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The magazine of the Fletcher Organisation
SUMMER 1977-78



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THE COVER: Our design features the word "Arrowhead" written in a variety of languages to symbolise the world-wide trading interests of members of the Fletcher group of companies.

OPPOSITE: Fletcher Mechanical, Auckland, supplied the air conditioning equipment to the AMP Society's handsome new Queensland State office building, close to the Brisbane River.

Produced for Fletcher Holdings Limited,
Private Bag, Auckland,
by David Brett Limited.
Editorial address: P.O. Box 37-388,
Auckland.

Exports Progress

The strongly rising trend in the value of export sales by members of the Fletcher Group was maintained in the first six months of the current financial year.

Spectacular growth had been achieved in the financial year 1976-77 when, reflecting a policy initiative from the chairman and managing director, Mr J.C. Fletcher, export sales of products and services rose from the previous year's \$5.3 million to \$11.4 million.

For the six months to September 1977 the total was \$6.68 million. This is a 39.45 per cent increase on the figure for the corresponding period of 1976. In addition, Fletcher agency initiatives in Russian trade resulted in more than \$30 million worth of New Zealand produce being sold to the Soviet Union.

All indications are that the full year's export total will be well ahead of the record figure achieved in 1976-77.

This special issue of *Arrowhead* is devoted exclusively to the export activities of divisions and subsidiary companies within the Fletcher Group which have contributed to this impressive achievement.

The goods and services they offer to the world cover an astonishing range for an organisation whose historical roots are in the construction and timber industries.

Wood products of all kinds continue to form a major export category, while Fletcher expertise in building and construction management is in demand in Pacific Basin countries and further afield.

The remarkable feature of Fletcher's export portfolio, however, is the variety and volume of manufactured goods and equipment which are finding overseas markets — products far removed from the traditional exports of a country famous for its grasslands.

Fletchers and New Zealand industry as a whole will be on show to the world at the

1978 New Zealand Exporters' Fair. More than 250 exporting companies will be displaying their products to overseas buyers in what will be the most comprehensive display ever of New Zealand exports.

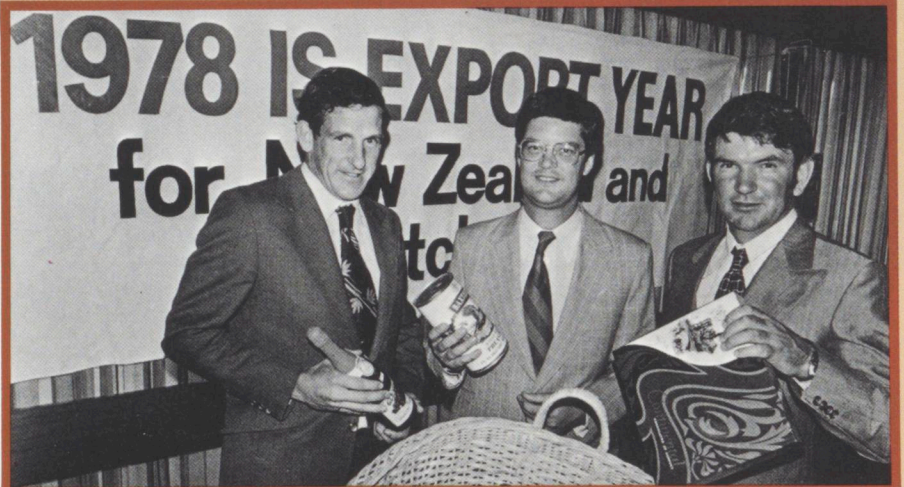
It will be held at Auckland's Ellerslie Racecourse on April 11-14 and will be officially opened by the Prime Minister, Mr Muldoon.

The fair is a co-operative venture of members of the New Zealand Export Institute. An organising committee of leading export executives, with Mr J.R. Fletcher, export director of Fletcher Holdings Limited, as chairman, has been planning the arrangements since late 1976.

As these plans began to take final shape, Mr Jim Fletcher told *Arrowhead*: "I have been greatly impressed by the enthusiasm and professionalism with which all concerned have risen to the challenge of making the 1978 Exporters' Fair the biggest and most rewarding event of its kind in New Zealand's overseas trading history."

BELOW: Mr J.R. Fletcher (centre), export director of Fletcher Holdings Limited, with representatives of Fletcher Forests, which was the winner of Group One in the Fletcher Export Award scheme. Shown with some of the contents of the Christmas hamper first prize are Fletcher Forests managing director, Mr Mike Andrews (right), and Mr David Evans, head forester.

Under the Award scheme, divisions and subsidiary companies are divided into three groups and points are allocated in each group according to export sales achievements. For the six months period to September 30, 1977, Fletcher Forests was the winner in group one, Fletcher Mechanical in group two and Fletcher Construction (Overseas) in group three.



Timber Sales at Home and

MSG Opens New Era

Export sales of machine stress graded timber to Australia topping the \$½ million mark by the end of August, 1977, paved the way for Fletcher Timber's introduction of MSG timber to the New Zealand market.

Sales to Australia from the company's Ngongotaha machine stress grader are continuing at high levels and encouraged the decision to install a similar machine at the Kopu sawmill. Output from Kopu will be marketed, in the first instance, throughout the top half of the North Island centring on Auckland.

Machine stress grading is a mechanical method of assessing the strength of timber and marking the product accordingly. Timber bearing the Fletcher MSG brand is colour coded according to its strength and gives the specifier a visible and unmistakable assurance that it is above a certain measured strength and stiffness.

The distinct colour markings used on Fletcher MSG timber also allow easy on-site checking against specifications and avoid disputes between supplier, specifier, builder and building authority. It also allows greater security in design — reducing the need for overstrength timber components to allow for inconsistent grading or invisible defects.

Fletcher Timber's marketing manager, Mr Geoff Whitcher, is enthusiastic about the prospects of MSG timber especially for designers.

"The whole point is," he says, "we are offering the discerning specifier a product that we are prepared to stand by."

Mr Whitcher continues: "Machine stress grading ensures that the strength of a particular grade is uniform, regardless of its origin. This is important, as our research team, headed by engineer Mr Derek Evans, tells us that there is great strength variation between similar looking timber from different forests.

"We also know that the range of strength within a single packet of MSG timber will vary far less than in a visually graded consignment," says Mr Whitcher, "and every consignment of Fletcher MSG timber of a given grade has a reliable specified minimum strength."

As well as providing a completely reliable method for grading timber from any source, machine grading has the obvious advantage of measuring the effect of hidden defects. It can detect zones of low density wood and give a more consistent and accurate assessment of visible defects.



For example, it has been noted that some correlations between defect size and strength are not very good. Some knots are locked into the wood fibres and detract little from the strength or stiffness of a piece of timber while others are isolated and, under stress, allow free movement of the wood around them contributing little to the strength.

The stress grading machine chosen by the Fletcher Timber Company is the Plessey Computermatic MK P IV (a) and two such graders have been installed at Fletcher mills. The first commenced operation at the company's Ngongotaha plant in March 1976 and was the first effective commercial stress grading machine in the country. The second is the recently commissioned machine at Kopu.

Fletcher's engineer, Derek Evans, describes how they work:

"Grading timber by mechanical means depends on the confirmed correlation between the stiffness of a piece of timber and its inherent strength," he explains. "By measuring how much the timber bends when subjected to a known force, it is possible to obtain an accurate indication of its stiffness and hence its strength. The Computermatic does just that."

"As each length of timber enters the machine," Mr Evans continues, "any natural curvature (bow) is monitored and fed into the control unit (computer). The timber then

passes between two rollers, 150 mm apart, and is subjected to a specified load by a third middle roller.

"The resultant deflection (bending) of the timber is also fed into the control unit and, by comparison with the natural bow, the ma-



TOP: Another load of Fletcher MSG timber bound for Australia is taken aboard a roll-on roll-off freighter at the port of Mount Maunganui.

ABOVE: Mr H.B. McInnes, export manager for Fletcher Timber in Auckland.

Abroad

chine can calculate the amount of deflection due to the applied load. This," Mr Evans says, "gives an indication of the timber's stiffness and strength at that point and the machine marks the timber with a short pulse of coloured dye, signifying the stress grade at that particular point.

"When the full length of the timber has been tested and colour-coded for strength, the machine's control unit codes the trailing end of the piece with a long pulse of the lowest grade overall, which then becomes the certified grade of that piece of timber."

Three machine grades will be available from the Fletcher Timber Company, although

the initial launch will concentrate on MSG No. 1 and MSG No. 2. The three grades are F7 (and better)

MSG No. 1 (and better)

MSG No. 2 (and better)

— "Engineering grade", colour coded blue.

— equivalent to or better than "No. 1 framing", colour coded black.

— equivalent to or better than "No. 2 framing", colour coded yellow.

F7 is considered necessary only for trusses of minimum 2 metres spacing and 12 metres minimum span. It has a basic working stress of 7M Pa (1015 p.s.i.).

Fletcher MSG timber has already been

widely approved by appropriate authorities in New Zealand including the Housing Corporation. It has a BRANZ certificate and all major Australian housing authorities approve of timber machine graded to the appropriate part of the Fletcher Product Standard. Implementation of this standard is under the direction of Derek Evans, a chartered and registered engineer, who has been a pioneer of mechanical grading in New Zealand. And daily verification of the accuracy and reliability of the grading is ensured by operator tests and destructive tests of graded samples in an independent Telarc-registered laboratory.

Sells Timber With Flair

Mr Clarrie McCleary is the sort of chap who combines a thorough and down-to-earth knowledge of timber with the flair of an entrepreneur.

Clarrie is Fletcher Timber's South Island export manager and has been with the Fletcher organisation for over 40 years. He has been involved in the timber side of the business from the start and was a party to

the decision to go into timber in the first place.

More recently, Clarrie spent eight and a half years in Australia. The friendships and business contacts he made during those years give him a head start in developing new export business in New Zealand's most important market. And it was Clarrie's entrepreneurial flair that brought together a number of South Island sawmillers to export under the Fletcher flag.

Fletcher Timber is continually probing new export sales possibilities, many of which develop too quickly for the specified product to be supplied ex-stock. This is where the

other companies' participation counts.

Once Clarrie has double checked his own knowledge of what his company can supply, he then contacts other sawmillers inviting them to quote prices. If the customer agrees, Fletcher Timber dispatches the order on behalf of the local sawmiller who benefits from the sale and earns the related export incentives. As the agent, Fletcher Timber receives an agreed commission from the New Zealand company it has helped.

The converse also applies. If a local firm has an oversupply of a certain species, grade and dimension of timber, Fletcher Timber seeks out a customer and acts as agent for the sale. This gives the other sawmillers in the South Island an opportunity for export business that they simply could not afford to go hunting for on their own account.

Clarrie's search for markets is not restricted to Australia or even the Pacific:

"I don't believe in having all our eggs in one basket", he says.

"We are on the lookout for customers in the USA, Europe, the West Indies, South-East Asia and all round the Pacific. And, thanks to our relationships with other sawmillers and wood processors, we can offer an extensive catalogue of products."

An idea of the variety of timber products currently being handled by Clarrie can be gained by glancing around his crowded office. There are brochures for sculptured panelling from McAlpine Timber Industries, samples of turned shelving systems from Craftware, specifications for planed or rough-sawn match lining and sales pamphlets for Fletchercraft outdoor furniture.

Fletcher Timber is in the process of filling



LEFT: Mr Clarrie McCleary, who heads Fletcher Timber's drive for exports from the South Island. The bookshelf supports he is holding are part of an export line turned from native timbers.

an order for 88,000 linear metres of 100mm x 50mm dressed Kahikatea in short pieces that are of little interest to the domestic market. These are going to an Australian toy manufacturer. Special permission was required to export this wood untreated so that young "end-users" could safely gnaw away at the toys to their hearts' content. The wood is being sawn at Fletcher Timber's Karamea sawmill and is dried and dressed at the company's Oamaru joinery and processing plant.

Fletchercraft garden furniture for Australia is manufactured from Kahikatea at Fletcher Timber's Oamaru plant and is being sold in Australia through the department store chain of Grace Brothers. Ultimately, this

business could be furthered through the Fletcher Group Australia Ltd.

An inquiry from Belgium for "New Zealand Cherrywood" (silver beech) has been passed on to Port Craig Timber Co. Ltd to consider whether that firm can supply to the specification at the right price. Choice of the description "Cherrywood" is deliberate, as inferior European beeches have given this species a poor reputation and one of the requirements is that the New Zealand wood be of a noticeably pink coloration — a characteristic of South Island silver beech.

Clarrie McCleary points out that, during the past year, more than half the radiata exported by Fletcher Timber from the South Island went from other sawmillers and most

of this was added-value product. That is, it was dried, dressed and often recut to clears (knot-free lengths).

It can be seen that export sales through this co-operative scheme are of no small significance to Fletcher Timber and at least as important to the other companies involved.

BELOW: *The Minister of Forests, Mr V.S. Young, feeds the first stick of MSG timber for the New Zealand market through the computerised stress grading machine at Fletcher Timber's Kopu mill. Keeping an eye on the Minister's work is machine operator Barry Priest.*



Fletcher Film Helps Boost Export Drive

To assist its export drive, the Fletcher Group has gone into the film business. Some "stills" from the film are shown on pages 9-12.

"The Fletcher Film" has rapidly become a basic tool in the Group's overseas sales efforts, for it is an attempt to inform customers and business associates about New Zealand itself, the Fletcher Group as a whole, and the wide range of products and services that Group companies have to offer.

Since the first prints were delivered early in 1977 it has been shown in Greece, Italy, Spain, France, England, Egypt, Yugoslavia, Russia, Roumania, Poland, Saudi Arabia, the Gulf States, Korea, Japan, Australia, Fiji, the United States, Brazil and Argentina.

Many of the overseas screenings have been of shortened, ten-minute or four-minute versions which were specially adapted to assist specific sales campaigns or to support

discussion on possible joint ventures.

The film is being permanently set up at Fletcher House for screening to overseas visitors and other interested parties and it is intended to make additional prints available to New Zealand's overseas trade commissions.

Production was by the Auckland-based film-makers Reynolds Television Ltd, working in collaboration with the Public Affairs Department of Fletcher Holdings.

Greenhouse Beats The Elements

In temperate countries such as New Zealand horticulturists use greenhouses to heat the atmosphere. In the tropics interior temperatures can be lowered by the same means.

Either way, the greenhouse provides a method of controlling the environment to achieve ideal growing conditions.

Fletcher Brownbuilt, manufacturer of the New Zealand-developed Fletcher Greenhouse, is taking advantage of this basic horticultural premise.

The company has recently exported Fletcher Greenhouses to Fiji and Toowoomba, Queensland.

The 268 sq. metre (2880 sq.ft.) greenhouse supplied to Storey Farms in Toowoomba was shipped c.k.d. and assembled on site with unskilled labour.

Fletcher Brownbuilt's Australian agent, Controlled Environment Structures, of South Australia, reports that the client is extremely satisfied with his new installation after six months' use.

The Fijian Department of Agriculture Research Station at Sigatoka purchased a 180 sq. metre (920 sq.ft.) Fletcher Greenhouse for experimental growing.

"It's almost like selling fridges to Alaska," says Fletcher Brownbuilt general manager, Mr Trevor Hunt. "But it is a basic horticultural fact that a controlled environment provides much improved growing results."

The modular Fletcher Greenhouse consists of steel framing clad in a sheathing of Durolite, a type of fibreglass widely used in the building industry.

In greenhouses, Durolite allows better use of available light for growing purposes. A special polyvinyl fluoride surface treatment called Tedlar is applied to the Durolite and filters out resin-damaging ultra-violet light rays while maintaining high visible diffused light levels.

Another attraction for growers is the fact that the sheathing in Fletcher Greenhouses won't be shattered by hail or high winds.

TOP: Flower growers have reported up to 15 per cent higher yield through the controlled environment of the Fletcher Greenhouse. Users have the choice of two ventilation systems — the fan and pad installation or a vertically operated ridge vent system.

BOTTOM: The Fletcher Greenhouse, with its galvanised steel framework and strong Durolite sheathing, is an engineered structure designed to ensure long maintenance-free life.

Durolite sheets produced in various profiles are in themselves one of the company's export products. Regular visits by export sales manager Mr John Arnott to Fiji and other Pacific Basin countries have

produced steadily improving results.

The fibreglass sheathing is used to provide natural light to working environments, and with an upturn in the building industry in Fiji, export prospects are good.



Varied Products From South Isla

Well over half the annual production of Fletcher Agriculture is exported. Its export business, mainly with Japan, is based on crops grown on the fertile plains of Canterbury, Otago and Southland.

The company has contracts with its farmer growers covering more than 12,000 hectares of linseed, lucerne and oilseed rape.

Oilseed rape is the basis of a new industry

for New Zealand, the production of edible cooking oil, which Fletcher Agriculture has developed and is now marketing under the brand-name Sunfield.

Fletcher Agriculture's linseed crushing plant in Dunedin produces a full range of oils used in the paint industry and also in the manufacture of wallboards, printing inks, sealants and adhesives. In addition, whole seed from the Canterbury linseed crop is

exported direct to Japan for processing there.

Japan is the principal market for protein-rich dehydrated lucerne stockfeed pellets produced at processing plants at Winslow and Hinds, in the heart of mid-Canterbury's lucerne country.

A regular exchange of visits between Fletcher Agriculture and the giant Tokyo-based agricultural co-operative Zen-Noh ensures good communications with the company's chief customer for its lucerne products.

Fletcher Agriculture's marketing manager, Mr Bob Davidson, says the company values its association with Zen-Noh, which in turn has expressed the desire to maintain a secure source of animal feed through a long-term buying contract.

New equipment has recently been developed at the Hinds plant to enable Fletchers to become more involved in lucerne processing, and has resulted in the company successfully entering the sun-cured lucerne export market.

Dehydrated lucerne requires the crop to be processed directly from the field, whereas sun-cured pellets are manufactured principally from baled lucerne hay.

Mr Davidson says an important export market for the sun-cured product for use as animal feed has been developed, mainly in Japan, and the company intends to process and export about 4000 tonnes of it this season.

This year has not been a good one for lucerne prices, chiefly because Canada has had a bumper crop following a good summer. Mr Davidson said this has tended to depress prices for Fletcher's lucerne products, as with world prices for other feed products.

"Even so," he added, "acknowledging that our prices are affected by fluctuations in world prices, we do know that demand for our lucerne products is strong and that our Japanese customers appear keen to maintain an on-going supply arrangement with us.

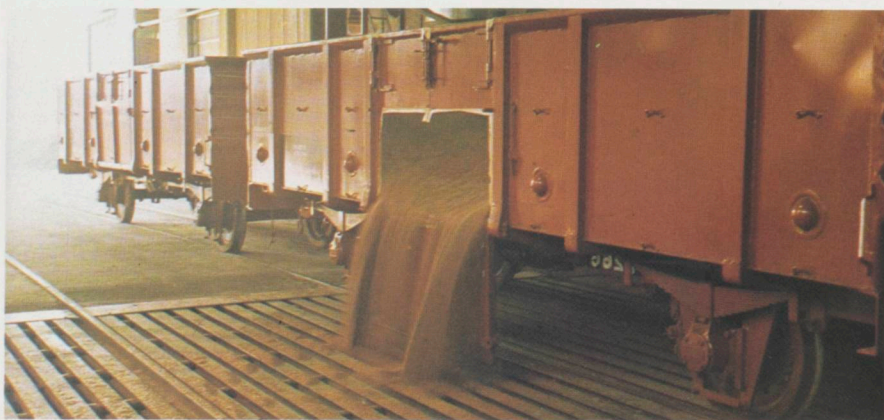
"The challenge this year lies in improving operational efficiency and maximising production volume so that we may explore further additional markets."

TOP: Linseed being unloaded into Fletcher Agriculture's bulk intake hopper.

MIDDLE: Linseed expeller cake, a nutritious stockfeed base.

BOTTOM: Pure linseed oil, which has a variety of industrial uses.

OPPOSITE PAGE: Harvested lucerne ready for processing at Fletcher Agriculture's plant in South Canterbury.



nd Crops



Construction And Management Services in Demand Overseas

As New Zealand's biggest and most experienced commercial building organisation, Fletcher Construction finds a continuing demand for its skills and services among developing countries.

Around the Pacific Basin a great variety of public and commercial projects has been carried out by Fletchers. The Group's civil engineering and construction resources are now available on a worldwide basis.

As many developing countries assess their needs for new hospitals, schools, hotels, industrial installations and so on, they are commonly faced with an abundance of local labour but a scarcity of know-how and of overseas funds.

They need to maximise the use of their own labour and building materials, but expert professional services must be imported.

Consequently, though Fletchers are equipped to carry out full contracting services, their contribution is sometimes in the areas of design, engineering and project management.

An example of a venture carried out in partnership with a local organisation is a contract which the joint venture company, Reddy-Fletcher Contractors, has in hand for

the Suva City Council, Fiji. The \$F1 million-plus contract called for the erection of downtown Suva's first multi-storey car park.

The building, due for completion early in 1978, will offer parking on four levels. What will make it distinctive from its counterparts in more sophisticated cities are a native handicrafts centre and produce markets occupying the ground floor of the car park and the whole of an adjoining, open-sided single-storey market building.

It is one of several ventures carried out jointly by Fletchers and their Fijian partner, Reddy Construction. The biggest of these, completed in 1976, was the building for the Fiji Electrical Authority of the \$F1.3 million power station at Vuda Point, near Lautoka.

A major project by Pacific Islands standards, expected to cost around \$F2 million, is being carried out for the Fiji Sugar Corporation at its sugar mill near Labasa, on the island of Vanua Levu.

The company has a project management contract for extensions to facilities at the mill site, including erection of a 30,000 tonne capacity bulk sugar store, construction of a 200-metre long wharf and installation of belt-conveying and loading equipment.

Sepi Australia Pty Ltd, outpost of an Italian firm of engineers and architects, designed the complex and the FSC engaged Fletchers as project managers.

The storage shed has a floor covering nearly 5000 square metres (53,000 sq.ft.) and is of steel portal construction. The steel frames were made in the client's own workshop, with Fletcher engineers supervising the fabrication and erection.

A stratum of hard coral not far below the crust of the seabed posed particular problems in ensuring the stability of the wharf and loading platform. Sepi designed a system of concrete and hollow steel piles and for added stability provided for a 1.5 metre (about 4½ ft) thickness of concrete for the floor of the loading platform.

For added protection, an unusual pneumatic fendering system, resembling nothing so much as a floating rubber sausage, will be installed to act as a cushion between ship and wharf.

A school in Malaysia, hotels in Micronesia, harbour works, commercial buildings and a sawmill in Western Samoa, schools, hostels, houses and a hospital in the New Hebrides — these are just some of the overseas projects successfully completed by Fletchers.

A full range of professional, technical, management and supervisory skills is readily available through the Fletcher organisation. For example, architects and engineers of the Fletcher Design Group may work closely with an overseas client from the conceptual stage of a new project.

Fletchers' Technical Services Division is well equipped to lend specialist assistance, and the resources of the subsidiary company Beazley Homes Ltd, New Zealand's largest house builder, can be drawn upon for multiple housing projects or the provision of accommodation units for camps, hostels and school buildings.

Pre-cut timber frames, trusses and laminated beams, panels of plywood or particle board, long-run roofing and, indeed, a full range of building materials can be prepared and assembled in New Zealand and dispatched to the site in a single shipment, thereby avoiding delays.



LEFT: Two major construction jobs in Fiji in which Fletcher Construction is closely involved are (above) Fiji's first multi-storey carpark and (below) extensions to the Fiji Corporation's facilities at its sugar mill near Labasa. Shown under construction is the bulk sugar store, which will have a capacity of 30,000 tonnes.

Fletcher Group Exports

A Buyers' Guide

Beazley Homes

See Fletcher Residential

Fletcher Agriculture

Products: Linseed expeller cake, whole linseed, linseed oils, lucerne meal, lucerne pellets.
Contact: R.G. Davidson, export marketing manager.
Address: P.O. Box 284, Ashburton. Phone 89-199. Telex 'Fletagas' NZ4337.

Fletcher Brownbuilt

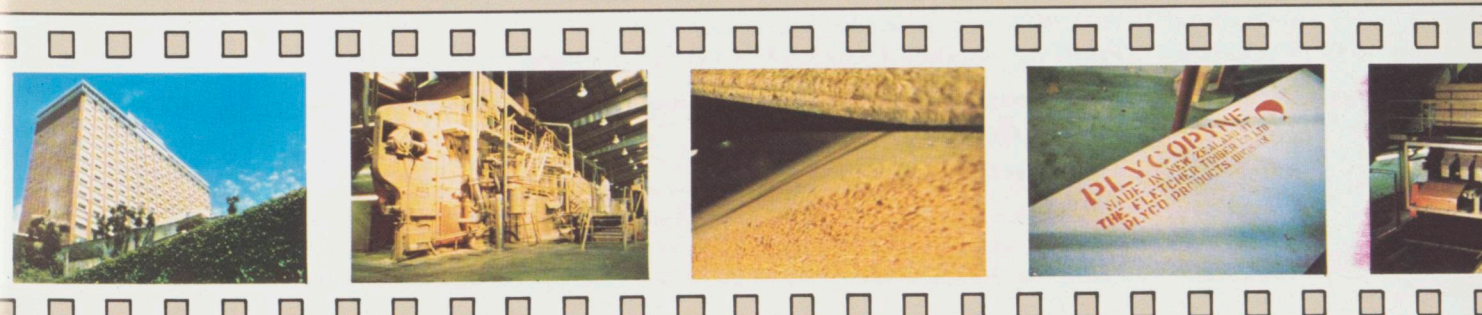
Products: Longrun metal roofing, Fletcher Greenhouses, Durolite fibreglass sheeting.
Contacts: T.G. Hunt, general manager; J.M. Arnott, export sales manager.
Address: Private Bag, Auckland. Phone 595-019. Cables 'Flemake'. Telex Fletcher NZ2441.

Fletcher Construction

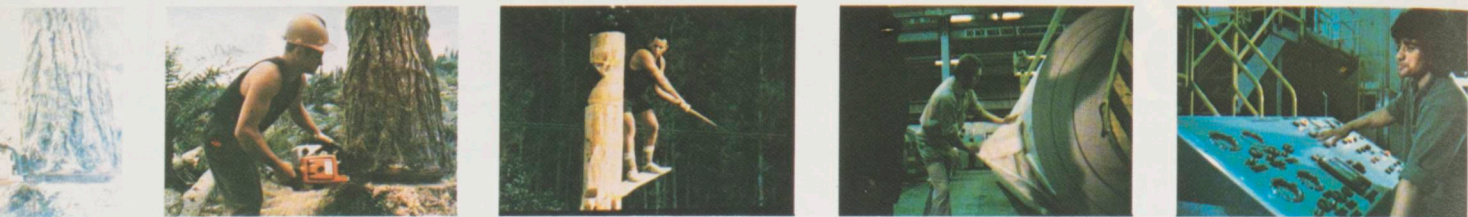
Service: Construction project management, building & civil engineering contracting.
Contact: C.F. Jamieson, overseas manager.
Address: Private Bag, Auckland. Phone 599-979. Cables 'Flebuild'. Telex Fletauck NZ2441.

Fletcher CSP — Galvanising

Products: Armco Multi-plate & Nestable culverts & structures, corrugated or pressed steel products, Flexrail highway barriers.
Contacts: G.F. Browne, general manager; S.J. Antunovich, export sales engineer.
Address: Private Bag, Auckland. Phone 592-869. Telex Fletpur NZ2684.



The illustrations on these four pages, showing a variety of Fletcher Group activities, are all taken from the Fletcher film.



Fletcher Duroid

Products: Building papers & roll products, Duralfoil reflective foil insulation, Dampgard concrete underlay, roofing membranes, dampcourse membranes.

Contact: R.N. Gardiner, sales manager.

Address: Private Bag, Auckland. Phone 599-979. Cables 'Flemake'. Telex Fletcher NZ2441.

Fletcher Engineering Products

Products: Power tools, winches & metalworking equipment, including hacksaws, high-speed saws, guillotines, box & pan folders.

Contacts: N.J.P. Hewett, general manager; J. Klouwens, sales manager.

Address: P.O. Box 62-014, Sylvia Park, Auckland. Phone 572-099. Cables 'Fleteng'. Telex NZ1110.

Fletcher Forests

Products: Sawlogs, also lamb, beef & wool.

Contact: M.J. Andrews, managing director.

Address: Private Bag, Taupo. Phone 2840. Cables 'Fletfor'. Telex NZ21658.

Fletcher International

Service: Import-export trading organisation specialising in trade with the Comecon countries.

Contact: C.E.S. Caro, general manager.

Address: P.O. Box 52, Auckland. Phone 78-445. Cables 'Flexport'. Telex Fletcher NZ21341.

Fletcher Mechanical

Products: Air conditioning & air handling equipment, chillers, refrigeration compressors, condensing units, grilles & diffusers, pneumavalves. Supply & contract installation.

Contacts: W.J.C. Wilkinson, general manager; D. Lawry, sales manager.

Address: Private Bag, Auckland. Phone 599-979. Cables 'Manuwether'. Telex NZ2441.

Fletcher Residential

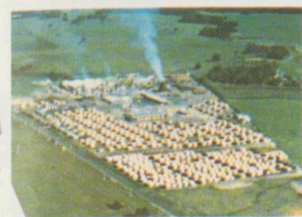
(includes Beazley Homes Ltd)

Products: Relocatable construction camp accommodation units; modular panel & pre-cut houses & buildings.

Contacts: J.D. Heise, managing director, Beazley Homes Ltd.

Address: Private Bag, Mt Maunganui South. Phone 54-009 Tauranga. Cables 'Mountimb' Tauranga. Telex NZ2692.

Or D. Hitchcock, managing director, Fletcher Residential Ltd; G.M. Furness, export marketing manager. Private Bag, Auckland. Phone 599-979. Telex NZ2441.



Fletcher Steel

Products: Reinforcing steel, straight & fabricated structural sections, flat rolled products, pipe, tool & alloy steels, fasteners, reinforcing mesh.

Contacts: T. Donaldson, Auckland area manager; D.J. Dalton, export supervisor.

Address: P.O. Box 303, Auckland. Phone 592-869. Cables 'Flesteel'. Telex NZ21032.

Fletcher Timber

Products: Machine stress graded & visually graded framing material; mouldings; dressed or rough sawn dry timber; furniture components; kitset furniture; Tanalith treated pine; Leith interior doors; green sawn case grade timber; pre-cut dwellings; engineered roof truss components.

Contacts: G.A. Whitcher, marketing manager; H.B. McInnes, export manager; D.R. Higgins, export services.

Address: P.O. Box 9033, Auckland. Phone 544-623. Cables 'Fletdis'. Telex NZ21072.

Or C.E. McCleary, South Island export manager. P.O. Box 492, Christchurch. Phone 487-059. Cables 'Fletdiv'. Telex NZ4959.

Fletcher Wood Panels

Products: Bisonboard, StructEX & other particle boards; plywood & doors; Plyco brand products.

Contact: A.B. Mitchell, export sales manager.

Address: P.O. Box 17-201, Greenlane, Auckland. Phone 591-259. Cables 'Fletply'. Telex NZ2811.

Kelly Automotive Products Limited

Products: Automotive parts & accessories; ball & roller bearings.

Contacts: P.H. Giles, general sales manager; A.D. Giles, bearing division.

Address: P.O. Box 30-116, Lower Hutt. Phone 695-118, Wellington. Cables 'Kelauto' Wellington.

New Zealand Wire Industries Limited

Products: Bright wire (for nails, clouts, reinforcing mesh, thread rolls, deformed & plain reinforcing wire for use in concrete work); galvanised wire (for line wire fencing, barbed wire, chain link netting, boundary fencing); annealed wire (for bag ties, tying reinforcing mesh & rods); other specialised wires on request.

Contact: Richard Bramwell, export sales manager.

Address: P.O. Box 22-198, Otahuhu, Auckland. Phone OH 69-048. Cables 'Enzedwire'. Telex NZ Wire NZ2883.

Nylex Fletcher Limited

Products: Vinyl-coated fabrics, including tarpaulins, wall & ceiling materials, furnishing materials; PVC sheet & film; rigid PVC.

Contact: A.G. Bullock, export manager.

Address: P.O. Box 58-001, East Tamaki, Auckland. Phone POP 45-149. Telex NZ2733.

Export Products Index

In the following index of export products and services available from members of the Fletcher Group, the number alongside each listing represents the company or division responsible for that item.

Key: 1 = Fletcher Agriculture. 2 = Fletcher Brownbuilt. 3 = Fletcher Construction. 4 = Fletcher CSP — Galvanizing. 5 = Fletcher Duroid. 6 = Fletcher Engineering. 7 = Fletcher Forests. 8 = Fletcher International. 9 = Fletcher Mechanical. 10 = Fletcher Residential & Beazley Homes. 11 = Fletcher Steel. 12 = Fletcher Timber. 13 = Fletcher Wood Panels. 14 = Kelly Automotive. 15 = NZ Wire Industries. 16 = Nylex Fletcher.

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Corrugated steel products 4
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Doors 12, 13
Dressed timber 12
Duralfoil reflective insulation 5
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ENGINEERING design 3

Engineering products 6

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Fibreglass sheeting 2
Film, PVC 16
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Steel products, corrugated or pressed 4
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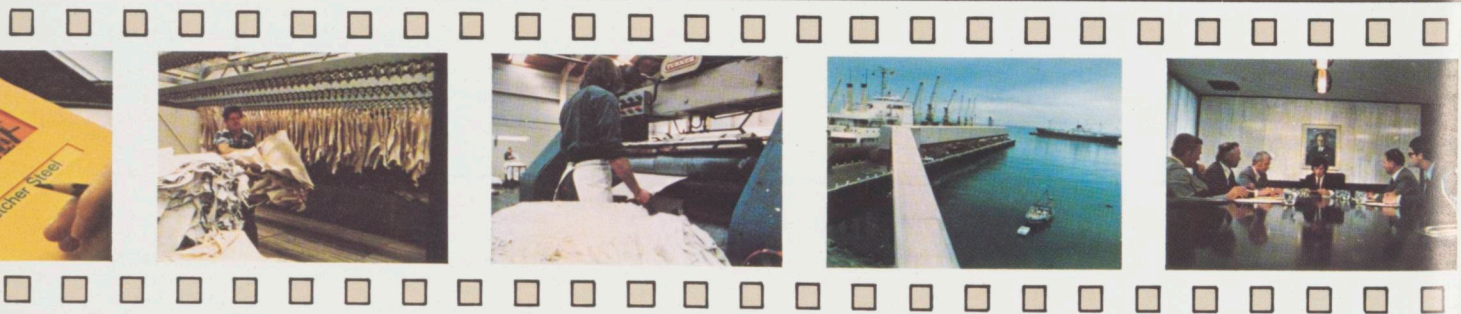
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Wall panels 13
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New Zealand-Made Wire Has Many Uses

Supermarket trolleys in the United States; crayfish pots in Australia; reinforcing mesh in New Guinea. These are just a few of the many products manufactured from New Zealand-produced wire.

For New Zealand Wire Industries Limited (87.5 per cent owned by Fletcher Holdings), 1977 has been a year of consolidation after buoyant sales and full order books throughout the latter part of 1976 and early 1977.

During the last financial year the company doubled exports of galvanised wire, mainly to the United States, and with continued active promotion of galvanised, bright and annealed wires, the export market looks extremely promising.

"In the United States, as in any big market, there's always room for competition," says marketing services manager, Vicki Brewster. "Because we are able to guarantee top quality products and meet delivery deadlines, we've established an excellent reputation on the North American market."

New Zealand Wire Industries has been exporting to the United States for four years now, and the area has become, in that time, the company's biggest export market.

"Competition is fierce," Mrs Brewster told *Arrowhead*, "and things aren't helped by the steel glut in the U.S. However, with a comparatively buoyant economy, especially in the building sector where a lot of other countries are feeling the pinch, we've been able to maintain a very pleasing momentum in galvanised wire sales."

The construction industry has had a marked bearing on the sale of New Zealand Wire's products to the Pacific Basin. Expansion of the building industry in many island economies has attracted the company's attention. Sales manager, Mr Richard Martin recently spent some time island hopping on a successful market assessment trip.

"Especially encouraging is the island governments' desire to develop their countries," he reports. "With this policy of growth, the Pacific islanders will be requiring substantial quantities of bright wire for the expansion of their building industry."

"There is also an expanding market for galvanised wire, to be used in the subdivision of plantations and farms."

Wire exports to Hong Kong have been on a regular basis for some time, and in Asia and the Western Pacific sales have been pleasing.

Export promotion in Australia received a boost in October when New Zealand's champion fencer gave a demonstration of Kiwi fencing techniques at the Elmore Field-days in Victoria.

Mr Albert Schuler won the trip to Australia as first prize in the New Zealand Wire Industries-sponsored competition at Mystery

Creek, Hamilton, in June. He uses the company's products exclusively for demonstration purposes.

BELOW: A shipping container is filled with wire made at Otahuhu, Auckland, for the American market.



Unloved Native Plant to Become

A homely native plant, once regarded as a weed, holds the key to development of a multi-million dollar export industry in which the Fletcher Group is playing a leading role.

The industry represents an entirely new source of export earnings, as well as a worthwhile alternative land use for farmers in North Taranaki.

The basis of the industry is the cropping of a formerly neglected shrub and the extraction from its leaves of a raw material used in the manufacture of pharmaceutical products.

The shrub, variously known as *Solanum aviculare*, *bulli-bulli* or by its Maori name of *poroporo*, is now being cultivated in Taranaki's rich dark loam. The first substantial crop was harvested in the spring of 1977.

Like earlier trial crops, it has been processed at a pilot plant at Bell Block, New Plymouth. With the feasibility of the project proven in extraction experiments, construction will begin shortly of a full-scale processing plant at Waitara.

It is expected to be in full production by mid-1979, while plantings of the crop will be extended progressively until 1981. After processing the entire output will be exported to earn for New Zealand some millions of dollars a year in foreign exchange.

The chemical substance contained in the dark green and spiky leaves of the *poroporo* is *solasodine*, which can be used as an intermediate material for the synthesis of various steroid drugs.

Steroids have applications as diverse as

fertility control, the relief of rheumatoid arthritis, and protecting the body from stress, shock and inflammation.

A joint venture company, *Solanum Extraction Industries Limited* — "Solexin" for short — has been formed by Fletcher Holdings Limited, Ivon Watkins-Dow Limited, of New Plymouth, and Diosynth, an affiliate of the Akzo Pharma Group, of the Netherlands.

IWD pioneered experimental plantings of *poroporo* some 12 years ago. More recently cropping trials and extraction experiments by Fletcher and Diosynth have enabled the New Plymouth company's agronomic research work to be taken to commercial realisation.

Fletcher's agriculture division has developed the cropping and harvesting



ABOVE: Jan Kloosterman admires a one-year-old crop of *poroporo*.

TOP LEFT: Kevin Julian, a foreman at the pilot processing plant, watches the material passing through the press which, with its 30 rollers, plays an essential role in the extraction process.

LEFT: A specially adapted tobacco planter is used to plant *poroporo* seedlings in a 10-hectare paddock at Tikorangi, near Waitara. The seedlings are raised at a nearby nursery and planted three rows at a time — 34,000 plants to the hectare.

Big Export Earner

techniques while Diosynth supplies the venture with essential knowledge about extraction, processing and marketing.

Jan Kloosterman, a Dutch chemical engineer, who is managing the operation, came to New Zealand early in 1977 to commission and supervise the pilot plant.

He told *Arrowhead* that the first solasodine samples from Taranaki were sent by air in 1976 to Diosynth's headquarters at Oss, in the Netherlands, where a team of eight scientists had been working on research and development of the steroid intermediate.

Operation of the pilot plant in the 1976-77 season had enabled the feasibility of the process to be checked and proven.

In the current (1977-78) season the objectives for the pilot plant were to permit

full-scale checking in Holland of the second part of the process, using the intermediate produced in New Zealand, to train staff for full-scale plant operation, and to collect design data for further plant design.

On the agricultural side the objectives in the first season had been to check and evaluate the know-how currently available to the company, and to test the feasibility of methods and costs for harvesting, cartage and other aspects of commercial cropping, said Mr Kloosterman.

Fletcher Development and Construction will build the processing plant and its ancillary buildings.

The joint venture company has already made a number of senior appointments.

These include Dave Fenton (formerly of Fletcher Industries) as project manager, John Scott (from Fletcher Agriculture) as agricultural manager, Peter White-Robinson (ex-Fletcher Timber), project engineer, Alan Brown (formerly with ICI N.Z. Ltd) as operations manager, and Paul Warren, of New Plymouth, administration manager.

Total staff for both agricultural and processing operations will eventually number about 50, with perhaps a further 20 being engaged on a seasonal basis. Most of the employees will be drawn from the local area, to give a welcome boost to employment in the Waitara district.

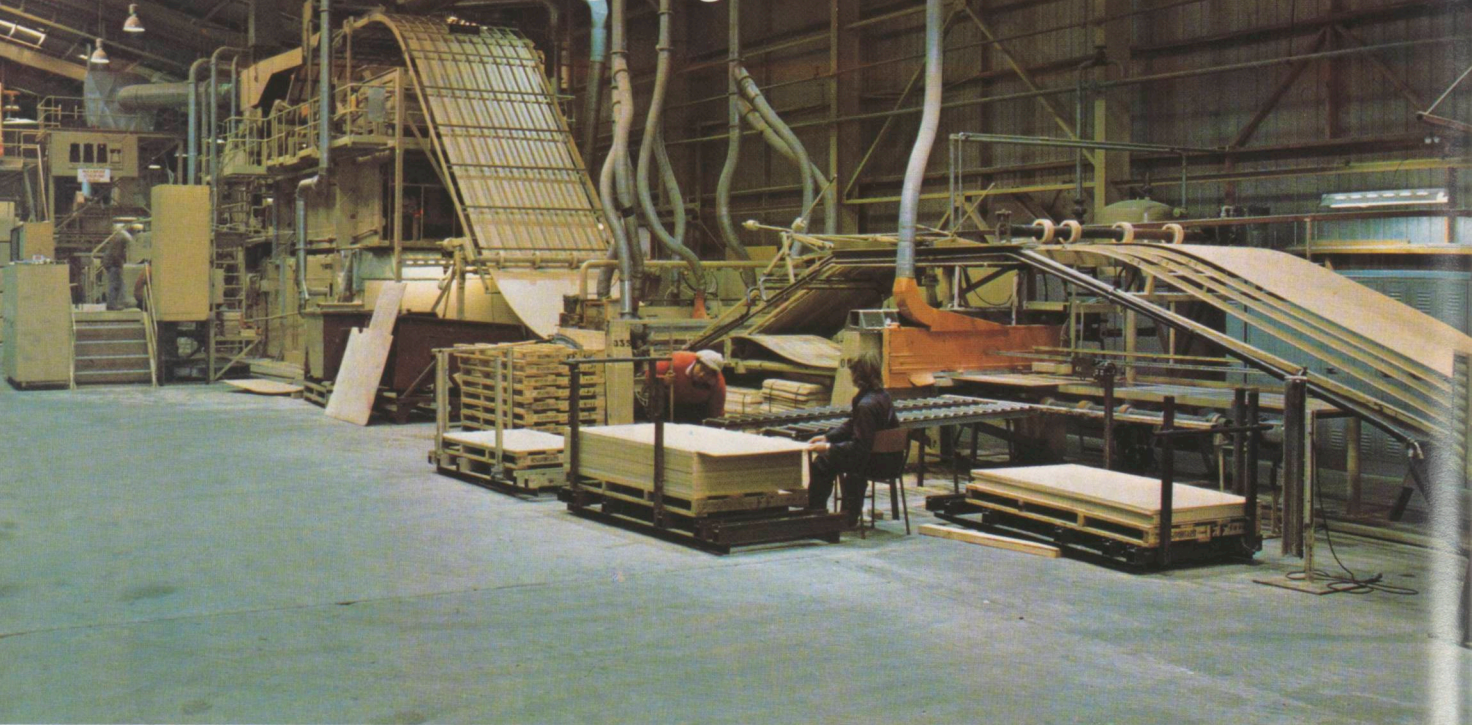
The company will institute a training programme to produce the skilled chemical workers which the plant will require.



ABOVE: A forage harvester moves along the rows of *solanum aviculare* plants. The crop is being grown on land leased from local farmers, but eventually it will be offered for contract growing.

LEFT: Unprepossessing in its raw state, this material, once it has been processed into solasodine for export in the form of granules, will mean significant export earnings for New Zealand.

Product Promotion is Paying Off



Active promotion of Bisonboard and particle boards on overseas markets has seen the emergence of these Plyco products as major export earners for Fletcher Wood Panel Products.

Bisonboard, which has made such a big impact on the New Zealand furniture, joinery and door trades, has proved particularly successful.

The product has been the subject of extensive promotion at trade fair exhibitions in Hong Kong and Singapore, as well as forceful marketing in the United States, the Caribbean, United Kingdom, Middle East countries and the Pacific Basin.

Hobex 77, Hong Kong's first international building exhibition, held in June, resulted in a number of successes for Plyco products.

The exhibition also gave the company the chance to train its local agents in particle board marketing techniques, while the success of its products at Hobex 77 convinced the agent to buy for stock rather than sell on indent only.

Close to 10,000 invited guests from the building industry saw the four-day exhibition, at which nearly 70 local and international companies were represented.

Fletcher Wood Panel Products gave away over 3,000 samples of Bisonboard. Other products featured were plywoods, timber mouldings and parquet flooring.

The New Zealand Industries Trade Fair in Singapore (August 1-6) gave the company the opportunity of once again familiarising its local agent with its products and in particular, Bisonboard.

Singapore is one of the major growth areas for Bisonboard and the company has designated it a prime target area for exports.

Reps manning the stand gave away over 1200 Bisonboard chinese checker and draughts boards to visitors who had clipped an advertisement from the local English-language newspaper.

According to export sales manager Mr Bruce Mitchell, the buoyant Singapore economy has provided an interesting sideline to Bisonboard sales.

"We have found that Bisonboard is often re-exported from Singapore made up into finished items such as toys and furniture," he said. "Quite a large proportion of Singapore-sold board is eventually used in other parts of the world."

The first Bisonboard destined for the Middle East has recently been ordered for Muscat and Oman on the Persian Gulf. Middle East countries have shown interest in the product through the New Zealand Trade and Development Group, based in Cairo, of which Fletchers is a founder member.

Inquiries in general are starting to pick up in this previously neglected area and the company has been quoting for some time in Egypt, Iran and Abu Dhabi, in the United Emirates.

Bruce Mitchell recently returned from market assessment visits to Fiji, Papua New Guinea and the West Indies after Plyco took over responsibility for the areas from Fletcher International.

Despite import restrictions, the Fiji market was showing pleasing potential, according

to Mr Mitchell.

In the UK, the firm has had more response than ever before to Bisonboard. The managing director and general manager of the company's UK agent were recently in New Zealand on a familiarisation trip.

Doorskins are the main use for Bisonboard in the UK, and the size of the population and large amount of new building undertaken each year have made Fletcher Wood Panels keen to expand its share of this lucrative market.

On the American scene, the company's marketing manager, Mr Graeme Newton, recently made an extensive tour, with San Francisco rep Adrian Gray, to produce a full evaluation of the market.

Previous shipments of Bisonboard to the US have been for pre-finished panels, door skins and standard panels.

Further south, in the Caribbean, the New Zealand Export-Import Corporation, which was instrumental in obtaining the first order for Bisonboard from Trinidad in 1976, has again launched a mission to the area.

Major objective, from Fletcher Wood Panels' point of view, will be to secure product information about prime usage of particle boards.

With established local markets for Bisonboard, and increasing demand on the export market, Fletcher Wood Panels is now concentrating on consolidating its export position while working to ensure prompt and efficient service to all clients.

Duroid Makes Breakthrough

In Fletcher Duroid's first year of export selling, the company is hopeful that export receipts will top 10 percent of total sales.

For instance, the company has just dispatched its thirtieth container of building roll products to Australia in only six months of positive exporting to that country. Fletcher Duroid has also looked for, and found, markets in Singapore, Malaysia, the Philippines, Indonesia, Papua New Guinea and the Pacific Islands.

Exporting to Australia began in earnest in April 1977 with the appointment of Mr Barry King as Melbourne-based sales representative. Since that date, Fletcher Duroid has exported thousands of rolls of products to that country. Duralfoil, a double-sided foil insulation, and Duroid bituminous sheet material such as dampcourse are the principal products being bought by Australia.

Fletcher Duroid is also selling successfully on the highly competitive South-East Asian market. Sales manager Mr Richard Gardiner tells how Fletcher Duroid established a beachhead there:

"We face intense competition in the South-East Asian building products market. Buyers and sellers alike are extremely price conscious and at the same time demand quality products.

"It has taken nearly a year, and we are at last being accepted as sincere sellers who deliver quality goods at the right price. One of the key elements in this area is the ap-

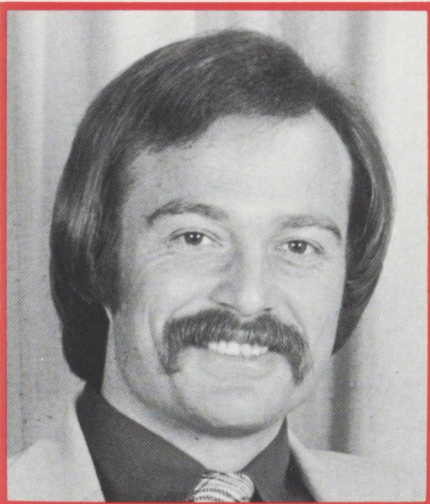
pointing of the right agent and our Kuala Lumpur resident representative, Wong Moh Seng, has proven this.

"Incidentally, we are well aware that the countries we are already selling to are not the only markets in that part of the world. We are hopeful of orders from Taiwan and Hong Kong in the near future."

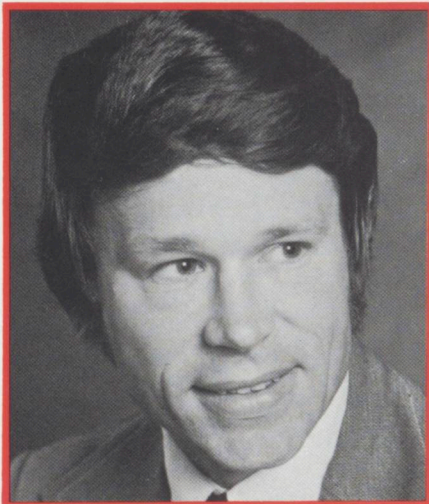
BELOW: Checking the loading of pallets bound for South East Asia are (from left): Cliff Ingmire (technical sales manager, Fletcher Duroid), Richard Gardiner (sales manager, Fletcher Duroid) and Ian Sutherland (general manager, East West Transport Ltd).



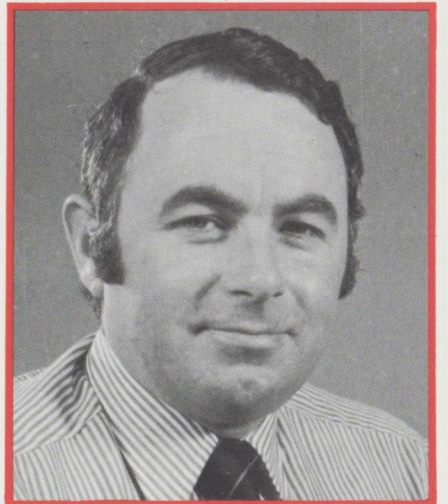
Men in Export



Mr Steve Antunovich has been appointed export sales engineer for Fletcher CSP to take over export sales of Armco Multi-plate and other products in Fiji, Western Samoa and American Samoa.



Mr Geoff Furness, who has been appointed export manager for the Fletcher-Beazley consortium. His chief responsibility will be the marketing of Beazley relocatable accommodation units.



Mr Bob Davidson, marketing manager for Fletcher Agriculture.

P.V.C. Film Helping Kenya's Coffee Growers

New Zealand-made PVC film is being used in Kenya to speed the processing of coffee beans.

The order, supplied by Nylex Fletcher Limited for more than 120 miles (200,000 metres) of the film, highlights the expansion of plastics exports since the company's formation in April 1977.

Fletcher Plastics and Nylex Products (N.Z.) Limited, New Zealand's two biggest sheet and film plastic manufacturers, merged in a move to rationalise the industry. At the time, directors of the two companies said the merger would result in substantially increased export sales for the new company.

Few could have expected such immediate results. Nylex Fletcher has been in the news regularly, notching up ever-increasing sales of PVC sheet and film to buyers in Australia, Africa, and the Pacific Basin.

The company's marketing manager, Mr Terry Houlahan, says the main orders have come from Australia, where the company has two permanent representatives.

"We have won two orders for PVC tarpaulin to Queensland Railways and South Australian Railways. Both were in the face of fairly intense competition from international manufacturers," he says.

"Queensland bought 70,000 metres and South Australia 20,000 metres, and we are confident of receiving a further order of 66,000 metres from Victoria Railways.

"At the same time there has been strong demand for the same product in the manufacture of trampolines in Australia. By the amount of material exported in this line, every family in Australia must be buying a trampoline to keep fit," says Mr Houlahan.

PVC-coated vinyl tarpaulins have a number of advantages over the canvas type — they are lighter, stronger, more durable and do not get heavy when wet.

One of the effects of the merger has been to greatly expand the overseas representation available to the new company through the offices and agents of both the Fletcher organisation and the Australia-based Nylex Corporation.

The Kenyan sale was a case in point. It came as a direct result of the world coffee shortage.

In view of the shortage, coffee growers are concentrating on speeding up the processing of beans, and improving the efficiency of their operation.

Nylex Fletcher's export manager, Mr Geoff Bullock, explains: "The film we are supplying them is being used to protect coffee beans from dew while they are drying at night. Growers require enormous quantities of unsupported film for this purpose and we are hopeful of receiving further orders."

He said the order was the country's biggest in terms of volume and required the company's multi-million dollar calendar to run non-stop day and night for a week.

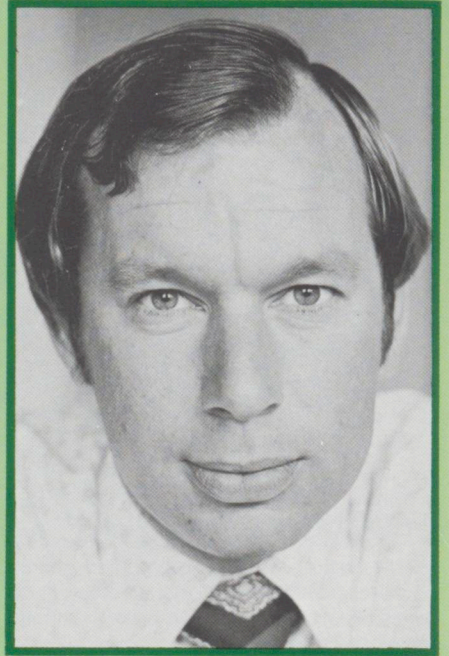
Mr Bullock has spent several weeks in South-East Asia promoting Nylex Fletcher wall claddings and a newly designed PVC ceiling product.

In Singapore a housing unit opens every 15 minutes, and high-rise buildings are going up rapidly throughout the Far East. The long life of PVC wall claddings makes them an attractive choice for this type of accommodation, while New Zealand-made lightweight PVC ceiling tiles bonded to fibreglass insulation panels are also proving popular.

The manufacture of new products to meet specific requirements of overseas buyers reflects the innovative approach of the company, and partly explains the achievement of Nylex Fletcher in passing the half-million dollar mark in export sales within only six months of the merger.

BELOW: Containers of plastic film ready for export to Kenya from the Nylex Fletcher plant at East Tamaki, Auckland. This order represents more than 100 miles of plastic sheet.

BELOW: Mr Geoff Bullock, Nylex Fletcher's export manager.

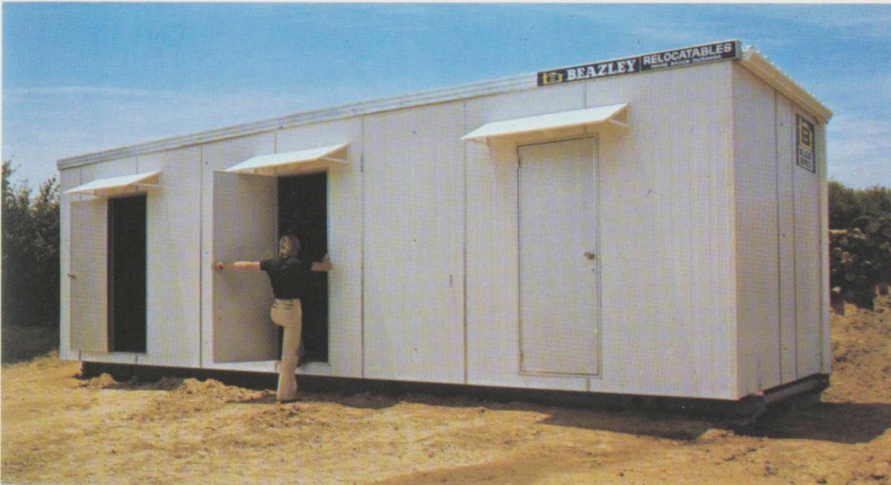




A view of the "Export Shed", part of the complex erected near the port of Mount Maunganui for the manufacture of Beazley relocatable units.



Unloading a four-man accommodation unit from its transporter. For shipment overseas, each unit is packed flat to make a package only 750 mm high.



Above: A three-bedroom unit at a hydro-electric power scheme site. Below: Interior of a unit in use as a messroom.



'Instant' Dwellings

Confident of its ability to compete on a tough international market, Beazley Homes Ltd has built and equipped a factory for large-scale manufacture of relocatable accommodation units.

The plant, which is located at the Mount Maunganui headquarters of Beazleys, New Zealand's largest home builders, will have the capacity to produce as many as 40 relocatable units a week. A team of expert tradesmen has been trained in the special techniques of "reloc" building, and at full production these men will supervise the work of up to 60 semi-skilled employees.

The units are the creation of Beazley's own design team. Throughout the planning stages, the objective was to produce a good standard of worker accommodation with units that could be built quickly and economically, packed flat for easy transportation, and then re-erected with a minimum of on-site labour or mechanical assistance.

This concept has been successfully realised, as is evident in the units already in use at hydro-electric and other project sites in New Zealand.

Each unit is mounted on a steel skid chassis, which allows the buildings to be moved from one work site to another as their owners require.

They are supplied with a high standard of finish, including vinyl-tiled floors, interior walls and ceilings of laminated Bisonboard, aluminium joinery and exterior cladding of aluminium or steel over plywood. Finishing materials can be varied to suit a buyer's requirements and local climatic conditions.

Built to a basic module of either 9 m x 3 m or 12 m x 3 m, the units offer extraordinary flexibility. Either singly or joined to form multiple units, they can be fitted out as sleeping or living accommodation, kitchens, messrooms, ablution blocks, offices, laundries, recreation rooms or whatever other purpose for which they may be needed on major construction, pipeline, mining and similar projects.

In developing countries, where there is often a need for instant accommodation on a large scale, they may form the basis of school, hospital or other institutional needs.

Executives of the Fletcher Residential Group, of which Beazleys is a member, and of Fletcher Construction have found the keenest interest in the Middle East and elsewhere in the firm's capability to supply good-quality high-volume accommodation that can be erected on site in as little as 20 manhours per unit.

Says Mr Peter Heise, managing director of Beazley Homes: "The demand overseas is substantial, and we are satisfied that we can compete with anyone in the world on quality, price and delivery."

Helping Workers To Keep Their Cool

Connor air conditioning equipment supplied by Fletcher Mechanical will control the working environment in the AMP Society's handsome new Queensland State Office building on the bank of the Brisbane River.

Commissioning of the equipment, worth over \$150,000, was completed recently and the building is now in the final stages of construction for occupation during 1978.

Variable air volume equipment installed in the building has proven economic advantages developed over 10 years both in the United States and at Fletcher Mechanical's own testing laboratory at Penrose.

Consulting engineers, Thomas Anderson and Partners, of Brisbane, specified variable air volume equipment for the AMP building, and Fletcher Mechanical's product sales division supplied the equipment to a Brisbane firm which held the contract for all mechanical services.

As air loads fall off in one area and increase in another at different times of the day, the variable volume system automatically adjusts its output to meet these changes.

Since maximum air volume is not required everywhere throughout a building at any one time, mechanical equipment can be reduced, thus saving money and energy.

The Connor CV-74 system specified for the AMP building allows any air conditioning zone to be shut off without affecting other areas, and portions of the system can be operated independently at any time.

At 41 levels, the building is the tallest in Brisbane. It comprises 30 lettable floors with other levels being taken up by car parking and service facilities. Total area is 28,000 sq. metres (300,000 sq. ft.).

"In such a huge building there is a substantial saving in energy costs by using the CV-74 variable air volume system," says Fletcher Mechanical's sales manager, Mr Don Lawry.

The company has prepared a laboratory-shot film showing the benefits of the system. Don Lawry says it is a case of sometimes having to take the laboratory to the customer, and he has had extremely favourable reaction to the film from overseas customers who haven't the time to inspect the company's New Zealand facilities.

Fletcher Mechanical has a growing list of contracts in Australia for its Connor air conditioning systems. The company has supplied a number of Sydney commercial buildings with units, and quotations have been supplied for contracts from Perth to Brisbane.

Meanwhile, in Fiji, Connor air diffusion equipment and another of Fletcher Mechanical's agencies, Carrier, have been specified for a number of new buildings, in-

cluding the Government Printing Office.

The company's contracting division has recently completely on time a \$1,000,000 contract for the mechanical services specified by D. Rudd and Partners, of Suva, for the three-storey printing office. The contract covered supply and installation of all mechanical services, including Connor and Carrier equipment worth some \$200,000.

The delicate nature of papers used by the Government Printing Office means constant temperature and humidity levels must be maintained to stop paper shrinkage.

Smaller packaged air conditioning systems shipped complete for ease of installation by unskilled labour have also proved particularly successful on the Fijian market.

Movie theatres are major clients because, according to Mr Lawry, they can charge a higher entrance fee if the theatre is air conditioned.

"With the local building industry starting to show significant signs of recovery in the last

six months of 1977, we have doubled our budgeted sales to Fiji," he said. "We are very pleased with the market potential."

Fletcher Mechanical has appointed a local agent, one of the two largest contractors in Fiji, and the move seems to have paid off in orders received.

Smaller packaged air conditioning systems from the Carrier range have been shipped recently to other Pacific Basin markets, including Rarotonga, Western Samoa and Tonga.

Fletcher Mechanical has an excellent export record, having twice won the division three section of the Fletcher Export Club competition.

BELOW: One of the two Carrier air conditioning chillers supplied for the Government Printing Office in Suva, Fiji, is lifted into place on the plant room roof.



OPPOSITE: Loading lucerne at the port of Timaru. (Photo by Brian Brake) ▶



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