

World First Container Storage Facility Opens in Christchurch

Following thirteen years of development and two years of Covid delays, Boxman Group, New Zealand's pioneering, innovative and premier domestic container leasing and trading company, has opened a world first container storage facility in Christchurch.



BASS – Boxman Automated Storage Systems – is the world's first fully automated, 'customer controlled' indoor container storage facility.

The facility can handle 10ft (3m) and 20ft 6m) containers, both standard height and high cube. The facility has a capacity of 600 x 10ft and 2200 x 20ft containers, with a maximum gross weight of 20 tons per container.

The containers are stacked 5 high, with the crane operating in the 1 over 5 space above the stacks. The containers are stacked 150mm apart, with the facility offering the most densely stacked full container storage facility in the world.

The facility operates 24/7 for storage access and business hours for container receipt/delivery.

Who is Boxman?

Boxman was the first business to open and operate a self-storage facility in New Zealand using shipping containers in 1998, these types of facilities are now very common throughout the Motu.

Through the decade of the 2000's Boxman continued to be the innovator in the portable storage market, being the first to bring many new container types into the market including mini-boxes of the 6ft, 8ft and 10ft variety, the first to have an all "newbuild" and all "high cube" leasing fleet, and the first to offer 40ft High Cube containers with doors at both ends as standard.

All of these innovations have pulled the competition upwards in terms of the quality of equipment now offered in the New Zealand domestic market and are now considered the bare minimum if one wants to compete in this highly competitive industry.

As Managing Director Mat Charles states “throughout the last decade, there has been a proliferation of competitors come into the market, particularly online only traders (sellers) of containers off the back of the extremely low prices for newbuild containers ex China. For the size of the NZ market there are far too many participants and container trading has become highly commoditised.”

Post Covid conditions have changed the pricing situation dramatically, with container prices reaching an all time (ever) high in late 2021, being three times the average prices of 5 years ago.

“I have been in this business 33 years and seen many container pricing cycles, which are derived from the boom bust cycles of the international shipping industry, but what we have seen in the Covid years is extraordinary!”

“To be frank, the degree of profiteering in the shipping and container manufacturing industries over 2021-2022 is extreme, as those in the import/export and distribution sectors are well aware, this is one of the most important factors in driving up the cost of living, not just in NZ, but globally.”

This profiteering hasn’t spilled over into the domestic container leasing & trading sectors, participants have had to increase lease rates/sale prices to keep up with cost price increases however are making smaller margins than the sector made pre-Covid.



Boxman Group is a full-service operator in the domestic container leasing & trading sector, meaning it sells containers, it leases containers, it operates self-storage facilities, and it offers a full customised container modification service with its own engineering teams in Nelson (Head Office), Auckland, Wellington, and Christchurch.

The Modifications business has work booked up months in advance in most locations and we are regularly adding capacity to our engineering teams in order to meet demand and to keep lead times as manageable as possible.

If you can imagine it, Boxman can build it, the finished product is, whether it be a low cost or a high-end modification, of the highest quality available in the market.

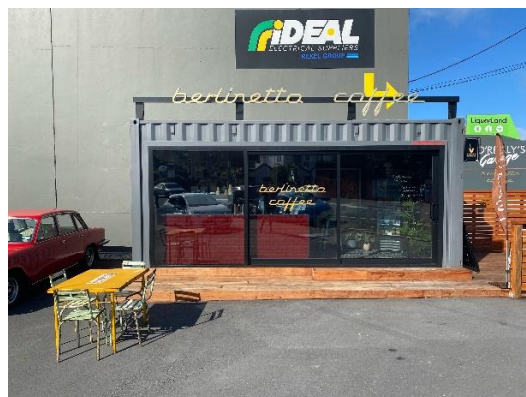
“Your imagination is limited only by your budget”



Portable Gym



Site Offices



Retail Outlets



Medical Labs / Food Preparation



Exterior Clad Ticketing Office

Storage Facilities

Boxman's business continues to grow in each of the sectors it is involved in, although the Modifications and Storage sectors are where it continues to see the greatest growth in percentage terms.

In the last two years the size of the self-storage facility in Wellington has doubled and the Nelson site is to triple in size over the next year, however it is in Christchurch where massive growth will occur over the next two years with the opening of the new "world first" indoor container facility at Christchurch International Airport.

Boxman currently has over 2800 units in its leasing fleet, this number will rise to 5000 units by this time next year.

"Having operated traditional self-storage facilities for a number of years and realising that the standard garage type or containerised self-storage facility layout was hugely inefficient in terms of revenues earned per square metre, I thought there has to be a better way to do this. Even with indoor self-storage facilities the wasted space taken up for aisles and walkways is non-revenue generating."



Traditional Self-Storage Facility

“I have always been a keen follower of technological advances, particularly in the ports sector, but also other sectors, with regards to automation, and I was also aware of large furniture storage businesses in Europe operating indoor container facilities, most using standard fork hoists (which is labour intensive and time consuming to dig containers out of stacks) and some using overhead cranes.”

Bringing BASS To Life

In 2006, having seen what was occurring in the ports sector with terminal automation, and with the understanding that industrial land prices (already high in NZ compared with overseas) were only heading one way, the idea of the BASS (Boxman Automated Storage System) was born and then further developed through 2007 & 2008.

Just as the business was about to launch into the building of the first facility along came the GFC in late 2008-2009 and those plans had to be put onto the backburner as Boxman focussed on its core business to ride out those difficult few years.

“Given the size of the investment required to build this type of a facility it took some years before we were confident the market was again ready for such a facility, but to our advantage technology has come a long way in the last 15 years”

Further ‘bad luck’ came several months after Boxman pushed the green light on the Christchurch facility as Covid19 gripped the world leading to global lockdowns including here in NZ.

“If I was a superstitious man, I’d say the Universe was sending me a message” laughs Charles “but I am nothing if not tenacious when it comes to innovation and great ideas, be they my own, or anything Boxman staff bring to the table.”

Our landlord is CIAL (Christchurch Intl Airport) and they have been forward thinking in their stance of backing us in this unique project and building the infrastructure to enable the vision to come true.

With the physical crane systems weighing nearly 100 tons, and the building being 200m long by 50m wide, and 25m high with a clear span construction, there have been some considerable design challenges around both earthquake resistance but more importantly wind loadings while the crane is operating. The steel vertical down-beams holding building up are 1.2m x 600mm, the volume of the highly reinforced floor is equal to 83 concrete trucks, the 200m long crane rails have a tolerance of 2mm end to end, and the crane itself passed its certification tests with a 2mm deflection, well exceeding anything the certifying agency has seen in NZ or Australia before.

Despite knowing there were going to be significant crane manufacturing delays due to Covid lockdowns, CIAL pressed on with the construction phase of the building throughout 2020/2021, there has been much interest in the project from the public in Christchurch with many speculating as to what it might be.

Boxman and CIAL also worked closely regarding Covid related delays when it came to rent once the building was complete, but the crane had not arrived in the country.

An agreement was reached whereby Boxman could move into the new facility to operate the other parts of its business at a renegotiated Covid relief rent.

“As can be imagined the rent on a building of this size and engineered complexity is significant, but we were well pleased with the communication levels and outcomes achieved, it is always pleasing to work in partnership with vendors/customers than to be fighting to achieve outcomes that work for both parties.”

Adding to the difficulties, the shipping line that moved the girders from Europe to NZ omitted Lyttelton from their schedule at the last moment resulting in some rapid decisions having to be made to clear the girders in Auckland, but also additional costs to truck these 23m long girders from Auckland to Christchurch.

Finally, 18 months after the original opening date of the new facility was signalled, the BASS facility became fully operational at the end of July.

“Given the highly stressful circumstances of Covid and the subsequent lockdowns, the teams we have worked with in NZ have done a fantastic job to get us to where we are.”

The construction itself was done by Armitage Williams, and the project managed by Envision 80/20 Ltd.

Despite considerable efforts to have a local crane manufacturer supply the crane systems, unfortunately none in NZ could meet the brief, and despite cheaper options being available out of China Boxman elected to use Royal Hollestelle Kranentechniek BV (from The Netherlands) to manufacture the crane and supply all of the electrical componentry, and ELMA BV to develop the software.

The spreader which lifts the containers is also unique, being telescopic to lift 10ft and 20ft containers.

Telescopic spreaders are nothing new but are usually used for the 20ft/40ft mix of containers.

Considerable engineering work was required to reconfigure all the electronics that usually fit into a 20ft footprint into the 10ft footprint without increasing the height or bulkiness of the spreader.

The manufacturer VDL of The Netherlands has since built another 10ft/20ft spreader for a storage company in Europe.



The Boxman owned software systems have an AI component to them, for example containers that are accessed less frequently will eventually be buried towards the back of the warehouse, containers accessed more frequently will be stacked at the front and in the top rows, thus making the operations more efficient. The software learns as it goes about its daily processes.

The system is quite quick, if your container is the bottom one at the far end and back of the warehouse, and the only door available is at the other end, it is a maximum 22 minutes to place your container to be available behind that door.

Average availability times are expected to be much shorter, but the key to efficiency is to use the booking system available to the customer via the Boxman online portal / APP.

The crane will be operating 24/7 which means it is looking for jobs to do in the quiet times, particularly overnight, a customer who wishes to access their container in the morning should book their time slot the day before and the systems will allocate that container to a door overnight.

There are 40 doors in the side of the warehouse facility, each door has hour long slots, in a 12-hour day that provide 480 slots which means that approx. 17% of containers in the facility could be accessed in those 12 hours. Our analysis of our existing facilities shows that less than 5% of customers access their containers in any one day, so there is plenty of capacity built into the system.

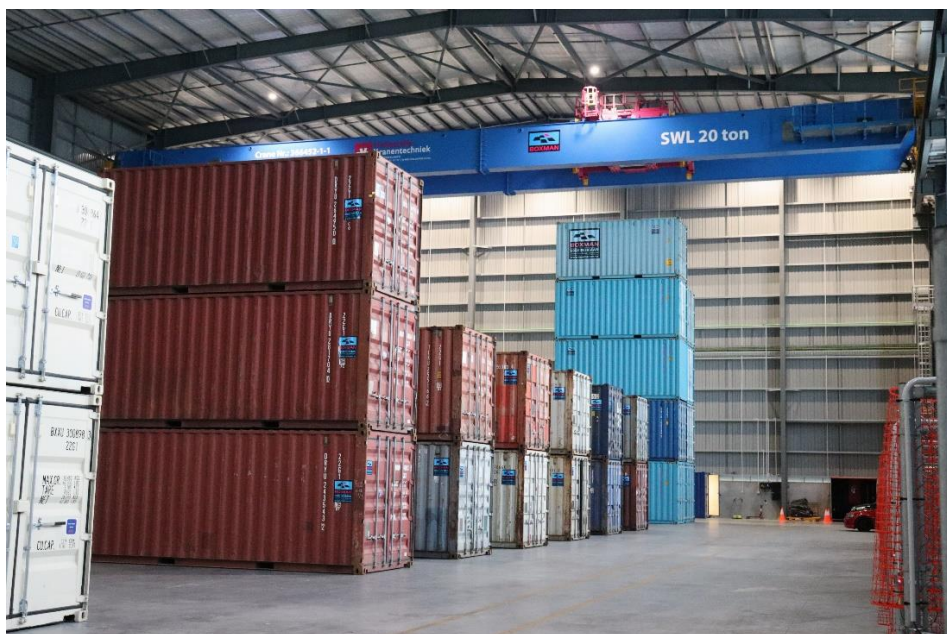
True Portable Storage

Where the BASS facility is entirely different to anything seen anywhere else around the world is that the end user, ie the customer is in complete control of their accessibility to their container.

Not only in terms of when they access their container, but also how they do so, via the Boxman web portal/APP.

24/7 access also applies to a standard self-storage facility, however the big difference with the BASS facility is that it offers true portable storage, containers can be removed from the facility, delivered to site for loading/unloading and returned to the facility.

This reduces the need for double or triple handing of goods into and out of trailers and/or trucks reducing the likelihood of damage.



Target Markets

Whilst the facility is perfect for the normal 'self-storage' client, the target market is B2B.

When Boxman first introduced this concept to potential clients in the furniture removals and 3PL sectors some were sceptical that this is just another competitor coming into the market, however Boxman believe they are 'creating' a whole new market sector.

"We are not in the business of (for example) furniture removals or 3PL logistics, we have no expertise in these fields and don't intend to gain any.

Our business is portable storage for full container loads, however once we explained the full benefits of using the facility, cost effectiveness being one of them, several of our customers realised that they could make more profit from putting their long term or slow turning products into the BASS facility, and thus utilise their own warehousing space more efficiently for higher earning products."

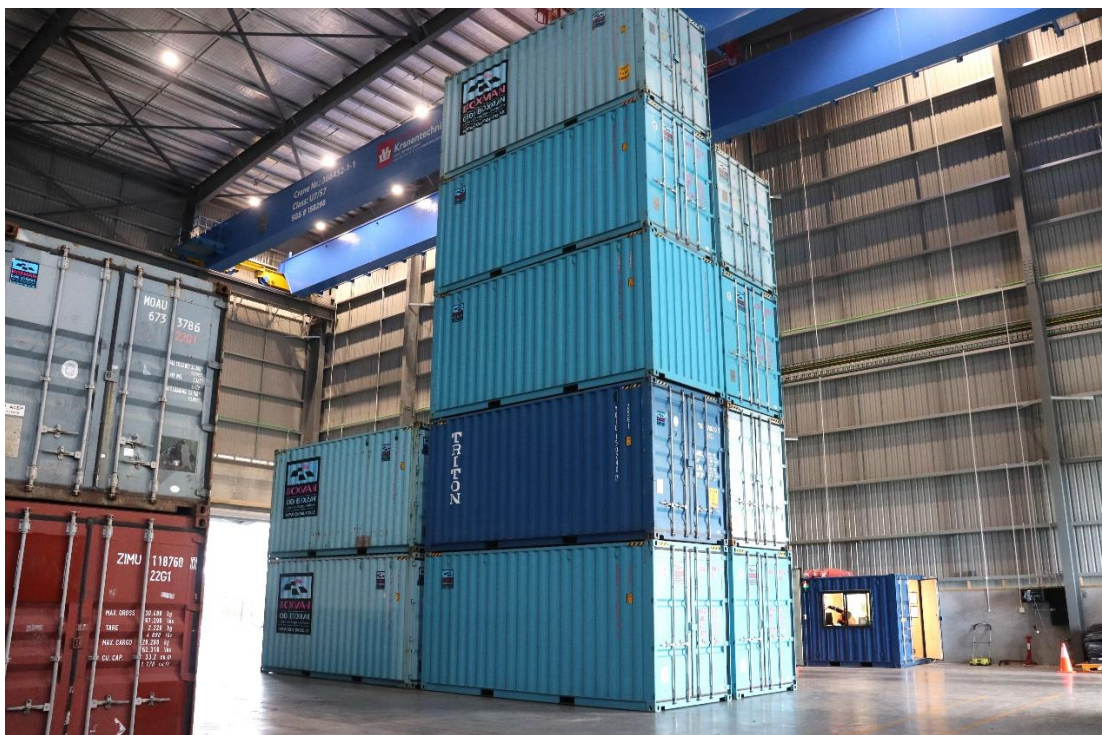
3PL's in particular offer the full pick and mix service delivery, which is something Boxman does not offer, although a client could set up their containers so that they can manage that process themselves.

This type of facility is definitely geared towards smaller import/distribution type businesses and businesses that might operate from home but be squeezed for space.

Often these types of businesses cannot afford full service 3PL warehouse facilities or afford to buy/lease expanded facilities of their own.

This is where the BASS facility comes into its own by providing a cost-effective way to enable businesses to expand without outlaying a whole lot of capital, business owners can focus on using their capital to grow their business, not sink it into unnecessary infrastructure.

Because of the efficiencies of the entire system the services offered are very cost effective compared with traditional warehousing options.



Customer Owned Containers

Whilst Boxman has plenty of containers available for lease inside the facility, if a customer has their own containers to store this is no problem.

Many businesses already have their own containers for storage, however there may be security issues, particularly for high value product. And Boxman knows all too well from experience that long term outdoor storage of goods in containers does come with weather related risks, particularly condensation issues. The BASS facility does away with all those concerns.

“We don’t care who owns the container, even if you are leasing it from a competitor of ours that is no issue, so long as it is structurally sound, we can store it at the BASS facility.”

“In fact, we have a different fare structure for Customer Owned Containers because there isn’t an element of rent from using a Boxman provided container.”



Whilst this Christchurch BASS facility is the prototype, before the end of this year Boxman will have pushed the go button on the building of similar facilities in Auckland and Wellington, the intention is to have a network of facilities countrywide so that customers can move containers seamlessly from one facility to the next.

Feedback already garnered from trial customers is that a higher load limit of 32 tons would enable import containers to be handled directly into the facilities ex-port terminals and that the ability to handle 40ft containers would provide more flexibility. These requests have already been engineered into the designs for Auckland and Wellington.

MPI accreditation is currently being worked through.

If you or your business has a need for storage at cost competitive prices in Christchurch, Boxman has the capacity to meet your needs.

Call 0800BOXMAN (0800 269 626)

Or visit our website: www.boxman.co.nz

