

# **STANSTEAD AIRPORT TERMINAL**



## **HI-TECH BUILDINGS PART THREE**

**LEICESTER UNIVERSITY 1963**

**BUSH LANE LONDON 1975**

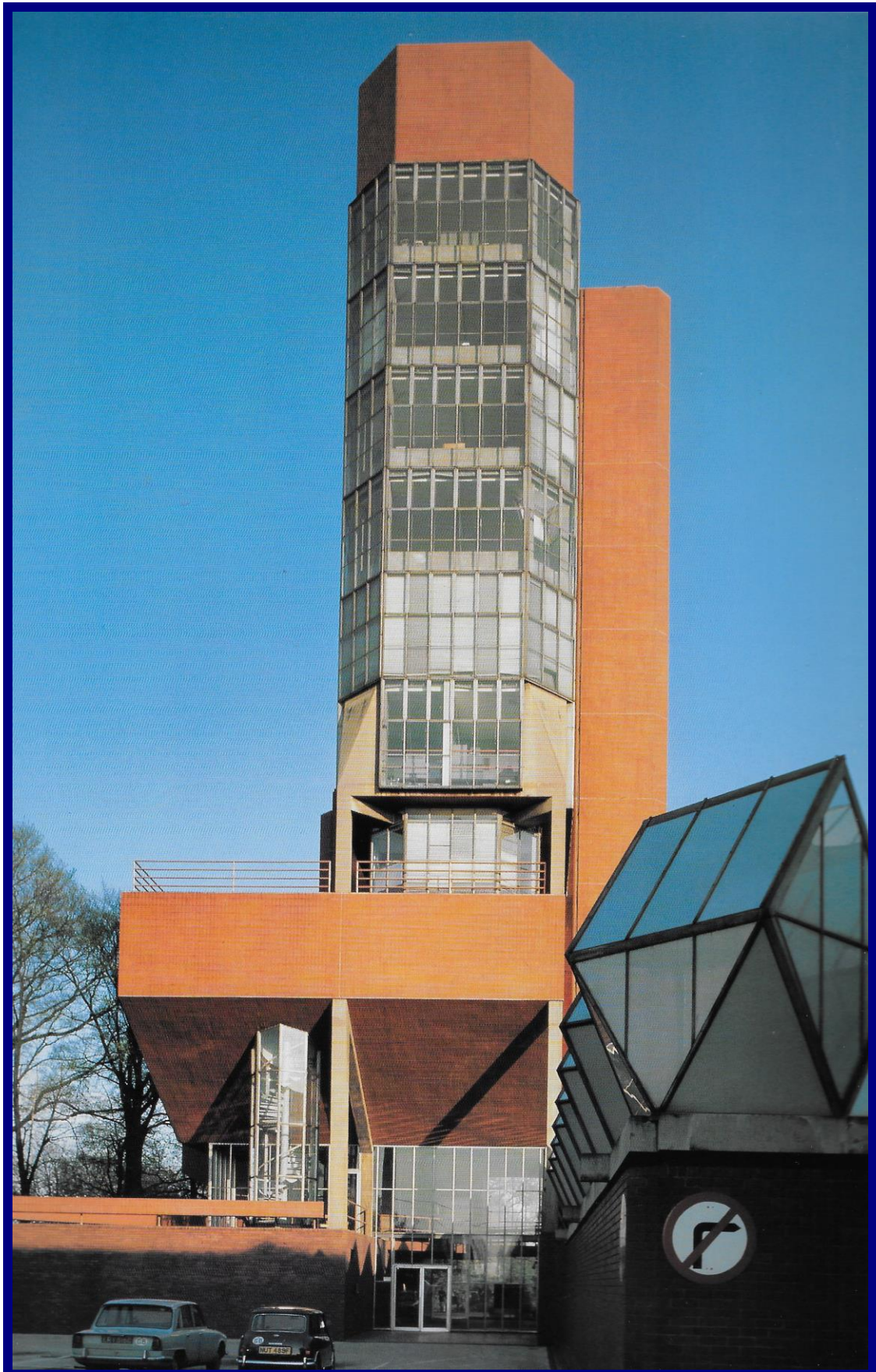
**STANSTEAD AIRPORT TERMINAL 1991**

**SEVENTY-EIGHT CANNON STREET 2011**

**BRIAN ROBERTS**

<2>

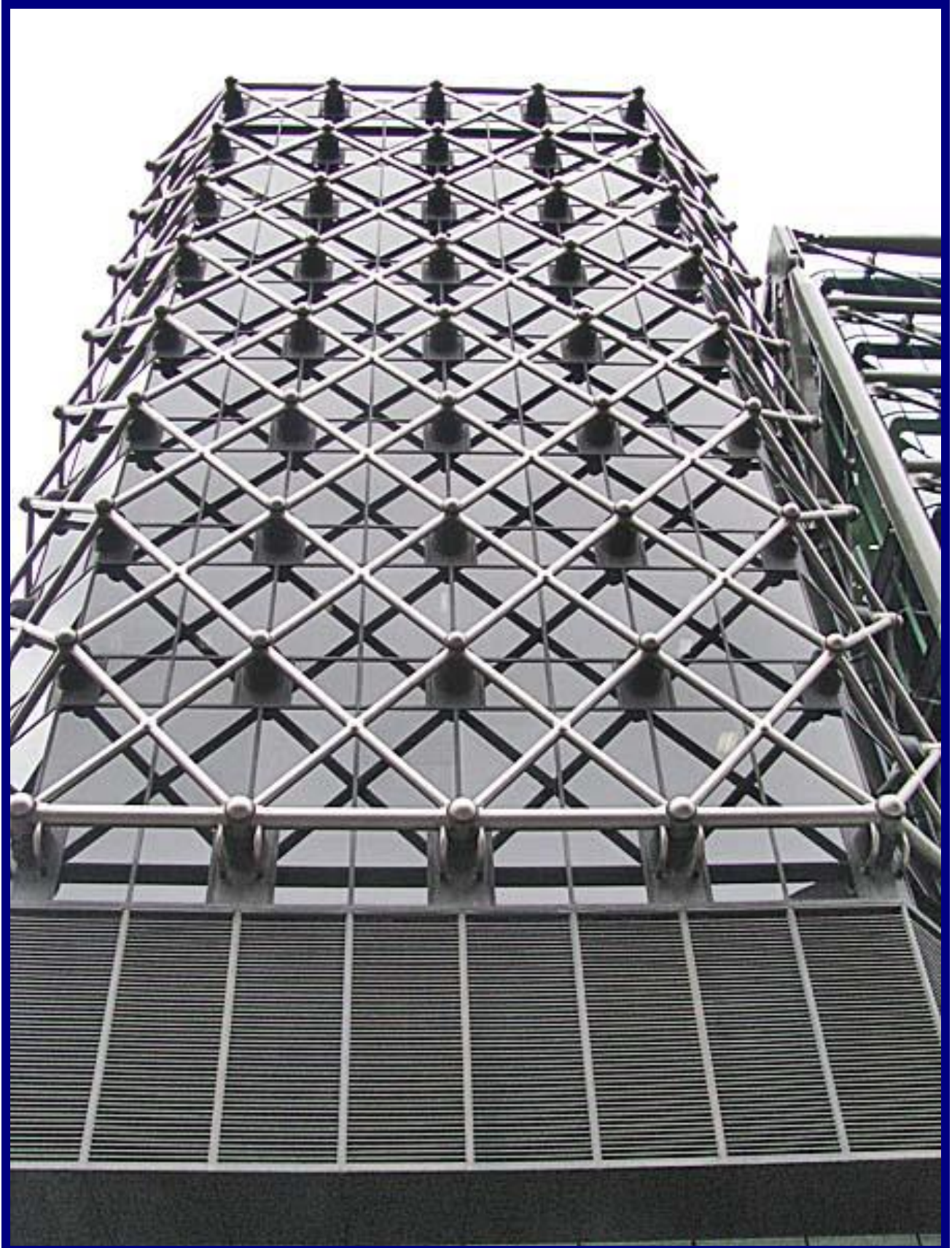
# LEICESTER UNIVERSITY ENGINEERING





<3>

# **BUSH LANE LONDON NOW EIGHTY CANNON STREET**





<4>

## SEVENTY-EIGHT CANNON STREET



# INTRODUCTION

This E-Book Number-3 features photographs of four **Hi-Tech** buildings with structure, unusual at the time of building, or with award-winning architecture. The buildings cover a time span of almost fifty years with examples from the nineteen-sixties, seventies, nineties and, by way of comparison, the final is early twenty-first century.

**Leicester University Engineering Building** opened in 1963. The architects and structural engineers were confronted with a number of problems. "The available site at first appearance appeared far too small. Some of the building's engineering workshops- heat engines, hydraulics and structures- contain very heavy machinery while others need large hydraulic testing tanks built into their floors. To create sufficient pressure for experiments in the hydraulics sump, the large water tank was required at a minimum head of 100 feet. All this demanded that these workshops be at ground level, with the other teaching workshops surrounding them." The University considered flexibility essential: "So the whole workshop building became an anonymous shed, within which all subdivisions, being non-structural, could be change without touching the skin."

The Building is Listed Grade II\*.

Architects [James Stirling and James Gowan](#).

**Bush Lane House** built in 1975, now named **80 Cannon Street**, has a distinctive external lattice-work structure around the office accommodation. This design is unique in the UK as the hollow columns are a fire-protection structure, being filled with water (see diagram on page 9). The design of both 80 and 78 Cannon Street means the office floors are free of structural columns. There were considerable restraints in the structural and architectural design of both buildings, being built over the Cannon Street Underground Tube Railway Station.

Structural and Fire Engineering [Ove Arup and Partners](#).

**78 Cannon Street**, the Bush Lane House neighbour, built much later in 2011 also features an external lattice-work structure, which though visually different, matches the design of Bush Lane. However, the structure fire-protection feature is not repeated.

Architects and Engineers [Peter Foggo Associates](#).

**Stanstead Airport Terminal Building** opened in 1991 and features "a *floating roof*, supported by a space frame of inverted-pyramid roof trusses, creating the impression of a stylised swan in flight. The base of each truss structure is a utility pillar, which provides indirect uplighting illumination and is the location for air conditioning, water, telecommunications and electrical outlets. Plant and machinery were placed below ground under the concourse allowing a lightweight roof having good day light transmission characteristics. In 1990 the building was awarded the European Union Prize for Contemporary Architecture.

Architects [Foster Associates](#) with Structural Engineer [Peter Rice](#).



<6>

## BUSH LANE LONDON





<7>

## BUSH LANE LONDON





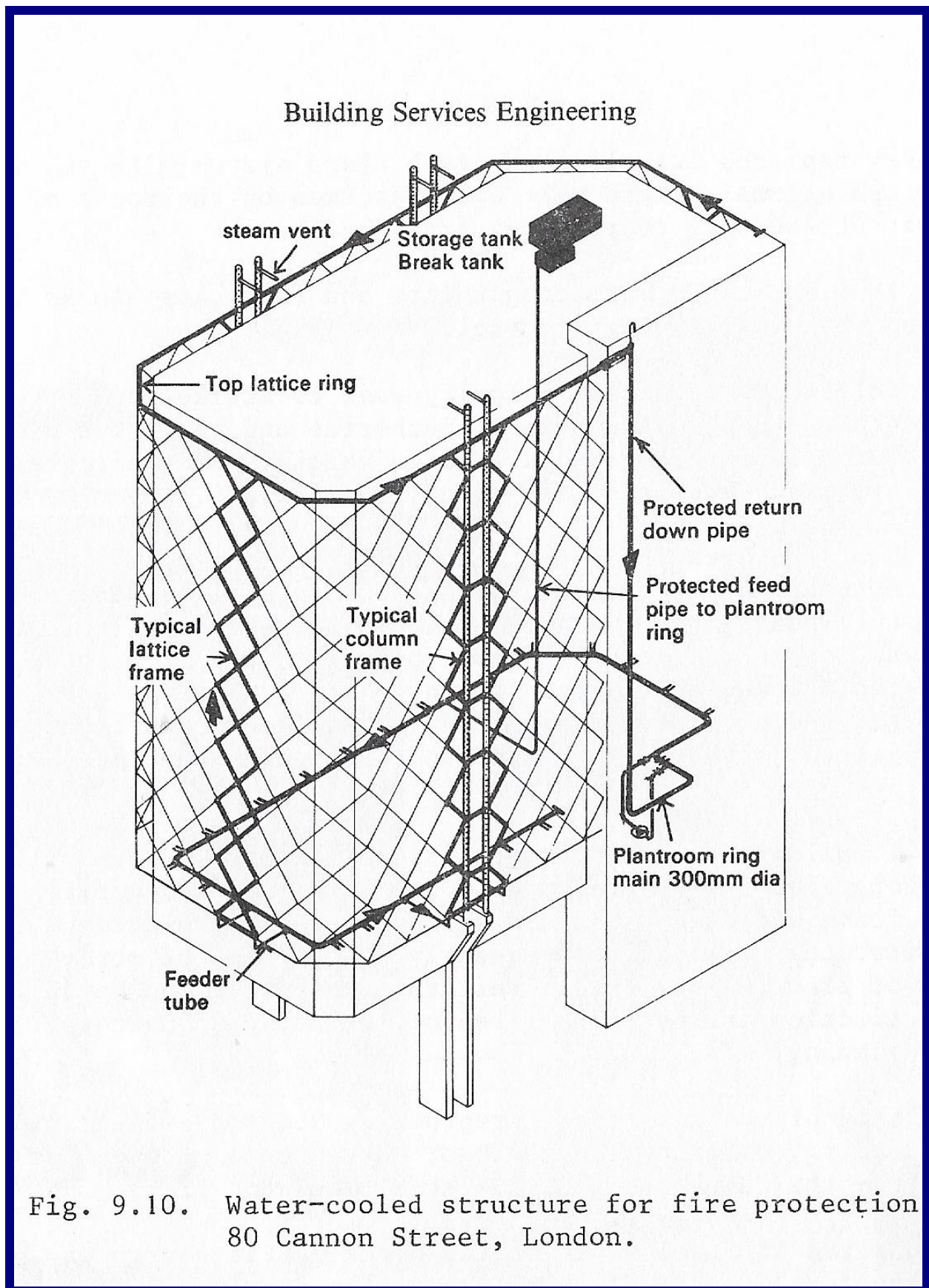
<8>

## BUSH LANE LONDON





# BUSH LANE LONDON



<10>

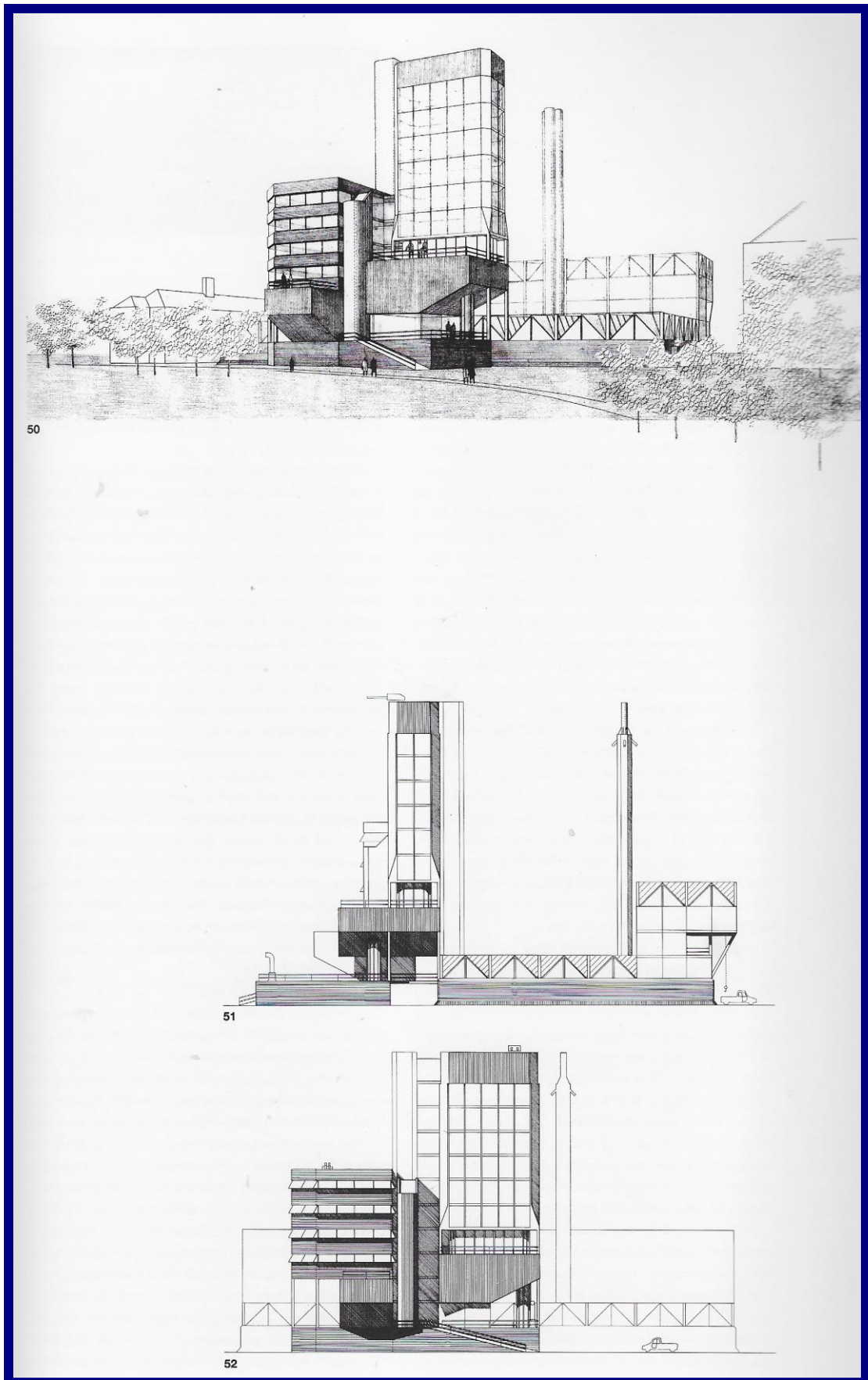
# LEICESTER UNIVERSITY ENGINEERING





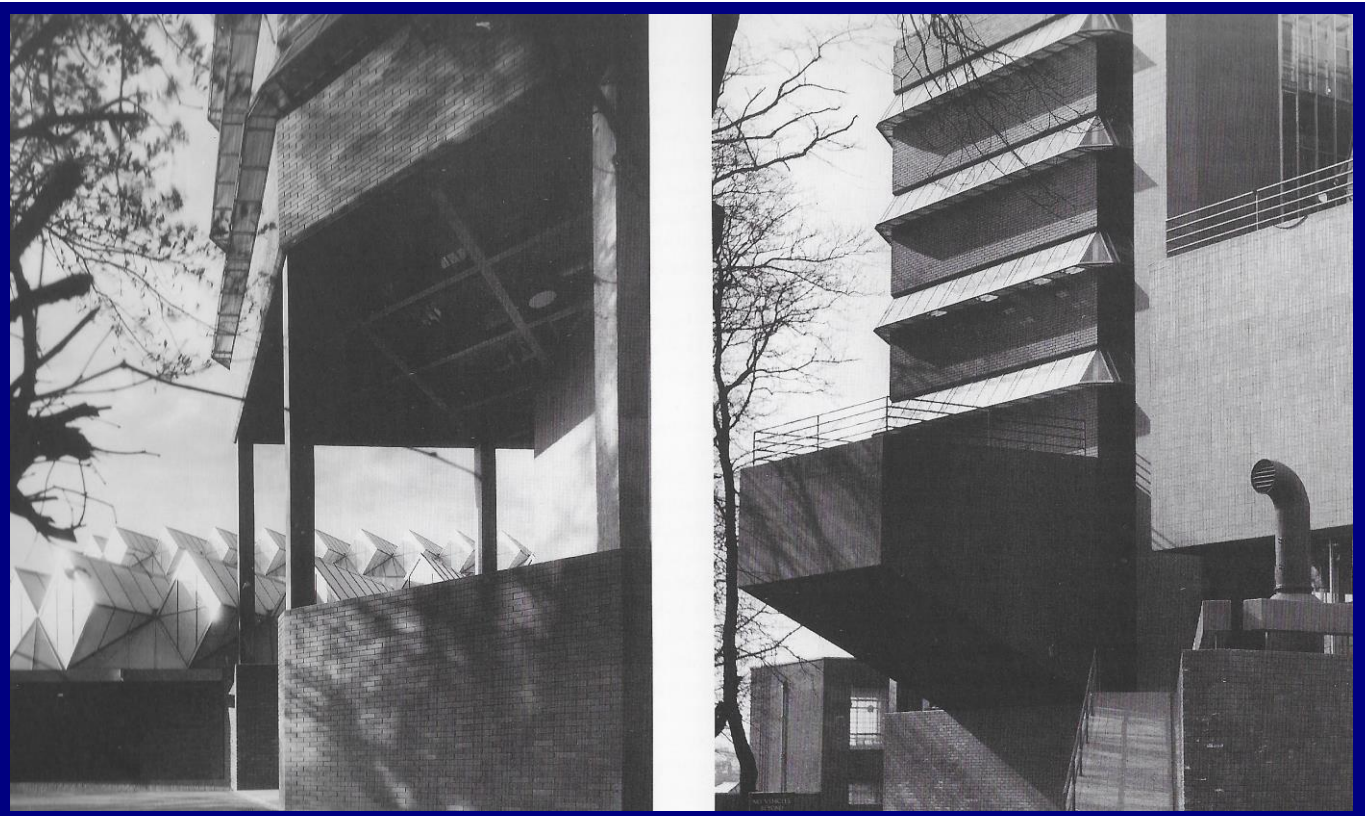
<11>

# LEICESTER UNIVERSITY ENGINEERING



<12>

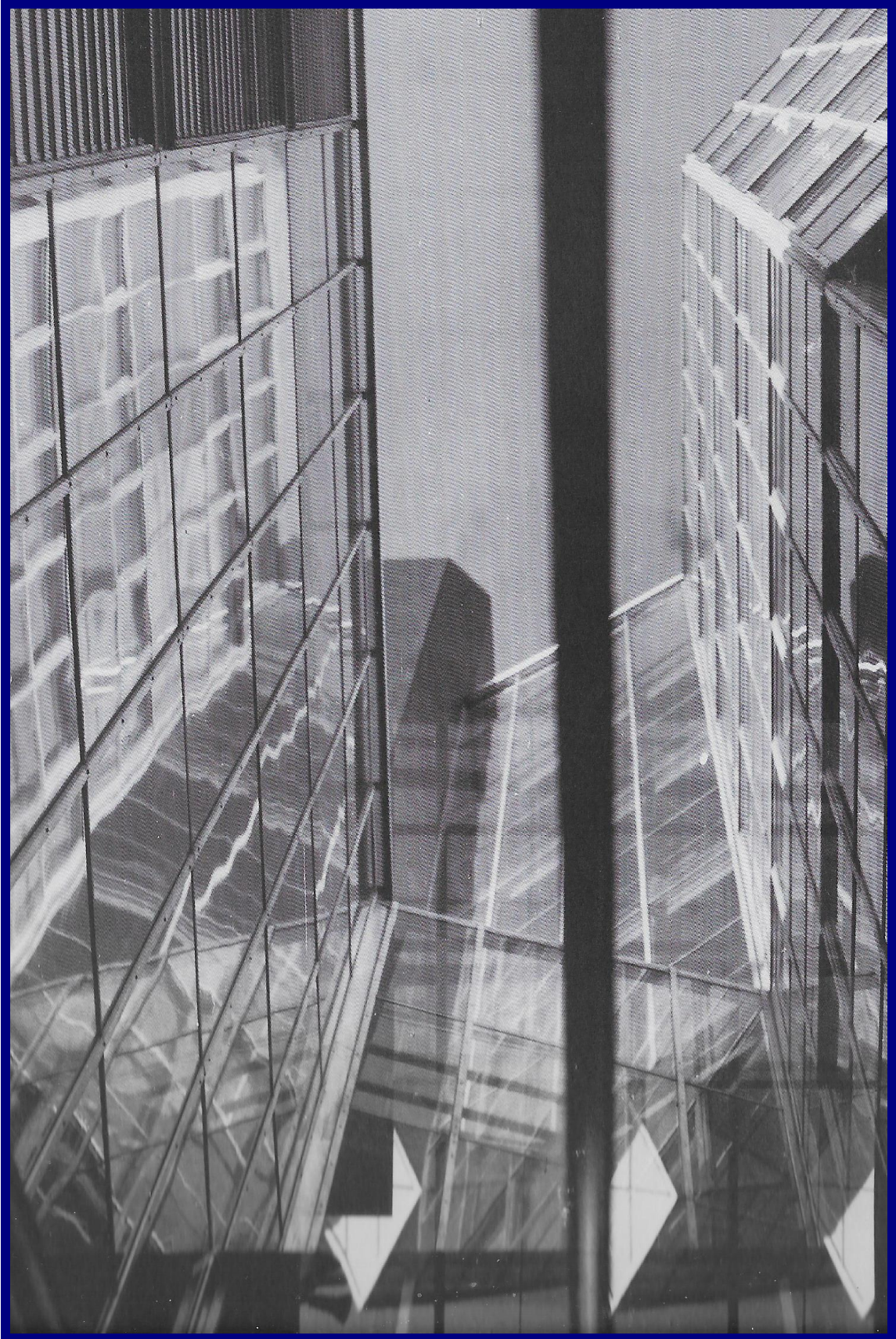
# LEICESTER UNIVERSITY ENGINEERING





<13>

# LEICESTER UNIVERSITY ENGINEERING





<14>

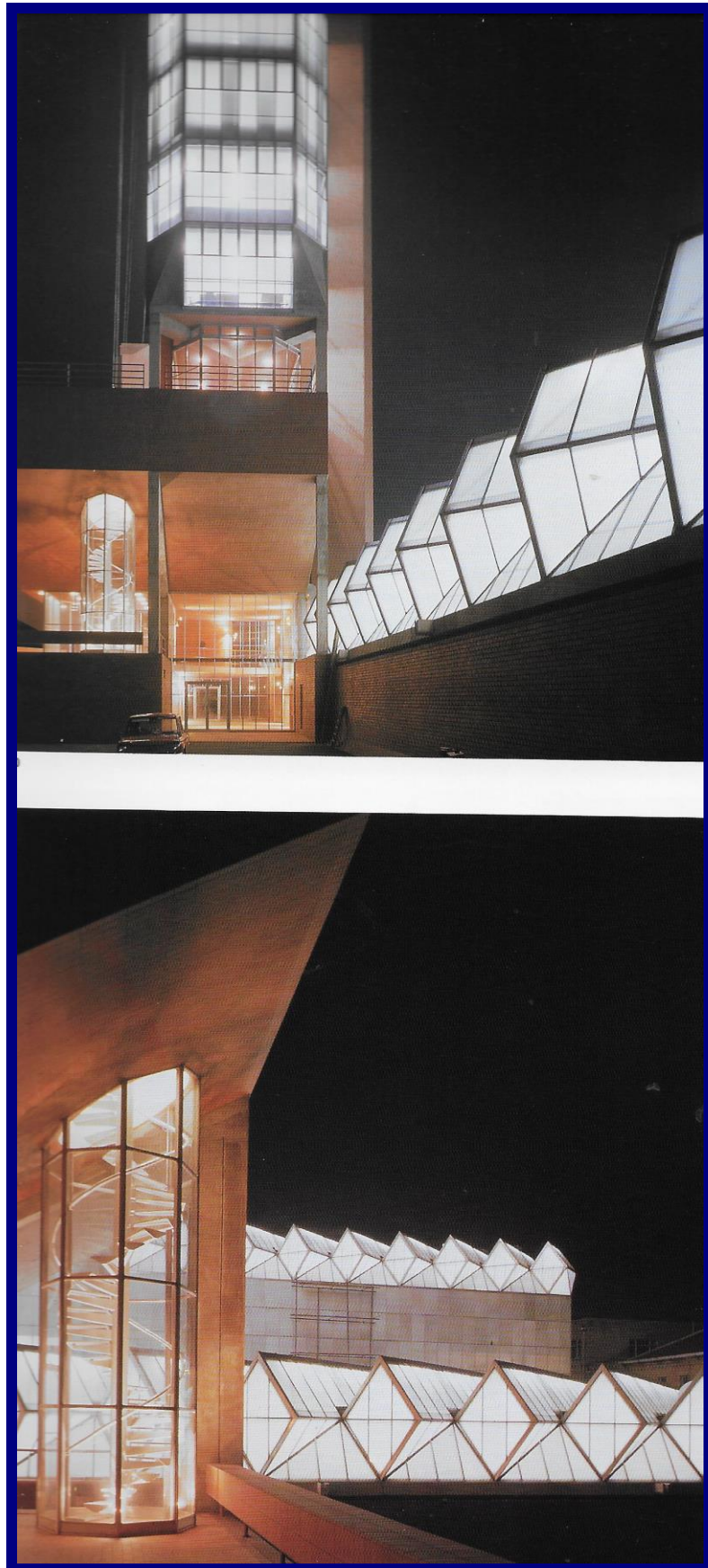
# LEICESTER UNIVERSITY ENGINEERING





<15>

# LEICESTER UNIVERSITY ENGINEERING





<16>

# LEICESTER UNIVERSITY ENGINEERING





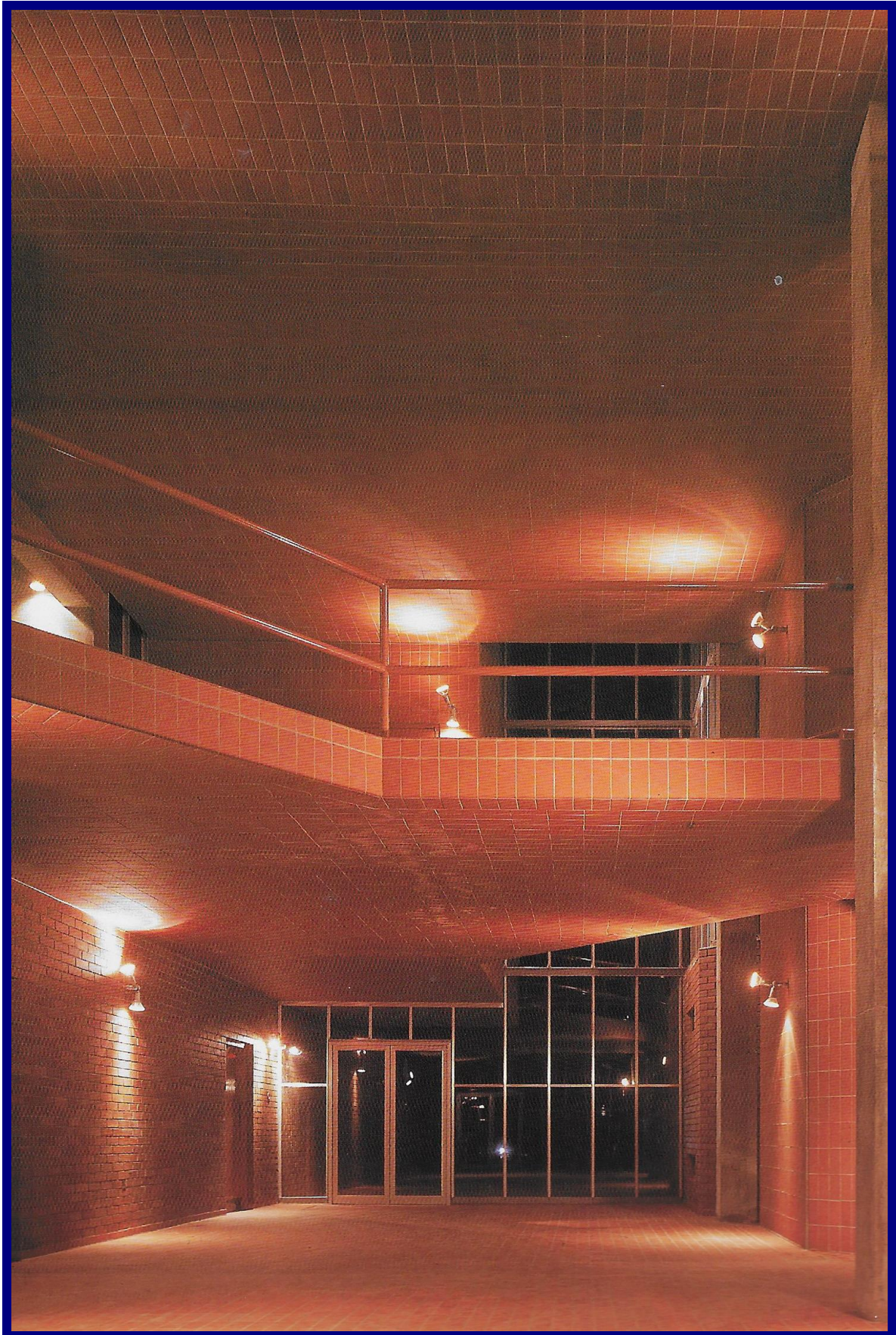
<17>

# LEICESTER UNIVERSITY ENGINEERING





# LEICESTER UNIVERSITY ENGINEERING





<19>

# STANSTEAD AIRPORT TERMINAL





<20>

# STANSTEAD AIRPORT TERMINAL





<21>

# STANSTEAD AIRPORT TERMINAL





<22>

## STANSTEAD AIRPORT TERMINAL



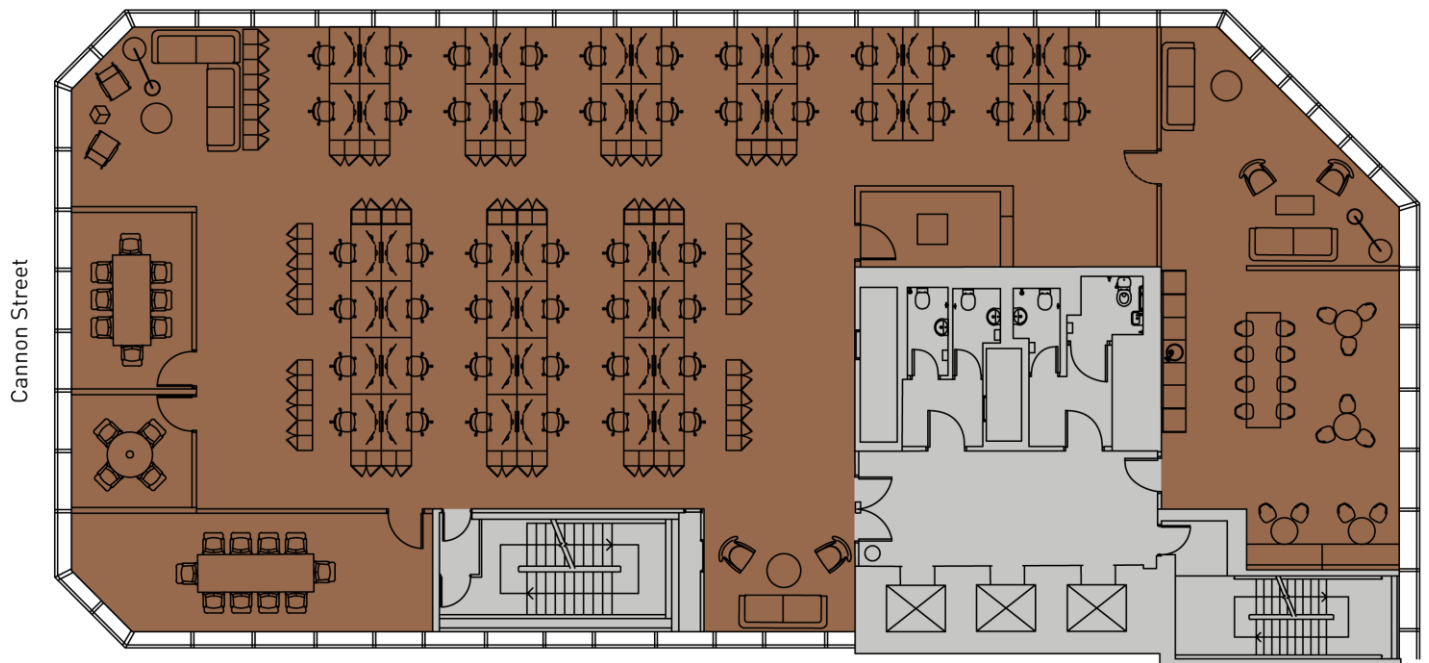


<23>

# EIGHTY CANNON STREET



Bush Lane





<24>

## EIGHTY CANNON STREET





<25>

## EIGHTY CANNON STREET





## **EIGHTY CANNON STREET**



## **REFERENCES AND FURTHER READING**

### **HI-TECH BUILDINGS PART THREE**

**LEICESTER UNIVERSITY  
BUSH LANE HOUSE  
STANSTEAD AIRPORT TERMINAL  
SEVENTY-EIGHT CANNON STREET**

1999 Pioneering British High-Tech: Architecture: Phaidon Press Limited, London.

2014 100 Buildings 100 Years, Susannah Charlton with Elain Hardwood (Eds),

Twentieth Century Society, Batsford, Pavilion Books, London.

2016 The Arup Journal-50, 1966-2016, Arup, London.