



Scott Wilson Consultants
→ **Environmental Report**
2003

Contents

SUMMARY	1
SITE ENVIRONMENTAL PERFORMANCE	2
PACE MICRO TECHNOLOGY PLC	4
ENVIRONMENTAL POLICY	5
ORGANISATION & ENVIRONMENTAL MANAGEMENT SYSTEM	6
ENVIRONMENTAL PERFORMANCE MEASUREMENT	7
PRODUCT ENVIRONMENTAL PERFORMANCE	9
Energy Efficiency, Greenhouse Gas Emissions & Set-Top Boxes	9
Re-designs / Updated versions	10
Energy Star	12
EC Code of Conduct on Energy Efficiency of Digital TV Service Systems	13
Product Make-up	14
Product Hazardous Materials & Air Emissions	15
Product Packaging	16
SITE ENVIRONMENTAL PERFORMANCE	17
Energy Consumption	17
Air Emissions	18
Water	21
Paper	22
Waste	23
ENVIRONMENTAL COMPLIANCE	23
SUPPLIER ENVIRONMENTAL PERFORMANCE	24
CORPORATE INITIATIVES & SPONSORSHIPS	25
Business In the Environment Index	25
FTSE4Good	25
Yorkshire Wildlife Trust	26
SOCIAL ISSUES	27
PERFORMANCE DATA SUMMARY & NOTES	28
GLOSSARY & WEBSITES	29
REPORTER'S STATEMENT	32

1

Summary

• Environmental Management Systems (EMS)

Pace has reviewed and amended its Environmental Policy to ensure that it reflects the Company's commitment to the environment and social issues.

Pace extended the scope of its environmental policy to its other key operational sites in the UK (namely Bracknell) and overseas (Boca, Florida and Grenoble, France). Environmental teams are being established at these locations to drive local environmental initiatives.

• Product Environmental Performance

Of the 27 products supplied to the market during the reporting period, 6 were destined for the USA market. At the time of reporting, each product destined for the US market had been designed in accordance with the current published ENERGY STAR performance criteria.

During the reporting period, 8 (30%) of the 27 STBs developed by Pace met the target performance levels set out in the EC Code of Conduct on Energy Efficiency of Digital TV Service Systems. Of the 15 STB models supplied to the EU market this year, however, only 3 (20%) met the target criteria of the EC Code of Conduct.

With the introduction of the Waste Electronic and Electrical Equipment (WEEE) and Restrictions on the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directives, systems have been implemented during the reporting period to accurately monitor and record the percentage of recyclable materials within Pace's products. During the period, Pace branded products were comprised of:

- **142 tonnes plastic**
or an average of 0.19 kg plastic per STB
- **941 tonnes steel**
or an average of 1.26 kg steel per STB
- **412 tonnes printed circuitry**
or an average of 0.55 kg printed circuitry per STB

Pace continued its work towards the development of a lead-free product through its 'Lead Free Working Group' and aims to devise a product that is compliant with the 'lead-free' requirements of the RoHS Directive by the end of 2003.

Pace is able to confirm that the paper used in its Operating Manuals now meets Pace's specification for 'environmentally friendly' paper (i.e. it is Total Chlorine Free and sourced from sustainably managed timber sources) for over 100% of its products.

SITE ENVIRONMENTAL PERFORMANCE

• Energy and Resource Consumption

Total electrical energy consumption for the period equated to 3,516,154 kWh, a 26% reduction on last year's figures. Total gas energy consumption for the period equated to 2,105,718 kWh, a 1.1% reduction on last year's figures.

• Air Emissions

On the basis of available information, Pace generated a total of 2,739 tonnes of Greenhouse Gas (GHG) (CO₂ equivalent) or 5.62 tonnes of GHG (CO₂ equivalent) per employee. This represents a reduction of 34% on the previous year's total GHG figures, but an increase of 3.6% per employee.

The average monthly total GHG emissions are reported at 219 tonnes, well below the target monthly emission of 300 tonnes.

• Water

The levels of water consumption presented above equate to an overall consumption of 26.35m³/employee/year, 28% higher than last year's figures.

• Paper

During the reporting period, Pace consumed 4588 sheets/employee/year or 19.5 sheets/employee/day. This represents a 51% increase in the previous figure of 12.9 sheets/employee/day. This is still below that of the average office worker who produces 100 sheets per day according to the Environment Agency

• Waste

Due to the tenancy arrangements at Pace's UK premises, available information only allows Pace to report on those waste streams that are not co-disposed with other tenants. Waste streams are reported for Saltaire only.

• Legal

There are no current or pending actions against the company for breaches of UK legislation during the reporting period.

• Supplier Environmental Performance

At the time of reporting, Pace is able to report that 100% of its sub-contractors and 38% of its component vendors have achieved accreditation to ISO14001.

- **Corporate Initiatives/Memberships**

Once again, Pace participated in the Yorkshire and Humber 5th Regional Index of Environmental Engagement along with 142 of the region's largest companies. In the 2003 index, Pace was ranked 23rd out of 142 participants. This demonstrates a significant improvement upon last year's results when Pace was ranked 54th out of 120 participants.

With the formal adoption of its policy at other operational sites of the business, Pace is pleased to report that it has now been included in the UK's FTSE4Good Index, an index series for socially responsible investment (SRI), designed by FTSE, one of the worlds leading index providers.

Pace continued its involvement in support of the Yorkshire Wildlife Trust. Earlier this year, a number of Pace employees took part in a voluntary exercise that involved traditional coppicing methods to control the growth of Sycamore at Stoneycliffe Wood in West Yorkshire.

- **Social Issues**

During the reporting period, Pace took part in a questionnaire 'self-assessment' survey to assist with determining its position in relation to two recognised initiatives, SA8000 and the Ethical Trade Initiative Base Code. On the basis of that analysis, Pace is considering an action plan to address the issues arising and meet the applicable requirements of these standards.

4

Pace Micro Technology plc

Pace Micro Technology (Pace) specialises in the development of Set Top Boxes (STBs) that provide a gateway for the reception of digital television and the reception/transmission of interactive services, telephony and high-speed data. In the UK, Pace operates from three sites at Saltaire, Cambourne and Bracknell. Overseas, Pace has operations in Boca Raton (Florida) and Grenoble (France).

The Cambourne office has only recently been occupied as part of a relocation of the former Cambridge office, which was occupied by Pace until the end of the reporting period, and which is therefore referred to extensively in this report.

The nett floor area of the newly occupied Cambourne office is 106m², approximately 0.6% of the total UK floor area occupied by Pace. Thus, Pace's activities at the Cambourne office currently do not directly contribute significantly to its direct total energy and water consumption or waste generation and as such, it is excluded from this report.

Pace's environmental performance report is applicable to the STB development activities carried out at Pace's UK premises for the period June 2002 to May 2003. It follows a similar format to last year's report, but contains some new information that is considered important, including:

- **Materials used in product development**
- **Energy efficiency of re-designed STBs**
- **Explanation of Key Performance Indicators (KPIs)**
- **Comment on Social Issues**

In preparing this report, consideration has been given to the Sustainability Reporting Guidelines (Global Reporting Initiative, 2002) as well as guidance offered in Environmental Reporting Guidelines (UK Department for Food and Rural Affairs (DEFRA), 2001).

5

Environmental Policy

Pace Micro Technology plc (Pace) recognises that its day-to-day operations and products have both positive and negative impacts on the environment. Pace is fully committed to minimising the pollution and harmful effects of its actions and products wherever practicable.

Pace is demonstrating its corporate commitment through an Environmental Management System (EMS) and other environmental initiatives.

As a result, Pace will:

- Comply with all relevant global environmental legislation and regulatory controls
- Minimise waste, maximise use of resources and prevent pollution in all parts of the business
- Identify significant environmental and social impacts and establish objectives and targets for improvement
- Review, monitor and improve the Company's environmental performance against set targets
- Audit the Company's activities against this policy to confirm environmental improvement
- Communicate this policy and the Company environmental performance to customers, suppliers and the public
- Ensure all employees are made accountable for these policy goals through training and communication of environmental issues throughout the company
- Encourage all employees to be proactive in the maintenance and continual improvement of the company's environmental management system
- Increase stakeholder involvement in corporate environmental initiatives



6

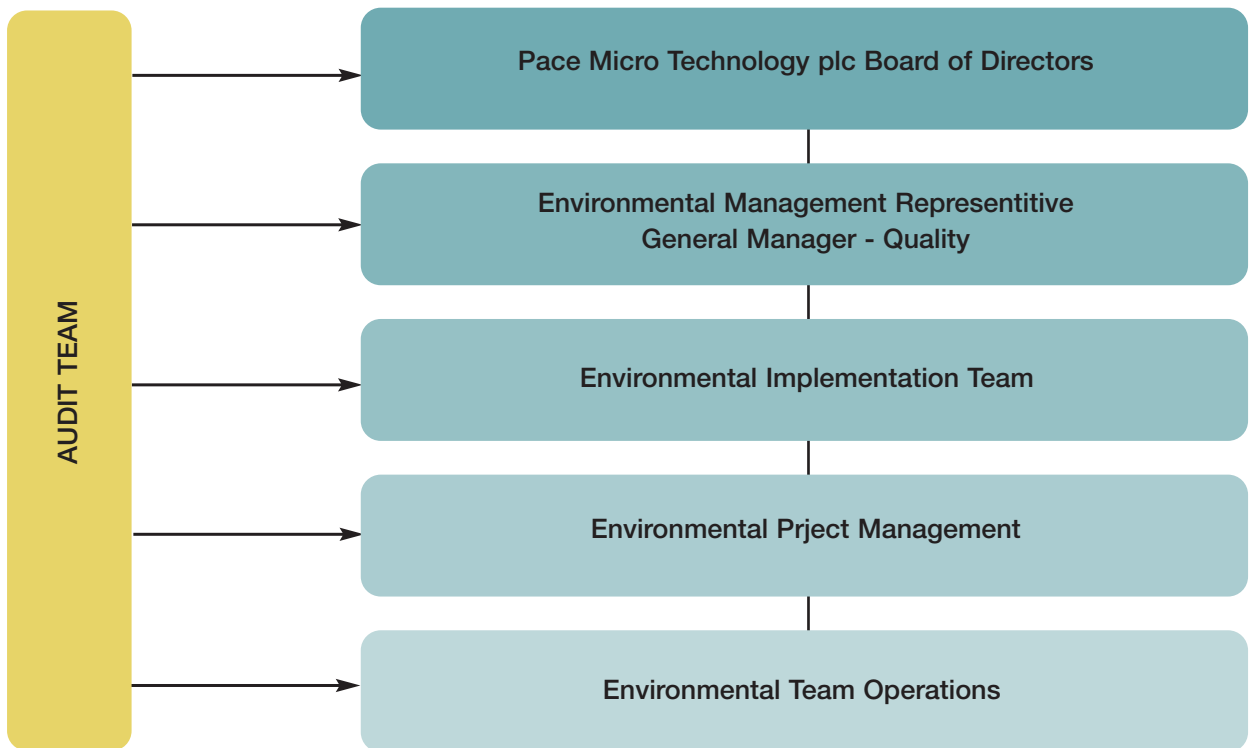
Organisation and Environmental Management System

During 2002, Pace revised its policy statement to reflect the changing circumstances of the business and continued to maintain its Environmental Management System (EMS) in accordance with ISO14001 at its Saltaire site.

The policy commitments are based upon the significant environmental impacts identified through the company's EMS and are the responsibility of the Board of Directors.

In order to ensure that these commitments are attained, formal management structures have been devised as follows:

Pace Micro Technology's Environmental Management Structure



During 2002, Pace extended its environmental policy to cover its other key operational sites in the UK (namely Cambridge and Bracknell) and overseas (Boca Raton, Florida and Grenoble, France).

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace is to roll-out its policy to other operational sites during the period 20002/03.			✓

The EMS continues to be registered to ISO14001, as assessed by independent assessors of the British Standards Institute (BSI) (see: <http://www.pace.co.uk/certificate.pdf>).

ENVIRONMENTAL PERFORMANCE MEASUREMENT

To help with measuring environmental performance, Pace has adopted a series of Key Performance Indicators (KPIs) in areas where it is possible to quantify its environmental impacts.

In this report, Pace refers to two types of Key Performance Indicator (KPI):

Absolute Measures (A)

These are measures that are expressed as one single unit (e.g. the number of tonnes of packaging waste, the number of kWh energy used, etc).

Normalised Measures (N)

These are measures that quantify the impact ((e.g. Energy in kilowatt hours (kWh), Paper consumption in kilograms (kg)) and present it against a common denominator (e.g. energy consumption kWh per STB). This provides for both reliable comparisons with similar organisations and products as well as comparing the company's performance results over time.

KPIs are reviewed by Pace on an on-going basis as the state of knowledge of its environmental impacts improves with further data gathering, analysis and reporting.

Certain KPIs relate to the use of materials in manufacture and the operational energy consumption of Pace products. Others relate to the direct environmental impact of Pace's business activities.

KEY PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	TYPE OF KPI	REASON
Product Energy Consumption	Energy rating in Watts for each STB in both standby and normal operational modes.	A	To calculate and report energy consumption per STB for comparison with other STBs and external benchmarks (e.g. Energy Star, EU Code of Conduct etc)
	KWh for all STBs supplied to the market	A	To calculate total energy consumption from products designed and supplied to market
	Average KWh/STB supplied	N	To normalise energy consumption across a range of STBs supplied to market
Product Composition	Percentage (%) weight components per STB	N	To establish % weight of materials which are recyclable, track compliance with legislation and measure reductions in materials composition.
Packaging Waste Generated, Recovered and Recycled	Tonnes	A	To measure packaging materials imported for sale to the UK and compliance with legislation
Site Energy Consumption	Total Energy Consumption (kWh) • Electricity (kWh) • Gas (kWh) • Oil (kWh)	A	To account for and report energy consumption in both absolute and normalised figures.
	Normalised Energy Consumption per unit of nett floor area (kWh/m ²) • Electricity (kWh/m ²) • Gas (kWh/m ²) • Oil (kWh/m ²)	N	
Air Emissions	Total Greenhouse Gas Emissions (kg CO ₂ equivalent)	A	To account for and report greenhouse gas emissions in units of carbon dioxide (CO ₂) equivalents in both absolute and normalised figures
	Greenhouse Gas Emissions (kg CO ₂ equivalents/employee)	N	
	Kg of refrigerant lost to atmosphere through leakage (equivalent to Kg CFC11/employee)	A	To account and report emissions of greenhouse gases in units of carbon dioxide (CO ₂) equivalent and ozone depleting substances in units of chlorofluorocarbon 11 (CFC11) equivalents, in both absolute and normalised figures.
	Normalised Kg of Ozone Depleting Substances (ODS) released per employee (equivalent to 1g CFC11/employee)	N	
Water Consumption	Total Water Consumption (m ³ /employee)	A	To report water consumption figures and measure the effectiveness of any water saving initiatives adopted.
	Normalised Water Consumption (kg/employee)	N	
Paper Consumption	Total Paper Consumption (kg)	A	To report paper resource consumption and measure the effectiveness of any paper saving initiatives adopted.
	Normalised Paper Consumption (kg/employee)	N	
waste	Total solid waste arising (kg)	A	To report solid waste generation and measure the effectiveness of waste minimisation initiatives.
	Total solid waste recycled	A	
Sub-contractor & component Vendor Performance	Number of sub-contractors	A	To report the effectiveness of our supply chain management initiatives.
	% Subcontractors registered to ISO14001	N	
	Number of component vendors	A	
	% Component vendors registered to ISO14001	N	

A = Absolute Measurement
N = Normalised Measurement

PRODUCT ENVIRONMENTAL PERFORMANCE

Products developed by Pace for the market have environmental impacts during their production, use and eventual disposal. During production, Pace's sub-contractors are required to adhere to company environmental standards (see Supplier Environmental Performance).

The Set Top Boxes themselves have environmental impacts via:

- **Energy** - the energy they consume during operation by end users
- **Greenhouse Gas Emissions** – from energy used that is generated at power plants using fossil fuels
- **Materials** - which they are made from (e.g. plastics, metals, etc)
- **Materials** - used in packaging (e.g. cardboard, plastic, polystyrene, etc)
- **Potentially Harmful Air Emissions** - Volatile Organic Compounds (VOCs) and Ozone from boxes and/or components
- **Potentially Hazardous Materials** (e.g. lead used in solder and components)

This section of the report addresses the environmental impacts of Pace STBs in the key areas of energy efficiency, product make-up, packaging and potentially harmful materials and air emissions.

Energy Efficiency, Greenhouse Gas Emissions & Set-Top Boxes

The STB in operation consumes electricity, which if generated from fossil fuels, generates emissions of Greenhouse Gases (GHGs) at source, i.e. at the power plant. GHGs such as carbon dioxide (CO₂) contribute to global warming.

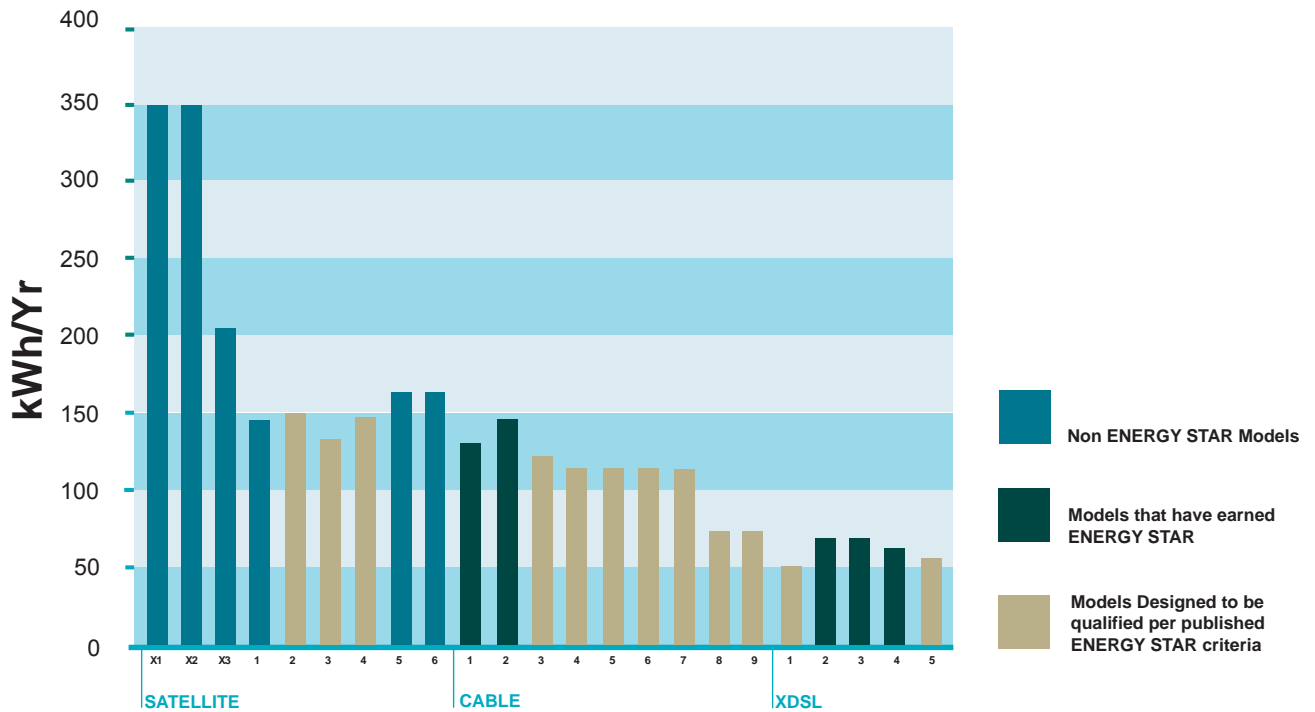
The amount of energy consumed by each STB depends on many factors such as duration of use, software loading and network requirements. Although Pace cannot control these aspects directly, it can influence how the end-user of its boxes operates the STB. For each STB design, guidance is provided to encourage the end-user to make efficient use of the product (e.g. utilise the 'stand-by' mode settings).

Pace also designs each set top box to be as energy efficient as possible, whether in 'stand-by' or 'operational' modes, given the functional requirements required in its application. By improving the energy efficiency of its STBs, they will become cheaper to use and have a more positive environmental impact through reduced GHG emissions.

During the reporting period 2002/03, Pace improved its product audit procedures to ensure that energy efficiency is actively considered in product designs. Each STB is evaluated to help achieve the highest possible energy efficiency, given the various functional requirements of the box itself.

During the reporting period, Pace developed 46 new STBs, of which 19 were prototypes or under development and 27 were for production, intended for supply to various customers around the world. Of these 27 models developed for production, only 22 were in active production and supply at the time of reporting. These 22 production models and their estimated annual individual energy consumption figures are reported in the graph below:

Comparison of Power Consumption (Current Generation STBs with Previous Generation STB's) in Normal Operational Mode



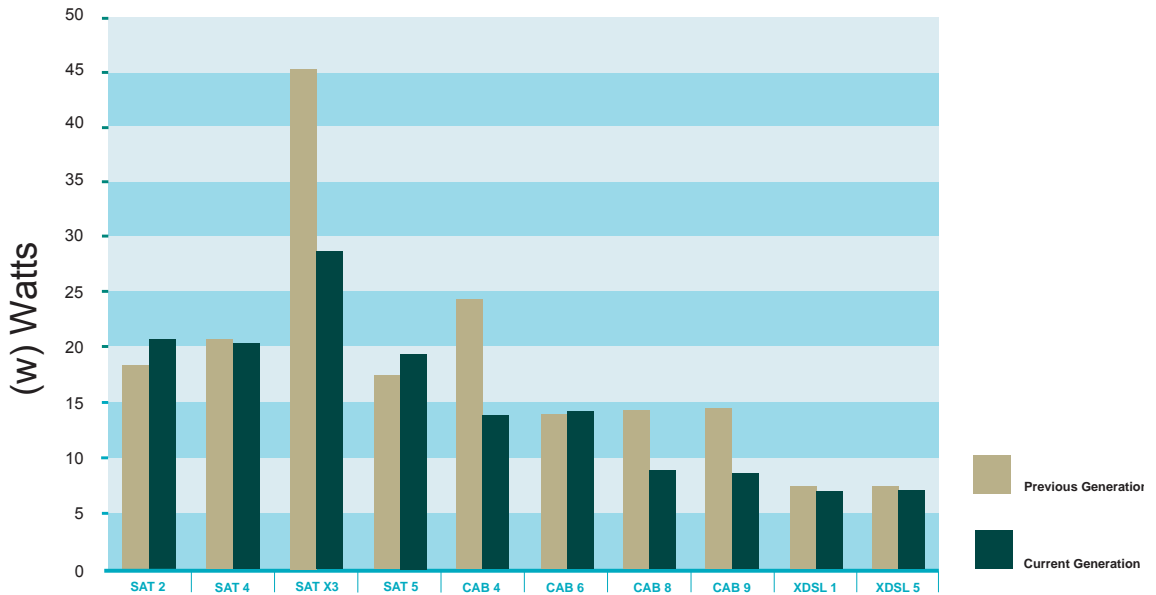
A combined total of 749,588 of the above STBs were manufactured during the reporting period. Using available production figures and average utilisation data, the total energy consumption from those STBs is estimated as 113,581 mWh/year. This equates to an average of approximately 151.5 kWh/year/STB, equivalent to a 4.1 % reduction on last year's figures.

Re-designs / Updated versions

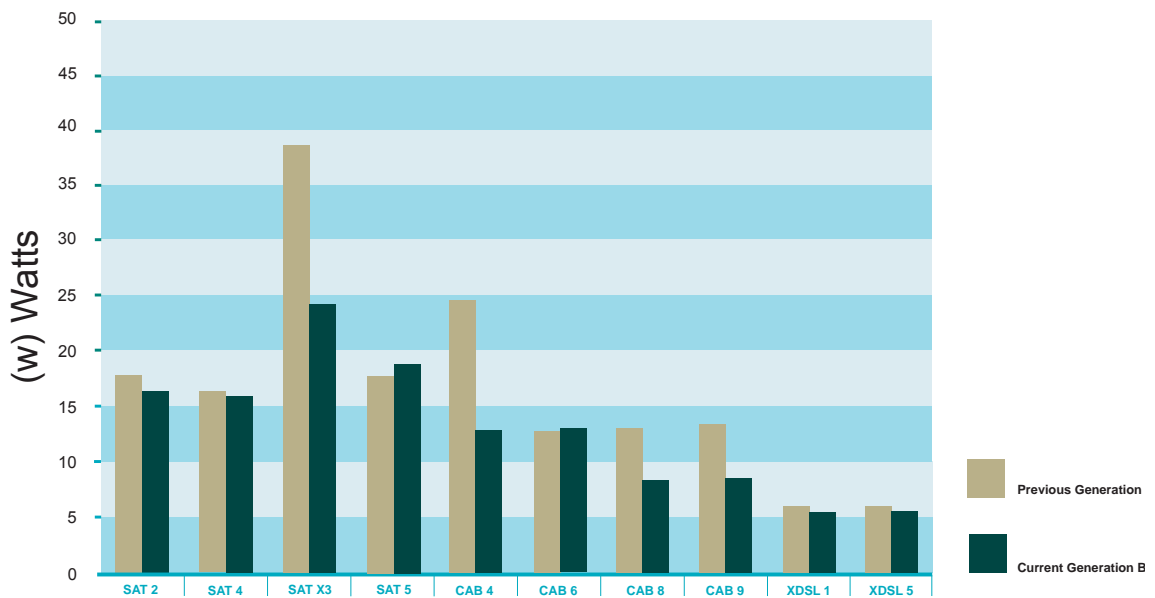
Of the 27 new designs produced and supplied to market this year, 10 are improvements to previous versions (i.e. 2nd and 3rd generation STBs). With the exception of those STBs with high functional requirements, Pace's new designs achieved energy reductions against previous versions as shown in the graphs below.

Across the ten boxes that are 2nd or 3rd generation boxes, power consumption ratings in both 'typical' operational and 'stand-by' modes have been reduced by an average of 4 watts.

Comparison of Power Consumption (Current Generation STBs with Previous Generation STB's) in Normal Operational Mode



Comparison of Power Consumption (Current Generation STBs with Previous Generation STB's) in Standby Operational Mode



Through the adoption of energy efficiency considerations in the design process, Pace continues to make significant improvements to its products.

Assumes daily usage of 4 hours on 'typical' operational mode and 20 hours 'stand-by' mode. Assumes each box produced is installed and used for one calendar year and that those 'prototype' boxes are not produced for re-sale and typical use by the end-user.

Energy Star®

During the reporting period, Pace continued as an ENERGY STAR partner. ENERGY STAR is a U.S. government-backed program helping businesses and individuals protect the environment through superior energy efficiency. As an ENERGY STAR partner, Pace qualifies products that meet ENERGY STAR guidelines and identifies those products to consumers in accordance with the ENERGY STAR Identity Guidelines. ENERGY STAR qualified set top boxes produce lower levels of greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. EPA and U.S. DOE. These guidelines are available at www.energystar.gov, along with the following:

- A list of ENERGY STAR qualifying products
- Specific energy efficiency requirements for qualifying Set Top Boxes
- The methods by which power consumption is measured
- Information on revisions to current ENERGY STAR specifications



Of the 27 Pace STBs developed for production during the reporting period, 5 (18.5%) have earned ENERGY STAR qualification. Those STBs produced this period that have earned ENERGY STAR are:

MODEL	SERIES	PRODUCT CATEGORY
DSL4000	545-1307000	Digital Cable TV Set-top Box
DSL4000 CHT	545-1007010	Digital Cable TV Set-top Box
DSL4000 NT32	545-1307011	Digital Cable TV Set-top Box
PACE510A	541-1005100	Digital Cable TV Set-top Box
Pace DC550P	541-1405600	Multifunction Device


Although not all of Pace's products have earned the ENERGY STAR, energy efficiency criteria are considered in the design processes of all of its boxes.

Whatever the functional requirements of the STB, Pace's design audit procedures ensure energy efficiency considerations are taken into account during product design along side other essential factors such as health and safety, software and network requirements. It is a design objective to ensure that all designs are as efficient as possible, taking due account of the functional requirements of each product.

This is demonstrated in that, although 5 (19%) of the STBs developed during the reporting period have earned ENERGY STAR, a further 12 (44%) have been designed to qualify per the published ENERGY STAR performance criteria for STBs. Thus a total of 17 (63%) of those Set Top Box models produced during the reporting period have been designed in accordance with the current ENERGY STAR performance criteria for STBs.



Of the 27 products developed for supply to the market during the reporting period, 6 were destined for the USA market. At the time of reporting, 5 (83%) of those had earned the ENERGY STAR rating. The 6th remaining STB had been designed in accordance with the current ENERGY STAR performance criteria.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
By 31/01/03, Pace aim to ensure that all Set Top Boxes destined for the US market are 100% qualified per ENERGY STAR requirements			

EC CODE OF CONDUCT ON ENERGY EFFICIENCY OF DIGITAL TV SERVICE SYSTEMS

Pace continues to be a signatory to the European Commission's Code of Conduct on Energy Efficiency of Digital TV Service Systems. Under this code, Pace is committed to taking all reasonable efforts to ensure that its STBs are designed to minimise energy consumption and achieve power consumption targets for new stand-alone products placed on the market after the 1st January 2003.

The commitments of the Code can be seen at http://energyefficiency.jrc.cec.eu.int/html/standby_initiative.htm and include:

- General principles
- Targets for power consumption for stand alone products
- Development and acceptance of Common Power Management Guidelines
- Cooperation with the EC and Member States in annual reviews of the Code of Conduct
- Ensuring procurement specifications comply with the Code of Conduct

During the reporting period, 8 (30%) of the 27 STBs developed by Pace met the target performance levels set out in the EC Code of Conduct.

Of the 15 STB models supplied to the EU market, however, only 3 (20%) met the target criteria of the EC Code of Conduct.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
At least 50% of Set Top Boxes developed for supply to the EU market to be compliant with this Code of Conduct by the 1st January 2003.			


Product Make-up

Returning used materials back into the material cycle, rather than disposing of them as waste, is recognised by Pace as the preferred option. With improved design and recycling of products and components, the need for raw materials will be reduced and wastage minimised.

The majority of STBs are constructed of materials that are recyclable in varying proportions, namely:

- Metals
- Plastics
- Printed Circuitry (including printed circuit boards and components)

Pace considers the recovery and recyclability as part of the STB design process. During the reporting period, Pace developed monitoring systems for accurately calculating the recoverability and recyclability of the components that comprise the STB.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace is to establish a system of monitoring the weight (%) of its products that are recyclable.			

In developing monitoring systems, Pace has gathered new information on the quantities of materials used in its STBs. For the 749,588 STBs developed and supplied to the market during the reporting period, Pace branded products used:

- 142 tonnes plastic or an average of 0.19 kg plastic per STB
- 941 tonnes steel or an average of 1.26 kg steel per STB
- 412 tonnes printed circuitry or an average of 0.55 kg printed circuitry per STB

Through its design processes, Pace will seek to continually review and improve the performance of its products as well as reduce the quantities of materials used in their production.

With the introduction of the Waste Electronic and Electrical Equipment Directive in March 2003, and due to come into effect in the UK before 13th August 2004., Pace will be under an obligation to set up systems for the recovery, recycling and re-use of its product components. According to the Directive, Pace will be tasked with meeting the following targets by 31st December 2006:

RECOVERY	RE-USE/RECYCLING
75%	65% (by average weight of appliance)

Through the adoption of its extended design audit procedures, Pace is now assessing and monitoring the weight of components that are recyclable. It is also continuing its work, as an active member of the Industry Council for Electronic Equipment Recycling (ICER), in developing systems for compliance.

ICER is a source of knowledge and expertise on WEEE issues and is helping companies to prepare systems for EC legislation affecting electrical and electronic equipment.

Product Hazardous Materials

Pace products are systematically checked for hazardous material content (**lead, mercury, cadmium, hexavalent chromium VI, poly-brominated biphenyls (PBBs)** and polybrominated diphenyl ethers (PBDE)) within the scope of applicable EC legislation and the potential for air emissions (Volatile Organic Compounds and Ozone Depleting Substances) during design.

Pace has recently extended its product audit systems to cover substances that are likely to be banned in the UK before 13th August 2004, when the Restriction of Hazardous Substances Directive (RoHS) is implemented. As these systems have been recently up-dated and rely heavily upon sub-contractor and supplier engagement, Pace is currently working with its suppliers to ensure robustness and reliability in its supplier data collection systems. Under the legislation, Pace will need to ensure that the above hazardous substances are removed from all products developed by 1st July 2006.

As part of its continual improvement process, Pace has already commenced the phase-out of one of the main known hazardous components of STBs - lead used in solder and various components. Whilst there are some components used in the STB that are exempt from lead-free requirements of the legislation (e.g. lead in glass of electronic components such as capacitors; lead in high melting point solders; and, lead in ceramic parts), Pace is working towards the development of a lead-free product through its 'Lead Free Working Group'.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace aims to devise a product that is compliant with the 'lead-free' requirements of the RoHS Directive by the end of 2003.		✓	

Product Packaging

Whilst Pace is no longer directly involved in the packing and filling of packaging materials, it still has a responsibility for the packaging that it designs for its products.

Pace designs packaging for its products and uses design audit procedures to ensure that the packaging it specifies in the design process is recyclable. Pace branded STBs are packaged in plastic bags that are then inserted into cardboard boxes with cardboard inserts. These items are recyclable and clear information on the recommended disposal route is printed on their exterior to encourage recycling by the end user.

In accordance with the requirements of the UK Packaging Waste Regulations, Pace monitors the amount of packaging handled and supplied to the UK market. Although no longer directly engaged in the manufacturing of STBs, under the Packaging Waste Regulations, Pace still has a recycling and recovery obligation for the packaging materials it handles (i.e. imported and supplied on to the UK market) in 2002. Pace will meet its legal obligations via the purchase of relevant Packaging Recovery Notes (PRNs) through the PRN market.

Pace is to develop a system for measuring the quantity of packaging used for all of its products by packaging type. This will assist with providing a baseline of packaging materials that will assist with formulating improvement targets in the future.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace will develop a system to record the weights of packaging materials used per product by Jun 2004.		✓	

Operating manuals that are supplied with Pace's STBs are printed on paper. As part of its continual improvement process, Pace set itself the target below in regard to its operating manuals.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace aims to ensure that 50% of all its operating manuals are printed on 'environmentally friendly' paper by December 2002.			✓

Paper now meets Pace's specification for 'environmentally friendly' paper (i.e. it is manufactured using Total Chlorine Free pulp which is sourced from sustainably managed forests). All factories that are engaged in the manufacture and supply of Pace branded products are required to use paper to this specification for all operating manuals supplied.

'Environmentally friendly' paper is defined as Total Chlorine Free and sourced from sustainably managed sources.

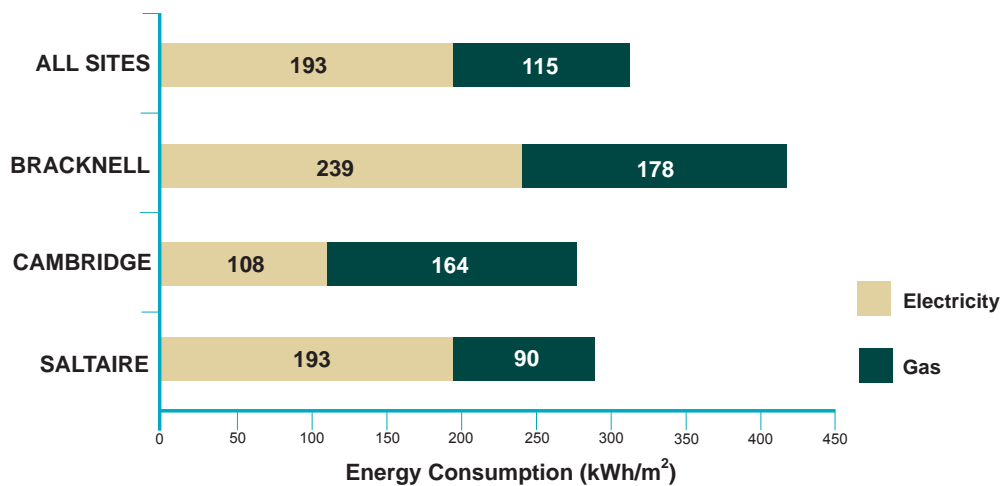
SITE ENVIRONMENTAL PERFORMANCE

As well as the impacts associated with the products developed by Pace, its direct environmental impacts are also considered important. This section of the report provides information on the direct environmental impacts of Pace's activities as they relate to its UK sites only. It is anticipated that with the roll-out of its environmental policy to its other operational sites (i.e. Boca Raton and Grenoble) that the data collection will be similarly extended in the future.

Energy Consumption

At Pace's sites in the UK, electricity, gas and oil are used for heating, cooling, lighting and powering electronic hardware (computers, photocopiers, fax machines, televisions, STBs and test equipment). Fuel is also used for the transport of staff and the shipment of freight.

Pace has continued to collect data on energy consumption. The results of this year's exercise are presented in the graph below.



NB: Graph excludes oil related energy (this comprises less than 0.3% of total Building related energy consumption)

Having established a baseline for energy consumption last year, Pace established a target to reduce electrical and gas energy consumption by 5% from its previous figures of 4,744,895 kWh (electricity) and 2,129,762 kWh (gas). Total electrical energy consumption for the period equated to 3,516,154 kWh, a 26% reduction on last year's figures. Total gas energy consumption for the period equated to 2,105,718 kWh, a 1.1% reduction from last year's figures.

The organisational changes undergone during the reporting period are considered to have been largely a result of the changing circumstances of the company, although the creation of local environmental teams charged with energy reduction target at their respective sites will have also contributed to these reductions.

All electricity consumption figures are based on monthly meter readings at each site. Gas consumption is based upon meter readings at Saltaire site only and is 'estimated' for Bracknell and Cambridge premises (using available utility bills). Gas consumption figures for Saltaire site assume approximately 10% is consumed by co-occupants. Oil is consumed at Saltaire only. Oil consumption for the period was 15,000 kWh, less than 0.3% of the total energy consumption for the UK (5,636,872 kWh).



TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace aims to achieve a 5% reduction in electricity consumption from 2002 figures.			✓
Pace aims to achieve a 5% reduction in gas consumption from 2002 figures.	✓		

During the reporting period, Pace consumed an estimated total of 5,636,872 kWh of energy at its UK premises. This equates to an annual average of approximately 308.65 kWh/m² of Treated Floor Area (TFA) occupied by Pace and 11,575 kWh/employee .

This represents a 5.6% reduction per m² of TFA, but an increase of 16.8% per employee on the previous year's figures.

Air Emissions

Pace generates emissions of greenhouse gases (GHGs) from the buildings that it operates and in the transport of people and goods. Emissions result from the combustion of fossil fuels at its sites for heating and accidental release of refrigerant gases from its air conditioning systems. Indirect emissions of GHG also arise from the use of fuel for travel by air, road and rail.

Pace's products and other large consignments of freight are transported by Pace's subcontractors; this is not currently monitored for GHG reporting purposes.

Some solder fume, which contains lead, is generated at each office from test laboratories. In cases where significant soldering is carried out, fume is passed through absorbent filters to remove the lead prior to release to the internal atmosphere.

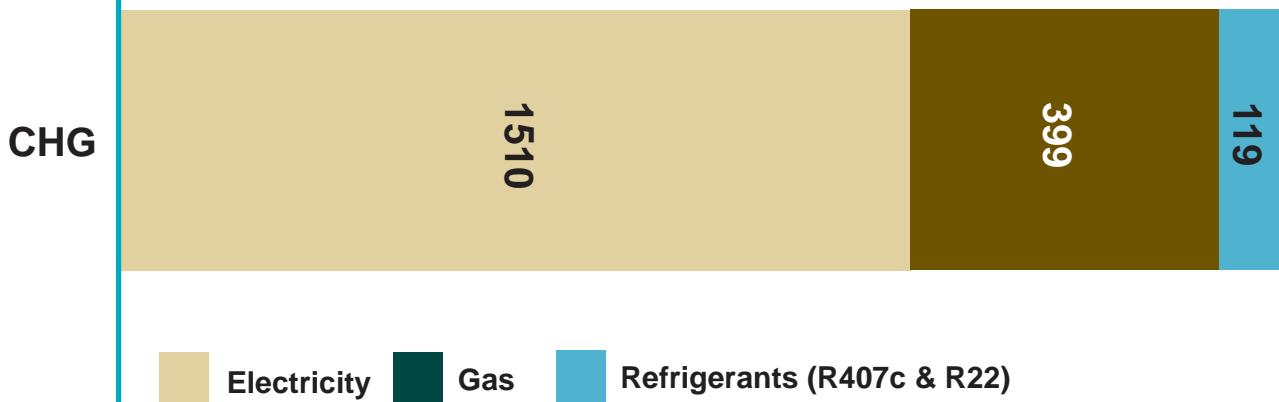
Pace no longer use fluxes that contain volatile organic compounds (VOCs). These have been replaced with water-soluble VOC free alternatives.

4 Treated Floor Area (TFA) is the Gross Floor Area excluding plant rooms and other areas not heated e.g. stores, covered car parks and roof spaces. This has been estimated as 12,737m² (Saltaire = 0.85 x Gross Floor Area), 3517m² (Bracknell = 1.25 x Nett Floor Area (NFA) and 2009m² (Cambridge = 0.9 x Gross Floor Area).

5 Total number of employees (487 as at May 2003) includes all Full Time and Part Time employees, but excludes Temporary Employees.

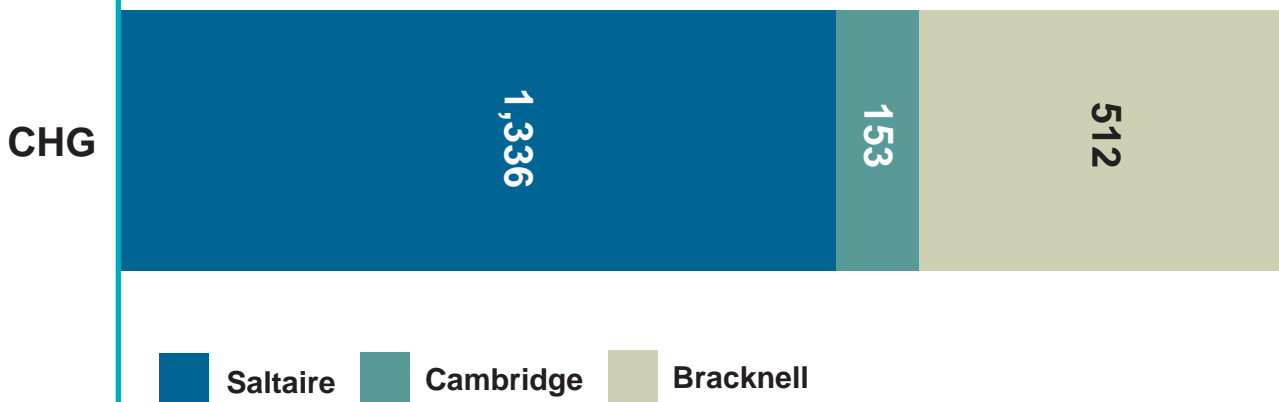
For the reporting period, Pace's UK greenhouse gas emissions by source can be seen below:

Pace UK Greenhouse Gas Emissions (CHG) (Tonnes CO₂ Equivalent)by Source

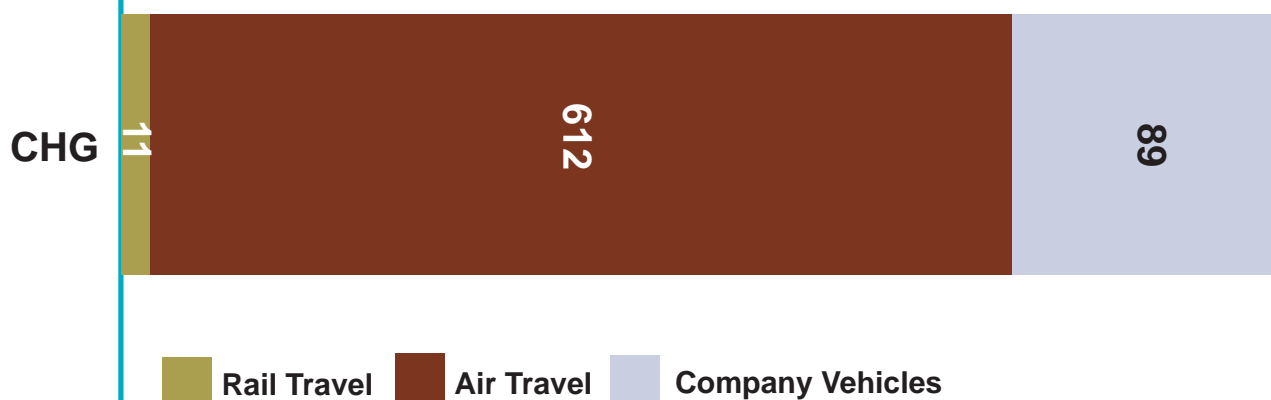


NB: Graph excludes excludes oil related CHG emissions (these comprise less than 0.2% of Building related CHG)

Pace UK Site Greenhouse Gas Emissions (CHG) (Tonnes CO₂ Equivalent)by Source



Pace UK Transport Related Greenhouse Gas Emissions (CHG) (Tonnes CO₂ Equivalent) by Source



Pace uses refrigerants in its air conditioning systems that contain both greenhouse gases and ozone depleting substances. During the reporting period, equipment operated by Pace had reported losses of 19kg (R22) and 54kg (R407c). The GHG associated with these losses are reflected in the charts above. Of these losses, 1kg of CFC11 Equivalent Ozone Depleting Substance (ODS) was released to the atmosphere.

Using the above figures, it is possible to estimate that from the sources for which data is available, Pace generated a total of 2,739 tonnes of GHG (CO₂ equivalent) or 5.62 tonnes of GHG (CO₂ equivalent) per employee. This represents a reduction of 34% on the previous year's total GHG figures, but an increase of 3.6% per employee.

The average monthly GHG emissions are reported at 219 tonnes, well below the target monthly emission of 300 tonnes.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace aims to achieve a monthly emission rate of 300 tonnes.			✓

Again, this radical change in consumption is likely to be largely due to changes in the company's circumstances. The greater use of teleconferencing facilities, encouragement of car sharing, public transport and other initiatives will also have contributed to this overall reduction.

⁶ Greenhouse gas emissions have been calculated using conversion factors produced by the Department of Environment, Food and Rural Affairs (DEFRA). Oil related GHG are included in the overall GHG calculations, but due to the small quantities generated overall (i.e. less than 0.2% of Building related GHG), they are not represented in the graphs.

⁷ Travel related greenhouse gas emissions exclude all sub-contractor related freight and passenger mileage; direct rail passenger mileage; freight mileage; and journeys by taxi or hire car.

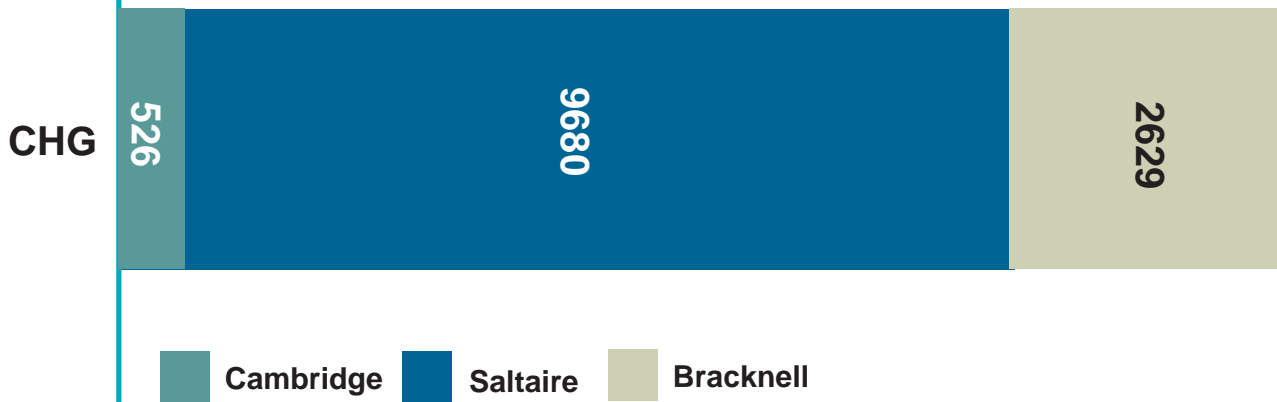


Water

In the UK, water is consumed mainly for hygiene, catering, cleaning and heating/cooling of the buildings.

Metered water data is available for Pace’s sites in Bracknell and Saltaire, although water consumption figures were estimated for Cambridge using available meter readings from current consumption. Pace’s estimated water consumption for the reporting period is as shown below:

Pace UK Water Consumption by Site (m³)



The levels of water consumption presented above equate to an overall consumption of 26.35 m³/employee/year, 28% higher than last year’s figures.

When compared to the benchmark set by the National Water Demand Centre (NWDC) for water consumption of 7.7m³/year/person , Pace’s consumption is higher.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace to achieve 3% reduction in water consumption	✓		

Pace is continuing to review its water management options with a view to making reductions. It is currently investigating systems for water reduction including urinal controls; tap regulators, reduced volume cisterns in WCs etc.

8 Current monthly meter readings were available for Saltaire and it is assumed that 10% is consumed by shared tenants. Bracknell water consumption is based upon meter readings. Cambridge water consumption estimated by calculating average consumption per employee for Saltaire and Bracknell sites and multiplying by the number of staff on site.

9 National Water Demand Centre, On the Right Track



Paper

A variety of equipment and consumables are used within Pace's office premises. These include office supplies, stationery, plastic drink cups, electronic equipment and furniture.

During the reporting period, Pace consumed 4588 sheets/employee/year or 19.5 sheets/employee/day. This represents a 51% increase in the previous figure of 12.9 sheets/employee/day.

However, when compared with typical paper consumption figures of an office worker of 100 sheets per day, the results can be considered low.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
To achieve 5% reduction in paper consumption.			

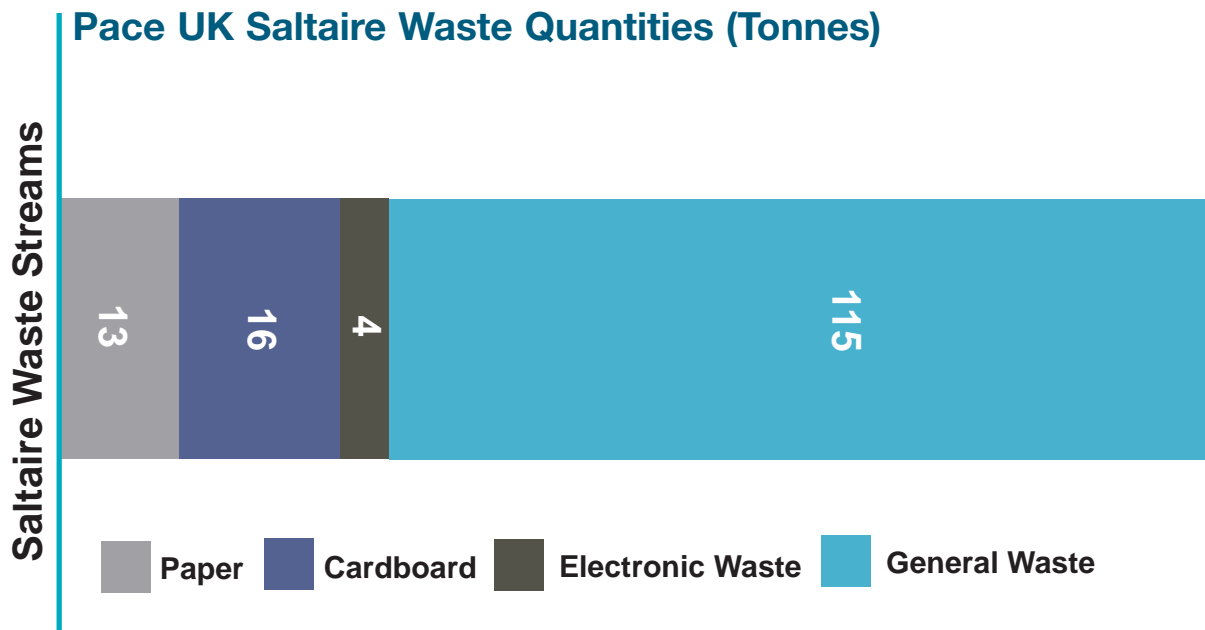
Waste

During the reporting period, Pace had the following waste streams:

- paper
- cardboard
- toner cartridges
- printed circuit boards and personal computers

With the closure of the mini-factory at the beginning of the year, Pace no longer generates waste dross, solder paste, fluxes and flux thinners in appreciable quantities.

Due to the shared tenancy and contractual arrangements for waste disposal at Pace's sites, it is only able to report on the following waste streams for Saltaire:



All electronic equipment is sent to licensed facilities for disassembly, recovery and recycling.

Cardboard, toner cartridges and paper generated at Saltaire are segregated for recycling.

The remaining waste streams at each of Pace's UK sites are currently co-disposed in shared skips arranged by the landlord.

ENVIRONMENTAL COMPLIANCE


There are no current or pending actions against the company for breaches of UK legislation during the reporting period.

Pace continues to track and plan for changes to its business as a result of existing and forthcoming legislation.

24 Supplier Environmental Performance

Pace applies supplier assessment procedures to evaluate the environmental performance of its suppliers. These request that suppliers provide details of environmental management systems and third party registrations as part of the supplier selection process.

At the time of reporting, Pace is able to report that 100% of its sub-contractors and 38% of its component vendors have achieved accreditation to ISO14001.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
By the end of January 2003, Pace aims to have 50% of its sub-contractor sites and 25% of all component vendors accredited to ISO14001.			

Business In the Environment Index

Once again, Pace participated in the Yorkshire and Humber 5th Regional Index of Environmental Engagement along with 142 of the region's largest companies. This scheme is administered by Business in the Community and ranks companies for their environmental performance. In the 2003 index, Pace was ranked 23rd out of 142 participants. This demonstrates a significant improvement upon last year's results when Pace was ranked 54th out of 120 participants.

The BiE survey assesses performance in three key areas and then converts the results into rankings against all participants overall and all participants within a company's sector grouping.

Environmental Management - the extent to which an organisation understands and manages its environmental issues as an integral part of business strategy.

Environmental Performance - defined as the extent to which organisations measure their global environmental impacts in keys areas and set specific targets to reduce them.

Assurance - the internal and external processes that an organisation uses to provide confidence that environmental information is of an acceptable quality and adequately addresses all environmental risks.

	2002	2003
Rankings		
Overall	54th	23rd
Sector	2nd	3rd
Scores (%)		
Environmental Management	68%	87%
Environmental Performance	32%	81%
Assurance	100%	100%
Overall Score	55%	86%



FTSE4Good

Following the formal adoption of its environmental policy at its other operational sites of the business, Pace is pleased to report that it has now been included in the UK's FTSE4Good Index. FTSE4Good is an index series for socially responsible investment (SRI), designed by FTSE, one of the worlds leading index providers. FTSE4Good is independently defined and researched, setting a global standard for SRI. The indices are based upon internationally accepted codes of conduct and FTSE's proven and transparent index calculation methodology.

The FTSE4Good criteria cover the following areas:

- Working towards environmental sustainability
- Developing positive relationships with stakeholders
- Up-holding and supporting universal human rights



FTSE4Good Index Series

Yorkshire Wildlife Trust

During the period, Pace continued its active membership of the Yorkshire Wildlife Trust, a registered charity established in 1946 to conserve and promote the diversity of Yorkshire wildlife and habitats for the benefit and well being of both wildlife and people.



On the 13th March 2003, a number of Pace employees were involved in a local conservation project, which involved traditional coppicing methods to control the growth of Sycamore at Stoneycliffe Wood in West Yorkshire.

Pace aims to continue to promote and contribute to the good work of the Yorkshire Wildlife Trust through regular donations and participation in annual fundraising events.

TARGET	NOT ACHIEVED	IN PROGRESS	ACHIEVED
Pace staff to participate in at least one event organised by the Yorkshire Wildlife Trust.			✓

27 Social Issues

This year, Pace wishes to express comment on its consideration of social issues within its environmental performance report.

Whilst Pace has no formal policy on corporate social responsibility (CSR), it has taken steps to determine its relative position against a recognised standard and code of practice, namely:

Social Accountability 8000 (SA8000)

The SA8000 is a standard developed by Social Accountability International (SAI). It is a tool for brand companies, suppliers and other organizations to assure just and decent working conditions in the supply chain. SA8000 is a recognised workplace standard that can be audited and verified by SAI-accredited auditing bodies.

SA8000 can be seen at <http://www.cepaa.org/SA8000/SA8000.htm>

Ethical Trade Initiative (ETI) Base Code

The ETI is an alliance of companies, non-governmental organisations and trade unions. It was established to identify and promote good practice in the implementation of codes of labour practice. The goal of the ETI is to ensure that the working conditions of workers producing for the UK market meet or exceed international standards.

The ETI Base Code was produced in 1998. It is based on Conventions of the International Labour Organisation, the oldest United Nations body and the only one with representatives from governments, business and trade unions.

A copy of the ETI Base Code can be seen at <http://www.eti.org.uk>.

During the reporting period, Pace took part in a 'self-assessment' survey to determine its position in relation to these two standards. On the basis of that analysis, Pace is considering an action plan to address the issues arising and meet the applicable requirements of these standards.

28 PERFORMANCE DATA SUMMARY & NOTES

Data Type	Units	Results	Notes
GENERAL			
Staff Numbers	Number	487	
Treated Floor Area	m ²	<ul style="list-style-type: none"> • Saltaire = 12737 m² • Cambridge = 2009 m² • Bracknell = 3517 m² Total = 18,263m ²	Treated Floor Area (TFA) is the gross area less plant rooms and other areas (e.g. stores, covered car parking and roof spaces) not directly heated. This has been estimated as 12,737m ² (Saltaire = 0.85 x Gross Floor Area), 3517m ² (Bracknell = 1.25 x Net Floor Area (NFA) and 2009m ² (Cambridge = 0.9 x Gross Floor Area).
PRODUCT			
Product Energy Consumption	KWh/Year/STB	151.5kWhr/year/STB	Assumes daily usage of 4 hours on 'typical' operational mode and 20 hours 'stand-by' mode.
Product Material Composition	Kg or tonnes	<ul style="list-style-type: none"> • 142 tonnes plastic • 941 tonnes steel • 412 tonnes printed circuitry 	Assumes each box produced is installed and used during the calendar year and excludes 'prototype' boxes not in production for market.
ENERGY & RESOURCE CONSUMPTION			
Energy Consumption	kWh	5,636,872 kWh	
Energy Consumption	KWh/m ²	308.65kWh/m ²	
Water Consumption	m ³	12,835m ³	
Water Consumption	m ³ /employee	26.36m ³ /employee	
Paper Consumption	Sheets/person/year	4588	Includes A3 and A4 paper
Paper Consumption	Sheets/person/day	19.5	Includes A3 and A4 paper
TRANSPORT			
Rail	Person km	116,773 pkm	
Air Mileage (Long Haul)	Person km	4,758,511 pkm	
Air Mileage (Short Haul)	Person km	493,608 pkm	
AIR EMISSIONS & WASTE			
Direct Greenhouse Gas Emissions	Tonnes CO ₂ Equivalent	2031	Greenhouse gas emissions have been calculated using conversion factors produced by the Department of Environment, Food and Rural Affairs (DEFRA).
Transport Related Greenhouse Gas Emissions	Tonnes CO ₂ Equivalent	712.20	Greenhouse gas emissions have been calculated using conversion factors produced by the Department of Environment, Food and Rural Affairs (DEFRA).
Total Greenhouse Gas Emissions/Employee	Tonnes CO ₂ Equivalent/Employee	2,743.57	Travel related greenhouse gas emissions exclude all sub-contractor related freight and passenger mileage; direct rail passenger mileage; freight mileage; and journeys by taxi or hire car. Greenhouse gas emissions have been calculated using conversion factors produced by the Department of Environment, Food and Rural Affairs (DEFRA).

ACTIVITY - an operation, process or function of the organisation that has an environmental impact.

CARBON DIOXIDE (CO₂) - Gas that is produced by the combustion of carbon based materials and a number of natural processes. Rising concentrations of global atmospheric CO₂ due to man's activities are believed to be the single largest contributing factor to climate change.

CFC - Chlorofluorocarbon (synthetic gas used as aerosol propellant and refrigerant, harmful to the ozone layer)

CLIMATE CHANGE - The major predicted impact of global warming is climate change, which includes melting of ice caps, rising sea levels and increasing frequencies of extreme weather patterns such as storms, droughts and high winds.

ENVIRONMENTAL AUDIT - A systematic and documented process of objectively obtaining and evaluating evidence to determine whether environmental management arrangements conforms to the criteria set by the organisation.

ENVIRONMENTAL IMPACT - a change to the environment (positive or negative) that results from an activity.

ENVIRONMENTAL PERFORMANCE - The measurable results of environmental management.

ENVIRONMENTAL TARGET - Detailed performance requirements (quantified wherever possible).

GLOBAL WARMING - The mechanism whereby incoming solar heat radiation is trapped by atmospheric carbon dioxide and other greenhouse gases. As the atmospheric concentration of greenhouse gases continues to rise, the amount of solar radiation that is trapped within the atmosphere increases and the tendency is for temperatures to rise. The overall increase in atmospheric temperatures is believed to be the cause of more frequently occurring extreme weather conditions, generally referred to as Climate Change.

GLOBAL WARMING POTENTIAL (GWP) - indicates the potential of a substance, relative to carbon dioxide (CO₂), to contribute to global warming. The global warming potential of carbon dioxide over a period of 100 years is defined as 1.

GREENHOUSE GAS (GHG) – a gas that has a Global Warming Potential (GWP)

HCFC - Hydrochlorofluorocarbon (ozone depleting substance used as a substitute for CFCs in refrigeration, foam blowing and aerosols)

HFC - Hydrofluorocarbon (substance used as a substitute for CFCs)

KEY PERFORMANCE INDICATOR - A specific expression that provides information about the environmental performance of an organisation's operations.

ABSOLUTE MEASURES (A) - measures that are expressed as one single unit (e.g. the number of prosecutions, the number of kWh energy used, etc).

NORMALISED MEASURES (N) - measures that quantify the impact (e.g. Energy in kilowatt hours (kWh), Paper consumption in kilograms (kg)) and present it against a common denominator (e.g. energy consumption kWh per Set Top Box). This provides for both reliable comparisons with other similar organisations as well as comparing our results over time.

OZONE DEPLETION POTENTIAL (ODP) - is a measure of the damage a particular substance will inflict on the ozone layer, relative to CFC 11 (which has an ODP of 1).

OZONE DEPLETING SUBSTANCE (ODS) - a substance that has an Ozone Depletion Potential (ODP)

R22 – A HCFC with a Global Warming Potential (GWP) of 1700 and an Ozone Depleting Potential (ODP) of 0.055.

R407C – A HFC with a Global Warming Potential (GWP) of 1600 and an Ozone Depleting Potential (ODP) of 0.

TOTALLY CHLORINE FREE (TCF) PAPER - Papers made from pulp processed without either chlorine or chlorine derivatives.

VOC.- Volatile Organic Compounds which evaporate readily and contribute to air pollution directly or through chemical or photochemical reactions to produce secondary air pollutants (principally Ozone and Peroxyacetyl Nitrate).

ENERGY STAR

<http://www.energystar.gov/>

European Commission's Code of Conduct on Energy Efficiency of Digital TV Service Systems

http://energyefficiency.jrc.cec.eu.int/html/standby_initiative.htm

FTSE4GOOD

<http://www.ftse.com/ftse4good/>

YORKSHIRE WILDLIFE TRUST

<http://www.yorkshire-wildlife-trust.org.uk/>

BUSINESS IN THE ENVIRONMENT

<http://www2.bitc.org.uk/index.html>

ENVIRONMENT AGENCY

<http://www.environment-agency.gov.uk/>

SAI

<http://www.cepaa.org/SA8000/SA8000.htm>

ETHICAL TRADE INITIATIVE

<http://www.eti.org.uk>

During 2002/03, Scott Wilson Kirkpatrick & Co Ltd were commissioned to carry out a review of Pace Micro Technology's UK activities, prepare its Environmental Report and provide assurance that the information presented is valid and presents a reasonable indication of environmental performance.

Scott Wilson's contract with Pace is strictly in relation to the provision of advice on the structure and content of the environmental report. We have no other commercial contracts with Pace on environmental matters. Our organisation is therefore independent of the Pace organisation, its policies and management system arrangements that provide the data and information contained within the report.

Scope & Objectives

Scott Wilson's responsibility is to review environmental performance information provided by Pace Micro Technology in order to present it the environmental report.

Method

In respect of the collection and presentation of the environmental performance information, Scott Wilson planned its review work so as to obtain all the information and explanations that were considered necessary to provide sufficient evidence to give reasonable confidence that the processes of data collection do not give rise to material misstatement.

Scott Wilson's work included:

- A review of current environmental management system policies, objectives, targets, procedures and controls.
- Site visits and reviews of Pace Micro Technology's premises at Saltaire, Bracknell and Cambridge.
- Interviews with staff members of the company to obtain data and information that demonstrate the existence of environmental information management systems, controls and practices.
- Examination of data, information and other documentary evidence.
- Validation of environmental performance data supplied by Pace Micro Technology.

Opinion

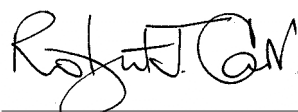
Based upon the information provided and our experience of working with Pace Micro Technology, we consider that the information reported provides a fair and accurate indication of the company's environmental performance for the period 2002/03.

Current systems of data collection, however, whilst making reference to the reporting guidelines of the Global Reporting Initiative and DEFRA, need to be advanced if they are to be considered fully compliant with these initiatives particularly in relation to the increasingly important Corporate Social Responsibility elements.

It is recognised that Pace's data collection and reporting systems are part of an evolutionary process and that the range and comparability of data is to improve for future reports.



Guy Mercer - Senior Environmental Consultant (Scott Wilson)



Robert Carr - Associate Director (Scott Wilson)