

Case Study: Self-Delivery

London Bridge Station Redevelopment

Self-Delivery has enabled *Costain* to develop a model which enables a systematic and consistent approach in the deployment of resources, materials and controls on major projects. In this case study, James Elford, London Bridge Project Director, talks about the success of self-delivery during the station redevelopment project.

1. Background

Traditionally companies such as *Costain*, providing technology-based engineering solutions, work as a supplier-led business packaging our works for our contracts and inviting our supply chain to undertake the elements of work required. Working this way means everything is packaged up. So, there would be a reinforced concrete sub-contractor, a glazing contractor, a roofing contractor etc. Many other peers and main contractors are now working towards a self-delivery model. *Laing O'Rourke* are one example, and *Costain* worked closely with them on Farringdon, the previous Thameslink Programme project.

Self-delivery was particularly important on the London Bridge Station Redevelopment project for the following reasons:

- The programme of works was such that it would be difficult to enter into a viable sub-contract for the reinforced concrete works. Managing key requirements such as labour, risk, programme dates, access would have become challenging. Instead, a proposal was put to Network Rail, outlining how the package of works for the reinforced concrete work initially would be self-delivered. *Costain* employed all the engineers, foreman and key people undertaking the work, purchased all the materials and plant and then put everybody to work.
- Testing this against budget prices received from the supply chain proved to be the most economical way of delivering this project.
- It enabled us to control the pace of the project. So, *Keltbray* undertook the demolition, *Bachy Soletanche* did the piling and then the self-delivery team came in to do the pile-caps, the concrete columns. This then all allowed *Cleaveland Bridge* to come in followed by *Prater* to do the canopies.
- We could speed up when necessary, employ more people, bring more materials in providing we had the space and we could do it safely and all those sorts of constraints. The reverse also applied, and we could slow work down and potentially save money, fill the gaps in the programme in the right way.
- We could manage these programme risks flexibly, allowing us to stick to the programme because it was imperative we finished on time to enable the next part of the railway to open.

2. Embedding self-delivery on the London Bridge project

This model had been utilised previously on other *Costain* projects but key factors in embedding the practices on the London Bridge project included:

- People working with us - the previous project director and the works manager were experienced in this type of work.
- Having the right capabilities to make it happen. It was a strategic decision of how we were going to deliver that part to the works, set out from the very beginning.
- Proving its success on the first stage of the project built confidence and belief in the model.
- The process worked, and we improved. For example, we moved from a position of four or five months for the first bridge deck to four or five weeks for the last bridge deck. This was indicative of how we learned to improve the self-delivery function along with the rest of the supply chain that were building bits and pieces in and around us.

3. Key benefits of self-delivery

- Embedding self-delivery on the project was a good learning opportunity for the team both in building skills and experience and problem-solving any challenges. Costain had many engineers, foreman, quantity surveyors, quality personnel – the whole raft of the type of people you would find on a construction site – who joined the project either from elsewhere or within Costain and have gone through that learning experience. They felt the pain when something went wrong. But, learning from these experiences has helped them developed their skillset.
- Using this mode of construction on other projects and broadening our horizons into things like MEP, (Mechanical and Electrical installation) and identifying if we can employ the labour and buy the plant and materials to do those elements of work ourselves.

4. Key lessons learned

- In addition to improving efficiencies and developing skillsets, a key lesson was to understand the limits of our capabilities. One of our supply chain members went into financial difficulty and, while we took on that work and completed it successfully, in hindsight, considering the commercial and additional challenges, a supply chain delivered product or offering might have been a better option.

5. Key recommendations for future projects

- Understand precisely the scope of work you are going to self-deliver.
- Ensure the interfaces with the other supply chain members have clarity and consistency.
- Have the correct seniority in the team who can manage the process robustly.

6. Actions taken by Costain following completion of the London Bridge project

- Costain used the experience at London Bridge to assist in tendering future work, in talking to clients about how we might carry out future work.
- Elements of the lessons learned from London Bridge will be transferred across along with some of the personnel. Some of the best ways to make the changes is through utilising the people who understand the process. The team can be built upon and spread across other projects sharing their learnings and developing the team they are working with. There is nothing better than learning through doing - helping people to learn is a far better way to make sure that a skill is embedded and developed.

Author

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Further information

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