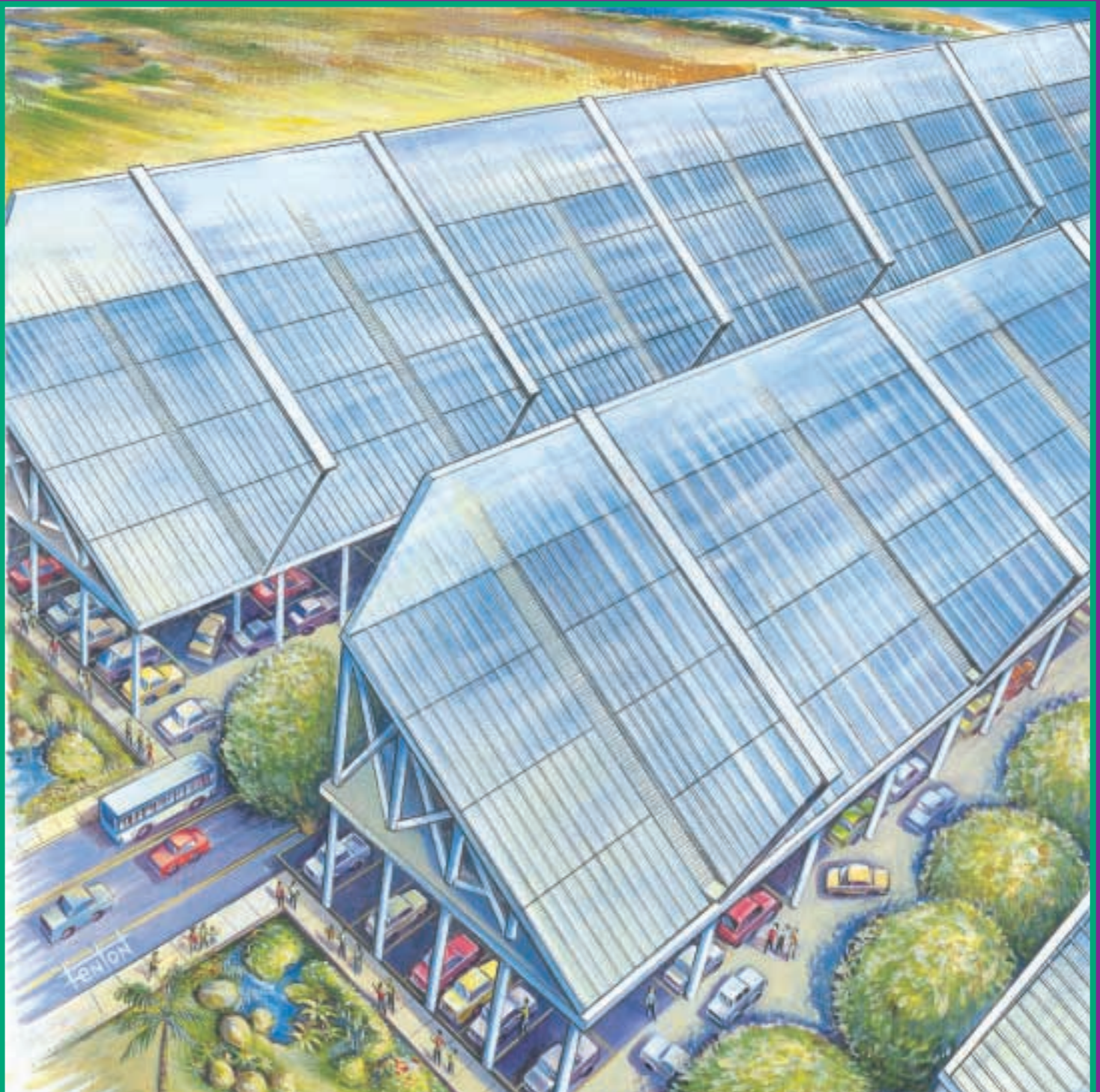


Olympic Report

1300 DAYS TO THE SYDNEY 2000 OLYMPICS • FEBRUARY 23 1997



1300 DAYS TO GO

GREENPEACE

SEES THE SOLAR

OLYMPIC VILLAGE

AS THE BEGINNING

OF AN

INTERNATIONAL

SOLAR AGE.

Solar Olympics

Brilliant Solution

The dream of a solar Olympic village came one step closer to reality when Bob Carr, Premier of New South Wales, announced that Mirvac Village Industry Consortium (MVIC) was winner of the contest to design and construct the Sydney Olympic village.

Mr Carr said that at the time of the Olympic Games all permanent dwellings would have photo-voltaic (PV) cells on the roof that would feed power into the electricity grid and reduce fossil fuel emissions by 75 per cent. Proponents claim the Solar Olympic Village will stop more than 4,000 tonnes of carbon dioxide from entering the atmosphere and causing global climate change, every year.

The winning Solar Olympic Village bid included MVIC plus timely support from the Sustainable Energy Development Authority, (SEDA), a government agency established to reduce greenhouse emissions and promote renewable energy sources.

Pacific Power, an integrated energy services organisation, will provide technical and hardware support. Until recently Pacific Power have been a coal driven electricity generator but are now one of Australia's leading solar research development organisations. They will guarantee performance and provide free maintenance of the rooftop solar systems on Solar Village homes.

Greenpeace sees the decision as the beginning of an international solar age.

When the Solar Olympic Village is viewed by the rest of the world in the year 2000 it will be seen as the largest solar powered suburb in the world.

Initial information from the consortium indicates that each home will have about 10 square metres of solar electric cells on the roof that will produce about 1 kilowatt of electrical energy. When this energy is not used at the house extra electricity will be fed back into the grid. Every year some 1 million kilowatt hours of electrical energy will be produced with no greenhouse gas contribution.

In an interesting development SEDA will provide a \$500 rebate to any house purchaser on the site.

The solar electric cells will be integrated into the roof of the house and each house will be connected to the grid for continuity of electrical supply. Solar Village home owners will also be offered electricity from the grid that has been generated by a renewable energy source.

In line with the Environmental Guidelines for the Olympic Games, all homes in the Village will be offered energy efficient appliances. Unlike some houses being built in Sydney now, all homes will have a high thermal mass with proper levels of insulation. Solar Olympic homes are designed to take advantage of natural ventilation and are equipped with efficient lighting and gas appliance connections.

As an added bonus each house will come equipped with a solar water heater that is gas boosted. This method of heating water is the most efficient and stops thousands of tonnes of greenhouse gases from polluting the atmosphere.



Solar equipment near Olympic pool

GREENPEACE/BARRY

FRONT COVER ILLUSTRATION: ARTIST IMPRESSION OF SOLAR THERMAL POWER PLANT FROM THE OLYMPIC SITE — SIMON FENTON, BLUEGUM STUDIOS

Solar Power

The Olympic Coordination Authority have made a bold move to allow the use of a 20 hectare carpark for an advanced type of solar thermal electric plant on the Olympic site. This should help repair the organisations tarnished record.

The Environmental Guidelines for the Summer Olympic Games clearly recommended that a solar thermal co-generation plant should be seriously considered. This is now taking place.

A consortium of major energy organisations including Energy Australia, Pacific Power, Solahart Industries, Australian Defence Industries and the NSW Department of Energy commissioned a financial plan that analyses the financial and practical viability of a solar thermal power station. It is expected that the financial plan will be considered in April, 1997.

The solar project being investigated for use on the site is the brainchild of Dr David Mills, a senior research fellow at Sydney University. This system uses mirror strips to concentrate the sun's rays on to an energy absorbing surface. In very basic terms, the sun heats water to a very high temperature. This solar heated water is then superheated with natural gas to produce steam which then turns a conventional electricity generator.

Recently, there has been a great deal of interest in solar thermal technology for use as a solar air conditioning unit. There are two types of technology that could be incorporated into the solar collection unit. One system uses hydrocarbon refrigerants the other system uses special salts in a liquid form to produce a cooling effect.

There is an obvious advantage in incorporating air conditioning elements into a solar thermal power plant. Basically when the sun is shining and the temperature is highest, a solar air conditioning unit will provide the most amount of cooling power.

In many parts of Australia, traditional air conditioning requires a huge amount of electricity.

Some experts believe a solar air conditioning unit could occupy more than 10 per cent of the solar thermal power plant site.

Solar cells such as those to be used in the Olympic village take the sun's energy and convert it into electricity directly. Most experts believe this technology has reached its theoretical limit of energy conversion which is less than 25 per cent. Solar thermal has much more potential to create significant quantities of solar energy including electricity and hot water. The theoretical limits for solar thermal electric are in excess of 80 per cent.

Preliminary investigations indicate that the proposed solar thermal power plant will have a capacity of 20 megawatts.

With little more than three years before the start of the Olympic Games in Sydney there is no time to waste if a solar thermal power plant is to become a reality.



Solar cells being assembled in Sydney at BP Solar

GREENPEACE/BARRY

“SYDNEY IS

COMMITTED

TO THE WIDEST

POSSIBLE USE

OF RENEWABLE

SOURCES

OF ENERGY”

THE ENVIRONMENTAL GUIDELINES FOR
THE SUMMER OLYMPIC GAMES

1992

Greenpeace starts a campaign to raise the environmental credentials of the Sydney bid for the Olympic Games in 2000. Greenpeace wins a competition for the design for the Olympic Village then cooperates with the bid committee to develop and publish the

Environmental Guidelines for the Summer Olympic Games. It was agreed that the Environmental Guidelines would apply to all sport venues, including the Olympic village. The Environmental Guidelines for the Summer Olympic games cover all the major urban environmental issues and become the international reference point for Olympic bidding cities to meet or exceed. In September 1993 the president of the International Olympic Committee (IOC) president Juan Antonio Samaranch announces that Sydney wins the right to host the Olympic games. The IOC resolves to ensure that the environment becomes the third dimension of Olympism, the first and second being sport and culture.

1993

THE ENVIRONMENTAL GUIDELINES FOR THE SUMMER OLYMPIC GAMES



Olympic Village Design

19



Sydney 2000 opens with a focus on ozone, a heavy ch...

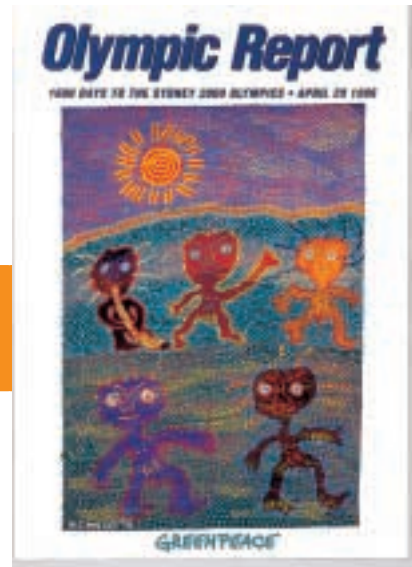
1996

Greenpeace leads the call for the widest possible use of renewable sources of energy on the whole Olympic site. A competition is started to decide who will design and construct the Olympic Village. Greenpeace regularly meets with all members of four consortia who are competing to build the Olympic Village. The next masterplan for the Olympic site is released to the public. This plan shows development extending over the whole site from north to south. Greenpeace calls on Australian business to 'Give the Planet a Sporting Chance'.



The government announces Australia Stadium 2000 as the winner of the contest to construct the Sydney Olympic Stadium which features many energy saving devices and a public commitment to avoid the use of PVC in the construction of the stadium.

Greenpeace starts a campaign to promote the use of timber from sustainably managed forests with a special focus on plantation timbers. The first solar cells are commissioned at an Olympic venue when the Sydney International Regatta Centre officially opens. The judges' stand makes history as one of the world's first solar powered regatta centres.



1997

The process of designing and constructing the Olympic Village starts after the government announces that Mirvac Village Industries Consortium (MVIC) will build the largest solar village in the world with solar electric and solar water heaters on most dwellings. MVIC state their intention to avoid the use of PVC in the village and insist that a variety of energy and water saving devices will be installed in the Olympic Village. The first work will begin on the village site in mid 1997.

1998

The Olympic railway is expected to open in early 1998. In April, the first Sydney Easter show will be held at the new 'showground' area of the Olympic site. This will be the first test of the new transportation system commissioned for the Olympics. The winter Olympic games will be held in Nagano Japan.



International Aquatic Centre with water disinfected with major improvement from chlorination.

1995

Greenpeace starts the Olympic Hundred Day reports which provide a regular focus on the environmental issues affecting the Sydney

Olympics. Every hundred days Greenpeace produces a report that is distributed to local Olympic officials and a large international market including the organisations bidding for the year 2004 Olympic Games. The first hundred day report deals with the need for a proper rail service to the Olympic site. At the time, the government was considering a single track spur line. Greenpeace called for an extensive network of bicycle paths, secure lock-facilities for bicycles, and better ticket systems for public transport. Greenpeace highlights the problems with PVC, the most environmentally damaging of all plastics and calls on the government to come up with world class solutions to water pollution.



The 1996 Olympic games are held in Atlanta USA under difficult conditions.

The Atlanta Olympics are judged as being below average on many environmental criteria. A huge team of Sydney Olympic officials attend the Atlanta games to gain management experience. On the local level Greenpeace continues to promote solar energy and other renewable energy systems for the Olympic site and village.

Greenpeace reveals that the Olympic Co-ordination Authority allowed PVC to be used on the Sydney site when many less polluting alternatives are readily available on the market. In order to promote alternatives to PVC, Greenpeace releases the 'Chlorine Free Action Pack' a comprehensive database which will be revised on a regular basis. The problem of high levels of pollution in Homebush Bay are exposed. Two of the offending chemical pollutants in Homebush Bay, dioxin and phthalates are considered to be hormone disrupting substances.



2000

Sydney will be judged on their commitment to the Environmental Guidelines for the Summer Olympic games. Special attention will be given to public transport, how well Sydney has been able to deal with all aspects of the water cycle, waste and recycling and the serious question of reducing the use of fossil fuels by use of renewable energy.

1999

The Olympic stadium will be completed as will most of the Olympic areas except for the village which will still be in a major construction phase.

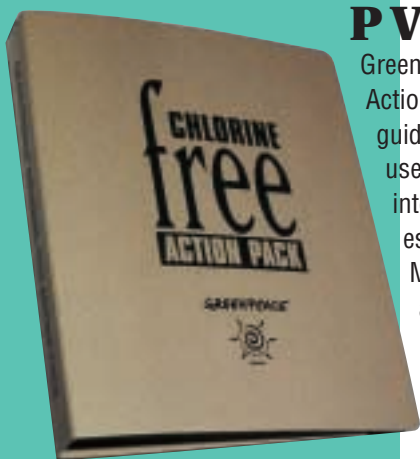
TRANSPORTATION

In the year 2000 Sydney will be judged by the world community on the quality of public transport provided for the Olympic Games. In many ways the Atlanta Olympics were a failure due to poor public transport.

The first draft development application by the Olympic Co-ordination Authority for the Olympic Village is a real disappointment. Plans for the Village after the Olympics indicate a heavy preference for cars and little attention to the needs of low energy transport systems including walking and bicycles. Sydney has a stated commitment to a car free Olympics.

PVC

Greenpeace has published the Chlorine Free Action Pack that provides a comprehensive guide to products and systems that avoid the use of PVC. There has been considerable interest in the use of PVC alternatives, especially in the construction industry. Many new products are now available that are PVC free, therefore Greenpeace will produce a second edition of the Chlorine Free Action Pack in 1997.

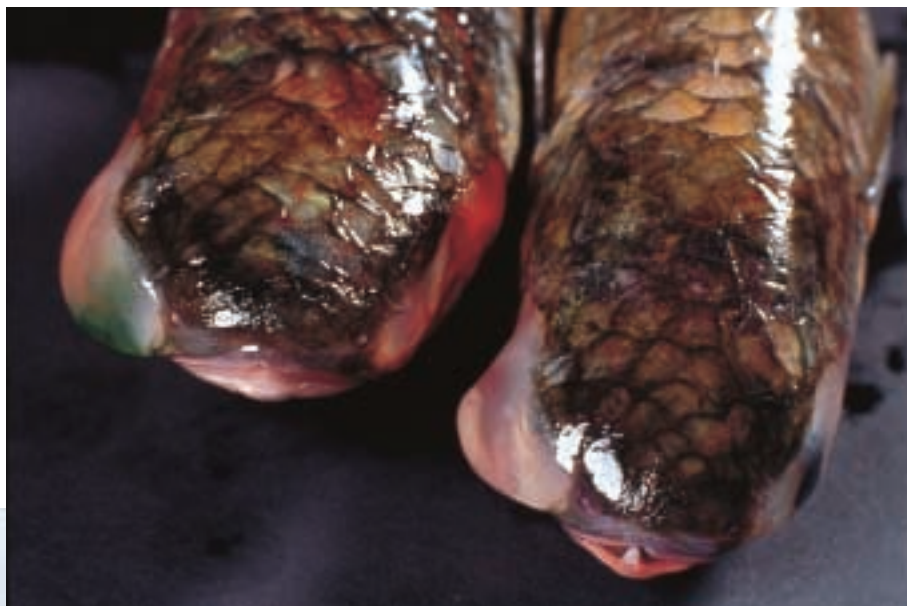


PVC pipes at the Olympic site, January 1997

GREENPEACE/BARRY

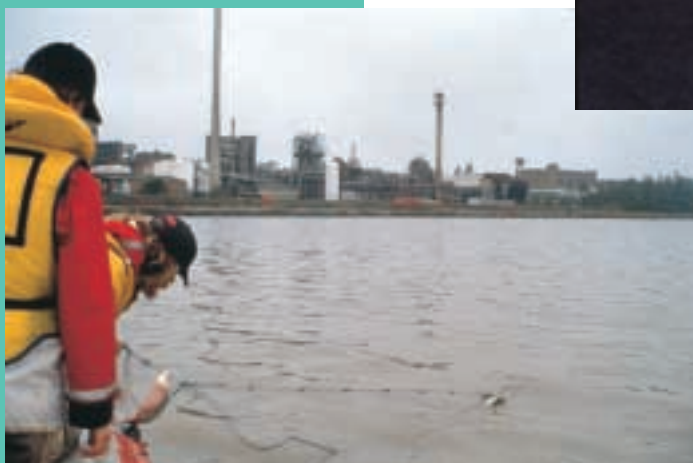
HOMEBUSH BAY

Greenpeace has released new evidence which shows fish caught in Homebush Bay with severe eye deformities. The fish, including the commercially available species mullet, were caught by Greenpeace during a scientific program in January 1997. Homebush Bay is contaminated with dioxins and phthalates, a PVC additive. The dioxins are a toxic legacy from the former Union Carbide facility while the phthalates are generally considered to be contamination from the only phthalate factory in Australia, operated by ICI on the banks of Homebush Bay.



Deformed fish caught at Homebush Bay, 1997

GREENPEACE/BARRY



Greenpeace action team catching fish samples near ICI plant, Homebush Bay

WATER CYCLE

Sydney is presently in crisis dealing with a 19th century waste water system that regularly overflows sending untreated sewage into Sydney Harbour and beaches in the region.

The Olympic Co-ordination Authority has released no plans to manage the Olympic catchment, or for technologies to avoid letting sewage from the Olympic site enter other waterways.

GREENPEACE/BARRY



Sydney Olympic Stadium construction work continues — February 1997

Recycled Timber

The \$4.6 million Olympic Rowing Pavilion will be built using recycled timber.

The announcement that the 1000 seat pavilion would use recycled timber has prompted timber recyclers to form an industry association to develop quality assurance standards.

"This is a major boost for the Australian recycled timber industry" said David Nash, a prominent Sydney retailer of quality recycled timber. "It is a great opportunity to introduce a high standard of quality assurance for Australian recycled timber. If it is properly managed, the Pavilion will showcase high quality recycled timber to a world audience."

Currently there are no uniform quality assurance standards for Australian recycled timber. Standards for verifying moisture content and stress grading would give buyers of recycled timber the assurance of quality that is needed for major projects such as the Olympic Rowing Pavilion.

On February 24th timber recyclers from across the East coast of Australia will meet to form the association and discuss the proposed new standards.

While the Australian recycled timber industry has seized the opportunities presented by the 2000 Olympics the same cannot be said for the rest of the Australian timber industry. The National Association of Forest Industries continues to resist the introduction of the Forest Stewardship Council (FSC) certification system into Australia, in defiance of the worldwide trend toward independent quality assurance standards for forest management.

It is understood that several bidders for the 2004 Olympics propose to ensure that all timber used in their Olympic Village is certified under the FSC system. Already overseas timber suppliers are lining up to supply FSC-approved timber for both the 2000 and the 2004 Olympics.

Greenpeace ranks recycled timber at the top of its preferred timber use options, followed by timber certified under the FSC system. Greenpeace is opposed to the use of any timber that is of unknown origin and which could come from an old growth forest.

For further information regarding the new Australian timber recyclers association and standards for quality assurance contact David Nash or Roy Reynolds, phone (02) 98181166.

TIMBER

SHOULD BE

FROM SUSTAINABLY

MANAGED SOURCES

THE ENVIRONMENTAL GUIDELINES FOR
THE SUMMER OLYMPIC GAMES

olympic village designs



Courtyard House — Olympic Mode.
HOWARD TANNER & ORDER ARCHITECTS



Courtyard House — Post Olympic Mode.
HOWARD TANNER & ORDER ARCHITECTS



Townhouse — Type 1.
HPA ARCHITECTS



Townhouse — Type 2.
VIRGINIA KERRIDGE & TONKIN ZULAIKA ARCHITECTS



Relocatable House 1
GORDON & VALICH ARCHITECTS



Relocatable House 3
HPA ARCHITECTS



Typical Units



Typical Family Home
GROSE BRADLEY & GORDON + VALICH ARCHITECTS



Relocatable House 2
VIRGINIA KERRIDGE + HPA ARCHITECTS