

OUR PLACE

IN THE WORLD

2019 EDITION | Annual Review

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STRONGER BUSINESS:**

FOCUS ON PROPERTY

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Proudly
OUR
PLACE

CHRISTCHURCH
AIRPORT

OUR PLACE

IN THE WORLD

2019 EDITION | Annual Review

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CHAIR & CHIEF EXECUTIVE'S REPORT

FINANCIAL YEAR 2019 (FY19)



Catherine Drayton, Chair



Malcolm Johns, Chief Executive

THE PAST FINANCIAL YEAR, FY19, HAS BEEN A PLEASING YEAR OVERALL AS OUR TEAM CONTINUES TO ACTIVATE OUR STRATEGY OF REAL GROWTH 2025 (RG25). OUR PURPOSE IS TO 'CHAMPION THE SOUTH ISLAND,' AT HOME AND ABROAD, THROUGH TARGETING OUR THREE MAIN PRINCIPLES SIMULTANEOUSLY: BUILDING A STRONGER BUSINESS & ENHANCING CUSTOMER JOURNEYS & BEING GREAT KAITIAKI. WE CAN CONFIDENTLY SAY, THAT DESPITE SOME SOFTNESS IN THE DOMESTIC AVIATION MARKET, WE CONTINUE TO DELIVER SOLID OUTCOMES IN THESE AREAS.

Our people and our customers remain at the centre of both our thinking and our activity as these two groups ultimately combine to produce our outcomes. Pleasingly our people continue to be highly engaged and aligned with the purpose of our organisation, our values and mission. Our customers continue to rate us top in Australia and New Zealand for customer outcomes (as measured by an independent survey).

Of significant note during this year was how our people reacted to, lead and supported our airport stakeholders, their

colleagues and the travelling public during the events of 15 March. We have put a lot of time and effort into developing broad and deep emergency leadership within our team. Our emergency leaders stepped up and lead us extremely well during the acute aspects of these events. Our people reacted well to short notice requirements, the more than 10,000 extra people who came to pay their respects, and in the way they supported one another and those around us. We are very proud of how our people responded and all of us have our thoughts with those directly impacted.

FY19 HIGH LEVEL OVERVIEW

Operating revenue was \$187.4 million, up \$9.8 million on FY18 (or 5.5%). Our team held operating expenses slightly below FY18 levels at \$62.0 million (a fantastic productivity-focused effort), which allowed all of the operating revenue gain to flow through to EBITDAf at \$125.5 million, against \$115.7 million in FY18. Excluding fair value gains on investment properties (which were \$13.1 million in FY19 against \$53.7 million in FY18), underlying operating profit before tax for FY19 was \$66.9 million against \$57.2 million for FY18 (or up circa 17%).

Note: Fair value adjustments on investment properties are influenced by completion of new developments and timing of revaluation reviews.

The Board has declared a full year dividend of \$43.3 million for FY19, against \$40.4 million in FY18 (up circa 7.3%). This is the fourth year in a row Christchurch International Airport Limited (CIAL) has produced both a record underlying operating profit and a record dividend for shareholders.

During FY19, we handled 6.93 million passengers, up 65,000 on FY18, which was 6.86 million. Passengers travelled on 73,000 flights, up 2% on FY18. We are executing against a multi-year aeronautical development strategy and it is pleasing to see this paying off. Over the past two years, we can see international visitor arrivals at Christchurch Airport (CHC) grew faster than New Zealand did as a whole in key international markets such as China (CHC 34.1%, New Zealand 5.8%), Hong Kong (CHC 44.7%, New Zealand 13.5%) and Australia (CHC 7.3%, New Zealand 4.4%). Our team led international trade and business development missions to South East Asia, China and the USA during FY19. These were supported by more than 30 businesses and all 15 tourism regions of the South Island, along with a number of government agencies.

We invested a further \$63 million in investment property, which will increase future revenue, dividends and shareholder value. This compares to \$68 million invested in FY18. CIAL finished FY19 with a WALT (weighted average lease term) of 6.05 years and 99% of its commercial property occupied.

FY19 HIGHLIGHTS

In the balance of this Annual Review, you will see stories from our people, about how they have gone about bringing our purpose and our mission to life during FY19. This is a bunch of awesome people doing some pretty cool stuff - they aren't afraid to try new things and they accept that trying, failing and learning makes us stronger in the long-term. We are lucky we have a Board prepared to allow our team the opportunity to think differently, to try things (on a managed scale), and to partner with others in order to learn and develop together.

During the year we have seen our international aviation outcomes outpace that of the nation. This reflects several years of developing good, visitor focused, international strategies, including partnering with airlines to tap those

market segments, and receiving solid support from the South Island tourism industry in international markets. We have always seen Christchurch as the engine room of New Zealand's value generation from tourism. We have targeted high value market niches; visitors who stay longer, visit more regions and spend more while they are here. The official statistics indicate our strategies have been spot on, reflected in what we are seeing from international visitors who enter New Zealand at Christchurch. It is also why, going forward, we expect to continue to see Christchurch build value positions in international markets with existing and new airline partners.

Airports are influenced by online/offline purchasing dynamics, the same as any high street retailer. CIAL has committed itself to partnering with others in this area (online and offline) to learn and adapt its retail business accordingly. Our partnership with Alibaba Group reflects this, and CIAL is now the largest and most active marketing partner for Alibaba's Alipay in New Zealand. This is allowing us to experiment and learn in areas we would not normally have access to.

In late 2018, we welcomed Lagadere Duty Free to Christchurch Airport. We are currently expanding Lagadere's retail footprint in the international terminal, to bring a greater range of brands and products to travellers. This is part of a material set of changes in the international terminal focused on better servicing the travelling public, helping make our terminal more efficient and providing a better platform for airlines to operate in.

Our property team continues to be very active in all our precincts across campus and we will finish several developments in FY20. The Novotel Christchurch Airport, while two years behind schedule, remains a fantastic product, and will be a great new service we can offer visitors when it opens in late 2019.

We also welcomed a group of leading agriculture businesses to campus. These companies have staff across New Zealand and around the world, being based at the airport, with easy access north and south on State Highway 1, made business easier for them.

Mustang Park, our tourism transport hub, has filled faster than forecast, so we have started to develop Stage 2 of this precinct. The hub is now the largest centre for rental vehicles in the South Island and home to the majority of the island's rental vehicle fleet. This provides our international visitors with great amenity and choice.

Our freight and logistics precinct, Dakota Park, has also had a solid year and will welcome a number of new tenants in FY20.

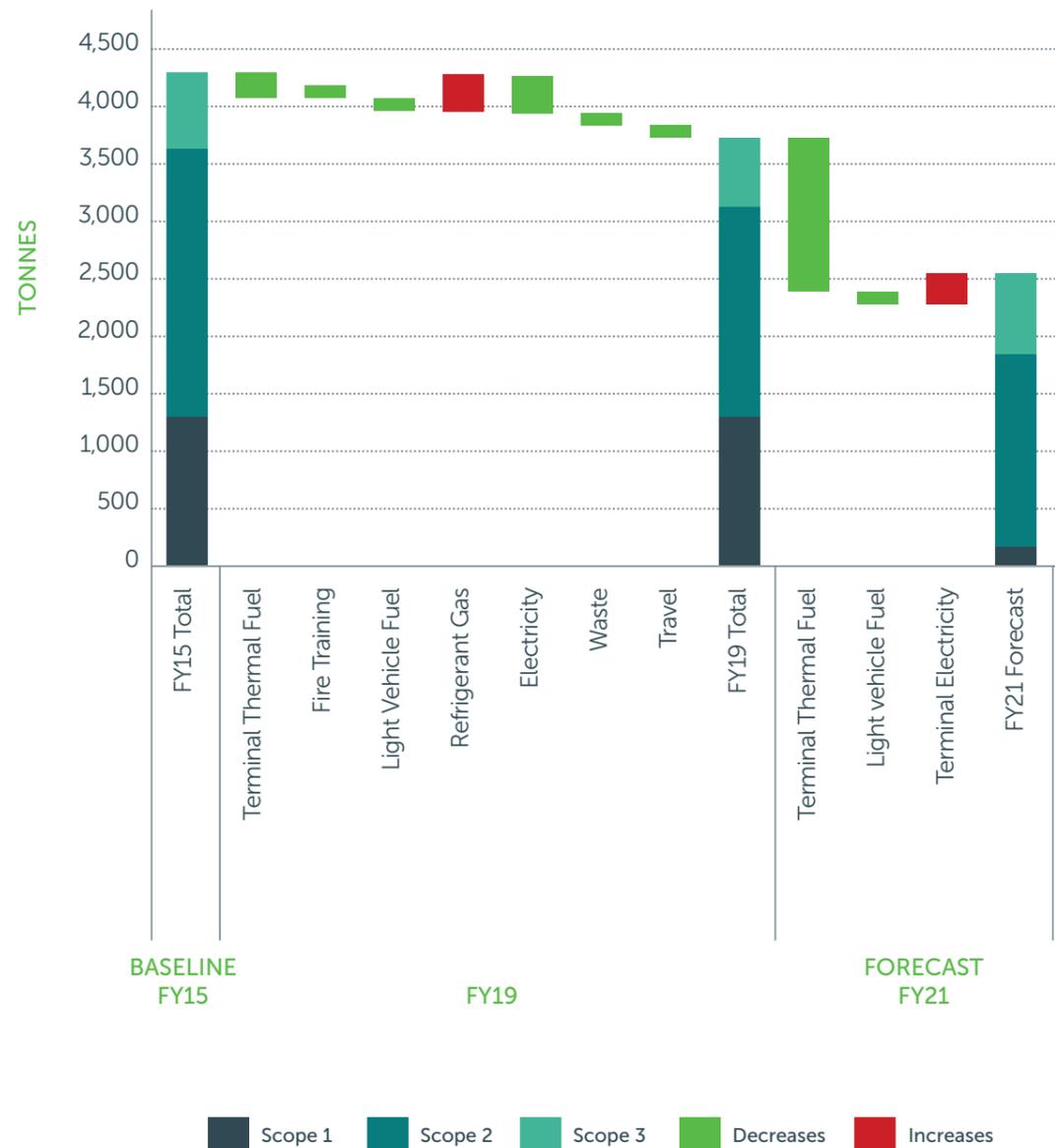
Harvard Park is a new precinct we have established in the north of the campus. Anchored by Bunnings Warehouse (which is almost complete), it will see new tenancies in FY20/21, that complement the tourism transport hub established in the adjacent Mustang Park.

During FY19 we embarked on two major projects under our Kaitiaki principle. Firstly, the Green Transition Plan and, secondly, the Boma Canterbury Education Fellows programme.

The Green Transition Plan (GTP) is a comprehensive plan to put Christchurch in the top 10 airports in the world when it comes to how we efficiently handle Carbon, Energy, Waste and Water. We have identified 24 airports from across the world we are benchmarking ourselves against, and our team is hard at work activating projects to get us to a position in the top ten.

A great example of this is in the area of Carbon. We measure and report publicly on our Scope 1, 2 and 3 emissions as a business. Scope 1 are the emissions we generate directly, and therefore the first focus we have put our efforts into reducing. The graph below shows that our team has almost eliminated our Scope 1 emissions (dark colour at the bottom of the main bars) through a series of projects that change the way we operate our business; making it more energy efficient and changing our assets from non-renewable energy to renewable energy. Special mention must go to Fulton Hogan who have supplied us with biodiesel to assist our transition.

CHRISTCHURCH AIRPORT EMISSIONS



We have also commenced an internal programme to help our staff learn about the United Nations' Sustainable Development Goals (SDGs) and how we can all contribute to these at work and at home. Whilst the GTP doesn't address all the SDGs, it does support a number of them, as outlined in the Kaitiaki section of this report.

A few years back we partnered with Boma New Zealand to design and establish a Canterbury Education Fellows programme (nz.boma.global/fellows). The Fellows programme focuses on the future of learning and how we can help support secondary teachers on a journey of discovery in education and technology. Each year the programme is open to 10 teachers from across Canterbury. The year-long programme involves opening minds and un-learning and re-learning about the future of education. Fellows visit the US where they can experience organisations who are at the cutting edge of future of education initiatives, culminating in time at Stanford University's d.school.

At CIAL, we make it our mission to partner with innovative people and innovative companies. Our partnership with Boma, to create and deliver the Canterbury Education Fellows programme, is a direct reflection of this. We have not only committed ourselves to this programme for a minimum of three years (30 teachers in total), we have committed that the programme won't cost the teachers, or the schools they come from, any of their precious school funding.

We want Canterbury to be New Zealand's leader in the future of education. Our young people belong to a world being shaped faster and more dynamically than ever before. We want their talent, their passion and their thinking to make a positive impact to Our Place in the World!

Board of Directors (L-R):
Chris Paulsen, Sarah Ottrey, Paul Reid,
Justin Murray, Kate Morrison,
Catherine Drayton (Chair)



BOARD CHANGES

The Board is mindful of its duty to look forward, discuss, debate and plan for future influences on the business in the years to come, not only here in Christchurch but also across the country and the Asia Pacific region.

Christchurch Airport operates in a wide range of industry sectors, including the aviation, retail, property, infrastructure, regulated and service sectors. Influences in these sectors will shape how the airport evolves going forward.

During the year, the Board welcomed Sarah Ottrey as a full-time director and Patrice Feary as an associate director. Sarah has deep marketing and commercial experience across a wide range of businesses and sectors. Patrice comes from a strong background in entrepreneurial and technology businesses.

SUMMARY

FY19 has seen the airport company continue on its journey, and continue to see its people deliver positive results for customers and shareholders alike, despite some lumpy market conditions in the domestic aviation sector. The strategies we have developed and the work our team has put into the South Island's international markets has seen CIAL outgrow the rest of New Zealand in the international aviation sector over the past two years.

We would like to thank the travelling public - if we have been part of your journey over the past year we thank you for your support. Your custom makes a difference!

It's a pleasure to be part of this airport team!



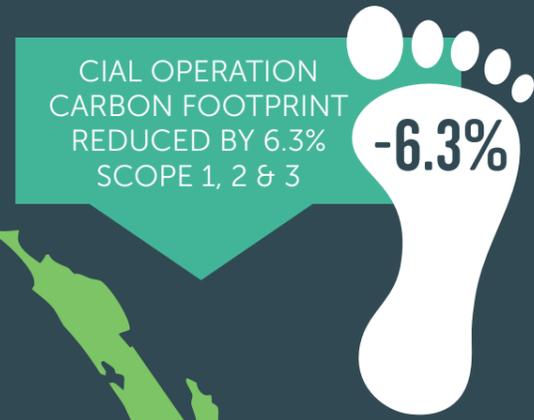
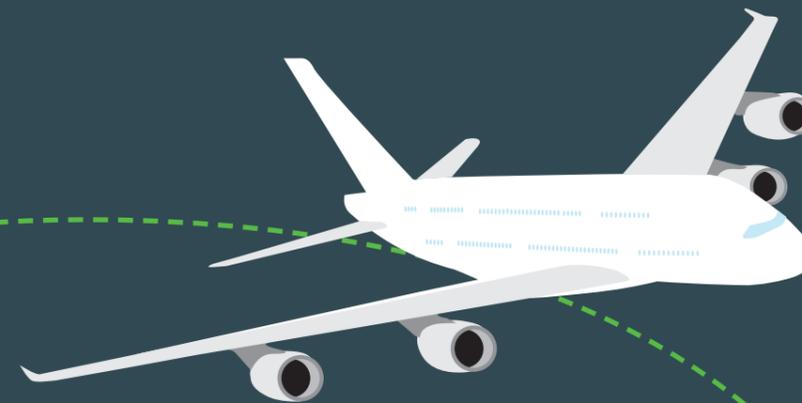
SOUTH ISLAND, *take a bow!*



THE SOUTH ISLAND HAD ANOTHER BIG INTERNATIONAL WIN DURING THE YEAR WHEN WE BECAME NEW ZEALAND'S ONLY WINNER OF A WORLD AIRPORT AWARD FOR THAT YEAR.

The Skytrax World Airport Awards considered surveys from 13.82 million travellers from 105 different nationalities across 550 airports around the world – and named us the best regional airport for Australasia/Pacific.

The award reflects the effort all the partners in the 'South' programme have put in to champion the South Island on the international stage over the past five years. We are extremely proud to be part of the big team which makes the South Island the best place to live, work and play.



24,788 PASSENGERS
OUR BUSIEST DAY



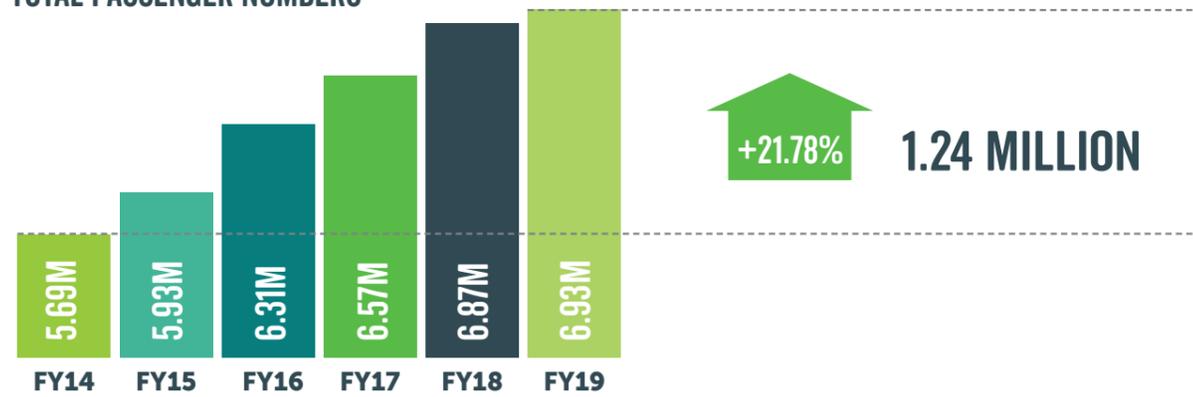
2019 YEAR IN REVIEW



6,931,441
PASSENGERS

2019 FINANCIAL Summary

TOTAL PASSENGER NUMBERS



OPERATING REVENUE¹

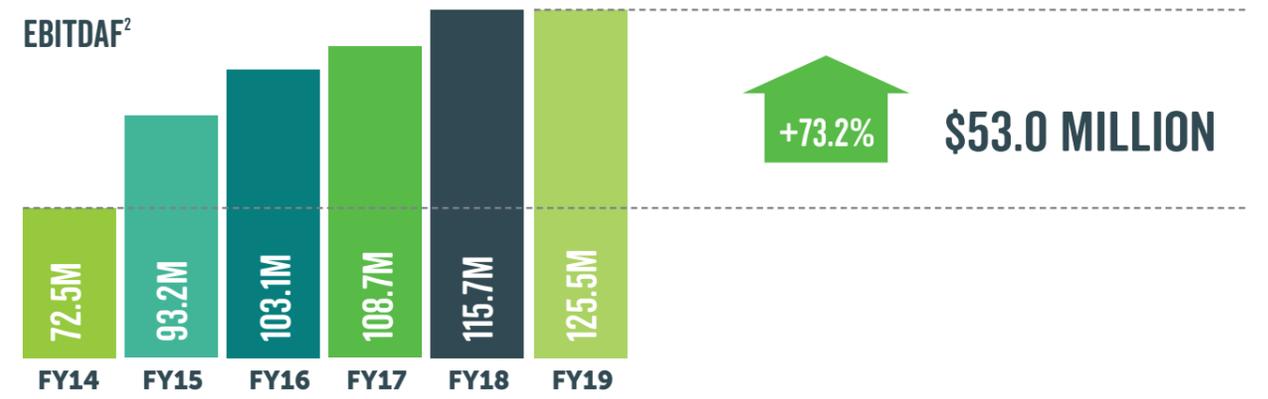


¹ Total Operating Revenue excludes unrealised fair value movements on investment properties, but includes realised gains/losses on asset disposals.

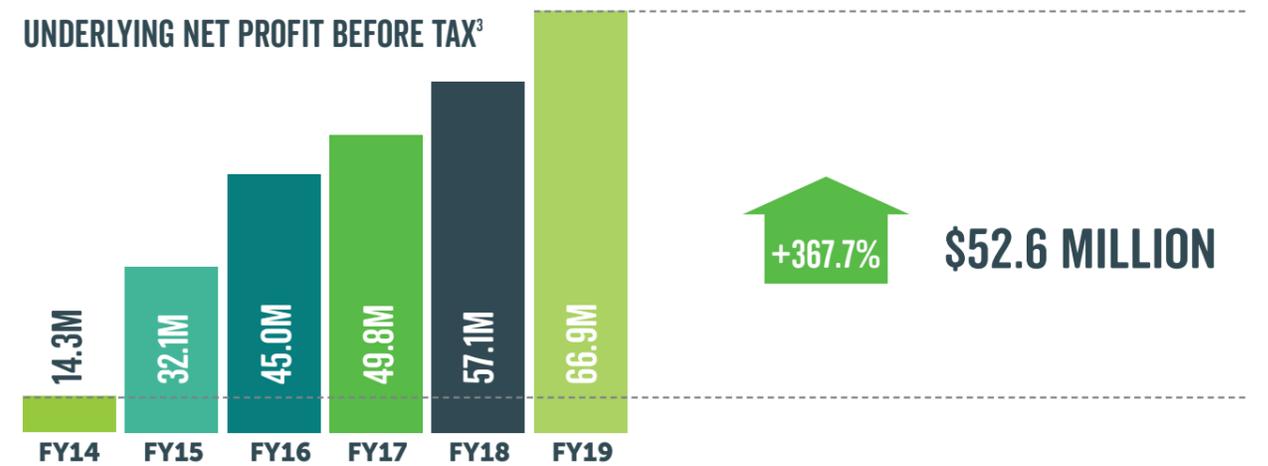
² EBITDA_f is defined as net profit after tax plus interest expense, plus tax expense, plus depreciation and amortisation, less fair value gain on investment properties, less gain on disposal of assets.

³ Underlying profit before tax is defined as profit before tax less fair value gains on investment properties.

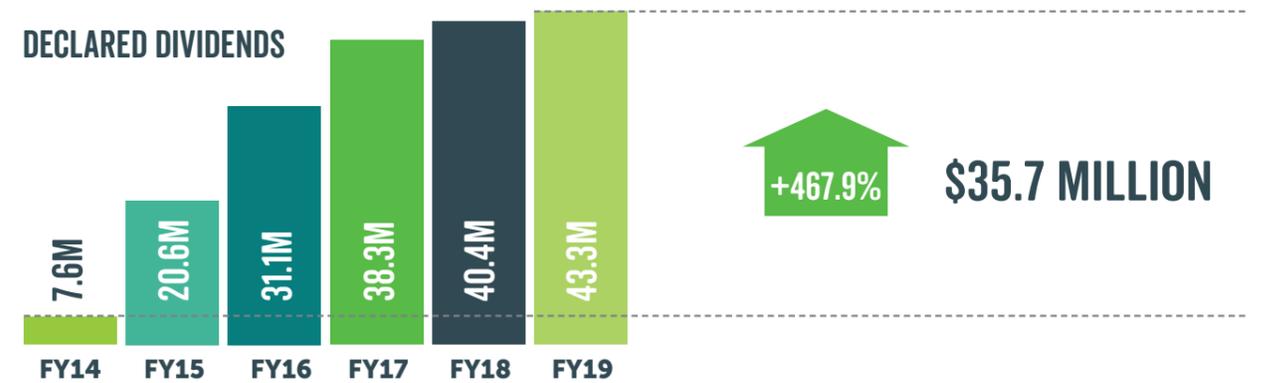
EBITDA²



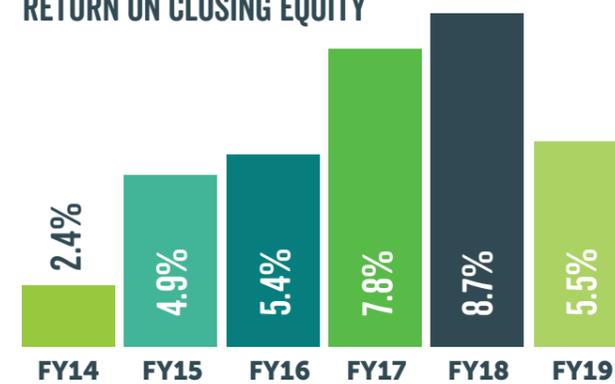
UNDERLYING NET PROFIT BEFORE TAX³



DECLARED DIVIDENDS



RETURN ON CLOSING EQUITY





Building a
**STRONGER
BUSINESS**

Greater connectivity AND NEW HEIGHTS OF CUSTOMER EXPERIENCE



FY19 SAW THE INTRODUCTION OF TWO OF THE WORLD'S NEWEST AND FUEL EFFICIENT AIRCRAFT INTO AIRCRAFT INTO CHRISTCHURCH, TAKING THE CUSTOMER EXPERIENCE TO A WHOLE NEW LEVEL. GOOD GROWTH WAS ALSO ACHIEVED WITH OPERATORS OFFERING NEW, OR BUILDING ON EXISTING, SERVICES.

Singapore Airlines, who in 2016 marked their 30th anniversary flying direct to Christchurch, further reinforced their commitment to the South Island with the launch of their flagship Airbus, the A350, on to the route. This state-of-the-art aircraft, with 253 seats, flies daily Christchurch to Singapore and beyond, bringing a new level of experience to visitors and residents.

The new Airbus aircraft has several environmental advantages over the plane it replaced. It makes 40% less noise, has 25% better fuel efficiency, produces 25% fewer emissions and 53% of the plane was built using lighter composite materials, so it is 14% lighter than the Boeing 777 it replaced.

China Southern Airlines has also taken their offering to the next level with the launch of their flagship 787-9. This aircraft is 30% larger and has their latest business and premium seats and entertainment offering. The airline's increase in capacity has helped to keep Christchurch the fastest growing entry point for Chinese arrivals, growing 8.5% in the twelve months to May 2019 versus the national average of -5.8%.

Also serving the growing Chinese market, **Cathay Pacific** had their second year of operating a direct seasonal service between Christchurch and Hong Kong, recording good year-on-year growth. Using their modern A350-900 into Christchurch, the route's success has given Cathay the confidence to announce a 49% increase to the service from November 2019.

On the Tasman, the de-coupling of the **Virgin** and **Air New Zealand** alliance has created opportunities for growth for Christchurch, with both airlines commencing new services or adding capacity. Further developments came in July 2019, when **Air New Zealand** began operating their larger A321s on Tasman routes to Christchurch.

The Tasman also continues to grow as a transit point for international visitors into Christchurch and destined for the South Island, and is now the largest transit point, having grown to 41% of all international transit passengers. The **Qantas** focus on connectivity to Asia and Europe into the South Island now sees more than half its passengers connecting through our airport.

Closer to home, Christchurch Airport saw a boost in connectivity to regional New Zealand, with **Air New Zealand** adding turbo prop capacity to key regional ports such as New Plymouth, Tauranga, Hamilton and Hawkes Bay. This has seen a 7.2% seat increase, which makes getting around New Zealand that much easier.

FY19 also saw the announcement of **Air New Zealand** commencing a direct widebody service between Christchurch and Singapore, with their partner **Singapore Airlines** commencing in December. **China Southern** confirmed an increase of 7% and **Cathay** announced a 49% increase. All these announcements reflect the strong growth opportunity that exists between Christchurch and Asia.

PROPERTY

THE PAST FINANCIAL YEAR, FY19, HAS SEEN \$63 MILLION OF CONSTRUCTION ACTIVITY ACROSS THE AIRPORT CAMPUS THROUGHOUT OUR DEVELOPMENT PRECINCTS. HERE'S WHAT'S BEEN GOING ON.



View from the restaurant on level 6



Top floor conference room at Novotel

NOVOTEL CHRISTCHURCH AIRPORT

Novotel Christchurch Airport is nearing completion and already attracting online bookings from people eager to stay on the airport campus.

The Warren and Mahoney designed six-level hotel is a brief walk from the terminal through a yet to be constructed covered walkway and plaza. In addition to the location, the big drawcard for the hotel is the stunning views from every floor, especially the restaurant, bar and conference facilities on the top floor.

Aircraft enthusiasts will appreciate the view over the airfield from 100 of the 200 guest rooms available on levels one to five. The mezzanine floor between ground and level one offers a guest gymnasium, meeting rooms for hire and associated break-out facilities. The main entry at ground level features an open and light reception, lounge and café area with indoor and outdoor seating.

The site of the hotel is outstanding but required careful design. The height of the hotel had to allow air traffic controllers in the tower to have visibility of aircraft approaching the main runway. While guests will appreciate the airfield views, they will not hear airfield noise, thanks to the terracotta facade and specially designed window system. The large windows offer breathtaking views across the campus, from the Port Hills to the Southern Alps.



Bunnings store under construction at Harvard Park

HARVARD PARK

The airport company's trade supply precinct known as Harvard Park is well underway, with the Bunnings store under construction and expected to be trading by Christmas 2019.

To support the precinct and surrounding roading network, as well as linking it to the other airport precincts, by the time Bunnings opens, all roading and associated infrastructure in Harvard Park will be complete.

Harvard Park is a trade retail development designed with the travelling public in mind. It will include a range of tenancies to support campus operators, including the increasing number of tourism transport operators based in the adjoining Mustang Park.

Harvard Park will also offer up to five food and beverage offerings, which may include drive-through outlets. They will be on an access road running off Russley Road (behind the BP service station). Current planning suggests those outlets are likely to open late next year.

Further landscaping work is planned to both enhance the area and make it easy and more pleasant for customers to move between our precincts.



Pocket Park in the Agri-Export Precinct

AGRI-EXPORT PRECINCT

This new, high-profile precinct sits at the entrance to the airport on Memorial Avenue. It is designed for businesses which require access to the airport for both business travel and freight.

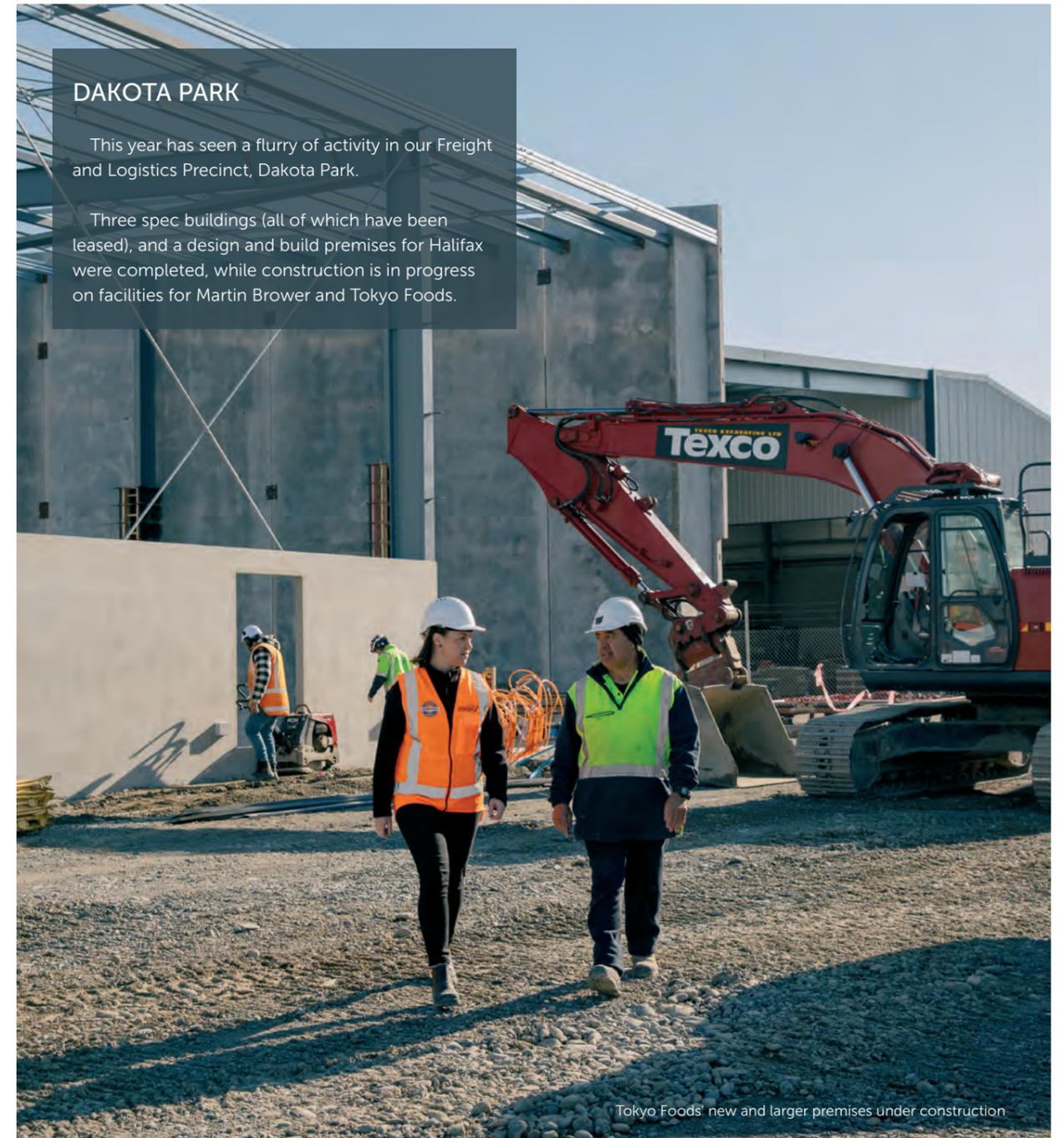
When completed, the precinct will consist of three two-storey administration buildings, 370 car parks and a 'Pocket Park', a central grassed area with seating and a basketball hoop and court for the tenants of all three buildings to enjoy.

The first building, for ANZCO Foods, was completed during the year. The remaining two buildings are currently under construction and on track to be finished in the coming months.

DAKOTA PARK

This year has seen a flurry of activity in our Freight and Logistics Precinct, Dakota Park.

Three spec buildings (all of which have been leased), and a design and build premises for Halifax were completed, while construction is in progress on facilities for Martin Brower and Tokyo Foods.

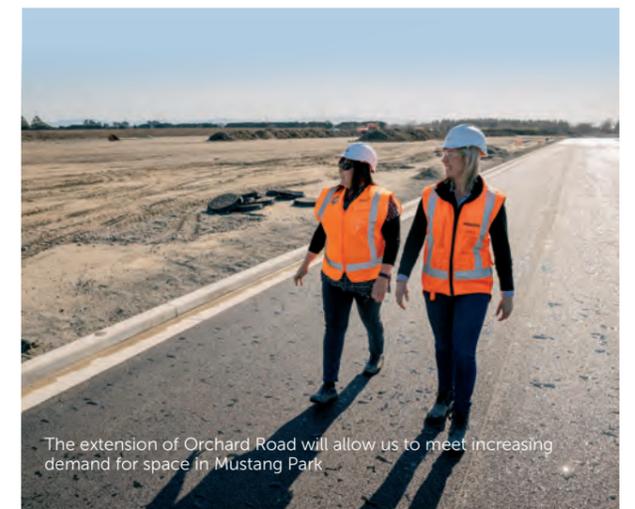


Tokyo Foods' new and larger premises under construction

MUSTANG PARK

Christchurch Airport's tourism transport hub continued to grow throughout the year with the completion of five new rental vehicle depots. That brings the number of rental car companies now occupying the precinct, and providing services to airport travellers, to 16, with a further three developments currently under construction.

This area has boomed since its inception, and as a result, we are in the process of extending Orchard Road (the main road through Mustang Park), to allow for further development.



The extension of Orchard Road will allow us to meet increasing demand for space in Mustang Park

Alibaba Group
阿里巴巴集团

阿里巴巴欢迎您!

Welcome to Alibaba!



KIWI BUSINESSES

learning more about

ALIBABA

THE SIZE OF THE CHINESE MARKET IS WELL UNDERSTOOD BY NEW ZEALAND BUSINESSES. LESS UNDERSTOOD IS THE MOST EFFICIENT WAY TO ACCESS AN ECONOMY OF THIS SCALE.

Small enterprises could be forgiven for feeling unable to reach customers in one of the world's largest and fastest growing consumer markets.

The barriers, such as the tyranny of distance or a perception that a big market requires big solutions and bigger volumes, could feel insurmountable.

However, these perceptions are quickly overturned when the technology and connectivity of China's mega tech platforms, such as Alibaba, are explored. Even the smallest of businesses can leverage the platform, transforming access opportunities for Kiwi enterprises.

Christchurch Airport is two years into a long-term strategic partnership with Alibaba, designed to help South Island businesses connect with China and in turn grow trade and visitation between the two countries.

Thanks to the airport's partnership, thousands of businesses across New Zealand have adopted Alipay, Alibaba's payment system. This means Chinese visitors to this country can easily pay for New Zealand products and services, and those businesses can market directly to Chinese consumers.

A visit to the Alibaba headquarters in Hangzhou, 170km from Shanghai, reveals the potential of the platform for New Zealand businesses and the scale of the vision of co-founder Jack Ma and his team.

In June 2019, I joined a business delegation which travelled to Alibaba to grow our understanding of the platform and its potential. The pristine campus has the appearance of an up-market university, with workers donning casual and on-trend gear. Once we got talking, we found the clarity with which Alibaba team members outline the company vision is admirably consistent.

The Alibaba corporation started life as an e-commerce platform, but is now a fully integrated supply chain linking small enterprises across the globe with consumers.

The platform offers solutions at every point of the supply chain from micro-finance for SMEs, consumer trend forecasting through the utilisation of big data, to logistics and fulfilment.

Officially the Alibaba vision is to "Empower inclusive globalisation", with secondary goals of empowering small and medium enterprises, young people and women and facilitating global consumption. Its growth is exponential and its ambitions truly global.

The payment platform alone has one billion users, while Alibaba's global delivery network connects with 224 countries and regions. The corporation is aiming for delivery within 24 hours within China and 72 hours worldwide from its global fulfilment centres.

Having started life as a virtual network, the corporation is now experimenting with bricks and mortar solutions, creating physical shops in which shelves have ever-changing stock based on the preferences of nearby consumers. Prices on digital price labels adjust in real time, responding to prices within the online marketplace, robots assist shoppers and payment is made via Alipay, through facial recognition. Augmented reality assists the purchase process: 'magic mirrors' allow you to try on any hue of cosmetic and purchase the appropriate shade without physically touching any product – no need for wasted samples.

Premium New Zealand products ranging from health supplements and beauty products to quality apparel are among those on the shelves in these technology-fuelled consumer environments.

Alibaba is therefore an entirely integrated system, allowing sophisticated business-to-consumer relationships of every scale from the very smallest of cottage industries through to large enterprises.

Understanding these Chinese mega-platforms is not just a curiosity. It is essential for New Zealand businesses with an interest in participating in the global economy and capturing a share of the colossal Chinese consumer market, and beyond.

Joanna Norris
Chief Executive, ChristchurchNZ



Enhancing
**CUSTOMER
JOURNEYS**



The growing

ALIBABA – CHRISTCHURCH AIRPORT

— PARTNERSHIP —

IN 2017, CHRISTCHURCH AIRPORT ENTERED INTO A WORLD-FIRST AGREEMENT WITH ALIBABA GROUP.

THE AIM: TO MAKE IT EASIER FOR YOUNG, INDEPENDENT CHINESE TRAVELLERS TO VISIT NEW ZEALAND'S SOUTH ISLAND AND ACCESS ITS EXCITING TOURISM AND RETAIL OPPORTUNITIES. THE RESULT: HIGHER SPENDING AND AN IMPROVED VISITOR EXPERIENCE.

In 2018-19, the airport company's 'South' partnership with Alibaba Group, and its affiliate Alipay, has grown substantially, with a number of key initiatives and activities to grow the reach and impact of the programme.

Mobile payments from QR codes are now an integral part of Chinese consumer culture. Alipay is a lifestyle super app, embedded in Chinese daily life. Everything from restaurants, to clothes, hotels, and borrowing a bike, is paid for with the simple scan of a QR code. Alipay is the largest mobile payment platform in the world with around one billion users with its partners.

Since the agreement signing, Christchurch Airport has seen the formation of ten marketing partnerships with every Alipay acquirer in New Zealand, to enable tailored solutions for Alipay acceptance to New Zealand retailers and tourism businesses.

'South' has increased the number of New Zealand brands joining the programme to 1,657 businesses, supporting more than 3,980 locations across New Zealand - a more than 200% increase for this financial year. The programme has seen a number of large New Zealand retailers, such as The Warehouse Group, Foodstuffs, and James Pascoes Group, sign up to the 'South' programme.

Enabling more merchants via the programme has allowed more New Zealand retail businesses to successfully connect with the inbound Chinese visitor market.

'South' has also run various programmes to increase merchant engagement - for example, a marketing project within the Alipay app to engage 50 Alipay-enabled merchants. 'South' also participated with a stand at the first Alibaba E-Commerce Expo in New Zealand in June 2019, generating further exposure among the Chinese community in New Zealand.

The partnership with Alibaba Group has allowed Christchurch Airport to maintain strong growth despite global headwinds. Annual international arrival growth between July and May was 8.5 percent, compared to a national arrival rate of -5.8% for the same time.

'South', Alibaba Group and Alipay are continuing to explore further innovative ways to work together, with the shared goal of improving the experience of Chinese visitors to

New Zealand, and helping Kiwi tourism and retail businesses across more of New Zealand better engage with these visitors, and benefit from Chinese tourism spend.

James Hudson

Director of Corporate Affairs and Marketing
Australia-New Zealand Alibaba Group



A vehicle WHICH CAME OUT OF A PRINTER!

FOR MOST PEOPLE, PRINTING MEANS PAGES OF TEXT.
BUT FOR THE TEAM AT HMI, NEW ZEALAND'S TRANSPORT
TECHNOLOGY COMPANY, IT MEANS MUCH MORE.



The new Ohmio Lift is the world's largest 3D printed vehicle, and the newest addition to the autonomous vehicle trial at Christchurch Airport.

We unveiled our new vehicle at the airport in June and for the next two weeks invited people to 'Ride The Future'. People were fascinated that as well as being autonomous (no steering wheel) and fully electric, parts of the vehicle had been printed. The printing took about six days, but now we know the process we believe in the future we can get that down to two days.

We used a 21 square meter printer (7x3m) to print the vehicle in 13 different parts, which fit together like shelves or desks you buy as a kitset and put together yourself.

The material used is a polycarbonate/acrylic/fibreglass compound and is similar to that used in high performance cars.

We think a lot about future transport technology and think it's pretty awesome that technology has come to a point where you can literally print a vehicle.

We are really proud that New Zealand is home to the biggest 3D printed autonomous shuttle in the world, and it's been a fantastic journey to take with Christchurch Airport. We appreciate the really forward-thinking mindset the airport team has, and consider them ideal partners when it comes to innovation.

Now we can 3D print the body of our vehicles, we'll be able to pretty easily change the look or layout of one vehicle to the next. That means our clients will have more choice and more say in what their vehicle looks like and how people interact with it. It's still a young market, so giving people lots of choice makes sense.

However, there will come a point where mass manufacturing becomes the goal, and that's when we might need to take a different approach. For now though, 3D printing is a fantastic fit for a young market still in the process of figuring out what its needs are and what regulations sit around those needs. By being able to change things between runs, it means we can adapt to the shifts in market needs and regulation as they come up, rather than continue something that may or may not be relevant in a couple of years.

The experiences we are having as we develop our vehicles are really eye-opening, as are the possibilities that can come about when you embrace new technology and easily jump over hurdles that would once have set you back weeks or months.

Dr Mahmood Hikmet
Head of Research and Development
Ohmio



In their HAPPY PLACE

PEOPLE COMING THROUGH THE AIRPORT OFTEN HAVE LOTS OF QUESTIONS, SO IT'S JUST AS WELL WE HAVE A POPULAR TEAM OF ENTHUSIASTIC PEOPLE WHO KNOW ALMOST EVERYTHING ABOUT ALMOST EVERYTHING!

Meet our Christchurch Airport Ambassadors, volunteers who staff the Help Desks through the terminal and assist other agencies around the airport with a variety of tasks.

It's fair to say the airport is their happy place. Some Ambassadors are globetrotters who enjoy passing through airports, some used to come through here as airline staff and just couldn't stay away! Some have family working on the airport campus, some consider the airport the ideal place to offer some volunteer community service while others are here because, well, they love it.

We started the Ambassador programme almost ten years ago with 16 Ambassadors, and still have 11 of the original group in the team, the eldest members now well into their 80s. They're a tight team who have become friends through working at least two four-hour shifts a week. They support each other, covering absences and doing extra hours if the airport needs them in an emergency situation – in fact, several of them just arrive at such times, even if they're not rostered.

They say they enjoy the combination of the busy pace of the terminal, the number of interesting people they interact with, how much they learn, and, importantly, the chance to be helpful. We regularly get feedback from visitors about the help our Ambassadors gave them – and one visitor applied to join the team after being impressed by assistance from an Ambassador.

A new recruit gets a lot of training, including the same induction programme every airport company employee does; health and safety, emergency, defibrillator and technology training. Some Ambassadors have become so confident on the work iPads, they have joined the online revolution and bought personal ones to use at home.

During their shifts, Ambassadors rotate through different parts of the terminal, from the Help Desks to assisting international passengers with border processes, including Customs queries and ePassports.

Put simply, our Ambassadors can't do enough for people. They genuinely want to be here and always arrive early, keen to do their valuable work. They are an essential part of the airport community, valued and respected for the cheerful willingness they offer across the campus. They are often the first or last friendly face a visitor sees as they arrive into or leave the South Island or New Zealand, so the impression they create or leave is vital.

We take every opportunity to applaud our Ambassadors, the diverse team of fantastic people who help make this airport not just their happy place, but a happy place for everyone. At the moment, our team is full and we have a long waiting list, but if you can't join them, make sure you say hello to them next time you're passing through.

Jacqui Robertson
Park to Plane Support Manager

Celebrating A KIWI HERO

THIS YEAR MARKS A HUNDRED YEARS SINCE THE BIRTH OF KIWI LEGEND, SIR EDMUND HILLARY.

Celebrations, events, artworks and stamps commemorating the inspirational life of the mountaineer, adventurer and philanthropist invite us to focus on the values he embodied.

This centenary is a unique occasion to salute New Zealand's favourite son, who inspired others to realise their own dream. More importantly, as Sir Ed exhorted his friends and colleagues to 'Step Higher', the real opportunity before us is to use his life and legacy to inspire the next generation of New Zealanders and indeed, youth around the world to accomplish remarkable achievements.

When Ed Hillary, as he was then known, set his sights on Mt Everest, mountaineers told him the final near-vertical rock step in the knife-edged ridge just below the summit of Mt Everest probably couldn't be climbed.

As we know, Hillary and his climbing partner Tenzing Norgay climbed it, and on May 29 1953, became the first people to stand 'on the roof of the world'. That challenging final climb was named The Hillary Step in his honour and is now referenced permanently within the Christchurch Airport terminal. Sir Ed lived his life facing his fear and overcoming challenges. If he faced a challenge he knew he could complete, his attitude was "Why start?" A real challenge meant it was always in the balance as to whether it could be completed successfully.

Aoraki Mt Cook is where Hillary did much of his early climbing, so the airport company's tribute is opposite the large graphic of the mountain. It blends mountain graphics

with a poem specially written by New Zealand's Poet Laureate, Dr Selina Tusitala Marsh. "Hillary's Step" refers to each of us having our own mountains to climb, and reflects the mountaineer's own quote *"It's not the mountain we conquer, but ourselves."*

Knighthood on his return from Mt Everest, the Kiwi hero embarked on many other adventures. He led the New Zealand party of the Trans Antarctic Expedition on three tractors across Antarctica to reach the South Pole. He jet boated up the river Ganges, and with astronaut Neil Armstrong (the first man on the moon), flew in a ski-plane to the North Pole. He was then credited with having reached the 'three poles' - first to climb Mt Everest, first to take vehicles across Antarctica to the South Pole, and an aviation adventure to the North Pole.

Though he achieved fame and influence, his life was one of humility and generosity. He devoted his life to helping the Sherpa people. In 1960 he founded the Himalayan Trust, which has built more than 40 schools, hospitals, village health clinics, water pipelines, bridges and airstrips in Nepal and India.

Sir Edmund Hillary lived a most remarkable life. TIME magazine named him as one of the 100 most influential people of the 20th century. He was named throughout his life as the most respected New Zealander, who helped put New Zealand on the world map.

So next time you hand over a \$5 note, take a moment to reflect on the man whose face is on it – and consider what challenge he might inspire you to achieve.

Professor Emeritus Clive Gilson
Chair of the Hillary Centenary Steering Committee



Hiding in PLAIN SIGHT

WE LIKE TO USE ART TO BRING THE AIRPORT CAMPUS TO LIFE, BUT ONE NEW DEVELOPMENT IS LITERALLY BRINGING THE ART ALIVE THROUGH MOBILE PHONES.

Sam Evans and Adrian Taylor formed a tech start-up, Evans Taylor Digital, 18 months ago at the same time Christchurch was ranked in the world's top 50 street art cities. The enterprising pair decided to use technology to bring that art to life, through an app called 'Plain Sight'.

Sam says the name refers to the saying 'hidden in plain sight', because street art is often overlooked, or misunderstood, so as well as making the art more noticeable, the app adds another digital layer.

"After people download the free app on to their phone, they'll get a map of more than 15 works in the central city and can hold the phone up to the mural to see it 'come alive'.

"At the airport, 'Perspective' focuses on a surfer within artwork at Gate 15, while 'Endangered' focuses on the Orange-Fronted Parakeet mural at the edge of Express Park."

Sam says Evans Taylor Digital wants to make an impact on the world they live in, and starting in the city they love is a good place to do that.

You can try the app by downloading 'Plain Sight' from the App Store or Google Play Store. Once downloaded, follow the on-screen instructions then press the augment button and point your camera over the surfer image on the right to see it come to life.



A NEW PROGRAMME IS BOLDLY CONSIDERING THE DRAMATIC IMPLICATIONS OF EXPONENTIAL TECHNOLOGIES.

Boma New Zealand supports business leaders and politicians, educators, entrepreneurs, young people and changemakers to navigate our rapidly changing world, in order for them to be more intentional and intelligent about the future we are creating.

The airport company is supporting our work with 10 South Island Education Fellows, as part of its social contribution to our community. Airport leaders believe our children truly are the first generation of the digital era, needing those of us from the industrial era to help evolve and support their journey in life.

The ten educators are on a 12-month programme, selected from a large number of applicants on the front line of this generational interchange, wanting to do things differently to support our kids.

When we first met the educators, they were starry-eyed and couldn't believe their luck at being selected for the programme. They were excited to be in a programme with like-minded educators with shared values and dreams for the future of learning. They were bursting to get started.

As the year has progressed, the Fellows have formed a tight supportive group, sharing insights and challenges. They travelled to the United States to learn from the most advanced project-based learning in action, featuring

technology, environmental sustainability, health and design. During that visit, we saw the Fellows on experiential overload, which meant some found settling back into home routines challenging. They had their minds expanded and experienced new learning paradigms, then returned to limitations and rigid structures.

However, we saw a change in their way of thinking about equality and collaboration, about giving power and agency to their learners and co-creating learning experiences with them. We were proud to hear one Fellow say, "This programme has changed the whole trajectory of my career".

New Zealand is at the bottom of the world, which means we are small enough to make change feel possible. Rolling out a new system into half the schools in the country is a big undertaking, but not impossible. Kiwis have an experimental approach, a 'why not' attitude, which supports many aspects of what we are doing with the Fellows. However we know from our year with them that the education space has some catching up to do.

All power to Christchurch Airport for looking into the future and signing up to prepare education leaders and their students to adapt and thrive in a dynamically changing world.

Kit Hindin

Boma Education Fellows Programme Strategy & Facilitation Manager

boma
new zealand

Education
**FOR A DYNAMICALLY
CHANGING WORLD**

Exploring NEW HORIZONS



MORE AND MORE SOUTH ISLAND TOURISM ORGANISATIONS ARE GETTING A VALUABLE HAND-UP FROM CHRISTCHURCH AIRPORT TO ATTRACT AND DO BUSINESS WITH CHINESE VISITORS.

Snow Farm NZ, a cross-country ski area and snow experience, recently experienced this, thanks to the airport company's New Horizons business mentoring programme.

Snow Farm NZ overlooks Mount Aspiring, the tallest peak outside of the Mount Cook region, and offers cross-country skiing experiences, as well as snowshoeing, snow play, tubing and overnight stays in backcountry huts.

New Horizons provided funding to enable us to generate fresh marketing material for the China market and a two-week trip around China to meet with, and present, our visitor experience to potential agents and buyers.

Snow Farm NZ already welcomes many Chinese visitors each season, most of whom are seeing snow for the first time. They're always blown away by touching the snow, taking photos, building snowmen with our special snowmen kits and going tubing in the Snow Fun Zone. It's delightful to watch.

Beijing is set to host the 2022 Winter Olympics, which is said to have sparked a surge in the popularity of winter sports in China. The airport aims to harness this development and continue to champion tourism in the South Island. The standard school holiday in China runs from 1-31 August, which is a great opportunity for Chinese tourists to visit the South Island for the winter ski season. Other lucky participants of the New Horizons programme include Cardrona and Mt Hutt.

New Horizons has helped us identify which of our products we should focus on marketing to the China market and how we can refine them to maximise their appeal. That's valuable insight.

From a visit to the NZ Embassy, hosted by NZ Tourism Minister Hon Kelvin Davis, big presentations, and sit-down dinners to shopping malls, I have now met with, and presented to, more than 300 Chinese agents and buyers in a variety of locations across China.

We're a small business which has grown rapidly in recent years, so we haven't had the time nor the know-how to market ourselves to the China market in a major way. New Horizons has enabled us to do this, and the valuable insight and relationships the Christchurch Airport team holds, will ensure we are successful. It's a win for us.

In the future, Snow Farm NZ hopes to create bespoke cross-country skiing and snowshoeing full and half-day experience packages for the China market that include lunch, a hot beverage, Snow Fun Zone access and tube hire. Along with Chinese-translated flyers, brochures and website pages, of course.

Pip Gillespie

Sales Manager, Snow Farm NZ

BEING GREAT

Kaitiaki



A ONE DAY *opportunity* ON A ONE-OF-A-KIND AIRCRAFT

THE WINTER VISITS TO CHRISTCHURCH BY NASA'S AIRBORNE OBSERVATORY ATTRACT CONSIDERABLE INTEREST ACROSS THE CITY, THE COUNTRY AND THE WORLD, WITH THE SCIENCE ACHIEVED IN THE SOUTHERN SKIES LAUDED BY SCIENTISTS.

This year was the sixth visit by the Stratospheric Observatory for Infrared Astronomy, known as SOFIA, and the first opportunity for the public to walk through this fascinating plane.

Members of the public are normally not permitted access to the part of the airfield where RNZAF, Antarctic and SOFIA operations are based. However, to facilitate access for the Open Day, we all agreed to establish a temporary security boundary, which meant visitors would not need the formal Civil Aviation Authority accreditation usually required for the area.

All usual activity on the airfield, including regular continuous aircraft maintenance, had to continue unimpeded by the security fence boundary erected exclusively for this event, under guidance from NASA and the U.S. Antarctic Program.

Pedestrian access and safety on the footpath along one side of a very busy public road had to be managed, as did time with each guest to cross-check the security information they had registered. We knew the processes would take time but also knew the people who wanted to see inside SOFIA understood the need for security.

We agreed to keep the number of visitors restricted for this event, not only to meet NASA's security expectations and our own very high health and safety standards, but also to ensure we could manage the numbers and host a successful event – in the hope we might be allowed to do so again in future.

SOFIA hosts Open Days at its sun-baked home base in California, in stark contrast to the wintry weather at its Christchurch home-away-from-home. After weeks of relatively balmy winter weather here, the Open Day was held in bitterly cold temperatures, lowered further by wind and rain.

Yet even the weather did not dent the enthusiasm and excitement of the thousands who had registered for a free ticket to walk through SOFIA. We know of people who flew here from Wellington, Auckland, Australia and even Scandinavia to take advantage of the rare opportunity to check out this world-famous aircraft. Their feedback was incredibly positive and the chance to walk through the plane, then go talk to SOFIA crew and scientists, meant many questions were asked and answered.

All in all, a very successful and memorable event, for the visitors and the many people, groups and organisations who worked so collegially and positively with the airport company to make this special day such a great success.

Angus Johnston
Apron Manager
Christchurch Airport





Kiwi coins overseas visitors won't need when they go home and foreign currencies returning Kiwis don't need any more, are donated into the collection bins, then gathered, counted and converted for donation through our Community Fund.

As many as 14 different currencies might be cleared at the regular collections. The airport company matches the amount donated, and twice a year community groups apply for a contribution to a project they are planning.

In the past financial year, 34 groups received donations totalling about \$40,000. The donations which helped young people get into the outdoors, children receive packs of warm winter bedding, provided respite care of children and their families, dance therapy for young people, resources such as sound equipment and defibrillators for community groups and centres, and hand tools for community gardens.

P.S. Our Beaches is a group founded by Christchurch schoolgirl E Wen Wong. Her interest in the environment piqued at age 10 and led her to launch her group to inspire, educate, connect and challenge young people concerned about sustainability.

"I had to do something," she says. "I am astounded by the amount of plastic in our communities and want to help people learn about plastic, because people can make a difference."

Our donation enabled E Wen to arrange a conference of like-minded 12 to 24-year olds.

"Lots of speakers discuss topics youth think about but don't always hear, but we will inherit the problems, so need information too. The conference took nine months to plan and I thought it would be a one-off, but it can't be," she says. www.facebook.com/psbeaches

Supporting COMMUNITIES

SMALL COINS CARRY WEIGHT ACROSS COMMUNITIES AFTER THEY ARE DROPPED INTO THE COMMUNITY FUND COLLECTION BINS AT CHRISTCHURCH AIRPORT.

A charity named **Who Did You Help Today?** is based on the question the charity's founder asks her children over dinner each night. When Stacey Shortall asked the same question of a group of people at an awards dinner, offers of help for her community projects started to flood in.

Our Community Fund donation helped the Mothers Project publish pamphlets to help children understand what to expect when they visit their mother in prison. Stacey says there's about 750 women in New Zealand's prisons and about 87% of them are mothers.

"The project now has more than 100 female lawyer volunteers signed up to support children of mothers in prison. They help information flow so the mothers know their children are OK and the children know their mother loves them and is asking after them," she says. whodidyouhelptoday.org

We reach further into the community by supporting charities through hosting them in our terminal on their national collection day, or lighting the terminal in a charity's colours to support their cause during an awareness activity. Our staff are regular donors to several causes through the year too and regularly cook up a storm at the Ronald McDonald House in Christchurch.

We are the main sponsor of a group of singers offering entertainment and joy across the city, country and island. **The Vocal Collective** is a group of highly talented singers which over the past eight years have appeared at many corporate gigs, including for China Southern Airlines and at Crusaders rugby games. They also accepted an invitation to perform at a prestigious international event in China; and, this year, were the first New Zealand a cappella group invited to sing at Carnegie Hall, in New York.



MAKING A DIFFERENCE TO THE *Greatest Place* ON THE PLANET

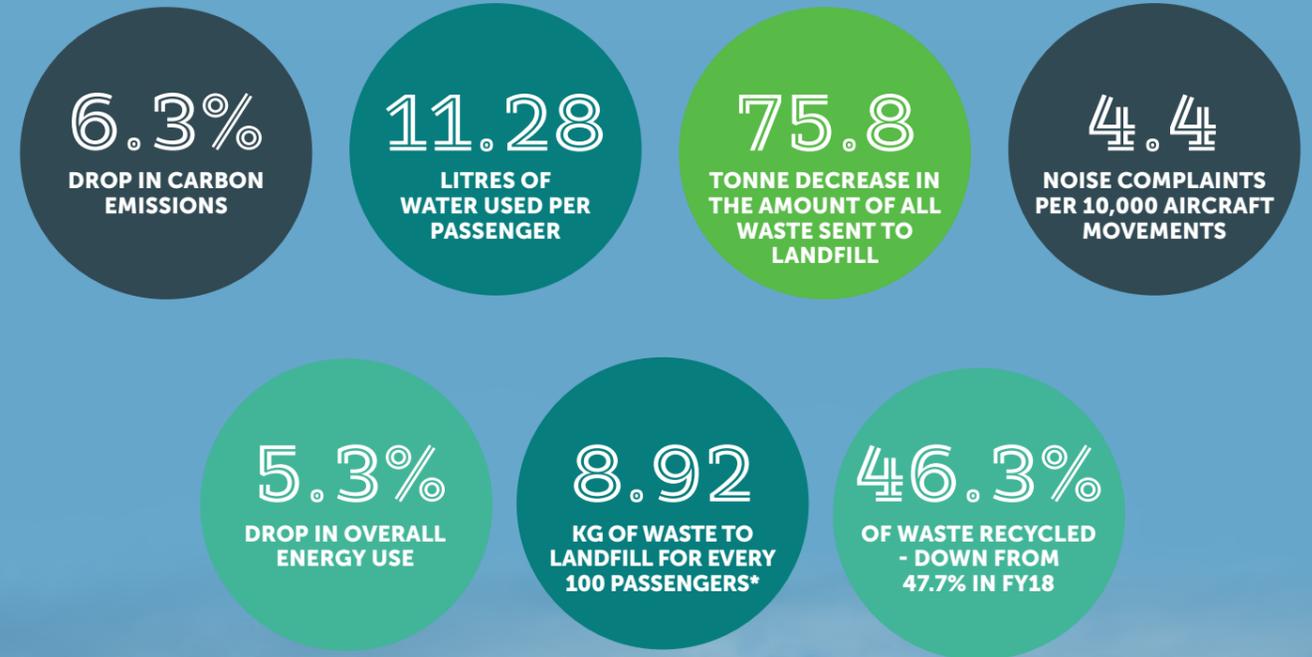
SUSTAINABILITY: 2019

OUR THIRD SUSTAINABILITY REPORT DEMONSTRATES SUSTAINABILITY IS INTEGRATED INTO THE BUSINESS THROUGH THE CORE PRINCIPLES OF ENHANCING CUSTOMER JOURNEYS & BUILDING A STRONGER BUSINESS & BEING GOOD KAITIAKI.

This report contains a number of key achievements and case studies to highlight the work we are doing, alongside updates on projects we have underway. Building on our work of previous years, we have undertaken two strategic projects which took 'deep dives' into our culture and ambition as a company, to inspire and drive further change within our business in years to come.

The first project focused on integrating the United Nations' Sustainable Development Goals (SDGs) into our business culture. The second involved a detailed benchmarking of our performance against airports across the region as well as the top performing airports globally. This helped us understand how we are performing in order to guide our ambition to become global leaders in sustainability.

FY19 SUSTAINABILITY HIGHLIGHTS



ONLY 5 REPEAT NOISE COMPLAINTS

*Down from 9.74/100 PAX in FY18



CASE STUDY - EMBEDDING THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

LAST YEAR, WE INTRODUCED OUR STAFF TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS, KNOWN COLLOQUIALLY AS THE SDGS. OUR STATED INTENTION FOR OUR SUSTAINABILITY STRATEGY TO MAKE A BIGGER IMPACT THROUGH MAKING IT MORE TRANSPARENT AND ACCESSIBLE TO EVERY MEMBER OF STAFF

The SDGs certainly resonated with our staff, who could see clear links to existing strategy and were keen to see how we could use them to challenge ourselves and improve our performance in various areas.

This year, we asked staff which of the SDGs were at the top of their own thinking, at work and at home, and which aspects they felt they could blend into both aspects of their life. As a company we were already working on issues of personal highest priority for staff, but asking the question gave us a clear indication of what else staff would like us to consider focusing on.

Businesses around the globe are making pledges around sustainability, but the real challenge is creating a genuine culture of sustainability within the business. We accepted that challenge. We have made some serious gains in the sustainability area of our work – cutting the terminal’s energy use by 20% since 2013 and transitioning our entire light vehicle fleet to EVs – but there is more to do.

We initiated a campaign that led to, and now features, a bespoke interactive tool showing real time progress on our sustainability initiatives.

For us, it was important to embed sustainability into every team member’s thinking, constantly striving to be better.

We want every person in our company to contribute to our vision to be a global leader in sustainability, rather than leave it to the sustainability team. A key milestone in creating that culture shift was working ‘from the bottom up’ to raise awareness and engagement with the SDGs. We created a campaign to introduce the SDGs to our staff in a way that would make a positive environmental change and engage not only them, but their families.

The solution was a series of interactive workshops where everyone was given a native tree to plant at home. A simple idea, but it created excitement and staff sent many photos of excited kids in the garden alongside Mum or Dad. As a result, Canterbury now has an extra 250 native trees.

The company’s intranet, Yammer, noticeboards and tearooms soon became regular repositories for SDG-related messaging, while also focusing on an intense period of building relationships and engaging staff.

Within a short period of time, we also identified 20 individuals (at least one from each of the airport’s business teams) who were particularly passionate about sustainability and wanting to make a difference. The Sustainability Ambassadors Programme was born. They meet regularly and have become a critical tool for us to embed our messages and boost engagement in their respective teams.

There have been many successes; our procurement team now requires sustainability to be considered in key purchases, a recent retail promotion by our marketing team involved sustainably-produced reusable shopping bags, our IT team has collected more than two tonnes of e-Waste for reusing and recycling, and a mid-year snapshot shows we have lowered our printer use by 25%.

Sharing the story of, and celebrating each success, has grown enthusiasm for the SDGs within the company.

That storytelling led to a whole lot of fresh ideas of other things we could do to help achieve the SDGs, and also sparked new pride in people realising what they were already doing to help achieve the goals. For example, the People and Culture Team’s charity lunches and the company’s Community Fund already demonstrated alignment with the SDGs.

We wanted to create a digital tool to bring the SDGs alive for staff, showcase all the company was doing to work towards the goals and collect new ideas from staff. It had to be interactive, easy to use, engaging and robust to give every project idea measurable outcomes.

The tool, called P1 (Planet One) now sits on the airport’s intranet. Staff can click on our seven different sustainability pillars to see all the actions the business is taking and how it links to the SDGs and their targets.

It also reminds staff why they should care about the SDGs, how they can work towards the goals (at work and at home).

P1 was introduced to staff in early 2019, through face-to-face sessions for each team and an initial campaign, offering prizes to incentivise staff to submit ideas. An astounding 143 ideas – at least one from every department – were lodged within four weeks of P1’s launch.

Phase Two of P1 will enable the delivery of the ideas to be tracked and automated reporting on all of the actions.

We would like to share our experience, and are currently exploring the development of a customisable sustainability tool, intending to assist businesses and organisations nationally and globally.

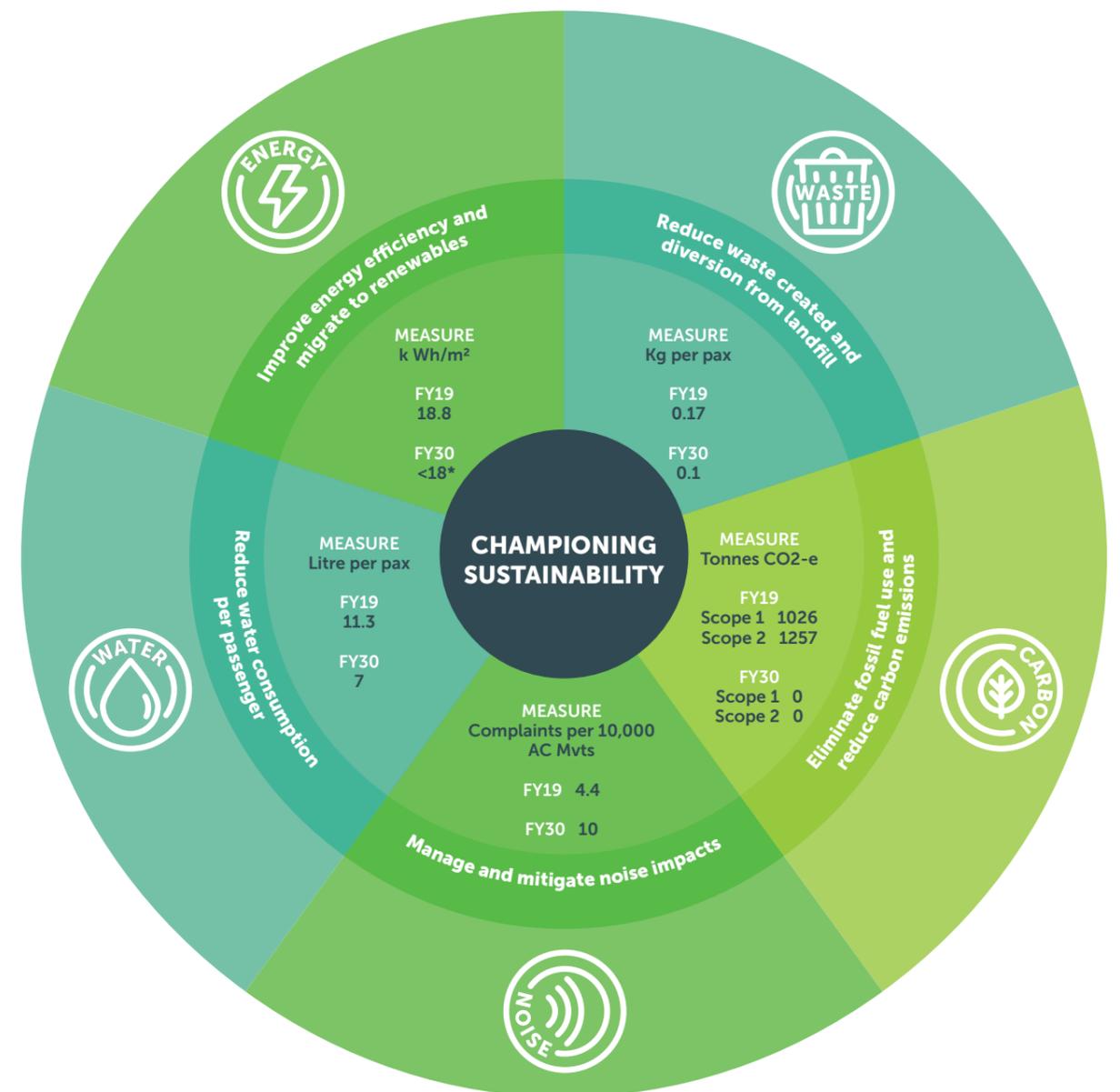
Overall, we are very happy with how cultural change is tracking. It is, of course, a difficult thing to measure, but our most recent survey showed staff scored themselves an average of 7.1 out of 10 for how their understanding of, and engagement with, sustainability has grown over the past

year. They also gave themselves a 6.4 out of 10 for their sustainability efforts at home (up from 5.6 in 2018). That is very pleasing. It shows our efforts are not just impacting our team’s behaviour but that of their children - our future generations.

This change in culture will ensure our move to become more sustainable endures any alterations in strategic direction or leadership, which is good for our planet and our community. This is work that makes us very proud

CASE STUDY - GREEN TRANSITION PLAN

FOLLOWING THE SUCCESSFUL LAUNCH OF THE SUSTAINABILITY STRATEGY IN 2016, WORK BEGAN ON WORKING TOWARDS THE OBJECTIVES SET OUT IN THE STRATEGY. TO MEASURE PROGRESS, DATA WAS COLLECTED FROM ACROSS THE BUSINESS AND KEY PERFORMANCE INDICATORS (KPIs) WERE DEVELOPED.



In the first 12 months, most of the KPI targets for 2017 were achieved - and in the case of energy, our 2025 target was reached well ahead of time.

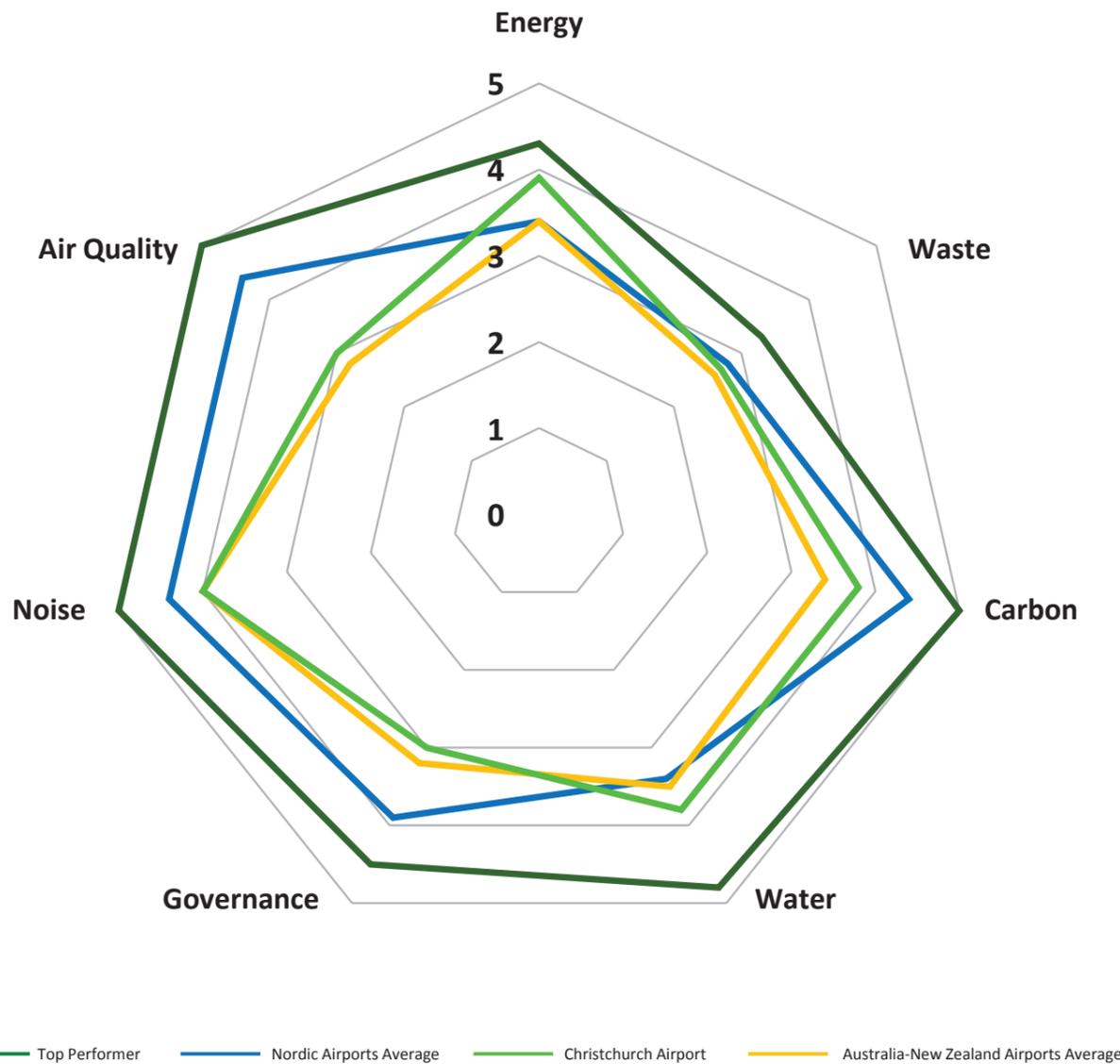
We have for some time been recognised as a leader in sustainability at a national and Australasian level, both as a business and as an airport.

We have received recognition for our efforts in energy, winning the 2017 Sustainable Business Network (SBN) energy efficiency champion award, and in waste, receiving Silver Recognition from Airports Council International (ACI) Asia-Pacific for our efforts in innovating solutions for minimising coffee cup waste.

Not wanting to rest on our laurels, in late 2017 CIAL engaged Airbiz Aviation Strategies Pty Ltd (Airbiz) to carry out a benchmarking exercise against 24 airports of similar size, geography and those who are recognised leaders in airport sustainability. Our data and performance was analysed and presented across seven pillars: Air Quality, Carbon, Energy, Governance, Noise, Water and Waste.

Across a range of criteria represented below in green, Christchurch Airport demonstrated we perform above the average of the best airports in Australia and New Zealand. We also learnt through this exercise we ranked very well globally, and in some areas such as Energy, Waste and Water, ahead of the Nordic average, the world leaders in airport sustainability.

SUSTAINABILITY BENCHMARKING



— Top Performer — Nordic Airports Average — Christchurch Airport — Australia-New Zealand Airports Average



This benchmarking exercise confirmed we were performing at a high level against other airports in Australasia. However, this exercise also highlighted 'best in class' case studies and challenged us to improve our performance in order to be considered world class. This work was presented to our Board, seeking clarification on ambition and focus areas. Our Board set us the task of investigating opportunities to become world leaders in Carbon, Waste and Water.

This investigation became known as the Green Transition Plan (GTP).

The GTP investigated opportunities and solutions to enable Christchurch Airport to understand what it would take to close the gap and become global leaders in these key areas.

A total of 22 opportunities were identified across the three pillars, ranging from minor projects that could be implemented with simple procedural changes, through to transformative projects pioneering new technologies for New Zealand.

These opportunities were investigated and viewed with a 'lens' of suitability for Christchurch Airport, with consideration towards the project's ability to meet our core needs and requirements such as:

- CARBON REDUCTION
- ENERGY PRODUCTION
- RESILIENCE
- WASTE MINIMISATION
- WATER REDUCTION
- ABILITY TO HELP TENANTS

From the initial benchmarking and evaluation, this work informed business cases for our boiler decommissioning and Fixed-Electrical Ground Power (FEGP) projects. These projects are now well underway and will deliver significant Carbon reductions for Christchurch Airport and our airline partners.

Other projects identified by the GTP and now underway include:

- Campus Water Telemetry: Automated metering and dashboards to enable Christchurch Airport and our tenants to accurately track and monitor water use in real time.
- Design Guidelines: These guidelines will provide guidance for future property development, covering a range of topics including Sustainability, Health and Safety, Structural and Architectural design.

Further projects identified in the GTP are beginning to advance from the concept feasibility study prepared during the GTP, into detailed design. We look forward to providing an update on this work next year.



CARBON AND ENERGY



TOTAL CHRISTCHURCH AIRPORT EMISSIONS

During FY19 we continued our efforts to reduce carbon where possible, with significant reductions achieved in our terminal and from our vehicle fleet. Our total measured footprint for FY19 was 3,693.6tCO₂-e. This is a 6.3% reduction from FY18 and a 16.5% reduction from FY15, our baseline year of measurement.

We currently have a project underway to decommission our boilers, which will deliver our 2025 objective to decarbonise our heating systems in the terminal. This project will be completed during Q2 FY20 saving the company ~1,000tCO₂-e emissions p.a. The waterfall graph on page 8 shows current and forecast emissions to the end FY21 – illustrating reductions of 1,808tCO₂-e or 45.9% based on FY15 as a baseline. See page 8 for reference diagram.

EMISSIONS FROM OUR TERMINAL

Our terminal emissions were 8.2% down on FY18. Key reductions can be attributed to utilisation of biodiesel in our boilers, and further efforts with continuous commissioning of our HVAC systems. Emissions from our two diesel and two LPG boilers are the primary source of Christchurch Airport's Scope 1 emissions, resulting in combined emissions of ~1026tCO₂-e for the year.

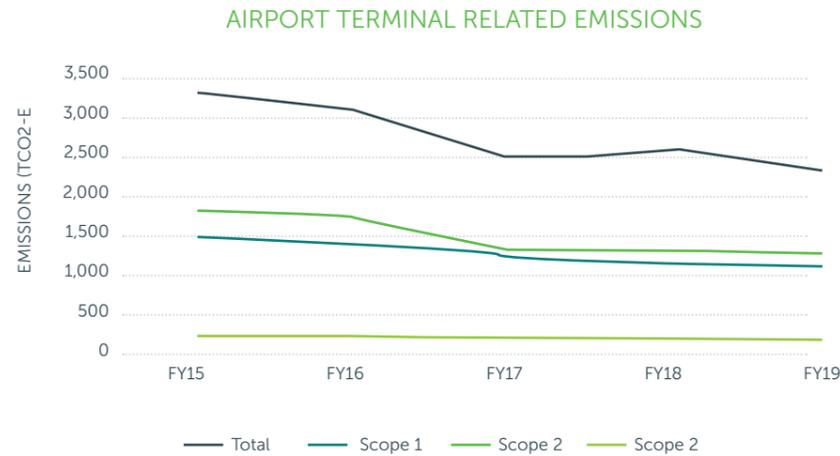
In an effort to reduce emissions from the diesel boilers until they are decommissioned, last year we undertook a 10% Biodiesel blend trial. This trial over winter proved a success and the B10 (biodiesel 10% blend) has been used for the entirety of FY19 and will be used until the boilers are retired in Spring 2019.

Work began in March 2019 to install the infrastructure to replace this boiler with a ground-source heat pump system.

Further efforts have been made to reduce electricity usage throughout the year through continuous commissioning and active maintenance. In essence, this has focused on maintaining efficiency gains made over previous years and further fine tuning of heating and cooling systems.

This year's airport terminal electrical usage was 12,862,763.84kWh. This is a 5.3% (718,056kWh) reduction on FY18. From a carbon perspective, this represents a 70.1tCO₂-e reduction in Scope 2 and 5.3tCO₂-e in Scope 3 emissions from lines losses. This represents an average of 18.8kWh/m² for the year – down from 19.86kWh/m² as reported last year and still below our 2025 target of 22.5kWh/m².

Additional reductions in Scope 3 emissions from a reduction of waste were achieved and will be discussed further in the Waste section of this report.



KEY OBJECTIVES FOR FY20

- CONTINUE TO MEASURE AND VERIFY OUR CARBON FOOTPRINT
- CONTINUE THE ROLL-OUT OF THE EV ACTIVATION STRATEGY
- REVISE CARBON STRATEGY TO ADDRESS RESIDUAL EMISSIONS NOW MANY OF OUR 2025 OBJECTIVES HAVE BEEN MET

FUTURE KEY PERFORMANCE INDICATORS (KPIs)

- FY20 – 10% REDUCTION ON FY15 EMISSION LEVEL - ACHIEVED
- FY25 – 20% REDUCTION ON FY15 EMISSION LEVEL – ON TRACK

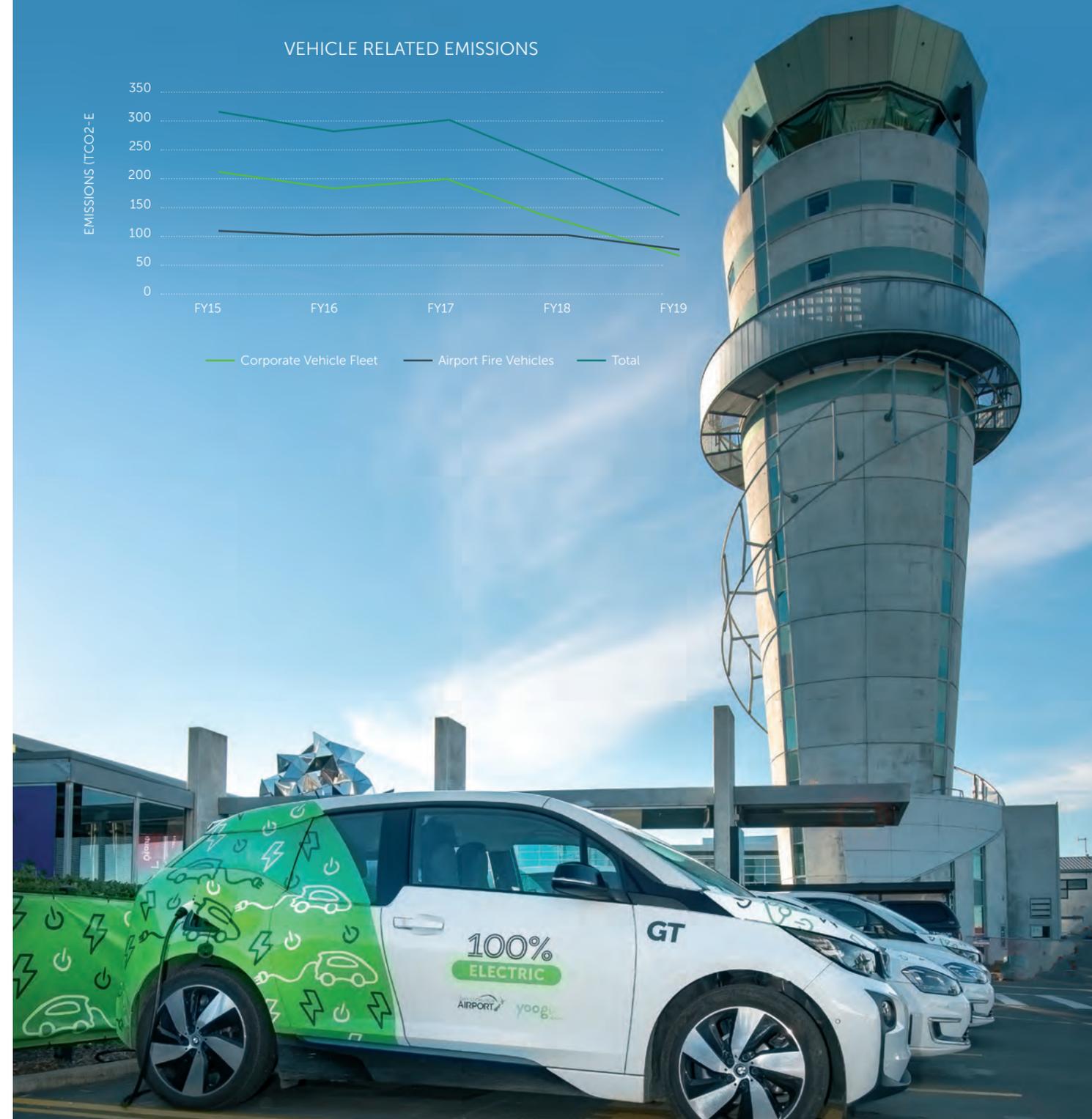
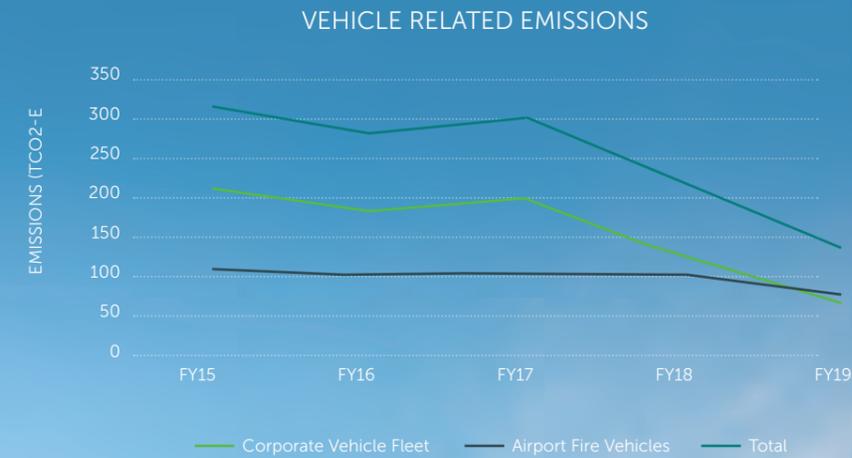
VEHICLE EMISSIONS

Last year we reported on the implementation of our Electric Vehicle (EV) Activation strategy and signing on to the global EV100 commitment. We became the first business in the South Island to sign up to a global initiative committing to transitioning our light vehicle fleet to 100% electric. We are pleased to report we are on track with our plans to optimise and electrify our fleet.

Our current pool of light vehicles stands at 20, with seven pure electric vehicles, four Plug-in Hybrid vehicles and nine

conventional vehicles, taking our fleet from 49% to 55% electric this financial year.

These changes have resulted in significant reductions from our corporate vehicle fleet, with a 62tCO₂-e or 50% reduction during the FY19. Overall, across our entire fleet, we have achieved a ~90tCO₂-e or 40% reduction in emissions during the reporting period, with further emissions reductions achieved through the replacement of a utility vehicle with a Plug-in Hybrid vehicle in our Airport Fire vehicle fleet.



CASE STUDY - DECARBONISING FROM PARK TO PLANE

AS THE GATEWAY TO THE SOUTH ISLAND, WE ARE ACUTELY AWARE OF OUR ROLE TO BE GOOD KAITIAKI (GUARDIANS) AND TO ENSURE WE UPHOLD THIS RESPONSIBILITY WHEN IT COMES TO LOOKING AFTER OUR PLACE IN THE WORLD.

Globally, people are becoming more aware of the emissions associated with aviation, therefore, as Kaitiaki, we need to play our part in reducing the emissions associated with using our airport.

In previous years, we have presented case studies relating to our efforts to reduce our Carbon Footprint relating to the terminal, the benefits of 'plugging in' the A380 and the implementation of Electric Vehicles.

In essence, these were steps that form part of a bigger journey to reduce carbon emissions in a passenger's journey from Park to Plane.

During FY19, we made further efforts to provide opportunities for passengers to reduce their emissions from their home to our car park, while we worked hard on eliminating emissions to the plane.

FROM HOME TO PARK...

We recognise a visitor's journey starts when they leave their home, so we have looked at how we can enable our visitors to decarbonise their journey before they arrive at the airport.

In conjunction with Christchurch City Council, we saw the need to provide EV charging infrastructure throughout the city, including the airport, to further enable the uptake of EVs in Canterbury. A joint project to provide free-to-use EV charging facilities lead to the installation of six EV charging bays in our Orchard Road carpark. This project went live in April 2019.

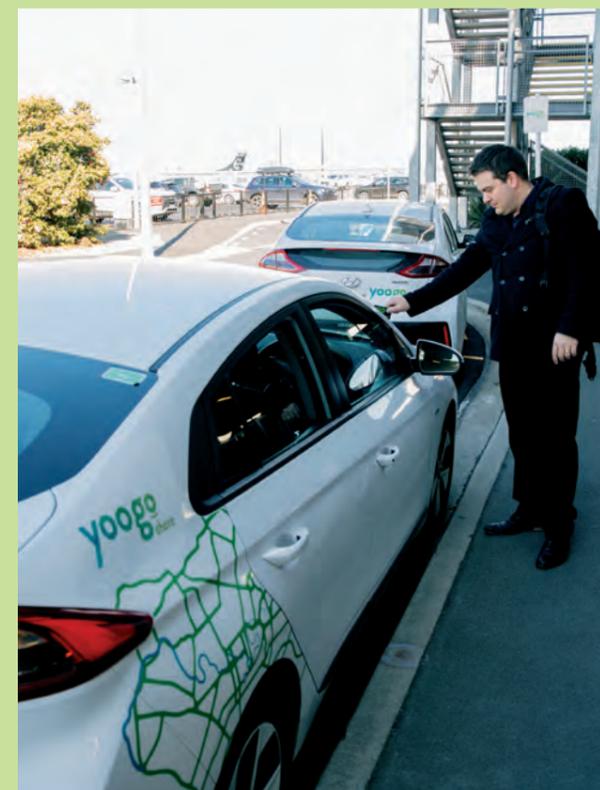
This year we installed free-to-use public charging points for not only Electric Vehicles, but also the growing number of electric bike (e-Bike) users visiting our airport.



Beyond e-Bikes, we're also aware of the number of people travelling with bikes through Christchurch Airport, particularly passengers travelling with mountain bikes to enjoy the variety of tracks the region offers. To make this journey easier, we've installed cycle assembly stations on our terminal forecourt. These assembly areas include racks, air pumps and a variety of bicycle tools, to allow passengers traveling with bikes to quickly and easily assemble/dis-assemble their bike and be on their way.



YOOGO SHARE IS NEW ZEALAND'S ONLY PURE ELECTRIC CAR SHARING SERVICE.



Kiwi owned and operated start-up Yoogo was launched in Christchurch in February 2018 to offer an alternative to vehicle ownership for businesses and the general public. Yoogo Share members drive BMW i3s or Hyundai IONIQs on-demand from seven locations across Christchurch, with Christchurch Airport being a key hub.

Members of the car sharing service have so far saved over 200 tonnes of carbon emissions.

Initially offering a round-trip service (A to A model), with pick-up and drop off at the same location, in July, Yoogo Share officially launched one-way trips (A to B) between Christchurch Airport and two central city locations. This service allows Yoogo Share members to pick up a car from Christchurch Airport's Rideshare Zone and drive themselves in a zero emission EV to The Crossing or West End car parks, for less than the price of a ride in an Uber or taxi.

This enables the travelling public to make the simple switch to driving electric cars, instead of vehicles which burn petrol or diesel, contributing to improved air quality and reduced emissions in New Zealand.



...PARK TO PLANE

With our visitor's journey now at the airport, we become responsible for ensuring the facilities we offer have a low carbon footprint. Our aim is to operate as efficiently from an energy perspective, as our visitors expect from a customer experience perspective.

We have previously reported on our efforts to drive energy efficiency in our terminal through implementing New Zealand's first ground-source heat pump, and the benefits of the continuous commissioning project. This work continues and we are still achieving further savings.

Our new focus is now on eliminating the use of diesel and LPG currently required to fuel our four boilers to heat our international terminal. While efficient, together they produce ~1,200 tonnes of carbon emissions a year.

Prior to this year, there was a technology gap we needed to overcome to enable this system to be replicated in the international terminal. Technology constraints with respect to the maximum temperature of heating water prevented the ground-source heat pump system in the integrated terminal being implemented in the international area.

This is no longer a project constraint.

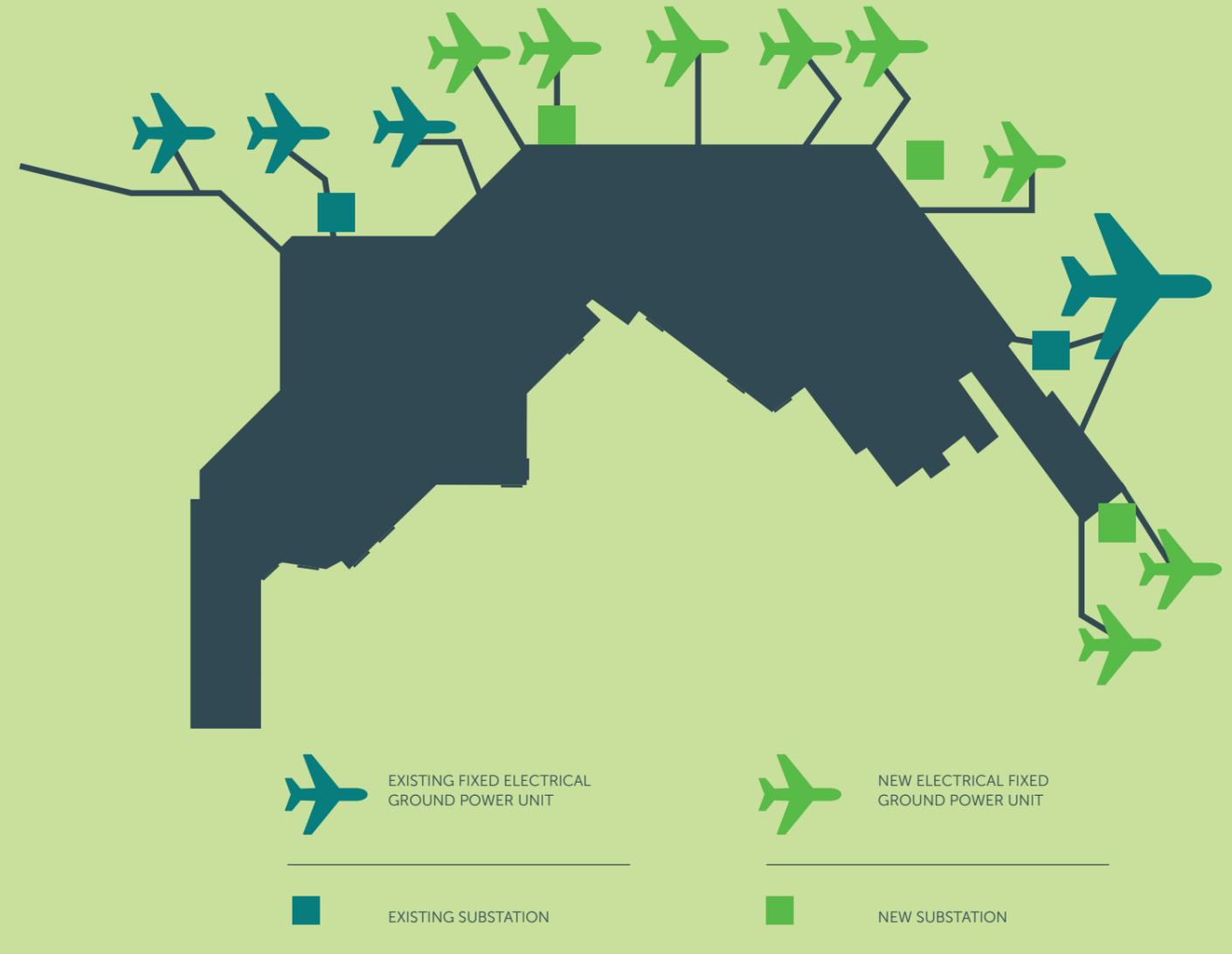
In early 2019, technology bridging this gap became available and work began to install the necessary pipework and infrastructure. This installation is expected to be completed in September 2019, allowing the boilers to be retired once and for all.

Last year we shared a story of our use of grid sourced electricity to power the A380 aircraft while it's parked on the ground, instead of using JET-A1 fuel to power its Auxillary Power Unit (APU). Fixed-Electrical Ground Power (FEGP) is a key piece of enabling infrastructure to help aircraft on the ground to save fuel and reduce emissions while operating from an airport.

This year, we began work to provide FEGP to all jet stands at Christchurch Airport. This involves installing three high voltage sub-stations on our apron, along with the associated cabling to each aerobridge. To reduce the operational and environmental impact of this installation, we have opted to install cabling above ground where possible, to utilise wall space and existing overpasses created by our aerobridges, rather than disturb existing pavement. This has reduced excavation requirements and associated fuel and soil disposal costs and emissions.

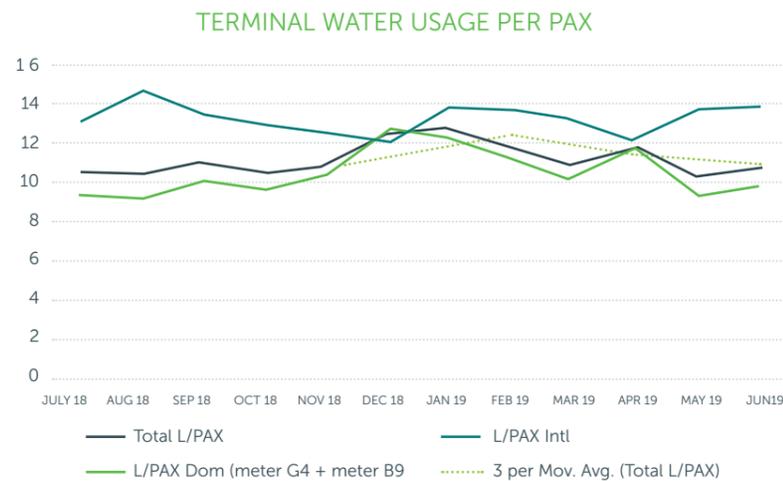
We currently have one substation operational, with a second substation nearing completion. We expect more ground power units to arrive in October and are hoping to have this upgrade fully functional in time for the summer season.

As part of this project, we have future-proofed this infrastructure by ensuring there is ample capacity to enable Pre-Conditioned Air (PCA) and EV ground support equipment charging in the future. There is no current demand for these facilities on the gates being upgraded as part of this project, however we have considered this in our project design to ensure we are able to meet this demand in the future.





WATER



We have continued to observe water use throughout FY19 to monitor trends over the course of the year. Overall usage rates indicate our terminal operates at ~11.28L per passenger, slightly higher than last year (11.1L/PAX).

We know through our Green Transition Plan benchmarking work that we are strong performers in terminal water efficiency. To facilitate our future efforts in this important area, we are currently upgrading water meters across the entire campus, to enable an automated real time telemetry system,

This system will use LoRa™ (Long Range) wireless data telemetry to share data from across the campus, to allow us to accurately model water usage.

CASE STUDY - POTABLE WATER NETWORK SECURITY

Drinking water security has been an important topic for New Zealanders since the Havelock North incident in August 2016, which saw more than 5,000 people falling ill following the presence of E.coli in the water supply. This led to a Government inquiry in which the final report conclusions made the following key recommendations:

- Mandate universal water treatment. Appropriate and effective treatment of drinking water should be mandated by law or through the Drinking Water Standards New Zealand, 2008 (DWSNZ) for all supplies (networked and specified self-suppliers)
- Provision should be made for exemptions to mandatory treatment only in very limited circumstances
- Prohibit new below-ground bore heads

We operate our own drinking (potable) water network, independent of the Christchurch City network, and have obligations under the DWSNZ to ensure we provide safe drinking water to all staff, tenants and visitors to our airport campus.

In December 2018, the Minister of Health announced changes to drinking water legislation (<https://www.health.govt.nz/publication/drinking-water-standards-new-zealand-2005-revised-2018>), adopting the recommendations of the inquiry ahead of changes to the DWSNZ, especially on mandatory treatment of drinking water supply and protection of drinking water networks. At the time of this announcement we had already initiated this project to provide full compliance to the recommendations made by the inquiry.

This project involved:

- Raising two well heads
- Removing confined space entry to well head chambers
- Integrating the water plant
- Enabling live monitoring of well performance, treatment plant performance and water quality
- Providing greater capacity for future forecast water supply requirements
- Improving asset resilience by adding generator backup to well 8 and Aviation Park wells.

This project is expected to be completed this year and will ensure clean and safe drinking water supplies across the airport campus.

KEY OBJECTIVES FOR FY20

- IMPLEMENT FURTHER SMART METERS
- TRIAL VARIOUS FLOW SETTINGS TO IDENTIFY BALANCE BETWEEN CUSTOMER SATISFACTION AND WATER SAVINGS
- IMPLEMENT TARGETED WATER SAVING INITIATIVES

FUTURE KEY PERFORMANCE INDICATORS (KPIs)

FY20 – TO ACHIEVE A 10% REDUCTION ON OUR FY17 BENCHMARK (TARGET: 9.4L/PAX)

FY25 – TO ACHIEVE A 20% REDUCTION ON OUR FY17 BENCHMARK (TARGET: 8.3L/PAX)



WASTE



The closure of recycling markets in South-East Asia had a marked impact on the recycling industry across New Zealand. The flow-on effect of this for our airport prompted a major rethink of our waste programme. Historically our primary focus was on increasing our landfill diversion rate (i.e. focusing on the collection of recyclables), with a secondary focus on how we could minimise our overall waste footprint. This focus has shifted and we are pleased to report the results below.

In FY19, we sent 8.92 kilograms of waste to landfill for every 100 passengers. This is down from 9.74 kg/100PAX in FY18.



Despite facing growing challenges to manage airport waste, our terminal operation generated 75.8 tonnes of waste less than last financial year. This reduction amounts to an -7.7% reduction overall.

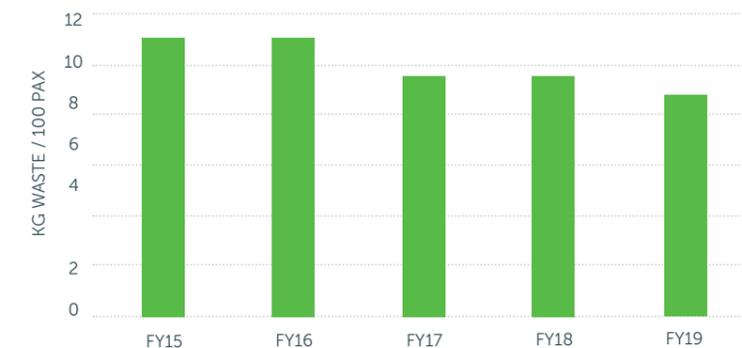
The biggest reductions were typically in general waste and cardboard, however an 18% increase in organic (food and compostable packaging) waste collected was observed. This is a direct result of combined consumer behavioural changes, our food and beverage operators making changes away from plastic products and increased efforts to segregate this waste stream in our food court.

WASTE STREAM COMPARISON AND TRENDS

	FY18 (TONNES)	FY19 (TONNES)	CHANGE (TONNES)	CHANGE (%)	TREND
GENERAL WASTE	517.2	487.7	-29.5	-5.7	↘
CARDBOARD	178.0	119.8	-58.2	-32.7	↘
ORGANICS	114.5	135.2	20.7	18.1	↗
GLASS	82.8	83.1	0.3	0.4	↗
MIXED RECYCLING	86.5	77.6	-8.9	-10.3	↘
POLYSTYRENE	3.3	2.8	-0.5	-15.5	↘
PLASTIC WRAP	1.3	1.5	0.2	17.1	↗
GRAND TOTAL	983.6	907.9	-75.8	-7.7	↘

From an airport operator's perspective, this is significant because for the first time since the Canterbury earthquakes, our waste footprint is shrinking while passenger numbers are increasing. This is a combined effort of consumer behaviour and efforts to reduce waste generated in the terminal.

DOMESTIC WASTE PER PAX



In line with global trends and efforts to reduce waste, our annual diversion rate was slightly lower this year at 46.3%, dropping 1.4%. A variety of factors influenced this, including lower tolerances for contaminants (non-recyclables) in mixed recycling and a general reduction in packaging materials used such as cardboard and polystyrene.

AIRPORT TERMINAL WASTE



Key improvement areas during this reporting period come from improved diversion of food and compostable waste from our general waste stream into our organics waste stream. As seen in the table above, FY19 saw a 20.7t or 18.1% increase in organics collected.



CASE STUDY - POLYETHYLENE TEREPHTHALATE (PET) BOTTLE FURNITURE

WE HAVE UPGRADED AN EXISTING AREA TO SIGNIFICANTLY ENHANCE THE VISITOR EXPERIENCE IN ARRIVAL AREAS AND SUPPORT OUR SUSTAINABILITY INITIATIVES.

Always wanting to ensure we Enhance Customer Journeys & Be Great Kaitiaki, we redesigned part of the domestic baggage reclaim and international arrivals area, installing furniture manufactured from a South Canterbury-based company. The company sources fabric from Repreve, which makes fabric from plastic bottles.

Waste is a key pillar of our sustainability strategy and we are conscious we need to be part of the solution. Repreve fabric is made from recycled Type 1 Polyethylene terephthalate (PET) plastic soft drink bottles. It takes approximately 20 bottles to make 1 meter of fabric, so that's a whole lot of fabric made from recycled plastic bottles in our new seating!



CASE STUDY - FRESH MINDS CONSIDER OLD CHALLENGE

WE WANT TO ENSURE WE HAVE APPROPRIATE INFRASTRUCTURE TO MEET OUR NEEDS. OUR GREEN TRANSITION PLAN (GTP) INCLUDES RESEARCH INTO WASTE AND IDENTIFIED A NEED FOR BETTER INFORMATION AROUND WASTE PATTERNS AND BEHAVIOUR.

We understood the volume of waste leaving our airport, but where it came from and the amount of waste from each area was less well known.

We saw an opportunity for a small research project into this problem and extended an invitation to local students at the University of Canterbury to carry out this task on our behalf as part of our team.

For one week in April 2019, seven university students were tasked with operating the Southern Waste Room during business hours. This project had three primary objectives:

1. To gain an understanding of infrastructure usage patterns to determine ongoing requirements
2. To determine the origin point for each bin coming into our waste room
3. To undertake a visual waste audit of the bins coming into the facility to determine the type of waste coming from that area and the level of contamination in the recycling collected.

The students carried out a visual waste audit, assessing and recording the bin type, the percentage volume of waste, the origin of the bin, the contents of the bin, and the level of contamination, particularly in regards to recycling.

Informal interviews were also held with staff in the terminal to gather information on the audit's primary objectives and identify further opportunities for improvement.

The outcomes of this audit have been invaluable. The final report has provided us with qualitative data clearly identifying



key areas of waste generation, opportunities to improve waste minimisation and diversion, along with a number of 'housekeeping' suggestions which will improve overall operation of our waste room.

The students were employed as paid interns for the duration of the audit and gained invaluable experience applying research techniques in a live workplace. We thank the team for their efforts and would highly recommend to other organisations to consider offering suitable opportunities to students. They provide a unique viewpoint on dynamic problems in return for invaluable experience in the workplace.

The students were involved in a range of degree studies, including Environmental Science, Political Science and Engineering. Feedback suggests they enjoyed their time with us, and valued the opportunity to see environmental goals come to life within a complex operational environment.

We sincerely hope their time here will inform future projects, career opportunities and further study.

KEY OBJECTIVES FOR FY20

- UPGRADE AND REVAMP OF FOOD COURT WASTE STATIONS
- FURTHER COLLABORATION WITH FOOD AND BEVERAGE OPERATORS TO ELIMINATE SINGLE USE PLASTICS

FUTURE KEY PERFORMANCE INDICATORS (KPIs)

FY20 - 0.16 KG/PAX

FY25 - 0.13 KG/PAX



NOISE



During FY19, we received a total of 46 noise complaints from 103,718 aircraft movements. This equates to 4.4 complaints per 10,000 aircraft movements and is well below the 10 complaints per 10,000 movement KPI set by our Sustainability Strategy.

ACOUSTIC TREATMENT PROGRAMME

In March 2019, we initiated the Acoustic Treatment Programme, which involved offering acoustic treatment to properties located in an area subject to a high noise environment.

KEY OBJECTIVES FOR FY20 AND BEYOND

- CONTINUE DELIVERY OF THE ACOUSTIC TREATMENT PROGRAMME
- CONTINUE MEASURING, MONITORING AND MITIGATING NOISE COMPLAINTS
- KEEP COMPLAINT NUMBERS LIMITED TO 10 PER 10,000 AIRCRAFT MOVEMENTS
- KEEP THE NUMBER OF REPEAT COMPLAINTS LIMITED TO 10 PER 10,000 AIRCRAFT MOVEMENTS.

PBN FLIGHT PATHS TRIAL

The PBN flight paths trial concluded within this financial year, with the following recommendations / conclusions:

- Because of the range of benefits being achieved, the PBN flight paths used in the trial be accepted.
- Continue to restrict the use of sensitive PBN flight paths prior to 9am on weekends (initiated 14 July 2018). This was a direct response to community feedback and is expected to provide a material reduction in the noise impact for some residents.
- Continue to use the additional PBN flight path to approach Runway 02 from the northwest (east of West Melton), added during the trial as an alternative to the original PBN flight path. This responds to, and addresses, residential noise concerns and increased pilot participation. Noise sharing by alternating use across these two flight paths may be considered as a future option.



	PAGE	CIAL STRATEGIC OBJECTIVE	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER
SDG CASE STUDY	44		✓	✓	✓	✓	✓	✓	✓
GREEN TRANSITION PLAN	46			✓	✓	✓	✓	✓	✓
ELECTRIC VEHICLE ACTIVATION	50			✓	✓				
ELECTRIC VEHICLE CHARGING STATIONS	50			✓	✓				
ELECTRIC BIKE CHARGING STATIONS	51			✓	✓				
YOOGO SHARE	51			✓	✓	✓			
BIKE ASSEMBLY STATIONS	51				✓				
GROUND SOURCE HEAT PUMPS	52			✓	✓			✓	
CONTINUOUS COMMISSIONING	52			✓	✓				
BOILER RETIREMENT	52			✓	✓			✓	
FIXED ELECTRICAL GROUND POWER UNITS	52			✓	✓			✓	
WATER TELEMETRY	54		✓		✓				
DRINKING WATER SECURITY	55		✓		✓			✓	
RECYCLED PLASTIC FURNITURE	58					✓	✓	✓	✓
STUDENT WASTE AUDIT	59				✓	✓	✓	✓	
ACOUSTIC TREATMENT PROGRAMME	60					✓			
PERFORMANCE BASED NAVIGATION	60					✓			

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OUR

PLACE