

Assessing the Impact of Professional Registration on Ethical Standards among Built Environment Professionals

Ornella Tambwe, Clinton Aigbavboa and Ntsindiso Mphoqo

CIDB Centre for Excellence & Sustainable Construction Management and Leadership in the
Built Environment, Faculty of Engineering and the Built Environment, University of
Johannesburg, South Africa

Abstract

Professional registration is increasingly recognised as a key mechanism for promoting ethical standards among built environment professionals; however, its perceived influence within the sector remains underexplored. This study assessed the perceived impact of professional registration on ethical standards among built environment professionals using a quantitative approach. Data was collected via an e-questionnaire distributed to professionals, including architects, construction project managers, construction managers, engineers, and Quantity Surveyors. Mean item scores (MIS) and standard deviations (SD) were used to analyse the data. The findings indicate strong agreement among respondents on the impact of professional registration on ethical standards. The most highly ranked factors were the granting of formal professional titles and status, the promotion of a binding code of conduct, and the enforcement of disciplinary procedures and sanctions. These findings suggest that professional registration is perceived not only as a form of professional recognition but also as a framework for guiding behaviour and promoting accountability. The study concludes that respondents view professional registration as an important mechanism for supporting ethical standards among built environment professionals. It is therefore recommended that professional councils and regulatory bodies strengthen the enforcement of registration requirements, regularly review codes of conduct, and ensure that disciplinary procedures are effectively implemented within the built environment sector.

Keywords

Professional registration, Ethical standards, Professional accountability, Regulatory oversight.

1. Introduction

According to Killip (2020), the built environment sector is responsible for fostering clients' trust and confidence. Ofori and Ceric (2018) and Obaju et al. (2022) suggested that professional registration may contribute to this objective. This is because professional registration is widely regarded as a mechanism that may support ethical standards and technical competence within the built environment sector, although its effectiveness in practice remains a matter of debate. Pratama et al. (2024) further noted that professional bodies are expected to maintain public trust and the integrity of the profession. However, the extent to which these expectations are met in practice remains insufficiently explored.

Naidoo and Rajcoomar (2020) indicated that professional bodies are not currently fully effective in their operations and need to enhance their performance to provide maximum benefits to members. Obaju, Musa, and Abass (2022) also stressed that formal professional registration processes in the built environment are often challenging and difficult to navigate. According to Owusu et al. (2019), poor professional ethics or the absence of professional registration are common causes of misconduct, which damage credibility and trust. Killip (2020) explained that issues such as fragmentation, poor quality, and inadequate customer service remain persistent challenges in the sector. Ghahari et al. (2024) suggested that these challenges highlight the potential need for stronger regulatory measures, including

professional registration; however, it remains unclear whether such mechanisms consistently translate into improved ethical standards.

Folorunso et al. (2024) examined the influence of Continuing Professional Development among built environment professionals, while Obaju et al. (2022) focused on the challenges associated with attaining full professional registration. Foxell (2025) emphasised the need for stronger governance, accountability, competence, and professional oversight within the sector. However, limited empirical attention has been given to examining the specific impact of professional registration on ethical standards in the built environment. Gwynne-Evans et al. (2021) further observed that even where ethics are prioritised, there is a tendency to emphasise compliance with regulations and codes rather than professional judgement and ethical decision-making processes. From a South African perspective, Mooya (2015) highlighted concerns within the valuation profession, noting that the current situation is considered inadequate, prompting regulatory responses such as increased educational requirements for professional registration by the South African Council for the Property Valuers Profession (SACPVP).

Therefore, this research assesses the perceived impact of professional registration on ethical standards among South African built-environment professionals. Accordingly, the study seeks to answer the following research question: What are the perceived impacts of professional registration on ethical standards among South African built-environment professionals?

2. Impact of Professional Registration on Ethical Standards

According to Lu et al. (2018) and Mackey et al. (2018), ethical codes are written documents that contain standards and require engineers who become aware of violations involving professional conduct regulations to notify a designated authority. Gwynne-Evans et al. (2021) indicated that a deeper understanding of how ethics are addressed in engineering education is necessary to align technical standards, non-technical criteria, and the mandatory code of ethical conduct, which are critical elements in professional practice. These perspectives suggest that professional registration may help shape and reinforce ethical standards, although the extent of its influence in practice remains to be established through further empirical investigation. The following section explores how professional registration may influence ethical standards.

Brauns and Mdlazi (2015) stressed that one of the main ways in which professional registration may influence ethical standards is through a binding code of conduct. This is because codes of conduct and professionalism play a key role in a country's social and economic development and long-term sustainability. Additionally, Menting (2017) pointed out that these codes can address public-interest issues that are often left to the government. Hubert (2021) stated that rules of conduct serve both preventive and remedial purposes, while Jiménez et al. (2021) noted that they provide a moral compass for addressing ethical issues in practice. Baird and Mollen (2023), Lescrauwaet et al. (2022), and Banks (2018) further stressed that these codes develop alongside the profession and help practitioners remain ethically grounded in a changing world. Furthermore, professional registration also relates to the consistent reporting of unethical behaviour and fraud, as well as to the enforcement of disciplinary procedures and sanctions, which is known as whistleblowing. Boluwaji and Osatuyi (2023) transmitted that whistleblowing mechanisms provide a structured way to report wrongdoing and misconduct. Okafor et al. (2020) and Stolowy et al. (2019) indicated that reporting unethical conduct promotes transparency, accountability, reduced fraud, and public confidence. In addition, Hardy (2016) and Scott (2018) stated that disciplinary procedures are among the strongest mechanisms for enforcing ethical behaviour in registered professions. In South Africa, for instance, Gwala and Benxa (2024) put forward that councils such as SACAP, SACQSP, SACPCMP, SACLAP, SACPLAN, SACPVP, and ECSA have the legal authority to investigate ethical misconduct. Foxell (2018) and Nardin et al. (2016) further opined that sanctions, ranging from warnings and fines to suspension or deregistration, discourage unethical behaviour and reassure the public that malpractice can be addressed. However, despite these mechanisms, their effectiveness may depend on the consistency of enforcement and the institutional capacity of professional bodies.

Moreover, Cooper and Barr (2015) stressed that professional registration confers on an individual a recognised title that is legally protected and carries prestige. According to Ranjan (2023), a professional title enables professionals to make informed judgements and apply their skills responsibly, while Zhang (2024) stated that losing such a title can negatively affect both a career and trust in the industry. Chetty et al. (2023), Ihueze et al. (2019), and Ali et al. (2020) all indicated that titles linked to registration promote confidence and trust because registered professionals are regulated. Gurzawska, Mäkinen, and Brey (2017) further showed that the prestige attached to a professional title

creates a self-regulating sphere in which ethical conduct becomes necessary. Besides this, Kwofie et al. (2018) and Wall et al. (2020) explained that professional registration further strengthens ethical standards through ethics training and education, as well as the promotion of continuous professional development (CPD). Roberts (2018) transmitted that those who want to work as architects must be registered and complete accredited education. Mohamad et al. (2015) and Avci (2016) stated that ethics learning should continue throughout a professional's career because it improves ethical understanding, decision-making, and professional behaviour. Kancharla and Dadhich (2021) added that ethics training has long-term benefits such as trust-building and employee commitment. Regarding CPD, Amoah and Steyn (2022) noted that CPD alone may not ensure ethical behaviour, whereas WahYick (2017), Kwofie, Aigbavboa and Mpambela (2018), and Wall et al. (2020) stressed that CPD helps professionals stay current with skills, knowledge, and industry developments. In this perspective, professional registration is associated with fostering ethical standards by supporting lifelong learning and continuous professional development. However, ongoing education and professional recognition do not automatically guarantee ethical conduct in practice.

Additionally, professional registration is also associated with transparent financial practices, regulatory oversight, and legal recognition and enforcement. Ramabodu (2023) and Erkartal and Uzunkaya (2019) added that financial transparency and openness are crucial for accountability and professionalism in the built environment. Trowbridge, Worden, and Pyke (2016), along with Fazli et al. (2017), indicated that built environment projects require financial transparency because they involve large capital flows and infrastructure development. Similarly, Ramabodu (2023), Buha et al. (2025), Yang (2017), and Omollo (2019) put forward that regulatory oversight is vital for ensuring compliance with legal, safety, ethical, and technical standards. Boshoff (2013) also argued that registration provides legal recognition, permission to practise, and legal protection. Professional registration, therefore, situates individuals within a legal and regulatory framework intended to foster ethical behaviour and responsibility, although its effectiveness may differ across contexts. Moreover, research by Iqbal et al. (2019), Grant et al. (2018), and Yap et al. (2018) has mentioned that enhanced leadership within project teams, robust public trust, and the reinforcement of accountability for ethical violations represent further advantages of professional registration. These authors also emphasised that leadership and collaboration among professionals contribute to improved project outcomes and positively affect professional conduct. In line with the studies by Ofori (2022), Sampford et al. (2024), and Six (2018), ethical practice, accountability, and professionalism may strengthen public trust. Akintola (2020), Sun (2023), Maxwell (2017), and Nita et al. (2022) added that accountability mechanisms are essential for addressing ethical breaches, conflicts of interest, and misconduct.

3. Research Methodology

This study employed a quantitative research design to evaluate the impact of professional registration on ethical standards in the South African built environment. A quantitative approach was adopted because it enables the systematic collection and analysis of numerical data from a relatively large sample, allowing measurement of perceptions and comparison across respondents, as explained by Creswell (2014) and Bryman (2012). Moreover, a well-structured questionnaire was used to gather data from professionals across various sectors of the built environment. The targeted population included engineers, construction managers, construction project managers, quantity surveyors, and architects. Additionally, a purposive sampling technique was utilised to ensure the inclusion of respondents with relevant experience and knowledge of professional registration and ethical standards. A total of 100 questionnaires were distributed, and 81 valid responses were received, yielding a response rate of 81%. Furthermore, the questionnaire collected both closed-ended and Likert-scale responses and was divided into two main sections: demographic and institutional background, and the perceived impact of professional registration on ethical standards. The demographic and institutional background section captured respondents' professions, years of experience in the built environment, and educational qualifications, providing context for interpreting the findings. The above-described questionnaire instrument was pilot-tested with five professionals to assess clarity, relevance, and reliability. The collected data were analysed using the mean item score (MIS) and standard deviation to identify the most influential perceived factors.

4. Results and Discussion

4.1 Demographic Results

Among the collected data on participants' highest educational qualifications, the most common qualification was a bachelor's degree, with 43.8% of respondents indicating it as their highest level of education. This was closely followed by the Honours Degree at 30%. Additionally, 5% of the individuals surveyed held a master's degree as their top qualification, while 21.3% had a post-matric qualification. Regarding professional affiliation, Quantity Surveyors

emerged as the predominant profession, claimed by 52.5% of respondents. Construction Managers accounted for 12.5%, construction project managers for 10%, engineers for 15.7%, and Architects for 7.5%. Furthermore, evaluating participants' years of professional experience, the data revealed a range of durations. In terms of years of experience, 7.5% had more than 15 years, 8.8% had between 11 and 15 years, and 12.5% had between 6 and 10 years. At the lower end, 42.5% had 0-5 years of experience, while 28.7% had less than 12 months. This shows that all participants were deemed fit to provide reliable responses to the questionnaire.

4.2 Mean Item Score and Standard deviation of the impact of professional registration on Ethical Standards

Table 1 shows the respondents' ranking of the impact of professional registration on ethical standards. The results indicate that 'Granting of Formal Professional Title and Status' was ranked first, with a Mean Item Score (MIS) of 4.35 and a Standard Deviation (SD) of 0.911; 'Binding Code of Conduct for Professionals' was ranked second, with a MIS of 4.23 and an SD of 0.912. 'Enforced Disciplinary Procedures and Sanctions' was ranked third, with a MIS of 4.22 and an SD of 0.894. 'Promotion of Continuous Professional Development (CPD)' was ranked fourth, with a MIS of 4.21 and an SD of 1.009. Subsequently, 'Incorporating resilient design principles' and 'Promotion of Ethical Breach Accountability' were ranked fifth, both with a MIS of 4.20 and SD of 0.933. 'Strong Public Trust' was ranked sixth, with a MIS of 4.19 and SD of 0.797. 'Validation of Legal Recognition and Enforcement' was ranked seventh, with a MIS of 4.15 and an SD of 0.969. 'Steady Reporting of Unethical Behaviour and Fraud Reduction' was ranked eighth, with a MIS of 4.11 and SD of 1.049. 'Enhanced Leadership Influence within the Project Crew' was ranked ninth, with a MIS of 4.06 and SD of 0.871. 'Enforcement of Regulatory Oversight' was ranked tenth, with a MIS of 4.05 and SD of 0.967. Additionally, 'Enforcement of Regulatory Oversight' and 'Promotion of Transparent Financial Practices' were ranked eleventh, with a MIS of 3.99 and SDs of 0.974 and 0.954.

Table 1. Impact of professional registration on ethical standards

The impact of professional registration on ethical standards	MIS	σX	R
Granting of formal professional title and status	4.35	0.911	1
Promotion of a binding code of conduct for professionals	4.23	0.912	2
Enforcement of disciplinary procedures and sanctions	4.22	0.894	3
Promotion of continuous professional development	4.21	1.009	4
Promotion of accountability for ethical breaches	4.20	0.933	5
Enhancement of public trust in professionals	4.19	0.797	6
Strengthening of legal recognition and enforcement	4.15	0.969	7
Promotion of reporting of unethical behaviour and reduction of fraud	4.11	1.049	8
Promotion of ethical leadership within project teams	4.06	0.871	9
Strengthening of regulatory oversight	4.05	0.967	10
Promotion of transparent financial practices	3.99	0.974	11
Promotion of ethics training and education	3.99	0.954	11

MIS = Mean item score; SD = Standard deviation; R = Rank

The factor with the highest mean score was the granting of a formal professional title and status (MIS = 4.35), followed by the promotion of a binding code of conduct for professionals (MIS = 4.23) and the enforcement of disciplinary procedures and sanctions (MIS = 4.22). This suggests that respondents view professional registration as helping to identify and legitimise professionals, thereby promoting accountability and adherence to ethical standards. These findings align with the South African Council for the Quantity Surveying Profession (2018), which put forward that professional registration involves holding a protected title and being subject to a code of conduct and disciplinary procedures. Similarly, the Engineering Council of South Africa (2018) stressed that registered professionals are required to adhere to ethical guidelines and may face penalties for non-compliance. However, while these regulatory bodies primarily describe professional registration in terms of its formal structures and intended functions, the present study provides empirical evidence of how these mechanisms are prioritised in practice by built-environment professionals. In particular, the higher ranking of professional title and status compared with disciplinary mechanisms suggests that recognition and legitimacy may be perceived as more immediate drivers of ethical behaviour than punitive measures. This extends to the work of Hardy (2016), who argued that professional identity reinforces ethical conduct, demonstrating that such identity-related factors are not only relevant but are perceived as the most influential in practice.

Furthermore, on the one hand, although Van Zyl and Visser (2016) and Twum-Darko and Mazibuko (2015) highlighted the importance of ethical frameworks and sanctions in guiding responsible decision-making, their focus remains largely on the existence and role of these mechanisms rather than their relative influence. On the other hand, this study quantifies and ranks these elements, showing that while codes of conduct and disciplinary procedures are important, they are perceived as slightly less influential than professional recognition. This highlights a nuanced understanding that ethical behaviour in the built environment is shaped not only by compliance requirements but also by professional identity and status.

Therefore, this study provides context-specific and empirical insight into how different professional registrations are perceived within the South African built environment. Also, by moving beyond theoretical and regulatory discussions, the study offers an evidence-based understanding of which mechanisms are perceived as influential in promoting ethical standards, thereby contributing to both academic discourse and professional practice.

5. Conclusion

Due to significant misconduct in the built environment, this study examined the impact of professional registration on ethical standards, offering valuable insights to professionals in the South African built environment. Using a quantitative research approach, the study found that professional registration markedly influences ethical standards among South African built environment professionals. The findings from MIS and DS established that the highly ranked perceived impactful factors are the awarding of formal professional titles and status, the promotion of a binding code of conduct for professionals, and the enforcement of disciplinary procedures and sanctions within the built environment. This demonstrates that professional registration is not just an administrative formality but a crucial mechanism for encouraging ethical behaviour, accountability, and public confidence in professional practice. Additionally, it indicates that registration enhances professional identity and imposes recognised ethical obligations on practitioners. Therefore, the study concludes that ethical standards in the built environment can be improved when registration systems are taken seriously and effectively enforced. The study also recommends that professional councils and regulatory bodies strengthen compliance with registration requirements across the built environment sector. Furthermore, these councils should ensure that codes of conduct remain active, clear, and enforceable in guiding professional behaviour. Moreover, disciplinary procedures and sanctions are to be consistently applied to discourage misconduct in built environment stakeholders and uphold the profession's integrity. Additionally, built environment organisations should promote ongoing professional development to increase ethical awareness and responsible practice. Finally, the study suggests improving transparency and accountability among registered professionals. This will help ensure that professional registration remains a practical tool for strengthening ethical standards in the South African built environment sector. The limitations of this study include reliance on reported perceptions collected at a single point in time, which may not fully reflect actual ethical behaviour or capture changes over time. Additionally, mean score analysis provides descriptive rankings but does not indicate causal relationships among variables. Thus, future research should address these limitations by adopting longitudinal and mixed methods designs, incorporating behavioural or organisational data, and applying inferential and multivariate techniques to provide deeper, more robust insights into the relationship between professional registration and ethical standards.

References

- Akintola, B.F., Jagboro, G.O., Ojo, G.K. and Odediran, S.J., Effectiveness of Mechanisms for Enforcement of Ethical Standards in the Construction Industry. *Journal of Construction Business and Management*, 4(1), pp.1-12. 2020.
- Ali, H.M., Ling, G.H.T., Sipan, I., Omar, M. and Achu, K., Effects of behavioural uncertainties in property valuation. *International Journal of Built Environment and Sustainability*, 7(3), pp.69-79. 2020.
- Baird, B.N. and Mollen, D., *The internship, practicum, and field placement handbook: A guide for the helping professions*. Routledge, pp.1-11. 2023.
- Banks, S., *Ethics, accountability and the social professions*. Bloomsbury Publishing, pp.1-111. 2018.
- Boluwaji, O. and Osatuyi, O., Effect of whistleblowing mechanisms on the financial reporting quality of quoted multinational oil and gas firms in Nigeria. *Asian Journal of Economics, Business and Accounting*, pp.73-84. 2023.
- Boshoff, D., *Understanding the Basic Principles of Property Law in South Africa*. The South African Council for the Quantity Surveying Profession, Pretoria, pp.1-50. 2013.
- Brauns, M. and Mdlazi, D., Ethics, codes of conduct, morals and professionalism as a bulwark against corruption and unethical conduct in the public sector: A case of South Africa. *Risk Governance and Control. Financial Markets and Institutions*, 5, pp.207-212. 2015.

- Bryman, A., *Social research methods*. Oxford university press. 2016.
- Buha, V., Tulinov, V. and Kosse, V., LEGAL STATUS AND COST-EFFECTIVENESS OF SUPERVISORY BODIES IN PREVENTING OFFENSES IN THE CONSTRUCTION SECTOR. *Baltic Journal of Economic Studies*, 11(2), pp.95-103. 2025.
- Chetty, M.Y., Mokwele, M.T. and Starr, M.N., *Roles, Responsibilities and the Value of Professional Bodies in the Context of the South African National Qualifications Framework (NQF)*. *SAQA BULLETIN*, pp.1-195. 2023.
- Cooper, S. and Barr, W., *Registered title and the assurance of reliability*, pp.1-19. 2015.
- Creswell, J.W. and Creswell, J.D., *Research design: qualitative, quantitative and mixed methods approaches*, 4th edn SAGE. 2014.
- Erkartal, P.O. and Uzunkaya, A., February. Transparency as a component of public space. In *IOP Conference Series: Materials Science and Engineering* (Vol. 471, No. 9, pp.1-9). 2019,
- Fazli, G.S., Creatore, M.I., Matheson, F.I., Guilcher, S., Kaufman-Shriqui, V., Manson, H., Johns, A. and Booth, G.L., Identifying mechanisms for facilitating knowledge to action strategies targeting the built environment. *BMC Public Health*, 17(1), pp.1-9. 2017.
- Folorunso, S.S., Udeh, G.I. and Adeniran, A.O., A Study on the Effectiveness of Continuing Professional Development (CPD) among Professionals in the Built Environment. *Management Analytics and Social Insights*, 1(2), pp.235-245. 2024.
- Foxell, S., Built environment governance and professionalism: the end of laissez-faire (again). *Buildings & Cities*, 6(1). 2025.
- Ghahari, S.A., Zuluaga, C.M., Madni, A.M. and Lindemann, U., The role of engineering ethics in mitigating corruption in infrastructure systems delivery. *Science and Engineering Ethics*, 30(4), pp.3-16. 2024.
- Grant, J.L., Taylor, A. and Wheeler, C., Planners' perceptions of the influence of leadership on coordinating plans. *Environment and Planning C: Politics and Space*, 36(4), pp.669-688. 2018.
- Gurzawska, A., Mäkinen, M. and Brey, P., Implementation of Responsible Research and Innovation (RRI) practices in industry: Providing the right incentives. *Sustainability*, 9(10), pp.1-26. 2017.
- Gwynne-Evans, A.J., Chetty, M. and Junaid, S., Repositioning ethics at the heart of engineering graduate attributes. *Australasian Journal of Engineering Education*, 26(1), pp.7-24. 2021.
- Hardy, M.C., Drafting an effective ethical code of conduct for professional societies: A practical guide. *Administrative Sciences*, 6(4), pp.1-11. 2016.
- Hubert, A.M., A code of conduct for responsible geoenvironmental research. *Global Policy*, 12, pp.82-96. 2021.
- Ikueze, C.C., Okpala, C.C., Okoli, N.C. and Onwurah, U.O., Dividends of professional registration in engineering practice for technological advancement, pp.40-46. 2019.
- Iqbal, S.M.J., Zaman, U., Siddiqui, S.H. and Imran, M.K., Influence of transformational leadership factors on project success. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 13(1), pp.231-256. 2019.
- Kancharla, R. and Dadhich, A., Perceived ethics training and workplace behavior: the mediating role of perceived ethical culture. *European Journal of Training and Development*, 45(1), pp.53-73. 2021.
- Kwofie, T.E., Aigbavboa, C.O. and Mpambela, J.S., Improving continuing professional development compliance among construction professionals through integrated strategies in South Africa. *Journal of Engineering, Design and Technology*, 16(4), pp.637-653. 2018.
- Lescrauwaet, L., Wagner, H., Yoon, C. and Shukla, S., Adaptive legal frameworks and economic dynamics in emerging technologies: Navigating the intersection for responsible innovation. *Law and Economics*, 16(3), pp.202-220. 2022.
- Maxwell, B., Codes of professional conduct and ethics education for future teachers. *Philosophical Inquiry in Education*, 24(4), pp.323-347. 2017.
- Menting, M.C., Industry codes of conduct, the foundations of contract law and regulation: a bottom-up perspective. In *Contract and Regulation* (pp.39-88). 2017
- Mohamad, N., Rahman, H.A., Usman, I.M. and Tawil, N.M., Ethics education and training for construction professionals in Malaysia. *Asian Social Science*, 11(4), pp.55-64. 2015.
- Mooya, M.M., The education and professional practice of valuers in South Africa A critical review. *Property Management*, 33(3), pp.245-274. 2015.
- Naidoo, S. and Rajcoomar, A., Towards management excellence: The case of South African professional bodies. *South African Journal of Industrial Engineering*, 31(2), pp.62-75. 2020.
- Nardin, L.G., Balke-Visser, T., Ajmeri, N., Kalia, A.K., Sichman, J.S. and Singh, M.P., Classifying sanctions and designing a conceptual sanctioning process model for socio-technical systems. *The Knowledge Engineering Review*, 31(2), pp.142-166. 2016.

Nita, A., Hossu, C.A., Mitincu, C.G. and Iojă, I.C., A review of the quality of environmental impact statements with a focus on urban projects from Romania. *Ecological Informatics*, 70, pp.1-10. 2022.

Biographies

Ornella Tambwe is a research fellow at the University of Johannesburg, South Africa. Her research interests include construction management, with a particular focus on data management, data security, digitalisation, and emerging technologies in the construction industry. She has contributed to research on improving construction practices through enhanced data governance and technology adoption. Dr Ornella is also focusing on and co-supervising research on flood resilience, low-income housing, and professional practices.

Clinton Aigbavboa is a Professor in the Department of Construction Management and Quantity Surveying at the University of Johannesburg, South Africa. His research focuses on digitalisation in construction, sustainable construction, housing, construction industry development, and leadership in the built environment. He has supervised extensive postgraduate research and published widely in journals and conference proceedings in construction management and the built environment.

Ntsindiso Mphoqo is a postgraduate student at the University of Johannesburg with an academic focus on the built environment and construction management, and related professional practices issues.