

Energy Report

2004/5

2004/5 Energy Report – Executive Summary

This energy report is produced to provide statistical information on costs and consumption of energy and water in University premises over a rolling three year period.

This year has been particularly challenging with the impact of significant increases in the world energy supply markets starting to show in our costs as the benefits of previous favourable procurement periods expire.

The annual key performance indicators (KPI's) from this year's report are as follows:-

Turnover

The University's turnover has increased by 7.7% during this reporting year

Student Numbers

The student numbers for full-time students have increased by 4.1%.

Premises

The overall premises Gross Internal Area (GIA) has increased by 6.8% over this year.

Energy

Energy consumption rose 8%.

Energy consumption per square metre was up by 1.5%.

Energy usage per FT student rose by 4.1% after falling for the previous three years.

Water

Water consumption rose by 11% during this reporting period.

Costs

All-inclusive costs for 2004/5 rose 24% to £6.15 million.

Environmental

Carbon Dioxide Emissions were reduced by 31% due to increased amounts of 'green' electricity being purchased.

Future Projections

Due to the volatility of the world energy markets, there has been a continuation of recent trends of rising costs of all forms of energy supply with unprecedented increases in the unit cost of electricity and gas during the summer of 2005. This cost inflation will result in significantly higher energy costs when most of our supply contracts are renewed at the end of September.

Industry indices cost projections suggest increased costs of around 50% for 2005/06 compared to those for 2004/05. Procurement activity during this period of volatility has followed industry best practice, tracking the monthly spot energy prices to avoid excessive risk premiums in longer term deals. In this market our current supply of green energy at zero cost differential is unlikely to be available over the next year.

The Energy Sub-Group has focussed additional activities and resources toward reducing recurrent energy consumption and is targeting a further reduction of 5% for 2005/06. A number of awareness initiatives are being promoted throughout the University premises and further emphasis will be placed on the use of energy efficient devices in our buildings and future developments.

Notes to accompany Executive Summary

The management of energy is undertaken by the Energy Sub-Group, which reports into the Environment Committee, chaired by the PVC for Infrastructure. As part of its strategy to control consumption and costs, the Energy Sub-Group has commissioned an Energy Report each year since 1997/8.

The membership of the Energy Sub-Group for 2004/5 was as follows:-

C. Jagger – Director of Estate Management
G. Scott – Environment Manager, Estates
J. Seymour – Management Accountant, Finance
T. Rudge – Energy Management Engineer, Estates
Dr. S.Pickering – Senior Lecturer, School of MMMEM
P. Cooper – Senior Engineer, Estates
Dr. R. Wilson – Senior Lecturer, Institute of Building Technology
J. Yarnall – BMS/Controls Engineer, Estates
L. Powell – Environment & Social Justice Officer, SU

Note that all figures relate to the University's financial year of August 1st 2004 to July 31st 2005, with the baseline for comparison being the previous (2003/4) financial year.

Utilities continue to be procured via Notice Ltd, which is a wholly owned subsidiary of the University of Nottingham.

2004/5 Energy Report

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Introduction

The annual energy report is produced to provide statistical information over a rolling three-year period. The data includes all of the University's UK building stock with the exception of student houses not located within our campuses.

It concentrates on three sections; the content in broad terms is:

Section 1 – Total Energy Report

Covering total energy costs broken down by campus, meterage squared and full-time student numbers set against the total University turnover.

Section 2 – Analysis of Energy Components

Covering the analysis of electricity, fossil fuels (gas and fuel oil) and water consumption and costs associated directly with the consumption.

Section 3 – Environmental Considerations

Covering carbon dioxide emissions and how the climatic conditions in the East Midlands and weather data affect the required heating load for the University.

Section 1 – Total Energy Report

1.A. - Energy and Water Costs Summary

Our energy and water bills rose by almost £1.3 million last year, as the effect of rapidly rising world energy prices began to feed through to the University's energy contracts. The vast majority of the increase was down to electricity, where the price rose 58% from October 2004 after our existing two-year contracts ended. Similar rises in the price of gas have not yet impacted heavily on the results shown in this report, but will do so next year.

Water prices also rose by around 18% from April 2004, and are expected to rise at greater than RPI over the next four years.

Energy prices have continued to rise in the summer of 2005, will impact with increased costs on our new contracts for gas and electricity commencing October 2005. To minimise these rises, 'flexible' energy purchasing was used for the first time, linking our price to current energy markets

Energy and Water Costs				Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	£ 2,077,626	£ 2,237,998	£ 3,043,972	36%
Sutton Bonington	£ 539,512	£ 536,245	£ 725,387	35%
Jubilee Campus	£ 296,760	£ 332,314	£ 379,587	14%
Others	£ 90,482	£ 147,268	£ 292,862	99%
Medical School	£ 1,013,500	£ 927,317	£ 1,026,500	11%
Total	£ 4,017,880	£ 4,181,142	£ 5,468,308	31%

Figure 1.A.1 Table of energy and water costs for last 3 years split by campus.

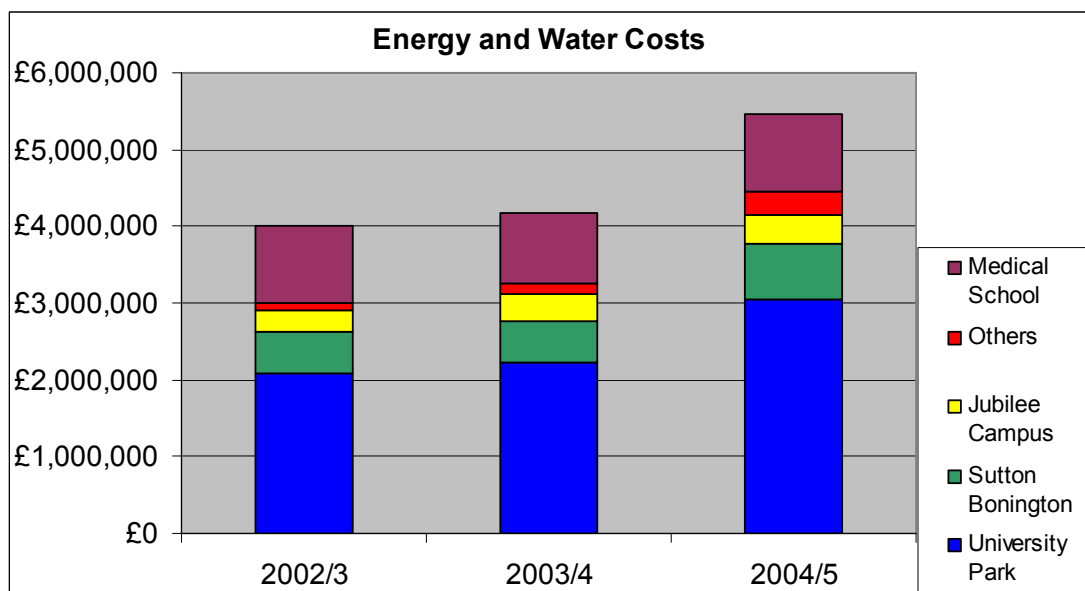


Figure 1.A.3 Graph of energy and water costs for the last 3 years split by campus.

Note that these figures exclude VAT and Climate Change Levy, which are discussed on page 10.

1.B. – Energy costs per square metre for each Campus

Campus Costs	Cost/sq.m/annum			
	Floor Area	Electricity	Heating	Total
University Park	277,857	£6.22	£2.47	£8.69
Sutton Bonington	48,459	£8.40	£3.47	£11.87
Jubilee Campus	41,589	£4.93	£1.33	£6.26
Others	52,828	£2.99	£1.66	£4.65
Medical School	45,036	£8.90	£12.59	£21.49
Total	465,769	£6.22	£3.36	£9.58

Figure 1.B.1 Table of energy costs per square metre, split by campus.

Overall energy costs per square metre have risen to £9.58, up from £7.60 in 2003/4. Note that the acquisition of King's Meadow Campus (21,340 square metres) has reduced the 'Others' total cost per square metre from £6.20 last year to £4.65 this year.

1.C - 2004/2005 Costs Broken Down by Campus and Utilities

Energy and Water Costs	Electricity	Fossil Fuels	Water	Total
University Park	£ 1,727,374	£ 685,857	£ 630,741	£ 3,043,972
Sutton Bonington	£ 406,862	£ 168,360	£ 150,165	£ 725,387
Jubilee Campus	£ 205,062	£ 55,188	£ 119,337	£ 379,587
Others	£ 158,094	£ 87,803	£ 46,965	£ 292,862
Medical School	£ 401,000	£ 567,000	£ 58,500	£ 1,026,500
Total	£ 2,898,392	£ 1,564,208	£ 1,005,708	£ 5,468,308

Figure 1.C.1 Table of energy and water costs split by campus and by utility

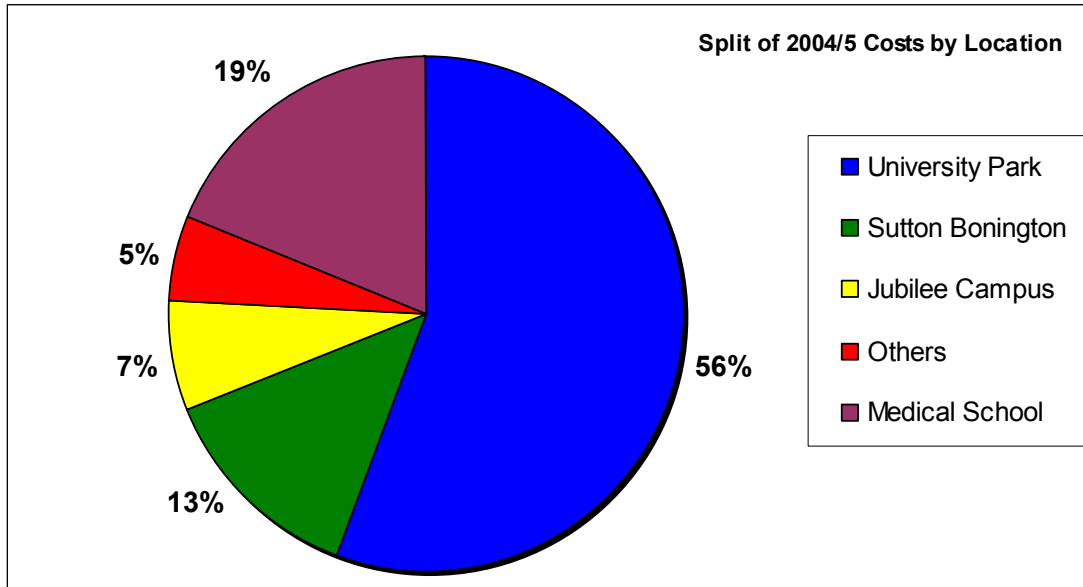


Figure 1.C.2 Pie chart of energy and water costs split by campus

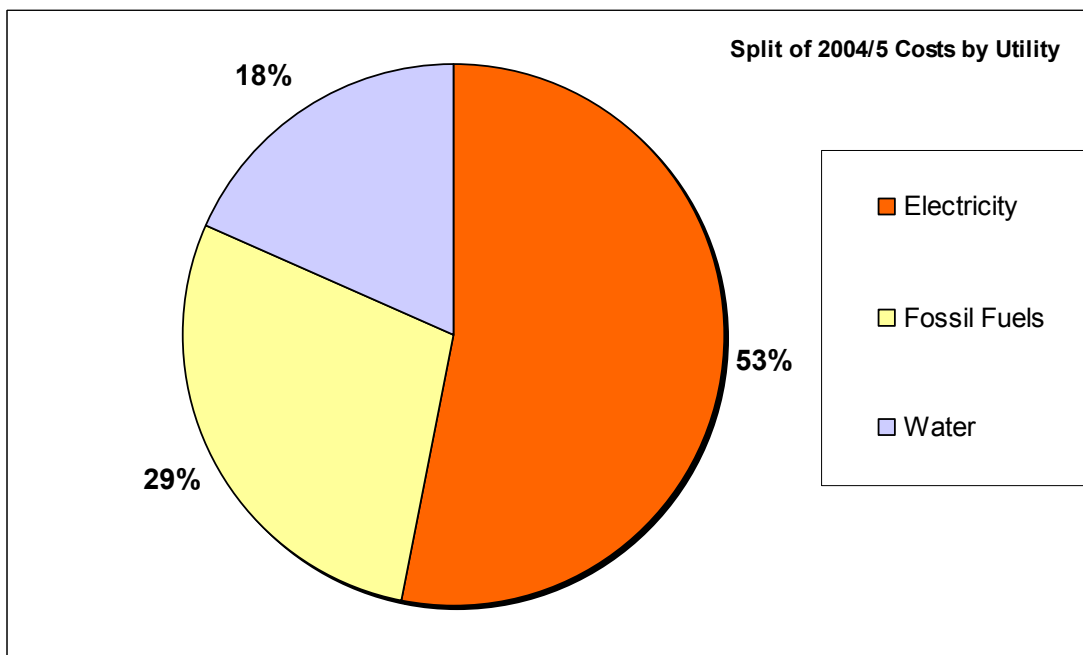


Figure 1.C.3 Pie chart of energy and water costs split by utility type

1.D - Energy Use Summary

Energy consumption was up by 8% on 2003/4, compared to an increase in premises area of 7%.

The raw figures show both electricity and fossil fuel usage rising 8%. The underlying trend over the last five years is that efficiency savings are being made on fossil fuels. There has been continued growth in electricity usage of 4% to 8% per annum as the University has grown.

Energy Consumption	MWh	MWh	MWh	Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	105,755	109,116	116,269	7%
Sutton Bonington	28,036	26,682	26,706	0%
Jubilee Campus	9,087	9,333	10,396	11%
Others	3,704	5,886	10,404	77%
Medical School	42,200	31,585	34,150	8%
Total	188,782	182,602	197,924	8%

Figure 1.D.1 Table of energy usage for the last 3 years split by campus.

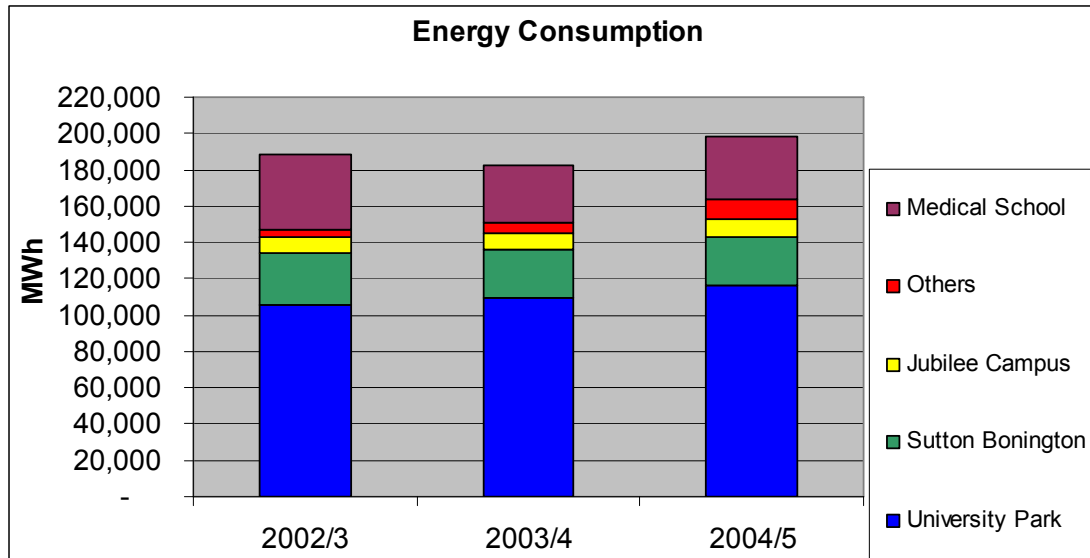


Figure 1.D.3 Graph of energy consumption for the last 3 years split by campus

1.E - Energy Use Breakdown by Campus and Utilities

Energy Consumption 2004/2005	MWh	MWh	MWh
	Electricity	Fossil Fuels	Total
University Park	43,245	73,024	116,269
Sutton Bonington	10,215	16,491	26,706
Jubilee Campus	5,091	5,305	10,396
Others	3,020	7,383	10,404
Medical School	9,900	24,250	34,150
Total	71,471	126,452	197,924

Figure 1.E.1 Table of energy consumption for 2004/5 split by campus and by utility

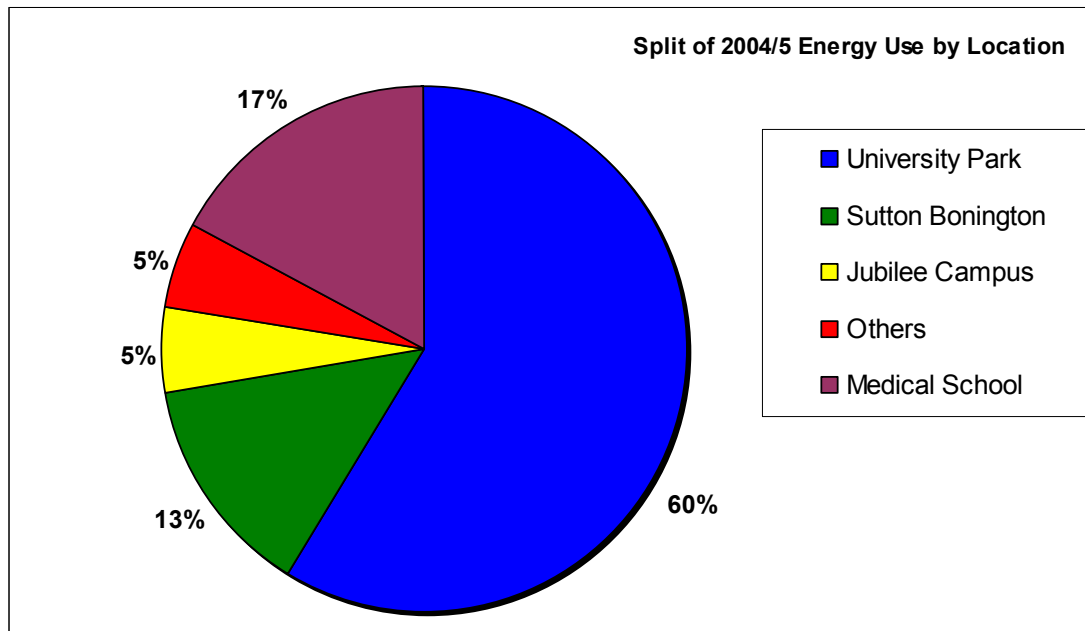


Figure 1.E.2 Pie chart of energy consumption split by campus

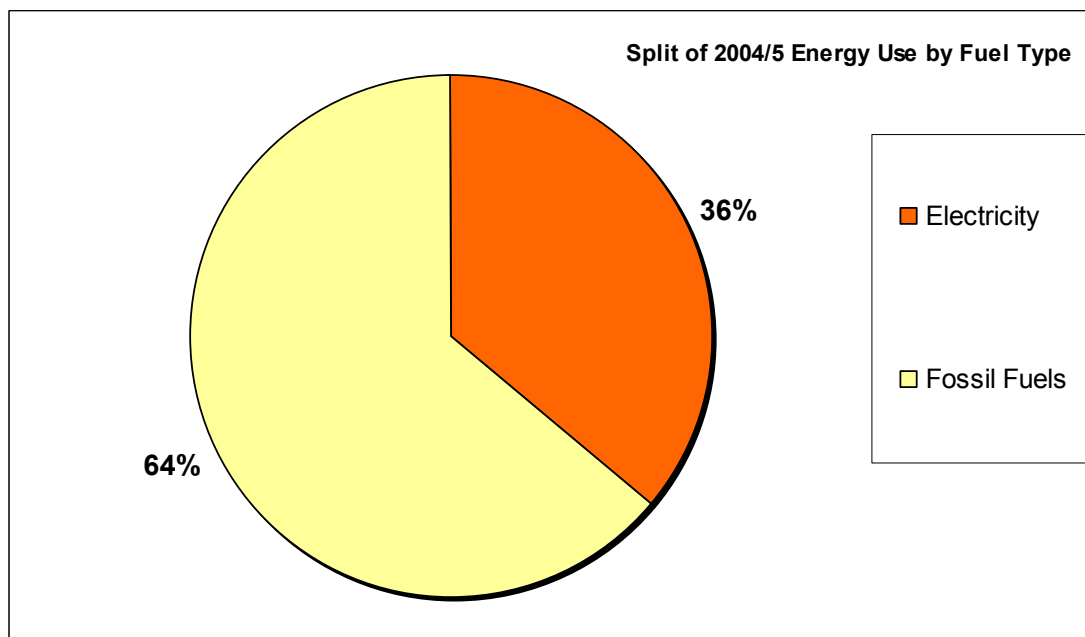


Figure 1.D.3 Pie chart of energy consumption split by utility type.

Note: Our 'fossil fuels' comprise 99.5% gas and 0.5% gasoil

1.F - Energy Usage and Cost Comparison with Gross Premises Area

	2001/2	2002/3	2003/4	2004/5	Change
Floor Area (sq.m.)	415,322	420,854	436,236	465,769	6.8%
Annual Energy Usage (MWh)	175,758	188,782	182,602	197,924	8.4%
Energy Usage Per sq. m.	423	449	419	425	1.5%

Figure 1.F.1 Table of last four years energy usage and floor area.

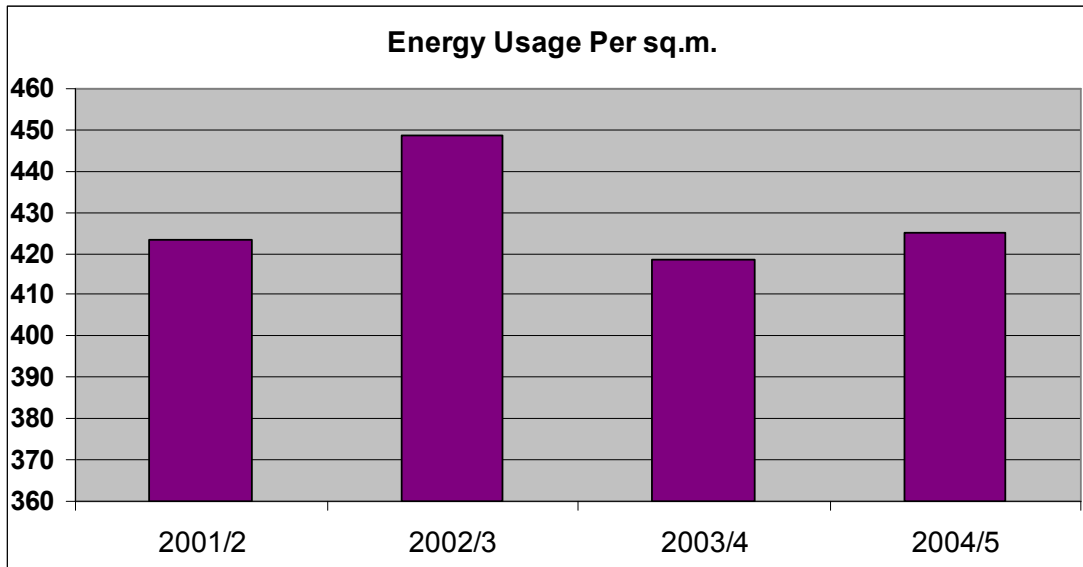


Figure 1.F.2 Graph of last four years energy usage per unit floor area.

	2001/2	2002/3	2003/4	2004/5	Change
Floor Area (sq.m.)	415,322	420,854	436,236	465,769	6.8%
Energy and Water Costs	£ 3,964,538	£ 4,017,880	£ 4,181,142	£ 5,468,308	30.8%
Utility Cost Per sq. m.	£ 9.55	£ 9.55	£ 9.58	£ 11.74	22.5%

Figure 1.F.3 Table of last four years energy and water costs and floor area.

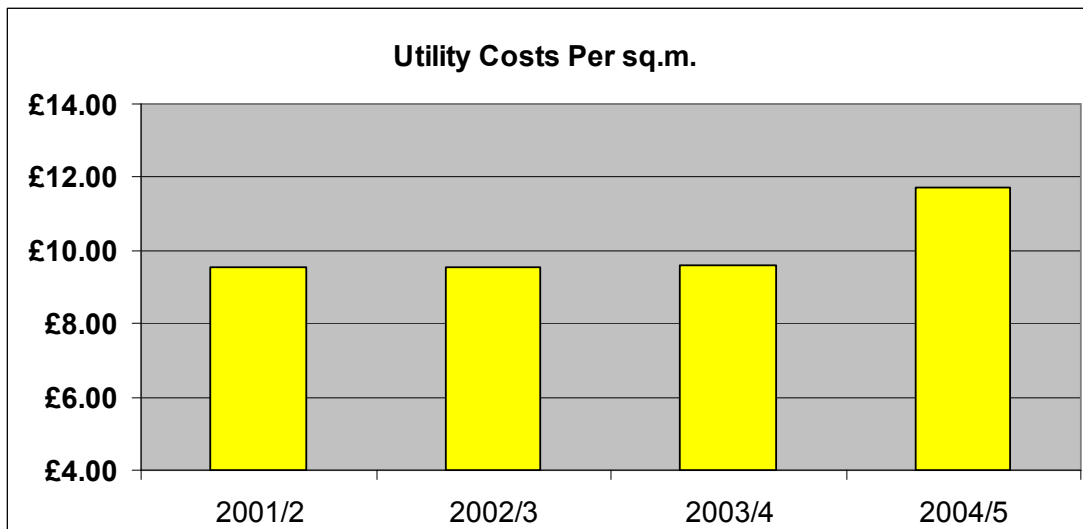


Figure 1.F.4 Graph of last four years energy and water costs normalised by floor area.

1.G - Energy Usage and Cost per FT Student

	2001/2	2002/3	2003/4	2004/5	Change
FT Student Numbers	19,130	21,244	22,808	23,740	4.1%
Annual Energy (MWh)	175,758	188,782	182,602	197,924	8.4%
Energy / Student (kWh)	9,188	8,886	8,006	8,337	4.1%

Figure 1.G.1 Table of last four years energy usage and full-time student numbers.

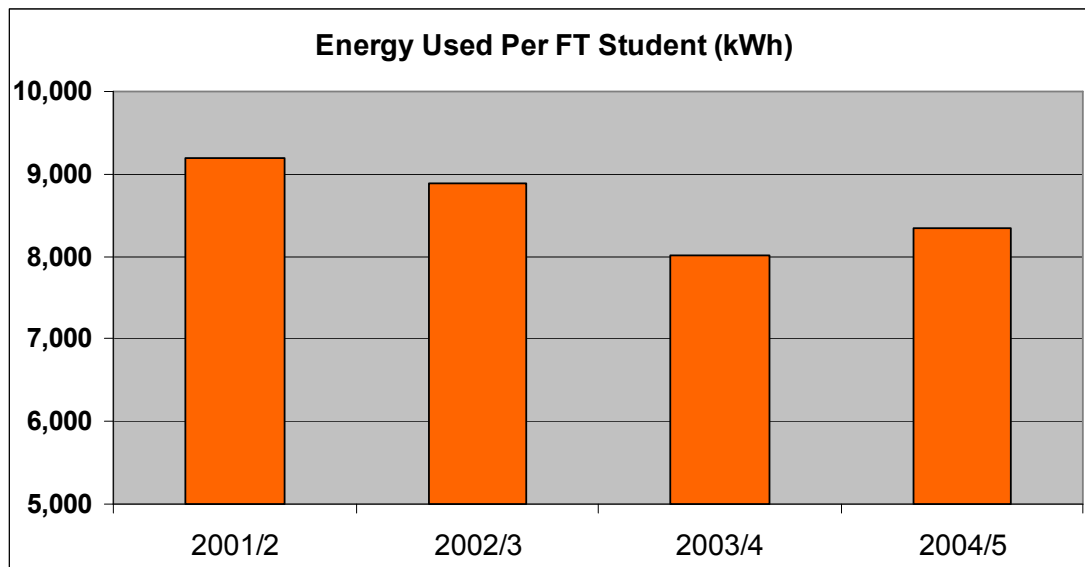


Figure 1.G.2 Graph of last four years energy usage per full-time student.

	2001/2	2002/3	2003/4	2004/5	Change
FT Student Numbers	19,130	21,244	22,808	23,740	4.1%
Energy and Water Costs	£ 3,964,538	£ 4,017,880	£ 4,181,142	£ 5,468,308	30.8%
Energy Cost / Student	£ 207.24	£ 189.13	£ 183.32	£ 230.34	25.7%

Figure 1.G.3 Table of last four years energy and water costs and full-time student numbers.

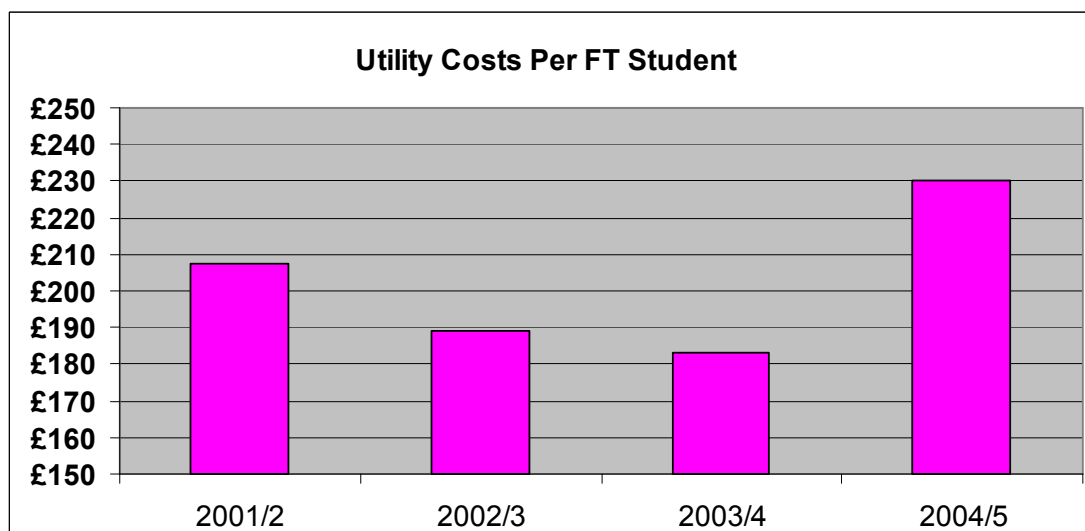


Figure 1.G.4 Graph of last four years energy and water costs per full-time student.

Note: The statistics on student numbers above are provided by the Policy and Planning Unit, Registrar's Department. They exclude students not currently studying in Nottingham.

1.H - Climate Change Levy and VAT

The Climate Change Levy (CCL) was introduced due to a change in government legislation in April 2001. This energy tax added 0.15p/kWh to gas and 0.43p/kWh to the electricity costs of all non-residential properties, although 'green' electricity is exempt.

The amount of CCL paid by Notice Ltd during 2004/5 was £47,270 for electricity and £103,253 for gas. This amount was over £150,000 less than last year due to the increased amounts of 'green' electricity that were procured (see 2B).

VAT is also not included in any of the tables or graphs shown in the report. VAT paid for 2004/5 FY was £536,965 (£146,656 on gas and £390,309 on electricity).

If the taxes were included in the total expenditure on utilities the totals can be seen below:-

	2004/5				2003/4
	Electricity	Fossil Fuels	Water	Totals	Totals
Energy Costs	£ 2,898,392	£ 1,564,208	£ 1,005,708	£ 5,468,308	£4,181,142
Climate Change Levy	£ 47,270	£ 103,253	£ -	£ 150,523	£316,482
Value Added Tax	£ 390,309	£ 146,656	£ -	£ 536,965	£455,006
Total	£ 3,335,971	£ 1,814,117	£ 1,005,708	£ 6,155,796	£4,952,630

Figure 1.H.1 Table of energy and water costs including Climate Change Levy and Value Added Tax.

1.I - Utility Costs as a Proportion of University Turnover

Percentage of Turnover (£ 000)	2001/2	2002/3	2003/4	2004/5	Change '04/5 to '03/4
Utility Costs inc. taxes	£ 4,683	£ 4,922	£ 4,953	£ 6,156	24.3%
Total University Turnover	£ 265,300	£ 286,300	£ 303,500	£ 326,400	7.5%
Percentage	1.77%	1.72%	1.63%	1.89%	15.6%

Figure 1.I.1 Table of last four years energy and water costs (including taxes) and total University turnover.

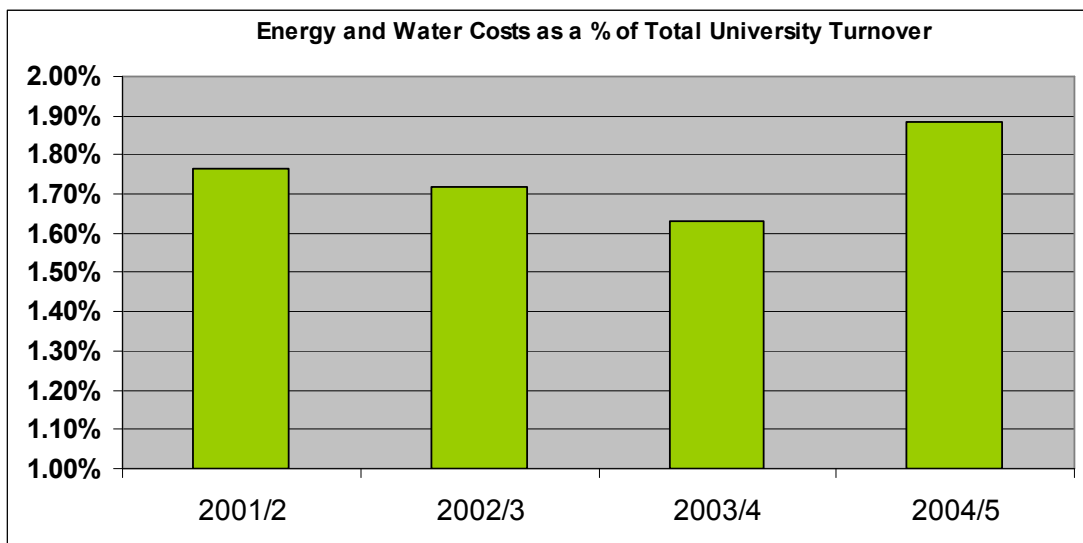


Figure 1.I.2 Graph of last four years energy and water costs normalised by total University turnover.

1.J – Comparison to Other Universities

	Energy use/ student (kWh)	Energy/sq.m (kWh/sq.m GIA) non- residential	Utility Costs/ income
Birmingham	6,596	488	1.51%
Bristol	4,856	405	1.54%
Cambridge	7,234	282	0.81%
Cardiff	3,574	347	1.78%
Edinburgh	5,879	261	1.56%
Glasgow	4,513	319	1.30%
Imperial College	27,630	716	2.09%
King's College London	7,861	432	1.35%
L.S.E	2,261	228	n/a
Leeds	4,681	332	1.90%
Liverpool	6,617	390	1.69%
Manchester	5,171	408	1.24%
Newcastle Upon Tyne	5,905	324	1.55%
Nottingham	5,009	461	1.75%
Oxford	7,125	326	0.86%
Sheffield	3,292	269	1.36%
Southampton	4,820	399	1.45%
U.C.L.	n/a	n/a	n/a
Warwick	5,466	396	1.28%

Figure 1.J.1 Table of Estates Management Statistics for the 2003/4 financial year.

The statistics in table 1.J.1 provide a range of comparators to other major Universities, as reported in the EMS returns for 2003/4. Note that the figures for Nottingham do not tally exactly with those provided elsewhere in this report as the EMS figures include taxes and have slightly different definitions in some cases.

Section 2 – Analysis of Energy Components

2.A - Electricity Consumption

Electricity consumption rose by 8%. Analysis of the figures shows that new buildings account for the majority of the increase:

King's Meadow Campus 750 MWh (in 5 months), Jubilee New Business School 600 MWh, New Grid Computer Facility 1,750 MWh, and the IHR expansion 1,000 MWh.

Electricity Consumption	MWh	MWh	MWh	Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	37,192	39,441	43,245	10%
Sutton Bonington	10,094	10,124	10,215	1%
Jubilee Campus	4,139	4,458	5,091	14%
Others	1,233	2,018	3,020	50%
Medical School	9,900	9,935	9,900	0%
Total	62,558	65,976	71,471	8%

Figure 2.A.1 Table of electricity usage for the last 3 years split by campus.

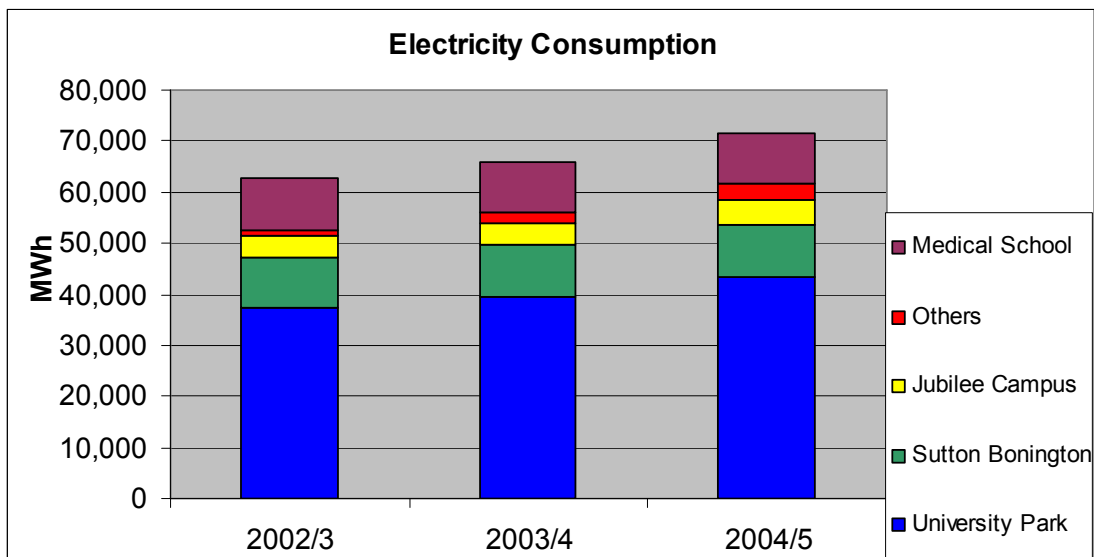


Figure 2.A.2 Graph of electricity usage for the last 3 years split by campus.

See Appendix A for a detailed breakdown of consumption on an account by account basis.

2.B - Electricity Costs

The existing contracts for our large sites ended in October 2004. These two year deals had protected us from substantial price rises that had already occurred in the electricity markets. At University Park the average unit price jumped from 2.69p/kWh to 4.24p/kWh, a rise of 58%, with other sites seeing rises of similar proportions. EOn retained the contracts to supply University Park and Sutton Bonington, with nPower supplying the remaining 'large' sites such as Jubilee Campus and Derby Medical School. These contracts were all awarded on a one-year basis, through to 30th September 2005.

In accordance with our Policy, we actively sought offers of 'green' electricity and were rewarded with a substantial increase in the quantity of low-CO2 electricity supplied, up to 83% from less than 1% last year. This increased energy costs by 0.41p/kWh (around 10%), but savings of 0.43p/kWh resulted from the green units being exempt from climate change levy. See section 3A for details.

The smaller 'sub-100kW' sites (a separate business package) were re-tendered in April 2004 and awarded to Bizz Energy for a duration of two years.

Electricity Costs				Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	£ 1,010,382	£ 1,058,896	£ 1,727,374	63%
Sutton Bonington	£ 280,819	£ 270,777	£ 406,862	50%
Jubilee Campus	£ 125,368	£ 128,369	£ 205,062	60%
Others	£ 47,486	£ 85,179	£ 158,094	86%
Medical School	£ 404,000	£ 394,000	£ 401,000	2%
Total	£ 1,868,055	£ 1,937,221	£ 2,898,392	50%

Figure 2.B.1 Table of electricity costs for the last 3 years split by campus.

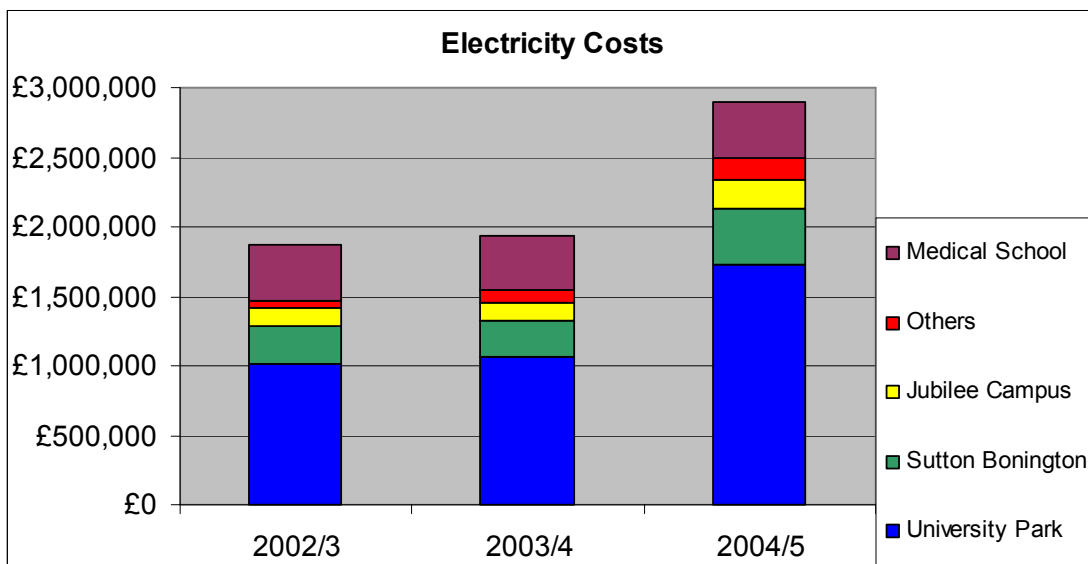


Figure 2.B.2 Graph of electricity costs for the last 3 years split by campus.

2.C - Fossil Fuel Consumption

Consumption of fossil fuels rose by 8% in 2004/5, compared to last year's reported figure. The overall increase of 9,800 MWh can be partially accounted for by new assets; Kings Meadow Campus added 3,400 MWh in 5 months, and another 1,000 MWh in total resulted from the addition of the New Business School, the first full year of operation of Biomolecular Sciences, and the IHR extension. Errors in the 2003/4 figures for the central heating station (5,000 MWh) and the Medical School (1,700 MWh), which were both underestimated, mean that in a like-for-like comparison, overall consumption actually fell 1,300MWh, or around 1%. This is broadly in line with the weather data in Section 3C, which predicts a fall of 1.5% if all other things remained equal.

At University Park, substantial savings of 3,200 MWh (20%) were made by fitting improved heating controls and two small replacement boilers at eight Halls of Residence. A payback period of just 10 months was achieved for an investment of £70,000.

Fossil Fuel Consumption	MWh	MWh	MWh	Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	68,562	69,675	73,024	5%
Sutton Bonington	17,943	16,558	16,491	0%
Jubilee Campus	4,948	4,875	5,305	9%
Others	2,471	3,868	7,383	91%
Medical School (Steam)	32,300	21,650	24,250	12%
Total	126,224	116,626	126,452	8%

Figure 2.C.1 Table of fossil fuel usage for the last 3 years split by campus.

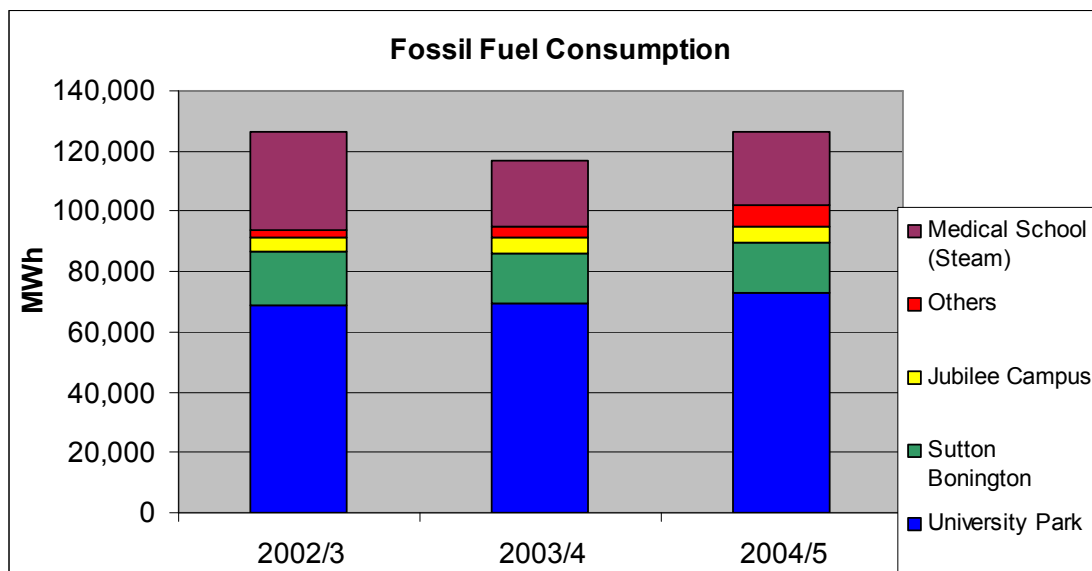


Figure 2.C.2 Graph of fossil fuel usage for the last 3 years split by campus.

See Appendix B for additional information showing a detailed breakdown of consumption on each account.

2.D - Fossil Fuel Costs

On 31st May 2005 our existing two year contracts with Elf Business Energy finished. New tenders for the supply of gas were invited in the Spring and it was apparent that prices were very volatile and had risen rapidly. It was therefore decided to award a short four-month contract to see if prices would subside before the winter of 2005/6.

Most sites use Firm Gas (see footnote). Elf held the contract in June 2003, at a price of 0.9791p/kWh fixed for a year, and retained it again in June 2005 with a four-month fixed price at 1.4949p/kWh (up 53%).

The new contract for Interruptible gas (see footnote - used at the Central Heating Station) was awarded to EOn at a price of 1.17p/kWh for four months, a rise of 39% on the previous yearly price of 0.8446p/kWh.

These price rises have yet to impact significantly as they only affect the last two months of these figures, and the usage of gas in these months is relatively small.

Fossil Fuel Costs				Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	£ 584,900	£ 642,615	£ 685,857	7%
Sutton Bonington	£ 164,161	£ 162,124	£ 168,360	4%
Jubilee Campus	£ 45,190	£ 47,884	£ 55,188	15%
Others	£ 27,408	£ 42,717	£ 87,803	106%
Medical School (Steam)	£ 547,000	£ 485,000	£ 567,000	17%
Total	£ 1,368,659	£ 1,380,340	£ 1,564,208	13%

Figure 2.D.1 Table of fossil fuel costs for the last 3 years split by campus.

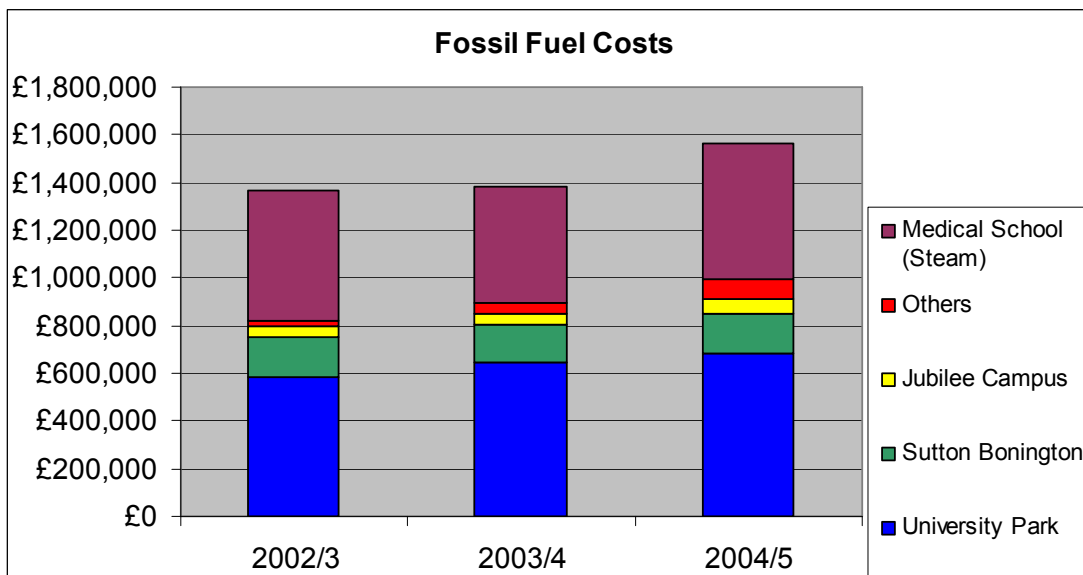


Figure 2.D.2 Graph of fossil fuel costs for the last 3 years split by campus.

Oil costs remained high throughout the period, remaining at or above 30p/litre. These levels are still significantly above an economic price for resuming operation of the oil-fired CHP unit at University Park (i.e. below 13p/l).

Note: 'Firm' gas is the standard gas supply used by the majority of smaller buildings in the UK. However many larger installations use an 'interruptible' supply. Whilst this is slightly cheaper, Transco reserve the right to stop the supply for several days a year, forcing users to switch to an alternative fuel source, such as oil.

2.E - Water Consumption

Water consumption increased by 11% with the reduction at Nottingham Medical School being more than offset by increases at University Park, Sutton Bonington, King's Meadow Campus (new usage) and Clinical Sciences (Nottingham City Hospital). The increases at Sutton Bonington were a result of recurrent problems with leakage; the increase at Clinical Sciences was traced to a plumbing problem and resolved in April 2005.

Water Consumption	cubic m.	cubic m.	cubic m.	Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	555,738	560,942	608,444	8%
Sutton Bonington	97,625	117,749	148,732	26%
Jubilee Campus	94,094	86,762	86,869	0%
Others	13,284	16,938	37,975	124%
Medical School	62,000	54,352	43,570	-20%
Total	822,741	836,743	925,590	11%

Figure 2.E.1 Table of water usage for the last 3 years split by campus.

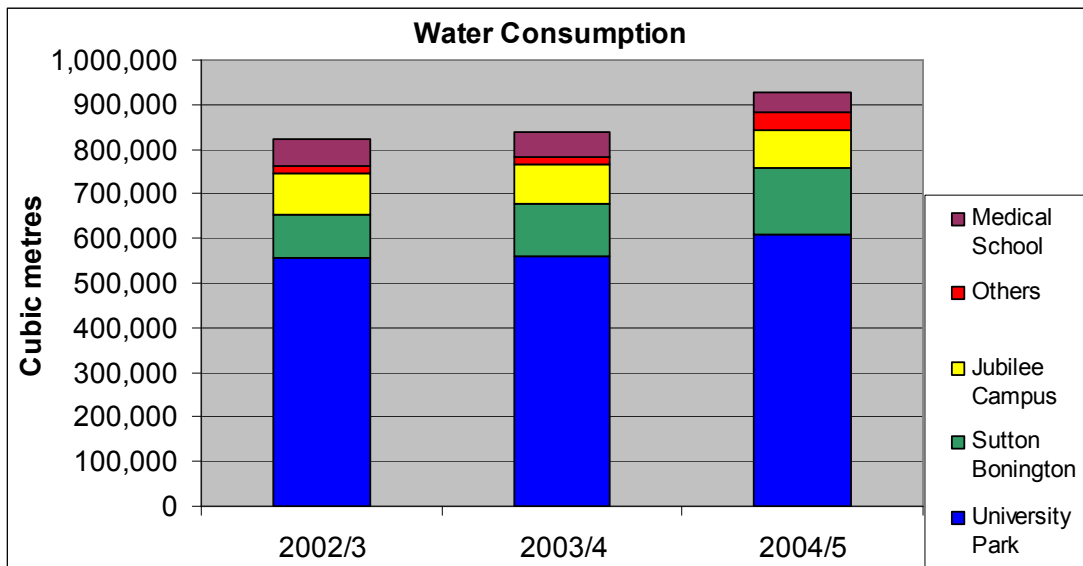


Figure 2.E.2 Graph of water usage for the last 3 years split by campus.

See Appendix C for a detailed breakdown of consumption on an account by account basis.

2.F - Water Costs

Although water usage rose by 11%, water costs were up by 16% as the large increases in price from Severn Trent Water began to take effect from 1st April 2005.

For ordinary metered accounts, the combined price of water and sewerage rose from 130.1p/cubic metre to 139.91p (up 7.5%) in April 2004, and then rose again to 166.41p in April 2005, a rise of an additional 19.0%. Similarly, at University Park - which benefits from a high volume tariff - prices rose from 91.18p to 107.6p (up 18%) in April 2004. Surface water drainage charges rose by 19.9% for all sites at the same time.

Test drilling began in October 2005 for a borehole at University Park. This project should be completed during 2006 and will significantly reduce our water costs at University Park and help to minimise our exposure to Severn Trent's planned future cost increases of RPI plus 11% over the next four years.

Water Costs	2002/3	2003/4	2004/5	Change '04/5 to '03/4
University Park	£ 482,344	£ 536,487	£ 630,741	18%
Sutton Bonington	£ 94,532	£ 103,344	£ 150,165	45%
Jubilee Campus	£ 126,202	£ 156,061	£ 119,337	-24%
Others	£ 15,588	£ 19,372	£ 46,965	142%
Medical School	£ 62,500	£ 48,317	£ 58,500	21%
Total	£ 781,166	£ 863,581	£ 1,005,708	16%

Figure 2.F.1 Table of water costs for the last 3 years split by campus.

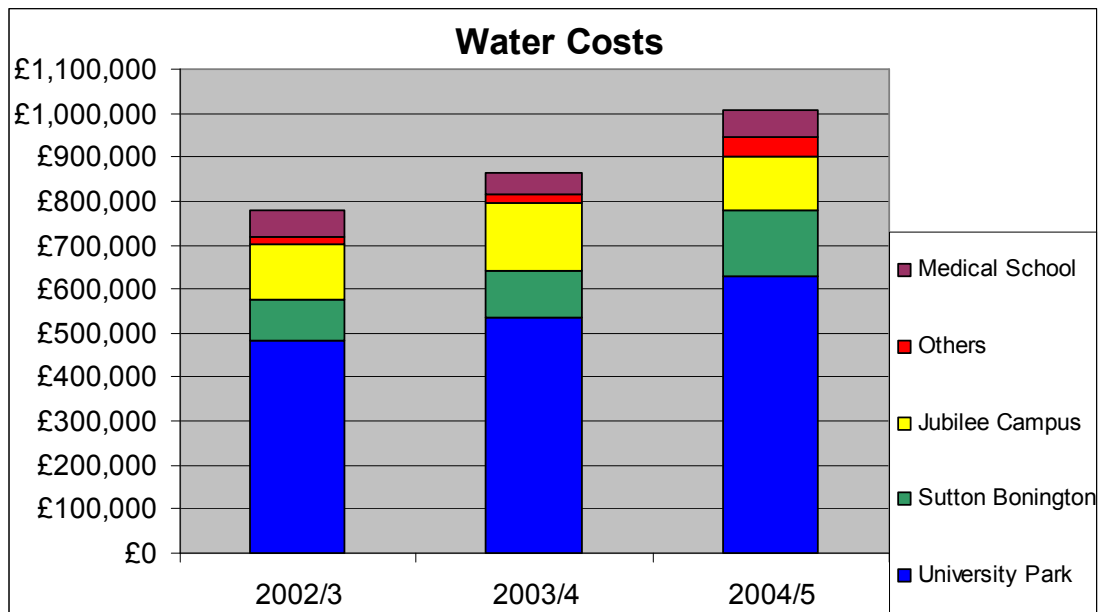


Figure 2.F.1 Graph of water costs for the last 3 years split by campus.

Section 3 – Environmental Considerations

3.A - Carbon Dioxide Emissions

Carbon Dioxide (CO₂) is released into the atmosphere when fossil fuels are burned, and is considered the most important of the 'greenhouse' gases – gases that are thought to be responsible for a man-made warming of the atmosphere. The UK government has a target of reducing national CO₂ emissions by 12.5% from 1990 levels by 2010.

Our emissions were reduced considerably in 2004/5 due to the proportion of 'green' electricity purchased jumping from less than 1% in 2003/4 to 83% in 2004/5. This green electricity was sourced as follows: Wind 12.5%, Hydro 2.9%, Biomass 15.2%, Landfill gas 6.5%, Sewage gas 11.0%, Municipal & Industrial Waste 51.9%. This electricity was classified as 'levy exempt' meaning that although the purchase price was increased by 0.41p/kWh, it did not attract any climate change levy, taxed at 0.43p/kWh (see 1.J).

CO2 Emissions	Tonnes	Tonnes	Tonnes	Change
	2002/3	2003/4	2004/5	'04/5 to '03/4
University Park	29,020	30,198	18,658	-38%
Sutton Bonington	7,749	7,499	3,581	-52%
Jubilee Campus	2,570	2,693	2,188	-19%
Others	1,000	1,586	2,205	39%
Medical School	10,394	8,386	8,013	-4%
Total	50,732	50,362	34,645	-31%

Figure 3.A.1 Table of CO₂ emissions for the last 3 years split by campus.

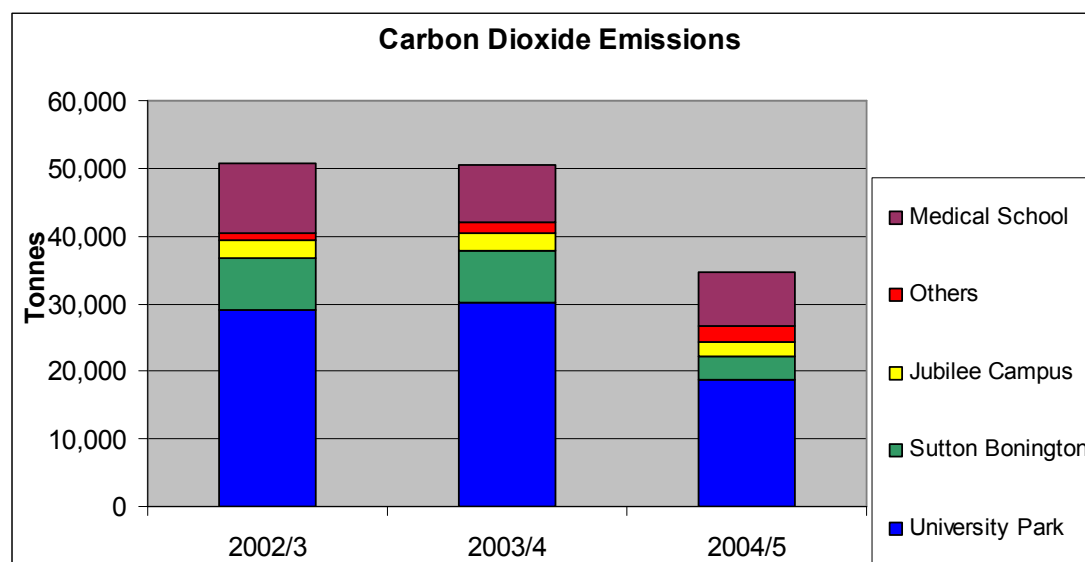


Figure 3.A.2 Graph of CO₂ emissions for the last 3 years split by campus.

Conversion factors used are supplied to us by the Carbon Trust - units are Tonnes of Carbon Dioxide emitted per MWh of energy consumed. Note that DEFRA (the Department for Environment, Food and Rural Affairs) are now recommending that for electricity a constant conversion value is used until 2010, although real emissions vary year on year due to the different mix of fuels used in power stations nationally.

	2002/3	2003/4	2004/5
Electricity	0.430	0.430	0.430
Gas	0.190	0.190	0.190

3.B - Carbon Dioxide Emissions Breakdown by Campus and Utilities

CO2 Emissions 2004/2005	Tonnes Electricity	Tonnes Fossil Fuels	Tonnes Total
University Park	4,783	13,874	18,658
Sutton Bonington	447	3,133	3,581
Jubilee Campus	1,180	1,008	2,188
Others	802	1,403	2,205
Medical School	3,406	4,608	8,013
Total	10,619	24,026	34,645

Figure 3.B.1 Table of CO₂ emissions split by campus and by utility

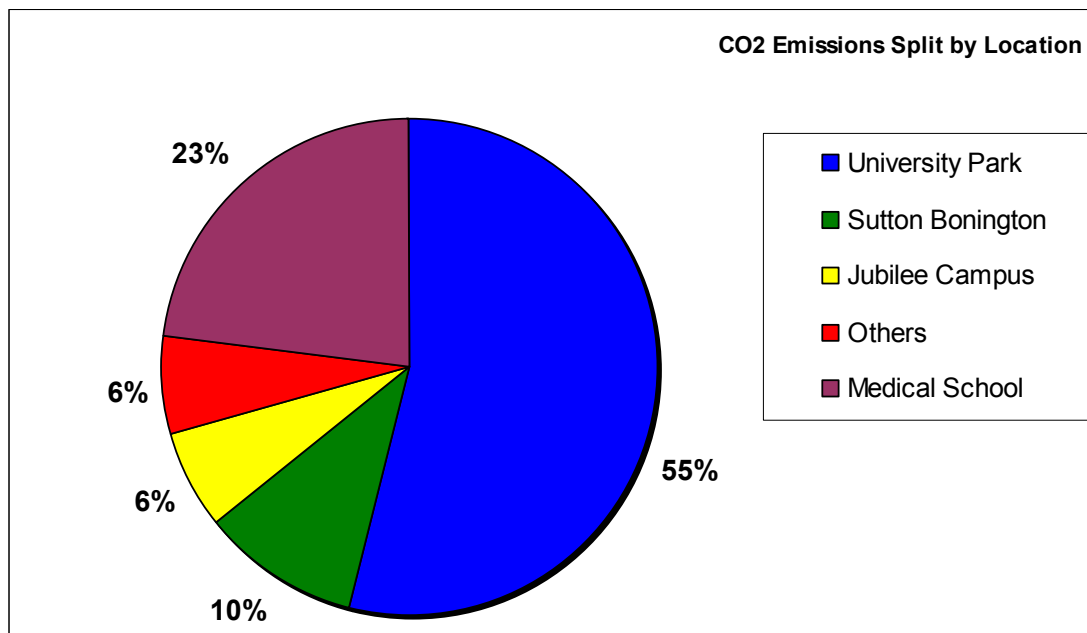


Figure 3.B.2 Graph of CO₂ emissions split by campus

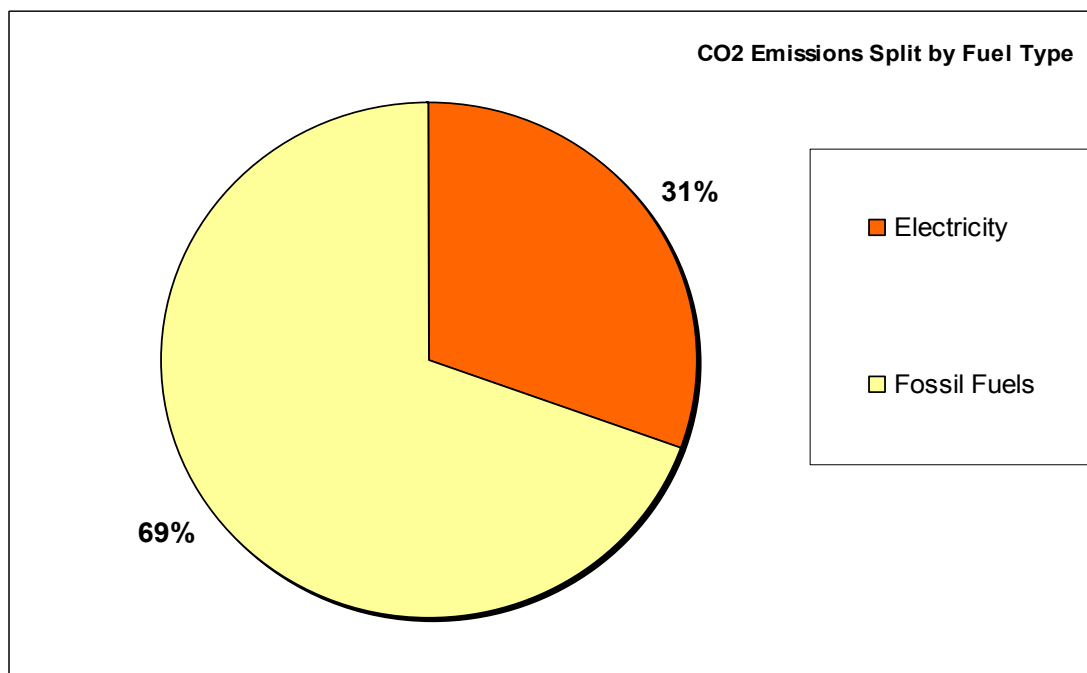


Figure 3.B.3 Graph of CO₂ emissions split by source fuel type

3.C - Weather Data – Degree Days

Degree days are determined by comparing the mean daily temperature to a set temperature, in this case 15.5 Celsius. For instance, a day where the outside temperature averaged 5.0C would be counted as 10.5 degree days. The values are summated over a calendar month and the total provides a reasonably accurate guide as to the relative heating load that should be required.

	Deg. Days	Deg. Days	Deg. Days	Deg. Days	'04/5 to '03/4
	20 Yr Avg	2002-03	2003-04	2004-05	Change
Aug	35	18	24	18	-25.0%
Sep	76	60	68	52	-23.5%
Oct	162	185	194	154	-20.6%
Nov	270	235	232	241	3.9%
Dec	338	324	343	310	-9.6%
Jan	362	349	332	309	-6.9%
Feb	312	332	293	325	10.9%
Mar	283	248	281	265	-5.7%
Apr	217	179	176	198	12.5%
May	137	106	112	139	24.1%
Jun	74	31	45	55	22.2%
Jul	35	20	39	30	-23.1%
Total	2,301	2,087	2,139	2,096	-2.0%
			Weather modifier (75%)		-1.5%

Figure 3.C.1 Table showing last three years monthly degree days and average degree days.

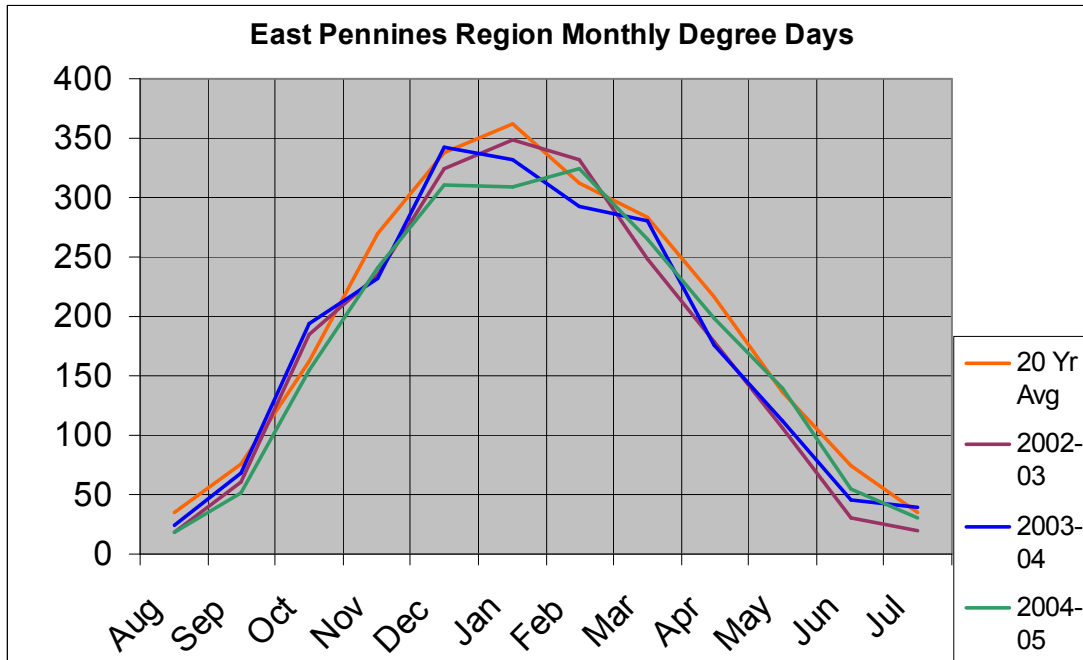


Figure 3.C.2 Graph showing last three years monthly degree days and average degree days

Note: Degree days however are an imprecise marker for a number of reasons. Firstly, not all of a building's heating load is weather dependent - production of domestic hot water typically accounts for about 25% of usage, and in halls of residence the figure could be substantially higher. Secondly, the figures are derived from Watnall weather station, and local climates can differ quite markedly

from these figures. Thirdly, wind speed and direction can have a marked effect on the energy consumption of some buildings, depending upon their construction. The degree day figures only include the effect of temperature.

For the purposes of this report, 75% of the change in degree days has been used as a realistic modifier to check 2004/5's consumption against 2003/2004's. Using this information, consumption on accounts used for heating should have decreased by about 1.5% as this year was slightly milder than last.

3.D – Major Asset Alterations

Major additions:-

King's Meadow Campus
Jubilee Campus New Business School
Jubilee Campus Sports Centre
Institute of Hearing Research Extension

3.E - Conclusions

The UK is currently experiencing a market increase in energy prices, which is impacting adversely upon the University's utility bill. Against this background it is increasingly important that we target to reduce waste and become more energy efficient.

Our strategy, as guided by the Energy Sub-Group of the University's Environment Committee is to:-

- Implement a review of all heating control settings to eliminate waste. This was completed in September 2005, and is expected to reduce fossil fuel consumption by around 10%.
- Increase our energy awareness campaigns during 2006, with the particular aim of limiting the growth in electricity usage. Our website at <http://www.nottingham.ac.uk/estate/environment/> has been updated and now acts as a central source of information.
- Continue to fund short payback opportunities during 2006 as occurred in 2005.
- Continue our programme of reviewing all major buildings to thoroughly check all energy saving control features are optimised and revised to our current standards.
- Complete the borehole project to reduce our water costs.
- Continue to review purchasing opportunities during the current period of high and volatile energy prices to obtain best value.

These actions and timescales are fully defined in the minutes of the Energy sub Group (see website), and are aimed at providing a consumption reduction of 5%, with a further 5% from additional measures to offset increased costs.

Section 4 – Appendices

4.A - Appendix A – Electricity Data

Electricity Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change		
Main Campus		kWh	kWh	kWh	£	£	£		
University Park	1000 ##	43,179,653	39,394,448	10%	£1,724,226	£1,056,702	63%	Grid,IHR	
Lenton Lodge	2251 NO	38,339	22,885	68%	£1,704	£762	124%		
Lenton Eaves Cott. No.2	2243 NO	24,351	20,000	22%	£1,195	£1,200	0%		
Redcourt Lodge	2222 NO	1,129	1,093	3%	£178	£122	46%		
Lenton Eaves Cott. No.1	2243 NO	1,630	3,000	-46%	£71	£110	-35%		
Total of 5 accounts		Totals	43,245,102	39,441,426	10%	1,727,374	1,058,896	63%	
Electricity Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change		
Sutton Bonington		kWh	kWh	kWh	£	£	£		
Sutton Bonington Campus	6800 ##	9,773,749	9,904,681	-1%	£388,952	£263,121	48%		
Eviton House (68 College Road)	5891 NO	209,493	80,509	160%	£7,089	£2,315	206%		
New Dairy	##	66,913	0	-	£2,630	£0	-		
St.Michael's Flats Nos 8&9	6843 NO	28,512	17,096	67%	£1,305	£650	101%		
St.Michael's House (Flats 1-5)	6841 NO	26,362	10,770	145%	£1,042	£382	173%		
Field 25	5671 ##	20,000	50,000	-60%	£1,000	£1,500	-33%		
Animal Research Unit (MLC)	5433 NO	27,501	29,627	-7%	£773	£788	-2%		
Pump House, Kingston Brook	6910 NO	14,462	0	-	£765	£18	-		
Bunny Farm	6860 NO	11,028	1,098	-	£612	£107	-		
40 College Road	6811 NO	6,974	3,640	92%	£412	£228	81%		
St.Michael's Close (Flats 10-15)	6840 NO	5,753	5,903	-3%	£384	£352	9%		
44 College Road	6814 NO	5,128	6,371	-20%	£354	£376	-6%		
St.Michael's Flats Nos 6&7	6842 NO	4,887	4,429	10%	£340	£201	69%		
24 College Road	6805 NO	4,663	4,740	-2%	£332	£303	10%		
50 College Road	6819 NO	4,559	2,319	97%	£329	£179	84%		
New Dairy Farmhouse	##	3,766	0	-	£237	£0	-		
45 College Road	6815 NO	1,121	622	80%	£173	£102	70%		
Irrig. Pump Kegworth	6910 NO	0	1,785	-	£133	£155	-14%		
Total of 18 accounts		Totals	10,214,871	10,123,590	1%	£406,862	£270,777	50%	
Electricity Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change		
Jubilee Campus		kWh	kWh	kWh	£	£	£		
Jubilee Campus	7000 ##	4,245,536	3,695,232	15%	£167,964	£105,174	60%	New Business School included	
Newark & Southwell Halls	7000 ##	780,472	762,988	2%	£33,377	£23,195	44%		
Jubilee Sports Centre	7301 ##	34,611	0	-	£2,196	£0	-		
Triumph House	6701 ##	30,053	0	-	£1,525	£0	-		
Total of 4 accounts		Totals	5,090,672	4,458,220	14%	£406,862	£270,777	50%	
Electricity Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change		
Others		kWh	kWh	kWh	£	£	£		
Clinical Sciences (City Hospital)	3325 E3:	1,075,000	1,018,180	6%	£50,900	£43,500	17%	No invoices recvd, estd.	
King's Meadow Campus		750,000	0	-	£50,000	£0	-		
Derby Medical School	3561 ##	888,124	734,889	21%	£43,287	£31,415	38%		
14-22 Shakespeare Street	6101 NO	82,530	79,311	4%	£3,543	£2,789	27%		
Sports Ground - Highfields	6311 NO	37,207	21,975	69%	£1,481	£737	101%		
Unit 5, William Lee Buildings	6885 NO	31,505	45,773	-31%	£1,409	£1,771	-20%		
Unit 6, William Lee Buildings	6883 NO	30,305	28,351	7%	£1,390	£1,150	21%		
Unit 8, William Lee Buildings	6884 NO	26,344	21,513	22%	£1,257	£940	34%		
Clumber Lodge	6900 NO	26,485	26,277	1%	£1,191	£1,216	-2%		
8 Peachey Street	6102 NO	23,148	7,461	-	£1,143	£342	-		
Boat House	6321 NO	21,844	3,500	-	£976	£170	-		
Grove Farm - Changing Rooms	6122 NO	13,049	20,837	-37%	£600	£659	-9%		
Grove Farm - Old Farmhouse	6121 NO	10,334	7,229	43%	£572	£314	82%		
Grove Farm	6123 NO	4,565	3,072	49%	£345	£176	96%		
Total of 14 accounts		3,020,440	2,018,368	50%	£158,094	£85,179	86%		
Electricity Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change		
Medical School		kWh	kWh	kWh	£	£	£		
Medical School		7,650,000	7,735,300	1%	£318,000	£320,000	1%	Includes 'overheads'	
Embedded Units (Q.M.C.)		2,250,000	2,200,000	-2%	£83,000	£74,000	-11%	Includes 'overheads'	
Totals		9,900,000	9,935,300	0%	£401,000	£394,000	2%		

4.B - Appendix B – Fossil Fuel Data

Gas Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Main Campus		kWh	kWh	kWh	£	£	£	
Central Heating Station	1000 ##	36,830,608	30,668,000	20%	£317,774	£259,100	23%	2003/4 estimate low
Rutland Hall & Sherwood Hall	2191 ##	3,355,938	4,062,434	-17%	£33,822	£39,775	-15%	New BMS
Cripps Hall	2171 ##	2,689,005	2,869,374	-6%	£27,122	£28,094	-3%	
Hugh Stewart Hall	2181 ##	2,413,024	2,905,117	-17%	£24,376	£28,444	-14%	New BMS
Derby Hall	2121 ##	2,351,562	2,559,568	-8%	£23,614	£25,061	-6%	
Bio-Molecular Sciences	1353 ##	1,973,492	1,634,294	21%	£19,870	£16,001	24%	2003/4 not fully occupied
Lenton & Wortley Hall	2141 ##	1,686,290	2,180,773	-23%	£17,152	£21,352	-20%	New BMS
Nightingale Hall	2161 ##	1,551,047	1,836,022	-16%	£15,625	£17,976	-13%	New BMS
Willoughby Hall	2211 ##	1,535,468	1,902,189	-19%	£15,538	£18,624	-17%	New BMS
Lincoln Hall	2151 ##	1,538,214	1,966,444	-22%	£15,471	£19,253	-20%	New BMS
Tower (various)	1271 ##	1,265,298	1,232,443	3%	£12,875	£12,067	7%	
Jesse Boot Conference Centre	1481 ##	1,244,902	1,189,679	5%	£12,816	£11,648	10%	
Florence Boot Hall	2131 ##	1,216,369	1,296,358	-6%	£12,301	£12,693	-3%	
Boots Science Building	1581 ##	1,156,775	1,033,651	12%	£11,993	£10,120	19%	
Swimming Pool	1571 ##	1,130,524	1,152,608	-2%	£11,640	£11,285	3%	
Cavendish Hall	2111 ##	1,034,618	972,055	6%	£10,469	£9,517	10%	
Ancaster Hall	2101 ##	1,027,223	1,111,845	-8%	£10,438	£10,886	-4%	
Institute of Hearing Research	1401 ##	819,966	446,841	84%	£8,550	£4,375	95%	Building extended
Architecture	1433 ##	852,483	899,844	-5%	£8,347	£8,810	-5%	
Trent Building	1101 ##	660,366	567,582	16%	£6,540	£5,557	18%	
Sports Centre, Main Campus	1221 ##	602,110	673,369	-11%	£6,012	£6,593	-9%	
Arts Centre & School of Music	1501 ##	489,621	530,062	-8%	£5,037	£5,190	-3%	
Staff Club Lenton Mount	1181 ##	492,472	533,070	-8%	£4,987	£5,219	-4%	
Wolfson Building	1421 ##	490,174	523,716	-6%	£4,917	£5,128	-4%	
Lenton Hurst	2411 ##	401,407	405,671	-1%	£4,068	£3,972	2%	
D.H.Lawrence Lakeside Pavilion	1631 ##	363,791	349,645	4%	£3,695	£3,423	8%	
New Studio (Built Environment)	1439 ##	168,664	954	-	£3,145	£15	-	
Redcourt	2221 ##	294,002	270,749	9%	£2,977	£2,651	12%	
Cripps Hall Kitchen	2171 ##	283,955	338,676	-16%	£2,957	£3,316	-11%	
Cripps Health Centre	1231 ##	263,175	289,471	-9%	£2,680	£2,834	-5%	
Portland Building	1111 ##	241,827	269,824	-10%	£2,433	£2,642	-8%	Converting to gas
Lenton Grove (History)	1211 ##	203,982	210,799	-3%	£1,998	£2,064	-3%	
Lenton Close Annexe (Cripps Hall)	2175 ##	185,777	184,597	1%	£1,879	£1,807	4%	
Sherwood Hall Kitchen	2200 ##	183,918	191,012	-4%	£1,870	£1,870	0%	
Paton House (Built Env.)	1441 ##	170,590	188,759	-10%	£1,699	£1,848	-8%	
Lincoln Hall Kitchen	2151 ##	162,473	183,493	-11%	£1,653	£1,797	-8%	
MMEM (Production Engineering)	1371 ##	157,837	188,055	-16%	£1,582	£1,841	-14%	
Fitness Centre (Sports Centre)	1221 ##	101,122	114,365	-12%	£1,443	£1,628	-11%	
Cavendish Hall Kitchen	2111 ##	117,890	123,532	-5%	£1,211	£1,210	0%	
Rutland Hall Extension	2195 ##	109,021	108,342	1%	£1,151	£1,061	8%	
Cavendish Hall Extension	2115 ##	108,746	110,739	-2%	£1,143	£1,084	5%	
Sustainable Research Building	1436 ##	109,177	118,865	-8%	£1,078	£1,164	-7%	
Lenton & Wortley Hall Kitchen	2141 ##	89,591	92,752	-3%	£927	£908	2%	
China House (Lenton Fields)	2163 ##	90,000	111,197	-19%	£880	£1,089	-19%	Est, no readings after Nov '04
Rutland Hall Kitchen	2191 ##	84,434	84,434	0%	£827	£827	0%	In query, overbilled
Playgroup	1411 ##	73,004	76,052	-4%	£723	£745	-3%	
Orchards	1161 ##	73,286	89,851	-18%	£719	£880	-18%	
Portland Building Buttery Bar	1111 ##	67,960	86,399	-21%	£698	£846	-17%	
J.Boot C.C. Annexe (Cottage)	1482 ##	61,407	51,521	19%	£618	£504	23%	
Warden's House Cavendish Hall	2113 ##	56,663	60,116	-6%	£579	£589	-2%	
Warden's House Rutland Hall	2194 ##	54,628	42,653	28%	£543	£418	30%	
Warden's House Sherwood Hall	2207 ##	51,772	50,475	3%	£522	£494	6%	
Lenton Lodge	2251 ##	51,948	55,610	-7%	£510	£544	-6%	
Squash Courts (Sch of Built Env.)	1223 ##	43,595	47,985	-9%	£430	£470	-9%	
1 Nightingale Close (Nigh.Hall Ward	2321 ##	40,880	42,268	-3%	£410	£414	-1%	
Warden's House Ancaster Hall	2105 ##	37,483	37,352	0%	£389	£366	6%	
Warden's House Florence Boot Hal	2133 ##	31,838	33,079	-4%	£327	£324	1%	
Lenton Firs Lodge West	2241 ##	28,196	40,469	-30%	£282	£396	-29%	
Paton Cottage	#### ##	24,455	26,295	-7%	£247	£257	-4%	
5A Wortley Hall Close (Eco-House)	2296 ##	18,786	26,634	-29%	£189	£261	-28%	
Sherwood Hall Laundry	2200 ##	8,758	9,029	-3%	£89	£88	1%	
Lenton Eaves (UNSSC) - OIL	1461 B3	0	122,600	-	£0	£2,283	-	
Clifton Building 1 (North)	1351 ##	0	93,663	-	£0	£917	-	
Total of 63 accounts	Totals	73,023,587	69,675,320	5%	685,857	642,615	7%	

4.B - Appendix B – Fossil Fuel Data continued

Gas Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Sutton Bonington		kWh	kWh	kWh	£	£	£	
Sutton Bonington Campus	6800 ###	10,015,554	10,218,683	-2%	£101,981	£100,051	2%	
Plant Sciences	5711 ###	2,700,473	2,643,317	2%	£27,568	£25,881	7%	
Animal Houses Boilerhouse	6800 ###	2,585,629	2,541,788	2%	£26,630	£24,887	7%	
The Elms (Environmental Science)	5161 ###	154,862	209,374	-26%	£1,558	£2,050	-24%	
Eviton House (68 College Road)	5891 ###	140,026	150,231	-7%	£1,405	£1,471	-4%	
Portakabins (T.C.R. unit)	5301 ###	89,501	127,312	-30%	£1,100	£1,247	-12%	
Sports Pavilion Sutton Bonington	5621 ###	104,625	105,249	-1%	£1,040	£1,031	1%	
Main Building (Sutton Bonington)	5011 ###	95,221	108,121	-12%	£967	£1,059	-9%	
Hathern House, Bon. Hall (4)	5831 ###	95,062	90,548	5%	£940	£887	6%	
Sports Hall Sutton Bonington	5221 ###	95,053	81,669	16%	£940	£800	18%	
Food Sciences Building	5701 ###	59,505	58,270	2%	£631	£571	11%	
Food Hall	5081 ###	52,122	51,656	1%	£553	£506	9%	
Bonington Hall Laundry & Gym	5881 ###	51,344	74,509	-31%	£525	£730	-28%	
St.Michael's Flats Nos 6&7	6842 ###	43,430	7,102	-	£439	£70	-	03/4 est'd readings
Bonington Hall Warden's House	5842 ###	41,012	41,658	-2%	£409	£408	0%	
North Laboratory	5091 ###	27,311	1,859	-	£270	£18	-	03/4 est'd readings
St.Michael's Flats Nos 8&9	6843 ###	23,292	9,624	142%	£235	£94	150%	03/4 est'd readings
24 College Road	6805 ###	21,687	8,940	143%	£213	£88	142%	03/4 est'd readings
St.Michael's House Flat 1	6841 ###	20,867	1,516	-	£210	£15	-	03/4 est'd readings
St.Michael's House Flat 3	6841 ###	18,497	1,106	-	£187	£11	-	03/4 est'd readings
St.Michael's House Flat 4	6841 ###	17,991	663	-	£182	£6	-	03/4 est'd readings
52 College Road	6820 ###	17,002	23,038	-26%	£168	£226	-26%	
St.Michael's House Flat 2	6841 ###	15,361	1,296	-	£155	£13	-	03/4 est'd readings
St.Michael's House Flat 5	6841 ###	5,350	410	-	£54	£4	-	03/4 est'd readings
South Laboratory	5051 ###	0	32	-	£0	£0	-	
Total of 25 accounts	Totals	16,490,777	16,557,971	0%	168,360	162,124	4%	
Gas Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Jubilee Campus		kWh	kWh	kWh	£	£	£	
Newark Hall	7130 ###	1,184,313	1,154,999	3%	£12,025	£11,309	6%	
Computer Sciences (DCS) & The A	7040 ###	868,098	854,687	2%	£8,805	£8,368	5%	
Melton Hall	7110 ###	633,775	636,268	0%	£6,483	£6,230	4%	
New Business School	7080 ###	472,422	49,541	-	£6,364	£637	-	First full year
Southwell Hall	7120 ###	596,352	612,422	-3%	£6,005	£5,996	0%	
The Exchange (CTF)	7030 ###	470,458	598,879	-21%	£4,673	£5,864	-20%	
Dearing Building (FOE)	7050 ###	417,149	435,841	-4%	£4,178	£4,267	-2%	
CCF hot water	7040 ###	381,146	159,164	139%	£3,842	£1,558	147%	
Business School (SMF)	7020 ###	281,194	373,327	-25%	£2,813	£3,655	-23%	
Total of 9 accounts	Totals	5,304,907	4,875,128	9%	55,188	47,884	15%	
Gas Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Others		kWh	kWh	kWh	£	£	£	
King's Meadow Campus	6901 ###	3,382,946	0	-	£40,940	£0	-	Mar-Jul
Clinical Sciences (City Hospital)	3325 G3	1,786,980	1,387,740	29%	£18,100	£13,560	33%	Est'd, no invoices received
Derby Medical School	3561 ###	1,105,112	1,345,264	-18%	£11,072	£13,171	-16%	
Grove Farm - OIL	6122	277,976	254,194	9%	£7,328	£4,690	56%	
14-22 Shakespeare Street	6101 ###	267,061	262,982	2%	£2,635	£2,575	2%	
Clumber Lodge	6900 ###	218,544	124,372	76%	£2,207	£1,218	81%	
Sports Ground - Highfields - OIL	6311	79,986	168,372	-52%	£2,062	£3,145	-34%	
Unit 5, William Lee Buildings	6885 ###	53,296	25,360	110%	£1,072	£449	139%	
8 Peachey Street	6102 ###	99,271	105,703	-6%	£1,003	£1,035	-3%	
Sports Ground - Highfields	6311 ###	87,223	83,556	4%	£880	£818	8%	
Unit 6, William Lee Buildings	6883 ###	24663	31,652	-22%	£502	£588	-15%	
Sports Ground - Highfields	6311 ###	159	158	1%	£2	£2	0%	
Boat House - OIL	6821	0	78,178	-	£0	£1,466	-	
Total of 13 accounts		7,383,217	3,867,531	91%	87,803	42,717	106%	
Steam Used		2004/5	2003/4	% change	2004/5	2003/4	% change	
Medical School		kWh	kWh	kWh	£	£	£	
Medical School	(Steam)	19,750,000	17,250,000	14%	£465,000	£405,000	15%	Est'd. NB 2003/4 est. was low
Embedded Units (Q.M.C.)	(Steam)	4,500,000	4,400,000	2%	£102,000	£80,000	28%	Estimated
Tota		24,250,000	21,650,000	12%	£567,000	£485,000	17%	

4.C - Appendix C – Water Data

Water Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Main Campus		cubic m.	cubic m.	cubic m.	£	£	£	
Water and SWD DD	1000 ##	0	0	-	343,430	294,533	17%	
Trade Effluent and Sewerage	1000 ##	0	0	-	287,311	241,954	19%	
Main Supply, S.Entrance	1000 ##	561,659	520,618	8%	0	0	-	
Science Area	1000 ##	14,890	10,916	36%	0	0	-	
Nightingale Hall	2161 ##	10,900	11,850	-8%	0	0	-	
Jesse Boot Conference Centre	1481 ##	6,782	6,595	3%	0	0	-	
Jesse Boot Conference Centre	1481 ##	3,872	2,912	33%	0	0	-	
Paton House (Built Env.)	1441 ##	3,456	1,174	194%	0	0	-	
Lenton Grove (History)	1211 ##	1,839	1,538	20%	0	0	-	
Architecture	1433 ##	1,665	1,637	2%	0	0	-	
Lenton Hurst	2411 ##	1,200	1,315	-9%	0	0	-	
Lenton Eaves (UNSSC)	1461 ##	740	1,040	-29%	0	0	-	
Lenton Lodge	2251 ##	452	113	300%	0	0	-	
Redcourt	2221 ##	399	709	-44%	0	0	-	
Beeston Lane Gardeners' Compound	1511 ##	309	206	50%	0	0	-	
Playgroup	1411 ##	238	262	-9%	0	0	-	
5A Wortley Hall Close (Eco-House)	2296 ##	43	57	-25%	0	0	-	
Total of 17 accounts	Totals	608,444	560,942	8%	630,741	536,487	18%	
Water Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Sutton Bonington		cubic m.	cubic m.	cubic m.	£	£	£	
SB Campus Water DD	6800 ##	0	0	-	77,300	55,717	39%	estd, no rec.
SB Trade Effluent & Sewerage	6800 ##	0	0	-	57,091	43,331	32%	
St.Michael's Close	6841 ##	10,132	3071	230%	15,207	4,213	261%	Leak, now fixed
Bunny Farm	6860 ##	600	62	-	550	67	-	
Trough, Keyworth	6910 ##	0	0	-	17	16	6%	
Landcroft Lane meter	6800 ##	112,000	97,911	14%	0	0	-	estd, no rec.
College Road meter	6800 ##	26,000	16,705	56%	0	0	-	estd, no rec. Leaks?
Total of 7 accounts		148,732	117,749	26%	150,165	103,344	45%	
Water Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
New Campus		cubic m.	cubic m.	cubic m.	£	£	£	
JC Water DD	7000 ##	0	0	-	81,901	106,506	-23%	New tariff, rebate received
Newark Hall	7130 ##	14,746	14,533	1%	23,577	21,363	10%	
Southwell Hall	7120 ##	7,672	7,828	-2%	13,465	12,539	7%	
Triumph House	6701 ##	24	33	-27%	215	225	-4%	
Triumph House	6701 ##	0	0	-	147	149	-	
Charnock Ave Sports Pavilion	7201 ##	7	33	-79%	32	69	-54%	
Jubilee Campus Water volume	7000 ##	64,420	63,629	1%	0	0	-	
Raleigh Site	##	0	706	-100%	0	15,210	-	
Total of 8 items		86,869	86,762	0%	119,337	156,061	-24%	
Water Invoices		2004/5	2003/4	% change	2004/5	2003/4	% change	
Others		cubic m.	cubic m.	cubic m.	£	£	£	
Clinical Sciences (City Hospital)	3325	22,317	12,762	75%	23,500	14,000	68%	
Kings Meadow Campus		8,000	0	-	14,000	0	-	estd, no bills recvd
Clumber Lodge	6900 ##	5,373	1,817	196%	4,783	1,446	231%	
Sports Ground - Highfields	6311 ##	845	1,122	-25%	1,277	1,207	6%	
14-22 Shakespeare Street	6101 ##	618	440	40%	962	622	1	
Unit 6, William Lee Buildings	6883 ##	63	96	-34%	650	585	11%	
Unit 5, William Lee Buildings	6885 ##	77	109	-29%	410	389	5%	
8 Peachey Street	6102 ##	97	81	20%	241	196	0	
Unit 8, Edison Village (Synergy Hou	6891 ##	74	0	-	201	81	148%	
Grove Farm - Changing Rooms	6122 ##	0	0	-	173	137	26%	
Unit 8, William Lee Buildings	6884 ##	0	0	-	68	61	0	
Boat House	6321 ##	511	511	0%	700	648	8%	
Total of 12 accounts		37,975	16,938	124%	46,965	19,372	142%	
Water Recharges		2004/5	2003/4	% change	2004/5	2003/4	% change	
Medical School		cubic m.	cubic m.	cubic m.	£	£	£	
Medical School	3325	32,770	40,852	-20%	47,000	36,319	29%	
Embedded Units (Q.M.C.)		10,800	13,500	-20%	11,500	11,998	-4%	
		43,570	54,352	-20%	58,500	48,317	21%	