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# Case Study: **Central London Trio of Projects**





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# Trio take on triad of city centre projects

The dynamic trio of BAM Nuttall Ltd, Prime Scaffold & Structural Designs Limited (PSD) and Alltask Ltd have successfully completed a triad of projects in the busy centre of London. Initially BAM were engaged by Network Rail to undertake a project at Clink Street with discussions progressing to take on the further projects over Borough Market and Railway Approach.

Colin MacCombe, Project Manager at BAM commented:

"Due to the high footfall in all three areas, the scaffold was designed from the off to be hung from the existing structure. We worked closely with Alltask, PSD and local stakeholders to develop a scaffold which offered up sufficient working space within the structure, sufficient protection to prevent dust and debris, whilst maintaining a scaffold structure that had visually looked tidy and acceptable from the ground level."

There was more than just the functionality of the scaffolding to take into consideration. Colin continued:

"The success of the schemes hinged on local stakeholders accepting that the scaffold design implemented will be visually as unintrusive as possible, with installation methodology accommodating out of hours installation and minimal disruption to members of the public, whilst maintaining high safety standards throughout the process. This has been evidenced by the strong and enduring relationships with stakeholders over multiple schemes."

We spoke to David Rogerson, Technical Manager at PSD, who talked us through what each of these projects entailed:

# **Project 1 | Borough Market**

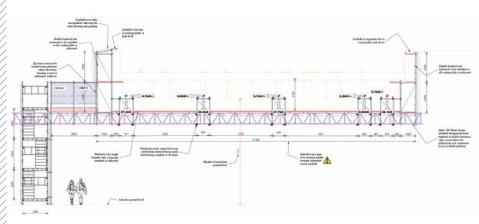
The first project for the trio of teams to tackle was located at Borough Market, a very busy place in terms of pedestrians. This meant that the scaffolding, which was required to provide access and protection for steelwork repairs and re-painting works to the underside of the bridge, was proposed from the beginning to be suspended from the existing steel work.

The design covers the complete area of works in addition to giving access not just to the underside of the bridge soffit but to the side parapets as well.

Several co-ordination meetings and calculation reviews were needed as part of the bridge assessment. Scaffold layouts and loadings were changed on a few occasions to help the structural engineers ensure their checks passed with regard to the capacity of the existing bridge.

The design also incorporated live load, wind loads to the shrink wrap, dynamic train pressures to the rear trackside elevation, and crowd loadings onto the lower-level hoardings.









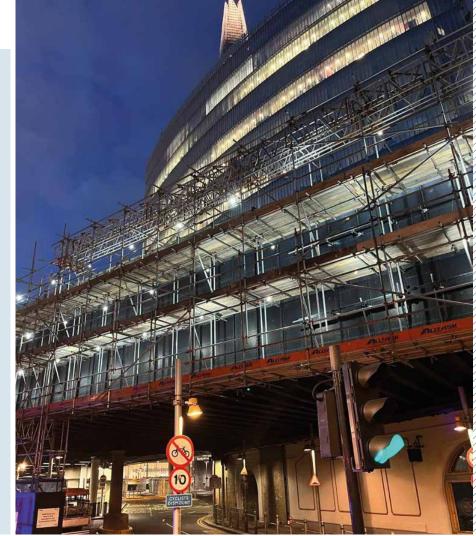
### Project 2 | Railway Approach

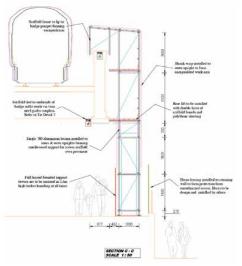
The teams then moved their attention onto their second project, which was located on another busy street and pavement area outside London Bridge station, at the foot of the Shard, where bus routes also needed to be considered, meaning the design was a complex one from the outset.

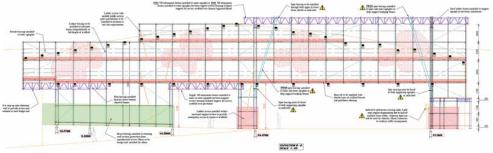
The scaffold was required to enable the safe removal of internal asbestos followed by UHP blasting and precision paintwork.

The solution the PSD design team came up with was a spurred beam span configuration which was installed at high level, this enabled the lower boarded level to be installed level with the soffit of the bridge and therefore not reducing any existing road clearances. Importantly, it also meant the client did not lose any valuable working space, which beams if installed to the bottom of the scaffold would have done.

The scaffold itself spans an impressive 20 metres with a 3-lift suspended scaffold.











The scaffold design entails a combination of live loads to facilitate the construction work, wind loads exerted onto the shrink-wrap sheeting, and dynamic train pressures from the Network Rail infrastructure to the rear of the scaffold. The design, therefore, takes into account the multiple loads acting on the scaffold to ensure its stability and safety during the construction process.

PSD also worked with Alltask to ensure the design used equipment that Alltask had readily available for the installation. The Alltask team ensured it was erected to the highest standards and successfully wrapped up for their valued client BAM, as part of the CP6 framework.

## **Project 3 | Clink Street**

The final project for the trio to contend with was located on Clink Street, which is a quieter back street of London, however it is still a very busy tourist location and pedestrian access along with vehicular access was a requirement for the scaffold design.

A fully encapsulated access scaffolding was required to enable BAM to undertake blast, paint, and steel strengthening works.

Agreed positions of supporting towers with bridged beam work located at a high level to form all the required vertical clearances were specified.

A water splash screen was installed through the pedestrian tunnel area to ensure that water management was in place to direct water away from members of the public during the blasting works.

Again, the design incorporated live load, wind loads to the shrink wrap, dynamic pressures from passing trains to the rear trackside elevation, and crowd loadings onto the lower-level hoardings.

David Rogerson, Technical Manager at PSD concluded:

"Over the course of many years,
PSD has developed a strong working
relationship with Alltask and BAM.
Throughout this time, we have
successfully completed numerous
projects, these three sites are a
testament to the hard work and
dedication of all staff involved.
I would like to express my gratitude
to Joao Abilio and Andrew
Robertson from PSD for their
invaluable contributions in delivering
all three sites on time while
maintaining our high standards
of quality and service."

Colin MacCombe, Project Manager at BAM, concluded:

"The partnership between BAM/
Alltask/PSD has led to repeated
work within the London Bridge
area, with the scaffold on the
Railway Approach structure being
repurposed to allow for installation
of a 20mx5m advertising scheme,
and the structure at Borough Market
proving sufficiently robust to allow
the durations to be extended to
undertake significant additional
improvements to the bridge
structure, with the market using
the structure to erect Christmas



Clark Coffield, Contracts Director at Alltask concluded:

"We successfully carried out and completed these three complex structures for BAM as part of their overarching CP6 SMD framework (Kent & Sussex Route), whilst working closely with Dave and his team at PSD throughout, from inception right through to construction. We would like to say a big well done to everyone involved for their hard work and commitment on this challenging infrastructure project, and a big shout-out to our dedicated team for delivering an exceptional scaffold access and containment solution."

