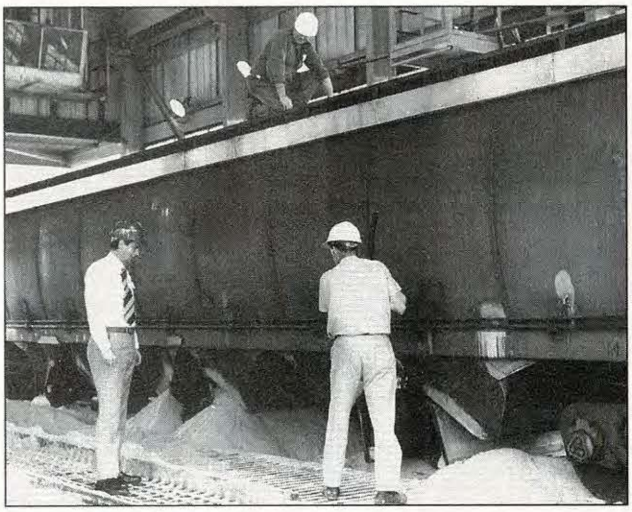
■ Receiving from Luya Julius road transport in 1960. Manager Charles Walker and chief engineer Lionel Doolan.

Bulk handling

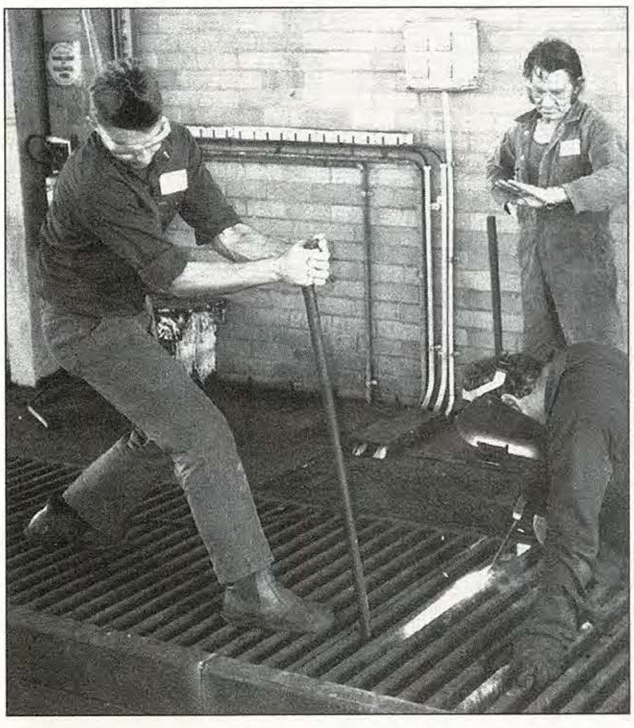
It was the introduction of bulk handling in the late 1950s and early 1960s which brought the end of shipping to the New Farm refinery. This was ironic because shipping adapts well to bulk handling.

But New Farm did not have deep water, the wharf or crane facilities to accommodate ships big enough to justify the expense. So bulk handling was confined to road and rail.

When it was first introduced, Queensland Premier Frank Nicklin called the bulk handling of sugar an important national development.



■ Raw sugar arriving at New Farm by rail. In the mid 1970s, manager Arthur Graham with Raw Store foreman Reg Paige inspecting the unloading of raw sugar into the receiving screws.



■ Engineers left to right: Eric Gourley, Graham (Sandy) Whyte and Doug Forbes converting the rail receiving area for road use in 1989.

Raw Sugar Store workers 1934.

Back row left to right: Tom Rowley (rigger), Jim Noble (cutting-in hand), Eric Lackey (stack hand), George Brooks (foreman), Charlie Swanson (cutting-in hand), Norman Bolt (cutting-in hand), Stanley Little (rigger mate).

Front row left to right: Oliver Crouch (weighbridge clerk), Eric Ingram (winch driver), Jack Hatton (sugar sampler), George Heywood (sack turner), Edward Wrench (stack hand), Robert Atkins (stack hand).

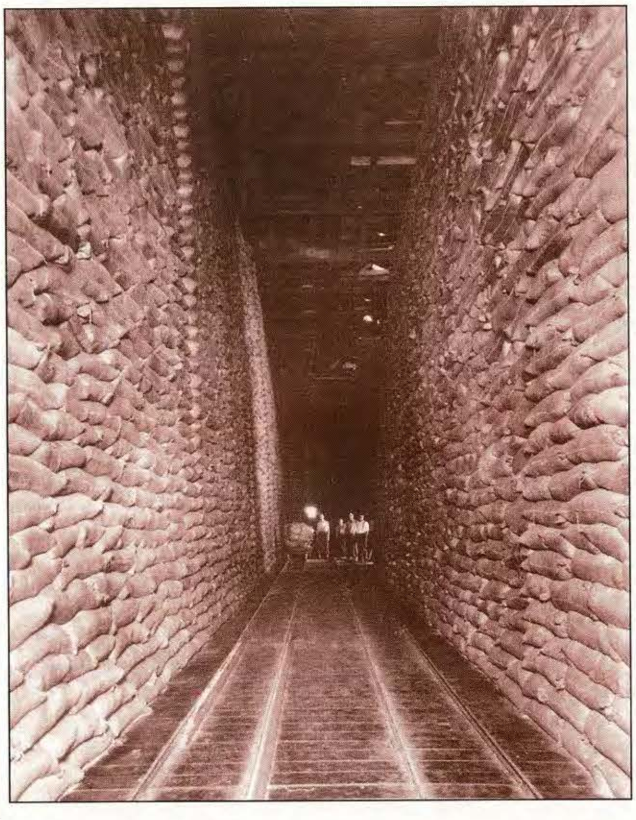
Now all sugar is handled in 28 tonne trucks which arrive every half hour at CSR during the crushing season.

Last year the contract for the bulk handling of CSR sugar was awarded to AZTEC Transport, who designed special trucks for sugar transport, in consultation with the Queensland Sugar Corporation.

The old trucks were simply large tip-trucks. The new ones are sealed and empty through a trapdoor in the floor – 'bottom dumpers'. This reduces the chance of foreign bodies getting into the sugar.

The new trucks also reduce the chance of moisture, one of sugar's greatest enemies, getting in to the product. They are also safer than the old tip-trucks which required careful balancing to avoid accidents. Disturbance to New Farm residents is minimised with all trucks travelling on one route along Commercial Road and away from the suburban backstreets.

■ A hall of sugar.



Working in the Raw Store

For the first sixty years at CSR, the receiving of sugar was very much a hands-on affair. Traditionally, workers built the bags of raw sugar into huge, perfectly-balanced stacks which rose forty feet up to the rafters.

Sugar was hauled up the stacks to the ceiling by a 'fall' which is a wire rope with a friction winch. Four men worked on top of the stacks.

"I used to pick up a 140 pound bag. Two men would put it on your shoulders and you would walk up and throw it on," said long-time CSR employee John Cuk.

It was hard work, according to ex-foreman Eric Ingram.

"You imagine backing up and getting a 140 pound sack on your back and carting it about twenty feet, then building the stack up."

■ To empty the hessian bags for processing wooden mallets were used to loosen the raw sugar which became solid during transportation by ship.

When the refinery was 'in season', there were around 200 men working in the raw store.

"There were no fat people. Everybody was skinny and you worked pretty well," said Norm Waye.

John Cuk remembers men coming out of the Raw Store to go to the showers.

"There was probably fifty or sixty men used to walk out half-naked, some totally naked carrying their little lap-laps in their hands. The manager used to say – tell those men to put some clothes on," John said.

Jack Tredwin remembers, "There were always men waiting outside the gate hoping to get a loading job."

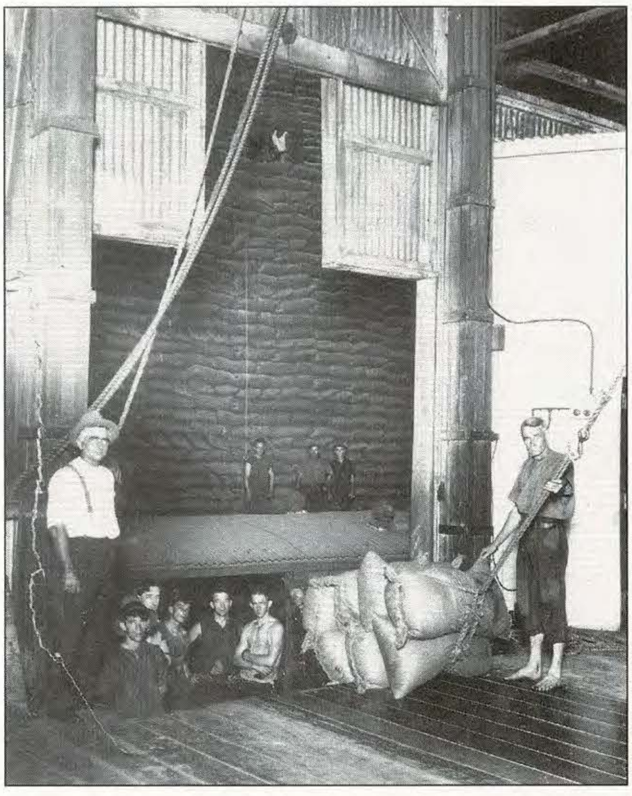
"Every Christmas, the foreman, Mr Brooks, would give all these men a job for the day so that they would have money for Christmas."

Since the introduction of bulk handling, instead of the dark towers of stacks, the Raw Store looks like an aircraft hangar storing pale mountains of loose sugar.

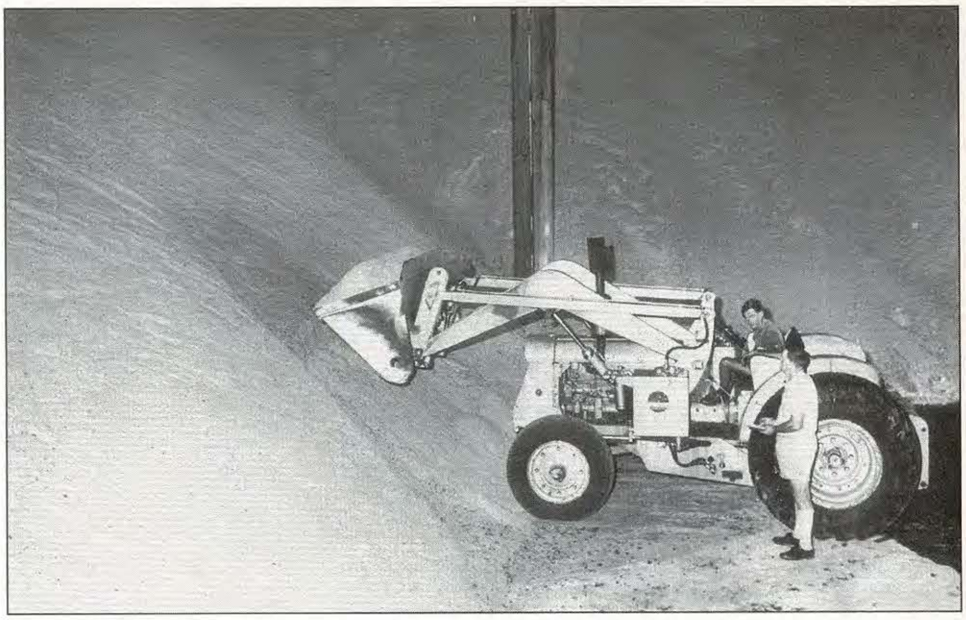
The raw sugar enters the Raw Store on a series of conveyors and a thrower sprays the sugar to create the sugar mountains.

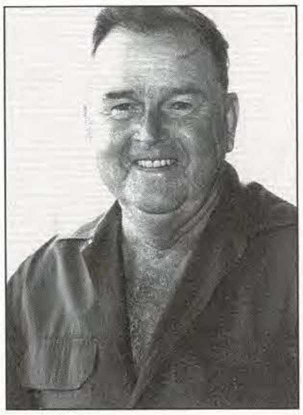
Front-end loaders continually move the sugar into the refinery for processing.

■ Sugar being taken out of a railway truck into the old store.



■ Right: front-end loader used in the 1960s and 70s for moving the raw sugar in the Raw Store.





The men wore nothing but a pair of shorts or a hessian lap-lap and bare feet.

"You couldn't wear anything else. You couldn't wear boots or you'd break your neck." – Eric Ingram

The refinery receives 7,000 tonnes of raw sugar every week during the crushing season from around July to November. Up to 2,500 tonnes of that amount is refined, with the excess going to the raw store.

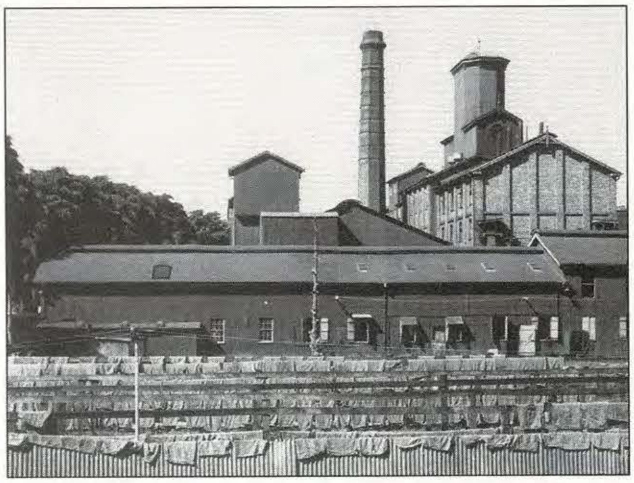
The way this excess is managed is vital, as sugar mills only crush sugar cane for five to six months a year and the refinery must have enough sugar in storage to carry over to the next season.

New Farm Refinery raw sugar receiver, Bob Kordic (Chicko) says it is also vital to monitor the sugar quality during the receiving process.

Samples are taken for the laboratory in Sydney and two samples are kept in case of any queries from the mills.

■ The Raw Store, not long after its extension for bulk use in 1961. The store has a capacity of 60,000 tonnes.

Handling the refined product



■ A common sight in the old days of CSR was the washed out and repaired sugar bags hanging on racks to dry.

Photo taken in 1946.

Once sugar has been refined, it must be packaged and stored for delivery. In the early days everything was done by hand from the packaging to the lugging of sugar bags, then delivery was done by George Cowin's horse and cart.

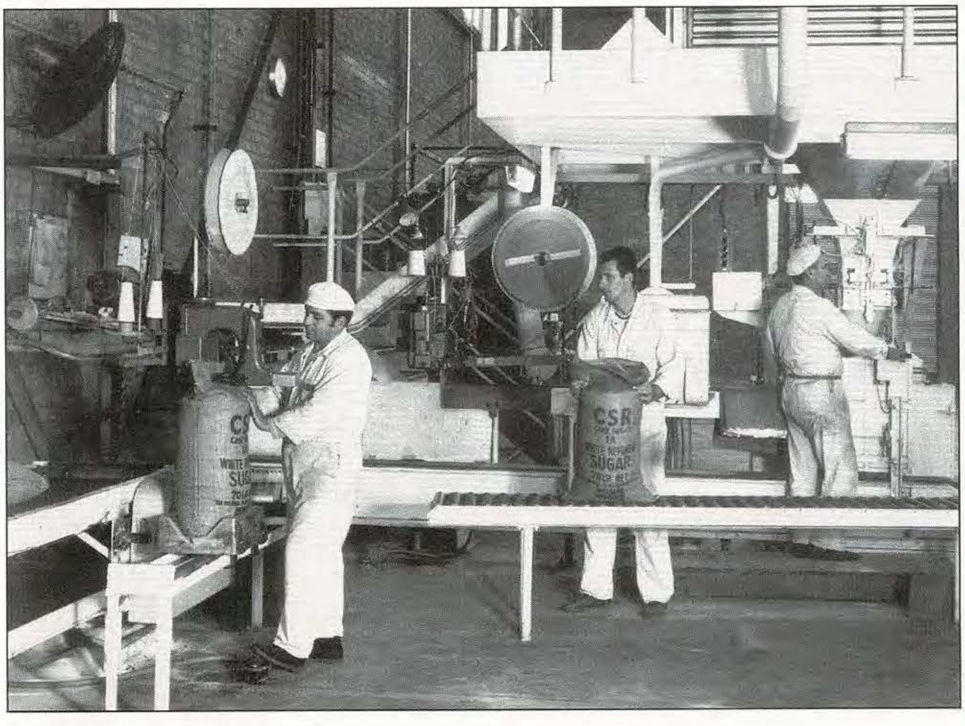
The sugar has two different markets – industry and the retail market and each requires appropriate packaging.

For retail consumers in the past, sugar would go into paper packets or tins for some products like golden syrup. Paper packets are still popular in the 1990s, although some products now come in plastic packs. Tins have recently been introduced as packaging for white sugar crystals going to markets in humid climates.

Industry needs sugar in much larger quantities. These days many industries receive their sugar in bulk from huge containers. But there is still demand for sugar in big sacks similar to the large hessian and calico bags of yesteryear.

The Bag Room was where young people made hessian bags by hand – considered a good job by CSR workers. There was also the Tin Shop where one and seven pound tins were made for packaging for syrup and treacle.

Old sugar bags were used for many purposes. The calico was of sufficient quality to be used for bloomers and aprons. A Sydney resident, Marjorie Biddle, made bedsheets by stitching six of the 70 pound bags together. Nell Wright, of Sherwood, is still using sugar bag pillow cases made in 1960.



■ General arrangement of plant used for packing 70 pound poly-lined hessian sacks. Left to right: John Politi, Neil Lightbody, Mick Puski. Photo taken in the early 1970s.

This line is now automated and feeds an automatic palletiser.

■ Above left: packaging brown sugar in the old brown sugar packing room. Caster sugar in the background.

This used to be the main area of employment for women in the refinery. These days women work in many occupations at the refinery.

■ Above right: the new brown sugar packing station which opened in 1992. Jenny Booth and Sam Lamari.

Periods of change: the 1960s and the 1990s

During the early 1960s, there were several technical innovations made in the handling of refined sugar. The changeover to bulk handling brought big changes to the packaging, storage and delivery of sugar for industrial use.

Rather than going into big sacks, the graded sugars would go into bulk storage bins for loading into containers.

The first delivery of bulk refined sugar was made on 14 January 1960 to COD cannery at Northgate, Brisbane.

Two years later, two Hesser packaging machines were introduced to put refined sugar into paper packets. These machines are still in use today. (See photo on page 37.)

During this time, packaged sugar began to be handled on pallets. Packets of sugar were assembled by hand onto pallets as they came from the packing line. The pallets were then picked up by forklift and stacked.

The other major innovation at the end of this period of change was the conversion to a conveyor system for moving sugar through the refinery.

The next major period of change has come in recent years with robotic palletisers, computerised packing systems and expanded warehouse facilities.

■ Packing golden syrup was a labour-intensive task – after the tins were filled, lids were manually placed on the tins. The lids were then pressed to secure them and placed on a rack for soldering. Finally the tins were packed into cartons.

The heavy, labour-intensive side of warehousing was eliminated with the introduction of palletising robots. In July 1992, the first palletising robot was installed in the DC (direct consumption) raw sugar section palletising 15kg and 25kg bags of raw sugar.

A further three robots were installed in December 1992 in the refined section palletising bags, boxes and bales. (See photo on page 19.)

The impetus for change came from the need to improve packing efficiencies and the introduction of health and safety laws in 1991. These required CSR to assess the risk of injuries to workers performing manual tasks, particularly high frequency manual lifting.

The assessment showed a potential risk of injury to workers moving packs of sugar from packing lines onto pallets.

■ Refined Warehouse built in 1960, designed for pallet method of handling.

Les McCormack stacking bags in the new warehouse. His brothers Alan and Ellis also worked at the refinery.

The great advantage of the robotic palletising system is flexibility – the robots are easily reprogrammed in minutes to handle new products or different sized packages. The robots need less space and are cheaper than other forms of palletisers.

They are also integrated with CSR's computer systems and future plans are to feed stock figures from the robots into the computer stock control system.

The robots have greatly reduced the risk of back and muscle injuries associated with palletising. Overall, says warehouse leading hand Laurie Andrew, the automation of CSR's packing and storage facilities, has doubled productivity. "You almost wore the fingerprints off your fingers handling the sugar bags all day," he said.

Delivering the refined sugar

In August 1893, George Cowin made a decision which kept his family business healthy for the next four generations.

CSR's New Farm sugar refinery had just opened and the tenders had been called for two carting contracts. One was to haul raw sugar from the railway goods yard at Brunswick Street in Fortitude Valley and the other was to deliver refined sugar to customers around Brisbane.

■ Refined sugar being loaded onto a Dennis solid tyre truck and horse-drawn wagon in the mid 1930s.

Far left beside the horse-drawn wagon: Bill Gray. George Cowin III is standing at the head of the horses. Left to right standing beside the truck: Paddy Hackett, Perc Peterson and Fred Hughton.

The horse-drawn wagon was used to haul raw sugar from the wharf to the refinery and also used to haul materials from the tin shop into the refinery until the mid 1950s when Bill Gray retired.

■ **The 1940s Cowin's fleet in the courtyard. In the background is the building which now houses the laboratory and the safety office.**

The raw sugar job looked appealing, but George Cowin figured the railway would soon be extended to New Farm so he bid for the refined sugar job and won the contract. He lodged a £10 bond against failure to deliver, which CSR returned 42 years later in 1936.

As George predicted, the railway was extended to the refinery in 1897. The raw sugar job ceased, but Cowin's deliveries of bags of refined sugar, plus general work, increased to the stage where his single horse and dray were no longer adequate.

With Brisbane spreading, in 1913 George Cowin bought a solid-tyre truck. He was the first master carrier in Brisbane to use motorised transport.

Although George Cowin died in 1928, his family kept the business going.

When the first bulk delivery of raw sugar was made in 1960, it was in a Cowin's tilt-truck.

■ **Filling bulk sugar in preparation for despatch during the 1970s. Left to right: Dennis Cronin, George Cowin III and Lindsay Fell.**

Although Cowin Transport still holds a tender with CSR, in July 1993 the Cowin family sold their interest in the business.

Nowadays, the service offered by Cowin Transport is supplemented by other transport companies, especially for delivery to other states.

Although road is the primary form of transport for sugar, some interstate deliveries are loaded into bulk rail containers which go by road to Acacia Ridge then by rail to the CSR Pyrmont depot in Sydney.

A natural part of life – sugar products and their marketing

In the one hundred years since the establishment of the New Farm sugar refinery, the variety of sugar products produced and packaged has changed enormously along with the ownership and marketing of refined sugar.

Until the late 1980s all sugar produced at New Farm was refined and sold on behalf of the Queensland Government. CSR was a toll refiner and in effect was paid by the Sugar Board for each tonne refined and sold.

In 1989 the industry was partially deregulated and CSR became refiners in their own right. With these changes in the sugar industry CSR's domestic market was threatened by other refiners, notably Manildra Harwood, Tate and Lyle, and overseas refiners.

This increased competition created the need for CSR to rationalise its refining capacity and strengthen the quality and service aspects of the business.

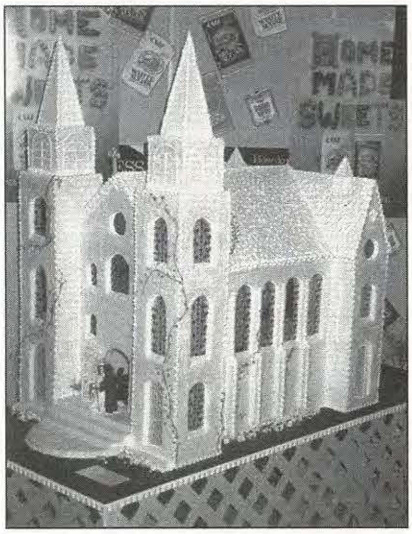
All employees at New Farm have had experience first hand of the changes to customer focus and satisfaction over the past few years.

The marketing of sugar over this period has reflected dramatic changes in lifestyle.

In the early days sugar was seen as a staple food – a necessity with little effort put into selling the product. Sugar was sold in 70 pound hessian sacks.

Over the years the market has become more sophisticated – the change from home-cooked food to prepared foods; the large increase in dairy products; and the demise of the corner grocer where you bought the family's sugar requirement by the pound from a large sack in the corner.

All these changes have led to the situation where packaging styles and sizes have been changed and new products developed for each market.



■ **Left: a marriage made in sugar.**

■ **Below: display of sugar products for the Sugar Court at the RNA Exhibition in the 1950s.**

■ Below: Nadia Mair, one of CSR's merchandisers, with a supermarket display in Wynnum North.

Merchandisers were first used by CSR Sugar in the mid 1980s.

Currently the market is split into two main categories: industrial and retail, with export sales making a third smaller category.

Selling sugar to the retail market

Retail covers the sugar on the shelves of the supermarket. Currently the range of products sold includes CSR brand white sugar in two pack sizes, a large range of generic packs of white sugar and also white sugar in cans.

Caster sugar, brown sugar, sugar cubes, coffee sugar, demerara sugar, raw and icing sugar along with golden syrup and treacle in various pack sizes to suit the market complete the range.

Ian Elliott, New Farm's retail sales manager, says the business of retail marketing revolves around brand protection or creating the preference for CSR sugar against generics.

This involves a myriad of related activities which includes on-pack promotion, store promotions, advertising throughout the media, building on relationships with the large supermarket chains and wholesalers, and the provision of recipe leaflets to encourage the use of sugar in the home.

Merchandisers are employed to ensure that these objectives are met at the store level.

In line with CSR's commitment to customer service and quality, the packaging of products and prompt delivery of correct orders is paramount to our continued success.

The fact that over 35 per cent of sugar products sold by CSR last year were retail sales highlights the importance of this category for New Farm.

Getting it right for industry

Peter Moon, New Farm's industrial sales and export manager says the focus has changed over recent years.

Marketing of sugar products has become more professional and customer-focused.

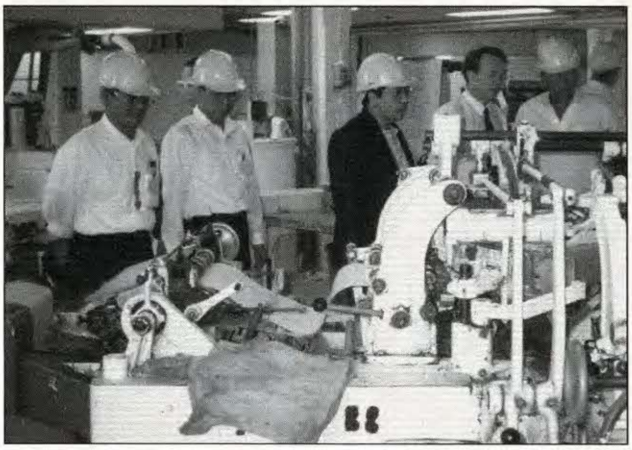
"We are now in the business of supplying customers with what they want, when they want it," he said.

This means tailoring products to the customers' specifications and requirements.

For example, New Farm has adapted to the brown sugar requirements of Kelloggs by producing sugar to their specification.

"We also produce liquid sugars for brewing purposes. These liquids are tailored to suit the individual brewer. In the earlier days the customer did not get a choice," Peter Moon said.

Over the years the consumer has been offered a whole new range of food and drink, with the advent of efficient refrigeration and transport opening up previously unobtainable markets.



■ Above: overseas customers on a visit to the refinery with Hesser packaging machines in the foreground.

As these markets developed, sugar deliveries from New Farm changed – from hessian sacks to pneumatic unloading of about 22 tonnes with no manual labour involved.

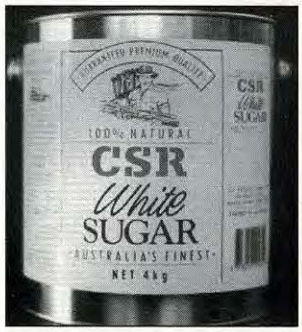
New Farm now supplies sugar in liquid tanks; 30kg, 25kg and 15kg bags; bulk crystal loads; intermediate bulk and whatever else the customer may want.

The marketing of industrial sugar, however, is not as easily defined as the retail business.

Marketing sugar

In recent years, CSR sugar has been marketed against the competition on the grounds of quality and service. The company has promoted the Australian sugar industry's advertising of sugar in general.

"We have also promoted our customers' finished products in order to increase their sales so we can sell them more sugar," said Peter Moon.



■ A recent packaging innovation – white sugar in tins for tropical climates to protect it from humidity.

The largest marketing effort has been against the anti-sugar lobby which ten years ago was very vocal and threatened the industry. The advertising consisted of a "FACTS" campaign, followed by the "natural part of life" theme, one of the most successful campaigns undertaken in the world.

Australia was the only western country to see a stop to the decline in sugar sales which was followed by an increase in sugar consumption. Whilst the anti-sugar lobby is no longer as vocal, the increase in diet soft drinks and the sales of artificial sweeteners are steadily making inroads into the sugar sweetener market.

Regrettably, the scramble for market share amongst the domestic refiners in Australia will allow these alternative sweeteners to develop their markets without facing as much opposition as they have in past years.

■ This campaign used the slogan "Make no bones about it" and featured an eyecatching skeleton.

Sending our sugar overseas

Over the past twenty years CSR has exported refined sugar to islands in the South Pacific.

This traditional island business has also changed with competition from several other countries. Singapore, Korea and Hong Kong are the alternative suppliers and these countries also buy Australian raw sugar.

This market is very small but in the past has helped with refinery economies of scale.

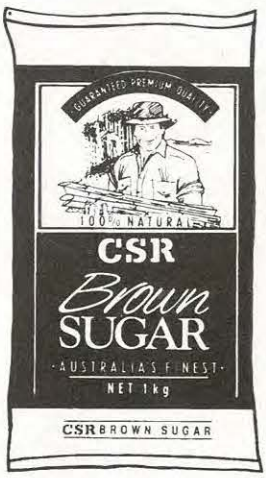
There are occasions when, due to an excess of capacity, we try to sell larger volumes of sugar overseas.

CSR has had some success with Hong Kong and the Philippines. Sales to these countries have highlighted the need to ensure quality as multinational companies, such as Dole and Delmonte, sent people to inspect New Farm refinery before taking delivery of sugar.

New Farm refinery does not produce every product that it sells. Because the volumes required are low, some products are produced only by one of CSR's three Australian refineries. For example, New Farm is now producing almost all of Australia's brown sugar.

Since the early 1970s, New Farm has also packaged and marketed raw sugar as a taste alternative to white sugar. Marketing over the next few years will position CSR as the sugar to purchase by offering the right mix of customer service, quality and price. Ian Elliott and Peter Moon agreed that they will be working closely with customers to ensure that CSR New Farm is the first choice.

■ **Above and below: packaging 1993.**



■ **Right: bulk liquid road tankers outside the main building. Photo by Max Dupain.**

■ **Part of the history of packaging – a familiar product.**

The Managers

The title given to the factory manager changed throughout the century. There was also a branch manager located in the city.

During the late 1970s, the branch office was relocated to the refinery and the branch manager's role was combined with the factory manager's role.

1893-1907 G E Holroyde

1908 C M Gunther

1909-1926 P Sylow

1927-1952 A M Epps

1952-1960 C S M Walker

1960-1963 A M Hooke

1963-1965 J O F Wittus

1966-1975 R J M H Robertson

1975-1978 A Graham

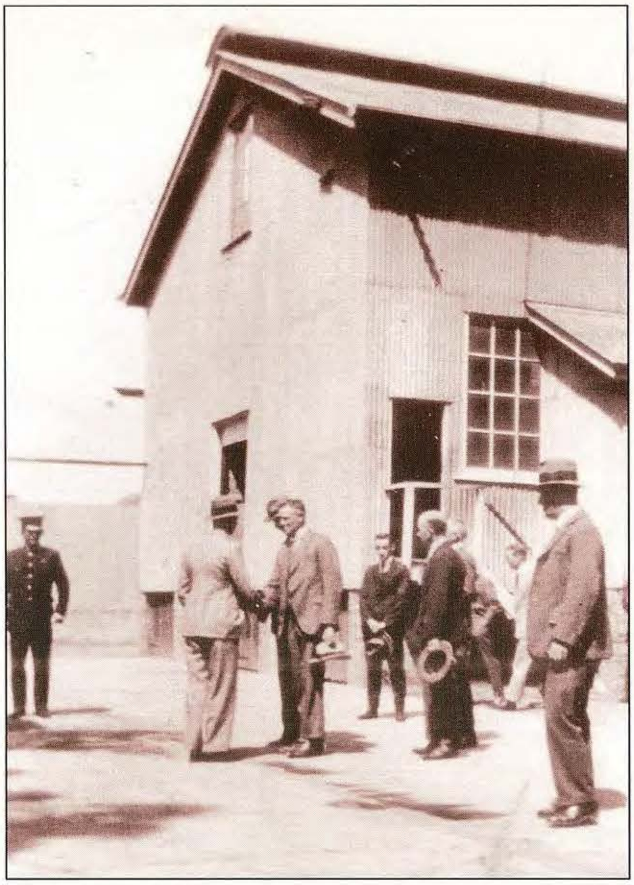
1978-1980 G Kells
(regional manager)

1980-1986 V B Aldrich
(regional manager)

1986-1988 D C Ebert
(regional manager)

1988-1991 P J White
(operations manager)

1991-present G D Cohen
(operations manager)



The Duke of York shakes hands with branch manager, Mr C W Brennan on a visit to the New Farm sugar refinery on 8th April 1927.

The Duke (later King George VI) and Duchess (now the Queen Mother) paid an unscheduled visit to the refinery.

The Brisbane Courier reported: "So active is the Duke, and so imbued is he with the Divine spirit of encouraging the uplift of humanity, and so earnest is his desire to find out for himself, by personal observation, how the toilers of the city fare, and the difficulties which beset industry, that he spent a considerable time going over the Colonial Sugar Refining Company's works..."

This photograph, from the Heywood family collection, was taken outside the original boiler which was dismantled in 1935 and used as an air raid shelter during WW2.

The Heywood family has a combined service of just under 150 years – Edward (34 years), son George (51), grandsons Jack (46.5), George Jnr (47), Ronald (5) and Norman (6).

Left to right: unknown, R Henderson (chief engineer), N Walsh (boiler stoker). Sitting: Edward Heywood (storeman).