

alcoa in australia

CELEBRATING THE FIRST 40 YEARS



australia's aluminium
since 1963

australia's aluminium since 1963



Sir Lindesay Clark, J.C. Bates (Managing Director) and Sir James Forrest discuss reforestation plans.

We are celebrating the 40th anniversary of a remarkable enterprise – one born of visionary leadership and nurtured by hope, optimism, innovation and hard work.

In 1963, the idea of an integrated aluminium industry in Australia, though ambitious, began to show fruit. Linking bauxite in Western Australia with coal in Victoria and building refineries in the West to ship alumina to smelters in the East was visionary.

In 2003, we enjoy the benefits of that vision, and we acknowledge the energy, integrity and determination to succeed of those who have made it a reality – the talents and efforts of the thousands of people who have created Alcoa of Australia Limited.

It is from Sir Lindesay Clark's vision and the alliance he initiated with the Aluminium Company of America that Alcoa today delivers Australia's aluminium to the world.

During 40 years of production in Australia we have grown from being simply pioneers of a new industry to become the world's largest alumina producer, a major producer of aluminium and a significant contributor to the wealth and well-being of the nation, our people and the communities in which we operate.

And the visionary thinking that founded the company continues to guide our aspirations for the future. There are still challenges to be met – new technologies to develop, new products to create, new and better ways of building stronger communities and protecting the environment. Our vision moves us to invest the resources and effort required to build a better, more sustainable future.

Aluminium is the metal of the 21st century – a vital material for so many industries and part of everyday life for people all around the world – and Alcoa stands at the forefront of aluminium technology and production worldwide.

Here we celebrate some of the highlights of Alcoa's first 40 years of production in Australia, remembering some of our major achievements and acknowledging some of the people and events that have made our journey to date so rewarding.

We have come a long way in just four decades. Our sights are fixed firmly on the many opportunities and challenges that surely await us in the years ahead.

Wayne Osborn
MANAGING DIRECTOR
OCTOBER 2003



above – Unloading aluminium at Point Henry.
top left – Volunteers head off for tree planting.
left – Casting aluminium ingots.

40 years of alcoa in australia

1957



Western Mining Corporation (now WMC Resources Limited) begins bauxite exploration in the Darling Ranges.

1959



Sir Charles Court as new Minister for Industrial Development shapes the future for industry in Western Australia.

1961

Alcoa of Australia is incorporated. Granted bauxite lease by WA government.

1963

April
First ingot is poured at Point Henry, using US alumina.

July
First bauxite delivered from Jarrahdale.

October
Start-up of Kwinana alumina refinery.

1964

February
First export shipment of Kwinana alumina to Japan.

July
First export of aluminium ingot from Point Henry.



1965

Alcoa began rolling aluminium at Point Henry.

1969

Anglesea power station began operating to supply power to Point Henry.

1970

Sir Lindesay Clark steps down as Chairman of Alcoa. Sir James Forrest takes on the role.

1972



Pinjarra alumina refinery commissioned. Bauxite mining begins at Del Park.

1978

Sir Arvi Parbo becomes chairman and serves until 1996.

1980

Construction of Portland begins but is postponed in 1982.

1984

Start-up of Wagerup alumina refinery. Bauxite mining begins at Willowdale. Construction at Portland re-starts. A new power contract is signed and the State Government becomes a new partner.

1986



February
Alcoa ships 50 millionth tonne of alumina.

October
First aluminium produced at Portland.

CITIC becomes Alcoa's partner in Portland, joined by Marubeni Corporation in 1992.

1990

Alcoa becomes the first mining company in the world to receive a United Nations Award for Environmental Achievement.

1994

Alcoa World Alumina and Chemicals (AWAC) is created – a global alliance is formed.

1995

Alcoa ships 100 millionth tonne of alumina.



1996

Alcoa Kaal Australia, now known as Alcoa Australian Rolled Products, is formed.

1998

Last production shift at Jarrahdale mine.

2000

Alcoa Inc. listed on Australian Stock Exchange.

2001



Rehabilitation of Jarrahdale mine is completed and site is officially closed.

2002

Demerger of WMC Limited leads to the creation of Alumina Ltd in December.

2003

Efficiency upgrade of Pinjarra refinery announced.

1950s

1960s

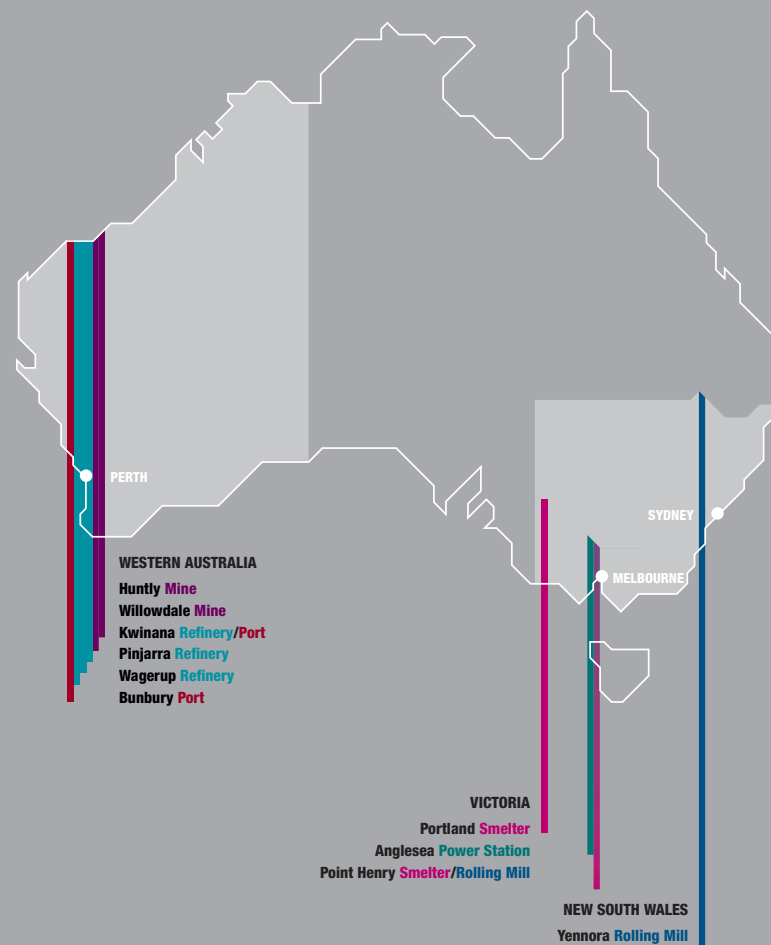
1970s

1980s

1990s

2000...

alcoa in australia



Alcoa's contribution to the Australian community began in 1963 with the start of production from the Jarrahdale bauxite mine and Kwinana alumina refinery in Western Australia and the Point Henry aluminium smelter at Geelong, in Victoria.

Our first 40 years of production in Australia have been marked by many challenges and achievements, and by remarkable growth won in partnership with the people, businesses and governments of the nation.

Alcoa has grown to become the world's biggest producer of alumina and a major producer of aluminium. Our operations in Australia now include three alumina refineries – at Kwinana, Pinjarra and Wagerup in Western Australia; two bauxite mines – at Huntly and Willowdale in Western Australia; two aluminium smelters – at Point Henry and Portland in Victoria; and rolling mills at Point Henry, and at Yennora in New South Wales. The company also owns and operates a brown coal mine and power station in Victoria at Anglesea.

We produce 7.7 million tonnes of alumina a year and more than 540,000 tonnes of aluminium a year. Alcoa products generate

\$2.8 billion in export sales each year, and the total assets of the company are valued at \$3.6 billion. We spend more than \$2.4 billion a year in Australia.

Alcoa provides employment for 6,580 people, mainly in regional Western Australia and Victoria, and our activities generate around 20,000 indirect jobs in Australia.

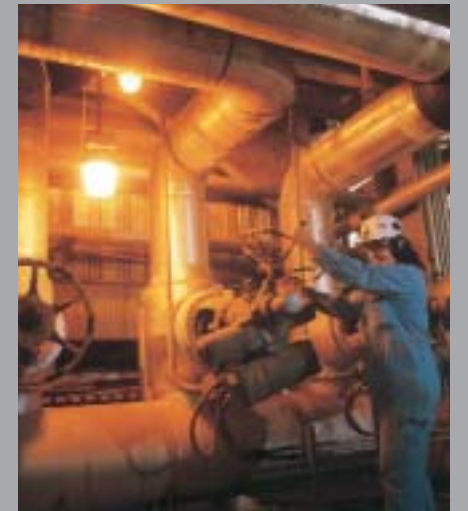
Environmental management is a high priority for the company and we have won international recognition for our work in mine rehabilitation and other environmental practices. In the same spirit, Alcoa actively supports the communities in which we work and live, via an extensive program of partnerships that foster environmental, educational, cultural, sporting and other community activities throughout Australia.

Alcoa's success is built on technology. We lead the world in the research, development and application of advanced manufacturing technologies and innovative processes and products.

As we celebrate Alcoa's first 40 years of production in Australia, there is much to be proud of and a great deal to look forward to.



above – J.C. Smith and Sir Lindsay Clark 'breaking the ground' for the Point Henry smelter, 1961.



top right – At work at Kwinana alumina refinery.
right – Aluminium ingots.



mining

alcoa's first bauxite mine



The first train loader at Jarrahdale, now the site of Langford Park.

Since the early 1900s, the Darling Ranges in Western Australia had been thought to contain considerable deposits of bauxite. However, it was not until 1957, following exploration by Western Mining Corporation (now WMC Resources Limited), that these deposits were confirmed, prompting the formation of a joint-venture company to develop an integrated alumina industry. The Aluminium Company of America (now Alcoa Inc.) became a partner, and in 1961 the new venture was granted a 12,619 sq km bauxite mining lease in the Darling Ranges.

Alcoa's first mine, at Jarrahdale, began operations in 1963 and for 35 years, until its closure in 1998, was the only source of supply for Alcoa's alumina refinery at Kwinana. During that long partnership, the Jarrahdale mine provided 168 million tonnes of bauxite from which 44.6 million tonnes of alumina were produced.

Today, Alcoa has two bauxite mines in Western Australia, at Huntly and Willowdale. The Huntly mine, established in the early 1970s to supply the Pinjarra refinery, now also supplies the ore for Kwinana. This expanded capacity makes Huntly the biggest bauxite mine in the world.

The Willowdale mine was established in 1984 and supplies Alcoa's Wagerup refinery.

Partners in protecting the environment

Alcoa actively partners a wide range of initiatives designed to protect natural habitats and create a sustainable future.

Alcoa's Landcare Program in Western Australia and Victoria is a cooperative venture with government agencies and community groups, set up to tackle problems such as salinity, erosion and degradation of farmland and bushland. Since 1989, Alcoa has committed more than \$20 million to Landcare, and the Alcoa Landcare Program has become Australia's largest and most successful demonstration of cooperative community action to address vital sustainability issues facing Australia.

Alcoa also works with the Western Australian Department of Conservation and Land Management on other nature conservation projects. The company is a major sponsor of Operation Foxglove, a feral animal control program designed to remove the threat of fox predation on small and medium size native animals.

Restoring the forests



For more than two decades, Alcoa has conducted an innovative and highly effective program to restore the botanical richness of the jarrah forest after mining. The success of this program is demonstrated by the success Alcoa has achieved in the rehabilitation of some of the original Jarrahdale mining areas, which provided the Western Australian community with an attractive recreational area – Langford Park.



In 2002, Alcoa was again recognised through the WA State Government's prestigious Golden Gecko Award for environmental excellence – Alcoa won its third Golden Gecko Award for its ongoing rehabilitation program and achieving the goal of restoring 100% species richness to rehabilitated areas at the Huntly and Willowdale mines. To achieve this goal, we have worked with local universities, the Botanic Gardens and Parks Authority and the Department of Conservation and Land Management to develop innovative techniques for soil handling and cultivation, seed collection and treatment and plant propagation. The excellence of this work has won worldwide recognition also through the United Nations Environment Programme.

Before and after photographs of the same mining location pre and post rehabilitation.

FACT:

Alcoa supplied the aluminium that went into the crankcase of the Wright Brothers' first plane, the 'Flyer'. 2003 is the 100th anniversary of their historic first flight, and the birth of aviation.

so many wonderful people



People at work.



Alcoa is a company proudly shaped by its people and infused with their character, values and enthusiasm.

In celebrating Alcoa's first 40 years in Australia, we acknowledge the tremendous contribution of the thousands of men and women who have dedicated their skills and talents to ensure the continuing success of our company.

Our people reflect the changes in the wider Australian population over the past 40 years. Many have come from other countries, other cultures, to make a new life as Australians and new friends among their Alcoa workmates. In the early years many of these newcomers were greeted as they stepped off the ships at Fremantle and recruited for jobs at the Jarrahdale mine or the Kwinana refinery.

Of all the many people who have given long and valued service, a special few have been with us since production began 40 years ago – and we are proud to feature them over the next two pages.



Alcoa's people are the backbone of the company.

Alcoans helping their communities

Alcoa employees are actively encouraged to volunteer their work skills and expertise for the benefit of the communities in which they live and work. The company is proud of our employees' record of volunteerism and as contributors to their communities, and encourages and supports these efforts through a variety of programs.

Their contribution is supported and recognised through the Alcoa Foundation, which has been investing in Alcoa communities worldwide since 1952. Our ACTION and Bravo! programs enable Alcoa employees, working as teams or as individuals, to earn financial grants for their chosen community organisations. In 2002, 1,500 employees in Australia volunteered more than 26,000 hours helping hundreds of community organisations – and their efforts were rewarded with \$550,000 from the Alcoa Foundation.



FACT:

Aluminium now comprises about 80 per cent of an aircraft's weight. A Boeing 747 contains around 66,150 kg of aluminium. Without aluminium, flying as we know it today would not be possible.

40-year employees



Our 40-year Point Henry employees, from left: Peter Rankin, Bob Paulden, Kay Eckersley, Morgan Quick, Neville Stalio and Henk Egberts.

Point Henry

BOB PAULDEN

Bob Paulden remembers those first years at Point Henry as "organised chaos". "We didn't know a thing about how the pots worked – we just learned the job along the way". He says that it's the people he has worked with who have kept him at Alcoa for 40 years. "We've worked with three generations of some families – the fathers, sons and now even the grandchildren. Really terrific people."

NEVILLE STALIO

Neville Stalio has been at Point Henry since the beginning, as a pot room operator, and still enjoys the work. Of his days at Alcoa he says: "You meet some terrific fellas. In the early days, at the end of every night shift, we'd all go to someone's house and have a social time. And you didn't just talk to your work mates, you met the whole family. The company is like that – it's a big family."

HENK EGBERTS

Henk Egberts, who works in the environmental area, helped pioneer community relations for Point Henry and recalls one memorable incident while working with a community. "I was facing a hostile crowd of about 200 people and some told me that they were not against me personally but they disliked a big corporation like Alcoa. And I said to them: "What is Alcoa? Is it buildings? The Board of Directors? Alcoa is people – it's me and all our employees."

PETER RANKIN

Peter Rankin started at Point Henry as a chemical laboratory assistant, moving quickly to become a Mechanical Testing Supervisor, and then Senior Metallographer. "I've enjoyed specialising in the customer service area requiring

special metallography skills," he says. "Originally, I planned to be here for only a couple of years, but the challenges in my work fired my interest." Nevertheless, after 40 years, Peter is looking forward to retirement and motoring around Australia with his wife, Helen.

MORGAN QUICK

Morgan Quick had an unusual introduction to Alcoa. In 1963, while being interviewed for a job at an engineering company on the Belmont Common, Morgan was overhead by an American with a huge cigar clenched between his teeth. "He said to me, 'come to Point Henry tomorrow, boy, and I'll give you a job'. So I went to Point Henry and I did get a job and I've been here ever since," he recalls.

KAY ECKERSLEY

Kay Eckersley had only recently arrived from England when she started at Alcoa as a Foil Production Planner. Today she works in human resources as Point Henry's Organisational Development Consultant. Kay believes Alcoa has always offered employees the best conditions and benefits. "I've spent nearly 40 years with Alcoa and when I look back I realise that all my closest friendships began here. I have grown up in Alcoa."

Kwinana

JOE FULGARO

Joe Fulgaro came to Western Australia from Italy in 1961 and worked with Cavalier Constructions, helping to build the Kwinana refinery. He joined Alcoa in March 1963 as a loader driver and in July that year unloaded the first shipment of bauxite to arrive at Kwinana from the Jarrahdale mine. Says Joe: "Alcoa is part of my family, my life. You just couldn't get a better company to work for."



Our 40-year Kwinana employees, from left: Ivor Stockwell, Ben Farrell and Joe Fulgaro.

IVOR STOCKWELL

Ivor Stockwell's first job at Kwinana involved collecting drill samples, using an old three-wheel motor bike. He used to "tear around the site making that bike do things it wasn't meant to", Ivor confesses. He later joined the R&D Department as a computer programmer. "I only intended to work at Alcoa for two years until I finished my university studies, but 40 years later, here I am. They've been very good years."

BEN FARRELL

Ben Farrell remembers his early years at Kwinana with affection. "It was small then, just like a family. We all knew each other by our first names and communication was easy. We worked hard, too – sometimes 16 hours a day, seven days a week. One time when I went home after a week at work, my dog bit me – he'd forgotten who I was." Looking back over 40 years, Ben says "it's just gone like a breeze".

refining

40 years on, and still going strong



Kwinana alumina refinery.

Alcoa's decision in 1961 to locate its first Australian refinery at Kwinana was important for the economy of Western Australia, and the people of the State took a great interest in the project's development. The construction site – just 22 km south of Perth – became a major tourist attraction, attracting hundreds of sightseers each weekend.

The Kwinana refinery was officially opened in July 1963 and began production three months later. The first shipment of alumina left the Kwinana port aboard the 'Lake Sorrel' on 22 February, 1964, bound for Alcoa's Point Henry smelter at Geelong, in Victoria. In March the same year, the first export shipment was despatched to Japan.

As world demand for Alcoa's alumina has grown, two additional refineries have been established in Western Australia – at Pinjarra, in 1972, and at Wagerup, in 1984.

Today, this three-refinery system is among the most technologically advanced in the world, with annual production of 7.7 million tonnes of alumina.

Public tours show Alcoa at work

Alcoa has long encouraged people to visit our refineries, mine sites and processing plants in Western Australia and Victoria. The company's operations are open to public inspection by means of free tours designed to show 'Alcoa at work'. The tours are very popular and more than 635,000 people – school groups, clubs and organisations, special interest groups and members of the public – have toured Alcoa's Australian operations. Visitors have also included figures such as Prince Charles and Princess Diana who visited the Portland smelter in 1986.



above – Prince Charles and Princess Diana toured the Portland smelter in 1986.
below – School groups enjoy their visits.



Kwinana wins with specialty aluminas

In addition to producing alumina to be smelted into aluminium, the Kwinana refinery today produces a variety of specialty aluminas which have a wide range of industrial and manufacturing applications all around the world. These include applications as diverse as water purification, refractory materials, pharmaceuticals, artificial marble, paper sizing, ceramics, abrasives, petroleum processing, plastic and fire retardant in carpets.

To meet the exacting quality standards demanded by specialty alumina buyers around the world, Kwinana has successfully sought and received certification to Quality Standards AS3902 (Australian) and ISO9002 (International) – the first alumina refinery in the world to be so accredited.

FACT:

Aluminium is by far the most commonly used material for exterior constructions, from building facades (cladding) to windows in houses.

partnering stronger communities



Alcoa assists community arts.

Alcoa is totally committed to building stronger connections with our communities and to working in partnership with them to create a sustainable long-term future in Australia.

Over the years, we have developed strong working partnerships with a wide range of community-based organisations, supporting development in the areas of education, health, safety and well-being, environment, culture and sport. We have also forged relationships and partnerships with State and local government organisations to foster essential projects within communities.

Through our community consultation groups, we are in continual discussion with community representatives about their needs and expectations and about the activities of the company.

Today, under the banner of 'Partnering Stronger Communities', our community partnership efforts are being given even greater focus and energy as we work to forge closer ties and become more involved in the growth and future of our communities.

The scope of our community partnership and sponsorship programs is wide and varied, providing financial, mentoring and other assistance for environmental projects, community volunteer activities, arts and culture education, school-based health festivals, sporting coach-in-residence programs, university-based scientific and social research, and many other projects designed to build stronger communities.

FACT:

Almost all aluminium products can be profitably recycled at the end of their useful lives without loss of metal quality or properties. Of the 680 million tonnes manufactured since 1886, 440 million tonnes are still in use.

Alcoa Poppykettle Festival



The Alcoa Poppykettle Festival is an outstanding example of the way Alcoa employees support valuable community projects through the Alcoa Foundation's volunteering programs, ACTION and Bravo!

Alcoa sponsors the Poppykettle Festival, which is a unique two-day multi-arts festival run by the Geelong Performing Arts Centre's (GPAC) education program and designed to encourage children to celebrate

the arts through participation and performance. Alcoa employees support the festival by volunteering as marshals to ensure the event is safe and successful. This volunteer work is rewarded by Alcoa Foundation ACTION grants which provide essential funding for GPAC and the Poppykettle Festival.

Working together

The flagship of Alcoa's community partnership program is the Alcoa Research Centre for Stronger Communities at Curtin University of Technology in Western Australia.

Established in December 2002, this five-year \$650,000 project is designed to draw together a variety of government resources and university disciplines for research and development in important areas of community life – including youth, old age satisfaction, Aboriginal culture, cultural diversity, sport, education and the arts.

The Alcoa Research Centre, together with the university's Chair of Stronger Communities Professor Daniela Stehlik, will make a practical contribution to the development of stronger communities at all levels of society, and reflects Alcoa's deep commitment to sustainable communities.

Fostering WA's sporting talent

Alcoa's links with Australian cricket legend Dennis Lillee go back to 1979 and the infamous 'aluminium bat' incident during the Test Match against England at the WACA ground. Alcoa provided the aluminium from which the bat was made.

It's a relationship which has continued. Dennis was a participant in the Alcoa Coach-in-Residence program which enables Western Australia's elite sporting talents to train with expert coaches. Begun in 1979, in partnership with the Ministry of Sport and Recreation, this Alcoa initiative has nurtured the talents of more than 5000 sports people in Western Australia, and is one of the longest-running community partnerships in Australia.



Alcoa coach in residence – Dennis Lillee.

smelting

four decades of smelting success



Pouring aluminium ingots.

Alcoa's Point Henry aluminium smelter, near Geelong in Victoria, began operations in 1963, producing its first aluminium ingot using alumina from the United States of America. By February 1964 the first alumina from the refinery at Kwinana, in Western Australia, began to arrive, and by November that year aluminium output at Point Henry was 40,000 tonnes per annum.

New aluminium extrusion and sheet rolling facilities and an additional potline were added in the late 1960s, and expansion continued throughout the 1970s and 1980s with the addition of more smelting, casting, sheet and foil production capabilities, raising production capacity to 90,000 tonnes per annum. A 150-megawatt power station was opened at Anglesea in 1969 to provide power for the Point Henry operations.

Today, Point Henry produces 185,000 tonnes of aluminium per year using alumina shipped from the three refineries at Kwinana, Pinjarra and Wagerup, in Western Australia.

In October 1986, Alcoa opened a second smelter at Portland in Western Victoria. With a production capacity of 345,000 tonnes per annum, Portland is one of the largest aluminium smelters in the southern hemisphere. Together, the two smelters produce one-third of all aluminium made in Australia.



Anglesea Heath

The Anglesea power station and coal mine which supply power to the Point Henry smelter are surrounded by Anglesea Heath, a 6689-hectare area of public land set aside for conservation. The heath is one of the most diverse and spectacular areas for flora, scenic landscape and wildlife communities in Victoria and much of the area is listed on the National Estate. Alcoa and Parks Victoria have launched a management plan which will ensure protection of the land, plant species and native animals.

Alcoa and the Davis Cup

In 1964, when the International Lawn Tennis Federation (ILTF) wanted a light, strong casing to protect the precious Davis Cup, Alcoa provided the answer. The company's Point Henry works fabricated aluminium cases for the Cup itself and for a new plinth of the Cup, and donated them to the ILTF.



Rolling on at Alcoa



Alcoa's Point Henry works include rolling mills and a semi-fabricating plant operated by Alcoa Australian Rolled Products, which also has operations at Yennora in Sydney. Alcoa is Australia's only manufacturer of aluminium rolled products and produces rigid container sheet for beverage cans, aluminium foil and common aluminium foil for building and marine applications.

The company accounts for Australia's total production of canned sheet. Over 50 per cent of production is exported, mainly to growing markets in Asia.

FACT:

Aluminium oxides – better known as sapphires and rubies – are worn as jewellery by millions of people throughout the world.

creating a sustainable future



All ages enjoy Frog Watch.

After 40 years of growth in Australia, Alcoa remains firmly focused on a sustainable future.

Our success so far has been founded on a strong commitment to pursuing technological excellence, nurturing people and their talents, caring for the environment and promoting stronger communities. These same values underpin our vision for the future.

Our investment in people for the future includes an extensive apprentice training program, scholarship programs linked to major universities and specific programs designed to foster industry careers for young women. Through programs in primary and secondary schools, and through our support of Scitech, we promote careers in science and technology.

Nurturing the future well-being of the environment remains a high priority, and we maintain our commitment in many ways, including our partnerships in Landcare, Alcoa Frog Watch and Millennium Kids.

Alcoa's community commitment continues to provide support for social, educational, environmental, sporting and cultural activities that help to build stronger communities and ensure that we contribute to a sustainable future for everyone.

In all of this, 'sustainability' is the key – ensuring that everything we do is contributing to the improvement of life while conserving resources and sustaining the well-being of people and the planet.

A major contributor to this cause is our product itself – aluminium – the most sustainable of materials. In addition to being light, strong, durable and versatile, aluminium has a proven record of renewable use, via recycling. Of the 680 million tonnes manufactured since 1886, 440 million tonnes are still in use today.

Aluminium is part of our everyday lives – a vital component in the manufacture of everything from aeroplanes and motor vehicles to bicycles and computers, from kitchen foil and step ladders to window frames and fishing dinghies.

Fostering young talent



Young people are our future, and Alcoa actively fosters young talent through a range of apprenticeship, traineeship and scholarship programs in Western Australia and Victoria.

Since 1963, almost 1300 trades apprentices have trained and graduated from Alcoa operations and most of these have been employed by the company. A wide range of other traineeship schemes and scholarship programs provide training and employment opportunities for Aboriginal youth, women in industry, horticultural students, the long-term unemployed and secondary and tertiary students seeking work experience.

Local businesses win Alcoa contracts

At every opportunity, Alcoa adds value to the economy of its communities by inviting local suppliers to bid for Alcoa supply contracts and helping them to do business with the company.

A typical example is Waroona Hardware Centre, which won a valuable contract to supply small tools to Alcoa's Wagerup refinery and Willowdale mine. Lindsay Gray, head of the family business, said the additional revenue from the contract puts the hardware store in a better position to provide financial support to local community and sporting groups.

The easy-open aluminium can



In the early 1960s, the introduction of the aluminium drink can and its easy-open end revolutionised the drink packaging business in Australia and created a significant new market for Alcoa's aluminium. The first easy-open ends were imported from America, and used on steel cans, but by 1967 were being manufactured locally using aluminium can sheeting produced at Alcoa's Point Henry mill. In 1968, the all-aluminium can was introduced in Australia and by the late 1970s over half of the beer and soft drink consumed was packaged in aluminium cans.

FACT:

Between 90 and 95 per cent of all automotive aluminium is recovered and recycled.

technology leads the way



Developing plant species for mine-site rehabilitation.

Technology drives Alcoa's success and we are committed to the pursuit of technological excellence. Each year in Australia we invest \$20 million in research and development, much of it in collaboration with universities and the CSIRO. Alcoa's Australian technology delivery group of 80 scientists work at the global research centre for alumina. It is focused on creating and improving manufacturing technologies and developing new and innovative products and processes that benefit Alcoa's operations in Australia and around the world.

As part of our ongoing commitment to research and technology, Alcoa

encourages and rewards outstanding achievements. In 2003, Alcoa Kwinana employee, Dr Gerald Roach, was one of two recipients of the prestigious Alcoa Chairman's Award for significant contributions to innovation, development and implementation of materials processing and systems technologies.

Dr Roach, Technical Manager, Extraction Technology, is a recognised world leader in alumina extraction technology and has pioneered ways to reduce raw material usage and improve the quality of alumina produced by Alcoa. His work has helped to make Alcoa's Kwinana, Pinjarra and Wagerup refineries among the most efficient in the world.

Recycling for a better future

Recycling is the key to aluminium's outstanding record of renewable use. Of all the aluminium cans sold annually in Australia, 67% are recycled, that is, reprocessed into container sheet that again becomes aluminium cans. Alcoa is the largest recycler in the southern hemisphere, processing 1.2 billion of these cans in Yennora, New South Wales. In fact, every aluminium can produced in Australia is made from can sheet from Alcoa. Aluminium recycling significantly reduces the use of natural resources, conserves energy and diverts waste from landfills.

Aluminium – a great way to fly

Alcoa's long tradition of innovative technology in the service of our customers reaches all the way back to the historic first flight by the Wright Brothers, in 1903. Alcoa provided the aluminium that went into the crankcase of the Wright Brothers' first plane, the 'Flyer', helping to ensure its success. Today, Alcoa continues to work in partnership with aerospace customers, helping them to meet the challenges of creating the aircraft of the future. A recent example is our contract with Airbus to provide major components for the construction of the new super jumbo airliner.

Putting waste to work

Alcoa has developed a world-first technology for converting spent pot lining – a hazardous smelting waste – into a useful product. The innovative process recovers the valuable fluoride contained in the waste material, while removing other hazardous materials, and produces a granulated vitreous material known as 'synthetic sand'.

The solution, developed by Portland Aluminium in Victoria, has attracted global interest. The 'synthetic sand' has been approved by the Environmental Protection Authority of Victoria for use in a range of commercial product applications.

For this project, Portland Aluminium was awarded a Banksia Environmental Award and the Victorian Premier's Sustainability Award in 2002.

Olympic Torch

Dr Peter Wallace lighting the flame in Pinjarra during the torch relay for the Sydney Olympics in 2000. The torches were made from Alcoa aluminium.



The Smelter in the Park

Alcoa's commitment to protecting the environment is typified by the 'Smelter in the Park' development at Portland, Victoria. The Portland smelting operations occupy 100 hectares in the centre of a 600 hectare area which has been developed as a parkland, wildlife habitat and community recreational area. Alcoa worked with the University of South Australia to conceive the plan and has invested extensive effort and resources into the creation of this valuable public amenity. The Portland 'Smelter in the Park' is recognised worldwide as a benchmark in industrial and environmental harmony.

FACT:

Increasing use of lightweight aluminium in vehicle manufacture is improving fuel economy, resulting in lower overall greenhouse gas emissions.

