

NEXUS HOUSE – LAN CUT IN AND REDIRECT PROJECT

In 2012, Sitenett was awarded a contract by Nexus (Tyne & Wear Passenger Transport Authority) to redirect the structured cabling in Nexus House.

Nexus House is a four storey building and had approximately 1200 cat.5 data points running back to the main comms room on the second floor. The comms room was suffering from a shortage of rack space to support planned network and systems expansion. Like many patching cabinets, the existing system had long since broken down, resulting in no documentation and a large tangle of patch cables making subsequent moves, changes and fault resolution an onerous and time consuming task.

The job specification was to install free standing cabinets on every floor, individually identify every cable as it entered the second floor comms room, then pull them back and reterminate them in the new data cabinets. The existing outlet numbering system had to be retained and every link certified with test results provided. All this had to be completed out of hours and with no disruption to users voice or data services.

Several contractors were consulted on the project, but only Sitenett were able to meet Nexus's requirements, with all other contractors doubting their accuracy of the cable identification.

Upon award of the contract, work began to prepare for the redirection. Cabinets were installed along with new cable tray and cable access routes. Fibre links were run between the cabinets, as well as 100 pair telecoms cables back to the main comms room. As Nexus ran all their telephony through an Ericsson MD110 PBX system, an extension to the Ericsson MDF (Main Distribution Frame) had to be installed too. New Cisco PoE Switches were also installed into the new cabinets connected back to the new Nexus Cisco 10Gbps network core.

Over a period of 6 weeks, a team worked through the night from 8pm-3am to carefully redirect the cabling. Each evening 48 data points were re-directed with associated data and voice services including:

- Identification of the equipment that was plugged in to the points to be redirected.
- Telephones were tested and data connectivity of network devices ascertained and documented including extension numbers.
- Telecom extensions were then traced back through the Ericsson MDF and documented (The MDF documentation was also out of date).
- Cross connects were moved between the old and new MDFs.
- Every Cat.5 data cable to be moved was toned out and labelled. Once the last one was labelled, they were double checked by re-toning.
- Cables were cut and the process of pulling back through ceiling voids and risers would commence.
- Cat.5 Cables would be reterminated on new patch panels and certified.
- Telecoms and data patches would then be re-established and all user devices tested.
- All old MDF and Patch panel jumpers then removed in the mains comms room and new documentation and patch lists produced.

HIGHLIGHTS OF THE PROJECT:

- Out of 1260 data points, no identification faults were made when toning and cutting cables.
- 23km of excess Cat5 cable was removed from the building
- Nightshifts varied from 2-7 personnel and remained on schedule throughout.
- Nexus received complete documentation including;
 - Data point, fibre and telecoms cabling certification
 - Structured cabling patch lists of every point in the building
 - Complete telecoms patch list, cross referencing; extension number; MDF jumpering and LIM Card port.

The entire project was completed on time and within budget. In fact, Nexus had originally costed for their telecoms engineers to take care of the Ericsson MDF jumpering, testing and documentation every night. As Sitenett personnel were able to take care of this too, Nexus made a substantial project cost saving.