

FROM STRATEGY TO SITE: ADVANCING SOCIAL SUSTAINABILITY IN INFRASTRUCTURE PROJECTS

Sean Elliot Wisse¹, Lovisa Bjurgård Fagerlund² and Daniella Troje³

^{1&3} *Department of Architecture and Civil Engineering, Chalmers University of Technology, Sven Hultins gata 6, 412 96, Gothenburg, Sweden*

² *COWI, Vikingsgatan 3, 411 04, Gothenburg, Sweden*

This paper investigates how social sustainability is organised and advanced in infrastructure projects, by drawing on 11 interviews and document analyses of a major Scandinavian contractor. The paper applies, and to some extent revises, a social sustainability framework by Valdes-Vasquez and Klotz (2013). Findings highlight strong commitments to safety but reveal gaps in inclusive team formation, stakeholder engagement, and evaluations of social impacts. This paper contributes to the broader discourse on sustainable infrastructure development by stressing the need to tighten governance to curb subcontracting risks and labour abuses, granting project managers greater influence over team selection to boost cohesion and decision quality, engaging communities earlier and more systematically to secure lasting benefits, embedding explicit responsibility for workers and stakeholders in corporate strategy, and replacing ad-hoc practices with rigorous, methodical social-impact assessments.

Keywords: case study; infrastructure; social sustainability; Sweden

INTRODUCTION

Social sustainability issues in the Architecture, Construction, and Engineering (ACE) industry are well-documented, yet persistent, issues that needs continuous addressing from research and practice (Alhammad *et al.*, 2022). Social sustainability development in relation to infrastructure projects can be especially interesting to study, considering infrastructure's considerable impact on social well-being, in terms of external social sustainability like regional development, accessibility to amenities, equitable travel possibilities, and community cohesion (Sierra *et al.*, 2017), as well as internal social sustainability like work-life balance, job site remoteness, and equality (Alhammad *et al.*, 2022). Infrastructure projects can ensure equity, accessibility, and decent work, so that every road, bridge, or rail link regenerate community well-being (Thomson and Newman, 2020; Vijayakumar *et al.*, 2024). Infrastructure projects thus play a vital role in contributing to socially sustainable communities and can be a catalyst for wider social sustainability development, such as regenerative cities. Therefore, this paper seeks to understand how social sustainability work can be organised and advanced in infrastructure projects. The purpose is addressed through a single case study of a major Scandinavian contractor's infrastructure division. The paper applies, and to some extent revises, a social sustainability framework by Valdes-

³ daniella.troje@chalmers.se

Vasquez and Klotz (2013), which is useful for contractors to develop their social sustainability work.

Valdes-Vasquez and Klotz (2013) conducted multidimensional scaling and hierarchical cluster analyses of social sustainability parameters, as suggested by experts in academia, industry and government. By doing so they consolidated many disparate processes into one cohesive framework that outlines key social sustainability considerations for the ACE sector. They identified six distinct clusters aimed at increasing practitioners' awareness and guiding them in adopting a more integrated approach to social sustainability: A) Stakeholder engagement; B) User considerations; C) Team formation; D) Management considerations; E) Impact assessment; and F) Place context. Valdes-Vasquez and Klotz (2013) propose that future research should develop this framework to specific empirical conditions. As such, for the purpose of this paper, an extended literature review has been conducted to adapt the framework considering current construction management research, and for the specific nuances relating to the Scandinavian infrastructure context.

The first cluster, Stakeholder Engagement, aims to foster early integration and collaboration among the client, contractor, and public. Despite often viewed as a government duty, businesses are called to take social and environmental responsibility, which requires a structured intervention to sustain continuous participation and communication (Valdes-Vasquez and Klotz, 2013; Vanclay, 2020). Building on interviews and workshops with clients, contractors and sub-contractors, Duryan *et al.* (2020) explain how managing stakeholder expectations and aligning the temporary nature of projects with long-term impacts in construction is challenging due to conflicting interests, and a lack of stakeholder engagement and knowledge transfer. Similarly, in their review of social impact assessment (SIA) research, Vanclay (2020) argues that addressing community concerns early fosters collaboration and long-term project success, but that corporations, like contractors, mainly engage in Corporate Social Responsibility (CSR) and invest in social initiatives to gain public trust and often prioritise corporate benefits over stakeholder welfare.

The second cluster, User Considerations, discusses productivity, safety, health, and security for end users, alongside the necessity of a demonstrably reliable project design. Additionally, attention must be given to the broader community during construction, mitigating disruptions and corruption through structured oversight and intervention. Addressing demographic, gender, and diversity-related issues is essential to promote inclusivity within surrounding communities (Valdes-Vasquez and Klotz, 2013). In a multiple case study of Italian and Swedish bridge projects, Sebastian *et al.* (2013) found that infrastructure projects can significantly disturb surrounding communities, in terms of lack of accessibility and decreased safety, cause noise and dust pollution, traffic disruptions, congestion, delays, and accidents. Infrastructure-related disturbances must be actively managed through planning and communication.

The third cluster, Team Formation, underscores the need for project teams to reflect the diverse composition of the community. The inclusion of local firms and interdisciplinary expertise is important, and Valdes-Vasquez and Klotz, (2013) emphasize how diversity—across dimensions such as profession, gender, ethnicity, and sustainability expertise—enhance adaptability, problem-solving, and ultimately project outcomes. In a systematic literature review that resulted in a classification of 82 sustainability indicators, Stanitsas *et al.* (2021) concluded that sustainable project

management in the ACE sector depends on aligning teams across disciplines and incorporating sustainability project indicators. In a literature review where Owen *et al.* (2010) tried to map the current state and possible future of integrated design and delivery solutions, they contend that early contractor involvement enhances project coherence by leveraging expertise during planning. However, broader adoption of integrated design and delivery solutions remains limited due to challenges in collaboration, workforce skills, and knowledge management. In a cross-national study including interviews with 70 construction workers from different countries, Caro *et al.* (2015) found that temporary labour migration, which has increased since Eastern European countries joined the EU, increase possibilities for diversity in Scandinavian construction projects. However, this has also led to worker exploitation, where migrant workers frequently face social segregation, leading to workplace tensions.

The fourth cluster, Management Considerations, pertains to processes that enhance health, safety, and productivity for temporary and permanent users. These objectives can be achieved by implementing management plans and adopting safety measures (Valdes-Vasquez and Klotz, 2013). In an extensive literature review, Eisenberg and Jabareen (2017) constructed a conceptual framework of social sustainability where they argue that a safe and ethical work environment requires proactive management strategies to mitigate risks, such as negative impacts on individuals and communities, including social polarisation, urban poverty, and climate-related disruptions. Similar, in their conceptual paper, Zwetsloot *et al.* (2017) found that risk assessment is vital for identifying safety hazards and vulnerabilities, and a zero-accident target reinforces the idea that all accidents are preventable, thereby promoting continuous improvement in workplace safety. However, fragmented subcontracting structures, language barriers, and disengagement between office staff and site workers pose challenges. Managers must foster a positive safety culture, where accountability is encouraged, and workers feel empowered to halt unsafe work (Duryan *et al.*, 2020). Stock *et al.* (2018), in their assessment of current Industry 4.0 industrial cases, argue that digitalisation advancements can offer risk management benefits, including improved efficiency and accuracy, but potential risks of such tools must also be acknowledged.

The fifth cluster, Impact Assessments, help identify social issues and risks for affected communities and end users and serves as a tool to identify various challenges associated with the project. SIAs evaluate physical factors, resource distribution, and population shifts that contribute to socio-economic effects (Valdes-Vasquez and Klotz, 2013). Impact assessments promote sustainability by holding projects accountable for their broader effects, but Vanclay (2020) explain that SIAs are often treated as secondary add-ons in projects, limiting their potential. SIAs should be present already in the early phases of any project, as communities are impacted by projects as soon as speculation begins. In a critical review resulting in a conceptual, and quantitatively assessable, definition of social acceptance of energy infrastructure, Cohen *et al.* (2014) propose that while economic and compensatory measures can improve acceptance if projects cause opposition, social considerations—such as public accessibility, mobility, and quality of life—should be integrated early in the project life cycle, so potential impacts to the community can be foreseen.

The sixth cluster, Place Context, emphasizes the significance of the project's specific location, advocating for deliberate design choices. These decisions should foster a sense of ownership, encourage social interaction, and minimise social vulnerabilities for the community, with continuous monitoring to ensure these goals are met (Valdes-

Vasquez and Klotz, 2013). Communities should therefore be actively involved in decision-making to ensure legitimate and accepted project outcomes (Vanclay 2020). However, Yu's and Leung's (2018) survey of stakeholders who participated in public engagement activities, found that engagement is often limited, as project developers focus on approval rather than meaningful participation, which can lead to opposition, participant fatigue, and unresolved community concerns.

METHOD

This study employs a case study approach to capture the lived experiences of professionals working with social sustainability in the ACE sector (Baxter and Jack, 2008). The case organisation, a major Scandinavian contractor, was selected for its strong outspoken social sustainability agenda and industry influence. Researchers were granted workspace access to observe daily operations. The data collection included a document analysis and semi-structured interviews. The document analysis covered publicly available corporate materials, including corporate narratives, governing documents, and sustainability reports, focusing on themes such as labour practices, inclusion, diversity, health and safety, and community outreach. Interviews were conducted in the company's infrastructure division, with six project managers (PM1-6), and five members of the project support function (SF1-5). Participants were purposefully selected for their direct experience with social sustainability work. Thus, the interviewees drew their recollections based on their wide experience working in many different projects rather than a few specific projects chosen by the researchers. These projects ranged from small to large-scale road, tunnel and energy infrastructure projects. Explicitly stating a focus on social sustainability, the interviews focused on team formation and management considerations, strategy and communication, stakeholder engagement, and social impact assessments, emphasising personal experiences over corporate statements. Interviews were conducted either online or in person (March–April 2024), lasted ~1 hour each, and were recorded, transcribed, and analysed. Open-ended questions allowed for exploratory responses (Kvale, 2007).

A thematic analysis was used to identify patterns within the data (Braun and Clarke, 2006). Initial inductive coding, where common patterns of themes were identified, followed the Gioia method (Gioia *et al.*, 2013). After a first coding round where patterns from the empirical data had been identified, the framework by Valdes-Vasquez and Klotz (2013) was applied. At this point it became clear that the clusters proposed by Vasquez and Klotz (2013) could only help to explain part of what was found, but that a consolidation and rearrangement of the clusters helped to further the analysis. The findings helped to group issues together in a way not previously done by the framework, and helped to streamline what issues were tackled jointly, and which were seen as separate issues. The analysis thus progressed through iterative rounds toward more conceptually informed themes and a revised framework. The research team jointly validated coding to ensure rigor. Based on the data analysis, the six clusters from Valdes-Vasquez and Klotz (2013) were rearranged and consolidated into four clusters that better reflected and helped to explain the study's specific context.

FINDINGS

The interviewees emphasized risk mitigation as a core management concern, particularly in health, safety and environment (HSE), which is strictly legislated in Sweden. Proactive risk assessments tailored to site-specific conditions were deemed essential for worker and public safety. In addition, vetting subcontractors and

suppliers is prioritised, with strict pre-qualification requirements on tax compliance, union adherence, and health insurance. While effective, SF2 noted that bureaucracy disadvantages small businesses: “Many are alone in their own company, and they are not running construction machines because they like paperwork” The company’s corporate approach aligns with these concerns, limiting subcontracting to two levels to improve transparency, reduce delays, and curb corruption.

In terms of HSE, interviewees stressed clear communication between project phases, given the hazardous nature of infrastructure projects. While the company promotes worker involvement in safety decisions, final decisions rest with managers. Most respondents saw the company’s corporate vision as clear regarding people-first values, linking success to employee well-being. However, some felt the social sustainability strategy was fragmented, spread across different practices rather than forming a cohesive framework. SF3 described the company’s approach: “We don’t have formal, written procedures for everything. It’s more about taking ownership and ensuring tasks are completed. That approach is both our strength and our weakness”.

Safety policies, while well-intended, are not always effectively communicated, with on-site workers engaging with them less frequently than office staff. While onboarding safety briefings exist, tracking whether workers understand protocols remains a challenge. Safety messages are reinforced emotionally, emphasising: “Make sure everyone can go home at the end of the day!”. But cultural differences and language barriers create complications in terms of translation of safety policies and norms, communication, and feedback loops. In response, the company mandates work environment training (OSA) for employees and subcontractors. However, the physical distance between offices and remote sites remains a challenge. Ongoing anonymous surveys now supplement annual feedback meetings to improve communication.

Issues with sexism or racism are said to be continuously decreasing as younger, more socially aware employees join the company. Instead, concerns about workload and work-life balance were more commonly noted, with employees citing excessive hours, disproportionately affecting female employees and those with children. Although post-pandemic flexibility introduced remote work options, it has limited feasibility for location-dependent roles in infrastructure projects. While digital tools like building information modelling (BIM) act as game-changers for accuracy and efficiency, client demand remains low. Digitalisation was also noted to decrease work-life balance, demanding constant availability: “They are working in three shifts, eight hours each. When [someone] is going home for the night and the next guy comes in, [notifications] come at night, in the morning and on the weekend.” (PM3).

Interviewees emphasized that effective teams require diversity, complementarity, and strong interpersonal skills. While technical qualifications are essential, cultural awareness and teamwork were equally valued. However, frustration was expressed over the lack of involvement in team selection. PM5 stressed the importance of ensuring equal participation: “If everyone is a 45-year-old white Swedish-born male, and think roughly the same way, then you won't get the best result. [...] It requires a little more when we are a little different, but it will be better if we dare to talk through it.” A lack of women in the ACE sector, especially among craftsmen, was widely acknowledged. Gender-diverse teams were associated with better workplace culture and project outcomes. Interviewees emphasized the need for inclusive job descriptions and a welcoming work environment. While younger generations are

driving a cultural shift, industry norms still present barriers for women. PM3 noted: “It is easier to be a man in this sector, like it is everywhere else as well.”

Foreign labour migration was identified as a potential risk, particularly when subcontractors exclusively hire foreign workers. Compliance issues are difficult to track, and incorrect wage payments are more common. SF2 noted: “We have at least one case where the workers didn’t get their performance bonus [...] They [Many foreign companies] sign the collective bargaining agreement in Sweden, but they don’t really understand it.” Though often using subcontractors, the company enforces its values strictly, issuing warnings or terminating employment when necessary.

The project-based nature of the sector creates social sustainability difficulties. Because each project is a clean slate, this makes team-building crucial but time-consuming. Managers called for more structured guidance, as current processes rely heavily on individual efforts. Moreover, the mobile nature of infrastructure work creates recruitment challenges, particularly for workers with families. Relocation demands make it difficult for single parents, an issue that has worsened over the past two decades. Some flexibility measures, such as early departures before weekends, have been introduced. Therefore, using local suppliers and subcontractors was seen as beneficial, particularly for remote projects, further improving efficiency. However, local engagement is prioritised only when quality and cost-efficiency are maintained.

Government and local authorities, often represented by clients, play a crucial role in infrastructure projects. While social sustainability criteria are increasingly included in tenders, environmental concerns still dominate. The interviewees noted that costs stemming from social sustainability work are not accounted for, making it difficult to justify beyond contract requirements, in comparison to environmental considerations which more easily justify higher costs. The interviewees acknowledged the challenge of balancing sustainability with competitiveness: “We must still compete with other companies that do not prioritise sustainability and social sustainability as highly as we want to, and we must still compete with them on the lowest price.” (PM5).

Community engagement was largely seen as the client’s responsibility, with contractors only engaging once the project begins. Clients typically handle pre-project communication, meaning there was a general lack of proactive engagement from the contractor, making it reactive rather than strategic. Internal stakeholder management and communication was also lacking. Although structured communication between office staff and site teams was seen as crucial to reducing project-level stress and workload, project-specific challenges remain isolated, lacking support from upper management. There was also concern over disconnects between design, planning, and execution teams, with calls for improved communication to improve workload distribution. Project follow-ups were considered insufficient, and interviewees felt that knowledge-sharing should be driven by senior management rather than left to project teams. Furthermore, while technical knowledge transfer is being prioritised due to its financial benefits, distribution of social sustainability knowledge remains a challenge. Safety advancements were attributed to effective knowledge transfer, but some interviewees criticised the overemphasis on negative incidents, arguing that positive lessons should be equally acknowledged. Instead, casual discussions among team members are critical to recognise successful practices and areas for improvement.

Despite existing guidelines, structured impact assessments are inconsistently required or practiced. Decision-making on-site is often based on experience and intuition, as

PM3 described: “Normally, your gut feeling is a good guideline if [...] you can do it. Of course, we have papers [and] lots of guidelines, and some read them, but some do not”. Corporate-level recruitment goals, especially regarding gender diversity, were defined but lacked consistent tracking. SF1 noted an absence of a cohesive company-wide strategy, with each region operating independently. While environmental impacts are meticulously calculated, social considerations remain secondary, often relegated to community concerns about noise, pollution, and accessibility. An example of this was a local farmer who had a pregnant horse. A member of the team would call the owner before any blasting, so they could take proper precautions for their horse. This was said to provide much goodwill from the local community.

DISCUSSION

Albeit that the purpose of this paper was not to revise Valdes-Vasquez' and Klotz' (2013) framework, this became inevitable as the findings, that are context-specific to infrastructure projects, highlight what facets of the framework is useful and what aspects can be adapted to better fit the nuances of the specific empirical conditions. As such, some clusters have been reorganised and consolidated where relevant, to enhance applicability in this specific context, much like Valdes-Vasquez and Klotz (2013) themselves have asked for. As such, the revised framework has been developed with the support of the empirical data, resulting in four consolidated clusters. In the extended literature review and in the data analysis it became clear that the six clusters proposed by Valdes-Vasquez and Klotz (2013) have many overlaps and common denominators, making distinction between certain clusters difficult. As such, a consolidation and thereby simplification of the clusters into four new, more comprehensive and easily distinguishable clusters is a fruitful development.

The analysis also supports a rearrangement of the clusters, where management considerations come first, as formal work practices and sustainability goals are formulated on the management level. Then follows team formation, as every project is driven by an expedient unique team of people. Then follows stakeholder management, as no project is constructed in a vacuum, but within a community. This cluster also encompasses most aspects found within the 'user consideration' and 'place context' cluster, which thematically relates strongly to stakeholder management and community engagement. Lastly follows impact assessment, which happens in the closing of a project. The revised framework contributes an more context-sensitive and practical guide for contractors, that mirrors the life cycle of a typical project.

In terms of management considerations, the company's proactive risk assessments and strict subcontractor vetting align with Valdes-Vasquez' and Klotz' (2013) call for thorough management plans to safeguard health, safety, and ethical practices. By assigning clear responsibilities and emphasising continuous communication the organisation reflects a zero accidents ambition, much like Zwetsloot *et al.* (2017) explain. At the same time, interviewees reveal ongoing challenges with language barriers and fragmented site-to-office communication, echoing the need for managers to remain engaged and ensure employees across multiple subcontracting levels feel empowered to report hazards. As such, much like Duryan *et al.* (2020) argue, although safety remains a core priority, the existing gap between office staff and on-site personnel in HSE engagement needs to be addressed. Strengthening on-site management's role in safety culture would ensure better integration of HSE principles. Although the company's OSA training is a positive step, its isolated approach to issues like stress and workload limits its impact. Like Stock *et al.* (2018) argue,

digital tools, such as BIM, promise improvements in efficiency and accuracy. Yet employees describe an “always-on” environment that threatens work-life balance, meaning that poorly managed digitalisation may instead undermine well-being. Adding to Eisenberg and Jabareen (2017), stringent administrative demands, which are not necessarily lessened by digital tools, can inadvertently exclude smaller firms, underscoring potential marginalisation. While the company’s people-centric philosophy aims to foster inclusion, interviewees suggest that more cohesive procedures might enhance consistency. Thus, tensions remain between robust oversight and inclusivity, as well as between efficiency and overwork. Continued refinement—through transparent communication and balanced technological integration—is thus needed to uphold safe and sustainable conditions.

In terms of team formation, effective teams require socially competent leadership, diversity, and shared goals (Valdes-Vasquez and Klotz, 2013; Stanitsas *et al.*, 2021). Yet, project managers have little influence over team selection, despite being responsible for team dynamics. Allowing them to contribute to team formation would improve collaboration. This aligns with Owen *et al.* (2010), highlighting the challenges of interdisciplinary collaboration and workforce integration in construction. Subcontractors employing entirely foreign workforces pose a risk in relation to safety, social exclusion, wage disparities, and communication, highlighting the need for better integration measures beyond safety (Duryan *et al.*, 2020). This adds to Caro *et al.* (2015) conclusions, that temporary labour migration often results in exploitation. The temporary and mobile nature of infrastructure projects add further complexity to team formation and negatively impacts gender diversity. Gender diversity is linked to better workplace culture and project performance, though infrastructure projects, especially remote ones, still present major barriers for women. These findings echo broader research on the challenges of increasing representation in male-dominated sectors (Stanitsas *et al.*, 2021). Moreover, local engagement is mainly prioritised when it aligns with cost and quality standards. Therefore, more strategic workforce planning, clearer recruitment policies, and stronger labour protections could enhance team cohesion and wellbeing.

In terms of stakeholder management, Owen *et al.* (2010), highlight how early contractor involvement is important for team formation, and the same can be said for stakeholder management. Since only the client is involved in local stakeholder communication in the early stages means that the contractor may fail to garner support and build trust for the project, resulting in limited acceptance of disturbances and higher opposition. This reactive approach contrasts with Vanclay's (2020) best practices, emphasising early and continuous stakeholder involvement to foster long-term project success, reinforcing concerns that stakeholder participation is often treated as a procedural formality rather than a meaningful process (Yu and Leung, 2018). Expanding social impact reporting could perhaps help to mitigate this issue to force more in-depth community engagement. The company’s annual reports primarily focus on workforce well-being, suggesting that they assume responsibility for internal benefits rather than wider social responsibility. However, internal stakeholder communication within the company was also identified as an area for improvement. The disconnect between office staff and site teams, as well as between design, planning, and execution teams, created inefficiencies and stress. This reflects Duryan's *et al.* (2020) findings that knowledge transfer in the ACE sector is often fragmented, particularly on social sustainability aspects. Improved knowledge transfer mechanisms could reduce project-based fatigue and strengthen collaboration.

In terms of impact assessments, the company's approach reflects broader challenges in integrating social considerations into project planning. While environmental impacts are systematically evaluated, social impact assessments (SIA) remain secondary, aligning with research that finds SIA often treated as an add-on rather than a core component (Vanclay, 2020). Despite existing guidelines, structured impact assessments are inconsistently applied, with decision-making on-site frequently based on intuition rather than formalised processes. This reinforces Valdes-Vasquez' and Klotz' (2013) concerns that social considerations are often overlooked in early project stages, despite their long-term significance. Since public opposition can begin before projects start (Vanclay, 2020), integrating social assessments in early planning could improve public relations, mitigate resistance (Cohen *et al.*, 2014), and decrease disturbances (Sebastian *et al.*, 2013). While some regional initiatives exist, such as notifying a horse owner before blasting, these efforts are largely ad hoc rather than systematically embedded in project planning. Both Vanclay (2020) and Cohen *et al.* (2014) suggest that early engagement and compensatory measures can improve project acceptance and social integration, yet current company practices appear to be driven more by individual initiative than strategic policy. Tailored, yet systematised, communication strategies and assessment methods could help reduce opposition by explaining project benefits and identifying disturbance mitigation measures.

For contributions, the paper empirically details how social sustainability work is performed within a Scandinavian infrastructure context and illustrates what areas are currently underdeveloped in practice. By answering Valdes-Vasquez' and Klotz' (2013) call to adapt the framework to different empirical contexts, the paper revises the framework accordingly and thereby identifies context-specific challenges and areas of improvement. Areas of improvement include: A) addressing subcontracting challenges, labour exploitation risks, and ethical concerns through more robust governance measures; b) allowing project managers greater influence over team selection to enhance cohesion and improve decision-making, c) encouraging earlier and more structured involvement with affected communities and other stakeholders to ensure long-term benefits beyond compliance-driven initiatives; d) revising corporate strategies to acknowledge responsibility for employees and affected communities and other stakeholders who are often overlooked; and e) shifting from intuitive, ad hoc decision-making towards methodical social impact assessments.

CONCLUSIONS

This paper has exemplified how social sustainability is currently organised within Swedish infrastructure projects and applied and subsequently revised the social sustainability framework by Valdes-Vasquez and Klotz (2013). Comparing the adapted framework with the empirical case highlights context-specific areas of improvement. Future research should consider comparative studies across cases to help identify common factors and develop country-specific frameworks. Also, as this paper excludes perspectives from subcontractors, craftsmen, clients, and the public, future research should explore their perspectives as well.

REFERENCES

- Alhammadi, Y, Radzi, A R, Alias, A R and Rahman, R A (2024) Modelling workplace well-being factors in infrastructure construction projects: PLS-SEM approach, *Buildings*, **14**(8), 2289.
- Braun, V and Clarke, V (2006) Using thematic analysis in psychology, *Qualitative Research in Psychology*, **3**(2), 77-101.

- Caro, E, Bernsten, L, Lillie, N and Wagner, I (2015) Posted migration and segregation in the European construction sector, *Journal of Ethnic and Migration Studies*, **41**(10), 1600-1620.
- Cohen, JJ, Reichl, J and Schmidthaler, M (2014) Re-focussing research efforts on the public acceptance of energy infrastructure: A critical review, *Energy*, **76**, 4-9.
- Duryan, M, Smyth, H, Roberts, A, Rowlinson, S and Sherratt, F (2020) Knowledge transfer for occupational health and safety: Cultivating health and safety learning culture in construction firms, *Accident Analysis and Prevention*, **139**, 105496.
- Eisenberg, E and Jabareen, Y (2017) Social sustainability: A new conceptual framework, *Sustainability*, **68**.
- Kvale, S (2007) *Doing Interviews*, London: Sage.
- Owen, R, Amor, R, Palmer, M and East, B (2010) Challenges for integrated design and delivery solutions, *Architectural Engineering and Design Management*, **6**, 232-240.
- Sebastian, R, Claeson-Jonsson, C and Di Giulio, R (2013) Performance-based procurement for low-disturbance bridge construction projects, *Construction Innovation*, **13**(4), 394-409.
- Sierra, L A, Pellicer, E and Yepes, V (2017) Method for estimating the social sustainability of infrastructure projects, *Environmental Impact Assessment Review*, **65**, 41-53.
- Stanitsas, M, Kirytopoulos, K and Leopoldus, V (2021) Integrating sustainability indicators into project management: The case of construction, *Industry Journal of Cleaner Production*, **279**, 123774.
- Stock, T, Obenaus, M, Kunz, S and Kohl, H (2018) Industry 4.0 as enabler for a sustainable development: A qualitative assessment of its ecological and social potential, *Process Safety and Environmental Protection*, **118**, 254-267.
- Thomson, G and Newman, P (2020) Cities and the Anthropocene: Urban governance for the new era of regenerative cities, *Urban Studies*, **57**(7), 1502-1519.
- Valdes-Vasquez, R and Klotz, L (2013) Social sustainability considerations during planning and design: Framework of processes for construction projects, *Journal of Construction Engineering and Management*, **139**(1), 80-89.
- Vanclay, F (2020) Reflections on social impact assessment in the 21st century, *Impact Assessment and Project Appraisal*, **38**(2), 126-131.
- Vijayakumar, A, Mahmood, MN, Gurmu, A, Kamardeen, I and Alam, S (2024) Social sustainability assessment of road infrastructure: A systematic literature review, *Quality and Quantity*, **58**(2), 1039-1069.
- Yu, J and Leung, M Y (2018) Structural stakeholder model in public engagement for construction development projects, *Journal of Construction Engineering and Management*, **144**(6), 04018046.
- Zwetsloot, G, Leka, S and Kines, P (2017) Vision zero: From accident prevention to the promotion of health, safety and well-being at work, *Policy and Practice in Health and Safety*, **15**(2), 88-100.