
Holiday Inn Express, Oxford Rd, Manchester Initial M&E Services Strategy

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August Consulting Group
MIOC
Styal Road
Wythenshawe
Manchester
M22 5WB

T. 0161 641 1184

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1.0 PROJECT OVERVIEW

The Holiday Inn Express on Oxford Road Manchester is a 10-storey hotel situated adjacent the River Medlock. The proposal is to retain all the plant on the existing roof and construct 2 additional storeys above the plant deck.

The plant deck will become the 11th floor and will have an open façade all around its periphery. The new 12th and 13th floors will have an additional 24 bedrooms between them.

The main area of concern and coordination is the relocation of the plant room. As the proposal is to route stairs and extend the 2 lifts up through the plant room the plant room will need to be relocated.

This will incur a period of down time for the hotel due to the isolation and rerouting of the refrigerant systems for the AC (system drain down, rerouting of pipe work and recommissioning), relocation of the electrical DB and controls panel (new boards, extend cables and test and commission).

2.0 UTILITY INCOMING SERVICES

Electricity;

Although it is considered that the additional 24 rooms will not exceed the existing electrical incoming capacity, this is yet to be confirmed.

Gas;

Although it is considered that the additional 24 rooms will not exceed the existing gas incoming capacity, this is yet to be confirmed.

Water;

The incoming water main is considered adequate for the additional 24 bedrooms.

3.0 MAIN SERVICES DISTRIBUTION

Electrical Distribution

A new DB will be required per floor to supply power to each bedroom consumer unit. A board will also be provided that will cover the 2 floors for the landlords small power and lighting.

Mains cables for each board shall be taken from the main splitter board in the switch room and routed up the existing service riser to the required location.

At this point each submain for each bedroom shall be routed within the corridor ceiling void to terminate at a consumer unit within each bedroom.

All electrical installations shall be in accordance with the current (at the time of construction) edition of BS 7671.

Gas Distribution

The existing distribution should be suitable to accommodate the gas load for the water heating. It is proposed that the existing gas fired water heaters are decommissioned and removed with new gas fired boiler and hot water storage vessels installed.

The new plantroom is to be located to the eastern side of the roof, as the existing plant room is to incorporate the extended stair and lifts. The existing pipe work will therefore be extended to this point.

Cold Water Distribution

The existing water distribution for the lower 10 floors shall remain as is.

Due to the relocation of the plantroom, all pipe work from the tanks will be rerouted and extended. This is the same for the distribution pipe work from the paint room through to each point of use in the new extension.

4.0 HEATING & COOLING

The existing level 11 is where the current AC condensers are located.

Due to the restricted head height above the units, it is proposed to relocate the existing AC condensers on to the new roof. This new roof level will also accommodate the new condensers for the new rooms.

All existing pipe work will need to be cut back to the riser and extended to roof level.

5.0 VENTILATION

The existing AHUs are to remain in situ and will not be upgraded to incorporate the new bedrooms. The intake ductwork to each AHU is to be extended to terminate against the façade to allow fresh air to be drawn into the units. The dirty air will be discharged into the area as currently set up with the cross ventilation dissipating the dirty air to atmosphere.

The extract only toilet fan is to be extended and terminated to the façade to discharge the extracted air to atmosphere.

The new bedrooms shall have individual ventilation units complete with heat recovery providing fresh air to the bedroom via the fan coil unit, and exhaust from the bathroom. This will mean that each bedroom will require an exhaust and intake grille on the external façade which would need to be reviewed for approval by the planning officer.

SMOKE VENTILATION:

The existing stair core mechanical smoke ventilation system is to be extended to the new roof level of level 13. The system will need to be extended with AOVs at each floor level within the newly created lobbies. The stair core natural AOV at the head of the stairs is to be relocated at the head of the extended staircase.

6.0 DOMESTIC HOT & COLD WATER

Domestic Cold Water Distribution

The existing pipe work for the gas and DHCW shall be rerouted to the new plant room. The riser for the services within the old plant room will be retained with new pipe work for the new floors being routed up through the floors from this point.

Hot Water Generation;

As the plant room is being relocated the existing hot water heaters will be decommissioned and removed. New water heaters/boilers will be installed, and possible storage cylinders provided. A flue dilution system will be proposed to assist with the dissipation of flue gases.

The CW booster pump set will also be replaced due to the increase in duty.

7.0 ABOVE GROUND DRAINAGE

All stacks will be extended to penetrate the existing roof and up through the new level 12 floor slab. These will then be extended to pick up all bedroom bathrooms. Some of the venting stacks will be routed to connect to one stack which will penetrate the roof.

8.0 LIGHTING;

Hotel Bedrooms

All lighting shall generally comprise LED downlighters and/or pendants as agreed with the Architect. Lighting shall be simply switched, via local switching in accordance with brand standards.

Communal Areas

All communal areas shall be provided with lighting, as per brand standards. The lighting shall comprise LED fittings. Communal corridor lighting shall be part switched by occupancy detectors with the emergency lighting remaining illuminated 24/7.

Lighting to cleaners' stores and the like, shall be IP rated to suit the environment. These and other infrequently used areas shall be controlled via occupancy detection.

All communal areas shall benefit from the installation of emergency lighting with 3-hour battery back-up. The emergency lighting shall also include illuminated exit signage to suit the fire strategy.

External Areas

External lighting consists mainly of building lighting, access lighting to the roof, and over door emergency egress point lighting and signage.

The lighting levels throughout the development shall meet the requirements of CIBSE guidance. Emergency lighting and directional signage shall be provided as required to comply with Building Regulations and in accordance with the buildings fire strategy document.

9.0 SMALL POWER;

Generally, small power will be provided to all of the following areas:

- Bedrooms
- Back of House areas
- Corridors and stair cores

Small power outlets shall include the following;

- Socket outlets.
- Fused spur units (switched and un-switched).

Bedrooms

Generally, there shall be an allowance for the following:

- On each floor an electrical distribution board to be centrally located (where possible) to provide sub mains to each apartment consumer unit. Sub-mains distribution to each bedroom shall be routed via the ceiling voids in corridors.
- Within each bedroom a consumer unit shall be installed.

Corridors, stair core & BoH Areas

Adequate small power outlets for general use, cleaning and maintenance purposes shall be allowed to these areas. The service sockets shall be wired on separate radial or ring main circuits from the general sockets (communal areas, offices etc) from the dedicated communal distribution board for that designated area. All circuits shall be protected in accordance with the current edition of the IET Wiring Regulations.

All service sockets (corridors/stairways) shall be RCD protected. Within corridors, sockets shall be installed every 10m. Where doors divide corridors, there should be at least one such socket in each section. Within stairways, sockets shall be located at each floor level. All socket finishes shall be as detailed by architect.

All external sockets shall be RCD protected and fitted with lockable protective IP65 rated covers. All service area and plant room small power outlets for cleaning and maintenance purposes shall be metal clad, RCD protected socket outlets.

10.0 LIFE SAFETY SYSTEM;

All life safety systems shall be installed to provide emergency cover and safety in accordance with the buildings fire strategy document;

- **Commercial sprinkler systems;**
Shall be adapted and extended to cover all additional areas.
- **Smoke ventilation systems**
The smoke ventilation system shall be extended and adapted to incorporate the additional floors (as note previously in this document).
- **Secondary Emergency Electrical Supplies**
Any emergency secondary supplies shall be maintained to all existing systems including those that have been extended and adapted.
- **Dry Riser**
The dry riser is to be extended to provide coverage to the additional floors.
- **Fire Alarm System**
The existing fire alarm systems will be extended to all bedrooms, BoH areas and communal spaces.



11.0 SECURITY SYSTEMS;

Access Control & CCTV;

The new floors shall be provided with access control and CCTV coverage as per the existing floors to retain consistency throughout the building.

12.0 TV & DATA SYSTEMS;

TV & DATA System;

The new floors shall be provided with TV and data as per the existing floors to retain consistency throughout the building.

All wiring shall be taken from the existing comms room and new splitter boards.

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