

Highgate Control Centre Construction & Fit Out Works



As part of the Northern Line signal upgrade project for London Underground, Cleshar were instructed by Tube Lines to construct a new control centre building at Highgate. The control centre would house state of the art signalling equipment and would control all trains on the Northern Line.



The works undertaken included the construction of a flat roofed single storey structure clad in steel and glass, internal construction and fit out elements for the main building and gatehouse, the inner signal control area which is contained within solid concrete walls and fitted with bomb blast resistant doors. The project also included the installation of London's largest single membrane green roof - refer to separate Project Profile sheet for more information.



Project Profile

Scope of Works:

- New internal walls in brickwork and blockwork with a plaster finish (1300m²)
- Dry-lined partitions and linings to plant areas, concrete walls and external cladding (800m²)
- Suspended ceilings with ceiling features to the main control room (1100m²)

Project Details:

Client: Tube Lines

Value: £2m

Duration: 18 months

For more details contact:

CLESHAR

Heather Park House North Circular Road Stonebridge London NW10 7NN

T: +44 (0)20 8733 8888 F: +44 (0)20 8733 8899 W: www.cleshar.com



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Scope of Works Continued:

- Medium and heavy duty raised flooring with 900mm deep service voids beneath (1260m²)
- A steel access staircase to the roof area and general ancillary steelwork
- Formation and fitting out of all toilets, shower rooms, locker rooms, kitchen and canteen areas
- Internal metal door sets 38No. with security controlled access
- Five Automatic blast doors to high security areas
- Painted wall and ceiling finishes (2000m²)
- Carpet, vinyl, ceramic and epoxy floor finishes (2100m²)

Design Development

Cleshar worked in conjunction with Tube Lines construction and design team to complete the detailed design and implement some of the more specialised elements of the project. These included:

- Fully automatic blast door sets, operated via an electronic security access control system and electric overhead motor. Each of the 5No. door sets weighed about 1.5 tonnes
- Raised access floor systems to provide for general and specific point loading, whilst maintaining full rigidity and accessibility for future under floor services installation and maintenance
- Metal door sets, with security controlled access and locking

- Dry-lined partitions, including fire-rated types suspended at high level for corridor services distribution and those with large apertures to provide high and low level air plenums.

Challenges

- Fit out works commenced in stages prior to watertight date to gain programme time and a temporary weathering system was installed
- Coordination of all works with other specialist trade contractors
- All deliveries had to be coordinated with the depot due to the single lane access road and no articulated lorry deliveries could be accommodated.

