

# 1 APPROACH TO THE WORKS

(Word Count - 997 words)

The ground investigation will be delivered by our in-house specialist ground investigation team, Arcadis Fieldtech Solutions (AFS).

## Communication

High levels of communication are considered critical to the success of this contract.

On commission, we will establish a dedicated project delivery team with clearly defined roles and responsibilities, providing clear and efficient lines of communication to the client / design team. Co-ordination with the design team will significantly benefit from Arcadis already being appointed as the designer on this scheme, allowing us to provide a highly integrated approach to project delivery.

Given the size and complexity of the project we have made allowance for an initial client / designer / key stakeholder meeting to clearly set out each parties understanding of the brief, establish key communication links and ensure information and permits are in place, so the works can commence as programmed.

We have assumed that access to third party / tenanted property will be negotiated by the HCA, including the safe management of livestock. Where required in support of these negotiations, we will provide information including pre and post fieldwork photographic records and method statements.

During the mobilisation period, our project manager will provide detailed health and safety, technical and logistical briefings to the project team to ensure clarity of brief. All necessary information will be issued to our sub-contractors to allow them to plan their element of works safely and efficiently.

Throughout the site investigation programme our project manager will provide daily drillers logs and progress reports and raise any particular matters the client / designer should be aware of. We will also provide weekly fieldwork measures to provide clarity on project budget.

## QA/QC

Project delivery will be managed under our accredited integrated management systems. The following specific quality controls will be implemented:

Element	Actions / Benefits
<b>Ground Investigation Delivery</b>	
Project team selection	Selection based on project scope / location and competency requirements to meet specification.
Project briefing	Cascading project scope, safety, environmental, technical and programme requirements to all of the delivery team, including sub-contractors staff.
Sub-contractor engagement	Sub-contractors engaged under our 'Approved Supplier' process.
H&S documentation	H&S plans aligned to CDM 2015 compiled using in-house approved templates, building from site reconnaissance observations.
Field work communication	<b>Regular communication</b> on progress / findings / challenges on site provided to client. Allowing ground investigation to evolve in real-time to meet encountered conditions.
Project tracking	Weekly <b>co-ordinated resource</b> and progress calls reviewing project progress and deliverables against programme.
Project reviews	Completion of monthly project reviews, with project director sign off.
Site Inspections	PM and senior managers will undertake frequent <b>site inspections</b> to evaluate site team and sub-contractor performance.

Element	Actions / Benefits
Field works de-briefing	Review to ensure compliance with brief undertaken prior to completion of site works to avoid re-mobilisations.
<b>Ground Investigation Reporting</b>	
Reporting	Reports compiled using approved reporting templates to ensure consistency. All reports and data transfer are approved by the Technical Manager.

### Pre-Works Planning

Arcadis have completed a preliminary walkover of the site to identify key constraints to investigation delivery. A further detailed site walkover will be undertaken, allowing further detailed development of H&S documentation and logistical planning, ensuring safe and efficient delivery from the outset.

### Health & Safety and Environmental Management

We have assumed that Arcadis will be appointed as Principal Contractor under the CDM 2015 Regulations. Based on proposed programme and site resourcing, this project will be notifiable to the HSE and assume the client will administer this.

Appendix C presents an outline H&S plan for the project. On commission, we will develop this further, using any additional information from the client and our observations from the pre-site walkover. In addition, with the support of our in-house ecological specialists, we will produce a detailed ecological risk assessment, summarising known ecological constraints and identifying suitable site controls to manage these. This documentation will be provided to the client and sub-contractors in advance of mobilising to site.

During site works, all site personnel and visitors will receive an induction, appraising them of all known site hazards and confirming site rules / controls. Thereafter, daily toolbox talks and task briefings will be provided.

Our site agent, or delegated engineer shall also be responsible for administering our permit to dig process and routine site inspections, ensuring compliance with the H&S plan.

### Establishment

Given the scale of the project, we propose to establish two site compounds at strategic locations within the site boundaries. The compounds would provide office, welfare, secure storage, lay down areas and car parking for the whole of the proposed investigation team, including client's engineer and visitors. All deliveries and dispatches will be from these two locations.

### Methods and plant

We will deliver the contracting elements of the works through a mixture of our own in-house specialist contracting capability and specialist, drill-only, sub-contractors. Our sub-contractors have been selected through our approved supplier system. Selection has been based on various criteria including quality, health and safety record, previous performance on similar large projects, price and the ability to offer suitable resource to deliver the works in line with the programme.

Proposed plant resources are as follows:

Method	Supplier	Level of resource
Cable percussive drilling	Southeastern Drilling Services Ltd	3nr Cable percussive rigs
CPT Testing	In Situ Site Investigation Limited	1nr 20-tonne tracked (and wheeled) CPT rig
Machine excavated trial pits	TBC (local supplier)	2nr JCB 3CX (or similar)
Soakaway Testing	Excavator Hire TBC (local supplier)	1nr JCB 3CX (or similar)
Window Sampling	Arcadis own rig or Geo Site and Testing Services Ltd	1nr tracked rig
LIF	Arcadis	See Appendix D

Method	Supplier	Level of resource
Laboratory Geotechnical Testing	Geo Site and Testing Services Ltd	See Appendix E
Laboratory Contamination Testing	i2 Analytical Ltd	See Appendix F

The proposed layout of the investigation locations is presented in Appendix A.

Indicative periods for the completion of each of the investigation types is presented in Appendix G.

**Waste & Waste Water**

All waste derived from the investigation shall be managed in accordance with the specification. We can also confirm that Arcadis is a Registered Waste Carrier (registration no. CBDU56019).

