

CASE STUDY—CUSTOM-BUILT PSS UPGRADE

The Problem

ColepCCL in Scunthorpe are a leading chemicals and packaging company. Typically a 24-hours a day, 7-days a week operation they require unquestioned continuity of supply. Any such business must keep any interruption to supply to an absolute minimum—even if planned.

The main package substation was some 15 years old. Installation of a new production facility demanded increased capacity resulting in the need for:

- Transformer upgrade.
- ACB Protection replacement.
- Addition of fuse-switch outgoing circuits.
- Overhead busbar trunking.

The Solution

Following consultation with [ExEllison Switchgear Services Ltd](#) a **single day** shutdown was arranged. With our knowledge of the existing equipment an advanced shutdown was not required.

Transformer Upgrade

[ExEllison Switchgear Services Ltd](#) specified the transformer and produced the required drawings including busbar positions and HV terminal positions to enable simple installation. The transformer was delivered the day before the shutdown and stored overnight. The change-over took just four hours including the HV and LV connections.



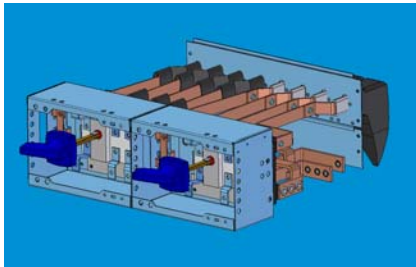
CPR Replacement

It had been reported during routine maintenance that the existing ACB protection unit (CPR relay) was non-functional. As well as upgrading the protection CTs to suit the increased transformer output the CPR relay was removed and a multi-function combined metering and protection unit installed. As well as providing long-time, short-time and instantaneous protection this unit provides multi-function metering facilities that were not available when the original installation was commissioned.

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Extension Cubicle / Overhead Trunking

In order to supply the new production machines additional fuse switches were required. Unfortunately there was no spare capacity within the existing equipment and there was no room adjacent to the existing switchboard for an extension cubicle. Following consultation with [ExEllison Switchgear Services Ltd](#) the solution was to provide a custom-built length of phase-crossing overhead busbar trunking to extend the busbars to a new front-access cabling fuse switch cubicle located 1 meter behind the existing package substation. For continuity the same switching devices were used as were provided within the original package substation.



[ExEllison Switchgear Services Ltd](#) utilise the latest 3D solid modelling CAD systems to ensure the quality of our designs. We can be sure that any custom designs will fit first time, every time. This upgrade project is a textbook illustration.

Conclusions

All of the above was completed on a single visit with a single shutdown. There was no need for an advanced shutdown and all elements were fitted first-time without the need for any modification to components on site.

A team of ExEllison Switchgear Services Engineers and fitters were used to perform these upgrades. This wealth of experience ensured the upgrade went exactly as planned without any problems on the day.

For Further information on Substation Upgrades or our other services contact us at enquiries@exellison.co.uk or Tel 01902 632639.

ExEllison Switchgear Services:

ACB Replacement
Spares

Extension Panels

Retrofit metering

Maintenance

Transformer replacement

PFC Panels

Protection replacement

Switchboard modifications

Emergency response

Control panels

Installation Services

Substation equipment

Operational Information