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# SUPPORTIVE HERO AND TROUBLEMAKER? DIVERGING ENVIRONMENTAL WORK EXPECTATIONS IN CONSTRUCTION

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Despite being key agents in the transition toward a more sustainable built environment, environmental professionals often struggle with unclear responsibilities and ambiguous work expectations—hindering their ability to drive meaningful change. This paper explores how everyday dynamics in construction projects shape environmental professionals' work expectations. Drawing on 20 semi-structured interviews and 80 hours of observational fieldwork from a large Swedish infrastructure project, the study analyses how project actors invest different meanings and activities into the use of space and time, using a practice-based lens. The findings suggest that diverging work expectations emerge from conflicting spatial and temporal understandings between the production and client organisations—tensions that environmental professionals must continuously navigate. This research contributes to the literature on environmental professionals in construction management and offers new insight into the spatial and temporal dimensions of environmental work that they are navigating.

Keywords: environmental professional; environmental work; practice; tensions; work expectations

## INTRODUCTION

Infrastructure in terms of systems, networks, and structures (road, railway) are important foundations for society and enable social and economic development (Davies *et al.*, 2019). Especially, in large infrastructure projects, there are technical, regulatory, and organisational dependencies that make these projects complex (Geraldi *et al.*, 2011). Complexity can be perceived as structural (i.e., size, variety), dynamic (changes), uncertainty, pace (urgency or criticality of time), and socio-political complexity (Geraldi *et al.*, 2011). Large infrastructure projects have a major societal impact and require both public and political support and often require public funding and ownership (Walsh *et al.*, 2022). Furthermore, the construction and maintenance of infrastructure is often expensive and has large environmental implications like CO<sub>2</sub>-emissions, pollution, and noise (Davies *et al.*, 2019). In many of these projects, there is a strong focus on sustainability and environmental requirements both during the construction but also after construction. While there is abundant literature on governance and project management of large and complex projects (Davies *et al.*, 2019), and research on sustainability assessment during and

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after infrastructure construction, there is hardly any research on how these projects organise their environmental work and how environmental professionals interact with production and construction client professionals.

The lack of research on environmental roles within highly environmentally complex projects poses a problem, as the delivery of such projects partly depends on clear role structures (Bechky 2006) that provide clarity into the responsibilities, routines, roles, and relationships of the actors involved. Existing research on environmental roles has found that these professionals often struggle with unclear responsibilities and ambiguous role expectations, which hinders their ability to drive meaningful change (Gluch and Bosch- Sijtsema 2016). For example, Akotia and Opoku (2018) found that sustainability professionals are often involved too late in the delivery process, even in projects explicitly framed as sustainable regeneration. Similarly, other studies have highlighted how environmental management frequently clashes with the more immediate demands of construction work (Gluch and Räisänen 2012), resulting in environmental experts struggling to find their place among more established roles in construction projects (Gluch 2009, Gluch and Bosch- Sijtsema 2016).

Given that sustainability and environmental requirements in infrastructure projects are likely to increase, and that clarity around responsibilities, routines, and roles is essential for delivering projects accordingly, this research aims to explore why environmental experts often have difficulty finding their place among other professionals in projects with high environmental ambitions. To explore this, we conducted a case study of a large-scale infrastructure project in Sweden, characterised by high environmental demands, complex construction processes, and a dense urban setting. More specifically, we ask the following research question: How do every day dynamics in construction projects shape environmental professionals' work expectations?

To address this question, we adopt a practice lens which emphasizes that environmental work is empirically grounded in what people do in practice rather than through formal documents and predefined descriptions. By centring on people's actions (practices), we gain insight into how everyday dynamics in construction projects shape environmental work expectations, and how these expectations, in turn shape the work environmental professionals do. A key advantage of a practice lens is that it allows us to highlight tensions and contradictions as they play out on the ground, offering a more nuanced understanding of why environmental professionals may struggle to establish themselves within projects. It also provides nuanced insights into how the industry might better organise environmental work in the future.

### **Practice Perspective on Role Expectations**

By adopting a practice lens (Feldman and Orlikowski 2011), this study focuses on the micro-dynamics of everyday actions and interactions through which construction outcomes are produced. More specifically, we are interested in what individual actors do when working in projects (Blomquist *et al.*, 2010), and how these practices shape expectations around their work. Work expectations emerge through ongoing social interactions that are continuously shaped and negotiated in practice—using tools, discourse, and embodied engagement. It emphasizes that action is not merely individual or cognitive, but situated within social, material, and temporal contexts. Rather than viewing the work of professionals as fixed, we conceptualise it as enacted in ongoing practices, shaped by shared understandings, material artefacts (e.g., plans, schedules, tools, environmental requirements), and the relational dynamics of

construction projects. This implies a bottom-up analysis of actions and interactions in situ—that is, as they unfold in real time—along with the meanings and motivations that underpin them (Blomquist *et al.*, 2010).

Since projects involve multiple actors sharing time and space, we focused on how environmental work expectations are shaped by differing temporal and spatial understandings as actors work towards achieving the project's objectives. These are influenced by temporal and spatial norms, as well as related structures that orient the ongoing activities of project actors—such as activity plans, time schedules, deadlines, and spatial regulations. Actors in interorganisational projects often hold differing understandings of space and time (Maaninen-Olsson and Müllern 2009), which must be negotiated and aligned during project work (Dahlgren and Söderlund 2001, Stjerne *et al.*, 2019). From this follows that environmental work, in time and space, should be viewed as socially constructed and practiced, and not just managed.

## **METHOD**

This study follows a qualitative research design. Data was collected through 20 semi-structured interviews with 18 project participants and 80 hours of field observations, conducted by shadowing an environmental manager within the contractor's environmental organisation, 40 hours in 2021 and an additional 40 hours in 2023.

The first phase of fieldwork involved shadowing the environmental manager full-time, for one week, to gain a comprehensive overview of the construction project and its organisational context. This initial period enabled the researcher to observe a wide range of daily activities, offering a broad understanding of the field. These early insights informed the selection of specific situations and interactions for more focused observations in the second phase. While the first round served as an immersive phase to familiarise the researcher with the overall context, culture, and dynamics of the project, the second round was more targeted, allowing for closer examination of specific practices and interactions identified as analytically relevant through earlier data collection.

Activities involving meetings or direct collaboration with either client representatives or the production team were prioritised for focused observation. During these sessions, detailed notes were recorded in a field notebook based on the following dimensions: (1) what was being done and said; (2) when it occurred; (3) where it occurred; (4) who was involved; (5) how it was done or communicated; and, later, (6) why it occurred—an aspect clarified through both informal and formal interviews.

The formal interviews were conducted in 2021 ( $n = 2$ ) and 2023 ( $n = 18$ ), involving members of the environmental team ( $n = 4$ ), support staff ( $n = 3$ ), site management ( $n = 4$ ), production staff ( $n = 3$ ), and representatives from the client organisation ( $n = 2$ ). Participants were asked about their daily work in the project and their perceptions of collaboration around environmental issues. Each interview lasted approximately one hour, was audio-recorded, and transcribed verbatim. The transcripts provided detailed insights into the project context as well as the shared understandings and expectations surrounding environmental work in the construction project. All participants provided informed consent prior to their involvement in the study.

The combination of observations and interviews enabled a deeper understanding of how environmental work expectations were enacted and interpreted in practice. While the interviews offered reflective accounts and explanations, the observations captured everyday practices and assumptions that participants often took for granted or did not

articulate explicitly. In this way, the two methods complemented each other analytically. Both interview transcripts and field notes were included in the thematic analysis.

The data was analysed thematically (Braun and Clarke, 2006), meaning that patterns of activity and understandings related to environmental work were inductively grouped into themes through an iterative process, see table 1. This involved interpreting practices and the meanings that different project actors invested in them, with particular attention to how environmental work expectations were shaped by contrasting spatial and temporal understandings within the construction project. The analysis revealed a set of spatial and temporal tensions that environmental professionals must navigate, which in turn contribute to diverging environmental work expectations.

Table 1: Coding table

Empirical Examples	Code / Sub-theme	Theme
“Noise pollution regulations dictate when and how much construction work can be carried out.” ( <i>Observation</i> )	Time is "fixed"	Temporal tensions
“If you plan your activities in advance, then there’s time—we can be involved as a kind of think tank.” ( <i>Interview</i> )		
“He answers the phone and runs out of the meeting to fix a problem.” ( <i>Observation</i> )	Time in flux	Temporal tension
“In a perfect world, we would know a month in advance... but the schedule changes.” ( <i>Interview</i> )		
“If the timing is wrong, then that’s just how it is...” ( <i>Interview</i> )		
“We moved through the site to ensure that materials were stored in their designated places, and that all chemicals and vehicles on the construction site were approved.” ( <i>Observations</i> )	Space is “fixed”	Spatial tensions
“The construction site was largely empty, except for one area where activity was in full swing.” ( <i>Observation</i> )	Space in flux	Spatial tensions
“We have a wheel loader just to move things around.” ( <i>Interview</i> )		
“space on site follows ‘djungelns lag’—the law of the jungle” ( <i>Interview</i> )		

### Case Description

The case study examines a large-scale and highly environmentally complex infrastructure project in a dense Swedish city, valued at £300 million, involving bridge and railway construction. The project was subject to strict environmental requirements, partly due to an environmental court decision, and partly because the client—the Swedish Transport Administration—is expected to fulfil environmental goals set by the government. As a result, the contractor faced high demands regarding how to organise its environmental management.

For the contractor to meet these expectations, more resources to comply with the environmental requirements compared to previous projects were required. Two years into the construction phase, the environmental department expanded, appointing a dedicated manager to handle “softer” issues previously managed by the production manager. The environmental roles were also restructured: instead of having a single QHSE manager responsible for quality, occupational health and safety, and environment, the responsibilities were split into three distinct roles.

A new environmental manager was hired with extensive experience in managing environmental issues during the construction phase, supported by a deputy environmental manager and three environmental coordinators, who were working within the different production blocks. This restructuring clarified responsibilities: the environmental managers focused on overarching environmental issues at the project level, while the environmental coordinators handled day-to-day problem-solving at the construction site.

## **RESULTS**

Our study of how everyday dynamics in construction projects shape environmental professionals’ work expectations identifies several spatial and temporal tensions that contribute to diverging environmental work expectations. Here, “tension” refers to the different activities and meanings that project actors invest in the practices of space and time. Space refers to physical space—i.e., the construction site and its spatial boundaries—and time refers to temporal aspects—i.e., the pacing of activities. In the following sections, we examine how these tensions unfold in practice and how they shape the work expectations of environmental professionals.

### **Spatial Tensions**

The first set of tensions is associated with the different activities and meanings that the client and the contractor invest in the use of space—i.e., the construction site. Here, the client practices space through controlling activities, which trickle down to the contractor’s environmental professionals. For example, the client’s environmental specialists conduct weekly environmental inspection rounds to ensure that the construction site complies with environmental requirements. In this way, the environmental specialists are auditing space—grounded in a legal environmental responsibility:

“Our main task from the Swedish Transport Administration is to monitor our operator responsibility in environmental matters—to make sure we are fulfilling the responsibility we’re required to take under environmental law and our permits and everything else we’re bound by.” (Environmental Specialist, Client)

For the contractor’s environmental professionals, however, auditing space is a more delicate, day-to-day activity—one that involves ongoing interactions with colleagues in production. As one environmental coordinator reflected:

“We’re an internal auditing function... it’s a pretty thankless role, and I think you really need to be the right kind of person to want to do it. Because it can easily feel like we’re... putting spokes in the wheels for our colleagues, or that it’s perceived that way. So it’s always a bit of a balancing act in how you present things.” (Environmental Coordinator, Contractor)

Part of this balancing act involves accommodating production and ensuring the continuity of the building process. For production, practicing space is not only about identifying problems, but also about being actively involved in solving them. As one site manager put it:

“Like our environmental guy—he’s out there looking at things. Like, how should we divert the water? And he’ll go, ‘Well, we could do it this way,’ and bring other ideas—‘Let’s do this instead, what’s the easiest way?’ When I’m out on site and he’s there, he brings other suggestions and shows that he’s engaged in both progress and production.”  
(Site Manager, Contractor)

In contrast to the client, who practices space through controlling activities, this quote also illustrates how the contractor’s site managers practice space through construction activities, prioritising progress over order. As another manager described it, space on site follows “*djungle’s lag*”—the law of the jungle—where space is up for grabs and must be claimed. Here, space becomes a resource for building—perceived as immediate and temporary—which significantly differs from the client’s understanding of space as “fixed” and regulated.

These contrasting spatial understandings—between space as regulated and space as a resource—create tensions that environmental professionals must continuously navigate in their daily work.

### **Temporal Tensions**

The second set of tensions is associated with the different activities and meanings that the client and the contractor invest in the use of time—i.e., the pacing of activities. Although construction activities are planned according to deadlines and the overall production schedule, they are often adjusted in practice due to unexpected events and discoveries that arise during the construction process. The contractor practices time through scheduling, which may or may not involve environmental professionals. Yet the overarching purpose remains the same: to create a continuous flow of construction activities on-site and to ensure that workers have the right conditions to do their jobs well. As one site manager explained:

“I work in a very straightforward way in my role as site manager and with my scheduling, so that everything flows smoothly. It might not need to flow quite as well in here, but out there with the workers, it’s important to ensure that things run without interruptions, so it doesn’t become frustrating or irritating for them. If the workflow remains continuous and there are always tasks to be done, then everyone stays happy.”  
(Site Manager, Contractor)

In contrast, much of the work of environmental professionals involves trying to keep up with the pace of production—by checking the three-month construction plan, asking around to find out what is happening, and being present on-site.

“The schedule is also ever-changing, so whatever happens, happens. In a perfect world, of course, we would have such well-planned work that we would know a month in advance how to handle all the environmental issues that might arise. But often, documents arrive late, or... the schedule changes, and suddenly there is an opportunity to do something that was not initially planned, and then the focus is simply on solving that problem.” (Environmental Coordinator, Contractor)

The client’s environmental specialists, however, expect a more proactive approach from the contractor’s environmental team and explained how this would improve collaboration. As one of them noted:

“If you’re proactive in your work—if you plan your activities, if you have clear working methods, and if you’re not constantly chasing urgent issues or reacting at the last minute—then there’s time. If you plan things in advance and present proposals, then we can always be involved as a kind of think tank.” (Environmental Specialist, Client)

Moreover, they reported that they often feel they can only intervene once a mistake has already occurred—or is about to occur. Although they would prefer a more

collaborative role, they feel the structure of the contract limits their ability to engage earlier:

“We probably would have preferred to serve as more of a sounding board over the years. That there had been more room for discussions on proposals and approaches instead of... simply pointing fingers. Saying: ‘This is wrong. This requirement hasn’t been met. We see a significant risk that this won’t be fulfilled or that mistakes will happen.’ We have essentially become just a compliance control function.”  
(Environmental Specialist, Client)

The challenge for project work arises when certain environmental requirements dictate the pace of construction activities—for example, environmental tests that must be analysed before work can proceed, or noise regulations and permits that restrict operating hours and the use of machinery. For environmental professionals, it becomes a question of timing the construction process: “You constantly have to stay alert and actively look for potential problems”(Environmental Coordinator, Contractor). By delivering this kind of information, however, environmental professionals often become the ones who disrupt ongoing construction activities. As one interviewee described:

“I rarely bring good news. It’s not like people stand up and applaud when I point out issues that both cost money and take time.” (Environmental Coordinator, Contractor)

For site managers, disruptions to the construction process can be a source of frustration, and they acknowledge that the environmental role can be a thankless one. While they recognise that environmental feedback is generally valid, they see timing as a critical factor. As one site manager reflected:

“Sometimes, during particularly stressful periods, many probably perceive those in the environmental role as being difficult rather than as being there to help.” (Site Manager, Contractor)

Upon further reflection, he added that the issue often lies not in the feedback itself, but in when it is delivered:

“If the timing is wrong, then that’s just how it is. But what they say is always wise. It’s just that sometimes, it’s the wrong moment. There are right and wrong times to receive information, depending on the phase we’re in and so on.” (Site Manager, Contractor)

These examples illustrate how temporal tensions in project work give rise to diverging expectations around environmental roles. While site managers prioritise maintaining a continuous production flow, environmental professionals must adapt to frequent changes while ensuring that environmental requirements are respected, often without fully knowing what is coming next. At the same time, the client expects the environmental team to act proactively, even when the conditions for doing so are limited.

## **DISCUSSION AND CONCLUSIONS**

The aim of this paper was to explore how everyday dynamics in construction projects shape environmental professionals’ work expectations. Our findings suggest that environmental professionals are acting between competing spatial and temporal understandings: one that values flexibility and immediate responsiveness, and another that demands foresight, planning, and control. Navigating these expectations requires not only technical competence, but also relational sensitivity and strategic timing. Consequently, the environmental professionals perceived their work as being both “the supportive hero who clears the way and lays the groundwork so we can build” and “the troublemaker who throws a wrench in the works for their colleagues”.

As previous research on temporal and spatial tensions in projects has shown (e.g., Maaninen-Olsson and Müllern 2009, Stjerne *et al.*, 2019), different actors tend to have different temporal and spatial norms that must be negotiated to enable collaboration. In our case, however, the client and the contractor never seemed to fully reconcile their differing temporal and spatial understandings of environmental work. Instead, it was the environmental professionals in the project who acted as a bridge between production and the client organisation—shifting between being present and embedded in day-to-day production, and being distanced and aligned with external, formal environmental requirements. This dynamic contributed to diverging work expectations rather than clarity. For individuals, this meant trying to fulfil expectations that do not fully align, which in turn could lead to work ambiguity and role conflict.

While this paper has identified some of the tensions that shape environmental professionals' work expectations, future research could further explore how environmental professionals manage these tensions in practice—for example, through boundary work or boundary-spanning activities. Such studies could provide valuable insights into how environmental professionals are collaborating with other professionals in projects.

By shedding light on how environmental professionals' work expectations are shaped through spatial and temporal dynamics in construction projects, this paper contributes to a more nuanced understanding of interorganisational collaboration in environmentally complex construction projects—highlighting the need to better support environmental professionals in their work.

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