

THE WINSTON CHURCHILL MEMORIAL TRUST  
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CHURCHILL FELLOWSHIP REPORT

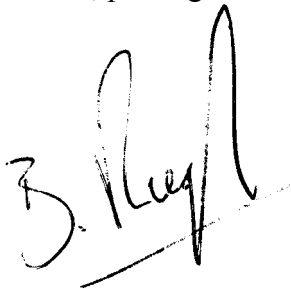
Report by – Bernie Riegler – 2002 Churchill Fellow

An overseas study of the automotive service and repair industry's environmental initiatives and implementation strategies for practical application in Australia via the Green Stamp program.

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## 1.0 Introduction

Australia's 12.3 million vehicles are sold, serviced, repaired and scrapped by approximately 80,000 automotive businesses. Of the Motor Trade Association of Western Australia's (MTA-WA's) member businesses, 83% employ less than 10 people. For these small businesses environmental management can be an onerous task due to the lack of time, resources, training and sector specific information readily available to them.

Based on a 1996 study by Ecotones and Associates the MTA-WA estimated that approximately 73,630,200 litres of liquid waste, 3000 tonnes (plus 928,295 m<sup>3</sup>) of solid waste and 186,900 litres of gaseous waste is produced by the automotive industry in Western Australia each year. If extrapolated to the national level these figures could be as high as tenfold. The impact of these wastes can be significant if they are not disposed of, or treated in an environmentally sensitive manner.

Contaminated wastewater that is allowed to enter storm water drains will end up in rivers, lakes and coastal regions. Solid wastes not directed towards recycling or re-use will reach landfill sites where the contamination of groundwater and nearby surface water is an issue, along with further land clearing necessitated by this short term solution to waste disposal. The release of methane gas from the decomposition of landfill adds to the gaseous wastes improperly released through automotive processes, adding to atmospheric problems including the green house effect and ozone depletion.

The Churchill Fellowship was an opportunity to visit the United Kingdom, Germany and Austria to meet with organisations that were addressing the environmental impacts of the automotive service and repair industry.

The organisations visited included industry associations, product and service providers, small and medium automotive businesses, local and national government agencies, consultants, vehicle manufacturers, international organisations and research / educational institutions.

Information and knowledge gained included the use of various forms of environmental management systems as a means of addressing the environmental responsibilities. A number of consultancy programs were visited that provided one-on-one assistance to businesses. Also examined were the types and degree to which particular cleaner production / environmental management initiatives are implemented along with the different types of educational resources developed to assist small and medium businesses.

I would like to thank the following people and their support staff for taking the time to assist me with my overseas research; Geoff Croft (Unic International), Barbara Herbert (MVRA), Paul Kuczera (MVRA), Mike Monaghan (MVRA), Aslam Vaid (MVRA), Sara Whiting (Envirowise), Tom Cochrane (Envirowise), Chris Blake (Land Rover), Miranda Campbell (Land Rover), Cedric DeMeeus (SMMT), Peter Barlow (RMIF), Michael Kundt (Wuppertal Institute), Guido Prick (BMW), Gudrun Kolleger (UTR), Chris Muri (UTR), Ingrid Kaltenegger (Joaneum Institute), Dr Hans Schnitzer (Joaneum Institute), Dr Karl Niederl (Stadt Graz), Alfred Harrer (CPC Austria), Christoph Holzner (CPC Austria), Niclas Svenningsen (United Nations Environment Program).

## 2.0 Executive Summary

*Bernie Riegler  
Green Stamp Coordinator  
Motor Trade Association of Western Australia (Inc.)*

*PO Box 727  
Balcatta WA 6914  
AUSTRALIA*

*Email: briegler@mtawa.com.au*

*Telephone: +61 8 9345 3466*

The automotive repair and service industry globally consists primarily of small to medium businesses. In Australia, particularly Western Australia, there has been a lack of succinct, relevant information, opportunity and incentive for businesses to identify and manage their environmental impacts, hence the majority of businesses continue to defy current legislative requirements.

The Churchill Fellowship provided the opportunity to look at a number of initiatives in the UK, Germany and Austria that are addressing this issue.

Businesses visited included the Motor Vehicle Repair Association (MVRA) located in Lancashire (UK). As a member based organisation similar to the MTA-WA the MVRA's main environmental program relies on an environmental management section within a larger health and safety management system. A number of mechanical repair and body repair businesses were also visited during this time, providing a first hand opportunity to see what the MVRA considered to be the average to upper proportion of businesses.

As an extremely well resourced government initiative, Envirowise provides a range of independent, practical advice on how to minimise wastes and convert turnover into profit. The program provides a range of products to businesses in the UK. These include a helpline, case studies, best practice guides, on-site reviews, networking opportunities and seminars.

Two manufacturers, Land Rover and BMW rely on environmental management systems (EMS's) to encourage their suppliers and in the case of BMW also their after sales centres, to implement better environmental practices. Both recognise the challenges facing small and medium businesses when it comes to EMS implementation and have therefore taken different approaches to assisting businesses to put these systems in place.

Ecoprofit, an Austrian based multi-agency initiative takes participating company representatives through a series of training seminars to develop their understanding of ecoefficiency and how these principles can be implemented in their workplaces.

It was found that one of the most common ways for businesses to identify and manage their environmental impacts was through the implementation of EMS's. However, representatives from all of the organisations agreed that these types of systems were very difficult for small and medium businesses to implement.

What appeared to be a more successful approach in some of the programs was a the personal delivery of good management practices. This was seen as a more pragmatic approach to addressing some of the common problems many of these businesses face when attempting to address their environmental impacts. As with many Australian businesses the problems faced by many of these businesses included a lack of resources and money due to a very competitive marketplace; lack of time to research the issues and solutions; difficulty finding sector specific information that is relevant to their particular industry.

It is anticipated that where practicable many of the ideas and solutions identified during the Churchill Fellowship will be implemented through the MTA-WA's Green Stamp Program and affiliated associations around Australia.

### 3.0 Programme

May 13	Unic International <i>(Nottingham - UK)</i>	Producers and distributors of solvent recycling systems for automotive spray painters.
May 15 - 20	Motor Vehicle Repair Association (MVRA) <i>(Blackburn - UK)</i>	Industry association representing automotive repairers.
May 21 - 24	Envirowise <i>(Oxfordshire - UK)</i>	Government initiative providing practical environmental advice to businesses.
May 28	Society of Motor Manufacturers and Traders (SMMT) <i>(London - UK)</i>	Industry organisation representing the interests of vehicle manufacturers.
May 30	Land Rover – ESF Project <i>(Birmingham - UK)</i>	Vehicle manufacturer’s environmental program
May 31	Retail Motor Industry Federation (RMIF) <i>(London - UK)</i>	Industry association representing the interests of the automotive industry.
June 3 – 5	Wuppertal Institute <i>(Wuppertal - Germany)</i>	Research institute addressing a range of issues including applied sustainability.
June 7 – 10	BMW <i>(Munich - Germany)</i>	Vehicle manufacturer.
June 11 - 12	UTR <i>(Vienna - Austria)</i>	Environmental consultancy group working with automotive dealerships.
June 13	Stadt Graz - Ecoprofit <i>(Graz - Austria)</i>	Local government eco-efficiency program.
June 14 & 17	Joanneum Research <i>(Frohnleiten - Austria)</i>	Research institute addressing issues of eco-efficiency in businesses.
June 17 - 18	CPC Austria <i>(Graz - Austria)</i>	Cleaner production consultancy group.
June 18	AC Steria <i>(Cramdach - Austria)</i>	Industry group representing the interests of component suppliers to vehicle manufacturers.
June 21	United Nations Environment Program (UNEP) <i>(Bangkok - Thailand)</i>	Asia Pacific office of the UN’s environment program.

## 4.0 Fellowship Findings

### 4.1 Licensing for solvent use in the UK

The UK's environmental legislation encourages businesses to adopt practices that will reduce their solvent use. PG6/34(97) is a Note that achieves the relevant objectives set out in the Environmental Protection Act 1990. It is a guide to local government authorities who in the UK are responsible for enforcing such legislation, on the techniques appropriate for the control of air pollution in relation to the respraying of road vehicles. It stipulates that:

*"...in carrying on a prescribed process, the best available techniques not entailing excessive cost (BATNEEC) will be used".*

It goes on to specify that high volume low pressure (HVLP) spraying equipment or any other paint application technique that has a transfer efficiency of at least 65% should be used.

The licensing system works in such a way that if a business uses more than 1 tonne of volatile organic compounds (VOC's) per year then they are required to register with their local authority for an authorisation to operate. The incentive is that if businesses implement practices and technologies that reduce their solvent consumption below 1 tonne of VOC's, then they can avoid the £1,000 (AU\$2,700) licensing fee.

When purchasing solvent based products including paints, thinners and washing fluids their invoice stipulates the amount of VOC's in the products purchased. When audited businesses must produce this documentation as proof of their current usage and methods and quantities of waste disposal. Purchasing lists from the distributors can be used to cross check this information or follow up on unlicensed buyers.

This licensing system is probably the main reason that a large proportion of UK automotive businesses were using procedures that dramatically reduced their solvent consumption. The 2001 Body Shop Magazine Industry Survey found that 84% of UK businesses used HVLP or LVLP (low volume low pressure) spray guns. 82% had gun cleaning systems that captured solvents used for cleaning their equipment and 23% used solvent recycling systems which allow for the long term reuse of gun cleaning quality thinners (gunwash). Though no similar surveys have been found for Australian businesses a local industry supplier estimates 15-20% use HVLP guns, 20% gun cleaning systems and approximately 3% recycling machines.

When discussing the changeover issues to the new technologies with UK workshops, some expressed problems with retraining spray painters but now found the new systems to be efficient and practicable. The assistance that they received from their paint suppliers was often cited as one of the factors that enabled a relatively smooth transition to the current system.

Only one industry association contact believed that due to monitoring capabilities of the relevant agencies it was difficult for them to adequately enforce the solvent regulations. As a result, he believed that there was still a certain degree of inequity between the "back-yard" operators and legitimate body repair businesses.

## 4.2 Environmental Management Systems

An Environmental Management System (EMS) is a written management program that assists a business to identify, control and monitor its environmental impacts. It provides a structured approach to planning and implementing environment protection measures.

To develop an EMS, an organisation has to assess its environmental impacts, set targets to reduce these impacts, and plan how to achieve the targets.

Perhaps one of the most commonly recognised EMS's, is the internationally recognised environmental standard, ISO 14001, which provides a framework for organisations to manage potential and existing environmental risks. Companies may be asked to demonstrate conformance with ISO 14001 as a condition of doing business in some markets.

Of the two industry associations visited in the UK the MVRA was the only one that had an environmental program for its 2,400 members. Based on a scaled down version of an EMS the environment section is part of a larger overall management system that includes simple checklists to help them identify and monitor their environmental impacts.

The price of these systems varies between £1,400 (AU\$3,780) and £3,000 (AU\$8,100) per year for 3 years depending upon the size of the business. This price includes a number of consultancy visits to help implement and monitor the systems on an ongoing basis.

Acknowledging their social responsibilities Land Rover in the UK have implemented the ESF Project, an environmental program to assist their part suppliers address and manage their environmental impacts. As the majority of these are small to medium businesses they have similar time and monetary constraints as the aftermarket repair sector. Land Rovers primary environmental requirements of their suppliers relies on the implementation of environmental management systems, ultimately to the ISO 14001 standard.

As with the previous manufacturer BMW have identified environmental management systems as the tool of choice for both its suppliers and after sales service and repair centres. However, it has recognised the difficulties associated with these systems for small and medium businesses and have instead defined its own criteria that will deliver the desired results without adding too much additional work to those involved. The key areas that businesses must satisfy include waste management, chemical handling, energy and water conservation.

Six out of BMW's five hundred dealerships in Germany are currently certified under ISO 14001, compared to almost 90% satisfying their own environmental management system requirements. As an incentive to improve their environmental standards as well other management issues BMW provide incentives to their dealerships to comply with their standards. The greater the compliance level the higher the financial bonuses based on vehicle sales.

BMW have engaged the services of a consultancy firm in Austria, UTR, to assist their automotive dealerships comply with their standards. UTR work with the dealerships to implement management systems for environment, occupational health and safety and building and infrastructure. The cost of this consultancy and development of systems is around E3,500 (AU\$6,000).

Small to medium businesses have a relatively smaller turnover compared to large businesses, thus the return on the cost of these systems can sometimes be correspondingly small. The costs and resources involved in receiving the ISO 14001 Accreditation can be more than what

some small to medium workshops are prepared to pay for a management system that only addresses the environmental aspects of the business.

Small to medium businesses generally do not employ a specific person to deal with their environmental issues, but rather rely on the owner or middle manager to accept these responsibilities. This person usually has no special training and has many other responsibilities. For these reasons the complexity of some EMS's often deters small to medium businesses from implementing such a system.

It appears to be a universal trait that the overwhelming majority of the small and medium businesses don't have management systems for anything, so the expectation that they will adopt and maintain them for 'environment' is possibly naïve.

### **4.3 Environmental education programs**

A number of different organisations and institutions visited had environmental education program's in place.

One of the most extensive, best resourced and managed programs researched was *Envirowise – Practical Environmental Advice for Businesses*. *Envirowise* is a government program offering free, practical advice on saving money and increasing profits by minimising waste. It provides a range of waste minimisation reference, networking and consultancy services, totally free of charge, and without obligation. Some of these free services include:

- The environment and energy helpline which is one hour of free advice and on-site consultancy from *Envirowise* experts.
- Publications include case studies, over 70 industry specific best practice guides and reference notes which provide up-to-date information on waste minimisation issues, methods and successes.
- Counselling visits are for up to 2 hours and look at one particular issue resulting in a brief report addressing the issue and practical solutions to manage it.
- The FastTrack visits are free onsite waste reviews for companies with less than 250 employees. They involve a more in depth analysis of the business and are conducted by one of 70 *Envirowise* consultants who are all specialists in their own particular fields. The consultants provide practical help to evaluate a business' activities and the current costs of wastes produced by the company; they then identify avoidable waste and the potential savings to be had.
- Waste Minimisation Clubs provide a chance for local or regional companies to meet regularly and share best practice experiences in waste minimisation.
- Best practice seminars and practical workshops assist businesses to find out about waste minimisation issues and to discuss opportunities and methodologies.
- A range of presentations, spreadsheets and databases are also made available at no cost to help individuals implement waste minimisation practices in their workplaces.

The *Envirowise* program also had close links with the Rover Group's *European Social Fund (ESF) Project* which was first run as a pilot program in 1992. The collaborative project now supports a partnership program between Land Rover, Coventry City Council, Jaguar cars, MG Rover Group, Environment Agency, Ford Motor Company, and seven auto supplier companies.

The project is aimed at assisting smaller automotive industry supply companies in the West Midlands Region to improve their environmental performance and competitiveness. The program provides free assistance to small and medium enterprise companies for implementing environmental management systems (EMS's) to the ISO 14001 standard. An environmental advisor is provided to support each stage of the implementation process including:

- environmental review
- identifying opportunities for improvements
- providing a register of environmental regulations
- producing an environmental policy
- General and specific environmental awareness training
- Developing an EMS manual and procedures
- Internal auditing

*The ESF Project* uses a 10-Step Process that was developed by Land Rover, to support the implementation of each element of ISO 14001. Training of employees is also provided to further develop and maintain the companies environmental management system.

This employee training consists of a simple quiz that is disseminated to staff prior to a visit from an ESF project coordinator. The objective of this is that the workers will work through the questionnaire beforehand and familiarise themselves with waste minimisation and cleaner production issues. The coordinator upon visiting the business will clarify and discuss the issues with the employees seeking their feedback on any further initiatives that they believe could be implemented.

Much of this information is also web-based, however certain resources such as the 10-Step Process can only be accessed by registered participants of the program.

*The ESF Project* in conjunction with *Envirowise* holds a number of seminars to assist businesses with various aspects of the EMS implementation process. One such session attended was the Waste Minimisation Seminar held in Coventry. The daylong seminar was aimed at the Project's target audience, representatives from Land Rover's small and medium supplier companies that were being asked to implement the ISO 14001 standard. The workshop addressed issues such as:

- The drivers and actions for minimising wastes
- Ways to reduce waste and cost
- Tools that can be used
- Waste minimisation techniques
- Developing an action plan

Addressing industry and environment at the conceptual level, the Wuppertal Institute for Climate, Environment, Energy is an interdisciplinary, academic based organisation that looks to solving problems in the area of applied sustainability research.

The Institute develops guiding principles and concepts in the areas of energy, transport, material flows and structural change, climate policy and eco-efficient enterprises as well as providing new and innovative models of wealth. Its role is primarily as mediator, linking politics, economics science and the community.

One of the Institutes initiatives was the *Efficient Entrepreneur*: a calendar that guides small and medium businesses through a month by month eco-efficiency program. It is produced in different languages and aims to facilitate performance measurement and communication.

The practical application of the calendar has proved a satisfactory alternative to EMS's for one large company. The multinational medical equipment manufacturer, Johnson and Johnson, purchased copies of the document for their small and medium sized suppliers and encouraged them to work through the document's objectives to produce an eco-efficiency report. Upon satisfactory presentation of the final document, businesses are given exemption from developing a full EMS, which was the company's previous requirement.

Another well resourced eco-efficiency program that provides direct assistance to businesses is the Austrian based *Ecoprofit*. The program is a collaborative partnership between a Stadt Graz (the local government authority), two government agencies for economics and environment and CPC Austria, a consultancy group set up specifically for the implementation of Ecoprofit.

The process orientated program works with about 15 participants at one time. Representatives from participating companies attend 10 seminars over a one year period. They are given additional assistance from their government authorities and consultants to identify and implement eco-efficiency opportunities. Where possible, consultants also participating in the program are encouraged to link up with company representatives and together they develop action plans and implementation strategies for that business.

Though approximately 15 participants start each year, the number often reduces to a core group of about 5 with the remainder either participating less or dropping out all together.

There is also an opportunity for businesses to become certified under the Ecoprofit banner. Businesses must first identify their initial objectives, then produce an end of year report highlighting their achievements. Once they have produced their following year's plan, they will be audited on a particular issue that the accrediting commission considers appropriate. Upon satisfaction of this audit they are awarded their certification.

Since its inception about 11 years ago approximately 100 Austrian businesses have participated in the program. The program has been expanded into other European countries including Germany, Italy and Slovenia taking the total number of enrolled businesses to almost 1,000. The current overall cost per participant works out to about Euro100,000 (AU\$170,000). This cost is part funded by the participants, the local government authority and other partner government agencies.

Overall, the programs that provided incentives and benefits appeared to be the best received by participants. Those that provided minimal or no outlay on the business' behalf to participate appeared to attract the most interest. However it was often difficult for some of the program providers to get the participants to recognise the potential and some times long term benefits of what they were advocating, particularly those associated with significant up-front costs.

## 5.0 Conclusions

It is difficult to see how the automotive industry's products and services can ever be produced and operated without causing some harm to the natural environment.

Today's society cannot function without a comprehensive transport infrastructure in which cars and commercial vehicles play the dominant role. Moreover, in a state such as Western Australia, which has one of the country's highest car ownership rates per capita, there is no indication that people will willingly give up the mobility lifestyle that car ownership bestows.

Ultimately it will be the automotive service and repair industry itself that will need to implement policies, with or without Government direction, to minimise its impacts. However for this to occur car owners and fleet operators will need to acknowledge the necessary investment in time and money to manage these impacts and be prepared to utilise the services of those businesses that are doing so. For as long as consumers allow businesses to exclude responsible environmental management, there will be little incentive for them to change their current practices.

From what was seen, Australia is still many years behind the three countries visited particularly in the area of solvent management. Their stricter, or at least enforced environmental laws, appear to have resulted in a generally higher standard of pollution avoidance in this area.

The industry leaders in WA don't appear to be that far behind their European counterparts. No particularly new or innovative methods of pollution reduction and abatement were found though there appeared to be a generally higher standard of environmental management within the automotive businesses visited.

It is anticipated that the ideas and information derived from the Churchill Fellowship will be disseminated through the MTA-WA's Green Stamp Program.

## 6.0 Recommendations

- Government to provide incentives that encourage businesses towards more environmentally friendly processes and technologies. This could be in the form of lower licensing fees, interest free loans or tax incentives.
- Government agencies should stop relying on complex environmental management systems for small and medium businesses as a vehicle for them to manage their environmental impacts. It is therefore recommended that more simplified forms of hazard identification and management be promoted within small and medium enterprises.
- Using the *Envirowise* program in the UK as a model there should be more practical based programs for specific industry sectors that utilise the skills of experts as apposed to general consultants.
- Government to support more industry based programs that provide expert assistance to small and medium businesses. Especially those supported by industry itself.
- Develop a national approach to environmental management within the Australian automotive industry. Many resources have been developed throughout Australia but no program to date has brought the best of them together.
- Set up a workshop level training seminar similar to that of Landrover's *ESF Project*. This can potentially be developed through the MTA-WA's Green Stamp program.

## 7.0 References, further reading & web sites

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