

## CASE STUDY

### Project: Laganside Courts Complex

#### PUBLIC SECTOR

Scope: Electrical

Value: £3.4 million

Client: N I C S

Main Contractor: Karl/ Northern builders

Consultant: Caldwell Partnership

Duration: 16 months

Completion: May 2000



#### Brief

Laganside Courts complex was one of the most advanced court buildings in the UK at the time it was being built. It consisted of 16 highly serviced courtrooms, a custody holding area, administration offices and secure Judge's accommodation.

We focused on creating and providing a detailed cost plan based on Court complexes recently completed in England by the design team. We used our own past experience in the local market to check and amend square metre rates for services such as lighting, power and fire alarm systems. Where possible we obtained indicative quotations for large items of plant such as lifts, transformers, LV switchboards and stand-by generators.

Once the contract was awarded the team met to discuss the design process, programme and procurement schedule.



#### Solution

There was reasonable time allowed for the design development and the demolition of the existing site. It was agreed that the M&E consultants could develop the design over the following four months without affecting the critical path of plant which needed to be procured.

Once the design drawings were issued, we re-priced the specification, highlighted any differences in the cost plan and made recommendations on how to reduce costs without having a detrimental impact on the quality of the finished building.

After a couple of meetings with the client it became clear that the NI Courts Service wanted this building to incorporate the latest technology that would allow digital recording of verbal evidence, and physical evidence to be displayed on screens at various locations in the courtroom and the facility to give evidence from a remote location.

At this stage we approached a number of specialist systems suppliers who we had worked with on previous large contracts and who had proven to be capable of taking on a design responsibility for this type of project.

When the quotations for the work were returned, we interviewed the most competitive tenders to ensure that their proposal met the design brief and they had the resources to carry out the work.

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An important aspect needed from the selected specialist, was the capability of developing and taking responsibility for their design and scope of work, and to provide a 12 year design warranty for their work.

Laganside Courts is now a fully operational facility with complete satisfaction of the Northern Ireland Courts Service.

### Result

This building was designed with a number of energy saving measures.

The majority of the lighting was controlled either via combined movement detector/ photocell or switched via BMS.

The glass curtain walling system at the front of the building and the numerous light wells at the back of the building maximised natural daylight. Full height blinds connected to the BMS system provided natural cooling and shadowing on a sunny day. We installed one of the first powerPerfector units in Northern Ireland within this building in 2008, this unit has reduced the electrical power consumption by 12%.

During the construction of this building we met regularly with the client to ensure that our design and installation methods met the client's expectations.

During this period we visited a number of recently completed court buildings with the client to ensure that we were providing the most up to date system.

We delivered a future proof flexible user friendly building. At the handover of the building it was reported to be one of the most advanced court buildings in Europe.

### Scope of Work

The electrical works included:

- New NIE supply
- HV switch and 1,000Kva transformer
- Main LV Switchboard
- Sub-main switchboard and cabling
- 1,000Kva standby generator
- Internal and external lighting (controlled via BMS system and local presence detector)
- Mechanical power supplies and BMS wiring
- L2 fire alarm installation
- Telephone wiring
- Television and radio installation
- Data wiring to all areas of the courts complex
- Public address and voice evacuation system
- Sound reinforcement systems in courtrooms ie
  - A. Micro phone on branches linked to digital recorders
  - B. Micro wave induction systems for the hard of hearing
- Call systems
- Cell call
- Affray call
- Telephone and IT wire ways
- Personal attack
- Intruder alarm
- CCTV system
- Card Access
- Video linking to court room
- Car park lighting
- Lightning protection
- Earthing and bonding
- Testing and Commissioning



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