Daylight Availability

5% Daylight Factor - Predominantly Daylit => 300lux
2% Daylight Factor – Daylit
horizontal light = 2.5 x vertical light
‘Reasonable Conditions’:
Less than 5% of working hours over 25°C
Less than 1% of working hours over 28°C
Thermal Targets

- Blue line: Shorts, t-shirt, sandals
- Green line: Light trousers, Short Sleve Shirt
- Red line: Suit, no jacket
- Yellow line: Suit with Jacket

% People Dissatisfied vs Operative Temperature deg C

- 5% dissatisfaction at 25°C after 100 hours
- 1% dissatisfaction at 28°C after 20 hours
The Last Year

Total % above each temp.

- GROUND FLOOR %
- FIRST FLOOR %
- EXTERNAL TEMPS %

Deg C

%
And last July....
Sustainable Options Payback Analysis

- Photovoltaics
- MVHR
- Hydrocarbon Chiller
- Dimmable Lights
- Condensing Boiler
- Free Cooling to Comms
- Waterless Urinals

Payback (yrs) & CO2 Saved (kg/yr)
PV Array - Energy Generated

ELECTRICITY GENERATED & CONSUMED

- net electricity
- pv generated
- elect used
Post Occupancy Analysis
Annual CO2/m2

Heelas PRELIMINARY
Enschede Tax Office ANV
ECON 1998 GP 1 cellular NV >>
Woodhouse Medical Centre NV+
Marston Books Warehouse NV
ECON 1998 GP 2 Open NV >>
Elizabeth Fry Building MM
APU Queens Building ANV
Heelas 2006 AND AFTER VISIT
John Cabot CTC ANV
Portland Building ANV+
One Bridewell Street AC >>
de Montfort Queens Building ANV
Marston Books Office ANV
ECON 1998 Typ 2 Open NV >>
Barclaycard Freshfields MM
Charities Aid Foundation MM
Orchard LRC, Selly Oak ANV
Rotherham Magistrates Courts MM
ECON 1998 GP 4 Prestige AC >>
Cheltenham & Gloucester AC
Cable & Wireless ANV+
Co-op Retail Services AC+
ECON 1998 Typ 4 Prestige AC >>
Tanfield House AC+
1 Aldermanbury Square AC
HFS Gardner House AC

Heelas less PV 4.9 kg/m²
Enschede less PV 0.8 kg/m²

kg CO₂ per square metre of treated floor area per year

Heating and hot water - gas
Heating and hot water-electricity
Refrigeration and heat rejection
Fans, pumps and controls
Gas for humidification
Electric humidification
Lighting
Office equipment
Gas for catering
Catering and vending
Other
Computer room (including A/C)
Communications/IT rooms (inc A/C)
C&I swimming pool, transmitter etc, MBW mechanical handling