

11th September 2019

Our ref: GE18008/GR02/190911



Tom Nelson
Linden Homes South
1A Guildford Business Park
Guildford
Surrey
GU2 8XG

Dear Tom,

RE: Boorley Green, Parcel B6

Further to our recent discussions, we write to present an update to the soil contamination assessment for this development parcel.

Background

Ground investigation and associated assessments undertaken prior to development commencing at Boorley Green identified an area of soil contamination, as reported by Geo-Environmental (ref. GE9523/GIR/JT/OCT13), on the portion of the site which now falls within Linden's B6 parcel. As such, a requirement was identified for possible preparation of a Remedial Strategy and Verification Plan and subsequent verification of risk mitigation measures to protect key receptors from the soil contamination identified. However, this requirement was subject to confirmation of the development layout in the vicinity of the soil contamination.

From the outset of development planning for the wider development site, the Consortium proposed to deposit site won, naturally occurring, uncontaminated subsoil and Topsoil within development parcels to achieve the requirement development levels. This was also the case for Parcel B6.

Updated contamination risk assessment

With reference to the development layout, the borehole location of concern where soil contamination was identified (WS375) is located beneath the proposed shared access road or adjacent footpath to the front of plots 409-412, as shown on the enclosed Figure 1 which is an extract of the development layout CAD plan with the co-ordinated position of WS375 superimposed over the layout.

The form of construction in the area of WS375 is assumed to comprise permanent hard cover which prevents end users coming in to contact with these soils and thus no specific remedial action is required other than segregation of any soils excavated from this area and the soils being removed from the site. These soils would not be suitable for placement at all gardens or in the upper 0.5m of open space landscaping.

Further sampling and testing was undertaken around WS375 and did not identify any other locations where soil contamination was present (letter report ref. GE15030-GR03-16-02-08), i.e. just a possible requirement for remedial intervention within c. 10m around WS375 depending on layout, e.g. if gardens were in this zone.

No gardens are proposed in the immediate vicinity of WS375 and the hard cover would serve to protect end users for remnant soil contamination beneath the placed fill/subsoil and hard cover construction.

Geo-Environmental Services Ltd
Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
+44(0)1273 832972 www.gesl.net

Environmental Consultants | Geotechnical Engineers | Site Investigations

Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479



With reference to development levels provided by Linden's Civil Engineers, it is proposed to raise ground levels in the vicinity of WS375 as summarised in Table 1 below. Plots 410 and 411 are closest to WS375.

Plot Ref.	Proposed increase in ground level (mm)
409	600
410	500
411	400
412	300

Table 1 Ground level increases on plots in proximity to WS375

The assessment set out in GE15030-GR03-16-02-08 included modelling for a simple soil cover system in open space soft landscaping using the BRE cover system method which determined a soil cover thickness of 465mm for soft landscaping (outside of gardens). However, with reference to the development layout, WS375 is located on the outside of the access road, i.e. side further away from the plots, and beneath a proposed pavement.

Therefore, on the basis of the review of development layout and levels in the vicinity of WS375 coupled with the proposed permanent hard cover end use of the area around WS375, it is considered that no further assessment, risk mitigation/remedial action or verification is required to support the proposed development.

Notwithstanding the above, if any abnormal conditions or variation in ground conditions are encountered then the contractor should follow a discovery strategy such that an appropriate assessment can be undertaken to determine whether any unplanned remedial action is required.

Discovery Strategy

Should previously undiscovered contamination be encountered during construction by the ground workers, this should be reported to the site manager immediately in order that any necessary inspection may be made. Records should be kept, and samples submitted for analysis where conditions encountered are not as anticipated. The results of any such testing should be sent to the relevant authorities for consultation.

A copy of the discovery strategy should be lodged on site, and provisions made to ensure that all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter.

Depending on the type, nature and extent of any such 'discovery', it may be necessary to halt works in that location until such time as the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with regulatory consultation.

As a general guide, where such unexpected conditions are encountered the following approach is recommended:

- All discoveries are to be reported to the Site Manager immediately and works at that location are to halt until further notice;
- The Site Manager is to report any such discoveries to the Client and the Environmental Consultant;
- Following notification from the Site Manager, the Environmental Consultant shall discuss the discovery with the Local Authority and if considered necessary, arrange to meet an Officer on site to view the discovery;
- The Environmental Consultant shall attend the site to record the location, extent and nature of the discovery and implement an appropriate sampling and analysis regime, taking due account of the type and nature of the discovery, known and probable land uses in that area of the site;

- Where remedial action is required, regulatory consultation and approval will be sought;
- A record will be produced by the Environmental Consultant and held on site (with copies held by the Environmental Consultant, Client and Local Authority), detailing the discovery, assessment works undertaken, findings thereof, confirmation either of no action required or detailing the remedial action taken and validation thereof.

The process is shown in Chart 1 below.

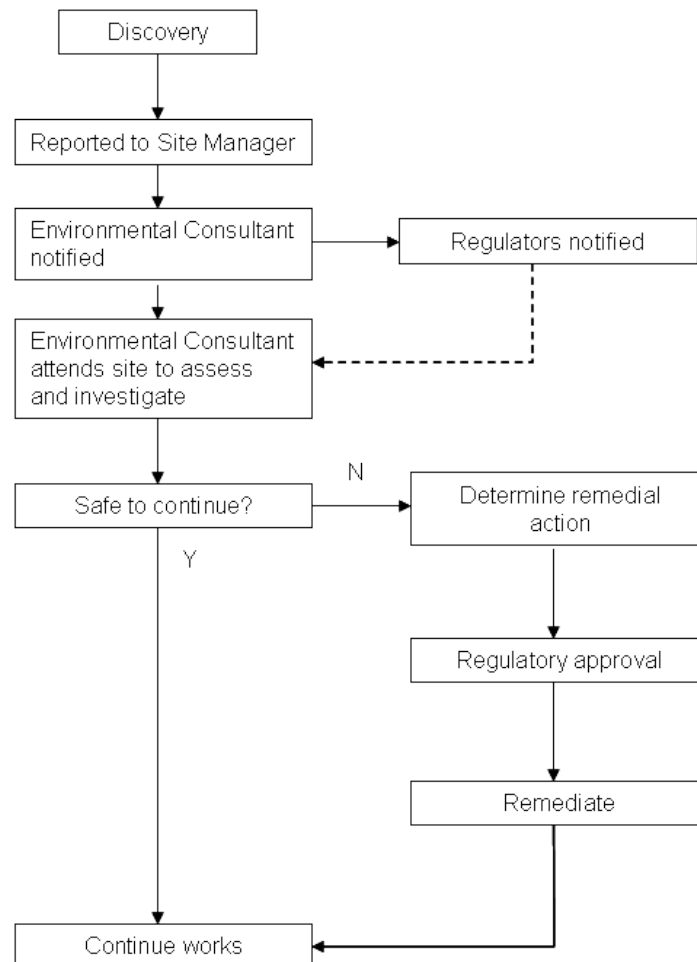


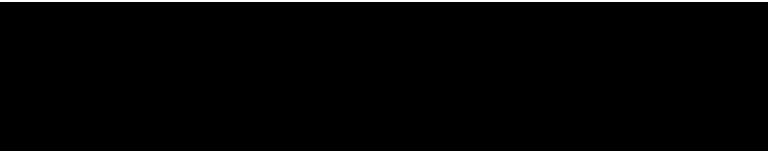
Chart 1: Discovery Strategy Process

Closure

We trust that updated assessment provides sufficient clarification with respect to soil contamination in the context of the updated development layout and proposed increase in ground levels, such that the Local Authority can review the relevant planning conditions and concur that further remedial action or verification is not required.

Should you have any queries please do not hesitate to contact us.

Yours sincerely
For and on Behalf of Geo-Environmental



GAVIN ROBERTS CGeol, BEng (Hons), MSc, FGS
Technical Director



Enc Figure 1 Development Layout Plan





NOTE: WS375 position plotted based on co-ordinated location as surveyed during the original ground investigation.

Project:	Boorley Green Parcel B6			Title	Development Layout Plan	
Client:	Linden Homes South			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net  Geo-Environmental		
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