

R. CARR GEOTECHNICAL SERVICES

Ref: 4198/25R

**PROPOSED CHANGE OF USE AT
WALNUT HILL NURSERY,
WALNUT HILL ROAD,
ISTEAD RISE, KENT DA13 9HL.**

CONTAMINATION ASSESSMENT

Revised: April 2025

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Walnut Hill Nursery, Walnut Hill Road, Istead Rise, Kent DA13 9HL.

1. Introduction

- 1.1 This report has been prepared following receipt of instructions from Mr C Lawson, representing First 4 Drains Ltd.
- 1.2 A change of use is proposed for the site from a horticultural nursery to a mixed use of Use Class E (Commercial, Business and Service) and Sui-Generis Use in relation to the operation of a drainage company including parking of HGV tanker vehicles.
- 1.3 The purpose of this report is to identify and quantify contaminative-related issues which could result due to the proposed change of use of the site.

2. Topography

- 2.1 The site is located to the north of Walnut Hill Road at OS Land Ranger map reference TQ 632 690. A location plan of the site is presented in Fig 1.
- 2.2 Ground surface at the site slopes downhill very gently from south to north.

3. Geology

- 3.1 Reference to the local Geological Survey sheet (no. 271, Dartford) has indicated that the site is located upon the Seaford member of the White Chalk subgroup (formerly referred to as the Upper Chalk).
- 3.2 The White Chalk consists of soft, white, friable limestone that is 95% calcium carbonate and contains scattered nodular and tabular flint. The upper surface of the Chalk is often deeply convoluted and may contain solution pipes filled with more recent deposits.

4. Hydrology and Hydrogeology

- 4.1 No surface water features have been identified within 500m of the site.
- 4.2 The Chalk is the Principal Aquifer of the area with high groundwater vulnerability. A Principal Aquifer is defined by the Environment Agency as a “highly permeable formation with known or possible presence of significant fracturing”. These tend to be highly productive and capable of supporting public supply and other abstractions.
- 4.3 The site is located within a Source Protection Zone type SPZ1 (inner protection zone). An SPZ1 is defined by a 50-day travel time for pollution from any point below the water table to reach the abstraction source within a minimum radius of 50 metres.
- 4.4 Information obtained from the BGS borehole records database is indicative that groundwater occurs at a depth of 31m approximately 400m to the east of the site (borehole record from map reference TQ 635 690 dated 1973).
- 4.5 Reference to the local Hydrogeological map has identified a groundwater abstraction on Downs Road, approximately 400m to the east of the site. The installation was confirmed as being managed by Southeast Water at the time of the site visit.

5. Site History

- 5.1 Walnut Hill Nursery previously operated as a commercial horticultural nursery. Planning permission is understood to have been granted in 2001 for the construction of a building to provide equipment/materials storage, propagation area, potting, packing and loading areas at ground floor level and staff facilities, drying room, office and storage at mezzanine floor level.
- 5.2 Horticultural operations at the site ceased approximately 2 years ago. The site was then purchased and is currently occupied by a drainage company (First 4 Drains Ltd), which began operating on the site during March 2024. Operations undertaken by the drainage company include the use of HGV tanker lorries, the use of which has raised issues with the Local Planning Authority.

6. Site Inspection

- 6.1 An inspection of the site was undertaken on 17th January 2025 in the company of the First 4 Drains transport manager.
- 6.2 The site was situated within a semi-rural area on the southern outskirts of Istead Rise village. Entry into the site was gained directly from Walnut Hill Road via an electronically controlled, sliding security gate.
- 6.3 A single storey, refurbished brick building containing office facilities was present at the front of the site, accessed by a tarmac drive (Plate 1). Ornamental borders and designated staff parking spaces were located to the front of the building.
- 6.4 A drive formed from paving blocks passed along the west side of the site to the rear of the office building, an area of compact granular surfacing being under construction for the parking of light vans (Plate 2). Construction of a timber building was in progress to the west of the granular surfacing, planning permission for which is understood to have already been granted.
- 6.5 The rear of the site contained an area of compact granular surfacing on which were parked a number of HGV tanker lorries. Sections of former horticultural bays intersected by concrete paths and polythene greenhouses remained at the north end of the site.
- 6.6 A strip of mature mixed woodland was present along the east side of the site whereas undeveloped land was situated to the north and west, a deciduous hedgerow forming the site boundary.
- 6.7 It was ascertained that the HGV tankers are always empty of contents when they return to the site at the end of the working day. No on-site vehicle maintenance is undertaken as the lorries are serviced and cleaned at a local garage. Refuelling is also carried out by contract with a local service station. Subject to annual mileage, lorries are renewed every three to four years.

- 6.8 The construction of a concrete lorry park is proposed for the existing area of granular surfacing on which lorries are currently parked.

7. Risk Assessment

- 7.1 Part IIA of the Environment Protection Act 1990 defines contaminated land as: "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land that:-

- a) significant harm is being caused or there is a significant possibility of such harm being caused, or;
- b) pollution of controlled waters is being, or is likely to be, caused

"Harm" means harm to the health of living organisms or other interference with the ecological systems of which they form part, and in the case of man, includes harm to his property.

- 7.2 There are two steps in applying the definition of contaminated land:

- 1) Identification of a "contaminant", a "pathway" (or pathways) and a "receptor" with respect to the land in question.
- 2) Identification of a pollutant linkage and that the pollutant linkage:
 - a) is resulting in significant harm being caused to the receptor in the pollutant linkage.
 - b) presents a significant possibility of significant harm being caused to that receptor.
 - c) Is resulting in the pollution of controlled waters
 - d) Is likely to result in such pollution.

- 7.3 Under the Groundwater Regulations Act 1998, it is an offence to allow List I substances to enter groundwater. It is also an offence to allow List II substances to enter groundwater without prior consultation with the local authority.

- 7.4 On the basis of the site's historic and current commercial use, a low risk from potential on-site contamination has been identified to human health, including site workers and local residents

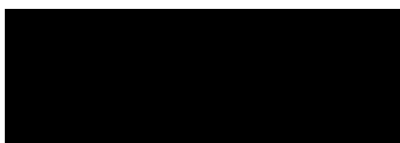
7.5 A low risk from potential contamination has also been identified to the underlying Principal Aquifer for the following reasons, particularly with regard to the operation of HGV tanker lorries:

- No discharge of tanker contents is undertaken on the site
- No lorry maintenance or refuelling is undertaken at the site
- The lorries are renewed on a regular basis, therefore leakages of mobile contaminants such as lubricants is unlikely to occur from new vehicles
- The provision of concrete surfacing in the lorry parking area will further minimise leaching of any such leakages into the underlying soil
- Groundwater is recorded as being of some considerable depth
- No surface water features have been identified within 500m of the site

7.6 Concerns have been raised by the Local Planning Authority with regard to the introduction of concrete surfacing on green belt land. However part of the area of proposed vehicular parking is already intersected by concrete footpaths associated with the site's previous use as a horticultural nursery and the impact of new surfacing could be cosmetically enhanced by the incorporation of localised small areas of ornamental planting.

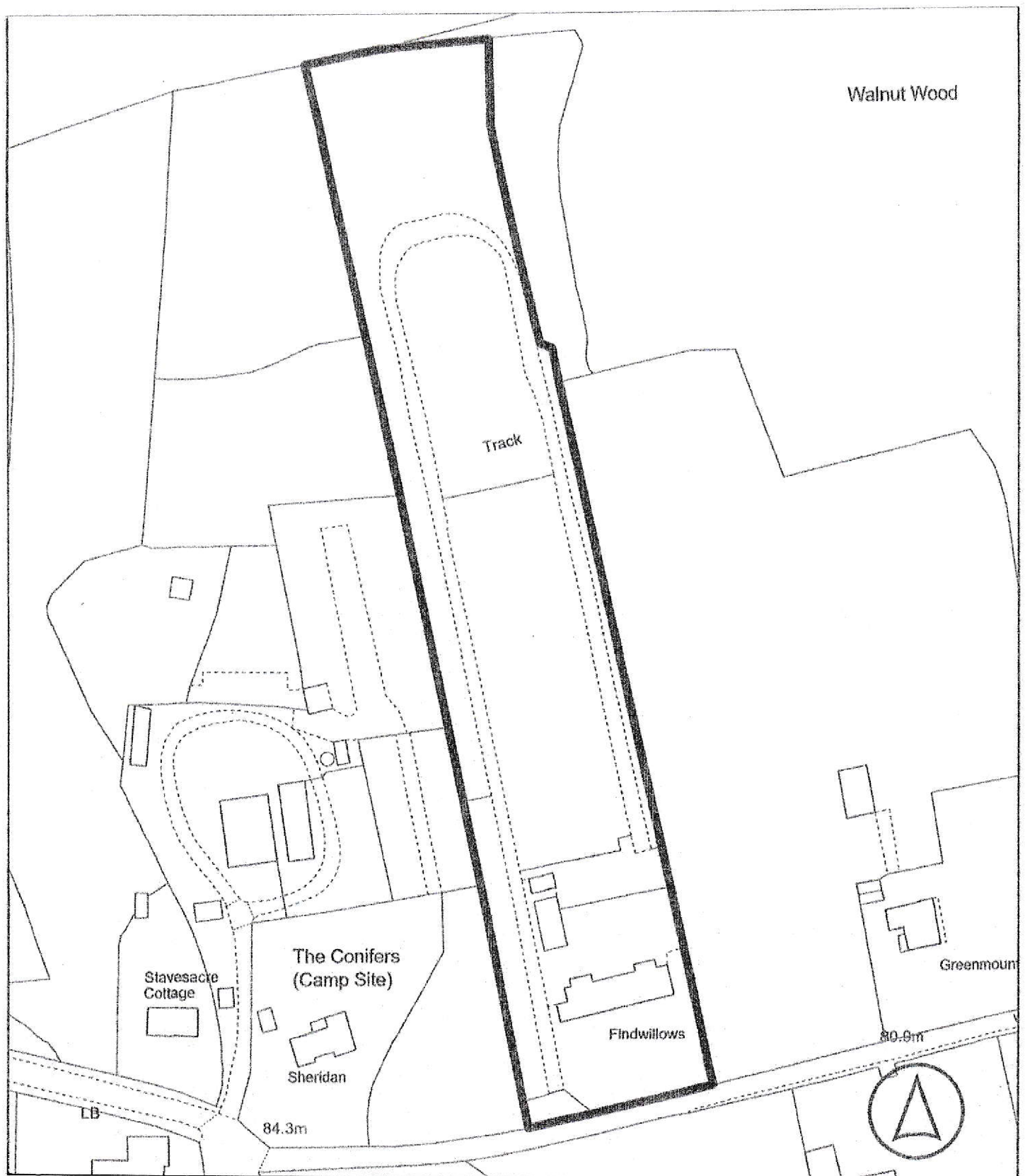
7.7 An appropriate surface water drainage system including the incorporation of oil separators should be designed by a drainage specialist and incorporated within the design of the proposed area of parking in order to mitigate the leaching of any mobile contaminants resulting from leakages or spillages associated with parked vehicles and so minimise the risk to groundwater.

7.8 The proposed change in use of the site is therefore not considered to represent a significant contaminative risk to the identified receptors, including groundwater and ecological systems.



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**Walnut Hill Nursery, Walnut Hill Road, Istead
Rise. Fig 1 Plan of Site.**



Plate 1



Plate 2



Plate 3



Plate 4