

Smiths Group plc  
Environment, Health  
and Safety Report

2003

We are a diverse and changing business, managing environment, health and safety issues responsibly



This report provides a summary of our EHS performance. You can find further information at [www.smiths-group.com](http://www.smiths-group.com).

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		Delivers highly engineered solutions and critical components for diverse applications, ranging from flexible tubing and interconnects through to mechanical seals and marine electronics.

### Making contact

We welcome your feedback on this report. Please send your comments to Jonathan Garrett, Smiths' Director Environment, Health and Safety at [ehs@smiths-group.com](mailto:ehs@smiths-group.com) or by writing to him at:

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## Message from the Chief Executive



Keith Butler-Wheelhouse

Welcome to Smiths' environment, health and safety (EHS) report for 2003. I am glad to report a year of significant progress against our targets and in our EHS programmes.

We have been working hard to give EHS issues a high priority in the way we do business in Smiths. Our improved performance derives from integrating EHS responsibilities into our day-to-day management activities.

Our businesses, large and small across our worldwide operations, drive forward our programme of continual improvement.

Looking forward, our priorities for EHS are to:

- Achieve ISO 14001 certification for the remaining three of our 80 targeted major manufacturing sites and continue implementation for new Group acquisitions.
- Continue to roll out our comprehensive health and safety audit system.
- Continue to improve the quality and interpretation of our data, recognising that the diverse and changing nature of our operations makes it difficult to establish meaningful trends.
- Improve our eco-efficiency by reducing energy, water, waste and emissions.
- Reduce the number of accidents, building on the improvements we have made over the last three years.
- Integrate environmental thinking into the design of new products to meet higher customer expectations and to comply with changing regulation.

We continued the programme of stakeholder dialogue that we started last year to help understand our stakeholders' expectations. Feedback from our key stakeholders has led us to review our existing policies and practices and explore how best to extend them to cover the risks and opportunities identified.

Our successes have been recognised at a local level, with awards for our pollution prevention programmes and our safety performance. External benchmarking - our improved rating in the Business in the Environment (BiE) survey of the UK's Top 350 companies - provides a further measure of our progress.

This report has been independently assured as we promised last year and describes how we manage EHS in our operations. You can find more information on our website at [www.smiths-group.com](http://www.smiths-group.com).

We have come a long way in recent years but we are not complacent and recognise there is still much to do. We value your feedback and welcome any comments you may wish to make as part of our stakeholder dialogue programme.

Keith Butler-Wheelhouse  
February 2004

We have again made good progress on the environment, health and safety aspects of our operations.

## Highlights

77 of our 80 targeted manufacturing sites are certified to ISO 14001

96%

45% reduction in waste tonnage to landfill per £million sales since 2001

-45%

Successes recognised at local level with awards for safety and pollution prevention

Stakeholder dialogue process used for the second year to help develop this report



Joined the UK Government's 'Make a Corporate Commitment' campaign as a company publishing environmental reduction targets

[www.macc2.org.uk](http://www.macc2.org.uk)



Independent assurance of our EHS report provided for the first time

24% decrease in the number of accidents resulting in working days lost to the business since 2001

**-24%**

New role of corporate Director for Environment, Health and Safety established

72 major sites completed at least one comprehensive health and safety audit using our AuditMaster™ self-assessment tool since 2002

**72**

New Group EHS Committee established



## Smiths and Sustainability



### Sustainable Development

It can be difficult to visualise what the commonly quoted Brundtland definition of sustainable development - "meeting the needs of the present without compromising the ability of future generations to meet their own needs" - means in practice. Smiths' strategy has been to focus on EHS issues in our day-to-day activities and on the impact of our products, aiming to:

- Reduce our environmental impacts, using ISO 14001 to help manage risks in our operations.
- Reduce workplace accident rates, using safety management systems and internal auditing.
- Improve the eco-efficiency of our operations, targeting reductions in our use of energy and other natural resources and better disposal of waste.
- Integrate environmental thinking into the development of new, sustainable products to meet customer expectations and regulatory requirements.

### Managing Eco-Efficiency

Our focus on creating a lean enterprise and implementing new management systems helps us minimise waste and maximise the efficient use of resources. We have set reduction targets for greenhouse gas emissions, water use and waste to landfill to support our continuing drive towards efficient operations. A Group-wide EHS Committee regularly reviews the progress we are making with our EHS initiatives.

### Sustainable Products

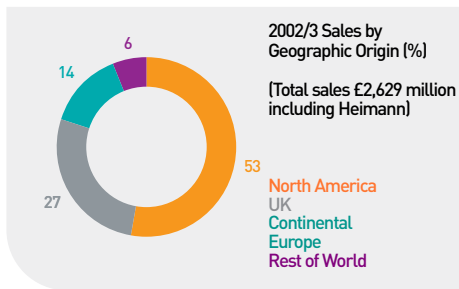
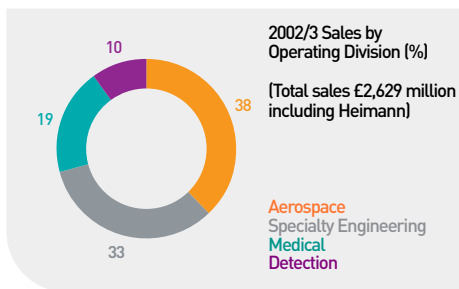
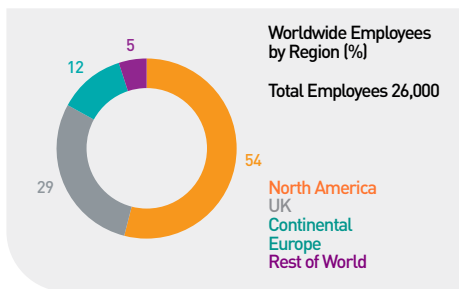
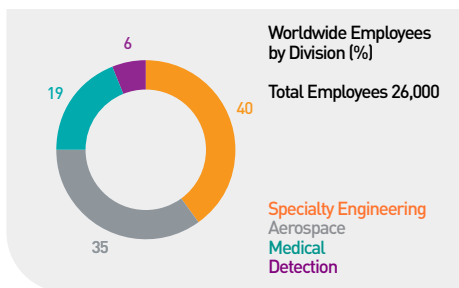
We have significant business interests in defence, healthcare, detection and emissions-reduction technologies. Innovation is the key to Smiths providing more sustainable products.

A number of our new products help reduce our customers' environmental impacts, improve safety and deliver healthcare benefits:

- Our safety syringes reduce needle-stick injuries.
- Our insulin pumps improve quality of life for diabetes sufferers.
- Our on-board avionics systems deliver improved energy efficiency and fuel saving for aircraft.
- Our mechanical seals and sealing systems help customers reduce environmental impacts and comply with increasingly stringent regulations.
- We repair avionic instruments to maintain safety and extend product life.
- We are working on phasing out hazardous substances in products to reduce environmental impact at end-of-life disposal and to comply with changing regulation.

Our ISO 14001 systems, procedures and design teams have raised awareness at all levels of the Group of the need for environmental thinking to be integrated into product design and we are developing simple Life Cycle Assessment tools to provide better quality data.

## Our Businesses



### Our Businesses

Smiths is an international engineering and technology group with market leading positions in our chosen areas of specialisation:

- Aerospace
- Detection
- Medical
- Specialty Engineering

These areas are reflected in Smiths' new divisional structure implemented in August 2003.

Smiths operates as a decentralised business, with considerable autonomy and accountability afforded to our subsidiary companies.

For more information on group structure and organisation see our Annual Report and Accounts for 2003 at [www.smiths-group.com](http://www.smiths-group.com).

### 2002/3 Financial Highlights

(continuing activities including Smiths Heimann)

	£m
Sales	2,629
Operating Profit	372
Pre-Tax Profit	349
Earnings per Share	45.6p

### Smiths People Worldwide

Smiths employs 26,000 people at over 250 locations worldwide, including 101 manufacturing facilities. Our employee numbers have changed significantly since 2002, largely due to the sale of our polymer business.

## Divisional Profiles



1	2
3	4

### 1 Smiths Aerospace

Smiths Aerospace is a first-tier supplier of integrated equipment and systems to defence and civil aircraft prime manufacturers and engine builders. Defence equipment accounts for 62 per cent of sales with the remainder coming from civil aircraft programmes.

Our principal countries of manufacture are the US, Canada and UK, and we have repair facilities in Singapore and Australia.

For more information on our aerospace activities please see our website at [www.smiths-aerospace.com](http://www.smiths-aerospace.com).

### 3 Smiths Detection

Smiths Detection provides advanced security equipment solutions to detect and identify explosives, chemical and biological agents, weapons and contraband.

Our principal countries of manufacture are the US, UK, Canada, France and Germany.

For more information on our detection activities please see our website at [www.smiths-detection.com](http://www.smiths-detection.com).

### 2 Smiths Medical

Smiths Medical is a leading supplier of devices used during critical and intensive care procedures, for post-operative recovery and home infusion therapies in two broad product categories – Anaesthesia/Safety Devices and Medication Delivery/Patient Monitoring.

Our principal countries of manufacture are the US, Mexico, UK and Germany.

For more information on our medical activities please see our website at [www.smiths-medical.com](http://www.smiths-medical.com).

### 4 Smiths Specialty Engineering

Our Specialty Engineering division delivers highly engineered solutions to customers' specific requirements for unique and critical components across a wide range of industries. Key product areas include flexible tubing and tubular systems, electrical interconnects, mechanical seals and marine radar and navigational charts.

Our manufacturing facilities are located in the UK, US, Mexico, Costa Rica, Brazil, Venezuela, South Africa, Continental Europe and China.

For more information on our specialty engineering activities please see our website at [www.smiths-specialtyengineering.com](http://www.smiths-specialtyengineering.com).



## Report Scope

### Report Scope

This Report provides a statement of progress in key EHS performance areas for the financial year ending 31 July 2003. EHS data is provided by our major wholly owned operations worldwide and encompasses some 85 per cent of our employees. We believe it provides a good overall representation of Smiths' EHS 'footprint'.

### Recent Acquisitions and Divestments

Financial year ending 31 July 2003 saw significant changes to the structure of the Group.

This report does not include 2003 data for Polymer Sealing Solutions (25 sites) the Ventilation Systems business (7 sites) and Lodge Ignition, UK (2 sites) that were disposed of. Data from Smiths Medical – Gary (formerly Bivona Inc) and Smiths Aerospace Mechanical Systems – Yorba Linda (formerly Able Corporation) are included for the first time in this report.

### Report Profile and Assurance

Data and information used to generate this year's report originate from:

- Annual environmental metrics collected at our manufacturing operations and larger customer service centres (97 facilities).
- Quarterly lost time incident data from manufacturing operations, service centres and warehouses (117 facilities).
- Results of internal health and safety self-assessment audits (AuditMaster™).
- Feedback from employees, customers and investors.

### Internal Assurance Systems

Guidelines for completing corporate environmental metrics at business level are provided in 11 languages.

EHS data is provided by our facilities around the world using an online reporting system and is aggregated and verified by the Group EHS function.

Recent acquisitions report their performance after their first full financial year in the Group. Data for Smiths Heimann, acquired in December 2002, is not included in this report.

The report has been prepared by the Group EHS Committee and approved by the Smiths Group Board.

### External Assurance

CSR Network has prepared an independent assurance statement for this EHS Report that can be found at page 27.

## Structure and Governance Framework

### Structure and Governance Framework

Our arrangements for Corporate Governance cover the assessment of all business risks and opportunities including EHS issues. Our Internal Audit function undertakes and reports on these assessments. Further details of our governance structures can be found in our Annual Report and Accounts at [www.smiths-group.com](http://www.smiths-group.com).

We have a clear line of responsibility for EHS management to ensure policies and standards are adopted by facilities worldwide. Day-to-day responsibility and accountability for EHS management rests with the local management of our operating companies. The new Director, EHS reports to the Director, Human Resources on EHS strategy, performance and progress against plan. The Director HR chairs the new Group EHS Committee and reports to the Chief Executive, who is accountable to the Board for EHS performance.

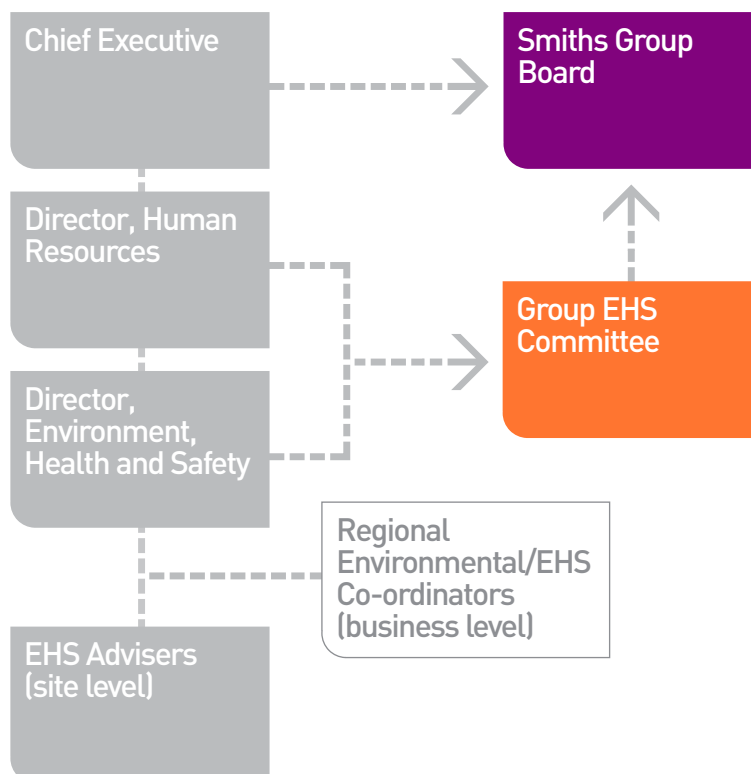
### Smiths Group Board

The Smiths Group Board regularly reviews EHS performance and briefings are provided for Executive Directors on specific issues and programmes.

### Group EHS Committee

A new Group EHS Committee, reporting to the Board, has been set up to enhance our divisional focus on EHS performance. With senior representation from the divisions and corporate EHS expertise, the Committee meets quarterly to develop policies and standards, review progress – including progress against group targets – and prepare the Group EHS report.

### EHS Organisation Chart

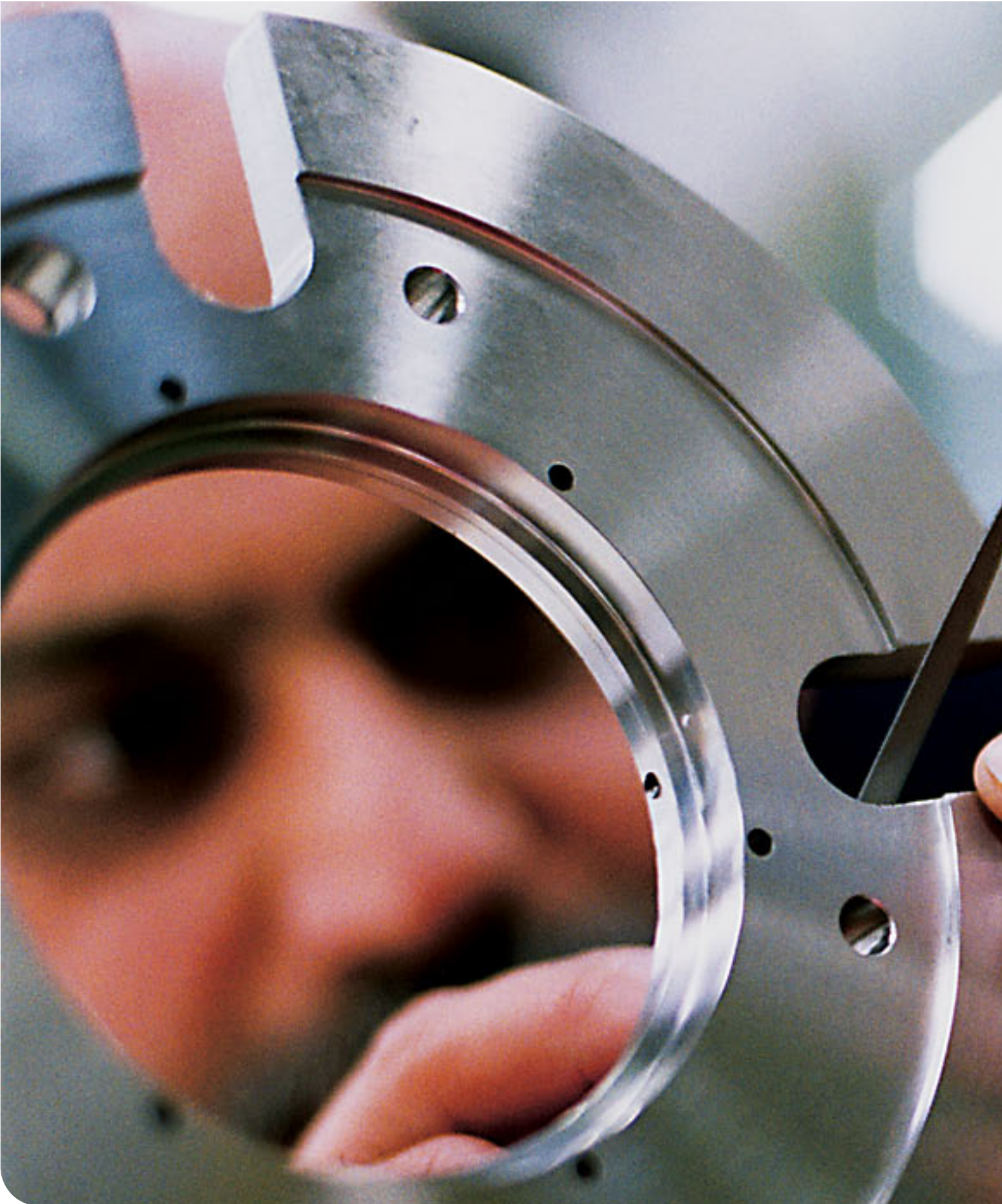



Smiths businesses are encouraged to develop their own site-specific targets – for greenhouse gas emissions, water and waste – to support the achievement of Group EHS targets.

## Group EHS Targets

Group Target	Progress
Implement Employee Assistance Programmes (EAPs)	<b>Partially completed.</b> North American businesses have EAPs in place; others implement EAPs in line with their own priorities.
Integrate business driving into Smiths' Health and Safety programmes	<b>Completed.</b> Guidance has been developed and adopted by one of our largest businesses - Smiths Aerospace in Cheltenham, UK.
Undertake Health and Safety audits of all major operations worldwide by end of 2003	<b>On track.</b> 72 major sites had completed at least one audit using the AuditMaster™ system by July 2003.
All major sites worldwide to achieve Health and Safety scores of at least 60%	<b>Partially completed.</b> 48 major sites (67% of the total) have completed an audit score of at least 60%.
Reduce the current absence rate for our UK and EU businesses	<b>Ongoing.</b> Absence data is collected for UK and EU businesses. We are investigating whether a single, worldwide framework for collecting this data can be developed.
All major manufacturing sites to achieve ISO 14001 certification by the end of 2003	<b>On track.</b> By July 2003, 77 facilities – 96 per cent of the targeted total - had achieved certification.
Set quantified reduction targets for key aspects of performance	<b>On-going.</b> Targets are: <ul style="list-style-type: none"> <li>— reduce greenhouse gas emissions by 5% per £million sales by 2006 (2001 baseline). <b>On track.</b></li> <li>— reduce water consumption by 10% per £million sales by 2006 (2001 baseline). Consumption increased; to be reviewed by Group EHS Committee</li> <li>— reduce waste to landfill by 20% per £million sales by 2006 (2001 baseline). <b>Achieved</b> in 2003. The Group EHS Committee will consider future waste reduction targets.</li> </ul>
Sign up to Make A Corporate Commitment (MACC2)	<b>Completed</b> in June 2003. Further information can be found at <a href="http://www.macc2.org.uk">www.macc2.org.uk</a> .
Publish a full Environmental Performance Report in 2003	<b>Completed</b> by publication of this summary and the full Smiths EHS Report 2003 on our website.
Develop an environmental award scheme to recognise, reward and promote best practice	<b>Postponed.</b> Work to develop this award scheme has been delayed pending improvements in the quality of our EHS data.

Further information on performance against targets can be found on page 16 below and in our full report at [www.smiths-group.com](http://www.smiths-group.com).





Our John Crane Type 2800 Seals are designed to operate in extreme temperatures and pressures without leaking polluting substances. 500 Type 2800s were delivered to the oil and gas industry in 2003 alone

We established an electronic consultation process via a dedicated website to seek the views of our stakeholders during the preparation of this report.

## Stakeholder Dialogue and Policy Statements

### Stakeholder Dialogue

Smiths recognises the value of engaging stakeholders in developing our EHS reports during the preparation stage.

We have taken forward the stakeholder dialogue programme initiated last year with help from The Environment Council, an independent organisation with expertise in facilitating stakeholder dialogue.

We completed two employee workshops, held meetings with more than 20 major customers and investors, and established electronic consultation via a dedicated website.

Our stakeholders identified supply chain management and the environmental and social impacts of our products - including life cycle assessment, hazardous materials management and producer responsibility legislation - as worthy of attention. The scope of our current EHS reporting was judged as about right.

We also received stakeholder feedback on broader questions of corporate social responsibility outside the scope of this EHS report. This feedback has assisted our already established review of our existing policies and practices.

### Policy Statements

Smiths has published policy statements for both environmental and health and safety issues, which can be found on our website at [www.smiths-group.com](http://www.smiths-group.com). These policies apply to our operations worldwide and are underpinned by our EHS management systems, measurement of key aspects of performance and improvement targets.

Responsibility for implementing and maintaining these Group requirements is devolved to operational management at each facility.

## Management Systems

**Target**  
All major manufacturing sites to  
achieve certification to ISO 14001  
by the end of 2003

**2003 Achievement**  
77 out of 80 targeted  
sites certified

96%

### Management Systems

Smiths believes it is right to adopt a consistent approach to EHS issues across all our activities. Our EHS programmes cover all our operations worldwide not just those in North America and the UK.

We follow a risk-based approach in managing the EHS aspects of our operations and are implementing an environmental management system to ISO 14001 at each of our major manufacturing sites.

This particularly suits the decentralised nature of our operations, allowing individual businesses to integrate environmental thinking into their operations, focus on their own significant aspects and improve their eco-efficiency, legal compliance, risk management and product design processes.

### ISO 14001 Certification

In November 2000, we set ourselves a demanding three-year goal to achieve ISO 14001 certification for all our major manufacturing sites by the end of December 2003.

We have made excellent progress and, at the end of July 2003, 96 per cent of the targeted businesses - 77 of 80 facilities in 17 countries - had achieved certification to this international standard.

Timescales for new acquisitions to seek ISO 14001 certification will be set by the Group EHS Committee.

### Safety Manual and Audit System

Guidance for health and safety management within the Group is set out in a global 'best practice' safety manual modelled on the standard for Occupational Health and Safety Management Systems (OHSAS 18001). Guidance focuses on the management and control of 60 common hazards and issues in our operations including the risk assessment process, hazardous substance management, lone working, travelling on company business and the function of safety committees.

We are continuing the roll out of our safety audit process across all our major operations. The AuditMaster™ tool contains more than 300 questions on the management of health and safety, risk assessments, control and protection arrangements, and health and welfare.

By the end of July 2003, 72 of 107 major facilities in 10 countries had completed at least one AuditMaster™ health and safety audit.

### OHSAS 18001 Certification

John Crane GmbH, Smiths Medical in Germany and John Crane Safematic in Finland have been successfully certified against the requirements of OHSAS 18001 for their management of health and safety.

Our Needle-Pro<sup>®</sup> safety devices protect the health and safety of clinicians and nursing staff across the US, reducing needlestick injuries and the risk of cross-infection







## Our Performance

This section reports our performance on the key EHS aspects we have identified within Smiths:

- Energy and water use
- Waste management
- Climate change
- Air emissions
- Contaminated land
- Product stewardship
- Health and safety
- Fines and prosecutions
- Environmental investment
- Supply chain management.

We have chosen these areas as indicators as they are common across our operations and to our activities as a manufacturing and technology group.

### Data Quality

We have developed a set of Key Performance Indicators (KPIs) to measure and drive our progress in EHS performance. Both absolute and normalised data is provided. Where normalised data is presented, we use the Group's financial turnover, as published in the Annual Report and Accounts for the year

in question for environmental performance, and use employee data i.e. actual staff numbers and man-hours worked at sites for lost time incident performance.

Significant absolute reductions in energy consumption, emissions and waste are shown in the performance charts. These are influenced by the sale of major business units – such as Polymer Sealing Solutions – during the year. We believe that normalising the data against sales and employee numbers provides more meaningful information on trends in performance.

Data collection and interpretation continues to be a challenge. Establishing meaningful trends in performance is difficult as the diverse profile of our operations can change significantly through acquisitions and divestments. We believe that the overall quality of our data has improved over time but we appreciate that there is still scope for further improvement.

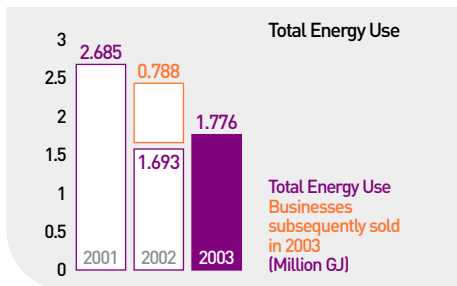
This summary report provides an overview of some of the EHS initiatives undertaken by our businesses around the world. You can find more detailed case studies and further commentary in the full EHS report on our website at [www.smiths-group.com](http://www.smiths-group.com).

### Our performance at a glance

Performance Area	Units	Trend 2001-2003	2003	2002	2001
BiE Index	% score	•	69	64	56
ISO 14001	Number of major manufacturing sites certified	•	77	49	36
Waste disposal to landfill	Tonnes/£m sales	•	4	6	7
Greenhouse gas emissions	Tonnes CO <sub>2</sub> equivalent /£m sales	•	88	92	89
Water use	M <sup>3</sup> /£m sales	•	605	608	544
VOC emissions	Kg/£m sales	•	118	134	117
Ozone depleting emissions	Tonnes CFC-11 equivalent	•	0.8	1	1.8
Regulatory compliance (environment)	Number of enforcement actions resulting in fines or prosecutions	–	1	2	Not available
Lost time incidents	Number of lost time incidents due to injury or illness/1000 employees	•	13	16	18
Roll out of health and safety audit protocol (AuditMaster™)	Number of major sites completing at least one audit	•	59	13	0
	Number of major sites scoring > 60%	•	48	8	0

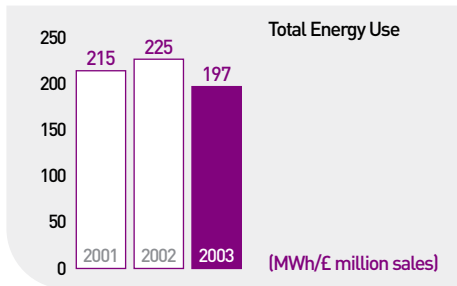
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## Energy and Water Use

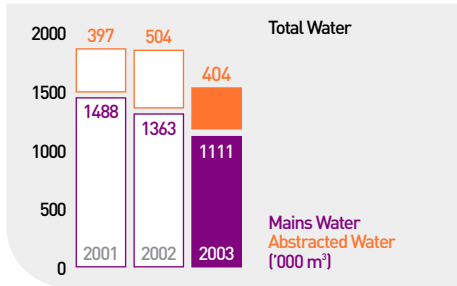


### Energy and Water Use

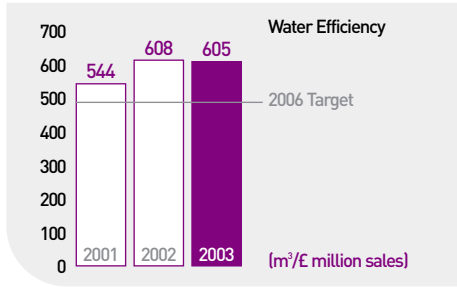
90 per cent of our site energy is derived from electricity and natural gas, with the remainder from heating oil, kerosene and LPG. In absolute terms, our use of energy in 2003 decreased by 28 per cent compared with 2002 due to the sale of our polymer and other businesses.



When normalised against turnover, our energy use decreased by 12 per cent per £million sales over this period. The decrease is due to the sale of our polymer and other businesses and also to improvements at site level including more efficient factory lighting, better heating controls and timers, new plant and systems, process changes, improved staff awareness and successful switch-off campaigns.



We continue to seek opportunities for energy conservation. Our targets for reduced energy use are 'rolled up' in the Group target for reductions in greenhouse gas emissions.



### Water Consumption

#### Target:

To reduce water use by 10% per £million sales by 2006, against a 2001 baseline of 544m³/£million sales.

#### Achievement:

Performance in 2003 was 605m³/£million sales. The Group EHS Committee is reviewing the future relevance of this target.

Meeting our water use reduction target has proved particularly challenging but the accuracy of our data has improved this year as a result of better monitoring.

We have found that previous years' figures for water use were significantly understated and we have restated the totals for 2001 and 2002 here.

These changes have prompted the Group EHS Committee to review the suitability of the current target given the changes in the composition of the Group and recent improvements in data quality.

#### Target

To reduce water use by 10% per £million sales by 2006

-10%

#### 2003 Achievement

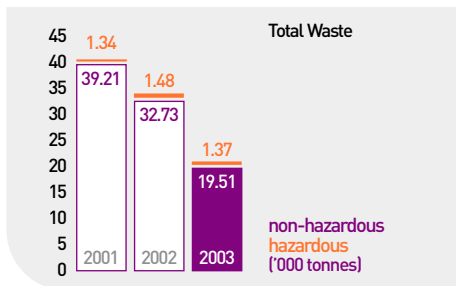
605m³/£million sales, an increase of 11%

11%

Smiths Medical (US) received a New Hampshire Governor's award for pollution prevention

Five Smiths' businesses worked together to identify 75 different opportunities for reducing energy consumption and waste, saving up to £200,000

## Waste Management



### Waste Disposal to Landfill

#### Target:

To reduce waste disposal to landfill by 20% per £million sales by 2006, against a 2001 baseline of 7.34 tonnes/£million sales.

#### Achievement:

45% reduction with 3.94 tonnes to landfill in 2003. A new waste reduction target will be the subject of future discussion by the Group EHS Committee.



After allowance is made for the companies sold during the year, the total amount of waste generated by Smiths' continuing operations decreased by 10 per cent compared with 2002, to just over 20,877 tonnes (23,280 tonnes in 2002, corrected for sold companies).



This reflects further improvements in data quality and the positive impact of our waste minimisation initiatives.

Our reduction programme for waste to landfill has been particularly successful. Our 20 per cent reduction target/£million sales has been achieved three years ahead of schedule.

Segregating and recycling waste as well as incinerating waste for energy recovery have been particularly effective and reductions in total waste to landfill as high as 50 to 80 per cent have been achieved at a number of sites.

#### Target

To reduce waste disposal to landfill by 20% per £million sales by 2006

**-20%**

Tri-Industries (Aerospace) based in Indiana, US, received a local award for waste recycling and energy reduction

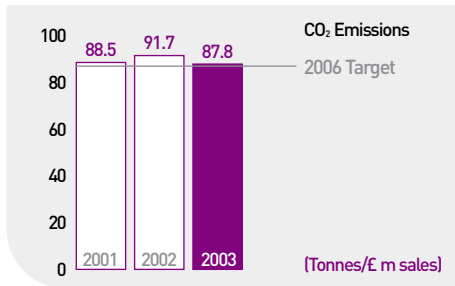
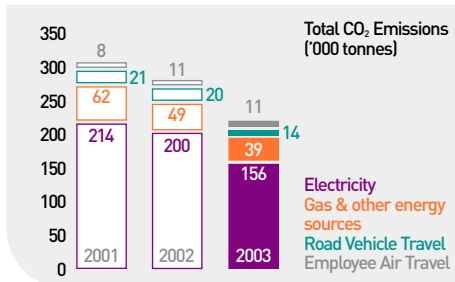
#### 2003 Achievement

3.94 tonnes to landfill, a reduction of 45%

**-45%**

John Crane (Specialty Engineering) reduced waste to landfill by 70%, enabling energy recovery that benefits the business and the environment

## Climate Change



### Greenhouse Gas Emissions

**Target:**  
 To reduce greenhouse gas emissions by 5% per £million sales by 2006, against a 2001 baseline of 88.5 tonnes/£million sales.

**Achievement:**  
 Performance in 2003 was 87.8 tonnes/£million sales.

Smiths' estimates of greenhouse gas emissions, expressed as tonnes CO<sub>2</sub> equivalent, are calculated from the following sources:

- Energy used on premises – electricity, natural gas and heating oil.
- Transport related emissions – business travel by car and aircraft.
- CO<sub>2</sub> releases from environmental test chambers used in Aerospace.
- Accidental leakage of HFCs from air conditioning and fire protection systems.

After allowance is made for divestments in the year, absolute emissions of greenhouse gases for continuing operations increased by 5 per cent in 2003 compared with 2002 – 220,074 tonnes vs. 208,886 tonnes – corrected for sold companies. This increase was due to two new acquisitions and more sites reporting air and travel related CO<sub>2</sub> data for the first time. Normalised emissions have decreased by 4 per cent over this period.

CO<sub>2</sub> emissions from site energy use – electricity and natural gas – are more straightforward to measure and report than corresponding emissions from car and air travel. This results in a greater element of estimation in our travel related data compared with metered and billed site energy use data. Our estimates show that car and air travel account for 12 per cent of our total CO<sub>2</sub> emissions.

**Target**  
 To reduce greenhouse gas emissions by 5% per £million sales by 2006

**-5%**

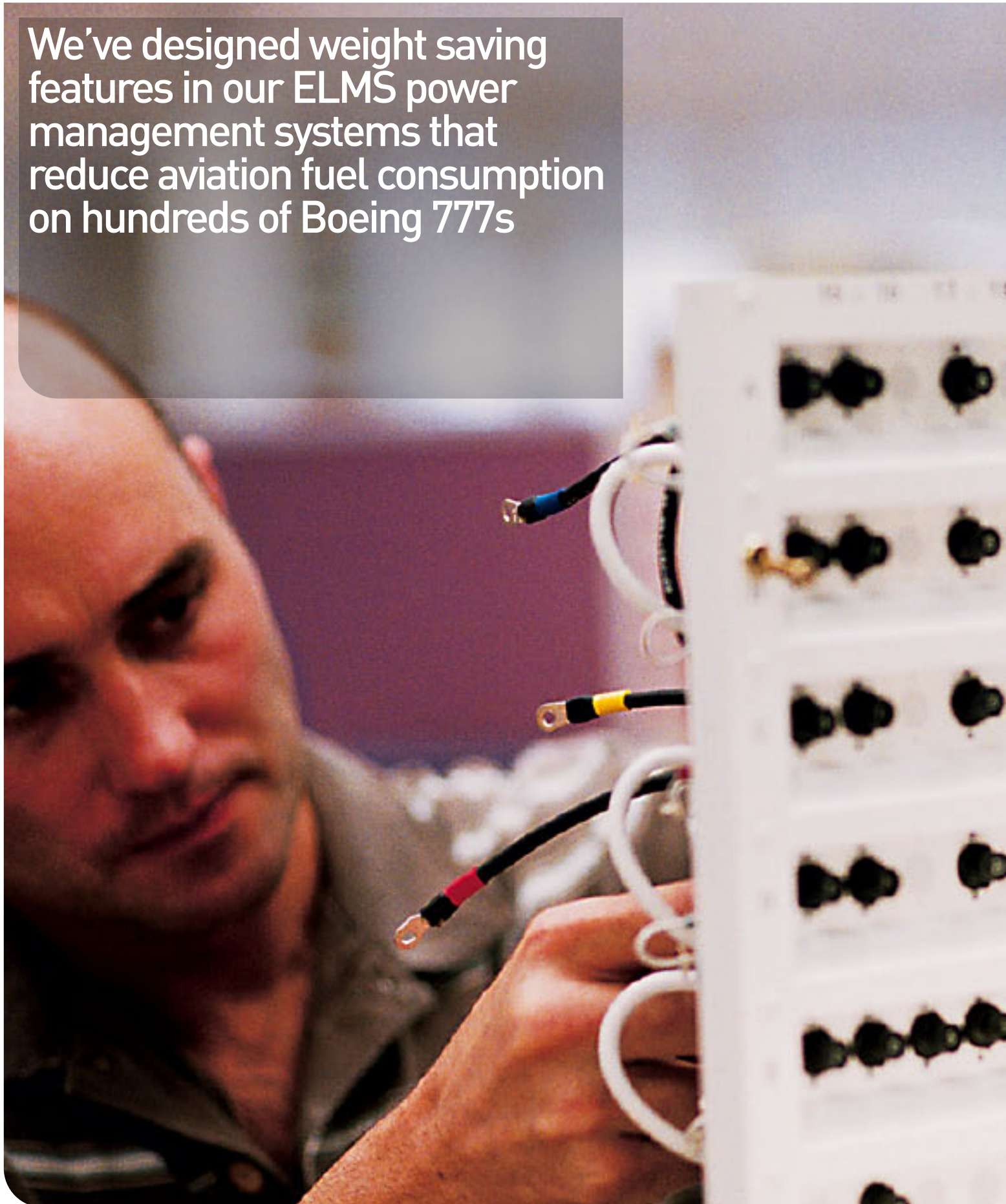
**2003 Achievement**  
 87.8 Tonnes/£million sales, a reduction of 1%

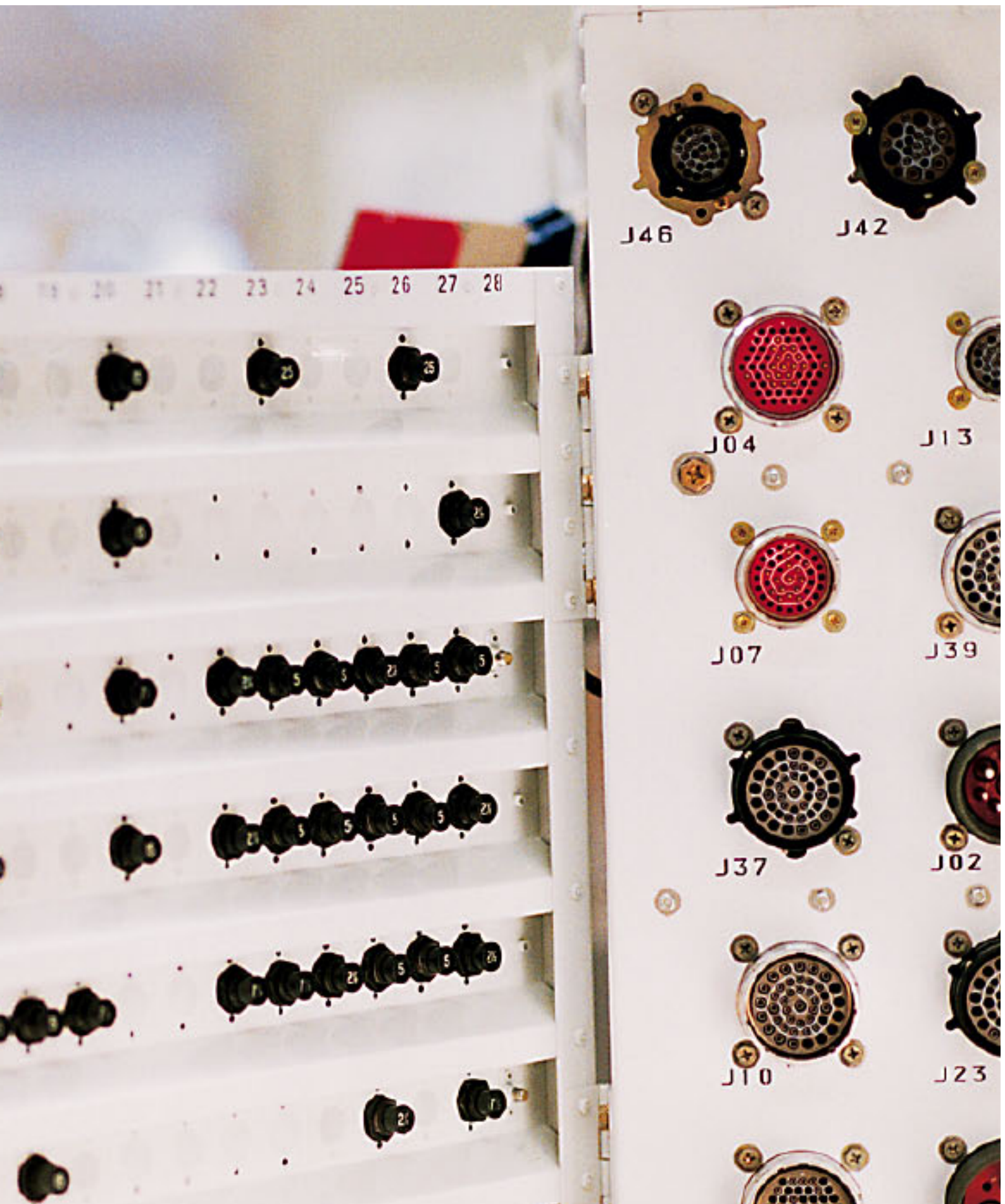
**-1%**

Smiths Aerospace Electronic Systems–Cheltenham phased out the use of sulphur hexafluoride gas, replacing it with helium, an inert gas

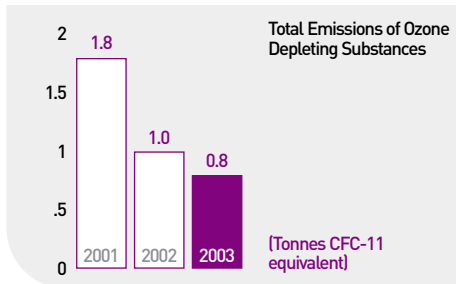
John Crane Italia has implemented a CO<sub>2</sub> compensation project where community tree planting offsets 12% of the site's energy related CO<sub>2</sub> emissions

We've designed weight saving features in our ELMS power management systems that reduce aviation fuel consumption on hundreds of Boeing 777s





## Air Emissions and Contaminated Land



### Ozone Depleting Substances

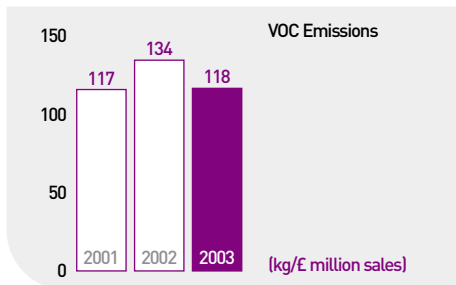
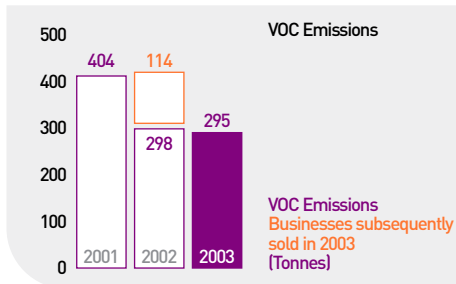
Smiths uses small quantities of ozone depleting substances such as CFCs and HCFCs in its operations. Typical applications include air conditioning and refrigeration systems such as environmental test chambers for aerospace products, process cooling, precision cleaning and fire fighting systems.

Emissions to atmosphere occur through small losses that result from equipment maintenance, accidental leakage and the use of certain solvents in precision cleaning of aerospace components.

Absolute emissions of these substances, expressed as tonnes of CFC-11 equivalent, have reduced by 47 per cent over the last three years.

### VOC Emissions

Smiths recognises that emissions of volatile organic compounds (VOCs) have environmental impact and monitors their use in operations. VOC emissions arise from the use of solvents in applications such as the precision cleaning and degreasing of components, in adhesive or bonding operations and in surface coatings and painting.



Smiths has directed significant effort into minimising the use of solvents, thus reducing our emissions of VOCs through process elimination, by switching to aqueous or citrus-based cleaners and in re-distilling waste solvent for re-use.

After allowance is made for the businesses divested in 2003, VOC emissions were virtually unchanged compared with 2002. Within this figure, the Smiths Detection business in Toronto released 12 tonnes of VOCs during the year (one tonne in 2002) as part of a significant increase in production volumes for Ionscan explosives detectors. Emissions of VOCs, expressed as kg/£million sales decreased by 12 per cent compared with 2002.

### Contaminated Land

Smiths' property portfolio includes a number of old sites and long-standing factories. Where we identify contamination of land or groundwater, we fulfil our obligation for clean-up and remediation.

Spills and leakages of stored hazardous substances such as fuel oil and chemicals are minimised through engineering controls such as the use of secondary containment techniques and providing awareness training for employees.

Smiths Aerospace Electronic Systems – Cheltenham reduced consumption and halved wastage of a key solvent



## Product Stewardship



### Product Stewardship

Smiths' product range is diverse. It includes avionics used in all types of aircraft, life-saving medical devices, components for the telecommunications sector and mechanical seals for the chemicals industry. Some products contribute positively to the environment - mechanical seals technologies reduce pollution - while others benefit society at large by improving people's quality of life or by providing safer medical products. Our detection products provide greater security for air travellers.

We also work to limit any potentially negative impacts our products may have on the environment, especially in managing hazardous materials and in response to customer requirements and changing regulation. Our manufacturing sites are encouraged to practice product stewardship through their ISO 14001 systems, manuals, procedures and design teams.

### Mechanical Seals Reduce Polluting Emissions

Mechanical seals and fluid control systems are an important element in controlling emissions from industrial processes. These seals produce a direct environmental benefit by decreasing the risk of leakage and by improving energy and water efficiency at customers' premises.

### Extending Product Life Through Repair and Overhaul

Many of our businesses provide repair facilities that can prolong the life of customers' products. Service centres are a key feature of our mechanical seals business and through repairs to our avionics instruments and systems, we help to maintain airline safety.

### Avionics with Reduced Environmental Impacts

Weight, space and fuel consumption are at a premium in supplying avionic systems. Our upgraded power distribution system for the Boeing 777 airliner includes additional energy and fuel saving features and offers a weight saving compared with the original. We also encourage our customers to use Liquid Crystal Displays rather than Cathode Ray Tubes (CRTs) as these typically use 30 per cent less energy, are 50 per cent lighter and have longer life expectancy.

### Safer Working Conditions for Healthcare Professionals

In the United States, the Needlestick Safety and Prevention Act 2001 made it compulsory to protect clinicians and nurses from needle injuries. Healthcare workers use our range of needle protection devices, including Needle-Pro<sup>®</sup>, which uses a simple one-handed closure technique, to protect against injury and cross-infection.

### Cozmo™ Improves Quality of Life for Diabetes Sufferers

Type 1 insulin dependent diabetics use Smiths Medical's Cozmo pump to personalize their treatment, adjusting their dosage of insulin to avoid the need for multiple injections during the day.

### SmartFlow Seal Saves Water

In Finland, John Crane Safematic's SmartFlow water seal device has been developed for the pulp and paper industry. SmartFlow reduces the water required to cool and lubricate a seal by as much as 90 per cent, leading to water savings of 1500m<sup>3</sup> a year per seal in tests. A typical pulp and paper mill has many mechanical seals and the potential for total water savings per site may be as great as half a million cubic metres of water each year.

## Product Stewardship



### Product Regulation and Controls

Smiths continues to track and prepare for the introduction of new product based legislation, which is due to come into force in Europe during the next few years:

- Waste Electrical and Electronic Equipment (WEEE) Directive
- Restriction of Hazardous Substances (RoHS) Directive.

#### WEEE Directive

In 2005, the WEEE Directive will become law within EU Member States, requiring the recovery and recycling of separately collected electronic and electrical equipment in specific product categories. The divestment of our domestic ventilation systems business in 2002 has significantly reduced our product take back liabilities under this legislation. Medical devices are also covered, although recovery and recycling targets will not apply to this equipment until 2008 at the earliest. We continue to consult with the UK's Department of Trade and Industry to clarify the scope of the Directive's 'monitoring and control instruments' category. Whilst we believe that our aircraft instruments will not be covered, we await clarification of the exemptions for monitoring instruments.

#### RoHS Directive

The RoHS Directive will ban the use of cadmium, mercury, lead, hexavalent chromium and certain brominated flame retardants in specific categories of electronic and electrical equipment from July 2006. These bans exclude medical devices and monitoring and control instruments until 2008 at the earliest. Products used solely for military applications will be exempt from both WEEE and RoHS.

#### Lead Free Solder

Legislation and market pressures will force many electronics and electrical manufacturers to change from the lead based solder alloys they have been using for more than 50 years, to lead free alloys that may have an adverse impact on the reliability of long life and safety critical components and systems.

As a result, lead free solder sets a particular challenge for those Smiths products that have high integrity, safety critical and long life applications, such as those used on aircraft. Lead free solders such as Tin Copper Silver remain untested and unvalidated in highly regulated environments and lead continues to be used as the main solder element throughout the Group whilst research is undertaken into alternatives. Boeing has specifically required that lead solder continue to be used for equipment supplied on its current aircraft. Lead solder may also continue to be used on the JSF/F-35 programme.

#### Hazardous Materials Replacement on JSF/F-35

The F-35 will be the highest volume fighter jet in production worldwide, incorporating many Smiths systems from power management to actuation and microwave cabling. The programme has a list of prohibited substances and a list of restricted materials that may not be supplied without prior approval through Lockheed Martin. The restricted materials list includes cadmium and chromium used for plating and lead compounds - except solder - and beryllium used in connectors. We are working with Lockheed Martin and other programme partners to replace restricted materials with commercially available alternatives.

#### Life Cycle Assessment

Some customers have told us they would like to see Life Cycle Assessment techniques applied to our products. This is a significant challenge given the diversity of our product range but we have taken some first steps to help us evaluate the appropriate techniques for our types of products. We will also participate in the product technical panel of the UK Environment Agency's electronic Life Cycle Assessment project (eLCA), which aims to develop web-based LCAs, eco-design tools and training materials to help produce more environmentally sound products. Polyphaser (Specialty Engineering) is the first of our businesses to embark on a product life cycle assessment study.

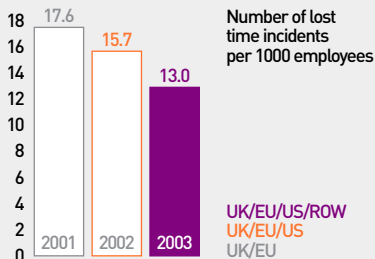
## Health and Safety Performance

**Target**  
 All major sites worldwide to have an audit score of at least

**60%**

**2003 Achievement**  
 72 of 107 sites completed at least one audit, 48 sites scoring at least 60%

**48 sites**



### Health and Safety Audits

**Target:**  
 Undertake internal Health and Safety audits of all major operations worldwide by the end of 2003. All major sites worldwide to have an audit score of at least 60%.

**Achievement:**  
 As at end July 2003, 72 of 107 major sites had completed at least one audit and 48 had achieved a score of at least 60%.

### Internal Health and Safety Audits

We have developed a comprehensive self-assessment questionnaire (AuditMaster™) to help our businesses undertake Health and Safety audits of their operations. These questions are built on the framework provided by our global 'best practice' safety manual. Audit results are displayed graphically to enable businesses to identify areas for improvement and to track corrective actions.

### Lost Time Incident (LTI) Data

Lost time incident data for work-related injury and illness is collected quarterly. The data collected for the Americas is based on Occupational Safety and Health Administration (OSHA) reporting requirements and differs slightly from that collected in the UK and Continental Europe. In 2003, we extended our data gathering to include our other facilities located outside these regions. We will review the LTI data collection arrangements we use to track injury and illness statistics to assess whether we can introduce a single worldwide system based on common definitions.

We track the number of incidents resulting in days away from work caused by workplace injury and occupational illness and express this as a frequency per 1000 employees. In 2003, our estimated lost time incident rate reduced to 13 incidents per 1000 employees from 17.6 incidents in 2001. Our consolidated lost time incident rate reflects the sale of the polymer business and other divestments during 2003.

Injury and illness frequency rates reported by our North American businesses over the last two years and calculated according to OSHA requirements are shown below.

	2003	2002
Number of sites reporting	62	76
Lost time case incident rate	1.3	1.6
Restricted duty only case incident rate	1.6	1.5
No lost time case incident rate	2.1	2.5
Total OSHA recordable case incident rate	5	5.6

Note: incidence rates are expressed per 100 equivalent full-time workers

### Business Driving

Risk assessment guidelines for driving on Group business are part of our global best practice safety manual. During 2003, Smiths worked with one of the UK's leading motoring organisations, the RAC, to develop guidance on business driving. Smiths Aerospace has used the guidelines to develop their own transport guide to improve driver safety and reduce the environmental impact of car travel through journey planning, speed reduction and taking regular breaks.

### Safety Awards

A number of Smiths' businesses were recognised with local awards for their Health and Safety performance in 2003 including:

- Smiths Aerospace in Germantown was presented with a '1,000,000 hours without a Lost Time Incident' award by the Maryland Safety Council, US.
- Flexible Technologies' two facilities at Abbeville and Honea Path, South Carolina, US, received Commendations of Excellence for Safety Recognition awards from the local Chamber of Commerce. The Abbeville facility received a second award, from the South Carolina Department of Labour and Licensing and Regulation for a 40 per cent decrease in its lost time incident rate over a two-year period.

## Enforcement, Investment and Supply Chain

### Fines and Prosecutions

One environmental enforcement action resulted in a fine in 2003. A Specialty Engineering facility in the US received a fine of US\$16,000 for waste labelling and storage violations. Corrective action was implemented and a subsequent follow-up audit by the regulator gave the facility a score of 100% compliance. In 2002, two minor enforcement actions resulted in fines of £1,300.

Smiths will start collating Health and Safety enforcement information at Group level and expects to report this data next year.

### Environmental Investment

We estimate that, in the year to July 2003, we spent £4 million on our environmental programmes. Two-thirds of this covers staff costs and fees paid to consultants and legal advisers. The balance covers ISO 14001 certification fees, pollution control equipment, remediation of contaminated land and legal compliance and permitting costs.

### Supply Chain Management

Our dialogue with stakeholders showed clearly the importance of managing EHS risks and opportunities in the supply chain. It is also the case that all companies, including our largest multi-national customers, find supply chain management challenging.

We encourage our manufacturing sites to introduce some form of supplier assessment programme. This is generally undertaken as part of an ISO 14001 programme, with supplier risk assessments and improvement initiatives developed at a local level. Guidance on supplier Health and Safety questionnaires is provided in our global best practice safety manual.

We are at the early stages of gathering information – through questionnaires and visits – to help us identify and understand the environmental risks in the supply chain.

## Independent Assurance Statement

csrnetwork

### Scope and Objectives

Smiths Group commissioned csrnetwork to provide independent assurance on the environment health and safety (EHS) information and data within the Smiths Group 2003 Environment Health and Safety Report (the Report). Any financial performance information contained within the report is excluded from the scope of this assurance process. The objectives were to check claims and review the arrangements for the management of EHS issues and the systems for collection of data. We were also asked to comment on the completeness and accuracy of the reporting and on the Smiths Group EHS management programme. csrnetwork took account of the principles underlying the AA1000 Assurance Standard in designing the assurance process.

### Responsibilities of the Management of Smiths Group and the Assurance Providers

The management of Smiths Group have sole responsibility for preparation of the Report. This statement represents our independent opinion. We were not involved in the preparation of any part of the Report although we did provide information on emerging best practice in reporting. We have no other contract with Smiths Group. This is the first year that we have acted as independent assurance providers for Smiths Group. We adopt a balanced approach towards all Smiths Group stakeholders. A Statement of Impartiality relating to our contract with Smiths Group will be made available on request. The opinion expressed in this assurance statement should not be relied upon as the basis for any financial or investment decisions. The independent assurance team for this contract with Smiths Group comprised Mark Line, Jon Woodhead, Elizabeth Ness, Lucy Candlin and Todd Cort. Further information, including a statement of competencies relating to the team can be found at: [www.csrnetwork.com](http://www.csrnetwork.com).

### Method

The independent assurance process was conducted through meetings at Smiths Group premises in London, and at operational sites in the UK and USA. Meetings were conducted with managers at Corporate and Division level responsible for areas of management and stakeholder relationships covered by the report, and for collating the data and information on which the report text and data was based. These meetings included the Chief Executive, three (out of four) Group Managing Directors, other Board members and senior Directors, and members of the Smiths Group EHS Committee. During these meetings, claims were discussed and a review was undertaken of the systems and processes for data collection and analysis. Specific areas of reported data were checked for consistency against these systems and processes.

In the UK, we visited an Aerospace site in Cheltenham, a Detection site in Watford, and a Medical site in Hythe. In the USA, we visited a Specialty Engineering site in Springfield (MA) and an Aerospace site in Grand Rapids (MI). The visits to operational sites were to discuss local management arrangements and to check reported performance data and relevant case study information with local management representatives. The assurance process included interviews, site visits and document reviews to review the company's reporting and management process. In addition, we reviewed the outputs of the internet based consultation exercise held by Smiths Group on the draft report, and contacted selected stakeholders involved in the exercise to discuss individual issues and concerns.

## Independent Assurance Statement

Mark Line, Director



Jon Woodhead, Director



### Opinion

#### Accuracy

On the basis of the method and scope of work undertaken and the information provided to us by Smiths Group, we have found that the underlying trends in reported data are generally robust, although data from previous years are less reliable and analysis is made difficult by the significant changes in the profile of operating companies within Smiths Group.

The electronic system for collation of EHS data (known as Trilogy) is beginning to become embedded, although further guidance on its use at certain sites is required. In particular, guidance on health and safety data reporting is needed, and is already being developed. Real improvements in the scope and quality of reported data have been achieved over the last year, although at most of the sites we visited, some discrepancies between reported data and onsite records (where available) were noted.

#### Completeness

The stated scope of the Report is EHS. The Report has addressed the main EHS issues and areas of performance, and many of the additional issues raised by stakeholders such as an explanation of Smiths Group EHS strategy and governance arrangements.

No material issues appear to have been omitted from the scope of the Report. However, Smiths Group continues to explore what level of detail on specific performance areas to include in the report, to support internal and external monitoring and decision making processes.

Prior to last year's Report, a consultation exercise was conducted with stakeholders to understand their interests and concerns. This year, a draft of the Report was shown to selected stakeholder representatives, and some text within the Report was redrafted in response to feedback received. Our review of this consultation process indicated that it is an effective mechanism, and that Smiths Group did respond to feedback received where appropriate, given the scope of this Report.

### Recommendations for the Smiths Group EHS Management Programme

Overall, the Report is a step forward from last year; the completeness of data has improved, as has the coverage of issues and explanation of management arrangements. These achievements have been supported by the formation of the Smiths Group EHS Committee during 2003. Key to the success of this Committee will be the monitoring of performance and communication of Group requirements to the operating companies.

We have provided Smiths Group with a number of suggestions that may assist the Company in responding to this Statement. These include making improvements to the data checking process at site level prior to submission to Group. Future reports would benefit from further information being provided on the management of health and safety and consideration should also be given to setting a performance target in this area. We also recommended that existing EHS performance targets be reviewed, given the changes in the profile of the operating companies in the Group.

CSR Network Ltd  
UK, March 2004

Mark Line, Director  
Jon Woodhead, Director



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You can read our full  
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