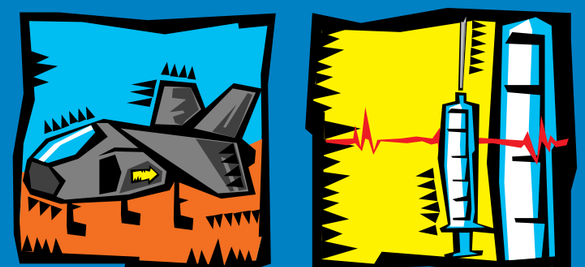


ENVIRONMENT, HEALTH AND SAFETY REPORT 2002

smiths

Smiths Group plc

765 Finchley Road London NW11 8DS UK
T: +44 (0)20 8458 3232 F: +44 (0)20 8458 4380
e-mail: plc@smiths-group.com
www.smiths-group.com

Designed and Produced by Lewisfield. Tel: 01992 652 200

smiths

smiths

SMITHS FOCUSES ON ENGINEERING GROWTH THROUGH INNOVATIVE PRODUCT DEVELOPMENT, TARGETED ACQUISITION AND CONTINUAL EFFICIENCY IMPROVEMENTS.

Aerospace
Smiths Aerospace is a first tier supplier of integrated equipment and systems to aircraft prime manufacturers and engine builders. Its sales are balanced between military and civil aircraft programmes. Smiths Detection provides equipment for the identification of harmful agents, narcotics and explosives.

Sealing Solutions
Sealing Solutions is a world leader in the design of high performance mechanical and polymer seals for industries including automotive, oil and gas, petrochemical, and pulp and paper.

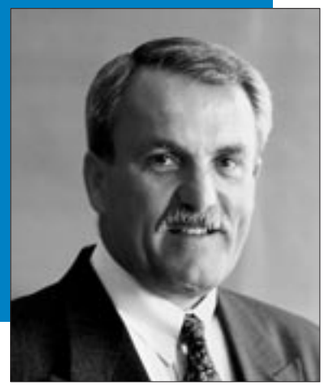
Medical
Smiths Medical is a leading supplier of devices used during critical and intensive care procedures and for post-operative care during recovery. There is a focus on specific clinical requirements, particularly in single-use disposable devices.

Industrial
Industrial is focused on two specialised market sectors. Interconnect supplying electronic connectors and components for defence, transport, telecommunications and other industries, while Air Movement products include ducting and ventilation systems.

Smiths Group plc

765 Finchley Road London NW11 8DS UK
T: +44 (0)20 8458 3232 F: +44 (0)20 8458 4380
e-mail: plc@smiths-group.com
www.smiths-group.com

CONTENTS



VISION AND STRATEGY

Message from the Chief Executive
Keith Butler-Wheelhouse

Welcome to Smiths first report on our environmental, health & safety (EHS) performance. It builds on three very successful years of managing and reporting externally on health and safety matters.

I believe that managing our EHS performance contributes directly to our overall business performance. Significant progress and changes in the way we manage the EHS aspects of our business has been made in recent years. These improvements are described in this report.

The number of Smiths facilities certified to the environmental standard ISO 14001, increased to 50 in 2002, up from 36 the year before. The Company is well on track to meet our target to have all major facilities certified by the end of 2003. Interest continues to grow in applying OHSAS 18001 to manage health and safety performance in a similar manner.

We believe that our environmental programmes are also saving the Company money. Our best estimates over the last two financial years, indicate net cost savings to the business in the order of £3 million per annum. We have continued to lay the foundations for effective EHS performance, measure where we are and set targets for improving performance – these include reductions in greenhouse gas emissions, water use and disposal of waste to landfill. These programmes are beginning to bear fruit-with significant progress already being achieved in the area of waste management.

As we go to print on this report, the Company signed up to MACC2 (the UK Government's Make a Corporate Commitment Campaign). This involves reporting our progress on environmental reduction targets we have set for the Company. We also plan to develop and introduce an environmental award scheme to help stimulate and encourage further ideas to improve performance.

Generating accurate data is a significant challenge for Smiths, with its multiple businesses. We recognise there is scope for improvement and we will continue to strive to enhance the quality of our data in future years. This year's report has not been externally verified. However, in line with best practice, we expect our next report will be externally verified.

My fellow Executive Directors fully recognise the contributions our employees have made in improving the Company's EHS performance. Whilst our journey will be a long one, I am encouraged by the significant changes already made within the Smiths operating businesses.

Keith Butler-Wheelhouse
April 2003

Smiths and Sustainability

Playing Our Part
It is clear that sustainable development cannot be undertaken by any single company acting alone. Every company can and, we believe, should contribute. We are assessing how best our contribution towards sustainability should develop. Whilst the move to more sustainable ways of doing business can be difficult to visualise, we consider practical changes in the way we safeguard the well being of our employees and protect the natural environment as important first steps. Small though these changes may be, they play a key role in the sustainability journey by raising awareness and helping to integrate different thinking into our operations.

Eco-efficiency & Lean Manufacturing
We are working continuously to maximise the eco-efficiency of our operations by minimising waste and maximising resource use efficiency (e.g. through our focus on lean manufacturing and ISO 14001). We will also need to increase our focus on the way we design and make our products (Product Stewardship). For this to be effective we recognise that our suppliers will need to be involved in partnership with us.

We recognise that some people may view our involvement in defence as controversial. However, we are a diverse company and some of our products reduce environmental impacts and others improve quality of life. Examples include mechanical seals which reduce polluting emissions in the process industries, through to fuel saving systems on board aircraft and medical products such as the new Cozmo insulin pump.

Our approach will help to minimise business risks, create new opportunities, safeguard our customers' interests and develop the Smiths brands. A code of business ethics is currently being developed which will define our values on doing business, respecting employees and the environment.

To help us further on this journey, we have embarked on a process of stakeholder dialogue to openly discuss and clarify the most important environmental and social issues we should be addressing.

Snapshot of EHS Progress

We have made significant progress in the fields of environment, health and safety over the last five years.

1997
- Smiths Industries becomes a founding member of the Valpak packaging compliance scheme in the UK.
- Group-wide Safety Management System introduced, initially in the UK.
- First UK Safety Manual published.
- UK Safety Conferences held three times a year.

1998
- First Environment Conference held by the Company.
- Smiths Medical Deutschland is the first business to become registered to EMAS (EU's Eco-Audit & Management Scheme).
- Initial internal status review conducted on the health and safety systems of all UK companies.

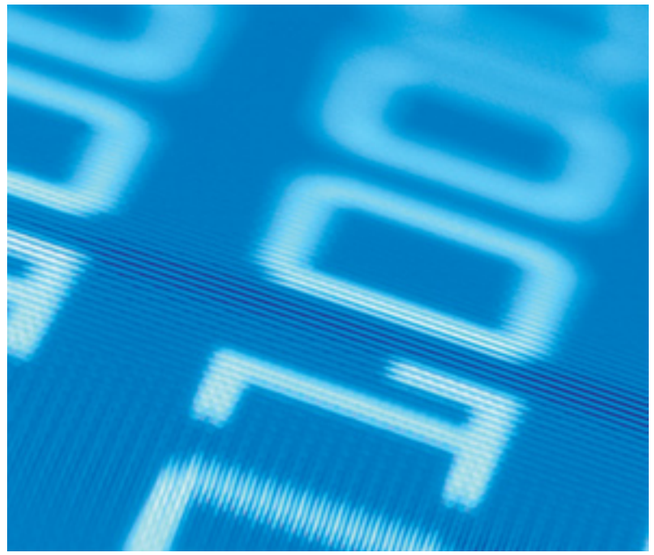
1999
- Health & safety status reviews extended to Europe and North America.
- Global version of the Best Practice Safety Manual published.
- First Health & Safety Report is published.
- Quarterly updates on health & safety progress are submitted to the Smiths Board at the request of the Chairman.
- First Smiths Industries environmental manager appointed.
- 1990 company Environmental Policy revised and re-issued.
- System of environmental metrics introduced to start measuring key areas of performance worldwide.
- Eco-design workshop held in the UK.

2000
- 34 initial environmental reviews completed in the UK.
- Smiths Board approves Global Environmental Action Plan (ISO 14001 certification, setting reduction targets, and auditing of US & EU businesses).
- Smiths Industries merges with TI Group to form the new Smiths Group in December.

2001
- 40 environmental audits completed in the US & EU.
- UK waste minimisation demonstration project is launched (on-going).
- Environmental metrics upgraded.
- Internal auditing system for health & safety introduced and successfully implemented in the UK.
- 36 facilities certified to ISO 14001 worldwide.
- Wills Polymer in the UK (Sealing Solutions) becomes the first Smiths company to gain certification to OHSAS 18001.

2002
- 100 personnel complete 3-day ISO 14001 implementation courses in US and UK.
- Regional Environmental Co-ordinators appointed to support local co-ordinators.
- Trilogy website for EHS launched to improve communication and share best practice.
- Reduction targets established for greenhouse gas emissions, water and waste to landfill.
- Health & safety internal auditing system rolled out to the Americas and Europe. 104 audits completed, to date, worldwide.
- 50 facilities certified to ISO 14001 worldwide.
- Second Smiths company, John Crane (this time in Germany) gains certification to OHSAS 18001.
- Estimated cost savings from environmental programmes over the last two years averages £3 million per annum.

COMPANY PROFILE



Our Business at a Glance

Smiths Group is an international engineering company with operating businesses in over 40 countries and market leading positions in each of its four chosen areas of specialisation

- **Aerospace**
- **Sealing Solutions**
- **Medical**
- **Industrial**

We are a public limited company, listed in the FTSE 100 on the London Stock Exchange.

Our customer base is broad and ranges from defence contractors, civil airline carriers and suppliers, petrochemical companies, to telecommunications firms and hospitals.

The Company has a decentralised structure with considerable autonomy afforded to its business units.

Smiths Portfolio 2002

Aerospace

- Electronic Systems
- Actuation Systems
- Components
- Detection
- Marine Systems
- Customer Services

Sealing Solutions

- John Crane
- Polymer

Medical

- Airway Management
- Assisted Reproduction
- Pain Management
- Needle Protection
- Ambulatory Infusion
- Vascular Access
- Hospital Infusion
- Temperature Management
- Critical Care Monitoring

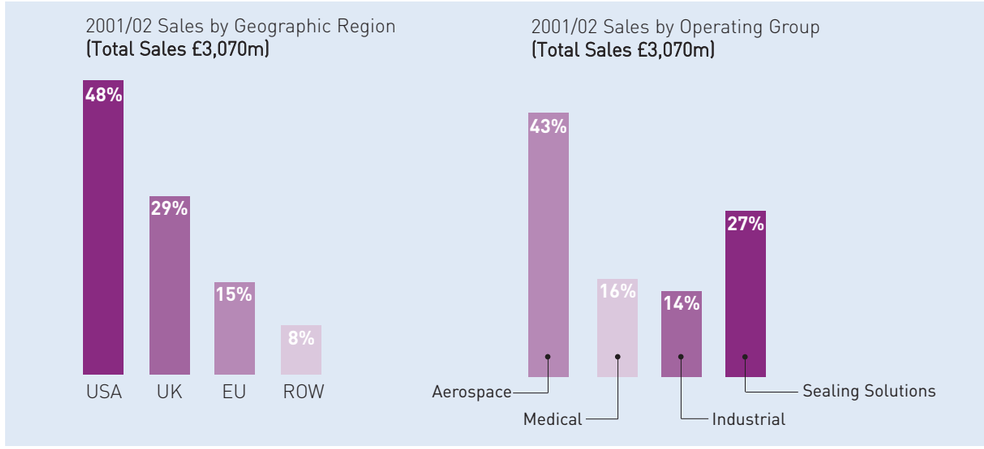
Industrial

- Interconnect
- Flexible Tubing
- Air Movement Systems

Financial highlights for the 12 months ending 31 July 2002	(restated) £m
Sales	**3,070**
Operating profit	**419**
Pre-tax	**398**
Earnings per share	**51.2p**

Employees	33,000
Locations worldwide	342
Major manufacturing facilities	119

Sales by Geographic Region and Operating Division



Further details on the Company's activities and products can be found at www.smiths-group.com

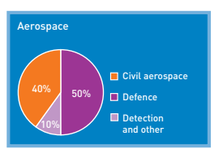
Aerospace

Smiths Aerospace is a first tier supplier of integrated equipment and systems to aircraft prime manufacturers and engine builders. The division was created during the merger of Smiths Industries Aerospace and Dowty Aerospace in December 2000. Aerospace is our largest business activity, with sales of over £1.3 billion, balanced 50:50 between military and civil aircraft programmes. These include providing products and services for top-selling commercial aircraft such as the Boeing 737 and 777, and military aircraft, including the F/A-18 Hornet and Apache helicopter. The products range from the most advanced flight management computers on commercial jetliners to the latest systems aimed at reducing a fighter pilot's workload on a mission. We also make equipment that identifies harmful chemical and biological agents, plus devices used at airports and elsewhere to check for explosives and narcotics. Our specialist marine products include radar and complete integrated ship bridge systems.

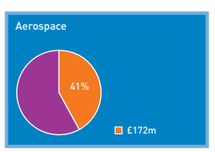
Principal countries of manufacture include the US, Canada and the UK, with repair facilities also located in Singapore and Australia.

Smiths Aerospace avionics on the Eurofighter Typhoon.

SALES BY ACTIVITY



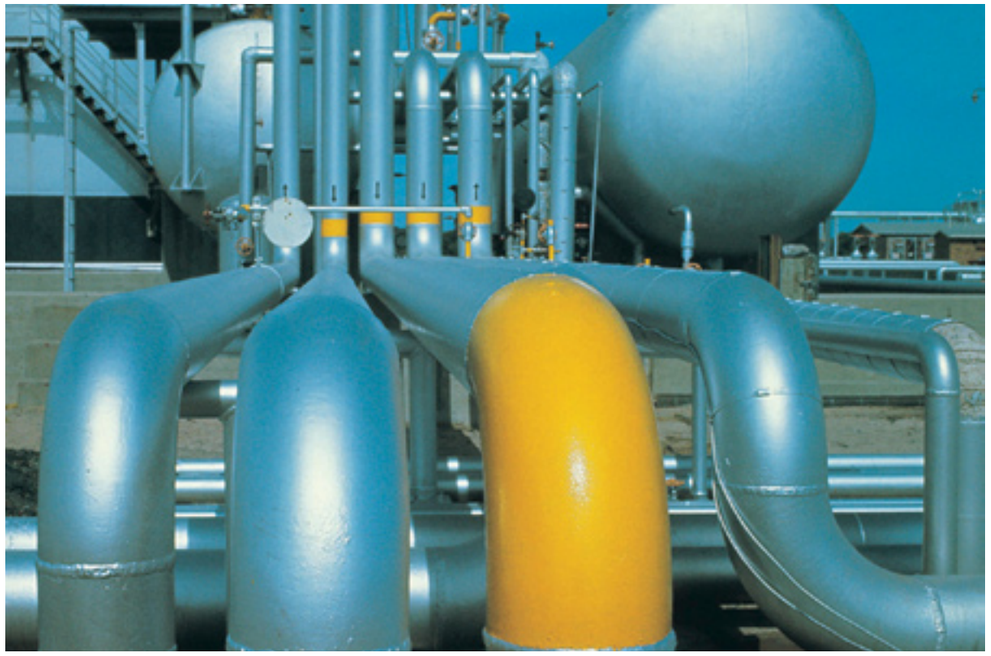
PROPORTION OF GROUP PROFIT



Sealing Solutions

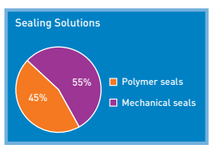
Sealing Solutions manufactures mechanical seals (John Crane) and polymer seals used primarily to keep contents in and contaminants out. They are used in oil pipeline pumps, offshore drilling platforms, chemical plants, paper and board mills, automotive applications and in safety critical fields like aerospace.

This new Division was created following the merger with TI Group and it operates in all parts of the world through its global customer service network. Principal manufacturing facilities are located in the US, UK, Latin America, Continental Europe, South Africa and China. Recently, production has been switched from some high cost areas of operation to lower cost ones such as Mexico, Poland and the Czech Republic.

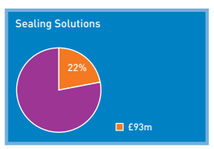


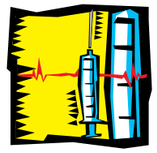
Our Mechanical Seals are used in the process industries to reduce emissions.

SALES BY ACTIVITY



PROPORTION OF GROUP PROFIT





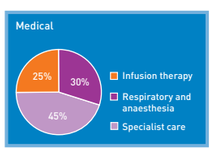
Medical

The market for medical devices is expanding steadily as the ageing world population grows and advances in healthcare continue to increase. Smiths Medical is organised into nine global business units, aligned to specific therapy areas. These nine business units are airway management, ambulatory infusion, assisted reproduction, critical care monitoring, hospital infusion, needle protection, pain management, temperature management and vascular access. Manufacturing is primarily based in the UK, Germany, and North America including Tijuana in Mexico. The Tijuana facility has grown significantly in recent years to become Smiths Medical's largest manufacturing site, meeting the assembly needs of many of the global business units.

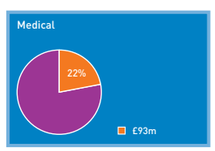
New product development activity is focused on markets such as needle protection, diabetes pumps, airway management and medication delivery.

Level 1 fluid warming systems.

SALES BY ACTIVITY



PROPORTION OF GROUP PROFIT



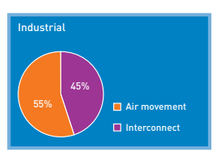
Industrial

The Industrial Division is involved in electronic interconnect equipment flexible ducting, specialised analytical equipment and air moving products for heating, ventilation and air conditioning applications. Markets include telecommunications, defence, aerospace, railway, computers, machine tools and factory automation, construction, automotive and other industries. Industrial's manufacturing operations are based in seven countries within the US and Western Europe.

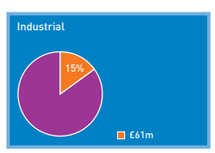
Interconnect has seen rapid expansion in recent years and includes many brand leaders. These include the Hypertac range of multi-pin connectors for safety critical applications, high stability military and commercial co-axial cables from Times Microwave, passive microwave components from EMC and Florida RF Labs and antennas from Radio Waves. Lightning protection and transient surge suppressors are also provided by Transtector, PolyPhaser and LEA International.

Assembly of multi-pin connectors at Hypertac in Cricklewood, London UK.

SALES BY ACTIVITY



PROPORTION OF GROUP PROFIT



Report Scope

In this report, for the first time we have incorporated environmental issues as well as the health & safety aspects previously reported. This reflects the close alignment of how environment, health and safety is managed in the company.

The data in this report covers our major facilities and operations, namely all manufacturing businesses, the larger product repair or service centre type operations (>50 employees for environment management and > 30 people for health & safety management). It does not include office only functions, warehouses or the smaller product repair facilities or service centres. By focusing on these facilities, we feel the report provides a good overall representation of the EHS "footprint" of the Company. The data covers 88% of our employees worldwide.

Major changes to the business over the past year include the sale of the John Crane-Lips Marine business (three major facilities) and the acquisition of Barringer Instruments (now Smiths Detection Toronto). This report does not cover any joint ventures such as Japan Medico Company Ltd (62% share) or our share of TI Automotive Ltd (19.99%).

The Smiths reporting year runs from 1st August through to 31st July.

Report Profile

The data used to generate this report is compiled from annual environmental and quarterly health and safety statistics collected by each business unit. Guidelines for completing the environmental metrics at business level are provided in 11 languages and internal checks are made on the data by the Group EHS function. Newly acquired businesses report their performance after their first full financial year within the Group.

The Smiths Board has reviewed and approved this report.

While this report has not been externally verified, we expect to provide independent assurance of the next published report.

Making Contact

Feedback on this report is welcomed and should be directed to:

Jonathan Garrett
Environmental Manager
Tel: +44 (0) 20 8457 8346

Email:
jonathan.garrett@smiths-group.com

Malcolm Mundy
Health & Safety Manager
Tel: +44 (0) 20 8457 8213

Email:
malcolm.mundy@smiths-group.com

Smiths Group plc
765 Finchley Road
London
NW11 8DS
UK

www.smiths-group.com

Cozmo Insulin Pump.

GOVERNANCE STRUCTURE AND MANAGEMENT SYSTEMS

Structure and Governance

EHS isues are considered during Smiths overall risk assessment processes under our arrangements for Corporate Governance. Our Internal Audit function undertakes these assessments and reviews the findings on an annual basis.

We have a structured approach to EHS management, which provides the framework for our businesses to respond effectively in a planned and proactive way. Our EHS management systems generate the data required to monitor performance against our key performance indicators (KPIs) which are presented later in this report.

Overall company responsibility for EHS management and performance rests with the Chief Executive Officer of the Smiths Board, through the Director, Human Resources. A Group Manager for Health and Safety and another for Environment report directly to the Director, Human Resources on strategy, performance and progress against plan. Each major facility has a safety advisor and a local environmental co-ordinator (in some cases, the same individual performs both functions).

These arrangements were strengthened further in July 2002 by establishing a network of 15 Regional Environmental Co-ordinators (RECs). The prime function of the RECs is to spread existing best practice more widely throughout the company. Regular reporting of EHS performance is undertaken, at least annually, to the Executive and Non-executive directors on the Board. Quarterly progress updates are given to the Executive Directors on specific issues (e.g. tracking ISO 14001 implementation).

In 2000, 32 environmental professional co-ordinators had obtained an environmental qualification (i.e. attended a recognised course or obtained another relevant professional qualification). By 2002, this number had increased significantly to 436. Our drive to implement ISO 14001 across the Group has provided much of the impetus for this focus on staff training and awareness. Indeed, we estimate that over 11,500 training hours on environmental topics were delivered in 2002.

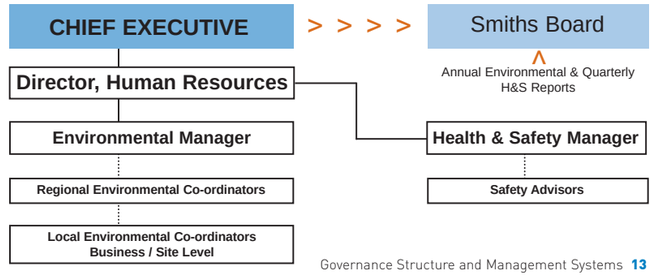
Stakeholder Engagement

We have begun to broaden our dialogue with key stakeholders. The first stage in our stakeholder dialogue process was to hold regional workshops (one in Atlanta and the other in London) with our EHS professionals in order to identify the key EHS issues which should be reflected in future reports. This will be expanded significantly over the coming year to include key customers and investors, which will help us to refine further the issues of interest. We have appointed The Environment Council, an independent UK organisation with significant expertise in managing stakeholder dialogue, to help us in this process. External consultation processes will include the innovative use of a website for electronic dialogue on the content of our next report.

EHS Policy Statements

Separate statements exist for both environment and health & safety. Both statements apply to all our businesses worldwide. The Health & Safety policy statement in the UK is also part of a legally required document that includes information on the organisation (detailing people's specific responsibilities in managing health & safety) and on the systems in place at each business for identifying and controlling a wide range of specific hazards. The UK model is used as a basis for requirements in all Smiths businesses worldwide, with customisation for other geographic regions as appropriate, while still retaining the same good management principles.

Smiths EHS Organisation



Environmental Policy Statement

Smiths Group plc and its subsidiary businesses ("the Company") recognises that its products, activities and services impact the environment. We believe that managing the environmental implications of our activities is an integral part of good management practice and responsible corporate governance.

Policy Principles
The Company is committed to applying the following principles to its activities:

- establishing clearly defined objectives and targets that address the environmental issues relevant to the Company's operations to ensure continual improvement in environmental performance
- complying with the applicable legal and regulatory framework wherever we operate
- preventing pollution and reducing the consumption of resources (energy, fuel, water, packaging & materials) wherever practical and appropriate
- ensuring environmental issues are considered in the design of new products and the introduction of new processes, services or facilities in order to minimise adverse impacts and improve environmental performance
- responding to valid concerns of neighbouring communities
- establishing and maintaining effective management systems to control identified risks
- providing support, information and training to Company staff with respect to environmental matters
- being prepared for environmental incidents or emergencies
- seeking ways to improve the environmental performance of the Company's suppliers and other business partners
- ensuring environmental issues are carefully considered during acquisitions and divestments
- monitoring, auditing, reviewing and reporting our environmental performance, and seeking to improve on that performance in the light of experience, developments in best practice and the evolving environmental agenda.

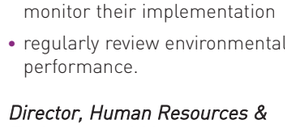
Responsibilities
Staff
All staff are responsible for safeguarding their working environment and the natural environment by following Company procedures, standards and good practices, together with reporting any deficiencies to their line management.

Main Board, Executive Management, Business Managing Directors & Presidents
The Main Board of the Company and its Executive Management through to business MDs, Directors and Presidents are responsible for implementing this policy and the Company's arrangements for environmental management in their respective areas of responsibility. They must:

- provide sufficient resources for effective implementation of the policy
- ensure that environmental responsibilities are assigned to appropriate staff members
- ensure at least one member of staff co-ordinates environmental activity at each site or within a business unit/division
- provide information on key aspects of environmental performance at business/site level for internal use
- develop environmental improvement programmes and monitor their implementation
- regularly review environmental performance.

Director, Human Resources & Environmental Manager
Smiths Group plc's Director, Human Resources is responsible for reporting the Company's progress in implementing this policy annually to the Board. Day to day management of environmental issues rests with the Corporate Environmental Manager, who is responsible for:

- periodic reviews and audits of the Company's facilities and activities to ensure compliance with this policy
- monitoring developments in environmental issues that impact on the Company
- providing support and advice on environmental matters relevant to the Company's operations
- promoting workable procedures and encouraging initiatives to implement this policy
- keeping staff and other relevant stakeholders informed of the Company's efforts to improve its environmental performance
- interpreting and implementing this policy, and advising on updating it as required.



Keith Butler-Wheelhouse
Chief Executive
May 2001

Statement of Policy

with respect to

Health and Safety at Work
Smiths Group Plc and its subsidiary companies (the Company) will strive to conduct all its activities in a manner which achieves the highest practicable health and safety standards in respect of employees and any other persons who could be affected.

This policy will be implemented by applying a safety management system whose primary aim is continuous improvement and compliance with all relevant legislation through:

- two-way communication with employees, both unionised and non-union
- integration of health and safety practices into operational procedures
- promotion of health and safety awareness at all levels within the company and
- regular internal audits at each business to identify non-conformances and the systematic corrective actions deemed necessary to prevent their recurrence.

The Company holds each director, manager, supervisor, and employee responsible for complying with the above policy in any area within their control or influence. No member of the Company is authorised to initiate or continue any activity, operation or process that would endanger employees, contractors, visitors or members of the public. The most senior director for each business unit has overall responsibility for health and safety matters at each site within that business.

To ensure that the requirements of this policy are met, the Company will provide and maintain safe and healthy working conditions, equipment and systems of work, together with adequate information, instruction, training and supervision for all employees. The attached "Organisation" and "Arrangements" sections and this policy statement together make up the Safety Policy Document, which provides essential health and safety details on the subsidiary company which issued it, as well as to Smiths Group as a whole.

The Safety Policy Document is supported by Smiths Group Safety Manuals, which detail 'best practice' guidance and procedures to cater for a wide range of specific hazards.

The Chief Executive of Smiths Group plc has overall responsibility for health & safety matters in the group as a whole. The Director, Human Resources is responsible for its effective administration and implementation.

Keith Butler-Wheelhouse
Chief Executive
April 2001

Management Systems

Effective EHS management adds value by delivering real environmental and safety performance by reducing costs, creating business opportunities and minimising business risk. We place substantial emphasis on performance and results as opposed to developing system documentation. Increasingly, many of our companies are reviewing the various management systems they have in place to remove duplication and ineffectiveness as part of the lean enterprise initiatives being implemented to improve business efficiency and cut out waste.

We believe the EHS agenda will continue to broaden in the future and demands for greater transparency will further increase. In order to respond to and manage these changes in a planned manner, we have enhanced our management systems for environment, by implementing ISO 14001 (the international standard for environmental management systems). In the health and safety arena, we initially based our management system on ISO 9000, which is now identical in structure to the emerging health and safety standard OHSAS 18001. This has enabled us to implement internal company standards for health and safety management and auditing, and share best practice.

Over 70 environmental compliance audits were conducted in the US, UK and Western Europe by the Group Environmental Manager and an external consultancy during the period 1999-2001. Responsibility for internal auditing has now been devolved through to each business as part of their ISO 14001 arrangements. Under ISO 14001, external assessments or audits are also carried out by certification bodies.

Polymer Seals have numerous applications, they include Busak+Shamban seals in wind farms.

ISO 14001: 42% of Facilities Certified

Target: ISO 14001 Certification
All major manufacturing facilities to be certified to ISO 14001 by the end of 2003.

Major manufacturing facilities are those sites which employ 50 or more people, or less than 50 people but with potentially high environmental impacts in the context of Smiths operations (e.g. regulated for air emissions, significant user of chemicals or hazardous substances or large quantity waste generator). 42% of our major manufacturing sites are now certified to ISO 14001, with significant progress being made in our Aerospace and Sealing Solution divisions. By the end of July 2002 certification status was as follows:

Division	Total No. of Major Sites	No. of Major Sites Certified	% Certified
Sealing Solutions	49	24	49%
Medical	9	2	22%
Aerospace	35	23	66%
Industrial	26	1	4%
Company Totals	**119**	**50**	**42%**

Our ISO 14001 certification programme is truly global with certificates covering our operations in the following countries:

Country	"ISO" sites	EMAS sites
Brazil	1	
Canada	2	
Czech Republic	1	
Denmark	1	
Eire	1	1
Finland	1	
France	2	
Germany	1	1
Malta	2	
Sweden	2	
UK	20	
US	16	
Total	**50**	**2**

Note: Both sites registered under EMAS are also certified to ISO 14001

Trilogy Improves Communication

We recognise the importance of effective internal communication to help spread best practice throughout our operations worldwide. Smiths introduced a web-based package in June 2002 called Trilogy to provide:

- Paper-less and rapid data collection of all EHS issues.
- A single and continuously available on-line EHS document library.
- An EHS enquiry facility, called "Ask Smiths", where any registered user can ask a specific question of other contacts on the Trilogy database and thus share knowledge and experiences.

Managing Health & Safety Performance

Following a series of worldwide status reviews, conducted from March 1998 to March 1999 (based on the Safety Manual collated from existing good practices and legal requirements) an internal auditing system was developed with a specialist software supplier (AuditMaster ™). Electronic communication systems are being used to "work smarter" by providing online help and support via the "Help" section of questions in the internal audit. This auditing package has now been implemented in the UK and North America and is being rolled out in Europe. These three geographic regions account for 95% of our total employees.

It is our intention to continue developing this and other performance measurement systems that are fully compatible with business unit targets, especially the "lean enterprise" initiative.

Communication, both internally and externally, remains an important part of the Smiths Safety Management System. External demands have widened the requirements of corporate governance and issues on the Corporate Social Responsibility agenda, including information requirements for fund managers and investment analysts.

Communication about safety related issues occurs at all levels throughout the company. This is achieved through:

- Annual safety reports* (with quarterly updates) to the non-executive Board and the executive management teams.
- Safety conferences and working groups in the UK and America, which are now being extended to Europe.
- Safety committee meetings in all the major businesses and ad-hoc gatherings at site level on specific subjects.
- Increasing use of Internet links to access important data immediately and maintain critical information.

We are actively involved in a number of specific issues that have come to the foreground of health & safety in the last 12 months, including:

- Employee Assistance Programme (EAP) – the results of an initial survey in one of our UK plants, combined with the introduction of a pilot EAP, have seen significant changes in employee response in this area. The EAP scheme will progressively be rolled out in the UK.

*In a report entitled "Health & Safety Indicators for Institutional Investors" written by Claros Consulting for the Health and Safety Executive in the UK in February 2002, Smiths Group were one of only six examples cited as representing good practice of H&S Reporting in the UK.

This will go a long way in making the employee support programme in the UK compatible with that already active in America.

- Occupational Health (OH) – OH facilities are already well established in our facilities in North America. In the UK and Europe, OH support varies regionally, according to local rules and customs. There is a drive now to improve OH facilities in our UK companies, where there are 57 business sites, 38 of which are engaged in manufacturing and employ more than 50 staff – with the largest site employing more than 1600 people. The plan is to provide the smaller sites, which cannot justify their own OH facility, with a scheme capable of cost-effectively providing cover comparable with that achieved by the larger OH based sites. This may best be accomplished by using a nationwide provider.
- Business Driving – working closely with the motoring organisation RAC, Smiths is developing a management system for the UK businesses. The aim is to significantly reduce the number of business related road traffic accidents involving our employees. This will be achieved using proven arrangements designed to promote "conscious and competent" attitudes and approaches when behind the wheel. If successful, this approach could save up to ten times the training cost.
- Integrated management systems – both Smiths Industries and TI Group had been investigating health & safety management systems prior to the merger in December 2000. Subsequently, a working group convened during a UK Safety Conference has determined that decisions on the adoption of any management system (be it ISO 9000, ISO 14001 or OHSAS 18001) should be taken at business level. This is due to the wide variation of circumstances that could prevail at the different companies in the Group. However, an increasing number of companies in the UK and Europe are now actively investigating the potential benefits of an integrated management system.

Assembly work at Portex: good ergonomics is vital.

PERFORMANCE INDICATORS

This section covers the significant EHS issues identified within Smiths:

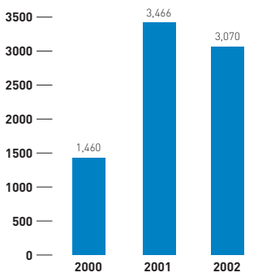
- Energy and water use.
- Generation and disposal of waste.
- Emissions of greenhouse gases from energy use and transport.
- Ozone depleting substances.
- Emissions of Volatile Organic Compounds (VOCs).
- Contaminated land and remediation.
- Product design.
- Lost time accidents and health & safety performance.
- Incidents and regulatory non-compliances.

An estimate of the cost savings reported by our businesses arising from their environmental programmes is also provided, together with a summary of progress against targets over the year.

We have developed a set of Key Performance Indicators (KPIs) to measure and drive progress in EHS performance. Where specific reporting frameworks have been used (e.g. for greenhouse gas emissions) these are referenced in the text. Unless otherwise stated, absolute data is provided for our KPIs. Where normalised data is presented, financial turnover, taken from the Annual Report and Accounts, for our environmental performance has been used as the reference. For normalisation of accident statistics, we use employee numbers and man-hours worked.

Smiths effectively doubled in size following the merger with TI Group in December 2000. Data for 2000 presented here therefore represents Smiths Industries only over the reporting year of 1st August 1999 to 31st July 2000. We have then incorporated data for the new combined group for the next full financial year of 1 August 2000 to 31st July 2001. All the KPIs presented in this report, consequently show a significant increase from 2000 to 2001. Therefore, more meaningful comparisons in performance should be made between data in 2001 and 2002.

Turnover £million



Our experience to date, indicates what a challenge data collection is in a diverse company such as Smiths, particularly one which continually changes shape through acquisition and divestment. This has been compounded by the extensive restructuring taking place within the Company as production is being switched between facilities in North America to Mexico and from the UK to Poland and the Czech Republic. While some early trends have been identified, we believe the addition of further data over the coming years will help us to establish a more meaningful picture of long term trends in performance.

The overall quality of data provided by Smiths businesses worldwide is mixed. We recognise further work is necessary to improve the quality of this data.

The overall environmental impact of Smiths operations decreased for most of our absolute measures during the period 2001 to 2002. This has been influenced partly by acquisitions and disposals, and partly through the results of our environmental programmes. When the data is normalised against turnover, we can see the impact a slow down in the economy has had over our efficiency ratios.

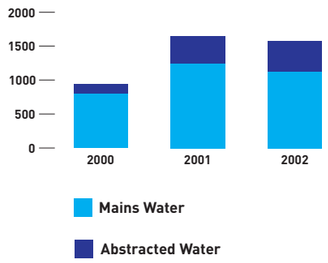
Energy and Water Use

Target: Water Consumption
To reduce water use by 10% per £million turnover by 2006 (set against a 2001 baseline of 456 m^3/£million turnover).

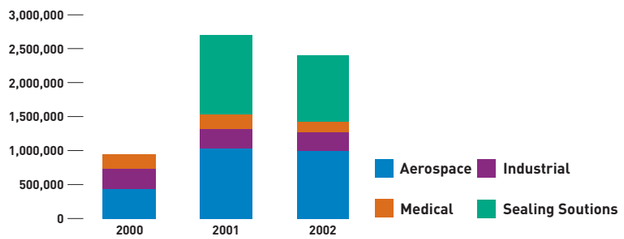
Our facilities are not intensive users of energy or water. However, we recognise these impacts are common across all of our areas of operation. 90% of our site energy use is derived from electricity and natural gas, with the remainder being made up from heating oil, kerosene and LPG. In 2002 our total energy use decreased by over 7% in absolute terms over the year before. When normalised against turnover, energy use increased by 4%. Despite this however, energy reduction programmes at our facilities have achieved some significant decreases. For example, Smiths Aerospace Actuation Systems Cheltenham, in the UK, achieved a 30% reduction in 2002 against 2001. We will continue to seek opportunities for energy conservation.

Our overall use of water in 2002 decreased by 3%, despite an additional 68,500 m^3 of abstracted water being used for cooling purposes for non-routine product testing at Smiths Aerospace Components in Burnley in the UK. The impact of this increase is shown graphically when water use is normalised against turnover. If this "increase" is set aside, the absolute reduction in water use would have been nearer to 7%. Opportunities for reductions in water use continue to be investigated and at some of our locations such as Adaptaflex (Industrial), there have been reductions as high as 35%.

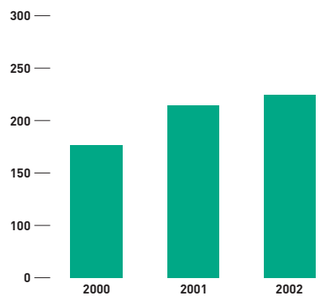
Total Water ('000 m^3)



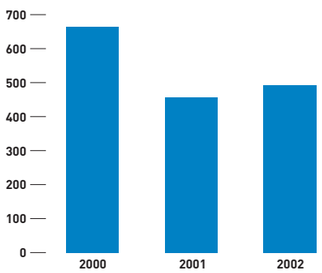
Total Energy Use (GJ)



Total Energy
(MWh per £million turnover)



Water Efficiency
(m^3 per £million turnover)

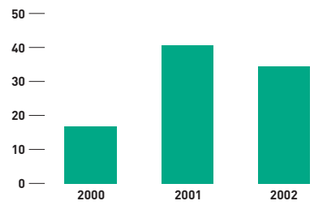


Waste Management

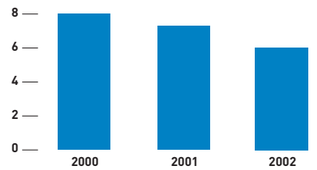
The total amount of waste generated by Smiths operations decreased slightly by over 15% in 2002 to just over 34,200 tonnes. This figure largely reflects changes in the composition of the company, improvements in data quality on the year before, together with the impact of waste reduction programmes. The measurement and reporting of waste has been undertaken using the guidelines developed by the UK's Department of Environment, Food and Rural Affairs (DEFRA). This involves a mix of waste weights, provided by our waste contractors, and estimation based on volume and appropriate conversion factors. 45% of all the waste produced in 2002 was recycled or incinerated with energy recovery.

We recognise the importance of waste disposal and the need to reduce society's dependence on land filling as a disposal option. We have set a target to reduce the amount of waste disposed to landfill by 20% over five years, normalised against turnover. We are already well on our way to achieving this target. Normalised data for 2002 showed a 17% reduction for the first year of the programme.

Total Waste
('000 tonnes)



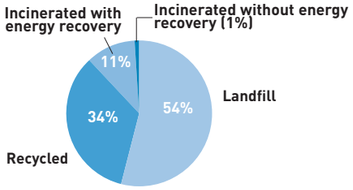
Waste to Landfill
(tonnes per £million turnover)



Some impressive results have been achieved at our larger sites. For example, Smiths Aerospace Electronic Systems in the UK, which employs 1,200 people, achieved a 36% reduction in waste sent to landfill. Adaptaflex (Industrial) produced similar reductions by recycling an additional 316 tonnes of waste in 2002, that would otherwise have been landfilled.

Clearly one of our major challenges is to reduce still further the total quantity of waste requiring disposal at source, as part of our drive for continual improvement.

Waste Management 2002 by
Disposal Route (34,200 tonnes)



Target: Waste disposal to landfill
To reduce waste to landfill by 20% per £million turnover by 2006 (set against a 2001 baseline of 7.34 tonnes / million turnover)

Greenhouse Gas Emissions

Emissions of greenhouse gases (GHGs) linked to climate change is perhaps the single most important global environmental concern of our time. Like all businesses, our operations contribute to these impacts through the use of fossil fuels. Our estimated GHG emissions arising from the following sources, have been calculated where data is available for:

- Energy used on premises such as electricity, natural gas, heating oil, kerosene and LPG.
- Transport related emissions (employee travel on company business by car and aircraft).
- Process based emissions, through the use of CO_2 in environmental test chambers, mainly in Aerospace, and a single very specialist leak application of sulphur hexafluoride (SF_6).
- Leakage of HFC refrigerants from air conditioning, fire protection and similar equipment.

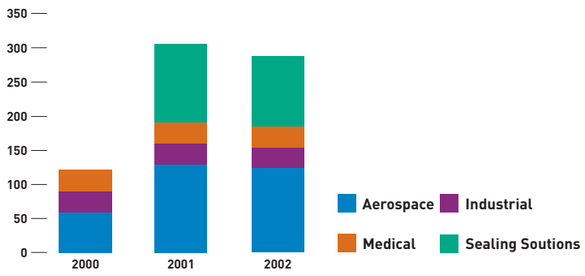
During 2002, absolute emissions of greenhouse gases (expressed as tonnes of CO_2 equivalent) decreased by 7% on the year before. Normalised emissions, against turnover, over the last two years have shown an increase of 4%.

We have calculated and reported our greenhouse gas emissions using the United Nations Environment Programme (UNEP) GHG Indicator Guidelines and the UK's DEFRA reporting guidelines.

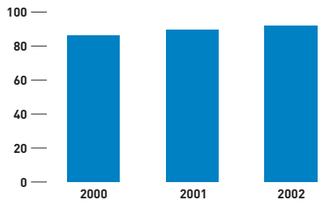
www.defra.gov.uk/environment/envrp/index.htm
www.uneptie.org/energy/act/ef/GHGin/index.htm

89% of our calculated carbon dioxide emissions are attributable to site energy consumption through our use of electricity, natural gas and heating oil. The bulk of the remaining 11% is attributable to employee travel on company business by car and air. However, we believe that the transport data represents an underestimate of the true figure as collecting accurate data has proved particularly difficult for many of our businesses. While our use of energy on site has decreased overall, the relative impact of transport on carbon dioxide emissions has gone up.

Total CO_2 Emissions ('000 tonnes)



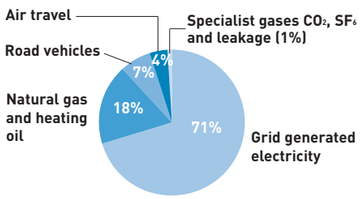
CO_2 Emissions
(tonnes per £million turnover)



During Environment Week in Canada in 2002, staff from our Forsheda Silcofab plant in Ontario, took part in a commuter challenge to change their mode of travel to work. By the end of the first year of the programme, 0.7 tonnes of CO_2 had been saved through car pooling, cycling and walking to work.

Reducing emissions of carbon dioxide will be one of the key areas we will focus our efforts on, as part of our contribution to achieving the goals set out in the Kyoto Protocol. These will include both on-site use of energy and business travel.

Breakdown of Greenhouse Gas Emissions 2002 by Source (283,200 tonnes)



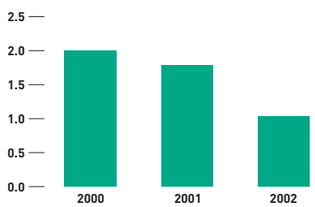
Target: Greenhouse Gas Emissions
To reduce greenhouse gas emissions by 5% per £million turnover by 2006 (set against a 2001 baseline of 88.28 tonnes / £million turnover).

Ozone Depleting Substances

Like many companies, we use small quantities of ozone depleting substances (ODSs) such as CFCs and HCFCs in our operations. Typical applications include air conditioning, refrigeration systems (such as environmental test chambers used in aerospace), process cooling, solvent bonding, precision cleaning and fire fighting systems (e.g. halons).

Emissions of ozone depleting substances occur through small losses that inevitably result from equipment maintenance, accidental leakage and the use of HCFC-141b solvent. Emissions of these substances, expressed as tonnes of CFC-11 equivalent, have halved in absolute terms over the last three years from two to one tonnes. The use of HCFC-141b solvent has ceased in our medical operations. A few precision cleaning operations in aerospace are still permitted to use HCFC solvent (R 141b) under the Montreal Protocol and EC regulations until 2008.

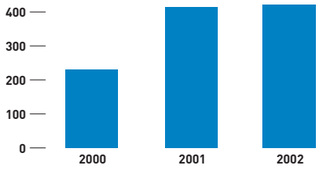
Total Emissions of Ozone Depleting Substances (tonnes CFC-11 Equivalent)



VOC Emissions

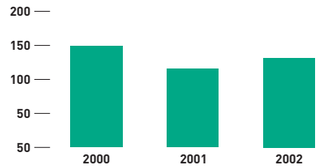
We recognize that emissions of Volatile Organic Compounds (VOCs) have environmental impact and monitor their use. Principal areas of application are for precision cleaning of components, adhesive or bonding operations and surface coating or painting. Estimates of VOC emissions from solvent use are derived from monitoring data or mass balance calculations. In the absence of this information, it is assumed that all solvent used in a given year is emitted to the atmosphere as VOCs. This will tend to overestimate emissions.

Total VOC Emissions (tonnes)



Emissions of VOCs were estimated at about 412 tonnes in 2002. This represents a slight increase of the year before, which in part is explained by improved data quality and coverage across the Group.

VOC Emissions
(kg per £million Turnover)



Emissions of VOCs, represents one of the main areas of our operations requiring regulatory approvals and permits for emissions to air. The introduction of the EU's Solvent Emissions Directive may bring additional, currently non-regulated, solvent using activities into the regulatory framework. The practical implications of such changes are being assessed.

Contaminated Land and Remediation

With a property portfolio that includes some old sites and long-standing factory use, there is potential for contamination of land and groundwater. Where such contamination is identified, we recognise our obligation for cleanup. 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 and awareness training.

In 2002, six spillage incidents that occurred outside of secondary containment were reported. This represents a significant reduction on the year before, when 17 spills were reported.

	2000	2001	2002
No. of Spills	3	17	6
Total Volume of Spills (litres)	2900*	290	150

* Approximately 2300 litres of the total occurred in a single major spill.

The environmental implications of acquisitions and divestments are carefully considered and where appropriate, further due diligence is undertaken in conjunction with environmental consultants and our legal advisers.

Product Stewardship

Our product range is diverse and covers avionics used in fighter aircraft, to life-saving medical devices, components for telecommunications and seals for the chemical industry. We recognise these and our other products and services have environmental impacts, not only in their manufacture, but also in usage and at the end of their life when they are disposed of. Changes are being introduced to influence and reduce these impacts at the design stage. Indeed, a number of products either solve customers' environmental problems or help reduce their impact. Examples include:

- John Crane mechanical seals help prevent and minimise fugitive emissions and pollutant leakage in the process industries (e.g. oil and gas which is one of the largest end users of seals, together with chemicals and paper).
- Electrical Load Management Systems (ELMS) help to reduce fuel usage in aircraft (Smiths Aerospace Electronic Systems).
- Composite propellers (Dowty Propellers) which are lighter (hence more fuel efficient) and quieter than their aluminum counterparts.
- Dowty Automotive's fuel O rings are used in safety critical fuel injector systems.
- John Crane Safematic produces equipment to recover and re-process used hydraulic oil from industrial machinery.
- Deltec (Medical) has an end-of-life recovery and recycling programme for returned drug delivery systems/pumps.

Increasingly our customers are seeking assurance that the products supplied to them meet certain environmental criteria. These typically include declarations on hazardous substances.

WEEE Directive
Looking forward, we are actively tracking developments in product based legislation, most notably the EC's WEEE (Waste Electrical and Electronic Equipment) and RoHS (Restriction on the Use of Hazardous Substances) Directives. Both directives may impact on a number of product ranges within the Smiths portfolio such as medical equipment. Dialogue continues with the Engineering Employers' Federation and the UK Government's Department of Trade and Industry, to clarify the scope of application of this legislation in other product areas such as monitoring and control instruments.

Work has already started to identify replacements for lead in solder, improve material labelling of product parts such as plastics and design for end-of-life recovery and recycling. For example, Icore (Industrial) has developed a TTH plating process, based on nickel, that has eliminated the need for the cadmium plating of its aluminum connectors used in aerospace applications.

Estimated Environmental Costs and Savings Worldwide

We believe that our environmental programmes are also saving the company money. Estimates provided by our businesses worldwide over the last two years, suggest net cost savings in the order of £3 million per annum. These savings are achieved after allowance has been made for our costs in terms of staff, consultancy/legal fees, certification fees, investment in pollution controls and the remediation of contaminated land at both a business unit and corporate level. Approximately 80% of the savings are derived from the reduced use of raw materials and recycling revenue for scrap and precious metals. We will continue to refine the quality of this data in future years and are confident that further cost saving opportunities can be found.

Health and Safety Performance

Performance measurement is an important part of any management system to enable:

- Demonstration of performance trends internally (continual improvement).
- Benchmarking with companies in the same business sector.
- The supply of appropriate and objective information to analysts and fund managers.

In this rapidly developing area, especially with the recent interest in Corporate Social Responsibility, Smiths monitors the requirements of bodies like the UK and USA governments and the ILO, for measurement and reporting. Data collection methods are changing with the transfer to Trilogy from the admin-intensive e-mail/spreadsheet arrangements previously used. In addition we have moved to internal auditing from the previous HQ managed status review. Data is reported in a standard format to facilitate easy comparisons for benchmarking and performance trends. Our performance continues to be good, as shown below.

Charts 1 and 2 show incident rates for 1+ day and RIDDOR (3+ days) accidents for the last three Smiths' accounting years for UK/EU and American regions. Charts 3 and 4 show the overall audit scores, at September 2002, for UK/EU and American companies respectively.

CHART 1

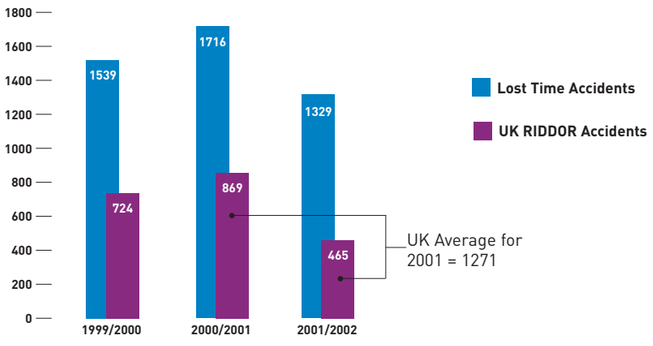
American Rates for 2001/02 Smiths vs "Average" Manufacturing
Injury and Illness Frequency Rates

	Smiths	Average for US Mfg.
Lost Time	1.6	2.2
Restricted Duty	1.5	2.5
No Lost Time	2.5	5.1
Total Recordable	**5.6**	**9.8**

In all areas, Smiths Group can demonstrate superiority to comparable companies in North America.

CHART 2

UK & EU Lost Time Accidents - Incident Rates 99/00 to 01/02
(Accidents per 100,000 Employees)



This year, we have expanded the range of KPIs used to measure health & safety performance to include globally accepted accident incidence and severity rates – i.e. not affected by local requirements.

We are developing a single performance indicator which considers audit score incidence and severity ratings for accidents and absences and costs related to Workers Compensation and Employer liability claims. We aim to start using this as a management tool in the next 12 months.

CHART 3

UK Audits by Operating Group

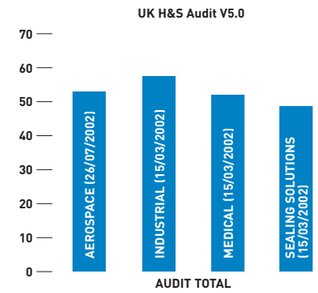
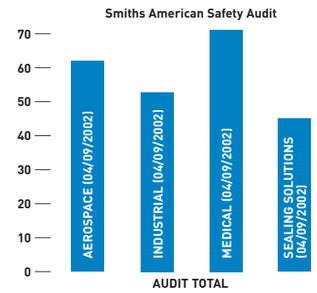


CHART 4

American Audits by Operating Group



Target: Health and Safety Audit Scores
For all major sites worldwide to have an audit score of at least 60%

Safety in the Work Area
Maintaining work equipment in optimum condition is a crucial part of minimising injuries to employees. We have a good record in this respect as shown by the results of regular inspections on our potentially dangerous machinery and equipment by qualified and competent persons – our insurance engineers.

In the UK, in the period 1st August 2001 to 31st July 2002, there have been 2794 examinations by Allianz Cornhill engineers with less than 0.65% serious defects (termed "A" defects) being found.

Similarly, Zurich have conducted 18632 examinations since January 1999 (44 months) and have, during this time, also found less than 0.65% "A" defects.

In North America, we have similar arrangements with our insurers and these inspectors have also demonstrated a very low incidence of serious defects.

Managing Compensation Claims
This is another good indicator of health & safety management. In America and the UK, which account for 78% of our employees we have improved our performance.

In North America, compensation paid in 2000/2001 reduced from 1.75% to 1.5% of profit generated.

Similary, in the UK, compensation payments reduced from 1.5% to 0.8%.

EHS Compliance

As a manufacturer of medical devices, aerospace products and many other safety critical products, we work in highly regulated environments. All our facilities are required to comply with the EHS regulations in force in the countries in which they manufacture and sell products.

In 2002, 111 routine inspection visits were completed by environmental regulatory authorities at Smiths facilities worldwide. Four minor instances of enforcement action were recorded in 2001, resulting in the issue of a prohibition or similar notice (no fines or criminal proceedings ensued). In FY2002, EMC Technology, based in New Jersey in the US, exceeded its effluent consent on two occasions (for lead and pH limits for its plating lab discharge). These minor violations resulted in fines totalling £1,300.

Suppliers

We recognise that the supply chain is an important feature of EHS management and performance. In common with many organisations, much of our EHS effort to date has focused on our own activities through the implementation of our safety management system and ISO 14001. Work has now begun to explore how best the Company should address EHS issues in the supply chain through Smiths' Purchasing Council. This work will build on the expertise and progress made by our own businesses supplier environmental assessments under ISO 14001. We expect to report further in this area in the next report.

Smiths was a founder member of Valpak packaging waste compliance scheme in the UK. Our recovery and recycling obligation (in tonnes) for the 2002 compliance year are shown in the table below.

	Recovery only	Recycling only	Overall obligation
Paper	358	170	528
Steel	9	4	13
Plastic	76	36	112
Wood	325	N/A	325
Totals	**768**	**210**	**978**

Progress Against Targets

Target	Progress
Implement Employee Assistance Programmes (EAPs) as part of our developing OH support programme.	**On-going.** Smiths Group North American businesses have an EAP in place. Following a successful 12 month pilot in the UK, an EAP will be rolled out in the UK.
Integrate business driving into Smiths health and safety programmes.	**On-going.** A management system for business driving in the UK is currently being established in conjunction with a major motoring organisation. It is expected to be operational during 2003.
Undertake internal H&S audits of all major operations world-wide by the end of 2003. All major sites world-wide to achieve health and safety audit scores of at least 60%.	**On-going.** 54 internal H&S audits have been completed to date, covering the majority of our main businesses, which employ 72% of our total employees. The remaining businesses will be completed by the end of 2003.
Reduce the current absence rate for our UK and EU businesses.	**On-going.** We are currently conducting a full review of our employee support arrangements to ensure they are compatible with our plans for the future.
All major manufacturing businesses to achieve certification to ISO 14001 by the end of 2003.	**On-going.** By August 2002, 50 facilities had achieved certification (up from 36 last year), representing 42% of the total.
Set quantified reduction targets for key aspects of performance by 2002 and sign up to MACC2.**	**On-going.** Targets* set are: • To reduce greenhouse gas emissions by 5% per £million turnover by 2006 (2001 baseline). • To reduce water consumption by 10% per £million turnover by 2006 (2001 baseline). • To reduce waste to landfill by 20% per £million sales by 2006 (2001 baseline). Expect to sign up to MACC2** in early 2003, a little later than planned.
Publish a full Company Environmental Performance Report in 2003.	**On-going.** Interim report (this document) produced for financial year 2002, ahead of target date. Preparations underway for more complete reporting of performance for the next report. Stakeholder dialogue to be used to identify issues to report and target audience. EHS performance report to be extended to cover wider CSR issues.
Establish a network of Regional Environmental Co-ordinators (RECs) across Smiths global operations.	**Completed.** 15 RECs established in July 2002 to improve management of environment and share best practice.
Develop an award scheme to recognise and reward best practice (and promote good practices throughout the Company).	**On-going.** Work to start in 2003 to develop the award scheme and promote case studies for the next report.

*Note: the environmental targets presented in this report have been amended from those that appeared earlier in Smiths Annual Report and Accounts for 2002. As our data gathering systems have improved, we have taken the opportunity to update the baseline figures for greenhouse gas emissions, water use and waste disposal to landfill that appeared in the Annual Report. These revised figures appear in this EHS report. Actual percentage reduction targets remain unchanged for greenhouse gases (5%) and water use (10%). The reduction target for waste to landfill has been increased from 10% to 20%. All targets are normalised against turnover and relate to a 2001 baseline.

**MACC2, Make a Corporate Commitment, is a UK Government initiative aimed at encouraging organisations to set reduction targets in key areas of environmental impact and to publicly report on progress (www.macc2.org.uk).