



Review of the Environmental Merchandising Policies of SOCOG: The Missed Opportunity

A Report Prepared For Green Games Watch 2000 Inc by

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EXECUTIVE SUMMARY

This report assesses the extent to which merchandising for the Sydney 2000 Olympics is, and is likely to, contribute to the fulfillment of Sydney's promise to stage a Green Games. It sets out to (i) examine the adequacy of measures put in place by SOCOG (Sydney Organising Committee for the Olympic Games) to achieve environmental objectives and (ii) analyse the extent to which licensed merchandise, now being marketed in 10,000 outlets across Australia, demonstrates environmental best practice.

SOCOG's performance is assessed according to the terms of its own environmental policy as well as by applying more broadly based sustainability criteria in line with world best practice.

The report acknowledges that the environmental objectives of the Green Games are located within the commercial context of the Sydney 2000 Olympics and the growth of event-linked merchandising. It finds however that SOCOG is not facing up to this contradictory situation. Instead it is largely attempting to strategically manage environmental *issues*, rather than seeking to reduce impacts.

The research was conducted in a context of limited and occasionally obstructed access to information about the environmental measures being taken by SOCOG and its licensees. In this light, and notwithstanding the genuine efforts of some merchandisers and of SOCOG staff to address environmental concerns, the approach adopted by SOCOG has been found to be deficient on many levels; specifically it has:

- failed to substantially take up and develop the concept of the Green Games. It has revealed a basic lack of understanding of both the challenges and opportunities.
- failed to exploit the enormous purchasing power of the Sydney 2000 Games as leverage for green business and sustainable economic development.
- failed to recognise and exploit the economic and export potential that showcasing Australia's well designed ecologically sustainable merchandise could have generated.
- established an absolutely minimalist structure for fulfilling only statutory environmental obligations. This goes against its claim 'to set a new standard of environmental excellence'.
- set the level of environmental performance for licensees extremely low, amounting to not much more than a statement of awareness of environmental issues.
- failed to recognise and make use of the significance of design in generating innovative environmentally progressive merchandise.
- failed to keep pace with local and international developments in ecologically sustainable design and manufacturing.

Furthermore:

- there is no system for auditing the stated environmental commitments of licensees.
- environmental monitoring of licensees has virtually been handed over to the Marketing Program.

- the processes for environmentally assessing licensees lack transparency and accountability, this being linked to the more general culture of secrecy of SOCOG, which has alarming implications in terms of gaining public trust and therefore enthusiasm for a Green Games.

As a result of SOCOG's policy and program failures, the Sydney 2000 Olympic merchandise now starting to flow out of factories demonstrates very little that is environmentally exemplary, and in some cases is actively environmentally damaging.

A few specific environmental positives were identified:

- a trend towards minimal, low impact packaging
- two instances where PVC was substituted by a less environmentally damaging material and one in which a PVC product ceased to be produced (but external pressure rather than SOCOG environmental policy was the catalyst)

Specific negatives were also identified:

- A number of soft PVC products for children, despite SOCOG's 'minimise or ideally avoid' PVC policy and the international trend towards banning soft PVC products for children.
- a trend towards low priced, short lifespan novelty merchandise manufactured offshore (thus going against SOCOG's 'Australian made' preference criteria) with no guarantees of environmental or labour conditions
- a complete lack of environmentally innovative products.

The report concludes that it is apparent that SOCOG have never fully dealt with what a transformation to a sustainable Olympic Games would actually entail. Now locked into a hugely expensive Games and with much of the funds still to be raised, SOCOG appear to be set on a course of diminishing Sydney's original commitment for a Green 2000 Olympic Games.

1. RATIONALE

Purpose

Green Games Watch 2000's brief to the report's author, the EcoDesign Foundation, was:

To research and prepare a report identifying the main types of Olympic merchandise and provide clear and simple environmental guidelines which can be followed by existing and future (tendering) merchandisers and Olympic decision makers.

Scope

This study is confined to Olympic merchandising activity licensed by SOCOG to date. Royalties from the sale of licensed merchandise comprise only one of the four income streams available to SOCOG to fund the staging of the Games. The other three are (i) Sponsorship, (ii) the sale of TV rights and (iii) Ticket Sales. TV rights is the most significant, providing around 50% of income, with sponsorship and ticket sales coming next. Licensing is in fact the smallest income stream. 'Merchandise' refers to actual goods produced for sale, and excludes services. Also excluded from this study is any examination of direct procurement by SOCOG of goods and services required for the Games, however it is to be noted that all tenderers are required to take SOCOG's environmental policy into account. It is recommended that procurement be the subject of further investigation by Green Games Watch 2000 (GGW).

Method

'Olympic merchandise' and 'environmental guidelines' need to be understood in the current conjuncture of Olympic activity, i.e.,

1. the commercial nature of the Sydney 2000 Olympics and SOCOG's structural position in this scenario
2. the fact that SOCOG already has environmental guidelines in place
3. the fact that most of the merchandising licenses have already been issued and the production and sale of licensed Olympic goods is already underway.

These pre-existent conditions frame the research task and the potential effectiveness of any guidelines that might be produced. Therefore the report is structured in the following way:

Section 2 addresses the contradictory contexts of on the one hand, SOCOG's formal environmental commitments and on the other, the commercial imperatives of the Sydney Olympics, particularly the growth of 'themed' merchandise.

Section 3 explains SOCOG's licensing process, how its environmental policy applies to merchandising, and discusses weaknesses in the environmental assessment process.

Section 4 presents three case studies that highlight problems in environmental policy and implementation:

- the treatment of PVC as an iconic single issue
- the difficulties raised by third party and offshore manufacturing
- the complex issues of cotton merchandise

Section 5 presents an environmental overview of currently known Olympic merchandise (supplemented by an analytical table in Appendix 3).

Section 6 gives a strategic overview of policy directions and outcomes.

Section 7 presents a conclusion and recommendations.

Six appendices of supporting documentation follow. To note is **Appendix 6** which fulfills the original brief by providing (i) an outline of local and international developments in environmental best practice relevant to merchandising and (ii) some basic principles for environmentally improved product design.

Information has been gathered by interviews with SOCOG's Environmental and Marketing staff, a questionnaire to 36 Licensed merchandisers (list supplied by SOCOG), phone interviews with selected licensees, SOCOG media releases of the last 18 months, newspaper reports, study of merchandise in the Olympic Store in Pitt Street. Green Games Watch 2000's earlier report by Andrew Myer, *Sponsorship and Merchandising for Sydney's Green Games* (1997) provided background material. Secondary sources have been consulted on environmental aspects of particular products and materials.

Timing

The research for this report was done in October and November of 1998. The Report itself was completed on December 7th 1998. Only minor changes have been made in the period between its completion and public release.

2. CONTEXTS

This section addresses two contradictory contexts in which the Green Games is attempting to be achieved: SOCOG's formal environmental commitments and the commercial imperatives of the Sydney Olympics, particularly the growth of 'themed' merchandise.

Context 1: The Environmental Commitment

Part of the Sydney Olympics 2000 bid included a commitment to Ecologically Sustainable Development as outlined in the *Environmental Guidelines for the Summer Olympics* (1993). The commitments made in these *Guidelines* are part of the contract between the International Olympic Committee (IOC), the City of Sydney and the Sydney Organising Committee for the Olympic Games (SOCOG). In reference to merchandising the *Guidelines* state:

Olympic host cities should commit themselves to:

- *all official merchandise satisfying appropriate environmental standards in manufacture, use and disposal*
- *avoiding unnecessary waste generated by products with a short useful life or unnecessary packaging*
- *not using materials from threatened environments or species*
- *maximum use of recyclable or recycled materials*
- *promotional clothing being made from natural fibres wherever possible.*

The *Guidelines* made additional commitments for Sydney 2000:

- *every company tendering for a merchandising contract will be required to provide environmental information in its submission in relation to manufacture, use and disposal*
- *the design and packaging of products will embody an educational message about the environment wherever possible*

This report will assess the extent to which these commitments have been, and are, being met. Additionally it will register environmental assessment as an activity which has developed substantially since the 1993 *Guidelines* and will thus make judgments and include recommendations which go beyond these and are in line with contemporary best practice. The approach taken also aims to step back and not to take as absolutely given either SOCOG's or the environment movement's definitions of ecologically sustainable development or of what would constitute a Green Olympics.

Context 2: Commercial Imperatives and the Rise of Theme-ing

Despite the *Environmental Guidelines*, the Olympics Games needs to be recognised as an event driven by commercial imperatives. It is not just national and civic pride that makes potential host cities compete so vigorously for the right to stage the Games, but the prospect of significant boosts to local economies across nearly all sectors - tourism, catering, building and construction, specialised goods and services and all kinds of theme-linked merchandise.

Themed products have played an increasingly significant part in recent Olympic Games, moving well beyond souvenir medallions and T shirts. This is part of a wider trend towards themed

merchandising, which actually started nearly sixty years ago with the New York World Fair and the birth of television. Today theme-ing is widespread. It is highly developed in the spin-offs that accompany children's TV shows and movies (Jurassic Park, Batman, Teenage Mutant Ninja Turtles, Babe, to name a few). Costumes, stuffed toys, mugs, bed linen, clothing, caps, satchels, pencil cases, books, video games, etc. are now standard fare for big budget children's movies. Income from themed merchandise is now so significant that it is a key factor in demonstrating financial viability and is thus factored into business plans for many movies. It is a synergistic process - the movie creates a market for the merchandise and the merchandise promotes the movie. In these terms the Olympics could be seen as having many advantages - it's like a live-to-air movie with simultaneous first release in every country on earth, and it appeals to adults as well as children! This could be seen as a merchandiser's dream come true.

Or, from a different marketing angle the Olympics could be seen as a 'brand name' with world-wide recognition. The Olympics has an established (but not absolutely fixed) identity or *sign value* which can be deployed to create *exchange value* (and hence profits). Furthermore it is a brand associated with excellence (peak athletic achievement) which comes with local and international official endorsement. Feeding off this, themed merchandise is now structured into fund raising projections for the Olympic Games, the Sydney 2000 Olympics being no exception. The expectation is that Olympic merchandise will provide income streams for the licensed entrepreneurs and royalty streams for the Games organiser. SOCOG is a fully self-funded government trading enterprise with no funding from NSW Government, but it is underwritten by it. For these reasons there is pressure to maximise the production and sale of Olympic branded goods, as well as promoting ticket sales and seeking sponsorship. Huge amounts of ephemeral goods are being produced that will increase the volume of the waste stream in years to come. This report addresses this particular issue through an analysis of the difference between the potential design life (i.e., how long the material product lasts) and estimated 'cultural life' (linked to the ephemerality or otherwise of the Olympic theme) of Olympics 2000 merchandise.

While SOCOG controls the production and sale of official Olympic merchandise through granting licenses, it cannot control the general commercial activity around the Olympics. As time moves closer to the 2000 Games, licensed merchandise will be the tip of an iceberg of proliferating commercial activity. There will be a massive visual presence of Olympic imagery in electronic and print media, on billboards, banners, signage throughout Sydney and beyond, all of which is intended to create 'Olympic fever' with commercial spin-off for all sectors of the local economy.

However a contradiction immediately appears when environmental imperatives are put into this scenario. Environmental imperatives mean reducing production, consumption and waste. Raising money via merchandise means increasing production, consumption and waste. While more complex than this simple picture, the macro scenario should not be forgotten and it is one that demands a great deal of thought, responsibility and management.

It needs to be recognised that the *Environmental Guidelines for the Summer Olympics*, by themselves, were too broad and general to have been the means of managing the increased impacts resulting from the enormous boost to economic activity generated by the Olympics. In hindsight, the original *Summer Olympic Guidelines* need to be criticised for certain fundamental omissions, particularly the failure to address the question of an appropriate scale for the Olympics, as well as for certain naïve assumptions (e.g., the nomination of 'natural fibres' obscures the fact that these are grown under highly artificial conditions; this is particularly the case with cotton in Australia, as will be discussed).

The argument posed against the Sydney 2000 Games as an irredeemably unsustainable undertaking is that the concept of a Green Olympics provides a unique opportunity, in fact a 'platform', for changing direction towards ecologically sustainable development (ESD): an opportunity to shift away from production and consumption *as it is currently constituted*. Through its enormous purchasing power and its very high international visibility the Olympics could provide many occasions for demonstrating reduced impact, environmentally beneficial products, processes and technologies. Thus the 2000 Olympics could set a new direction for industry. Clearly this is applicable to design and construction of Olympic venues - in terms of opportunities to showcase renewable energy technologies, best practice in water, energy and materials conservation. But it applies equally to merchandise - the kinds of products associated with the Olympics logo could be environmentally exemplary - in what they are, how they function, how they are made, how they are marketed and how they are dealt with at the end of their useful lives - all of these aspects are within the remit of design (engineering, production process, industrial, graphic). All these aspects require substantial and innovative design input.

The *Summer Olympics Guidelines* (which are endorsed by SOCOG) did recognise, albeit in an underdeveloped way, that ecological sustainability could mean business opportunities, in its statement:

The summer Olympic Games should be a showcase for high environmental standards. They generate an enormous amount of economic activity, and offer unparalleled opportunities for sponsors and suppliers to take a leading role in environmental protection through innovative marketing strategies and actions. By adherence to responsible criteria for processes, products and packaging, industry can share environmental responsibility and take credit for investing in ecologically sustainable development.

3. HOW SOCOG'S ENVIRONMENTAL POLICY APPLIES TO MERCHANDISE

This section explains SOCOG's process for awarding licenses, the types of merchandise being endorsed and how environmental policy is being implemented. It then identifies weaknesses in SOCOG's process and ends by making a comparison with OCA's environmental management system.

The Process for Awarding Licenses

SOCOG calls for expressions of interest (EOIs) for particular merchandise categories with prospective tenderers being asked to make submissions judged by eight assessment criteria. These are:

1. Manufacturing capability
2. Quality control
3. Creative resources
4. Distribution breadth
5. Marketing expertise
6. Australian made
7. Environmentally friendly
8. Innovation

The EOIs are assessed by these criteria via a confidential in-house process led by marketing staff with input from environmental staff. Recommendations go to the SOCOG Board, then to the IOC for final approval. The successful tenderers enter into contracts with SOCOG. After this they can be publicly announced.

Competition was intense in the early phase with only three out of every twenty EOIs being successful. SOCOG seeks to limit the number of licensees per product type while at the same time seeking to maximise sales. Estimation of sales is an important part of the tendering process, with royalties being paid to SOCOG in advance on the basis of projected sales. Once a license has been granted, the merchandiser still has to submit any proposed product variation or new product lines to SOCOG. These often go through a number of iterations before being approved, and according to SOCOG Environmental Program staff, environmental considerations such as packaging are often a factor in this process.

Merchandise Range, Volume and Distribution

There are seven broad merchandise categories, with licenses being granted within these. They are:

1. Apparel - general
2. Apparel - technical (e.g., sport clothing)
3. Gifts and novelties
4. Plush (stuffed toys)
5. Homeware (e.g., dinner plates)
6. Collectables (e.g., pins, coins, badges)
7. Publishing (e.g., colouring books)

SOCOG supplied Green Games Watch with a list of 36 Licensees. Another 39 have been proposed by SOCOG and are awaiting approval by the IOC, who as the ultimate copyright owner of the Olympic Games and its insignia must grant all final approvals. For this reason Green Games Watch has been refused access to any details of these upcoming licensees or their merchandise. The 36 previously approved licensees and their products are listed in Appendix 1.

Sydney 2000 consumer products are forecast to generate \$800 million of retail sales. Sydney 2000 merchandise is currently available in over 10,000 outlets across Australia. In June this year SOCOG announced an agreement with K Mart to sell Sydney 2000 Olympic Games merchandise. Products will also be sold internationally with SOCOG having reached agreement with the United States Olympic Committee for distribution of the Sydney 2000 merchandise throughout the USA. This is the beginning of an ambitious international licensing program expected to include 30 Olympic Committees worldwide.

The Environmental Assessment Process

SOCOG has a ten point Environmental Policy (see Appendix 2), consisting of broad statements of commitment of which all potential licensees **are made aware**. They are also asked to provide information about the following environmental aspects of their products:

- type and source of material used
- whether PVC is proposed
- recyclability
- nature of packaging
- disposal safety
- company environmental policy, practices and audits
- environmental marketing

These aspects are elaborated in Appendix 2. All potential licensees are assessed according to these criteria by SOCOG's Environmental Program staff. A proforma is used, a blank copy of which is also in Appendix 2.

There are **no mandatory environmental requirements** that licensees have to meet. Nor are there prescribed forms of documentation required to be submitted to verify licensee environmental claims (such as evidence of an Environmental Management System being in place). Because SOCOG was not prepared to release any completed proformas, it is not at all clear the amount of detail that licensee applicants actually supply. It is very possible that brief, vague, unverified statements suffice. If this is the case, the environmental assessment process can be viewed as tokenistic green-washing - little more than minimal insurance for SOCOG itself against accusation of non-compliance with its own environmental policy.

The Environmental Program staff is 4 in a total of 700 SOCOG staff (projected to grow to 2000 as the Games approaches, with no plans to increase paid environmental staff). The environmental staff are also responsible for assessment of sponsors, partners and official suppliers of goods and services. This huge task is sought to be managed through a devolution of responsibility via an internal Environmental Management System and by staff environmental awareness training. Therefore **it becomes the responsibility of marketing staff to monitor environmental performance** of the individual licensee accounts that they handle. This model of devolved environmental responsibility is fairly typical of large organisations which have internal EMS's in place - for example those that are ISO 14000 accredited or who carry out regular environmental reporting. While this might be appropriate for an organisation where design and production occur largely 'in house', it is clearly **a very weak instrument for attempting to control the environmental actions of second and third parties** - which is what the licensing process is all about.

Weaknesses of SOCOG's Process

- Under-development

A striking feature of the way in which SOCOG has sought to fulfill its environmental commitments is that it has not progressed from the *Summer Olympics Environmental Guidelines* of the Sydney bid document, neither in terms of developing the Guidelines into a strategy nor in terms of keeping up to date with best practice. Dealing with the first point - clearly the *Guidelines* were written with the intention of such development. For example they call for 'appropriate environmental standards in manufacture, use and disposal', yet to our knowledge, SOCOG have not defined such standards, neither by citing existent ones nor creating their own.

On the second point, there appears to be no recognition by SOCOG that environmental best practice has come a long way since 1993. Nowhere in the documents that have been made available to GGW is there any mention of developments such as:

- ⇒ ISO 14000 (International Standards for Environmental Management which are being taken up throughout the world, including by 140 Australian companies);
- ⇒ Cleaner Production (which the Commonwealth government has been promoting recently);
- ⇒ ecodesign and eco-redesign;
- ⇒ packaging take-back schemes;
- ⇒ zero waste;
- ⇒ Extended Producer Responsibility;
- ⇒ Life Cycle Assessment;
- ⇒ the embodied energy of products;
- ⇒ energy efficiency in manufacturing or renewable energy in manufacturing.

Information on these developments is included in Appendix 6.

- A literal, legalistic and defensive approach

SOCOG has taken an unambitious approach, interpreting the Guidelines in a literal and legalistic way, rather than taking them as a starting point for a more proactive and entrepreneurial environmentalism. They seem to regard environmental protection as a constraint rather than an opportunity. This is against the spirit of the *Summer Olympic Guidelines* statement quoted above, i.e.: *The summer Olympic Games should be a showcase for high environmental standards. They generate an enormous amount of economic activity, and offer unparalleled opportunities for sponsors and suppliers to take a leading role in environmental protection through innovative marketing strategies and actions.* What is needed to deliver this is first of all clearly stated standards or benchmarks, followed up with a proactive strategy for prompting sponsors, suppliers and merchandisers in this direction, which would include informing them of the developments listed in the previous point.

- The Sydney Olympics are unlikely to be a showcase for high environmental standards, because of SOCOG's failure to set standards or benchmarks and its disinclination to make transparent, let alone promote such achievements.

- Inadequate resourcing

It could be argued that SOCOG's EMS process is positive in that it spreads environmental responsibility around the organisation. On the other hand, it is difficult to see how the small environmental staff that administer it can effectively service the whole organisation, keeping all other staff aware of responsibilities, providing them with relevant information, undertaking product

research and keeping up to date with newly identified environmental risks and best environmental practice. While staff 'keep their ears and eyes open' for new environmental information they do not have the time nor the material infrastructure to support ongoing research. None of this is to imply that the current staff do not do as best they can with limited resources. This lack of resourcing goes against two of the 10 points in SOCOG's Environmental Policy which state:

- ⇒ *integrate environmental consideration and a culture of continuous improvement into all aspects of its work and have policies, programs and resources in place to implement this policy and to maximise environmental performance*
- ⇒ *assist, train and empower SOCOG staff and volunteers to conduct their activities in accordance with this policy*

The conclusion that can be drawn is that:

- lack of resourcing of the Environmental Program reflects its low priority for SOCOG.

Lack of environmental leadership at top level

While SOCOG's ten point Environmental Policy is signed by the Chief Executive and President, it was not clear from our investigation whether there is anything beyond this at executive or Board level. To our knowledge no SOCOG Board member has specific responsibility for environmental issues. In this regard it is worth noting that **the NSW Environment Minister does not appear to have a formal relation to SOCOG**. Yet the concept of a Green Olympics would suggest that the NSW Environment Minister should be on the Board.

• Competing assessment criteria

Environmental assessment is only one amongst eight criteria. The environmental criteria themselves are very general, and they do not appear to be crucial in deciding licensees. As we will see in the next section, a number of PVC products have been permitted, with justification able to be drawn from SOCOG's other selection criteria relating to marketing and distribution. The conclusion to be drawn here is that:

- Environmental criteria are taken into account only when they do not conflict with the other criteria

• Lack of enforceability

SOCOG's environmental requirements of licensees are not mandatory, they are only guidelines. There is no mechanism for dealing with breaches of environmental guidelines, such as financial sanctions or removal of license. While there would be some stated conditions in the License agreement whereby a license could be revoked (there are 'out' clauses in all contracts) we have not been notified of any relating to environmental breaches. As we have seen, the possibility of verification for third party manufacturing is remote. The conclusion that can be drawn then is that:

- The management of SOCOG's environmental undertakings are dependent upon an inadequately designed chain of responsibility in which each link becomes progressively weaker.

- Lack of transparency

When questioned, SOCOG Environmental staff stated that there is no formal process for following up on the licensees' stated environmental commitments, such as a regular review or audit by SOCOG or an independent auditor. While there is a clause in the license application which states that '*SOCOG will also be seeking independent advice within this category and may have your company assessed on this basis*' this has never been applied according to Environmental staff. Added to this, all documentation relating to licensees environmental statements and undertakings is confidential. This is not unique to SOCOG's environmental decisions making process. As has been commented upon in the press recently, even the 'host city contract' with the IOC was locked away from public scrutiny via an amendment to the Freedom of Information Act when the NSW Parliament passed the legislation establishing SOCOG in 1993 (Moore 1998b). Comparisons have also been made showing that far more information about the organisation processes of the Atlanta Olympics was made publicly available than has been the case so far for the Sydney 2000 Games (Moore 1998b). Thus:

- SOCOG's confidentiality requirements mean a lack of transparency in regard to the environmental assessment process - it has not been available for public scrutiny.

- Lack of promotion of 'environmental positives'

What is made public are the very general statements relating to company's environmental policies or aspects of their products - often these are banal, such as 'packaging is recyclable' (despite the fact that the Environmental Program's assessment proforma is more specific, asking 'Can the product be recycled/is there a market and if so in Australia?' and 'What packaging has been used? Is it designed to reduce waste and can it be reused by the buyer or recycled?'). It is possible that some licensees have positive environmental stories to tell, but they do not appear to be told by SOCOG. From interviews with SOCOG staff and our contact with licensees the impression gained is one of regarding environmental imperatives as constraints rather than opportunities. The conclusion is that:

- SOCOG considers environmental imperatives to be problems rather than entrepreneurial opportunities.

Comparison with OCA Process

SOCOG's means of meeting its environmental obligations can be contrasted with those of OCA, whose role has been to deliver and oversee the construction of new sporting venues and facilities for the Games. While there is still much to criticise in terms of OCA's actual delivery of a 'green games', it certainly put in place a more rigorous and transparent process than has SOCOG. First, OCA developed the Summer Olympic Guidelines into something more specific for their task: the *Homebush Bay Environment Strategy (HBB Strategy)*. All tenderers for design or construction projects were required to provide details of their environmental policy and Environmental Management System, and, most importantly, had to provide an outline Environmental Management Plan (EMP) indicating how they would meet the requirements of the *HBB Strategy*. Once appointed this EMP had to be fully developed by the contractor within two weeks and implemented throughout the project. During the job, contractors' EMPs were subject to spot audits by OCA to ensure that they were being implemented.

OCA's environmental policy has been similar in spirit to SOCOG's - nothing was mandatory - contractors simply had to demonstrate that they had taken all the aspects of the *HBB Strategy* into account and had implemented them within the context of other constraints such as budget or pre-existent master plans. This has meant outcomes at Homebush Bay and other Olympic venues have varied from 'taking everything into account' but achieving very little, through to projects that have demonstrated considerable innovation in renewable energy, natural ventilation systems, water conservation, use of recycled materials, etc. There have been some

failures in implementing environmental intentions from design phase through to sub-contractor supplier stage, because the OCA process also has missing links in the chain of environmental responsibility (discussion of which is beyond the scope of this report).

What *has* been strikingly different from SOCOG is OCA's recognition of the importance of design as a driver of environmental performance - a building's uptake of materials, its embodied and operational energy, its use of water, generation of waste and so on, are all overwhelmingly determined at initial design stage. This is where environmental imperatives need to be inscribed. The same applies to manufactured goods, yet SOCOG have not required a proactive environmental management approach to the product design process, but have simply taken a very restricted damage reduction approach. Far more could have been asked of, and offered to the licensees. It appears they have had nothing put in front of them to make them confront the degree of change that has to occur for sustainability to happen.

Working on Olympic venues has been a significant ESD learning experience for architects, engineers and builders, which they are now taking to other projects. Because of SOCOG's much vaguer environmental requirements, its lack of follow-up, its failure to keep abreast with and to communicate trends in environmental best practice, the designers and manufacturers of Sydney 2000 licensed merchandisers are not getting the same stimulus to change their practices. In its Environmental Policy SOCOG promises '*to leave an environmental legacy that will mark the beginning of the next millennium*'. It seems that an environmentally advanced manufacturing sector will not be part of this legacy.

Environmental Management or Managing Environmental Issues?

Reviewing SOCOG's processes for fulfilling its environmental commitments leads towards the conclusion that its priority is to manage *issues*, rather than environmental impacts. The ineffectuality of the procedures that have been put in place reveal a lack of commitment to achieving significant environmental outcomes; the overriding thrust seems more to do with appearing to do the right thing. The marginal position of the Environmental Program in the organisation gives the impression that it was established primarily as a buffer between the demands of the environmental movement and the commercial imperatives of SOCOG.

4. THREE CASE STUDIES

This section presents three case studies that highlight problems in environmental policy and implementation:

1. *the treatment of **PVC** as an iconic single issue*
2. *the difficulties raised by **third party and offshore manufacturing***
3. *the complex issues of **cotton merchandise***

1. PVC

PVC has been singled out in SOCOG's environmental assessment process. The procedure SOCOG has put in place is that when a licensee specifies a PVC product or product component they are required to complete an assessment form to demonstrate that they have **considered** all other alternative materials for the particular application. A blank copy of the PVC proforma is in Appendix 2. Completed ones were not made available by SOCOG. This suggests that the process is designed more as a way of managing 'political issues' than as a way of improving environmental performance.

PVC became a prominent issue for the Sydney 2000 Olympics because of the convergence between Greenpeace's international campaign to phase out PVC and its role as one of the major authors of the *Summer Olympics Guidelines*. As it has endorsed the *Guidelines* SOCOG has a responsibility to comply with the guideline statement to '**minimise or ideally avoid ... PVC**'. SOCOG has chosen not to get involved in the scientific debate over the extent to which PVC constitutes an environmental problem, nor to attempt to educate licensees about why PVC might be a problem. This approach tends to obscure the reasons behind the anti-PVC campaign in the first place. PVC is a chemically complex material - to address its complexity enables the problems of 'the synthetic environment' to come into focus - i.e., the pervasiveness of, and accumulation in human and non-human environments of the chemical constituents, bi-products and wastes of PVC (e.g., chlorine, dioxins, phthalates) and the resultant multiple negative impacts on many lifeforms. But once crystallised as an iconic single issue, in which the imperative is to demonstrate compliance without very much explanation, the big picture disappears and the educational opportunity for industry is lost.

Even this pragmatic approach has yielded mixed results, as the following examples demonstrate.

- SOCOG claim to have knocked back a number of proposed PVC products, e.g., inflatable toys. The Manager of Consumer Products Licensing made the point that SOCOG could generate a lot more income if not for its PVC policy, for example it could be like the Warner Bros store which is full of PVC products. However the claimed environmental achievement of PVC avoidance and/or minimisation **cannot be quantified or verified** because commercial confidentiality precludes SOCOG from revealing relevant documents. **The few documented instances of PVC avoidance have mainly been the result of pressure from external sources** as seen in the next two examples.

- A range of Olympic mascot money boxes made of PVC which were being marketed by sponsor Westpac, were discontinued after Greenpeace drew the media's attention to them. This needs to be recorded as a negative against SOCOG which approved them in the first place.
- Olympic 2000 Collector Coins are packaged in a plastic card the size of a credit card with a clear plastic bubble holding the coin in place. These were PVC until Greenpeace drew the attention of the Mints' Olympic Coin Program Representative to SOCOG's PVC avoidance policy. A number of alternative plastics were investigated with the result being that polypropelene is now being used instead. While this instance of materials substitution is commendable, the packaging of collector coins is very materials intensive, particularly in the case of the collectors album which has plastic sleeves into which the already plastic packaged coins are inserted. There is a missed opportunity here for total packaging redesign.
- Following the Mint case, polypropelene was also substituted for PVC for the Olympic Club card.

The PVC assessment process does not require licensees to consider alternative designs or production processes, the product concept as presented is taken as given.

The result of this is seen in the following examples of PVC products slipping through one of the many wide holes in SOCOG's environmental net.

- 'Jelly shoes'(semi-flexible 100% PVC sandals for adults and children) have been permitted as official Olympic merchandise, according to marketing staff, because they are an already established commercially successful product.
- A licensee (Hunter Leisure) who proposed plastic figurines of the Sydney 2000 Olympic mascots has been permitted to make these in PVC by arguing that PVC is the only plastic suitable for rotational molding. Hunter were not required to move to a non-PVC dependent processes, nor to change the figurine design to accommodate a different material, nor to explore and develop other representational forms for the mascots (that weren't being done by other licensees). Hunter now has a range of PVC Olympic mascots in stores, in the form of figurines, key rings, children's mugs and coin purses.
- Green Games Watch have already raised with SOCOG the issue of PVC mugs in the shape of the faces of the Olympic mascots. The problem is that of the leaching of phthalates when children chew and suck on them (while the drinking chamber of the mug is a non-PVC plastic, it is enclosed in a molded PVC sleeve which forms the handle and protruding parts of the faces - which would encourage children's sucking).

Phthalates are the plasticising agents in PVC. They have been identified as having potential to cause long term damage to liver and kidneys and of being suspected hormone disruptors. The European Scientific Committee on Toxicity, Ecotoxicity and the Environment concluded on 24 April 1998 that PVC teething rings can leach up to 10 times the accepted level. On 1 July 1998 the European Commission issued a warning to member nations on soft PVC childcare articles and toys. Soft PVC toys have been banned in Austria, Sweden and Denmark. On 11 November 1998 Canadian Health authorities issued advice to parents and caregivers of very young children to dispose of soft PVC teething rings and rattles. Toys R Us have withdrawn soft PVC teething rings, rattles and pacifiers from their stores worldwide. Mattel and other major toy manufacturers are phasing out PVC. In regard to the other negative aspects of PVC, in August 1998 Nike announced that it will stop using PVC in its shoes. All of this indicates that the environmental negatives are being widely acknowledged and that the international trend is to move away from PVC.

It is not so much a question of identifying individual PVC products as dangerous. They have to be understood as components in an increasingly synthetic environment in which children exist. Plastic toys, footwear, accessories, etc are part of a more pervasive presence of synthetic oestrogens which are present in many other manufactured products such as food packaging, homewares, cosmetics and personal care products. While it could be argued that the main health concern of plasticised PVC is for very young children and the Hunter merchandise is in fact intended for children over 3, this would be a retrogressive defence, given international trends.

The concern with PVC is a way of focusing on more widespread and pervasive environmental dangers rather than on a single product. This is the concern now informing the world's most progressive legislation. The fact that SOCOG are prepared to allow soft PVC children's products shows just how out of step they are with informed environmental policy. This absolutely undercuts any claim for the Sydney 2000 Olympics as demonstrating global environmental leadership.

The symbolic communication of PVC Olympic mascots also needs to be considered. Given that Sydney 2000 is meant to be the Green Games and that SOCOG has plans for the mascot characters to communicate environmental messages through print and electronic media, it is somewhat ludicrous that 'Syd, Millie and Ollie' are given embodied form in PVC. The contradiction would be particularly apparent to European visitors to Sydney, undermining the credibility of other environmental claims being made for the 2000 Olympics.

Both the PVC mascot items and the jelly shoes are being manufactured in China. This raises the issue of third party environmental responsibilities as well as issues of exploitative labour practices.

2. Third Party and Offshore Manufacturing: Environmental and Labour issues

The issue of labour conditions should be of concern to SOCOG given the Anti Slavery Society's recent reports (Richardson 1998):

- that there are forced labour camps in China (with the appearance of being regular factories) producing PVC, stuffed toys, cotton, rubber and other textile goods (all of these types of goods are being produced as Olympic merchandise)
- that much glassware produced in Thailand, Pakistan, Nepal, Bangladesh and India is made with child labour (Hurrica Trading, the licensee for drinking glasses has commissioned its manufacturing in Thailand).

Despite 'Australian made' being one of SOCOG's criterion, **an increasing number of merchandisers are using off shore manufacturers**. According to SOCOG's Manager of Consumer Products Licensing, licensees are contractually obliged to make third party manufacturers aware of SOCOG's environmental policy and are also obliged to sign a statement stating they will only commission manufacturing from factories that meet International Labour Organisation conditions (copies of these contractual statements were not made available to Green Games Watch).

It was admitted that SOCOG are not in a position to verify whether these conditions have actually been met (and there is a long history of such loose claims being flouted). The stated indirect means of avoiding the worst environmental and labour conditions is to award licenses only to businesses who deal with known offshore manufacturers, e.g., those that manufacture for US corporations like Mattel. But it is commercial rather than environmental or social justice reasons that dictate this choice - using these factories eases entry of Olympic 2000 licensed products into the US market. SOCOG are also insisting on long lead times and back-up production capacity so as to avoid merchandise shortages at crucial times (especially the 17 days of the Games) and to avoid last minute manufacturing being done by parties remote from the licensee.

3. Cotton

Cotton merchandise is to be a major seller for the Olympics. Licensed items include T shirts, other clothing, bed sheeting and accessories. Olympic theme T shirts in particular will be produced in large volumes. Bonds are supplying about 4 million 'blanks' to various other licensees who apply Olympic insignia using various techniques - screen printing, embroidery, rubber, chenille.

On the positive side Bonds are in the process of gaining ISO 14000 accreditation; one of their divisions, Pacific Fabrics, are participants in the Greenhouse Challenge; Bonds also claim to be minimising waste and using 'clean/green production processes' (however details were not supplied).

Some licensees are promoting their use of cotton as environmentally beneficial because it is a natural fibre (in line with *Summer Olympics Guidelines*). However the cultivation of cotton is not a natural process in Australia where it relies on irrigation and pesticide use, both of which entail environmental impacts.

Bonds Pacific Fabrics division, with the support of SOCOG's Environmental Program, are promoting their use of Bt cotton as environmentally friendly, stating that currently 9% of their cotton is Bt, but for the Olympics this will be increasing possibly up to 20%.

Bt cotton, manufactured and marketed internationally by Monsanto, is a cotton plant genetically engineered to resist moth attacks. Its claimed environmental benefit is that it requires less frequent applications of pesticides (68% less in a trial area in Gunnedah in 1996/7 [Cotton Australia 1997]). But there is disagreement about its

environmental benefits, not least concerning the uncertainties of transgenic species in general. There are fears that insects will develop resistance to it more rapidly than they do to pesticides (Bt is an insecticidal protein, originally found in soil bacterium - the genetically modified cotton plants have been engineered to produce it continuously). To counteract resistance, refuge areas of non-Bt cotton have to be planted, but the optimal size and location of these is not yet known (New Scientist, 1998). The acreage of Bt planted cotton (known by the trade name Ingard) is government controlled and its use is part of Cotton Australia's (the growers' industry body) integrated pest management strategy. Nevertheless Bt cotton is yet another instance of the real life genetic experimentation that is coming to characterise agriculture. It is also symptomatic of an unsustainable tendency towards biodiversity reduction linked to the increasing dependence of farmers on a small number of patent-holding, multi-national seed stock suppliers.

The Olympics will provide a boost (even if short term) to the Australian cotton industry (also possibly meaning that the growing area of Bt cotton will be extended). The biophysical impact implications are not known. Will this mean more areas under irrigation? Will this clash with NSW water reforms which are seeking to reduce irrigators' access to rivers? If the economic power of the Olympics had been harnessed to green economic policy (which would obviously require State government as well as SOCOG backing) the answer to these questions would be known, and measures could have been taken to seed the legacy for a greener cotton industry; perhaps organically grown cotton could have been given a boost through Olympic orders. Instead of such a vision what we have from SOCOG are vague undocumented claims about Bond's environmental credentials and naïve claims about the value of Bt cotton. This is a clear example of SOCOG not having the resources to be fully aware of all the environmental implications of their decisions.

5. ENVIRONMENTAL ANALYSIS OF OLYMPIC MERCHANDISE

This section moves away from direct environmental policy considerations to discuss the types of Olympic merchandise now available in stores. It needs to be read in conjunction with Appendix 3 which presents a tabular analysis of:

- *the environmental impacts associated with various types of merchandise,*
- *recommended measures to address them,*
- *the extent to which such measures are being taken,*
- *and an assessment of the appropriateness of product lifespans.*

Some environmentally positive examples of Olympic merchandise are registered, followed by a discussion of the more complex question of product lifespan.

'Quality' vs Mass Merchandise

While it has already been stated that Olympic merchandise is available in 10,000 stores throughout Australia and that a distribution agreement has recently been signed with K Mart, this gives a somewhat inflated impression of the current visibility of Olympic merchandise - it is increasingly arriving in tourist outlets but does not yet have a very high profile in stores, though some is being stocked by chains such as David Jones, Grace Bros, Rebel Sports. This will change as the Games draws closer. Currently the most comprehensive product range is carried in the Olympic Store in Pitt Street Mall. This is characterised by what could be thought of as 'Phase 1 merchandising' - an emphasis on tasteful display and Australian brands (e.g., Bonds, Drizabone, Akubra, RM Williams). The store is dominated by clothing, with quality items such as ceramics prominently displayed. While there are some novelty items such as key rings and plush toys these are not present in abundance nor is there a huge variety of such items.

However, the up-market appearance of this store conceals what will characterise Phase 2 merchandising (through K mart and other mass market outlets) which will have a much greater proportion of low priced goods not manufactured in Australia. In fact the 'price points' demanded by the mass market retailers signed up by SOCOG is forcing a great deal of Olympic licensed manufacturing offshore, mainly to Southern China. As already discussed this demonstrates that the 'Australian made' criterion is being disregarded and that environmental controls of product manufacture are likely to be far less stringent - and virtually impossible to verify.

One licensee, Lush Creations who manufacture ceramics in Sydney as well as applying decals to Western Australian manufactured ceramics, complained of SOCOG's shift away from Australian Made. They stated that they are likely to be forced into offshore manufacturing in order to compete with another more recently signed-up ceramic mug licensee who is manufacturing in China.

"World-record sales of tickets and world-record revenue from marketing" will be needed for SOCOG to meet its budget forecasts according to a recent (October) assessment by the IOC (Moore 1998a). It could be assumed that this will accelerate the trend towards offshore manufacture. It could also mean a proliferation of ill-conceived revenue-raising merchandise with little regard for long or short term environmental impacts.

Positive Examples

According to SOCOG marketing staff, the relative commercial significance of the merchandise categories are as follows in descending order (this both in terms of volume of sales and income generated):

1. Collectables, i.e. coins, pins, badges and spoons
2. General apparel
3. Gifts, novelties and plush toys
4. Homewares, publishing and technical apparel (sporting)

It can be regarded as environmentally positive (or at least relatively neutral) that coins, pins, badges, spoons, are the largest merchandise category. These are all small items that are likely to be kept for a long time. As metal items, there are environmental impacts in their manufacture, but these are generally well-managed where manufacturing occurs in Australia and New Zealand.

Coins

The minting of Olympic issue coins has been a traditional means of fund raising for Olympic Games since their inception. In fact up until 1976 coin sales paid for the Games (through the difference between the coins' face value and their manufacturing cost). This was the era before the arrival of TV rights which now comprise the major income stream for funding the Games. For the Sydney 2000 Olympics the Royal Australian Mint and the Perth Mint are producing a set of 28 souvenir coins, but their relation to SOCOG is the same as all other merchandisers, i.e., a royalty is paid on sales (which means that the two government Mints will make quite a tidy profit on the Olympics).

Management of environmental impacts: heavy metals are used and the coin blanks are treated with a number chemical processes. The Mint in Canberra has an effluent treatment plant and an air treatment system which means the plant produces practically zero emissions. Both the Royal Australian and Perth Mints, as government enterprises, are very mindful of environment obligations and both are regularly monitored by their State's EPAs.

Badges, Pins and Other Small Metal Items

All of these are specifically designed as souvenirs by Aminco, Benson House, Trofe Australia and Perfection Souvenirs. One of these companies stated that projected sales are in the order of 30 to 50 million units.

Management of environmental impacts: the electroplating of metals is a process which uses a number of toxic chemicals which can be damaging if released into waterways or spilt. Environmental regulations in Australia and New Zealand require separate retention and collection of spent solutions. Perfection Souvenirs, a New Zealand company producing a range of electroplated and polished metal items has won a number of environmental awards for its Auckland factory which employs 80 people. Aminco are producing Olympic pins in their Melbourne factory (about 40 employees) as well as in a factory in China employing 800, of which they own a half share. They claim to have introduced better environmental practice into this factory, with spent electroplating solution collected by a waste recycler rather than being released directly into waterways.

Packaging

As detailed in Appendix 3, there has been a major achievement in packaging reduction. In the Olympic Store, swing tickets and cardboard tags predominate. Olympic pins and badges are mounted on printed cards (often recycled cardboard), no plastic packaging is used. In several cases (e.g., Perfection Souvenirs) SOCOG's environmental requirements prompted a shift from plastic to card packaging. Whether this high environmental standard of packaging survives the Olympics mass marketing stage about to begin remains to be seen.

While labels and swing tickets often draw attention to the fact that they are made of recycled or recyclable materials, this is somewhat of an irony in that the reduction packaging has meant less room for environmental messages, as stated in the Summer Olympic Guidelines, *'the design and packaging of products will embody an educational message about the environment wherever possible'*.

The substitution of polypropylene for PVC in the packaging of the Olympic Coin Collection has already been discussed in Section 4.

Lifespan, Value and Waste

While a great deal of environmental assessment of products focuses how to reduce pollutants, wastes and energy uptake in manufacture, the question of product lifespan also has environmental implications. It is relevant to bring this consideration to Olympic merchandise.

The expected functional life of a product is often referred to as its 'design life'. It would be expected that products do not get discarded before the end of their design life, however this is not always the case:

- its components may have different design lives, and if those with a shorter life cannot be replaced, the whole product will get discarded;
- a modification of this, is when the material itself outlives the product function (e.g., the plastics and other materials that make up a computer's hardware may perfectly sound, but it gets discarded because it is not capable of being upgraded with the latest software);
- products often get discarded before they wear out, simply because they are no longer considered desirable, i.e. they have lost the cultural value they once had for their owner.

Each of these scenarios results in the product being converted into waste, and thus becoming an environmental problem. A major generator of the waste crisis is the disparity between a product (or some of its components') design life and its desirability or 'cultural life'. A product can clearly be identified as unsustainable when its cultural life is shorter than its design life or the design life of some of its components. This is often the case with themed merchandise, because of the rapid diminution of its novelty value (which of course is intrinsic to the very idea of 'novelty').

What we are talking about here is the meaning that products have for people and the length of time for which they remain desirable or meaningful. Clearly many factors are in play, and what is desirable for one 'demographic' will be undesirable for another. Similarly some social groups are more trend conscious than others and thus 'cycle through' products at a faster rate. Fashion clothing used to be the prime example of this, but it has been overtaken by a more general process across all kinds of merchandise in 'the mass production of difference'.

We have already identified the constant arrival of new themes, as well as themes within themes, and themes attached to narratives, as a feature of contemporary merchandising, designed to drive consumer desire and keep production going. All of this generally occurs with no consideration by designers, manufacturers, wholesalers, retailers or customers, of what will happen to merchandise once it is discarded. But there are indications of change: Germany has packaging take-back legislation and in Europe, more generally, Extended Producer Responsibility for items such as cars, televisions and electronic goods is beginning to be introduced. While this has yet to be extended to smaller consumer goods, such as toys, novelties, clothing, etc, the concept of the Green Olympics could provide opportunities for innovation in products with multiple lives, extended lives, take-back schemes and so on. This could be woven into both Olympic and Green themes, as well as creating a more participatory form of involvement in the ongoing 'Olympic Spirit' - especially with merchandise for children.

SOCOG have not put in place any design criteria for merchandise to have multiple lives - this opportunity for environmental innovation has been lost. In fact the pressure to raise funds has focused Olympic merchandising on short term commercial gain. Consider the variety of theme-ing strategies. It's not just the use of the IOC's five ring logo and the title 'Sydney 2000 Olympics' that are being licensed, but a whole raft of images which can generate many product types. There is the Sydney 2000 logo; images of each sport (thus creating collectors series of coins, pins and badges) and not one, but three Olympic mascots (Syd, Mille and Ollie) which are to be given personalities and voices by ex-Warner and Disney designers.

All these Olympic symbols are mostly being attached to very conventional types of merchandise and pre-existent products. From the analysis presented in Appendix 3 it can be seen that the very conventional nature of the types of merchandise limit the possibilities for environmental innovation, which is why it is only possible to register fairly standard impact reduction measures - and even these are not being implemented in all cases.

6. STRATEGIC ASSESSMENT

It needs to be admitted that staging an ecologically sustainable Olympic Games is an enormous challenge. There is a clear argument that a venture of this sort, based on conventional economic factors, could never be in any way sustainable. But having taken on the job, Sydney's task was to clearly define the problems before it. This would have meant confronting from the very beginning the issue of what sustainability could mean for an event like this. If there are contradictions at the heart of this exercise, then they can only be dealt with by being plainly and honestly set out. SOCOG does not appear to have had the courage to face up fully to the practical *and intellectual* consequences of this undertaking.

Merchandising was always going to be the hardest test. The criteria for sustainable merchandise, let alone environmentally benign merchandise, should have been debated and outlined several years ago. This would have provided an identifiable target for SOCOG's licensing and environmental departments to aim for. That this was never done suggests that SOCOG admitted defeat before it even began. Consequently, the environmental aspects of SOCOG's licensing process look as though they have been designed for damage limitation and political management rather than dynamic delivery of exemplary environmental performance through merchandising. The following attempts to explain a little of what the latter might have involved.

Sustainable Scale

The very first thing that needed to be examined, if SOCOG was serious about delivering a Green Games, was the scale of the whole Olympics venture. More athletes will compete in Sydney 2000 than at any previous Games. This seems like an unquestionable parameter, but sustainability demands this sort of fundamental yet strategic, 'out of the square' rethinking.

There is obviously a direct relation between the scale of the Games, the funds required and environmental impacts. The first and most significant decision of environmental responsibility should have been to stage a more appropriate scale Games. This in turn would have meant less funds needing to be raised, thus less need for large volumes of retrograde, environmentally irresponsible merchandise.

The failure to think about the appropriateness of the scale of the Games does not lie entirely with SOCOG. The Australian Olympic Committee (AOC) and IOC have had a hand in determining the size of the Games and the subsequent reduction of the 'Green Games' idea to one of minimalist compliance to the letter of the *Summer Olympic Guidelines*. The State government also shares some blame. As already noted, although this is to be the Green Games, the Environment Minister has no formal role, not even a place on the SOCOG board.

Strategic Plan

The research done for this report indicates that the opportunity to use merchandising associated with the Green Olympic as a platform for the economic development of sustainability through new environmentally beneficial product innovation has been missed. This has been perhaps because no overall plan was ever devised for the delivery of such an objective. Without anything driving the process, merchandising was bound to become a pragmatic and even ad hoc process.

Hence, the very conventional range of merchandise. The standard product categories themselves needed to be questioned, and new ones developed. Very little new or high quality product design seems to have actually occurred. Most Olympic merchandise is based on pre-existent designs to which Olympic symbols are added. While it could be argued that there was always going to be some of this standard merchandise produced for the Games, this does not mean it all had to be like this.

It is now too late to turn this situation around in any substantial way. Nearly all of the merchandise licenses have been let, production is well underway, distribution and marketing have begun. While we are still twenty-two months out from the Games, there is no longer sufficient lead time for product concept development, market research, design, prototyping, followed by procurement of materials, components and manufacturing capacity. Perhaps it might still be possible to do this for some small simple products.

SOCOG was set up in 1994, so there has been sufficient time. Without any motivating vision behind the merchandising process though, there was no willingness to take the Green Games idea beyond a basic compliance with the *Summer Olympic Guidelines*. No substantial policy was ever developed, and thus no strategic plan. The difficulty and challenge of green merchandising never received the commitment and resourcing it urgently needed *from the outset*.

SOCOG should have established its own proactive Environmental Product Development Team to assist in the development of at least one innovative, environmentally exemplary product in each of the merchandise categories. This team could have co-ordinated and resourced selected participating manufacturers, putting them in touch with appropriate sustainable design expertise, assisting them to develop environmental product briefs, and regularly reviewing product developments. From our survey of licensees, it is clear that environmental assessment resource knowledge is underdeveloped and many of them would like to know more.

Designing Participation

SOCOG has also failed to consult with people in Australia with ecodesign knowledges and skills. There are many organisations throughout the world who could have contributed to advancing SOCOG's and its licensee's sustainable design practices. There are many precedents for establishing these kinds of advisory design teams - even OCA dealt with pressing design problems through charettes and workshops with invited architects and planners. Merchandising warranted the same kind of approach.

It should also be mentioned that most design schools these days teach their students ecodesign techniques. These abilities provide a large and powerful resource that SOCOG could have drawn on. It is an indictment of SOCOG's investigative capability, insight and imagination, that no effort has been made to access the talents of these tertiary students in the same way that SOCOG has promoted itself in schools — though it should be noted that in the latter case there have been missed opportunities. In the recent 'Let the Spirit Move You' graphic design competition for schoolchildren, part of SOCOG's National Education Program, the winner's motifs were applied to T Shirts, Mugs, Placemats, Fridge Magnets, Tea Towels Key Rings, Post Cards, etc - all now available in K Mart. Participation was successful, SOCOG receiving 25,000 entries - a pity about the lack of imagination in the end products!

In general, the merchandising has become part of the general way in which SOCOG is structuring public participation in the Games. SOCOG appears to invite participation in the Games process, but primarily in marketing terms that encourage a passive relation to the Games. The Olympic Club is a

good example, with the public paying membership fees to receive installments of merchandise and the opportunity to win tickets. Where are the schemes for participation which do not treat the public as just another revenue raising source?

Why has the public not been invited into the development of new forms sustainable merchandising? This would not just be an altruistic exercise, it would also be an excellent way to engage in market creation for new environmentally beneficial forms of merchandise. In our view, SOCOG's marketing has also been very conventional, with very little work done on the development of new markets.

One reason why these opportunities for participation have not been taken up lies in the strict confidentiality that SOCOG is demanding around all its activities, especially those in relation to merchandising. The confidentiality agreements that subcontractors and suppliers are required to sign are quite onerous and SOCOG's decision making processes are almost entirely closed to public scrutiny. Clearly such a policy will not build public trust, let alone public enthusiasm.

7. CONCLUSION AND RECOMMENDATIONS

This report has indicated that even from a brief investigation of the merchandising process, it is clear that an important opportunity for Australia and NSW is being missed. The conventional and defensive literalism that SOCOG has structurally applied to environmental issues with respect to merchandising has ensured that the merchandise for the Sydney 2000 Games not only fails to make contributions to the wider development of sustainability but is also minimising the ecological impact of merchandise only in some cases and even then in limited ways. In terms of the state of the art of ecodesign practices currently being used all over the world, the merchandise for 2000 Games are, and will be, very inadequate.

It is apparent that SOCOG have never fully dealt with what a transformation to a sustainable Olympic Games would actually entail. Now locked into a hugely expensive Games and with much of the funds still to be raised, SOCOG appear to be set on a course of backgrounding Sydney's original commitment for a Green 2000 Olympic Games.

However, rather than judge SOCOG by what could have been, it is worth asking in conclusion to what extent they have met their own limited Environmental Policy commitments. The following draws from its 10 point Environmental Policy.

- ***'SOCOG will use its best endeavours to set a new standard of environmental excellence for organising and staging an Olympic Games.'***

This report has found that in the area of merchandising SOCOG have failed to define such a standard, has merely required licensees to be environmentally aware, and as a result there is very little to show in terms of exemplary merchandise.

- ***'SOCOG will be guided by the principles of Ecologically Sustainable Development (ESD).'***

This report believes that SOCOG has never sought to take ESD beyond the bare reiteration of the three words. It has failed to ensure that all merchandise embody *and extend* ESD principles.

- ***'SOCOG will work co-operatively with the public, community groups, businesses and government agencies to achieve its environmental objectives.'***

From this report's experience, SOCOG's excessiveness in regard to commercial confidentiality and nervousness about environmental issues have obstructed forms of co-operation with anybody with expertise in the area of sustainable product design (especially in regard to the writing of this report, which was both a learning and promotional opportunity for SOCOG and its merchandise licensees), severely limiting its ability to achieve its environmental objectives.

- ***'SOCOG will integrate environmental considerations and a culture of continuous improvement into all aspects of its work and have policies, programs and resources in place to implement this policy and to maximise environmental performance.'***

This report has found that there has been no development of SOCOG's environmental policy with the result that SOCOG seems to be unaware of an extensive number of developments in the field of sustainable product design in recent years. There appears to be no infrastructure in place to inform,

support and further ways of maximising the environmental performance of the 2000 Olympic Games merchandise.

- Consequently, this report believes that not enough has been done to *‘promote and encourage the use of environmental technology and environmentally friendly products and services through its... merchandising programs’*.

Recommendations

Context

The concluding recommendations of this report have been made with the following provisos:

- At this late stage, it is almost impossible for SOCOG to undo the damage resulting from their inadequate environmental merchandising policies. SOCOG now has limited leeway to initiate the design of sustainable products. Given that SOCOG is now facing a budget blow-out for the Olympics, pressure will fall on merchandising to make up a significant amount of that shortfall. This means that it will be difficult to gain the funds required for improving the ecological performance of the merchandise.
- SOCOG therefore now have a public relations problem given the findings of this report. SOCOG can directly deny what this report argues, pointing out that it withheld from the researchers of this report a range of actions which it undertook to improve the ecological performance of its merchandise, though the proof really lies in the nature of the merchandise itself which is already in the public domain (see the Addendum included at the end of this Report concerning SOCOG’s merchandise advertising campaign).
- Finally, the Olympics movement is now infamous for attempting to make up for the inadequacies of each games by handing on a legacy to the host nation and subsequent games organisers. Whilst this formalised process does allow for incremental evolution in the games, it should not be used as a way of evading responsibility. In making these recommendations this report is contributing to the content of that legacy, but wishes to stress that a legacy can also be derived from a clear understanding of and admission to failings.

Recommendations to future Olympic hosts

We have indicated in this report that what should be done by Olympics hosts is:

- the development of a strong design strategy for all merchandise which aims to
 - use the purchasing power and visibility of Olympics merchandise to demonstrate the need for and feasibility of major changes in manufacturing and retailing norms and consumer habits toward sustainability
 - dematerialise merchandise as much as possible, replacing merchandise with services for instance

- ensures that the merchandise has use-lives that extend well beyond the Olympics, including provision for subsequent lives
- develop an infrastructure for retrieving all shorter-life merchandise and packaging for merchandise after its use so that it can guarantee that all such merchandise gets disassembled and totally recycled
- ensure that all merchandise surpass all existing environmental performance standards setting new benchmarks whilst also being accredited under such standards (such as ISO 14000)
- act as ecodesign managers and resource centre for all merchandise, but also use its power as licensor to audit the environmental performance of licensees

Appendix 6 sets out a wide range of the existing techniques (eg Design for the Environment, Life Cycle Analysis, Extended Producer Responsibility, etc) that all future Olympic merchandise must make use of at the minimum. All the techniques mentioned make up detailed parts of a process of environmental management planning whereby:

- thorough needs analyses of all products are performed prior to any work commencing with a full canvassing of all 'no-manufacture' options
- a complete audit is done of all the ecological impacts of the production process and of the product throughout its lifetime, including flow-on impacts from its use with other products
- a systematic attempt is made to radically redesign the product to not only minimise the ecological impacts identified but even contribute to remediation of those impacts or the generation of other beneficial ecological impacts
- a critical assessment is made of all products after their release, prompting modifications not only for future products but also of existing products

Recommendations to SOCOG

We recommend that SOCOG, as soon as possible:

- publicly recognise that the current range of merchandise is not exemplary of the environmental performance standards expected of world's best practice or the Sydney 'Green' Olympics
- conduct an extensive review, consulting with external bodies with expertise in sustainable merchandise design, to determine what went wrong structurally to lead to these failings and report the findings of this review to future Olympic hosts as a warning
- identify remaining opportunities for the development of licensed products that could demonstrate environmental innovation or at least an improved level of environmental performance; put in place a strategy for realising these opportunities
- dedicate some resources to an intensive set of mandatory training sessions in sustainable product design for merchandisers

- dedicate some funds to developing a comprehensive set of resources on enhancing the sustainability of merchandising to be handed on to subsequent hosts

This has been a missed opportunity and SOCOG has a responsibility to the future to take the sorts of actions that will go towards compensating for the unsustainability of its merchandising.

Addendum

On the day after this report was completed, the *Sydney Morning Herald* carried a 16 page colour advertising supplement on Sydney 2000 Olympic Games Official Licensed Merchandise ('Show your spirit: Christmas 1998', *SMH* 10 December 1998, copy enclosed). During the course of our research we were not made aware of this imminent 'launch' of Olympic merchandise.

Nevertheless what is shown in the supplement confirms two points made in our report:

1. That environmental commitments have a very low profile in Olympic merchandising: in this lengthy illustrated advertorial ***not one*** mention is made of environmental aspects of the products or of the Green Olympics. Ironically this can be contrasted with a Gowings catalogue (also enclosed) in the same issue of *SMH* which includes organic cotton sweaters plus environmental information about some other products - and this store does not even have an overt environmental policy!
2. That there are two categories of merchandise: the "Millennium Collection for the sophisticated mid to higher-priced market, and a second range of officially licensed clothing lines, which are on sale to the mass market." (we characterised this as Phase 1 and Phase 2 - see p. 19 of Report).

Some qualifications need to be added to our report:

1. There appears to have been substantial *fashion* design input in creating "the leisure lifestyle clothing range" (but this does not invalidate our point about the lack of new product *design* and especially *ecodesign* input).
2. That Olympic logos & symbols on the more expensive items are quite low key, therefore not jeopardising the long term value (and therefore use life) of the items. This needs to be registered as a responsible marketing decision.
3. Some of these 'quality' type items (leather boots, Driza-Bone jackets) have been omitted from our Appendix 3 'Environmental Analysis of Licensed Products ...'.

Some points about 'Show Your Spirit':

1. It has been designed to have a distinct up market appeal - the magazine style layout, attractive but low key 'real life' models in informal settings, 'informative' text, etc. The emphasis is on clothing and collector items, very few of the licensed ***novelty*** lines are featured. No prices are mentioned. The aim appears to be to produce a 'feel good about the Olympics' response and to 'show your spirit' through buying - another example of the blurring of the distinction between public participation and marketing (as mentioned on p. 23 of our Report).
2. On p. 7 of '*Show Your Spirit*' it is stated, "most Sydney 2000 Olympic Games products are being manufactured by Australian companies. Although a smattering of offshore companies are involved." This is somewhat misleading, it does not mean that most of the manufacturing is happening in Australia as many of the licensees have commissioned off shore manufacturers.

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Interview and meeting with Peter Ottesen and Colin Dimitroff of SOCOG Environment Program, 28 October 1998

Interview and meeting with Terry Wilson of SOCOG Consumer Products Licensing and Peter Ottesen, 17 November 1998

Interview and meeting with Colin Mickleborough, Olympics 2000 Coin Program, 24 November 1998

Phone interviews with licensees: Acme, Aminco, CA Australia, Hurrica Trading, Ken Duncan, Lush Creations, Paragold, Bonds Pacific Fabrics, 23 November - 7 December 1998

Appendix 1

Sydney 2000 Olympic Games Consumer Products Licensees

As at 28 October 1998. List supplied by SOCOG

Appendix 2

Documents Supplied by SOCOG and Correspondence

1. Environmental Policy
2. Proforma for Environmental Assessment of Potential Licensees
3. Proforma for Assessment of PVC
4. Letter from Green Games Watch to SOCOG
5. Fax from EcoDesign Foundation to SOCOG and SOCOG's reply

Appendix 3

Environmental Analysis of Selected Licensed Products for Sydney 2000 Olympics

This is presented in table form on the following pages.

For the purposes of analysis the merchandise has been classified firstly by material type (e.g., metals, plastics, cotton), with examples of types of products given. Licensees are listed in the second column. Then the significant environmental impacts associated with each merchandise type are noted. This is followed by recommended impact reduction measures, an indication of whether these are being undertaken and by which, if any, licensees (this has been hampered by the non-response of a number of licensees).

The last factor to be assessed is the relation between the design life of the merchandise and its expected actual life - the ideal environmental outcome is that both are the same. This relation is an indicator of a product's 'destiny' - whether it has a long use life or whether it is on a fast track to the waste stream. This is an important consideration given SOCOG's environmental commitments as well as the NSW government's waste reduction policy (e.g, there is a target of 60% reduction per capita by the year 2000). Taking these factors into account, lifespan is assessed in the final column as very good, good, fair, poor or very bad.

Appendix 3: ENVIRONMENTAL ANALYSIS OF SELECTED LICENSED PRODUCTS FOR SYDNEY 2000 OLYMPICS

PRODUCT TYPE by material	LICENSEES	SIGNIFICANT ENVIRONMENTAL IMPACTS & ISSUES	RECOMMENDED IMPACT REDUCTION MEASURES ✓ <i>Being implemented by some companies</i> ✗ <i>Not being implemented or unknown</i>	ESTIMATED DESIGN LIFE & POST LIFE	ESTIMATED 'CULTURAL LIFE'	LIFESPAN APPROPRIATE-NESS RATING*
Small metal items Coins Pins, brooches, spoons, key rings	Royal Aust & Perth Mints; Perfection Souvenirs, Aminco, Benson House, Trofe	<ul style="list-style-type: none"> Electroplating and other treatment processes in manufacturing produce waterborne pollutants, heavy metal wastes, airborne emissions. Manufacture is energy intensive. 	<ul style="list-style-type: none"> Spent treatment solutions and metal wastes should be separately captured, recycled and eventually safely disposed. <i>YES - Australian Mint/Perth Mint, Perfection Souvenirs, Aminco</i> Cleaner production, continuous environmental improvement, ISO 14000, energy conservation <i>NO/UNKNOWN</i> Licensees using offshore manufacturers should make same requirements <i>YES - Aminco</i> <i>UNKNOWN - others</i> 	Collectors items - very long/indefinite key rings - 2 to 5 years depending on quality Recyclable in principal but no post consumer mechanism exists. Coins can be 'recycled' as legal tender	Collectors items - very long/indefinite. key rings - 3 to 5 years; quality items may be kept longer because of souvenir value	Very good Fair
Cotton & knitted items T shirts, socks, underwear, jumpers, bed sheeting	Bonds (supplier of blank T shirts to other Licenesees) Acme Coogi Davenport G'nsorough Illust. Sports Jockey K. Gamble Line 7	Cotton production - irrigation can deplete rivers & alter their ecologies; pesticides can cause damage to human health and other lifeforms; genetically engineered pest resistant cotton plants (Bt cotton) have as yet unknown impacts Spinning and dyeing are energy intensive; Fabric pre-treatment and dyeing frequently uses damaging chemicals such as chlorine	<ul style="list-style-type: none"> Organically grown cotton- <i>NO</i> Limit the use of Bt cotton - <i>Bonds - NO</i> ISO 14000 - <i>Bonds - YES</i> Lower energy intensive fabric treatment and dyeing processes; <i>Bonds YES, but no details provided</i> Less polluting dyes and pre-treatments. <i>UNKNOWN</i> 	3-5 years depending on frequency of wearing and care of garment Downcycling to second hand clothing then rags	Event-themed clothing tends to have a 'sign value life' shorter than its functional life	Fair
Headgear Caps, sunhats	Acme Illust. Sports	Besides impacts of manufacture, impact on the wearer is an environmental protection issue. Because of high risk of skin cancer in Australia, headgear needs to be seen as protective clothing	<ul style="list-style-type: none"> Sun protective headgear should conform to Cancer Council guidelines. <i>NOT KNOWN - SOCOG NOT AWARE</i> 	5-10 years depending on materials and quality	Olympic theme likely to shorten desirability lifespan	Poor

PRODUCT TYPE by material	LICENSEES	SIGNIFICANT ENVIRONMENTAL IMPACTS & ISSUES	RECOMMENDED IMPACT REDUCTION MEASURES ✓ <i>Being implemented for Olympic merchandise</i> ✗ <i>Not being implemented or unknown</i>	ESTIMATED DESIGN LIFE & POST LIFE	ESTIMATED 'CULTURAL LIFE'	LIFESPAN APPROPRIATE-NESS RATING*
SYNTHETIC FIBRE ITEMS Lycra swimwear, nylon bags, pouches, backpacks	Seafolly, Line 7, Paragold, Klikkers	Emissions and pollutants associated with petrochemical industry and plastic manufacture	<ul style="list-style-type: none"> ✗ Cleaner production - NO ✗ ISO 14000 - NO ✗ Energy efficiency - NO 	1-5 years depending on use and care	Olympic theme likely to shorten desirability lifespan	Poor
PLUSH Stuffed toys- Olympic mascots	CA Aust., Hunter	Some fabric colouring processes have been identified as a health hazard to factory workers Non recyclable - mixed materials	<ul style="list-style-type: none"> ✓ Low toxicity fabric paints are available; fully enclosed spray booths in factories protect workers. <i>YES - CA Australia</i> ✗ <i>Disposal, take-back schemes - NO</i> 	1-3 years	Duration of appeal to children is unpredictable - could be anything from a week to many years - the latter only if durable! (the more toys available to a child, the more likely they are to be of transient appeal & therefore disposed of before the end of their functional life)	Poor
MOULDED PVC ITEMS Mascot figurines mugs, keyrings, coin purses, moneyboxes	Hunter Westpac	<ul style="list-style-type: none"> • Leaching of heavy metals and phthalates (plasticisers) above accepted safety levels have been identified in many children's PVC toys tested in Europe, Canada and USA. • PVC is also hazardous in production and if burnt (accidentally or disposed of by incineration) due to release of dioxins. • PVC is very difficult to recycle 	<ul style="list-style-type: none"> ✗ Phasing out of PVC in manufacturing <i>NO - Hunter lines</i> ✓ <i>YES - Westpac (sponsor)</i> ✗ Withdrawal of PVC items for children from stores - <i>NO - Hunter lines</i> 	PVC does not readily deteriorate, its life is estimated at 100 years	Some figurines may be kept as souvenirs by adults. Probably most will be purchased for or by children and are very likely to be discarded within a few years.	Very bad

PRODUCT TYPE by material	ITEMS	SIGNIFICANT ENVIRONMENTAL IMPACTS & ISSUES	RECOMMENDED IMPACT REDUCTION MEASURES ✓ <i>Being implemented for Olympic merchandise</i> ✗ <i>Not being implemented or unknown</i>	ESTIMATED DESIGN LIFE & POST LIFE	ESTIMATED 'CULTURAL LIFE'	LIFESPAN APPROPRIATE-NESS RATING*
GLASSWARE Drinking glasses	Hurrica	<ul style="list-style-type: none"> Air and water borne pollutants are produced in the glass making process. Australian factories are controlled by EPA laws; there are questions about environmental management and labour conditions in Asian factories. 	<ul style="list-style-type: none"> Glass making factories should conform to Australian environmental regulations; Licensees using offshore manufacturers should ensure that they also conform to Australian environmental and safety standards. (UNKNOWN) 	Can last indefinitely. The lifespan of glass items is dependent on frequency of use and care in handling. Recyclable	While Olympic novelty appeal will be shortlived, it is most likely that drinking glasses will continue to be used until they break - i.e. sign life is unlikely to diminish functional life.	Fair
CERAMICS Plates, mugs	Lush Creations	<ul style="list-style-type: none"> Clay dust in manufacture; heavy metals in glazes 	<ul style="list-style-type: none"> Dust emissions must conform to OH & S standards YES Glazes should be 'food safe' e.g. cadmium free YES 	Can last indefinitely. The lifespan of ceramic items is dependent on frequency of use and care in handling.	Souvenir value may extend lifespan	Good
PRINTED MATERIAL Stationery, colouring books	Hunter	<ul style="list-style-type: none"> Forest resource depletion negative effects of chlorine bleaching on waterways and marine life printing inks may contain heavy metals 	<ul style="list-style-type: none"> Paper from agricultural waste fibre is preferable to wood fibre Post consumer recycled paper is preferable to virgin stock Oxygen bleached paper is less environmentally damaging Soya-based inks preferable to chemical based. 	Less than a year for stationery. Recyclable	Less than a year - stationery is disposed of or recycled after use.	Poor
Books	Ken Duncan			Books may last from 3 to 20 years or more depending on quality of paper and binding	Lifespan depends on whether content is regarded as being of enduring cultural value	Poor
Postcards, glossy brochures, booklets	Ink Group			1-2 years. Low priced glossy brochures & booklets have high environmental costs & very short lives	Cultural value is significantly shorter than functional life	Poor

PRODUCT TYPE by material	ITEMS	SIGNIFICANT ENVIRONMENTAL IMPACTS & ISSUES	RECOMMENDED IMPACT REDUCTION MEASURES ✓ <i>Being implemented for Olympic merchandise</i> ✗ <i>Not being implemented or unknown</i>	ESTIMATED DESIGN LIFE & POST LIFE	ESTIMATED CULTURAL LIFE	LIFESPAN APPROPRIATENESS RATING*
PACKAGING	All licensees	<ul style="list-style-type: none"> Paper/card: as for printed materials 	<ul style="list-style-type: none"> Minimise packaging materials, especially plastic. <i>YES - in most cases</i> Packaging should be either: <ul style="list-style-type: none"> (i) biodegradable YES - in most cases paper (ii) recycled YES - in some cases (iii) reusable, with a take-back system in place NO (iv) recyclable YES - in most cases ✓ <i>All clothing: swing tickets only, often recycled card.</i> ✓ <i>Most other items also minimal e.g., swing tickets or cardboard or small items card mounted.</i> ✓ <i>Many of the merchandise labels state that they are made of recycled or recyclable materials</i> ✓ <i>Paper bags with string handles used in the Olympic Store are made of a percentage of waste fibre</i> ✗ <i>but this message isn't carried on the bag</i> ✗ <i>Some novelty items however are plastic blister packed</i> 	N/A	N/A	N/A

* This is an estimation of the appropriateness of the relation between design life and cultural life, recognising that event-themed merchandise is often discarded before the end of its functional life. Ratings are: very good, good, fair, poor, very bad.

Appendix 4

Letter and Questionnaire sent to Sydney 2000 Olympics Consumer Products Licensees

(Note: on the basis of responses, and because of time pressures it was decided not to proceed with the trial EMP mentioned in the letter.)

Appendix 5

Level of Awareness of Environmental Aspects of Products

Appendix 5: LEVEL OF AWARENESS OF ENVIRONMENTAL ASPECTS OF PRODUCTS

We sought to gauge licensee level of awareness via a letter and survey, followed by phone interviews. The results are summarised in a table. This table also indicates attitudes and willingness to provide information. While responses ranged from defensive to co-operative, there was a general sense that ‘environmental aspects’ were something dealt with when applications for licenses were made, and which hadn’t been required to be considered since. Some licensees even complained to SOCOG that they were being asked environmental questions by another organisation, and one (Keith Gamble Pty Ltd) refused to supply information after consulting with SOCOG marketing personnel. These reactions suggest that most licensees did not realistically expect that independent auditing of environmental claims taking place would ever take place.

The table also includes an assessment of SOCOG’s willingness to supply environmental information.

Licensor, Retailer or Licensee	Department	Questionnaire Sent	Questionnaire Returned	Phoned	Returned Phone Call*	Meeting	Claimed Level of Current EcoAwareness †	Claimed Need for Further EcoPractices‡	Attitude & Comments*
SOCOG	Environment	Briefed		Yes	Yes	Yes	High	Low	Defensive about environmental issues. Provided list of current licensees but refused to give out the more numerous list of the most recent new licensees. Refused access to SOCOG personnel and merchandising information on grounds of confidentiality despite fact that environmental agreements signed by merchandisers are a crucial part of SOCOG’s public obligations.
SOCOG	Marketing	Briefed		Yes	Yes	Yes	High	Low	Refused access to SOCOG personnel and merchandising information on the grounds of confidentiality (see attached fax), despite the fact that environmental agreements signed by merchandisers are an opportunity to promote the merchandise and their producers on environmental grounds.
Olympic Store	Retail			Yes	No				Deferred to upper level management who did not respond.
Acme Merchandising	T-shirts, Caps, Sweaters, Bandannas	Yes	No	Yes	Yes		Medium	Low	Helpful
Aminico Australia	Pins	Yes	No	Yes	Yes		Medium	Low	Helpful
Akubra Hats	Hats	Yes	No						

Licensee	Products	Questionnaire Sent	Questionnaire Returned	Phoned	Returned Phone Call*	Meeting	Claimed Level of Current EcoAwareness †	Claimed Need for Further EcoPractices‡	Attitude & Comments*
Benson House	Pins	Yes	No	Yes	Yes				
Bonds	Cottonwear	Yes	Yes	Yes	Yes		High	Low	Helpful
CA Australia	Plush Toys	Yes	No	Yes	Yes		Medium	Low	Helpful
Carlson	Corporate Supply	Yes	No	Yes	No				
Clifton Joseph & Son	Umbrellas	Yes	Yes	No			Medium	Low	
Coogie	Knitwear	Yes	No	Yes	No				
Davenport Industries	Ties, Socks	Yes	No	Yes	No				
DNA Technologies	Professional Services	Yes	Yes	Yes	Yes		Low	Low	
Driza-Bone	Jackets, Knitwear	Yes	No	No					
Gainsborough	Bedding	Yes	Yes	No			High	Low	
Gillette Australia	Pens	Yes	No	Yes	No				
Hale Australia	Coasters	Yes	Yes	No			Medium	Low	
Hunter Leisure	Figurines	Yes	No	Yes	No				
Hurrica Trading	Glassware	Yes	Yes	Yes	Yes		Low	High	Helpful and interested
Illustrated Sports Clothing	T-Shirts, Caps, Sweaters	Yes	No	Yes	Yes		Low	Low	
Jockey Australia	Socks	Yes	No	Yes	Yes				
Jurlique International	Scent Pots	Yes	Yes	No			Medium	High	Very interested
Keith Gamble	Handkerchiefs	Yes	No	Yes	No				Explicitly refused to participate after seeking advice from SOCOG
Ken Duncan Australia	Publications	Yes	No	Yes	Yes		Medium	Low	
Klikkers Leatherware	Jackets	Yes	No	Yes	No				

Licensee	Products	Questionnaire Sent	Questionnaire Returned	Phoned	Returned Phone Call*	Meeting	Claimed Level of Current EcoAwareness †	Claimed Need for Further EcoPractices‡	Attitude & Comments*
Line 7 Australasia	Clothes	Yes	No	No					
Lush Creations	Ceramics	Yes	No	Yes	Yes		High	Medium	Helpful
Opal Pacific	Jewellery	Yes	No	Yes	Yes				
Paragold Distributors	Bags	Yes	No	Yes	Yes		Low	High	Helpful and interested
Perfection Souvenirs	Spoons, Keyrings, Magnets	Yes	No	Yes	Yes		High	Low	Helpful and interested
Renaissance Editions	Art Miniatures	Yes	Yes	Yes	No		Low	Low	
RM Williams	Boots	Yes	No	No					
RTA	Number Plates	No		No					
Seafolly	Swimwear	Yes	No	Yes	Yes		Medium	Low	Helpful
Sydney 2000 Coin Program	Coins	Yes	No	Yes	Yes	Yes	High	Medium	Helpful and interested
Ink Group Publishers	Stationery	Yes	No	No					
Trofe Australia	Pins	Yes	Yes	No			Medium	Low	
Waterford Wedgwood	Collectables	No		No					

* **Returned Phone Call:** Indicates that licensee provided information pertinent to the investigation in a return phone call.

† **Claimed Level of Current EcoAwareness:** Summarises the results of a licensee's questionnaire response or phone call with respect to claims about their current environmental policy and management practices. More detail is provided within Table 1

‡ **Claimed Need for Further EcoPractices:** Summarises the results of a licensee's questionnaire or phone response in regard to their satisfaction with their current environmental policy and management practices.

** **Attitude and Comment:** A subjective assessment based on phone call notes of extent to which the licensee contact person was prepared to co-operate with this investigation.

Appendix 6

Guidelines for Improving Environmental Performance of Merchandise

The following provides ways of enhancing the sustainability of manufactured products currently employed by leading industries around the world. In the light of the paucity of SOCOG's guidelines and consequently the amount of material which needs to be covered to bring manufacturers, suppliers and retailers up to date on developments in this area, these guidelines can only be an introduction.

The first section describes a range of policies and initiatives and assesses their contribution to the development of sustainability. The second section contains a guide to all that we believe needs to be considered to *begin* to enhance the sustainability of a product.

1 Policies and Initiatives

Standards and Legislation

ISO 14000

Standards have existed for some time now concerning many of the ecological impacts associated with individual materials and processes, normally in the form of Occupational Health and Safety Guidelines. These are currently being collated together in an Environmental Aspects of Product Standards.

Such Standards can be doubly limited: they are only ever voluntary, and they normally lag behind the latest research and the most precautionary recommendations. International and local standards should always be met, but in nearly all cases they should be surpassed.

A new major area of International Standards has recently been developed in the area of environmental impact assessment and management. Where the ISO 9000 series specified a way of assuring the quality of any process, the ISO 14000 series aims to be a way of assuring the quality of how the environmental impacts of any process are managed. A raft of standards are now available or appearing concerning: Environmental Management Systems, Environmental Auditing, Environmental Labels and Declarations, Environmental Performance Evaluation, Life Cycle Assessment

The main standard, ISO 14001, sets out an Environmental Management System that involves:

- developing an environment policy
- setting environment performance objectives
- developing a plan for managing the realisation of those objectives
- implementing the plan through training, management and reporting structures
- monitoring the process and taking corrective action

The best aspect of the standard is that it is structured around 'continuous improvement' requiring that those accredited under the standard cycle from policy setting, through implementation and evaluation back to policy setting. The standard emphasizes the need for environmental performance initiatives to be measurable.

As with all Standards, the ISO 14000 series is limited by its voluntary status and its genericness. It would be possible to be accredited under ISO 14000 without substantially changing production processes. Because the standard only deals with commitments and documentation procedures, it would be possible for an environmentally damaging product or process, like the manufacture of a lethal pesticide, to be accredited on the basis of its management practices. The contribution to sustainability that operating in line with this Standard would make totally depends upon the comprehensiveness and explicitness of the environmental policy that directs the process.

The Standards most relevant to producers are:

AS/NZS/ISO 14001: 1996 Environmental management system - Specification with guidance for use
AS/NZS/ISO 14004: 1996 Environmental management system - General guidelines on principles, systems and supporting techniques.

Available from Standards Australia PO Box 1055, Strathfield, 2135. Phone 1300 65 46 46. Fax 1300 65 49 49. Website: www.standards.com.au. Also see their Environmental Standards Newsletter.

NPI (NEPM)

Part of the federal government's most recent National Environment Protection Measures involves a National Pollution Inventory. Handbooks are now available from Environment Australia for most industries, guiding them in estimating, reporting and monitoring their storage, use, disposal and emission of a range of pollutants and toxins.

The process should streamline the licensing of polluters and assist national regulation of industries that have direct ecological impacts on the biophysical environment. The NPI is having teething trouble (especially in regard to its teeth for non-compliance), and would work best when integrated with a concerted cleaner production policy.

For further information contact Environment Australia (www.environment.gov.au/net/npi.html).

Greenhouse Gas Challenge

This is a Commonwealth Government initiative attempting to contribute to the reduction in Greenhouse Gas Emissions which Australia has promised the International Community it will do. It is a voluntary process similar to ISO 14000. Companies interested in participating:

- establish an inventory that measures the level of greenhouse gas emissions arising from the company's current activities
- assess opportunities for greenhouse gas emission reduction
- set reduction targets against forecast do-nothing greenhouse gas emissions
- sign-up to the non-binding Greenhouse Gas Challenge on the basis of those targets
- monitor the implementation of greenhouse gas reduction targets
- report to the Greenhouse Challenge Office on what has been achieved.

The system aims to encourage no-regrets greenhouse gas emissions in companies wanting a public profile for their undertakings. Those who substantially reduce their greenhouse gas emissions now may be in a position to trade their greenhouse gas emission levels when emissions trading is formalised in the near future.

As with all greenhouse gas reductions, the amount of the reduction is totally relative to forecasts of future greenhouse gas emissions. It is therefore possible to make a greenhouse gas reductions without doing anything.

For further information contact the Greenhouse Gas Challenge Office
(www.dpie.gov.au/resources.energy/environment/greenhouse/challenge.html).

International Initiatives

Industrial Ecology

This is a way of thinking about industrial processes, especially across manufacturers. It involves planning the location of factories in proximity to each other to encourage co-generation, where one industry is making use of the waste energy or materials of another, with minimal transport costs. This initiative is mainly relevant to industrial site planning.

For further information see the 'Bibliography on Industrial Ecology'
(web.mit.edu/ctpid/www/tbe/iebib.htm).

Zero Waste

This is an European and Asian initiative related to Industrial Ecology which develops and promotes production processes that generate no waste through careful specification, on-site recycling and co-generation. This initiative is mainly relevant to planning new or restructured manufacturing processes.

For further information see *Design for the Environment* Rockville, Md : Government Institutes, 1994

Clean Production

This is a UN sponsored initiative promoting technologies and techniques for minimising toxic and hazardous wastes from production processes. Through a series of case studies the UN and recently the Commonwealth EPA have been promoting things like lower impact chemicals, sealed production processes, effluent scrubbers, etc. This initiative is mainly relevant to major restructurings of manufacturing processes.

For further information see *Cleaner Production Worldwide* volumes I & II (UNEP, 1993, 1995).

Factor Four

This is an approach that combines technologies for enhanced resource efficiency with techniques for reduced resource demand to deliver no-regrets contributions to the development of sustainability. According to the initiators of the idea, Factor Four identifies ways of doubling wealth while halving resource use. This initiative is major contribution to the environmental management planning of any business.

For further information see E.von Weizsäcker, A.Lovins & H.Lovins *Factor Four* [Sydney: Allen & Unwin, 1996].

LCA

Life Cycle Assessments are now a highly developed ways of assessing the comparative environmental performance of materials, products or processes. LCAs can be very resource intensive and lengthy procedures, but light versions are now available. The key to any LCA is: a) the parameters put over what will be assessed (when does the life cycle begin and end? what aspects of the life cycle are going to be taken into account and with what weighting?); b) the ecological impact weightings used (whether based on energy, toxicity, ecological impact or a combination); c) the qualitative interpretation given to the quantitative result of the LCA. Any one of these can be used to influence the outcome of the LCA. Standards for the rigour and objectivity of LCAs are arriving (as part of the ISO 14000 EMS series) and there is increasing consensus on the Environmental Priority Strategies (EPSs assign weightings to ecological impacts) to be used for LCAs.

For further information see the USA EPA *Life Cycle Design Guidance Manual*, 1993.

EPR

Extended Producer Responsibility is increasingly part of European legislation. Developed in response to a crisis in landfill, these are regulations backed up by fines that require all manufacturers to take back all packaging, and now require certain industries (eg electronic appliances) to take back whole manufactured products at the end of their use-life. The punitive economic measures have led to lightweighting and volume reduction in packaging, and allowed the creation of infrastructures for product disassembly and recycling. It is believed that EPR will prompt a shift in the market toward product leasing rather than purchasing.

For further information see Friends of the Earth *Demystifying Extender Producer Responsibility*, 1998

DFE

This is a well-developed European and American initiative especially in the manufacture of electronic products which attempts to make environmental considerations into one of the central requirements of all design (preferably by installing it into CAD software which these days assist in automating the design process), and even incorporate it into all other design requirements. DFX stands for Design For X where X may be considerations of: assemblability (A); regulatory compliance (C); integratability into manufacturing processes (M); material logistics (MC); customer ordering processes (O); reliability (R); safety standards and liability (SL); serviceability (S); testability (T). Hence Design for Environment (E).

For further information see *Design for the Environment* Rockville, Md : Government Institutes, 1994

Energy and Waste Audits

There is now a large mainstream consultancy business (some of which is accredited) for performing audits of businesses energy usage and waste levels especially by Energy Supply and Waste Management companies. Audits quantify and cost current practices and make recommendations about ways of minimising these costs by the introduction of new technologies, processes and habits. A wide range of software is also available for self-auditing.

For further information see the International Chamber of Commerce *Guide to Effective Environmental Auditing*

Environmental reporting

Models and benchmarks for the inclusion of environmental performance indicators in company annual reports to share holders is now a well established practice. Recent changes to federal company law require companies to make annual reports on their compliance with environmental legislation and regulations. Chambers of Commerce and Accounting Associations have recently begun to issue guidelines for various forms of environmental accounting.

For further information see the Coalition for Environmentally Responsible Economies (www.ceres.org/aboutreport.html).

Ecolabeling

A wide range of programs have now been established in many nations and internationally for certifying the environmental soundness of products or processes. These are both market driven and regulatory initiatives. There are environmental performance ratings schemes (especially for energy efficiency), approval schemes by independent non-government environmental organisations, procedures for the certification of environmental management practices, systems of recognition for environmental impact minimisation, remediation and conservation measures, and 'chain of custody' processes for sustainably sourced materials (especially timber).

For further information on the one of the most respected labels, see the German Blue Eco Angel (www.blauer-engel.de/English/englisch.html).

2 Guide to Sustainable Design

The following are brief accounts of some the key activities which ecodesigning manufactured products involves. Much of it is derived from the essential and comprehensive folder (which includes modules and worksheets), H.Brezet & C.van Hemel *Ecodesign: A Promising Approach to sustainable production and consumption* (UNEP, 1997) and also from the detailed T. Graedel & B. Allenby *Industrial Ecology* [New Jersey: Prentice Hall, 1995]. Both (and most publications we've referenced) can be ordered from DA Information Services, Victoria, phone (03) 9210 7777, email: service@dadirect.com.au. The UNEP publication is \$247 plus post, and there is a waiting period.

Because conflicts will arise between these principles, they have been put in a probable order of priority (rather than the order of a design process, though they are similar).

No-manufacture Option

Since making any new product requires the use of resources and energy regardless of the extent of the ecological impact minimisation measures taken, the greatest contribution to the development of sustainability can come from finding ways of not having to produce a product at all. This can mean *immaterialising* a product by replacing it with a *service*, or at least virtualising it via information or communication technology software. If these radical approaches are not possible, all designs should aim to *eliminate surplus materials*, reduce the number of materials used and *scale down* the product.

Retrofitting

Rather than make a new product, finding ways of **re-using** an existing product, which may require upgrading or remanufacturing it, will always lead to substantial reductions in the resources used compared with the production of a new product. By the same principle, ecodesign should always involve the reuse of existing materials (which do not require extensive recycling) and then the use of **recycled materials**.

Extended Use Life

Immediate and large contributions to sustainability come from extending the use life of any product. Extending a product's use life means designing it so that it is **valued by its user**, easy to maintain, repair and upgrade. A recent development in ecodesign has been to strive for **simplicity** and neatness in component assembly and the product use. Careful attention to the product's **interface** and how the user learns to use the product are key elements in ensuring that the user prizes the product and takes care of it over a long period. **Instruction manuals** are very underdesigned ways of encouraging users to extend the use life of products.

Multiple Use

A product's use life can also be extended by not only extending its primary life but also by giving a product subsequent lives. Ecodesign involves designing products for subsequent lives **from the outset**, even designing the infrastructure that will take a product back and remanufacture it into something else. A product's primary life can also be enhanced by encouraging **product sharing**, an initiative that also minimises the number of products and therefore resources consumed. Major contributions to the social equity that is integral to sustainability can also be made through product sharing.

Recyclability

There is a fine line between giving a product a subsequent life by radically remanufacturing it and recycling its components and materials. Designing for recyclability is now a highly developed process that requires: reducing the number of materials in a product; avoiding mixing materials; **labeling all materials**; designing a product so that it can be readily disassembled into its main materials (**design for disassembly** is now a very well documented process). Every product is in theory recyclable. A product is in fact only recyclable if there is an **infrastructure in place to recycle it**, something that requires designing marketable uses for the recycle.

Renewable Resources

Wherever possible, only renewable materials should be used. Once again, all materials are theoretically renewable, but a material is only renewable if it is in fact being renewed **in a sustainable manner** at this time (for example, whilst timber plantations renew short term timber supply, many are not managed sustainably either in regard to ecosystems or timber supply).

Non-disruptive of Biodiversity or Ecosystems

Wherever possible, materials should only be specified for a design if their sourcing and manufacturing has not disrupted ecosystems or endangered the biodiversity of those ecosystems. In some cases it may be possible to design a product that itself contributes either directly or indirectly to the **conservation or regeneration** of an ecosystem.

Non-toxic

Wherever possible, toxic materials and processes, or products that have been manufactured through the use of toxic chemicals should be avoided. Where this is not possible, the use of toxic chemicals should only occur in *sealed processes* and there should be *rigorous up to date procedures* for the storage, transportation and disposal of those chemicals, as well as extensive emergency and accident protocols.

Energy Optimisation

The design of any product should aim to reduce the amount of energy used in production and where possible involve the use of *renewable energy sources*. All waste energy should be recycled or used *co-generatively* in other production processes. Materials used should be of *low embodied energy* if they were manufactured through processes that used non-renewable energy supplies.

Product Delivery

The design of any product should aim to *minimise the amount of transport* and packaging used in getting the product to its user. All packaging should be reuseable and recyclable and *be taken back by the manufacturer*.

Ecological Education

Because the best ecodesign will be implicit in the good design of a product, at this time of transition toward sustainable cultures and economies, products and product literature should be used to educate users in ecodesign features. By giving users *ecological and design literacies*, new markets can be created for sustainable goods and services.