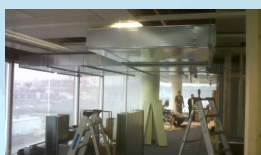


## CASE STUDY

# INNOVATION AT NEW ZEALAND HOUSE, HAYMARKET



**A clever solution which we engineered on budget and on time. Our client at New Zealand House, Haymarket, London, needed something out of the ordinary!**

Air conditioning was needed for a new office space and server room, however there were two main issues to contend with:

- There was no external plant space and we were eight floors up. Not even an opening window!
- The office was ventilated only via the means of a constrained louvre sitting above the glazing.

This was seen by the company as a major hurdle to their new office fit out programme given the landlord supplied system quite simply wasn't up to the job. They required additional cooling for their server room and the general office given the nature of their business.

### Internal Office Plant Room

The first problem, the inability to situate plant equipment on the roof posed a serious problem, after all quite simply where else could it go?

Embracing the challenge, our design team brainstormed ideas and came up with the possible and unlikely solution of having the plant room in the office itself, and forming a self contained area from scratch. The area would need to be sound proofed and ventilated, but the idea would work well. The issue of channelling the rejected plant room heat to outside was the next hurdle although we had a plan.

### Ventilation Solution

The problem for NZ House was that the building featured a fully glazed external façade typical of modern high rise offices. However, these were of single pane fixed construction and the design allowed for no opening of any kind. The only ventilation came from a series of small grilles placed at specific junctures on the façade.

The grilles did allow for limited ventilation but the questions was, would it be enough? On this note a ducted scheme would need to be designed to deliver ambient air to the plant room and an additional series of ducts routing the rejected heat to back outside. This sounds simple in itself but it needed to be extremely quiet and difficult to engineer given the confines of a space you'd struggle to swing a cat within !

As with every installation, we set to work designing the full system taking into account room volumes, air flows, noise levels, usage, peak loading and more, and designed a ventilation system that would satisfy the air flow requirements of all. It was a success and we have since picked up numerous clients in the same building through our innovative and clever design techniques. Call us today!

Building:	Multi Storey Office
Location:	Haymarket, London
Manufacturer :	Toshiba / Mitsubishi Heavy Industries
Heating & Cooling:	YES
Refrigerant :	R410a
Appointment Objectives:	Assess, Consult, Design & Install
Engineering Achievements:	Ductwork and Airflow Designed For Internal Plant Area
Timescale:	4 Weeks

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