



**Andy Martin Project
Manager (Substations)
Integrated Utility Supplies:**

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I was particularly impressed by the way everybody worked together to achieve the result. Nothing appeared too much trouble for anyone and where we did have problems these were resolved very quickly.
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Train enhancements call for power upgrades

The high profile power upgrade scheme was completed as part of our framework agreement with Integrated Utility Supplies with works being completed along the M23/A23 corridor. The South East Power Supply Upgrade programme required the upgrade of the rail network power supply to allow the next generation of enhanced specification trains to be rolled out. The new rolling stock put a greater power demand on the network than the old slam-door trains and required our combined rail and civils competencies for successful delivery of the logistically complex transformer sites and associated service routing.

Interlocking elements requiring clear and honest communications

With the new trains already in production and being deployed across the region, the power upgrade works were critical to ensure our customer could achieve their promises and roll out the improved trains to the agreed schedule.

From the outset we recognised that successful completion of the new and existing transformer locations would require end-to-end teamwork to mitigate the risks associated with providing preparation of ground and accesses, construction of retaining walls, transformer foundations, equipment bases, piling, fencing, cable routing, troughing, and under track crossings, in association with distribution of the upgraded power supply over several miles of operational railway.

We opted to take on a wholly collaborative and open relationship with our customer and principal supply partners to ensure the timely, efficient and compliant delivery of every element of these highly inter-linked and complex works. This ensured the right skills and minds were working together to create opportunities, mitigate risks and create an environment for innovation and sharing of best practice to ensure the next generation of trains could be deployed as planned.

IMAGE: Power upgrade scheme



Early access reduces delivery programme

With investigation work continuing, and distribution solutions being designed while others were implemented, this project asked far more of those involved than a typical project. Traditional technical approvals were run in parallel to site works, creating a production line process and enabling early involvement of our site teams for preparation of the ground, access and enabling works, whilst the structural designs and inter-disciplinary checks were finalised.

With personnel being deployed across several miles of operational railway, good communication was identified as a key issue. To deploy both trades and materials across the scheme required meticulous planning and clear communication to ensure the safe and successful completion of each element of the power upgrade scheme.

IMAGE: Power upgrade scheme