

**1999/2000 Environment, Health  
and Safety Performance Report**

**NEXT  
GENERATION  
POWER**



**STANWELL**  
CORPORATION LIMITED

# 1999/2000 Environment, Health and Safety Performance Report



**STANWELL**  
CORPORATION LIMITED  
ACN 078 848 674 ABN 3707 884 8674



SCL RECEIVED THE 2000 BANKSIA ENVIRONMENTAL FOUNDATION AWARD FOR CORPORATE ENVIRONMENT LEADERSHIP, IN RECOGNITION OF THE COMPANY'S OUTSTANDING ACHIEVEMENTS IN ENVIRONMENTAL EXCELLENCE.

COVER:  
TULLY RIVER IN TROPICAL FAR NORTH QUEENSLAND WHERE SCL'S KAREEYA HYDRO AND KOOMBOOLOOMBA HYDRO ARE LOCATED. WATER FROM THE RIVER IS USED TO GENERATE HYDRO-ELECTRICITY, ONE OF THE CLEANEST AND MOST EFFICIENT WAYS OF PRODUCING POWER FROM A NATURAL RESOURCE.  
(INSET) MICHAEL OBODIN FROM CAIRNS COMMUNITY.

## CONTENTS

Company Profile	1
Chief Executive Officer's Statement	2
Corporate Direction	4
Highlights and Challenges	5
Corporate Commitments	6
Report Verification	7
Auditor's Verification Statement	7
Reporting Direction	8

<b>EHS Management Overview</b>	<b>9</b>
Environmental Management	10
Health and Safety Management	14
Interactions with Stakeholders	17

<b>Performance Reports</b>	<b>19</b>
<b>Non-renewable Generation</b>	<b>20</b>
Stanwell Power Station	20
Stanwell Energy Park	25
Mackay Gas Turbine	26
<b>Renewable Generation</b>	<b>27</b>
Kareeya Hydro	27
Koombooloomba Hydro	29
Barron Gorge Hydro	29
WindyHill Wind Farm	31
Townsville Biogas	31
RockyPoint Cogeneration Project	31
Solar School	32
Solar Concentrator	32
Solar Farm	32

**Glossary** *inside back cover*

**Locations** *back cover*

**Stanwell Corporation Limited (SCL) is a strong national utility company with a portfolio comprising coal-fired, gas, solar, wind, hydro and biomass power generation.**

The Queensland-based company is regionally focussed and working towards becoming Australia’s foremost provider of environmentally responsible energy solutions.

Formed on 1 July 1997, following the restructure of the State Government owned Queensland Generation Corporation, SCL is actively involved in the National Electricity Market and plays a key role in providing reliable electricity to a range of consumers.

The company’s presence is being extended through the development of new projects and offices in regional Queensland and interstate. In addition to offices in Rockhampton, Townsville, Cairns and Brisbane, SCL now has offices in Western Australia and Victoria and employs more than 270 people nationally.

- SCL owns and operates the:
- 1400 megawatt (MW) Stanwell Power Station near Rockhampton;
  - 34 MW Mackay Gas Turbine;
  - 60 MW Barron Gorge Hydro on the Barron River;
  - 72 MW Kareeya Hydro on the Tully River;
  - 7 MW Koombooloomba Hydro on Koombooloomba Dam; and
  - 12 MW WindyHill Wind Farm on the Atherton Tablelands.

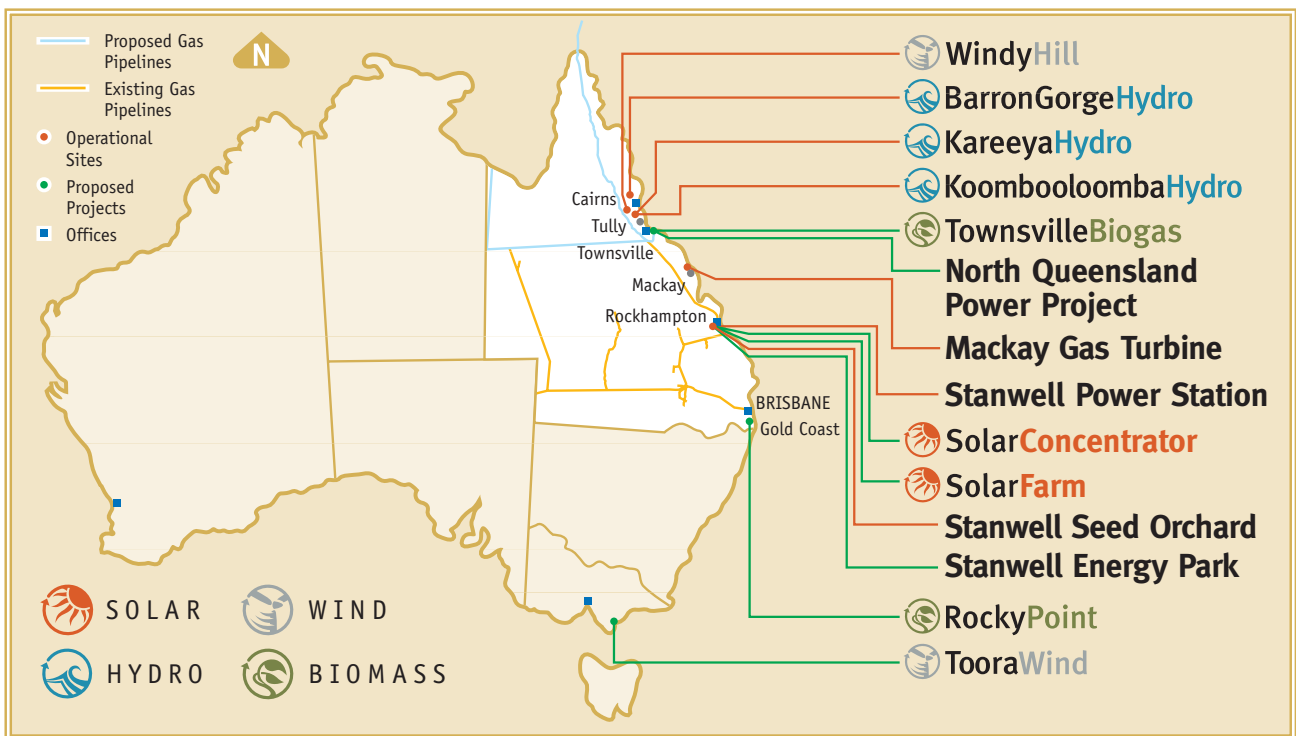
The company is progressing other projects in Queensland, Victoria and Western Australia.

SCL is one of the few “green power” companies in Australia and is committed to the highest international environmental standards. These standards are applied throughout the company to all activities. Projects offering green power to electricity

retailers are accredited by the Sustainable Energy Development Association (SEDA). SCL continues to build on its reputation for innovative environmental practices and adheres to a policy of continuous improvement in environmental performance.

The company operates with integrity and seeks to satisfy current customer needs and anticipate emerging ones. By broadening its core businesses, and with a focus on developing long-term community and business partnerships, SCL aims to grow through new projects that demonstrate economic, social and environmental benefits.

SCL proactively supports community, educational and tourism programs and events.



**Providing a safe and healthy working environment is our highest priority. The company will continue its investigation into and adoption of new technologies and practices to enhance the continual improvement of its EHS performance.**



TED SCOTT  
CHIEF EXECUTIVE OFFICER

**S**tanwell Corporation Limited's (SCL) third Performance Report covers our environmental, health and safety performance for the 1999/2000 financial year. In line with company policy to have third party audits of Environment, Health and Safety (EHS) procedures, processes and performance, a verification statement from external consultants URS Australia is included on page 7 of this Report.

SCL was devastated by a tragic accident at Kareeya Hydro on 11 June 2000 that took the life of Russell Todd, an employee of 19 years standing. The accident resulted in a comprehensive review of safety procedures throughout the company to reduce the possibility of further accidents.

Counselling support was provided to Russell's family and his fellow employees. A memorial, designed by the workforce, has been set up at Kareeya Hydro in Russell's honour and SCL has established a sporting scholarship, in his name, to encourage and support youth on the Atherton Tablelands.

Providing a safe and healthy working environment is our highest priority. The company will continue its investigation into and adoption of new technologies and practices to enhance the continual improvement of its EHS performance.

It is with much sadness that we report the death, after a long illness, of our Environmental Manager Russell Robinson (on 7 November 2000). Russell's support and dedication were fundamental to the formation of the SCL corporate

direction. His leadership will be greatly missed, not only within the company but throughout Australia's electricity industry.

Over the past year, the company has continued to foster close relationships with the communities in which we operate. This includes local community members and organisations and neighbours of our existing generation sites and our new and potential generation sites throughout Australia.

To reinforce the approach outlined in our vision, we have embraced the following definition of Sustainable Development: "Sustainable Development is a business philosophy that balances environmental, social and economic aspects to improve the quality of life both now and in the future".

In progressing towards a sustainable future, SCL will ensure that the environmental performance of its coal-fired power station will not only meet but will exceed community expectations.

In June 2000, SCL received the Banksia Environmental Foundation Award for Corporate Environmental Leadership. This is considered Australia's most prestigious award, recognising outstanding achievements in environmental excellence.

Barron Gorge Hydro, Kareeya Hydro and Mackay Gas Turbine achieved certification for Environmental Management Systems (EMS) to the international standard ISO14001 in June 2000, following certification audits conducted in May. Stanwell Power Station maintained its EMS

THE NEW WINDYHILL WIND FARM ON THE ATHERTON TABLELANDS IN FAR NORTH QUEENSLAND. PICTURED HERE, SEAN COLLINS WHOSE FAMILY OWNS ONE OF THE PROPERTIES WHERE WINDYHILL IS LOCATED.



certification for the third consecutive year, with surveillance audits conducted in November 1999 and February 2000.

During 1999/2000, SCL maintained its commitment to the Electricity Supply Association of Australia (ESAA) Code of Environmental Practice. The Code supports the underlying principles of Sustainable Development by setting a framework for environmental management. Our adherence to the Code was audited using the same protocols as those used in 1998/1999.

The company is committed to reducing its greenhouse gas intensity. Our support of the Greenhouse Challenge Co-operative Agreement continued and a reduction in the amount of carbon dioxide (CO<sub>2</sub>)

emitted from Stanwell Power Station was achieved.

*[For discussion on the results of the ESAA Code of Environmental Practice audit and Greenhouse Challenge gas reduction strategies, refer to the "Environmental Management" section on pages 10 to 13 of this Report.]*

Looking to the future, SCL has based its business direction on renewable energy. Before this Report is published, we will have launched our Elemental Power brand that will be the vehicle for marketing SCL's renewable energy portfolio in the national market.

A handwritten signature in black ink, appearing to read 'Ted Scott', written over a circular scribble.

**Ted Scott**  
*Chief Executive Officer*

## OUR VISION

**SCL will be Australia's foremost provider of environmentally responsible energy solutions.**

We are actively increasing the range of technologies within our portfolio and have a strong focus on renewable energy. Our vision will be achieved through our committed and proactive workforce, innovativeness and close relationships with customers.

**SCL takes a proactive approach to EHS issues by ensuring compliance standards are met and by continuing to strive for improvements in EHS performance.**

**E**nvironment, Health and Safety (EHS) are of paramount importance to SCL and the company's integrated policy supports its commitment to these areas. The highest priority is placed on mitigating EHS risks and on developing credible management support systems to enable this. The company's philosophy is that EHS issues take priority over production activities. Accordingly, the management support systems developed are subject to annual third party audits. One such management support system, the Risk Management System, ensures the Board and Executive Management are kept informed of issues that are likely to have a significant impact on the company.

SCL takes a proactive approach to EHS issues by ensuring compliance standards are met and by continuing to strive for improvements in EHS performance.

#### ENVIRONMENT, HEALTH AND SAFETY POLICY

- Identify, monitor and reduce EHS impacts on the workforce and the natural and social environment;
- Utilise the Risk Management System to identify risks and develop risk management plans;
- Educate employees, customers and business partners to support our EHS goals and objectives;
- Promote our EHS commitment to all suppliers, contractors and consultants, and seek to deal with those who operate in a manner consistent with our values and demonstrate responsible EHS performance;
- Proactively seek and participate in local and national agreements relevant to EHS management;
- Promote open communication between the community and SCL and demonstrate our commitment to the environment, the health and safety of the workforce, our neighbours, and those who visit our sites;
- Monitor and report our progress on EHS performance to employees, the general public, and external stakeholders;
- Utilise and assist in the commercialisation of environmentally innovative technology to meet the renewable energy demands of the future;
- Comply with all relevant legislation, regulations and standards relating to our operations.

Objectives and targets have been developed to ensure that SCL effectively implements the EHS policy.

## HIGHLIGHTS

- Two EMS surveillance audits were conducted at Stanwell Power Station by NATA Certification Services International (NCSI) – September 1999 and February 2000.
- The visitors' toilets at Barron Gorge Hydro were upgraded and responsibility for the facility was handed over to the Department of Natural Resources (DNR) – September 1999.
- The first two wind turbines at WindyHill Wind Farm were commissioned – February 1999.
- Stage Two of the Seed Orchard Joint Venture was planted – April 2000.
- Koombooloomba Hydro was officially opened by the Minister for Mines and Energy and Minister Assisting the Deputy Premier on Regional Development, the Honourable Tony McGrady MLA – June 2000.
- EMS certification audits were conducted at Barron Gorge Hydro, Kareeya Hydro and Mackay Gas Turbine, with all three sites achieving certification to the international standard ISO14001 – June 2000.
- SCL received the Banksia Environmental Foundation Award for Corporate Environmental Leadership – June 2000.
- Legal compliance audits, combined with audits of SCL's performance against its further commitments in environment and safety, were conducted at Stanwell Power Station, Barron Gorge Hydro, Kareeya Hydro and Mackay Gas

Turbine, as part of SCL's 1999/2000 EHS Performance Report verification process – July 2000.

- A review of EHS performance was conducted at WindyHill Wind Farm – July 2000.

## CHALLENGES

- During 1999, low frequency noise levels in the turbine hall at Kareeya Hydro were identified as an issue. The levels are safe when the correct Personal Protective Equipment (PPE) is used, however, hearing protection was not mandatory in the turbine hall at that time. Engineering control measures and the use of PPE have since been investigated. Modifications, including the application of acoustic lagging, are scheduled to commence in March 2001 and hearing protection has been made mandatory within the turbine hall until all noise control modifications are complete.
- Concerns about Stanwell Power Station's emissions and the possible effects on health remained an issue. These concerns were raised by some community members within a three-kilometre radius of the station. The company has continued to work through the issues with the community and other interested stakeholders. Ambient Air Monitoring of station emissions continued, with emission levels monitored that comply with national and world ambient air quality guidelines.
- Other community issues raised were the health of local vegetation, corrosion and rainwater quality



BRETT CONNOR - STATION CHEMIST DISCUSSES AIR QUALITY ANALYSIS FINDINGS WITH LOCAL LANDOWNER NORM ATKINSON. TWO OF THE AIR QUALITY MONITORING TRAILERS ARE MOBILE AND ARE LOCATED ON PRIVATE PROPERTIES WITH A DIRECT LINE OF SIGHT TO STANWELL POWER STATION.

at Stanwell Power Station, and sedimentation of the Barron River weir. The investigation process includes but is not limited to further testing, briefings, information sessions and focus group meetings. SCL continues to voluntarily investigate these concerns and to foster a close working relationship with the communities in which the company operates.

- The 1998/1999 compliance and risk audit conducted at Barron Gorge Hydro identified, as a significant risk, the potential for chemicals and oil to enter the adjacent river system. The proposed oil separation system upgrade was delayed due to issues with engineering design. The system upgrade will be implemented by June 2001. During the year, significant improvements were made in the storage, handling and disposal of oil and chemicals at the station to reduce the risk of contaminants entering the river.

## 1998/1999 PERFORMANCE REPORT COMMITMENTS AND ACHIEVEMENTS

Commitment	Target	Progress	Section Discussed
Certification of EMS for Barron Gorge Hydro, Kareeya Hydro and Mackay Gas Turbine	Jun 2000	Completed	Environmental Management
Reporting of NPI results for 1998/1999	Jun 2000	Completed	Environmental Management
Development of Waste Management Plan for SCL	Jun 2000	Ongoing	Environmental Management
Development and implementation of company Safety Management System	Jun 2000	Ongoing	Health and Safety Management
Commencement of Health Surveillance and Monitoring Program for employees	Jun 2000	Ongoing	Health and Safety Management
Development of a Crisis Management Plan for all SCL operations	Jun 2000	Ongoing	Health and Safety Management
Review of environmental training modules	Sep 1999	Completed	Interaction with Stakeholders
Development of the Performance Report as indicated for 1999/2000	Jun 2000	Ongoing	Reporting Direction
Support of ESAA Code of Environmental Practice – protocol development and audit of initiatives	Jun 2000	Completed	Environmental Management
Greenhouse Challenge Reporting	Jun 2000	Completed	Environmental Management
Planting of Stage Two of the Seed Orchard Joint Venture	Apr 2000	Completed	Stanwell Power Station
Continuation of ambient air monitoring at Stanwell Power Station	Nov 2000	Ongoing	Stanwell Power Station
Installation of Continuous Emission Monitors (CEM) on all units at Stanwell Power Station	Jun 2000	Completed	Stanwell Power Station
Report on results of leachate investigation	Jun 2000	Ongoing	Stanwell Power Station
NATA accreditation of Stanwell Power Station laboratory	Jun 2000	Delayed	Stanwell Power Station
Review of control measures for underground fuel storage tanks at Stanwell Power Station	Jun 2000	Ongoing	Stanwell Power Station
Further investigation into land contamination at Mackay Gas Turbine	Jun 2000	Ongoing	Mackay Gas Turbine
Investigation of lead contamination at Barron Gorge Hydro	Jun 2000	Completed	Barron Gorge Hydro
Investigation into sedimentation of weir at Barron Gorge Hydro	Jun 2000	Completed	Barron Gorge Hydro
Removal of chrysotile asbestos at Kareeya Hydro	Jun 2000	Completed	Kareeya Hydro
Upgrade of oil water separation systems for Kareeya Hydro	Jun 2000	Completed	Kareeya Hydro
Review of noise levels and appropriate control measures for Kareeya Hydro turbine hall	Jun 2000	Ongoing	Kareeya Hydro

## 1999/2000 PERFORMANCE REPORT COMMITMENTS

Commitment	Target	Section Committed
Development of the Performance Report as indicated for 1999/2000	Jun 2001	Reporting Direction
EMS Surveillance audit of Barron Gorge Hydro and Kareeya Hydro	Dec 2000	Environmental Management
EMS Surveillance audit for Mackay Gas Turbine	Jun 2001	Environmental Management
Reporting of NPI results for 1999/2000	Jun 2001	Environmental Management
Development of NPI Internet Web Site for SCL	Dec 2000	Environmental Management
Support of ESAA Code of Environmental Practice – action plan development	Jun 2001	Environmental Management
Recertification audit for Stanwell Power Station EMS	Jun 2001	Environmental Management
Full implementation of Health Surveillance and Monitoring Program for employees and contractors	Jun 2001	Health and Safety Management
Improvement of community consultation for new generation projects	Jun 2001	Interaction with Stakeholders
Continuation of Ambient Air monitoring at Stanwell Power Station	Jun 2001	Stanwell Power Station
Receipt of NATA certification for Stanwell Power Station Laboratory	Dec 2000	Stanwell Power Station
Review of water quality results for 1999/2000 for Stanwell Power Station	Jan 2001	Stanwell Power Station
Implementation of Fire Management Plan and controlled burnoff at Stanwell Power Station	Sep 2000	Stanwell Power Station
Revegetation of Ash Disposal Area to cover an additional 12 hectares	Nov 2000	Stanwell Power Station
Installation of engineering controls for noise at Kareeya Hydro	Mar 2001	Kareeya Hydro
Commencement of Water Monitoring Program and training at Kareeya Hydro	Nov 2000	Kareeya Hydro
Upgrade of oil water separation at Barron Gorge Hydro	Jun 2001	Barron Gorge Hydro
Monitoring of sedimentation in Kuranda Weir	Jun 2001	Barron Gorge Hydro
RockyPoint Cogeneration Project commissioned	Nov 2001	RockyPoint Cogeneration Project

Verification is fundamental in ensuring SCL's performance reporting, in the EHS Performance Report, is accurate and transparent. Several audits were conducted during the year, including EMS surveillance and risk audits. The verification audit is part of the external audit schedule, which will be reviewed in 2001, to ensure audit processes and audit responses remain effective tools for continual improvement.

External auditing is supported by internal quality assurance and environmental management audits. An integrated internal auditor-training course covering quality, environment and health and safety was conducted at Barron Gorge Hydro and Kareeya Hydro during 1999/2000. Similar training will be conducted at Stanwell Power Station by June 2001.

## Auditor's Verification Statement

**URS**

Dames & Moore  
Woodward Clyde

### VERIFICATION OBJECTIVE

URS has been retained by Stanwell Corporation Limited (SCL) to undertake an independent verification of the 1999/2000 Environment, Health and Safety Performance Report. The objective of the verification exercise was to ensure that the information contained within this Report provides an accurate and complete reflection of SCL's environmental, health and safety performance.

### VERIFICATION SCOPE

The scope of the verification exercise was three-fold, involving site visits, interviews with key personnel and a review of information and data in both hard copy and electronic format. Site visits were undertaken at the following SCL power stations during July 2000:

- Stanwell Power Station;
- Mackay Gas Turbine;
- Barron Gorge Hydro-Electric Power Station;
- Kareeya Hydro-Electric Power Station;
- Windy Hill Wind Farm (since this site was under construction at the

time of the site visit, an initial review of environmental, health and safety performance was undertaken).

The site visits incorporated the following elements:

- An audit of compliance, where applicable, with Site Environmental Authorities (Licenses), Wet Tropics Maintenance Permits and the Wet Tropics Environmental Code of Practice, the Electricity Supply Association of Australia (ESAA) Code of Environmental Practice and other relevant environmental legislation;
- A review of environmental management systems (EMS) to the requirements of the international standard for EMS, ISO14001, health and safety management and environmental key performance indicators (KPIs).

The verification was undertaken by externally accredited auditors, in accordance with the international environmental auditing standard ISO14010.

### VERIFIER'S OPINION

#### *Accuracy and Completeness of the Review*

It is our view that SCL's Environment, Health and Safety Performance Report for 1999/2000 provides a complete and balanced representation of their environmental, health and safety

performance. The Report incorporates appropriate coverage of SCL's environmental, health and safety aspects, highlighting those of most significance. The Report also highlights that SCL continues to take a leadership position with respect to the generation of electricity from renewable sources.

We also congratulate SCL for the extension of their Reporting Direction to incorporate Health and Safety, as well as further clarifying the planned reporting direction for 2000/2001, 2001/2002 and 2002/2003.

#### *Recommendations for the 2000/2001 Report*

To facilitate continual improvement in reporting, when developing next year's Report, we suggest that SCL consider a review of their environmental objectives and targets, ensuring the appropriate allocation of responsibilities, deadlines and resources. Subsequent tracking of progress on a regular basis is also central to continual improvement in environmental management and is therefore also highlighted for review.



**Merv Jones**  
Managing Director Asia-Pacific  
URS

The reporting structure and five-year plan, first detailed in the 1997/1998 Environmental Performance Report, have been reviewed and updated. The plan now covers the next four years until 2002/2003. SCL is reviewing the requirements and resources needed to deliver a Sustainability Report in 2003.

During 1999/2000, SCL created a standard list of stakeholder groups. The EHS Report will be developed each year according to the plan below, with the interests of the following stakeholders in mind:

- Employees
- Local community
- Wider community
- Customers – existing and potential
- Environmental groups
- Shareholders
- Major suppliers
- Government and other regulatory bodies

	1999/2000	2000/2001	2001/2002	2002/2003
<b>Report Framework</b> ■ Environment	■ EMS development and certification for Barron Gorge Hydro, Kareeya Hydro and Mackay Gas Turbine ■ Review impact of major suppliers and contractors on SCL operations ■ Define sustainability for SCL and future operations ■ Adopt sustainable technologies	■ Identify environmental indicators of sustainability ■ Develop sustainability principles for SCL and future operations ■ Adopt sustainable technologies	■ Monitor and report on environmental indicators ■ Review integrated policy ■ Adopt sustainable technologies	■ Report on continual improvement for sustainability processes and achievements ■ Report on full social implications ■ Development of sustainability policy ■ Report on financial indicators for environment, health, safety and social
■ Health and Safety*	■ Review of Health and Safety Manual ■ Development of employee health surveillance monitoring ■ Development of health and safety performance indicators	■ Development of health and safety sustainability indicators ■ Hazard and Risk Awareness Training ongoing for all employees	■ Review integrated policy ■ Monitor and report on health and safety indicators	
■ Social	■ Identify and address internal and broader local community issues, eg. jobs, industry, health ■ Further increase stakeholder dialogue	■ Identify and address SCL's impact on the wider community ■ Identify social indicators for sustainability	■ Report on progress towards sustainability reporting ■ Monitor and report on social indicators	
■ Financial	■ Review most appropriate reporting options ■ Investigate financial indicators for environment, health and safety	■ Investigate financial indicators for environment, health and safety ■ Most financial indicators reported in Corporate Annual Report	■ Review reporting options to meet Sustainable Reporting guidelines. ■ Some indicators reported in EHS Report	
<b>Verification</b>	■ Expand verification to cover increased disclosure. Reported in performance report	■ Expand verification to cover increased disclosure. Reported in performance report	■ Detailed verification of all data	
				■ Detailed verification of all data and indicators

\* New section added to the plan in 1999/2000: the 1999/2000 health and safety targets are taken from the commitments published in the 1998/1999 EHS Report