

Johnson & Johnson - Pinewood

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Contamination Risk Assessment

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Revision History

Revision	Date	Description
P01	06/08/2024	Initial issue.
P02	09/08/2024	Planning Consultant Comments Addressed

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Manually update the document revision number, date and description (reason for issue). Ensure it matches the front cover.

A new line should be added to this table each time the document is revised to ensure a full revision history and date of issue is retained.

Document Verification

	Name / Qualifications	
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1.0 Introduction

1.1.1 Site Assessment

LGIM has requested that MNP carry out a review of existing site information to support an application for prior approval and a proposed change of use of the existing building from Use Class E to Use Class C3 under The Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended), Schedule 2, Part 3, Class MA.

The site address is as follows;

- Pinewood, Nine Mile Ride, Wokingham, RG40 3EA

Specifically, the review is to report on development risks and risks in the ground, including potential contamination. Local Authority Mapping indicates a potential source of ground contamination near the site, so we have been asked to review historic investigation reports and advise on the potential impact to development.



Figure 1. Extract of Land Contamination Zone Map

1.1.2 Historic Reports

LGIM has provided the following information for MNP to review. This assessment is based solely on these documents alone. The reports are not specific studies for the development but are legacy reports, which can only be used to develop an opinion on the likely site conditions. The Ian Farmer Associates Site Investigation Report was submitted in connection with application reference F/2006/9192.

- DRAFT J_J Pinewood_ UK Phase I ESA - 19 July 2023 (4).pdf – Phase 1 Environmental Site Assessment
- Pinewood – Report on Desk Study and Site Investigation – 50100B – Ian Farmer Associates

2.0 Pinewood, Nine Mile Ride, Wokingham, RG40 3EA

2.1.1 Site Overview

The site is an area of woodland, and is currently occupied by a Johnson and Johnson Campus. The site is accessed from the south and east via an access road from Nine Mile Road. The topography of the site is generally level but with a slight slope to the north. Agriculture and woodland surround the site.



Figure 2. Image of Pinewood Site from Phase 1 SI provided

2.1.2 Review of Historic Reports

General site description and development risks

- The site was historically woodland (1876-1901). A gravel pit was excavated within the wooded area between 1899 to 1911 and was never filled in. There is a depression in the woodland but this is outside the built footprint.
- The former site use was as a TB sanatorium built 1901, and becoming a hospital in 1929. The hospital closed in 1966 and Hewlett Packard acquired the site and developed the existing office campus before 1987. Johnson & Johnson acquired the offices in 2007, and the use has remained unchanged since.
- Three above ground storage tanks were present in the north western corner of the site in 2006, along with a generator. It is unclear if these are still present but it must be considered a that the tanks may have been a source of local contamination. The 2006 contamination testing found no evidence of specific contamination that may be associated with the tanks.
- The historic reports highlighted that an Underground Storage Tank (UST) was removed during development of car park to east of site in 2020.
- Specific site investigation was carried out in 2006 as part of the Ian Farmer Associates site investigation. Whilst a strong smell of petrol was reported, contamination tests reveals no harmful substances.

- Asbestos Containing Materials (ACMs) have been identified in the existing buildings but these appear to be limited to sheet asbestos and floor tiles. Careful removal prior to redevelopment will mitigate risks to the development. There must be an allowance for this.

Topography and hydrology

- The site is generally level but slopes slightly towards north.
- Stormwater drains via soakaways – 7 No. across the site.
- Two ponds are reported to exist on site, one being artificial clay lined.
- The EA reportedly state that the site is within Emm Brook water catchment zone. The site is in flood zone 1 but there are some areas of high surface water flood risk – with the high-risk areas adjacent to the east of the office. It is considered that these can be dealt with normally by a positive drainage system in the development.
- Hydrogeological records indicate that the site is located upon a minor aquifer, namely the Plateau Gravel.
- An old gravel pit forms a depression in the wooded area to the south (central) of the site but this is outside the built footprint. The gravel pit was infilled in the mid-20th Century – possibly with rubbish – but it remains outside the development area.

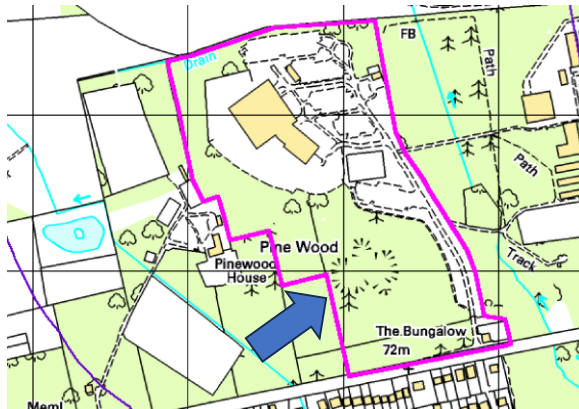


Figure 3. Gravel pit location

Geology and Hydrogeology

The phase 1 report used nearby historic boreholes and GBS mapping to predict the ground conditions.

- Topsoil overlies made ground to 2.3m depth.
- River Terrace Deposits comprise clayey sandy gravel from 1.2m to 2.3m below ground level. These superficial deposits form a secondary aquifer suggesting ground water way flow through. No record of ground water has been reported on so this is an assumption based on proximity of watercourses. Ground water is expected to run toward NW and Emm Brook
- Bagshot beds comprising clayey sand underlie the site below 2.3m depth. It is expected that the buildings found of spread foundations set to depths to suit tree roots, or piled.

Ground Contamination

- Historic contamination testing in 2006 focused on Made Ground, Above Ground Storage Tanks, Below Ground Storage Tanks and Foundations from the Victorian Hospital development. Made ground was encountered in all locations up to 3m in depth and contained subbase, ash, clinker, sand and gravel and concrete. In the location of the former buried tank, made ground was noted to have a strong petrol odour at 2.8m depth, but subsequent testing did not indicate contamination. It must be considered that some local hydrocarbons may require removal.
- None of the 2006 tests identified elevated levels of contamination from soil samples analysed. It should also be noted that whilst this assessment was for an office development, the report concludes that none of the results exceeded the most sensitive targets for residential use with gardens. Of course, this relates to the standards of 2006 but historic reports indicate that the site has a low contamination risk.
- The risk of contamination in the area of development would be expected to be low subject to detailed testing. Potential contamination sources are listed but are reported to be localised. It is possible that remnant foundations from the long-demolished hospital – possibly including cellars may be present.
- This is in keeping with the assessment of made ground to 2.3m so it can be expected that some below ground obstructions, contamination such as lead and hydrocarbons, and made ground may be present.

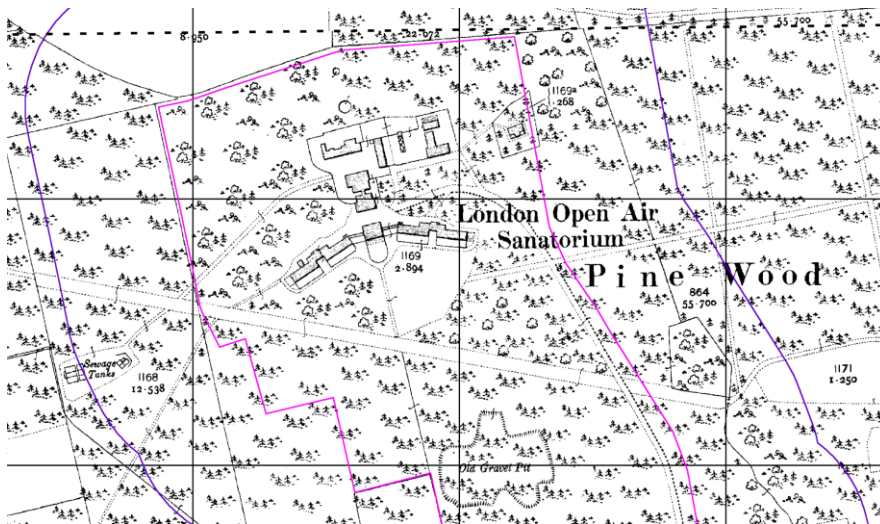


Figure 4. Former Hospital and Gravel pit location

- The risk of contamination is further reported on Local Authority Mapping. The following is an extract from Potentially Contaminated Land Zone that is presented in the Planning Report provided. Contamination is potentially present to the south of the developed area. The source is not defined. It is possible this may be transient contamination travelling in the secondary aquifer. There is no evidence in the specific reports reviewed to suggest this will affect the proposed conversion of the offices.
- All evidence presented suggest the site has a low contamination risk.

Ground Gases

- The 2006 site investigation included a regime of gas monitoring. It was considered that no special precautions need be adopted within the proposed (now constructed) structures to mitigate the risk of ingress of toxic gas.

2.1.3 Risk Summary

In summary, the conversion of the office campus to residential use is expected to be of low risk. The site lies in the made ground, potential obstructions associated with the former hospital, and foundations in ground where made strata may extend locally to 2.3m depth.

Risks associated with former use appear to be low and commensurate with a normal development of this nature. There are some local areas where contamination could be present but historic studies have shown no evidence of this and confirm that a residential use is appropriate.

Ground gas risk is expected to be low given the historic testing.

In conclusion, the information provided indicates that a proposed change of use of the existing building from Use Class E to Use Class C3 under The Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended), Schedule 2, Part 3, Class MA will be feasible without ground remediation or special measures.

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