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mpqc



BDA Audit Handbook

Version No. 2.1

 **BRITISH
DRILLING
ASSOCIATION**

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Image Credit: Soil Engineering Geoservices

Welcome to the BDA Audit Handbook.

This handbook will clearly explain the audit procedure, to raise the awareness of what you can expect from an audit and eliminate the myths and misconceptions surrounding the audit process. The handbook defines the standards that have been used to develop the Audit and demonstrates that the system is fair and transparent.

Any change to the audit will be determined by the Health and Safety Committee and or the Technical and Standards Committee, and communicated to the membership by the Training and Education Committee prior to any revised audit.

The audit is central to the BDA's mission of raising standards within the land drilling industry and on delivering our aims and objectives:

- Improve efficiency, health & safety awareness and standards in the industry
- Promote and support scientific research into drilling techniques
- Promote and support the training and education of all personnel involved in the drilling industry including drilling operatives, supervisors, apprentices and engineers
- Promote and support the establishment of new and relevant standardisation
- Establish and improve Codes of Practice
- Liaise with Government bodies and Institutions
- Disseminate information to interested parties
- Compile relevant statistical support
- To collaborate with other related associations both in the UK and abroad to advance our industry
- Promote the drilling industry
- Promote BDA members as exemplars

As a not-for-profit trade association, all funds are reinvested back into the BDA for the work it undertakes on members' behalf. The price of the BDA Audit covers the cost of administration and the Auditor's fee, is a small fraction of the cost of a drilling operation and an investment returned on many times over through the benefits of a job done professionally, safely and proudly.

Richard Fielden

BDA Chair - August 2020

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WHO?

1.1 AUDITORS

There are currently three approved, contracted Auditors whom carry out the BDA Audit:

Lee Allardyce (Land Drilling NVQ Ltd)

Experience

Lee is an A1 qualified assessor who has over 40 years' experience in the drilling industry including owning and operating two successful drilling companies. He has been auditing for over 17 years as well as running BDA Apprenticeship Courses. He has a wealth of knowledge of Cable Percussive, Dynamic Sampling, Rotary and Sonic drilling methods as well as holding all required qualifications for working Offshore.

Relevant Qualifications

- A1 NVQ Assessor
- NVQ Level 6 - Construction Contracting Operations Management
- IOSH Managing Safely
- Streetworks Excavation and Reinstatement Monitoring Signing, Lighting and Guarding
- CCNSG Safety Passport
- ENG 1 Seafarer Medical Certificate
- BOSIET (Basic Offshore Safety Induction and Emergency Training)
- NVQ Land Drilling – Lead Driller - Level 2

Philip Dainton (Rotary Test Drilling Ltd)

Experience

Philip is a conscientious and professional IQA, Assessor, and Auditor with extensive experience of 38 years in all Land Drilling Disciplines and Endorsements. He is a highly organised and efficient individual, whose thorough and precise approach to training and assessment makes him an excellent BDA Auditor.

Relevant Qualifications

- A1 NVQ Assessor
- LEEA Lifting Equipment and Accessory Inspector
- NVQ Land Drilling – Lead Driller - Level 2
- Advanced First Aid Instructor/Assessor

Andrew Frogley (A Frogley Contracting)

Experience

Andy has been Assessing NVQs and Auditing drilling crews for almost 10 years. He is an accomplished driller with over 20 years' hands-on experience in mineral exploration, geotechnical and environmental works. Andy's strong knowledge of all drilling practices and procedures in a wide range of ground conditions and formations makes him an ideal Auditor.

Relevant Qualifications

- A1 NVQ Assessor
- LEEA Lifting Equipment and Accessory Inspector
- NVQ Land Drilling – Lead Driller - Level 2
- IOSH Safe Supervision of Geotechnical Sites

1.2 AUDIT MANAGER

The BDA Audit Management is a contracted service supplied by an independent third-party.

- Quality Assurance of every BDA Audit is supplied by the BDA Audit Management to ensure consistency of audits and the auditing process from all BDA Auditors.
- BDA aims to obtain official third-party accreditation of the Audit scheme within 12 months.

Keith Spires (Equipe Group)

Experience

Keith has over 40 years' involvement in the drilling and geotechnics industry. He spent his formative years learning the drilling trade 'the conventional way' working his way up from Second Man to Driller. In 2006, he moved into Senior Management and has utilised his expertise and values in his work as an NVQ Assessor, Internal Quality Assurer and BDA Auditor. Keith has been a prominent figure in developing health and safety guidance for Land Drilling and promoting good practice across the entire UK industry.

Relevant Qualifications

- Edexcel Level 4 Internal Quality Assurance Assessment (V1)
- Edexcel Level 3 Assessing Candidates using a range of Methods (A1)
- Approved Assessor for NVQ Levels 1, 2 & 3 in Land Drilling, Level 3 Occupational Working Supervision
- LEEA Approved Lifting Inspector
- NVQ Level 2 Land Drilling - Lead Diller Rotary, Cable Percussion & Dynamic Sampling

Image Credit: Equipe Group

WHAT?

2.1 CHECKLIST

Below is a non-exhaustive list of the items checked during the course of a BDA Audit:

Industry qualifications / certifications:

- VQs in Land Drilling or Drilling Operations
- Construction Safety Card Scheme (CSCS) Card
- Emergency First Aid at Work (EFAW)
- Asbestos Awareness / Notifiable Non-Licensed Work with asbestos
- Manual Handling



Image Credit: Soil Engineering Geoservices

On-site health, safety & environment issues:

- Risk Assessments & Method Statements (RAMS)
- Rig and equipment inspections
- Welfare facilities
- COSHH assessment and management
- First Aid - kit inc. eye wash facilities
- Environmental control - Spill kit
- Provision of utility detection equipment (CAT and Genny) and qualified operator
- Fire safety
- Vehicle access provisions
- Public access / protection of working area
- PPE

Adherence to relevant legislation and guidance:

- | | |
|---|--|
| • HASAW 1974 | • Control of Substances Hazardous to Health Regulations 2002 (COSHH) |
| • Management of Health and Safety Regulations 1999 (MHSR) | • BS EN 16228 2014 |
| • PUWER 1998 | • The Workplace (Health, Safety and Welfare) Regulations 1992 |



Image Credit: BH Drilling Services

Drilling rig safety:

- Daily rig inspections
- Emergency engine stops
- Guarding (rotating parts and hot/cold parts)

Drilling rig compliance:

- Rig and equipment condition
- Compliant data plates and identification for equipment
- Winches / wire ropes (Safe Working Loads, maximum line pulls, correct terminations, correct certifications)
- Lifting equipment (SWL and unique identifier)
- Health and safety signs

Drilling Operations:

- Choosing the right methods and equipment
- Mobilising sufficient resources
- Drilling / boring safely and efficiently
- Logging, sampling and labelling to the standards
- Testing to the standards
- Equipment knowledge
- Backfill and reinstatement to specification

SPT Calibration certification

Training & CPD

Good communication and working practices

General good practice

2.2 AUDIT FINDINGS

BDA Auditors will conduct the audit against specific audit criteria in order to determine audit findings. Audit findings provide factual evidence collected by Auditors to indicate conformity or non-conformity with an aspect of the audit criteria.

Individual audit findings and subsequent reports will include notes on conformity and good practices along with their supporting evidence, opportunities for improvement, and any recommendations to the auditee.

Non-conformities and their supporting audit evidence will be recorded. Non-conformities will be graded depending on the context of the organisation and its risks. This grading will be qualitative (e.g. non-conformity and major non-conformity). They will be reviewed with the auditee in order to obtain acknowledgement that the audit evidence is accurate and that the non-conformities are understood.

Every attempt will be made to resolve any diverging opinions concerning the audit evidence or findings with any unresolved issues recorded in the audit report.

OBSERVATION

DEFINED AS: *An opportunity for improvement or recommendations to the auditee.*

EXAMPLE: *SPT rod straightness being checked and documented.*

MINOR NON-CONFORMITY

DEFINED AS: *A deviation from current standards which if left unrectified could lead to a hazard to the health or safety of personnel or the environment or to a sub-standard quality of work.*

EXAMPLE: *Samples not being stored in line with BS EN ISO 22475.*

MAJOR NON-CONFORMITY

DEFINED AS: *A deviation from the current standards which presents an immediate hazard to the health or safety of personnel or the environment, a potential breach of legal duty and where rectification cannot be immediately achieved.*

EXAMPLE: *Engine emergency stop not working correctly.*

- In these circumstances it is the BDA's right to terminate the audit and inform the project manager and record the findings on the audit report. Non-achievement of audit owing to a major non-conformity cannot be rectified at a later date, it must be re-assessed when the auditee has resolved the issue.

2.3 AUDIT REMIT

All Audits will be carried out and any subsequent non-conformances will be noted according to adherence with the latest and current list of Standards, Guidance, Legislation and Regulations provided here.

HEALTH & SAFETY

- First Aid at Work Regulations
- Health and Safety at Work Act
- UK Specification for Ground Investigation (Yellow Book)
- Health and Safety Executive Guidance Number 47 (HSG47) Avoiding Danger from Underground Services
- Construction Design and Management Regulations (CDM)
- The Provision and Use of Work Equipment Regulations (PUWER)
- The Workplace (Health, Safety and Welfare) Regulations
- The Management of Health and Safety at Work Regulations
- The Control of Substances Hazardous to Health Regulations (COSHH)
- The Working at Height Regulations
- Personal Protective Equipment at Work Regulations
- The Regulatory Reform (Fire Safety) Order (England & Wales) or Fire (Scotland) Act

TECHNICAL

- BS 5930 - Code of practice for ground investigations
- BS EN ISO 22475 – Sampling methods and groundwater measurements
- BS 22475-2 - Qualification criteria for enterprises and personnel
- BS 22475-3 - Conformity assessment of enterprises and personnel by third party
- BS EN ISO 14688 – Identification and classification of soil
- BS EN ISO 14689 - Identification and classification of rock
- BS EN 16228-1:2014 - Drilling and foundation equipment — Safety Part 1: Common requirements
- BS EN 16228-1:2014 - Drilling and foundation equipment — Safety Part 2: Mobile drill rigs for civil and geo-technical engineering, quarrying and mining
- BS EN ISO 22476 - Field testing
- BS EN ISO 22282 – Geohydraulic testing
- BS EN ISO 18674 – Geotechnical monitoring by field instrumentation

2.4 CSCS CARDS

Thanks to partnership with MPQC for accreditation purposes, the BDA Audit team are also now permitted to administer CSCS card assessments on behalf of MPQC. This means if you don't have a valid CSCS card, or you have an operative whose card has expired, they can now take a touch-screen CSCS test before their audit takes place.

If they pass this test, the audit card will be endorsed with achievement on passing. There is no extra cost for this and is a free benefit of being a BDA Member and undertaking an annual BDA Audit. However, you will need to opt in to this service when completing the application forms.



Image Credit: BH Drilling Services

WHERE?

3.1 LOCATION

BDA Audits can be carried out on any working site across the UK & Ireland, provided that access to the site is not in contravention with any contracts entered into by the Contractor being Audited and their Client.



WHEN?

4.1 AUDIT PROCESS

1. Pre-Audit

- A company decides it needs its drilling teams to be Audited
- After collecting all relevant paperwork and certifications (Front & Back of VQ Certificate, Front & Back of CSCS Card and Emergency First Aid at Work Certificate), a representative from the company fills in the online registration form or contacts the BDA Audit Management office to organise multiple Audits
- During registration, applicants are offered the opportunity to obtain a BDA audit card endorsed with the CSCS confirmation of CSCS health and safety test achievement.
- On completion of the registration form, the representative either uses a credit card to pay for the Audit(s) immediately, or arranges for other immediate payment
- The BDA Audit office ensures all pre-Audit paperwork is present and sufficient
- Once all paperwork is received and payment has been processed, the BDA Audit office confirms the location of the Auditee's next working site
- The Audit is assigned
- The assigned Auditor will contact the Auditee or Employer directly to arrange a time and date that the Audit will be completed
- The Auditor will contact the Auditee immediately prior to the audit to request any additional details regarding access to site, special requirements i.e. PPE, time and site inductions

2. Audit

- The Auditor arrives on site and offers the opportunity to undergo the CSCS health and safety test, before commencing with the BDA Audit
- If any deviations from industry good practice are identified, they are shared with the Auditee and noted as observations by the Auditor within the report
- If any non-conformities have been identified, they are shared with the Auditee and discussed immediately. If required, the Auditor will then agree with the Auditee the timescale within which the non-conformities will need to be rectified
- If a major non-conformity is identified during the audit the Auditor will raise this immediately with the Auditee and, if necessary, their Employer and the report is marked 'NOT ACHIEVED'
- *Note: A number of questions asked during the audit are for BDA information-gathering purposes only and do not effect the audit outcome.*

3. Post-Audit

- Where non-conformities have been identified for rectification, the Auditor shall ensure that all required evidence has been collected to close out the non-conformities
- The Auditee and/or their Employer must provide evidence to the Auditor as proof that the non-conformities have been rectified in the previously agreed and specified timescale (no more than 21 days from point of Audit)
- If non-conformities are not rectified and supporting evidence provided to the Auditor within the agreed timescale, the audit is marked as 'NOT ACHIEVED'
- If evidence of rectification is received, the Auditor will close out the non-conformities within the Audit Report and mark it as 'ACHIEVED – Subject to Quality Assurance' and submit to the BDA Audit Manager for Quality Assurance
- The BDA Audit Manager has seven days to complete Quality Assurance before the report is formally presented to the Auditee and employer
- If the Auditee has achieved audited status then a completed copy of the Audit Report will be sent to the Auditee and Employer along with a .JPEG copy of the Auditee's Audit Card
- The Auditee will then receive an email/SMS notification prompting them to download the Cardskipper App to their smartphone which will display their official BDA Audit Card
- If the Auditee has not achieved audited status then a completed copy of the Audit Report identifying the non-conformities will be sent to the Auditee and Employer. Once these non-conformances are corrected, the Auditee will be invited to start the Audit process again

Audit Report

The official Audit Report formatting will follow the internationally recognised RAG system to identify the findings of the audit. The audit report will contain all of the below:

- If identified: A list of Auditor observations concerning deviations from industry recognised good practice. The BDA would expect that actions would be taken to improve on all auditor observations ahead of any future, repeat audits. These observations will be identified in **GREEN**.
- If identified: A list of all minor non-conformances. These non-conformances are deemed to not be an immediate health and safety risk, however are deviations from established industry Standards, Guidance, Legislation and Regulations. These non-conformances will be identified in **AMBER**. Some minor-non-conformities will be required to be rectified prior to audited status being granted; if this is the case, the auditee will be notified and the non-conformity will be listed at the end of the report. Some minor non-conformities are deviations from standards, however cannot be rectified post-audit and thus will remain on the audit report.
- If identified: A list of all major non-conformances. Major non-conformances are deviations from established industry Standards, Guidance, Legislation and Regulations which either pose an immediate health and safety hazard, or, in certain scenarios, compromise the technical accuracy of the drilling operation. These non-conformances will be identified in **RED**.
- Photographic evidence to support all findings from the audit

OBSERVATION

MINOR

MAJOR



4.2 QUALITY ASSURANCE

The purpose of the Quality Assurance provided by the BDA Audit Manager is to ensure all BDA Audits are carried out to the same specification and standard. The BDA Audit Manager cannot alter the result of an Audit without consultation and agreement with the Auditor, however, they can request additional evidence and information from the Auditee/Employer to support the Auditor.

On 1st May 2021, the BDA Audit was accredited by the Mineral Products Qualification Council. Following the awarding of the accreditation, the assessment and quality assurance of the audit is now externally verified by an industry-recognised training and assessment body, bringing the audit fully in line with ISO 9001.

The BDA Audit also provides a robust annual competency assessment, as outlined in BS EN 22475-2.



4.3 BDA AUDIT CARD

As of 1st July 2020, the BDA will no longer issue physical Audit cards and will instead issue an e-card (digital card), alongside a watermarked digital image copy for office use.

Developed in partnership with Swedish digital communication experts, Cardskipper, the e-card system creates a secure environment for the Auditee's data and allows for greatly improved control, management and communication between the BDA and individual Auditees, whilst also reducing the environmental impact associated with the creation and use of plastic cards.

This cutting edge digital system will provide each Auditee with their own Audit e-card which can be downloaded direct to their smart device via the free, secure Cardskipper app. The app is free to download from Apple and Android stores and offers additional communication features between the BDA, BDA Audit Management and the Auditee, such as sending Safety Alerts, industry related news, standards updates, renewal reminders and any changes to BDA Audit content.



DELIVERING THE BDA AUDIT CARDS IN PARTNERSHIP WITH



WHY?

5.1 TIMELINE

In 1992 the British Drilling Association (BDA) introduced an accreditation to assess competence of all member land drilling operatives against industry standards and regulations. The development of this accreditation and it's successor, the BDA Audit, can be marked against time:

1995

BS EN 791:1995 Drill rigs. Safety – the original standard for drill rig safety is published.

1998

Provision Use of Work Equipment Regulations (PUWER) and Lifting Operations & Lifting Equipment Regulations (LOLER) are published providing the requirement for safe, suitable and routinely inspected work equipment; protection against dangerous moving, & temperature affected parts.

2000

Vocational Qualification (VQ) in Land Drilling is introduced to demonstrate competence under assessment.

2006

BDA Audit officially replaces BDA Accreditation.

2007

The Construction (Design and Management) Regulations 2007 are published, outlining that "Employees are expected to have the appropriate qualifications and experience for the assigned tasks".

2011

British Standard 22475:2011 Parts II and III stipulate qualification and audit criteria for enterprises and personnel working in the ground investigation and testing industry.

2012

Institute of Civil Engineers (ICE) publishes the Second Edition of the UK Specification for Ground Investigation (Yellow Book). This industry specification states the requirement for operatives to be adequately trained and and third-party audited in order to demonstrate competence.

2014

BS EN 16228 - Drilling & foundation equipment safety supersedes BS EN 791:1995 taking into consideration current state of the art knowledge of drilling machines and their safety performance from a manufacturer and operator perspective and the respective requirement.

2015

Construction (Design and Management) Regulations 2015 (CDM, 2015) are released, reinforcing the expectation of employees to have the appropriate qualifications and experience for the assigned task.

2015

BDA Audit is digitalised and updated to reflect changing legislation. Audits are now completed via tablet computers.

2020

BDA Audit adds independent management and Quality Assurance to improve standard of Auditing and ensure consistency.

2021

BDA Audit is awarded third-party accreditation by industry awarding body, the Mineral Products Qualification Council (MPQC).

5.2 ORIGINS OF BDA AUDIT

- In 1974 the Health & Safety at Work Act (HASAWA) legislated all people carrying out work must be trained to carry out their role. This was further enforced by CDM, 2007 "Employees are expected to have the appropriate qualifications and experience for the assigned tasks" and reiterated in the 2015 version.

Employers must demonstrate their workforce satisfy this legal demand at all times.

- In 2000, Vocational Qualifications (VQs) in Land Drilling were introduced to create a minimum standard for which drilling operatives could be trained and assessed against across the spectrum of near shore and off-shore construction drilling disciplines.

This award is recognised as the minimum standard of training by the BDA and is promoted through specification by clients and contractors as the only method to demonstrate competence.

- The BDA Audit contributes to the demonstration of compliance with BS 22475 Parts 2 and 3, the Yellow Book and CDM, 2015 and was developed to improve on the successful raising of the safety bar created during the BDA Accreditation scheme, simultaneously introducing ongoing competence post-VQs.

5.3 SUMMARY

- If anything goes wrong during, or as a result of, the works involved in a project (injury, engineering failure, inaccurate/poor data, fatality etc), competence of all those involved will be questioned by either HSE, the police or a judge.
- If Employers or Clients cannot prove that the people employed to carry out work are competent carry out the job, they now become liable.
- Failure to demonstrate this fundamental requirement can result in a personal prosecution to the worker, the employer or both together. With potential unlimited fines and maximum custodial sentences available to the most severe of breaches, protection against the direct and indirect implications is paramount.
- The BDA Audit offers a third party, independent assurance to assist demonstration of legal obligations and compliance with industry standards, guidance and good practice.
- The BDA Audit is the only competence scheme which enables clients, consultants and contractors to comply with BS 22475 Parts 2 and 3.



Image Credit: Eijkelkamp Fraste

APPEALS & COMPLAINTS

6.1 APPEALS

An appeal is defined as either:

- An appeal against a decision made by the BDA Audit Management or a BDA Auditor regarding the acceptance of an Auditee's evidence/results of an Audit, either as part of an external verification function or an external examination function. (In this instance an appeal will not necessarily involve re-assessing the evidence), or
- An appeal against a decision regarding reasonable adjustments and special considerations, or
- An appeal against decisions relating to any action to be taken against an Auditee or a BDA Auditor following an investigation into malpractice or maladministration.

Auditees/Employers wishing to implement the appeals procedure should first discuss the case with the BDA Auditor who carried out the initial Audit. The BDA Audit Manager will endeavour to resolve the matter to the mutual satisfaction of the candidate, the Auditor, and the BDA.

Appeals must be made in writing and sent to BDA Audit Management within seven working days.

Should the Auditee/Employer not be satisfied with the outcome, they must appeal in writing to the Appeals Panel of the BDA Audit within seven working days of receiving the decision.

The Appeals Panel

The Appeals Panel will include:

- BDA Audit Manager
- Chair of the BDA
- Chair of the BDA Safety Committee
- Chair of the BDA Technical Committee
- A non-involved BDA Auditor

The Appeals Panel will consider the appeal and will inform the Auditee/Employer of the decision within 28 working days.



Image Credit: Eijkelkamp Fraste

6.2 COMPLAINTS

Complaints may include, for example:

- Conversations/communication with BDA Auditors or Management which do not meet your expectations
- Poor/difficult relationships with the Auditor or Audit Manager, affecting Audit delivery or assessment
- Incorrect or confusing communication or advice

Complaints should not include any assessment/accreditation issues

How to submit a complaint?

Complaints may be submitted by email, telephone or letter. However, should your complaint involve a third party which the BDA works with, the BDA Audit Management will ask you to ensure the complaint is made as a written complaint and your details may be disclosed to the third party as part its investigation process. The BDA Audit Management will not investigate complaints involving a third party without this process being understood and adhered to.

Escalation of Complaint

If the Complainant is still dissatisfied following the decision of the BDA Audit Management they can also refer the complaint to the appropriate regulatory authority e.g. Ofqual or SQA.

To view the full BDA Audit Complaints Procedure, please contact the BDA Audit Office directly.

WITH THANKS TO

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Image Contributions

- Archway Engineering
- BH Drilling Services
- Eijkelkamp Fraste
- Equipe Group
- Soil Engineering Geoservices
- WJ Groundwater

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- BDA Chair - Richard Fielden
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- BDA Technical and Standards Chair - Mark Toye
- BDA Marketing - Debbie Darling
- BDA Auditors - Lee Allardyce, Philip Dainton, Andrew Frogley
- BDA Audit Management & Administration - Calum Spires, Keith Spires
- Other Technical Contributions - Julian Lovell

BDA Audit Handbook

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Updates to:

- 4.1: Audit Process
 - Colour coding system
 - 'Information only' questions



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