

GREEN PRINT FOR SYDNEY

Jeff Angel

CV

Jeff is the Director of the Total Environment Centre (TEC), one of Sydney's peak non-government organisations. TEC have campaigned on a vast range of environmental protection issues since 1972, including natural and urban, coastal and inland, country and city issues.

Presentation

It certainly was a very long and intensive exercise, the Olympic development. Total Environment Centre and several other groups were part of the organisation, Green Games Watch 2000. At the end of the process, we characterised ourselves as a "frog watch" and, the website is still alive. The important thing of course, is to learn from the Green Games, which was the biggest exercise in ecologically sustainable development in the world: well funded, well resourced intellectually, and I think, we were all determined that it didn't become a green ghetto. As such, we have all been trying to learn lessons from the Green Games and apply them elsewhere in Sydney, if not the rest of Australia, and this is an absolutely essential task arising from the public investment in the Olympics.

The restoration of urban ecosystems is, to my mind, a facet of reducing a city's ecological footprint, and that was the big contrast between what we had at the Olympics and the rest of Sydney. In the Olympics, we had a reducing ecological footprint and in Sydney of course, as we have right now, an expanding ecological footprint. The remediation or restoration of urban ecosystems is not just about remediation of a particular site, or creating a new local beauty spot, it is part of a wider program. The concept of an ecological footprint involves calculating the total area of productive land and water required on a continuous basis, to produce all the resources consumed, and to assimilate all the wastes produced by a population.

The 1997 State of the Environment Report for NSW assessed Sydney's ecological footprint as 37 times its actual land area. Now clearly a city, particularly a modern western industrialised city, cannot just produce all of its resources and assimilate all its waste within its entire particular land area, but I would suggest that 37 times is a bit too big. As Sydney enters the 21st Century, it is embroiled in controversies about its future shape and environment, and it is timely push towards a new vision. Perhaps more than at any other period in its past, there are contradictory forces battling to put their stamp on the city. Whether it is medium density or fringe development, whether it is an international city, whether it is car dependent and resource guzzling, or a sustainable city, and all these themes are currently in play. Population growth and reducing the impacts of the existing population are essential concerns. TEC believes the ecological vision of Sydney has not received sufficient attention and the theme of environmental sustainability in urban development decisions deserves a central place in the debate.

There are very significant sets of problems that Sydney faces, or the greater metropolitan region faces, now and in the future, particularly with increasing population and traffic. There may be further fringe development and there certainly will be urban consolidation, as we've seen on the various contaminated sites. Either, problems will be managed and the ecological footprint reduced, or there will be an unwelcome and observable reduction in the quality of life.

If you just look at some of the facts about Sydney, the environmental facts about Sydney, you can see the scale of the problem and I think that as an immediate reaction, that this is too much. The population growth is 54,800 per annum. By 2021, we expect the population to be 5 million. The occupancy ratios, very interesting because it has an affect on how many houses we have to build - it was 2.92 in 1981 and now it is 2.68.

The car use - we are traveling an extra 20 million kilometres per day compared to 1990. In regard to air pollution - 2.5 million people are exposed to the World Health Organisation long-term ozone standard. How much CO₂ is produced by transport? Four million tonnes per annum. How much more rail patronage do we need to reach our air quality goals? We need a 45% increase in patronage of rail. How much water do we use each day? 1.6 million litres. How much wastewater do we dispose of each day? More than 1.3 million litres. How much greenhouse emissions does each person use in regard to their electricity consumption? 8.4 tonnes per person, per annum. And how much waste to landfill? 4.5 million tonnes per annum.

So, clearly that's why our ecological footprint is rather large and unacceptable. One immediate example of reducing the footprint is found of course, here at Sydney Olympic Park. With the use of recycled water, its benefits are obvious, but it is also a challenge to the conventional paradigm of the urban water cycle, that is outside the boundaries of this place and the rest of Sydney.

As I said, Sydney Olympic Park should not be a green ghetto. This was one of the greatest dangers of the Green Games and various community groups, State, local and national have been working to extend the benefits of the technologies and practices to other parts of the urban fabric. Legislation underpinning SOPA calls for an expansion in the use of recycled water. What is important is that the intention is that we move beyond showcase, which is certainly what the Olympics was internationally, to mainstream implementation.

There are two particular areas that I would just briefly like to examine - river restoration and contaminated sites. Urban river restoration has been an enduring concern for urban groups as well as the Total Environment Centre, and in fact, we first became centrally involved in the issue in 1976 with the Cooks River, and of course the work on Haslams Creek is inspiring. In a recent study, completed by consultants for TEC called "*Identifying Opportunities for Restoring Degraded Streams in Sydney*", a whole range of factors are discussed about what should be brought to bear on restoring

urban rivers. For example, the issue of hydrology must be considered in terms of flood mitigation, tidal inundation, geomorphology of the systems (such as channel size, shape, type, substrate, sediments and bank stability) and the most suitable flows for restoring the ecosystem of the stream, both in terms of duration, season, rates and frequency. The hydrology of streams may vary considerably between reaches. Monitoring or modeling of stream flows is recommended in order to provide a framework for designing morphology of the restored streambed.

Then there is the consideration of what's happening with the water flowing into the stream. You need to consider the impact of relaxing the planning controls on the installation of rainwater tanks. Because if there is increased widespread use of tanks, as I think most people would say we should have - then stormwater production will be reduced, or at least the timing of the releases during storms will vary, and that will have an affect on high flows and the stream beds. There also needs to be consideration of the impacts of stormwater detention in conjunction with restoration activities, both during and after construction, to maintain flow for the integrity of the stream ecosystem. Water recycling schemes for stormwater and sewage effluent, including sewage treatment plant overflows, affect flows and water quality of urban streams. If the flows are not of suitable water quality, then the social and ecological benefits of rehabilitation maybe lost.

Another external factor is the issue of extraction. Excessive extraction from streams, creeks or groundwater aquifers cause a significant reduction in stream flows. The extraction regime needs to be managed so that there are sufficient flows to maintain the health of the stream. Again, the social and ecological benefits of rehabilitating the system may be lost. Tidal flow and the potential for increased/decreased salinity regimes and sediment transportation need to be considered.

These are not just matters for inside the Olympic site. We have a nice Haslams Creek, the green ethic that we have at Olympic Park has to contaminate the external urban environment, and we have to ask questions and people say - "If there's something happening in Ashfield or Concord, what is the impact on the restored Haslams Creek?"

There is also the issue of contaminated sites - a very long running debate, and one as Irene said, required information at the outset rather than hiding information. I do recall a possibly celebrated event with Green Games Watch, where our Executive Officer visited the EPA Library and found the actual report which told us how much, things were really contaminated and the information that had been actually hidden. Its one alternative to an expensive freedom of information request - I suppose one shouldn't advertise that because you might have to pay a lot to get into the libraries now.

Community groups have learnt the hard way, that once the original polluter has left the site, it becomes much harder to make the polluter pay. A good example is the Rhodes Peninsula. For decades, Union Carbide used to use the site as a toxic waste dump from its production facility that produced Agent

Orange. After initial clean up, Union Carbide sold the site back to the state government for a dollar. However, the site remains highly contaminated with dioxin and DDT and the community is continuing to push for a satisfactory remediation proposal. There does need to be transparent independence in the handling of contaminated sites. Often the clean up is driven by commercial factors and the capacity to recover costs through real estate development. To that extent, the Olympic site is not a good example, because it had such a huge budget and a broader social and economic recovery perspective. Continually, we were told about the employment and the profile building benefits of the Olympics, and that's why it was worth the cost. Recovery of the direct costs on the private development proposals, are far more constrained by how much you can make by the real estate development. Thus, we get significant controversy about density and height of the development as proposed on a particular site that's being remediated. Such concern for the recovery of direct costs, including ongoing management, can prejudice the public interest outcomes.

In regards to that point, we certainly support Irene when we say you need to assist the review of remediation programs with a well-resourced community advisory panel. This panel assists in the overseeing of clean up options at the site and reviews competing tender bids for the remediation technology. The panel should also select an independent auditor that would oversee and review the management of the project, to ensure all of the predetermined environmental goals are met.

The issue about the whole living experience, was that it was a partnership, somewhat forced at the beginning, but certainly became an important component in managing controversies and managing the good reputation of the Olympic site and the developing games project. These days, most people are concerned about the environment and most are working in a range of areas. The community, corporate, business, academic, government regulators and education sectors are starting to talk the same language, so there is great potential for partnership.

Partnership shouldn't be seen as a substitute for necessary regulation and the setting of benchmarks. It is not a choice between regulation or voluntary processes, or capture of community groups, or of debate. It is a matter of having appropriate regulation, objectively arrived at benchmarks and partnership. What is important about partnership is it can help you to move beyond compliance, it is in the area of "beyond compliance" where the most exciting advancements can be made.

The extent of environmental degradation and the task of restoration that lies before us in Sydney, as well as in other urban areas, is immense and we need to set ambitious targets. We need to create issues, have debate and explore solutions. One of the things that TEC is doing, is that we have just issued a report called "*Sydney: The Urban Sustainability Challenge*" (I have given Edwina more of these), and there are a lot of people who are starting to talk about the "sustainable city". Now, that is the right language and the interpretation of that will require a lot of discussion, but the concept of a

"sustainable city" is what is important to drive urban development decisions in Sydney, and we can certainly learn a lot from what happened here. It has been said before that the 21st Century should be the era of environmental restoration.

Question:

Do you think we have good enough definitions of sustainability to put it into operation? What would you suggest would be a good definition of this?

Yes, I know what you are asking. We have some very broad definitions and sense of principles and legislation, but they are not good enough to operationalise ESD, and no, I don't have specific definitions for ESD that could apply to different industry sectors or urban development. That's why it's so interesting and adventurous because we are operationalising ESD with each major development that we come up with. Perhaps that's why there is so much debate about the definition of best practice. What was best practice this year might not be best practice next year, and the intent is to move beyond compliance or beyond best practice, the so-called continuous improvement.