



Response to Invitation to Participate in a Mini Competition
To be completed and submitted by Panel consultant

Panel Name: MULTIDISCIPLINARY

Project Name: Tattenhoe Park

Date: 07 December 2016

Reference Number: OJEU REF 2014/s 020-031462

To: [REDACTED], Senior Area Manager (South East Midlands Team), Homes and Communities Agency

From: WYG
Geneva Building, Lakeview Drive, Sherwood Business Park, Annesley, Nottingham, NG15 0ED
[REDACTED]



Proposal

WYG understands that the site comprises a series of plots of land totalling approximately 29ha located on the southwestern periphery of Milton Keynes, immediately north of the A421. WYG have based this proposal upon the development of the site for predominantly residential uses including private gardens. It is noted that the site is not known to have been previously developed, however aerial photos available online suggest that some areas of the site may have been used as construction compounds and for the stockpiling of arisings during development of adjacent land parcels. Aerial photographs indicate that majority of the site area currently comprises grazing land.

WYG understand the following services are required:

- Desk Study
- Ground Investigation
- Topographical Survey
- Site Information Plan

Desk Study

Preparation of a Phase One Geo-Environmental Desk Study report, comprising:

- A discussion of the current site status and associated environmental influences;
- A historical site and area review, primarily referring to past issues of Ordnance Survey maps, but utilising other sources as available;
- Site walkover inspection and photographic record.
- Appraisal of environmental regulatory data as obtained from the Landmark Information Group (hereafter referred to as the Envirocheck report);
- A ground and groundwater conditions assessment discussing the results of the research above;
- Assessment of potential for ground contamination;
- Assessment of potential geotechnical constraints;
- Identification of any known archaeological remains or areas of sensitivity which may constrain site development, including consultation with the Senior Archaeological Officer at Milton Keynes Council.
- A qualitative contamination risk assessment and formulation of a preliminary Conceptual Site Model.
- Provision of a single desk study report for the combined 29Ha site as a separate report.



Ground Investigation

WYG propose the following scope of intrusive ground investigation works on the basis that the site is not thought to have been previously developed. Should the desk study identify potential geo-environmental issues which require further assessment, additional intrusive works would be required.

Based on the assumption that the site is currently Greenfield, WYG present the following scope of intrusive works:

- 38 No. machine excavated trial pits, to a maximum depth of 3.5m bgl. Due to the currently perceived low contamination risk (assumed Greenfield sites), WYG have adopted a density of exploratory locations based on one position per hectare, sufficient to verify that conditions are as anticipated. This would be implemented as a square grid, or best-fit 100m spacing to suit the small land parcel sizes. An increased density of investigation may be prompted, either by Desk Study findings or field observations. WYG would notify the client of any recommended variation.
- Chemical analysis of samples recovered from the trial pits including 'screening' contamination tests (including metals, hydrocarbons, PAH and asbestos). Should field observations during the excavation of the trial pits indicate evidence of contamination, additional testing may be required.
- Geotechnical testing of samples recovered from trial pits including moisture content, Atterberg limits, particle size distribution, compaction and BRE SD1 short suite. Hand vane tests will be undertaken in suitable material recovered from the trial pits.
- Provision of a combine geo-environmental factual and interpretive report for the combined 29Ha site area, outlining the findings of the investigation and presenting our recommendations and conclusions. The report will include:
 - Factual reporting of the site investigation works;
 - Discussion of encountered subsurface conditions, including groundwater observations if encountered;
 - A summary of laboratory contamination assessment results;
 - A summary of laboratory geotechnical assessment results;
 - An assessment of the potential contamination risk of the site, based on current guidelines and best practice and the suitability of any excavated material for off-site disposal.
- Recommendations for further investigation, if applicable.

All trial pits will be positioned with reference to site information plans showing existing utilities and service conduits. In addition, all trial pit locations will be scanned with a cable avoidance tool (CAT) prior to any intrusive investigations being undertaken. Any damage to unknown services, or to services not located as shown on plans, would be the responsibility of the client.



Trial pits will be backfilled with arisings, WYG will endeavour to compact the reinstated arisings to minimise the likelihood of subsidence, however we cannot guarantee that future subsidence of the reinstated ground will not occur. Any excess arisings will be mounded on top of the pit. WYG do not accept any liability for the welfare of livestock which may occupy the site following completion of the intrusive investigations. Removal of livestock would be required during the ground investigation works.

Possible Additional Studies

In addition to the trial pit and contamination assessment required within the ITT documentation WYG would propose the following additional ground investigation works that would be prudent :

Soakaway Testing

The geological plan for the site indicates that the majority of the area comprises cohesive strata although some alluvium is noted in the vicinity of the site. Alluvium can contain granular strata that may be suitable for the adoption of soakaways as part of a sustainable surface water discharge. The number of soakaway tests to be carried out would depend on the geological conditions encountered however it may be prudent to allow for undertaking 5 No tests across the whole of the development area.

The soakaway testing is to comprise one day of testing at each pit location and three full tests may not be achieved. In addition to this if the trial pit collapses we would not fill the excavations with gravel to BRE 365 but progress the soakaway test and note time of collapses as observed. The limit of reach of the JBC is approximately 3.5m so we will not be able to excavate soakaways to a greater depth than this.

Window Sampling and Gas Monitoring

In order to provide additional information on the ground conditions for foundation design WYG would recommend that additional window sample boreholes were drilled in each area with carrying out of Standard Penetration Tests at regular intervals throughout the boreholes.

In addition to the provision of information on the deeper geological strata and in situ strength characteristics of the ground the window sample boreholes can also be used to install gas and groundwater monitoring standpipes in order to assess potential gas risk to any development. In accordance with CIRIA C665 six gas monitoring visits over a three month period are proposed. A density of window sample boreholes distributed at one borehole per two hectares is proposed to supplement the spread of trial pit positions across the site. Subject to the desk study findings,



approximately 16 No. window sample locations are proposed, of which 8 No. would be installed for groundwater level and gas monitoring. If present within the monitoring boreholes groundwater would be sampled and submitted for laboratory analysis.

Abnormal Costs Assessment

Dependent on the results of the ground investigation WYG will provide estimated costs (with express accompanying assumptions used in their calculation) for undertaking works (where relevant and necessary) to:

- (i) Remove any contaminated soil from site and import and compact replacement clean fill material and/or
- (ii) Remediate or suitably cap any contamination in situ (where valid and appropriate) and/or
- (iii) Install foundations for substantive super-structures that may be developed (consistent with medium density residential development) to a depth or design that would generally be considered to be 'abnormal' compared to normal construction practice

WYG would provide this cost assessment under separate cover to the Ground Investigation Report.

Topographical Survey

Completion of a topographical survey of the site and provision of 1:200 scale plans in electronic format. A further two A1 paper copies of the topographical survey plans will also be provided. This element of works will be subcontracted to Peak Surveying Services.

Site Information Plan

Provision of plans identifying existing utilities, service conduits and installations within the site boundary. WYG will commission Atkins to supply utilities and services information. It is noted that electronic copies of drawings produced to a scale of 1 in 200 has been requested. In view of the size of the site this may result in an excessive number of files (potentially in excess of 50 drawings). Additionally 2 copies of each drawing at a suitable scale on an A1 drawing have been requested. In order to keep the number of files down we would suggest a scale of 1 in 500 (estimated to be approximately 12 sheets) however we would be able to produce the drawings to suit the Clients requirements.

Collateral Warranties

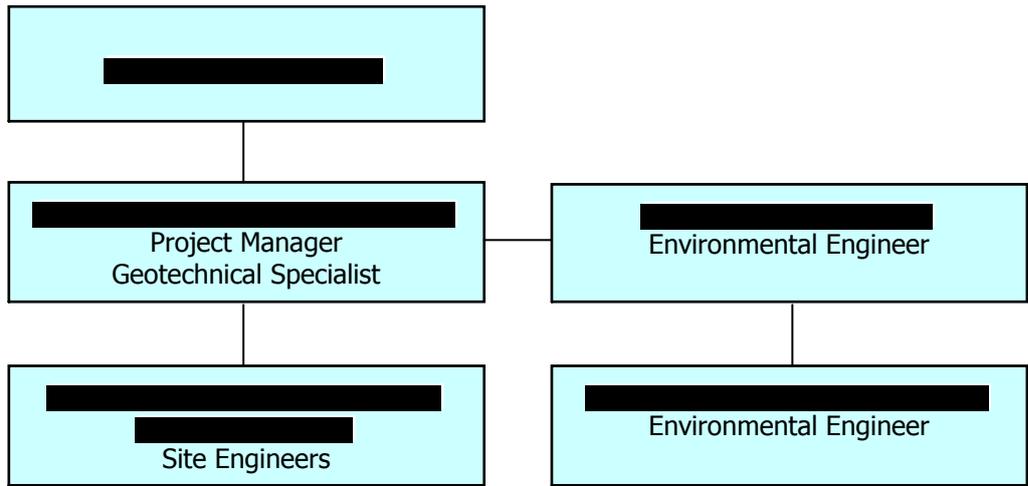


In order to agree the requirement for Collateral Warranties WYG would require further information with regards to the requirements and numbers of warranties needed.

Proposed staff

The project will be managed and resourced by WYG staff located at our Nottingham and Leicester offices. Should any other specialist input be required, the Project Manager may utilise other personnel elsewhere within WYG's UK offices.

The project team will comprise:



[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]



Management arrangements

The Project Manager, [REDACTED], will act as the main point of contact with the HCA, including attendance at meetings with the client and interim progress reporting.

The arrangements for the WYG management of the project are given above.

Timescale

The desk study element will be commenced immediately upon receipt of a formal order and will be completed within three working weeks. WYG would complete the proposed scope of ground investigation works by 28th February 2017. WYG could provide draft exploratory hole logs within one week of completion of ground investigation works.

All final reports will be submitted by the 20th March 2017.

Fee Proposal

The lump sum fee proposal for the above works, excluding meetings, is [REDACTED] as detailed in the Resource Schedule, Appendix C.

Additional Costs

If required, window sampling and associated laboratory testing and gas and groundwater monitoring at additional cost of [REDACTED]

If required, soakaway testing at additional cost of [REDACTED]

Additional investigation requirements would be charged as HCA Panel rates, plus third party costs. Any additional works would be agreed with the client before proceeding.

All meetings to be recharged at agreed HCA rates.



Appendix A – Curriculum Vitae of Proposed Staff



Appendix B – Experience of Similar Commissions

WYG have undertaken many similar commissions for the HCA and local authorities including review of WYG and third party site data; assessment of remedial options and geotechnical requirements, and preparation of remediation strategies. Recent examples include:

Towergate A

WYG were appointed by the HCA to carry out ground investigation works, topographic surveying and ecological assessment of the Towergate A site in Milton Keynes. The ground investigation works comprised trial pits, window sample boreholes along with gas and groundwater monitoring. A programme of geotechnical and chemical laboratory testing was carried out and WYG provided a Phase 2 ground Investigation report on the results of the investigation.

Trent Basin, Nottingham, for HCA (Nottingham)

WYG were appointed by the HCA to procure and supervise the demolition and remediation of the former Trent Basin, off Trent Lane, Nottingham. The site was located within HCA owned land located on the northern bank of the River Trent in the suburb of Sneinton, approximately 1.5km to the south east of Nottingham City Centre and the site historically comprised industrial units, disused warehouses and access roads. A basin associated with the River Trent was located in the centre of the site. WYG were appointed to carry out demolition and reclamation works on the site.

WYG were appointed by the HCA to complete further stages of ground investigation on the site under two stages of investigation, the ground investigation works comprised a review of existing information, carrying out on site ground investigation and the provision of an interpretative report and Remediation Strategy. WYG liaised with the Local Authority and the Environment Agency with regards to the contents and conclusions and of the Reclamation Strategy and agreed the scope of the works before implementation.

On behalf of the HCA WYG was responsible for the procuring and tendering of the reclamation works on the site and provided on behalf of the HCA an NEC Option A Remediation Contract.

Former Coal Products Limited site, for North East Derbyshire District Council (Ongoing)

Long term commission commencing in 2014, initially assessing site investigation data produced by third parties. Following gap analysis, supplementary site investigations were designed and implemented, and an outline Remediation Strategy prepared and submitted to the local authority and Environment Agency for approval. Enabling works to deliver the site for development have since been undertaken, with WYG supervision.

Rydale Garage, Aston, for HCA / Birmingham City Council (Ongoing)

Review of third party site investigation data resulted in the identification of a significant contamination issue which was unresolved. Supplementary ground investigations were designed; implemented, and an Outline Remediation Strategy devised. The approach was discussed with the Environment Agency and obtained approval.

Former Coalite Works, Bolsover, for North East Derbyshire District Council (2015)

Undertook peer review of site investigations and remediation strategy prepared by a third party, on behalf of a developer. Identified a number of issues requiring further consideration / justification relating to the remediation / mitigation of contamination, associated with the proposed mixed-use development.



AMH Guhring, Aston, for HCA / Birmingham City Council (Ongoing)

Review of third party site investigation data resulted in the identification of a significant contamination issue which was unresolved. Supplementary ground investigations were designed; implemented, and an Outline Remediation Strategy devised. The approach was discussed with the Environment Agency and obtained approval.



Third Party costs are broken down as follows:

Activity	Grade/Job Title
Acquisition of Envirocheck Information	██████████
Site Walkover Mileage (at £0.45 per mile)	██████████
Site Investigation Mileage (at £0.45 per mile)	£ ██████████
Trial Pit Excavation	£ ██████████
Geotechnical Laboratory Testing	£ ██████████
Contamination Laboratory Testing	£ ██████████
Welfare Provision	£ ██████████
Topographic Survey	£ ██████████
Site Information Plan	£ ██████████

All fees are based on WYG’s agreed rates with the HCA excluding VAT, to be charged at the prevailing rate.

Fees for Additional Site Investigation Services

Activity	Grade/Job Title	Daily Rate (£)	Days	Total	
				Fee (£)	Third Party (£)
Window Sampling	Consultant	£ ██████████	█	██████████	██████████
Soakaway Testing	Consultant	██████████	█	██████████	██████████
Monitoring	Consultant	██████████	█	██████████	██████████
Subtotal				██████████	██████████



Additional Third Party costs are broken down as follows:

Activity	Grade/Job Title
Window Sample Rig and Installations	£ [REDACTED]
Water Tanker and Water Supply	£ [REDACTED]
H&S Provision	£ [REDACTED]
Groundwater Laboratory Analysis	£ [REDACTED]
WYG Engineer Mileage (Monitoring Visits)	£ [REDACTED]