

# Sustainability

## CLIENT

MTT Consulting

## PROJECT

National Audit Office, Victoria, London SW1

## ARCHITECT

tp bennett

## VALUE

£60 million

## WORK SCOPE

Complete modernisation of existing National Audit Office Headquarters with retrofitting sustainable services



NLG Associates were appointed by MTT Consulting to design all above ground public health services for the £60 million refurbishment of the National Audit Office in Victoria.

### The Brief

The stripping of the six story Grade II listed building to its shell to produce a fully modernised office matching the changing needs of the National Audit Office with the ambition to achieve an “excellent” BREEAM certification. As part of the buildings complete refurbishment, all three rooftop plant rooms were to be relocated to the basement.

### Challenge

The National Audit Office headquarters backs directly onto Victoria Station’s rail terminus. A substantial part the buildings’ existing drainage exits the rear of the building and runs adjacent to the railway lines. It passes over a number of the stations platforms at high level prior to connecting to a Thames Water sewer located within the grounds of Victoria station. It was imperative that NLG Associates above ground soil and waste design complemented the existing below ground scheme, as any necessary ground works would have required the part closure of Victoria Station at a huge financial expense.



### Outcome

- NLG Associates complimenting design was successful with this task providing the National Audit Office with a substantial budgetary saving.
- The building’s original plant rooms were located in three roof areas providing the building with gravity-fed services. NLG Associates engineering a new pressurised hot and cold water system serving the whole building from a single plant room.
- With the BREEAM certification a key priority NLG Associates concluded that due to the available roof space the introduction of a rainwater harvesting and a solar hot water system were both realistic options. NLG Associates designed a comprehensive solar hot water system consisting of approximately 50 panels that at maximum output would supply the National Audit Office with 6,000 litres of hot water to be distributed throughout the entire building.
- NLG Associates approved rainwater harvesting scheme is a designed retrofitting system that complies with the Grade II listing requirements of the building. It has been estimated that annually the NLG Associates design potentially allows the National Audit Office to recycle just over 800,000 litres of rainwater.
- In addition to the rainwater harvesting system NLG Associates also successfully advised on and incorporated into the design sanitary supply shut-off valves and urinal presence detectors in all of the National Audit Office toilet cores significantly reducing the buildings’ water consumption.



*“NLG Associates continue to impress with their professionalism and commitment to deliver projects on time”*

Graham Compton, Associate, MTT Consulting