



Skanska

The M25 Road Widening Mega-Project

***SWORD***

GRC



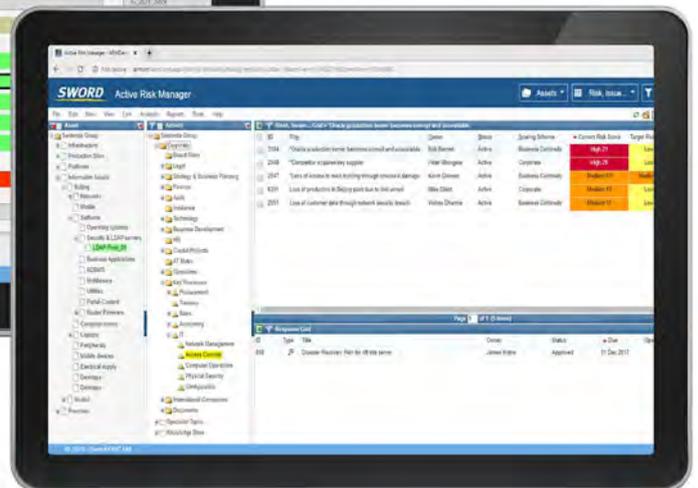
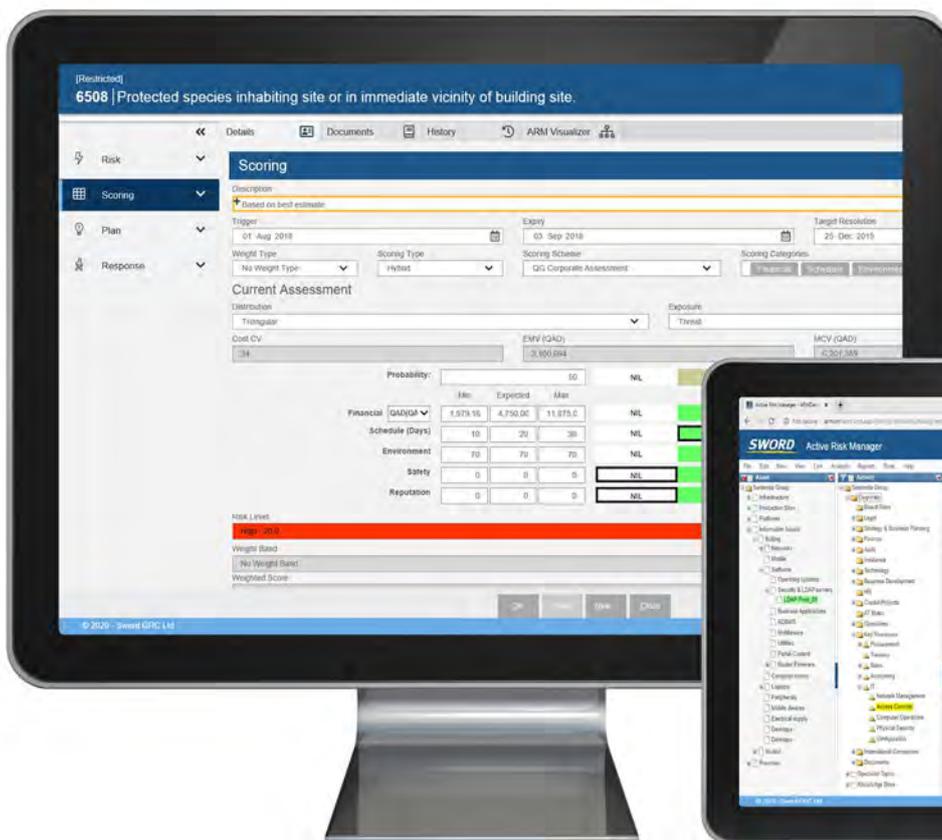
## The Challenge

The M25 is a 117-mile (188 km) highway that encircles Greater London, making it the second largest orbital road in Europe. Skanska was awarded the contract to widen two sections of road to increase the number of lanes and to refurbish the 3/4 mile long Hatfield road tunnel. The contract value was in excess of £1 Billion (over \$1.6b) and represented a major step change in UK infrastructure procurement in terms of scale and risk.

The contract was fixed cost, lump sum with an immovable end date. The project had to be completed in time for the start of the 2012 London Olympics, with potential costs and liquidated damages of £70m (over \$100M) if deadlines were not met. If the end date was missed then the entire project had to completely demobilize for the duration of the Olympics and then remobilize afterwards.

This was an extremely high profile project, with numerous stakeholders including UK government ministers and agencies, several local authorities, utilities providers, emergency services and the public. The M25 is a vitally important part of London and the UK's transport infrastructure and so any delays or failures would have attracted major negative publicity and had major reputational and economic impacts.

The inherently risky nature of the project was compounded by the fact that the contract was signed five weeks later than expected, making an incredibly tight deadline even tighter. The 'lump sum' nature of the contract also transferred considerable risk to the contractor. Traditional methods of generating additional value were not an option and at the point of tender a significant number of incorrect assumptions were likely due to the lack of detail available.





## The Solution

Two broad approaches were adopted to help mitigate the high level of risk inherent in the project. The first was to gain an in-depth understanding of obligations to minimize the potential of being 'in breach' of contract. The second was to treat partnering seriously.

To support this strategy it was decided from the outset to utilize Active Risk Manager (ARM) Enterprise Risk Management software rather than hold risk registers in spreadsheets. This provided the benefits of increased security, better auditability, and custom reporting capabilities.

Risks were split into several registers within ARM to enable the different teams to take ownership of the process. A core register was also produced for macro risks that affected the whole project such as overall design risks. Risks within the top ten per section and any items selected for in-depth monitoring were substantiated with a current breakdown of impact cost from the commercial department. This cost data was hyperlinked from within ARM, allowing users to view the movement of the risk over time.

**“Implementing ARM helped the teams keep sight of the 'big picture' and enabled early investment in effective risk mitigation”.**

Construction in the UK has an inherent culture of 'fire fighting'. By utilizing Monte Carlo simulation in ARM to hold single risks with super-high impacts and very low probabilities, it enabled the teams to keep sight of the 'big picture' and helped prompt early investment in mitigation.



## The Results

**The level of reporting provided for the stakeholders was substantial, enabling all parties to have considerable confidence in the project's current status. This in turn led to simple resolution of issues rather than contentious disputes.**

**The increased level of transparency, trust and communication enabled by ARM ensured that issues were resolved at a greater pace and the non-confrontational approach aided all stakeholders.**

**“Skanska won the 'Major Capital Projects' Award and the 'Outstanding Contribution to the Risk Industry' at the CIR Global Risk Awards.”**

**Skanska believes that the project represents the world-class standard for planning predictable schedules, collecting accurate progress information, acting on that information and achieving all key milestones.**

**The project in its entirety completed eight weeks early, smashing all financial targets. The success to date means that negotiations are underway for new projects on two additional sections of the M25.**

**Skanska has won numerous awards for the risk management on the M25 project, including the Major Capital Projects Award and the Outstanding Contribution to the Risk Industry at the CIR Global Risk Awards in November 2012.**



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