
GEO-ENVIRONMENTAL SUMMARY – MILTON HILL, CLAPHAM

Wardell Armstrong LLP (WA) was commissioned to undertake a Geo-environmental Assessment to support the promotion of a new housing development within the Neighbourhood Development Plan, for a site at Milton Hill, Clapham, Bedfordshire. This document provides a summary of the works undertaken and an overview of the findings and recommendations from the assessment.

The purpose of the geo-environmental assessment was to identify and examine information relating to the:

- past and current uses of the Site and surrounding area;
- environmental setting including geology, mining, hydrogeology and hydrology;
- potential contamination sources, pathways and receptors;
- potential stability and contamination constraints that may arise in connection with the present use or proposed use of the Site; and
- requirement or otherwise for future studies, including potential intrusive site investigation prior to redevelopment.

In addition, two walkover surveys of the site have been undertaken, in February 2019 and October 2019.

PAST AND CURRENT LAND USES

The Site comprises approximately 24 hectares of primarily agricultural land and a former poultry farm currently containing several buildings, grazing paddocks and a caravan storage park. The buildings on Site are mainly used as chemical (including petrol, WD40, motor oil, solvents, paint, antifreeze and LPG gas), vehicle and general storage.

GEOLOGICAL AND HYDROGEOLOGICAL SETTING

Geological mapping (see Figure 1 overleaf) indicates that the Site is mainly overlain by the following superficial deposits:

- Oadby Member – Diamicton;
- Stoke Goldington Member and Felmersham Member (Undifferentiated) – Sand and Gravel;
- Head – Clay, Silt, Sand and Gravel; and
- Glaciofluvial Deposits – Sand and Gravel.

The Site is also underlain by the following bedrock geology:

- Peterborough Member – Mudstone; and
- Kellaways Formation - Sandstone, Siltstone and Mudstone

The superficial deposits of the Stoke Goldington Member and Felmersham Member (undifferentiated) and the Oadby Member are classified as Secondary A and Secondary Undifferentiated aquifers respectively. A Secondary A Aquifer is described as 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. An undifferentiated aquifer classification is assigned where it has not been possible to attribute either category A or B to a rock type due to its variable characteristics.

The bedrock of the Kellaway Formation is also classified as a Secondary A aquifer.

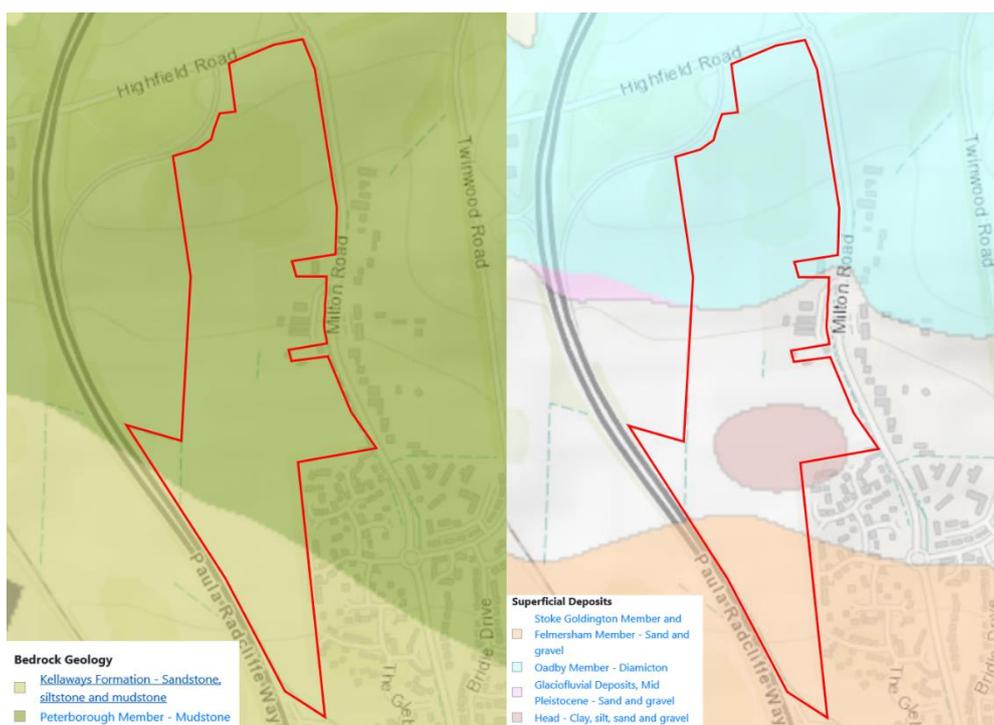


Figure 1: Bedrock Geology (Left) and Superficial Deposits (Right) underlying the Site

ENVIRONMENTAL SETTING

No contaminated land entries or notices are identified within 1km of the Site.

There are no records of historic landfills within the Site boundary. However, one historical landfill is located 22m southeast of the Site boundary and two Local Authority Recorded Landfill sites were identified 1m and 16m south of the Site boundary.

The Zetica regional unexploded ordnance (UXO) risk map has been reviewed, and shows the Site in a low-risk area. Furthermore, examination of historical plans indicates RAF Twinwood Farm is recorded approximately 800m to the northeast of the Site, and an industrial target was identified approximately 1.5km to the east of the Site. Due to the distance of the Site to these features, the risk of unexploded ordnance (UXO) at the Site can be considered to be low; however the risk cannot be entirely discounted.

CONTAMINATION

Potential contamination sources on Site comprise chemical storage, made ground, and a historical septic tank in the South. Asbestos from existing buildings and made ground could also be present. Potential offsite contamination sources could include the Local Authority recorded landfill Site to the southwest of the Site.

An electric substation is also present adjacent to the Site, which may represent a potential source of contamination, however at the time of the Site walkover no contaminants were identified, and the substation appeared in good working order.

Based on the available information summarised in this report, the Site is considered to present an overall **Low to Moderate risk** from historical land use, current Site use and adjacent landfilling. It is recommended that further intrusive investigation of the geological, contaminative and geotechnical setting is undertaken.