low-moderate risk, and may be reduced to 1 low, where any old fill materials beneath existing hard standing and impacted soils within the former tank area are removed from the site.

9.11 Please note: This risk rating does not take into account the potential risk posed by landfill gas. Landfill gas protection measures are to be incorporated into the design of the proposed buildings on site. We understand that the measures proposed are to be similar to those incorporated into the design and build of the two recent residential developments on the wider site. Again, these measures are to be approved by Horsham District Council.

10. RECOMMENDATIONS

10.1 Site worker are to implement appropriate protection measures during site clearance and the redevelopment of the site. These are to include measures to protect the work force should any previously unidentified asbestos containing materials be present on site, protection from potential soil contaminants, and protection from potential landfill gas.

10.2 No further investigation in relation to soil or groundwater contamination is recommended at this time in relation to the proposed development, however, some recommendations are given in relation to the removal of waste and surfacing materials, as follows:

- i. As part of the site's redevelopment it is proposed to remove the existing buildings and hardstanding. It is recommended that any underlying fill is removed down to the natural ground (clay) and ground levels are restored

with clean material from an uncontaminated source. The excavated fill should either be removed from site or, if it is intended to use this material elsewhere, it should be tested for suitability.

- ii. The mixed soil and rubble deposited within the field to the south of the haybarn (on site) is to be removed as part of the site's redevelopment. It is recommended that the soil, rubble, and any underlying soil which may have been impacted is removed down to the natural ground (clay) and ground levels are restored with clean material from an uncontaminated source. The waste material should either be removed from site or, if it is intended to use this material elsewhere, it should be tested for suitability.
 - iii. The diesel tank to the west of the yard has been removed. The soil within the vicinity of the tank should be removed and replaced with clean topsoil from an uncontaminated source.
 - iv. The existing water supply is to be utilised at the site. It is recommended that barrier pipe is used.
 - v. Should any unexpected contamination be identified during the development phase, the Council are to be notified and any necessary remediation work carried out as required.
 - vi. A record of all works undertaken should be kept, including photographs and any material disposal and/or delivery receipts. Should it be intended to import any soils (or other materials) for use in the soft landscaping areas of the site, evidence should be sought to confirm that the material is free from contaminants and suitable for the proposed use.
- 10.3 Landfill gas protection measures are to be agreed with Horsham District Council. It is understood that protection measures to be incorporated into the design of the new buildings on site are to be similar to those already approved for the adjacent two dwellings located on immediately adjacent land to the north and east of the current site boundary.

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APPENDIX A **Site Plans**





APPENDIX B

Historic Maps

See separate file

APPENDIX C

Photographs



Photograph 1:

The site is accessed from Mill Lane to the west of the site via a new access route which cuts across the northwest corner of a field before joining the original shared access from a neighbouring residential property on Mill Lane.

The access up to and around the buildings (pictured left) is surfaced with compressed road planings. There is little hard surfacing across the site, grass surrounds the buildings.

The access road leads to a cluster of farm buildings.



Photographs 2 and 3:

A small, single pitched 'shed' constructed from corrugated metal (left) and a concrete block stable with corrugated metal roof, located to the south of the access road. A metal fuel tank is located adjacent to the western façade of the shed. Inspection of the tank identified a small quantity of diesel at the bottom of the tank.



Photographs 4 and 5:

A brick and wooden clad building with corrugated metal roof currently used to store household maintenance equipment, lawn mower and bikes.



Photograph 6:

To the south of the access road, east of the above row of buildings and west of the hay barn, is a small storage area and access gate into the field to the southwest of the farmyard.



Photograph 7:

'Hay' barn constructed from timber and corrugated metal roofing sheets, used for general storage of items including bicycles, two trailers, hay bales and wood.



Photograph 8:

To the east of the hay barn is the remaining concrete base of a single garage. The garage included asbestos containing materials and has been removed from the site.



Photographs 9 and 10:

To the northeast of the hay barn is a single storey brick building with corrugated metal roofing and a static caravan. This building and the caravan are currently being used as a dwelling by the site owner.



Photograph 11:

To the east of the existing dwelling is a Klargester (domestic sewage treatment plant) which is to be retained and connected to the new dwelling.



Photographs 12 and 13:

To the north of the caravan is an area of concrete hardstanding thought to be the remains of a dairy building. To the east is a wall with the remains of milking bays (from the dairy) and to the west is a concrete block building with corrugated metal roof and concrete floor. The building comprises two bays currently used for stabling a horse and associated equipment. A metal shipping container (used for household storage) has been placed within the northeast corner of the concrete 'yard'.



Photograph 14:

To the west of this stable building, north of the site access road, is a corrugated metal building currently used for the storage of household items. This building has a compressed dirt floor.



Photograph 15:

The final building is small cattle shelter within the field to the north of the access road.



Photograph 16 and 17:

The proposed dwelling is to be built to the south and east of the existing farm buildings, within the northwest corner of a field left to pasture. To the east of the proposed footprint is a small allotment garden, developed by the current site occupiers.



Photograph 18:

An excavation within the footprint of the proposed dwelling revealed a shallow layer of topsoil over clay with Horsham Stone. Immediately adjacent to the existing dwelling excavation revealed a layer of concrete with flints and brick up to 200 mm bgl, over a layer of chalk between 200 mm and 300 mm bgl over the natural ground (pictured above).

Photographs taken 3rd February 2026:



Photograph 1 - 3: Hay Barn

Hay barn located to the east of the site, to be removed to make way for the redevelopment of the site.



Photograph 4: Mixed Earth and Rubble Pile

To the rear (south) of the hay barn is a pile of mixed earth and building rubble comprising concrete, brick, wood and sheet metal.



Photographs 5 – 7: Storage Area and Field

Adjacent to the field entrance is a storage area presently with two shipping containers located to the west of the gate.



Photographs 8 and 9:

Brick and wooden clad building with corrugated metal roof and concrete floor used to store household maintenance equipment.





Photographs 10 and 11: A concrete block stable with single pitched corrugated metal roof and concrete floor used to store equestrian and other miscellaneous items.



Photograph 12:

Former shed and tank location, now cleared.

APPENDIX D
GroundSure EnviroInsight Report

See separate file

APPENDIX E

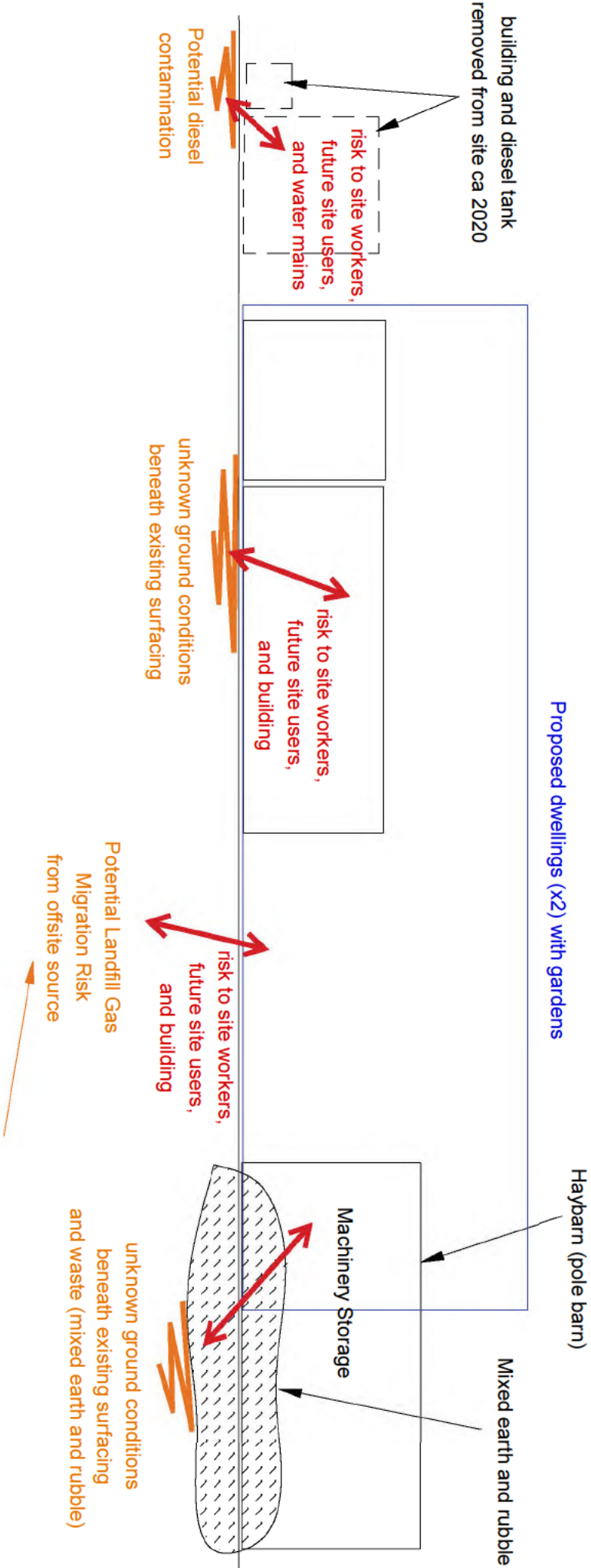
Conceptual Model

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Preliminary Contamination Risk Assessment

Conceptual Model - February 2026





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