

# **SIGNIFICANCE OF CONSTRUCTION CONTRACT AUDITING FOR ENHANCED INTEGRITY ON LARGE INFRASTRUCTURE PROJECTS**

**PRESENTED AT NIQS NATIONAL WORKSHOP WITH THE THEME:  
INNOVATIVE SUSTAINABLE CONSTRUCTION PRACTICES: Building  
a Resilient, Cost-based, and Knowledge Driven Industry with Integrity**

**BY**

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## **Abstract**

The deliverables of construction projects in terms scope, cost, quality, time and other variables are set from the inception and these deliverables are expected to be achieved through the stages of planning, pre-construction, project construction and commissioning. On completion of the projects most times, there are no assessment of the conformity of the finished project with the set cardinal objectives. This paper explores the construction contract auditing processes and examines the role of construction contract auditing in promoting integrity, transparency and accountability on large infrastructure projects. This paper also provides valuable insights into the challenges of construction contract auditing practices towards building integrity and sustainable construction practices in the industry.

Keywords: Construction, Contract, Auditing

## **Introduction**

The construction industry is a critical sector that plays a vital role in the growth and development of economies worldwide contributing up to 10% of the gross domestic product (GDP). However, the industry is faced with several challenges, including environmental degradation, rising costs, and a lack of transparency and accountability in project delivery. As a result, there is a growing need for innovative and sustainable construction practices that can address these challenges and ensure the industry's long-term viability.

According to recent authors, innovative and sustainable construction practices are essential in improving the industry's sustainability, reducing its environmental impact, and enhancing efficiency, safety, and quality. These practices involve the use of advanced technologies, materials, and methods that are environmentally friendly, cost-effective, and socially responsible. They require a shift from traditional construction methods to a more knowledge-driven approach that emphasizes collaboration, innovation, and continuous improvement.

However, achieving innovative and sustainable construction practices requires a commitment to integrity and transparency in project delivery. The construction industry is susceptible to fraudulent activities, and it is essential to ensure that project costs are reasonable and necessary. One critical aspect of promoting integrity in construction projects is through construction contract auditing. Auditing helps to detect and prevent fraudulent activities, promote compliance with regulations, and ensure that resources are used effectively and efficiently.

The goal and objectives of a project is set from the inception through the planning stage, pre-contract stage. Setting the stage for the execution of the contract based on the outlined principles but many a times there is no assessment of the conformity of the finished project with the cardinal objectives in terms of scope, cost, time, quality, etc, hence the need for construction contract auditing to be enshrined and advocated as a mandatory requirement of construction projects in Nigeria.

The purpose of this paper is to explore the significance of construction contract auditing for enhanced integrity on large infrastructure projects and how best to ensure that completed projects meet the stated objectives.

## **Construction Contract Auditing**

The keywords in the topic of our discussion are:

- Construction
- Contract
- Auditing

### Construction:

This can be viewed from three levels (i) as an economic activity that involves the entire process of producing raw and manufactured building material and components, (ii) providing professional services such as design and project management (iii) executing the physical work on site.

### Contract:

An agreement between two or more parties which creates reciprocal legal obligations to do or not do a particular thing. Contract define legal obligation of the parties and the conditions guiding the performance or otherwise and the consideration for such an act.

### Auditing:

The verification of activities such as inspection or examination of a process or quality system to ensure compliance to set requirements An audit is a planned and documented activity by qualified personnel to determine by investigation, examinations or evaluations of objectives evidence, the adequacy and compliance with established procedures, or applicable documents and effectiveness of implementation (Cai, Kandil, Hastak, & Dunston, 2012).

An audit can apply to an entire organisation or project or might be specific to a function, process or production step. Auditing is prominent function in the field of accounting. By statute, audit is a mandatory exercise in running of certain organisation (audited accounts of corporate bodies) usually carried out by an independent body/organisation.

### **Overview of Construction Contract Audit (CCA):**

Construction auditing is an objective forensic accounting, financial, performance and technical exercise, conducted on a construction project aimed at ascertaining and evaluating the evidence of assertions on economic, professional actions and events on the project and its stakeholders (Agu, 2022).

Construction contract audit is an independent examination of a construction vendor to determine whether they comply with the terms of the contract, to evaluate the adequacy of internal controls over the construction project, to verify the propriety of the amounts paid for the project.

CCA essentially comprises of contract review and cost auditing. It is a careful ordering of fact derived from relevant project contract documents, comprising drawings, specifications, bills of quantities, schedule of rates, condition of contract, claims, estimates, cost projections and relevant correspondence relating to events that transpired during the currency of the contract in such a manner tells the proper story of the state of affairs of the contractual relationship at the point of study.

CCA is not only interested in the detection of errors and fraud but also in the provision of improvement recommendation for the project management team in the management of resources. CCA provides an opportunity to uncover issues, concerns and challenges encountered during the project lifecycle (Usman & Sani, 2015).

The general purpose is to ascertain fair administration of projects cost and to identify lessons learnt that can help improve the performance of future projects by undertaken a forensic review to uncover problems to be avoided. Construction contract audit is highly beneficial to project round table and provides an outcome that will increase the likelihood of future projects being managed successfully (Michael, 2014 in Nwiboko. et. al, 2022).

Construction contract auditing is an essential process in the construction industry that ensures compliance with the terms and conditions of the contract. It involves a detailed independent review of construction contracts to identify and mitigate risks associated with the construction project. The essence of construction contract auditing also include ensuring that the projects are completed within budget and on time, and prevent disputes between parties.

The role of construction contract audit is of paramount importance in construction activities. It serves as a means of ascertaining hoe financial transaction of the contract is being handled by the parties to the contract (Anyawata & Oke, 2023). The purpose is to assist in achieving prudent contracting by providing those responsible for project procurement with financial information and advice relating to contractual matters and the effectiveness, efficiency, and economy of contractors' operations.

Frequent news reports about cost overruns and delays on large construction projects fuel concerns for more accountability and increased scrutiny of construction contract spending. World over, every year corporate and government audit teams review hundreds of billions of dollars in spending, identify billion of dollar of potential audit issues and recover millions of dollars in contract overpayment on individual projects (KPMG, 2011).

### **Classification of Audit**

Audit can be classified majorly into two:

1. Internal Audit, and
2. External Audit

#### **Internal Audit:**

This is a review or appraisal carried out by an organisation on its activities vis-à-vis the technical, financial, management and other operational processes as basis for early detection of anomalies

that might affect the organisation output and ensuring that requisite standards are kept through the process.

#### External Audit:

This is an independent review or appraisal carried out by a qualified external body to organisation either as statutory requirement or appointed specifically for the exercise. The External Auditor reviews the operations of the organisation to determine the level of compliance and appropriateness of the delivered construction project in terms of scope coverage, cost spent, quality standards and other key criteria.

#### **Benefits of Construction Contract Auditing**

1. Stronger contractor – owner relationship
2. Averted penalties
3. Early identification of potential compliance issues
4. Improved safety
5. Fraud deterrence
6. Tamm risks, cost and delays
7. Identification of areas of process improvement
8. Good publicity in the market place

#### **Auditing Elements Inherent in QS Services**

A Quantity Surveyor by default is a trained auditor though there is need to acquire more skills and competences to meet up with the requirements. By discharging our functions as QS we carry out audit in the followings aspects:

- i. Error checks in estimates, bills of quantities, schedules, etc
- ii. Interim valuation and payment certificate
- iii. Financial report and accounts reconciliation
- iv. Contractor/Subcontractors/Suppliers selection
- v. Final account report

A comprehensive construction contract audit is a multi disciplinary task requiring expertise in different fields. A construction auditor is a person who possesses the requisite skills, knowledge, and experience to perform audits of construction activities and assess compliance with the requirements founded in the construction contract. A construction auditor performs construction contract compliance audits based on an understanding of the construction process, the construction contract, and the relationship between them.

## **Types of Auditing in the Construction Industry**

### **a) Financial/Cost Auditing:**

Financial audits include financial statement and finance-related audits. This is undertaken to verify and establish the justifiability or not of contract rates and contract sums, payments, claims and cost estimates of construction works in line with contract conditions and best construction practices (Awolesi & Musa, 2011). It involves diligent examination of all financial transactions and documents.

Financial audit seek to protect the public against fraud, careless or extravagance in the use of public and private resources in the execution of the project. During a financial review, financial reports are examined to ascertain whether reports agree with actual cost incurred, payment application and certificates processing conform to established procedures and that internal procedure have been adhere to.

### **b) Performance Auditing**

This provides an independent assessment of performance, with the purpose of determining how well established goals and objectives are being achieved and with the additional objective of identifying opportunities for improvement. Performance audits may include functional audits for economy and efficiency, evaluating the planning process, space use, staffing and established procedures.

A performance audit for a construction program will typically combine an in-depth review of expenditures with an analysis of compliance with applicable laws and funding requirements, and may also include an examination of the program management plan and its effectiveness as practiced.

### **c) Technical Auditing**

Technical auditing involves the logical evaluation of construction works based on a stated goal to establish whether all the necessary anticipated attributes, design variables and user parameters have been followed or fully complied with as planned. It involves the verification of contract documentations and existing project features evidence.

The results are often an opinion based on persuasive evidence within and outside the project environment. It will usually depend on the availability of pre-contract, construction and post construction contract documentations. Hudson & Feng (2010) suggest that the professional technical auditor in the case of a construction project should have and attain an independent status, free from investigation and reporting constraints to produce results that will benefit stakeholders in a convincing manner

#### d) Environmental Sustainability Auditing

Environmental sustainability auditing is an accounting of the quantifiable environmental factors that will be incurred in the production and use of a building. It is usually carried out to ascertain the eco-friendly dimensions of the construction design factors, variables and decisions (Rousseau, et. al, 2017). Such audit must include the energy and no energy supply and consumption related factors of the existing buildings and their occupants.

A conscious attempt must be made to reduce emissions of carbon oxides, oxides of sulphur, air, water and solid waste, impacts of material processing, handling, depletion of limited reserves of non-renewable within the building environment. Other dimensions of environmental sustainability audit include the minimization of damage to terrestrial and aquatic habitats, production of hazardous wastes with long term consequences on construction project activities among others (Gray, 2000).

#### e) Health and Safety Auditing

It is paramount in the face of the current high records of accident and injuries in the construction industry. There seems to be a lack of regards to health and safety issues at both organizational and project levels. The above has painted a gloomy picture concerning its safety record as regards the industry. Despite the fact that prior studies have contributed significantly to both safety performance and evaluation techniques such as accident rate, incidence rate among others, there is still the need for more innovative and scientific techniques to manage and measure the health and safety dynamics of the construction industry (Agu, 2022). It is important to incorporate health and safety audit as part of the construction project management function. This must start from the project inception to completion and its usability stages.

### **Processes of Construction Contract Auditing**

Construction contract auditing involves the review and evaluation of construction contracts to ensure compliance with contract terms and specifications. With regards to innovative and sustainable construction practices, construction contract auditing can help to ensure that sustainable practices are being implemented and that the project is being executed in an environmentally friendly manner. Some of the key processes of construction contract auditing with regards to innovative and sustainable construction practices, include,

#### Review of Project Documents:

All the document that formed the basis of the construction contract (drawings, schedules, specifications, bills of quantities, conditions of contract, articles of agreement, etc) need to be reviewed for proper understanding of the provisions, the intent and expected deliverables of the project.

#### Site Visit:

The project site where the construction was or is being carried out depending on the time of the audit, need to be visited for on the spot assessment of what have been done and to what standards they were done.

#### Submission of Documents by Parties:

The parties (client, consultants, contractor, sub contractors, suppliers, etc) involved in the construction project will be requested to make submissions of documents that will guide the audit team to understand their levels of involvement in the work.

#### Interview of Parties:

Interview of the parties will future give credence to the audit action by availing all the stakeholders opportunity for fair hearing, clear all doubts and to buttress their submissions.

#### Tracking Project Costs:

Construction contract auditing can also involve tracking project costs to ensure that the project is being executed within budget and the processes leading to payments approval are in compliance with the contract conditions. This can help to ensure that resources are being used efficiently and effectively.

#### Assess the Quality of Constructed Project:

Evidences abound where constructed facilities failed integrity test though standing physically on site. This can involve monitoring quality control systems deployed during the execution of the project, carrying out tests on the finished product, etc to ensure compliance to specifications and quality standards.

#### Monitoring Compliance with Sustainability Requirements:

Construction contract auditing can involve monitoring compliance with sustainability requirements, such as LEED certification or compliance with local environmental regulations. This can help to ensure that the project is being executed in an environmentally responsible manner.

### **Significance of Construction Contract Audits in Nigeria Construction Industry**

Contracting auditing practice must aim at discovering the effect of the actions and events on the project and collaborating the results to interested stakeholders. It is a means to create awareness, develop skills, integrate knowledge, upgrade the technicality, increase profitability, productivity and improve an organization working environment. The adoption and practice of contract auditing offer some benefits to the Nigerian construction industry in many fronts:

- Client organizations that institute contract auditing as part of their project management function could recoup and avoid overcharges on their construction project. It will also help them and the industry develop a control system to save cost on future projects in the country.
- The practice of contract auditing will give additional financial and management control over the client and in the case of Nigeria, because it is an independent third party review of the construction process, it will give project investors and donors as it pertains to government projects an assurance that their money is being used wisely.
- The early involvement of technical auditors on a construction project will yield some savings than involving them at contract close-out stages. It will also help both client and main contractor determine their risk and rights under the contract
- The practice of contract auditing will also ensure accountability, thereby providing stakeholders with a means to trace construction and activities of professionals in the Nigerian construction industry. Accountability in the context of construction depends on the proper identification, authentication and assessment of well-established benchmarks within a construction environment.
- It will be of immense benefit if the content and environment of construction is audited to ensure all the necessary design and end-user dimension variables are met.
- Construction contract auditing is a critical process that plays a vital role in promoting integrity and transparency in project delivery.
- The auditing process involves reviewing and verifying construction contracts to ensure that they comply with relevant laws and regulations, project specifications, contract conditions and industry standards.
- The contract auditing plays an important role in identifying areas of improvement and preventing disputes between parties, resulting in significant cost savings. According to Odeyinka et al. (2020), contract auditing helps to identify and prevent contract breaches, which can lead to costly disputes and delays.
- Auditors review the construction contract to ensure that all parties involved in the project have complied with their obligations, including payment terms, work scope, and timelines.
- Another role of contract auditing is to promote transparency in project delivery. Auditors review the financial records of the construction project to ensure that all expenses are properly documented and accounted for.

- Contract auditing helps to prevent fraud and corruption in construction projects by ensuring that all financial transactions are transparent and accountable. It also helps to ensure that there is no mismanagement of funds, which can lead to cost overruns and delays (Chileshe et al. 2018).
- Contract auditing also plays a vital role in promoting quality in construction projects. Auditors review the construction contract to ensure that all materials used in the project meet the required quality standards thereby increasing the safety of the constructed project.
- Construction contract auditing in improving the efficiency and effectiveness of construction projects (Al-Yami et al. 2021).

### **Bottlenecks to the Practice of Construction Contract Auditing**

Despite the benefits of construction contract auditing for the sector, a number of challenges prevent the adoption and application of contracting audit practice.

- One of the major difficulties facing Nigerian auditing practice includes fighting the epidemic of fraudulent activities and corruption in the public sector.
- A significant threat to the practice of construction contract auditing was posed by excessive political meddling, a lack of political will to enforce contract auditing results, and other legal and necessary actions to assure project execution.
- Eboh (2019), the office of the accountant general of the federation, said in a statement that one of the biggest difficulties facing Nigeria's auditing practice is the lack of an Act or legislation that would improve auditing efficiency and effectiveness.
- A lack of accountability among stakeholders, such as architects who frequently issue variation orders without review, also contributes to the frequent reworks that occur on building projects.
- Lack of desire on the part of project stakeholders to provide all the data required to support the auditing process, and dedication to construction contract audit and its practice is uninspiring (Nalewaik, 2007).
- The practice of construction audits is hampered by a lack of resource commitment. The cost implications of carrying out audit of the construction contract is another challenge

associated with the adoption of sustainable construction audit practices as it is seen as increasing the cost of the development project.

- Lack of auditors or auditors who are knowledgeable about construction projects and the auditing environment (Sohail, M. and Cavill S., 2008; Nalewaik 2007). The practice of contract auditing is significantly impacted by a scarcity of experts and skilled auditors, according to Bondinuba et al. (2017).
- One of the primary challenges faced in implementing innovative and sustainable construction audit practices is the lack of awareness and knowledge about these practices (Ekanyake et al. 2019). Without an awareness of the contract terms and circumstances, Goldberg (2010) added that it is typically challenging to identify areas of potential exposure when performing a construction audit. Rarely are audit reports for construction projects created.
- Poor or insufficient use of relevant and current technology by audit institutions,
- Lack of managerial capacity, and financial autonomy.

#### **CASES:**

- i. 10 – Storey Trade Center Building, Abakaliki
- ii. Ebonyi International Market Development

#### **Conclusion**

Construction contract auditing is essential for promoting transparency, accountability, and integrity in project delivery. Auditing helps to detect and prevent fraudulent activities, promote compliance with regulations, and ensure that resources are used effectively and efficiently.

The benefits construction contract auditing will bring to bear on the construction industry in Nigeria cannot be overemphasized in terms of ensuring that the goals and objectives set out are actualized, procedures followed, quality attained, value for money achieved, all within the time frame allocated for the project. These deliverables will not only boost the economy of the industry but also ensure transparency, accountability and integrity of the construction industry.

The knowledge that independent audit exercise will take place on a project will further make project stakeholders to be conscious of their dealings, and this will invariably rescue the industry from the menace of collapsed building ravaging our nation today.

## Recommendations

1. Public Procurement Act be amended to make construction contract audit a mandatory requirement for all construction projects.
2. Auditing should be conducted intermittently throughout the project lifecycle to identify and prevent potential breaches and non-compliance issues. Not only during project close out.
3. Auditing processes should be standardized to ensure consistency and comparability of audit results across different projects and organizations. This will help to promote transparency and accountability in project delivery.
4. Advocacy and stakeholders' engagement on the need for construction contract auditing.

## References

- Agu, N. N. (2022). An assessment of contract auditing techniques of construction projects in Anambra State, Nigeria. *IOSR Journal of Mechanical and Civil Engineering*, 19(2), 16-22. doi: 10.9790/1684-1902041622
- Akinade, O. O., Oyedele, L. O., Bilal, M., Ajayi, S. O., Alaka, H. A., Owolabi, H. A., & Ahmed, A. (2019). Public-private partnership projects and construction contract auditing practice in Nigeria. *Journal of Financial Management of Property and Construction*, 24(1), 30-45. <https://doi.org/10.1108/JFMPC-08-2018-0040>
- Al-Yami, A. M., Alreshidi, N. M., & Alqhtani, S. (2021). Construction contract audit: a way to enhance the efficiency and effectiveness of construction projects. *Journal of Construction Engineering and Management*, 147(6), 04021027. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0002004](https://doi.org/10.1061/(ASCE)CO.1943-7862.0002004)
- Anyawata, C.H., & Oke A. A (2023). Effects of non-adoption of contract auditing on construction projects delivery in Port Harcourt, River State. *Proceedings of FIG Working Week, Orlando, Florida USA*
- Awolesi, J.A. and Musa, N.A (2011). Contract auditing and value management towards achieving client's satisfaction and public accountability. Being a paper delivered at a three-day National Workshop Organised by NIQS at Kwara Hotels, Ilorin, Nigeria.
- Baroudi, B., Le, T. T., & Lin, J. (2021). Construction contract auditing in claims management: A theoretical perspective. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 13(2), 04521002. [https://doi.org/10.1061/\(ASCE\)LA.1943-4170.0000481](https://doi.org/10.1061/(ASCE)LA.1943-4170.0000481)
- Bondinuba, F.K., Nansie, A., Dadzie, J., Djokoto, S.D., and Sadique, M.A. (2017). Construction Audits Practice in Ghana: A Review. *Journal of Civil Engineering and Architecture Research*, 4 (1), 1859-1872..

- Cai, H., Kandil, A. Hastak, M., & Dunston, P (2012). Construction Research Congress 2012: American Society of Civil Engineers.
- Chileshe, N., Rameezdeen, R., & Hosseini, M. R. (2018). Construction contract auditing in developing countries: A review of literature. *Journal of Engineering, Design and Technology*, 16(4), 499-520.
- Eboh M. (2019). Auditor-General bemoans challenges to autonomy, effective auditing in Nigeria. Vanguard Newspaper, Retrieve from <https://www.vanguardngr.com>.
- Ekanayake, L. L., Liu, A. M. M., & Wijesundara, M. A. J. (2019). The role of contract auditing in ensuring quality in construction projects. *International Journal of Construction Management*, 19(4), 309-318.
- Goldberg M. (2010). Lay the foundation-construction project auditing 101, Association of Healthcare Internal Auditors .
- Gray R. (2000). Current developments and trends in social and environmental auditing, reporting and attestation: A review and comment, *International Journal of Auditing*. 2000, 4 247-268.
- Hudson A. I., X. T. Feng (2010). Technical auditing of rock mechanics modeling and rock engineering design, *International Journal of Rock Mechanics and Mining Sciences* 4(7) 877-866.
- Nalewaik, A. A. (2007). Construction audit-an essential project controls function, *AACE International Transactions*,49,20-24
- Nuruddeen Usman & Abdukadir Sani (2015a). Construction professionals' perceptions on contract auditing system in building projects. *Journal of Multidisciplinary Engineering Science and Technology*, 2(4)
- Nuruddeen Usman & Abdukadir Sani (2015b). An evaluation of contract auditing practice in Nigeria building construction projects. *International Journal of Economics, Commerce and Management*, 3(4).
- Nwiboko E., Agu, N. N., Kanu D. O. & Ekenmoh R. C. (2022). Exploring auditing practices in public construction contracts in Ebonyi State, Nigeria. *Journal of Architecture and Civil Engineering*, 7(11).
- Odeyinka, H. A., Oladapo, A. A., & Holt, G. D. (2020). The role of construction contract auditing in enhancing project performance. *Journal of Construction Engineering and Management*, 146(3), 04019115.
- Sohail, M. and Cavill S. (2008). Accountability to prevent corruption in construction projects, *Journal of Construction Engineering and Management* 1(34) 729-738